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Primary Health Care Landscape Analysis

East Asia and Pacific

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Foreword

Immense progress in women's and children's health has been made in East Asia and the Pacific in recent years. Fewer and fewer women are dying in childbirth, more and more boys and girls are vaccinated against life-threatening diseases, and more and more families have access to basic healthcare close to home.

But progress has been unequal, and families living in remote, hard-to-reach areas, ethnic minorities and marginalized groups are still being left behind. The unfinished agenda of preventable child and maternal mortality remains, while the threat of noncommunicable diseases such as diabetes, heart disease and respiratory infections is on the rise. With climate and pandemic risks further complicating the picture, it is safe to say that more than ever before, primary healthcare needs to be prioritized.

In the 2018 Astana Declaration, primary healthcare (PHC) is recognized as foundational to fulfilling the right of every human being to the highest attainable standard of health. Governments expressed their commitment to uphold this fundamental right to health, which is defined as physical, mental, and social well-being. Truly operationalizing this commitment, however, requires investing in knowledge and capacity building, human resources, new technologies, adequate financing, and the empowerment of communities.

This Regional Landscape Analysis provides an overview of PHC policy and strategy in the region, and identifies the gaps that persist and continue to leave some families behind. Some of the gaps are inadequate investment in frontline workers, limited inclusion of essential public health functions and community engagement, and limited adoption of a social model of health that would make PHC more inclusive and accessible. There are also key opportunities, such as models of care that engage stakeholders from a variety of sectors and ensure the participation of marginalized communities in delivering services.

But what is critical in all cases is a competent and empowered PHC workforce, one which can consistently deliver essential public health services to all families, supported by decentralized planning and management. New digital tools also offer immense potential to better reach, track, deliver and monitor services, and these are solutions we must seize and leverage today.

This report reaffirms the urgent need to transform health systems towards a PHC approach, but this requires sustained efforts and commitment from political leaders and stakeholders across sectors. With our partners, UNICEF will continue to promote PHC as a foundation of health with the goal of achieving every child's right to quality primary care - and ensuring no girl and no boy is ever left behind.

Debora Comini
Regional Director
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Executive summary

Background

The Astana Declaration and the Operational Framework for Primary Health Care, published by the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF), have revitalized discussion on the approach to primary health care (PHC) globally and regionally. In East Asia and the Pacific, the narrowing of fiscal space has created pressure for improved efficiencies, effectiveness in health service delivery and equity through the implementation of a PHC approach. The objective of the present landscape analysis is to provide an overview of the status of PHC policy and strategy in East Asia and the Pacific. Based on the findings of the analysis, priority actions have been identified to inform the efforts of UNICEF and, where applicable, joint regional and national efforts on developing and implementing the PHC approach.

The present landscape analysis was conducted using a mixed methods approach. Information sources included a literature review and analyses of PHC and health system databases and consultations with country offices and regional advisers of UNICEF. PHC country profiles (n=16) were developed, combining and contrasting information from these multiple sources. The analytical framework for the description and analysis of PHC policy and strategy in the region is based on the Operational Framework. It has three components (integrated services and public health, community empowerment and multisector collaboration) and 14 strategic and operational levers. The Operational Framework is complemented by recent developments in the WHO strategy for East Asia region and for the Pacific.

Main findings

The context in the East Asia and the Pacific is dominated by rapid socioeconomic growth, persistent social and health inequalities, rapid urbanization and varying degrees of administrative decentralization. Most of the 24 countries in the region have transitioned into lower middle-income status. Several countries are currently affected by geopolitical instability and humanitarian emergencies (Democratic People's Republic of Korea and Myanmar), and most countries are undergoing rapid demographic, epidemiological and technology transitions. In population of approximately 2 billion people in the 24 countries of East Asia and the Pacific is ageing while fertility rates are in rapid decline. Excluding high income countries, the region is now 58 per cent urbanized. The prevalence of non-communicable diseases (NCDs) is rapidly escalating, raising concerns about the preparedness and sustainability of current health system designs. Despite the cultural and political diversity of the region, common social and environmental trends that impact on public health include globalization, urbanization, decentralization, health and social inequalities and widespread exposure to climate and pandemic risk. Against this backdrop of rapid social and environmental change, health inequities persist, with some countries struggling to provide basic maternal and child health services in rural and remote areas. Both the speed of change and stagnation in development provides a strong rationale for transformation of societies and health systems towards a PHC approach.

Over the past 20 years, significant improvements in health-care coverage and equity have been measured according to the UHC Coverage Index (SDG target 3.8.1). Of the 15 countries for which data are available, China, Thailand, Malaysia and Viet Nam recorded coverage at 70 per cent and above, while coverage was at 50 per cent or below in the Lao People's Democratic Republic, Solomon Islands and Papua New Guinea. Analysis of coverage gaps in the most populous countries of East Asia and the Pacific (China, Indonesia, Myanmar, the Philippines and Viet Nam) with a total population of 1.9 billion in 2019 indicates that a significant proportion of the population are being left behind. are being left behind. In terms of the financial protection Index (SDG target 3.8.2), of the 11 countries with data, three countries have reported more than 10 per cent of household income expenditure on health (China, Cambodia and Myanmar), and eight out of 17 countries with data report out of pocket expenditures greater than 30 per cent of current health expenditures. Analyses and reviews demonstrate that zero dose vaccinations and health-care use are associated with multiple social and sector deprivations related to incomes, education, location and ethnicity, all of which validate implementation of the PHC approach. Cambodia, China, Indonesia, Malaysia, Myanmar, the Philippines and Viet Nam are all confronted by the challenge of ensuring equity of health-care access, use and coverage for remote populations, ethnic minorities and other marginalized populations.

Health system landscape is dominated by mixed models, whereby provision of care is provided through both the public sector and the private sector, and it is regulated to varying degrees at the national and sub-national levels. The market model, though arguably generating investment in health care and ensuring services are accessible to some of the population, is exposing sectors of the population to impoverishment and/or leaving them behind. The expansion of public investment in health systems along with the development of health insurance and financial protection measures have contributed to controlling communicable diseases and protecting maternal and child health, and these services provide a foundation for building the PHC approach. Despite these gains, challenges related to health inequities based on the social determinants of health, emerging public health threats and the rise of NCDs mean that current health systems fall short of universal health coverage (UHC). The PHC approach can support the remodelling of health management and services to better accommodate the needs of communities in a twenty-first century setting.

PHC policy and strategy landscape: Just as countries have their own pathways to UHC, they also have their own approaches to PHC, reflected in relevant laws, policies or strategies. Despite this diversity, most PHC policy and planning dialogue is focused on the best way to address gaps in front-line health services through expanding access to a basic package of health services. While PHC is largely conceptualized in terms of primary or front-line health services, there is

recognition of the importance of integrating services and public health, other sectors and communities into networks of PHC care. Political leadership, governance and policy, the health workforce, models of care and community engagement were the strategic and operational levers emphasized for accelerating the PHC approach.

The main gaps in relation to uptake of the PHC approach are associated with a culture of vertical disease programme management and hospital centrism, which, though having provided significant benefits for large sectors of the population, are nonetheless continuing to leave populations behind. These include the urban poor, remote area residents, ethnic minorities , vulnerable youth and populations in humanitarian contexts. Examples of hospital centrism, primary care bypass, and health workforce concentration in urban areas and higher end facilities is a constant theme that runs through most of the PHC profiles from the Pacific Island States to Indonesia, China, and Mongolia, and provides a strong case for regional and national support for rebuilding of the primary care system. The dominance of private market systems for health is reflected in undersupply in the public sector in rural and remote and urban poor areas and concentration of health professionals in urban centres and the private sector. Services are heavily oriented towards diagnosis and treatment, and respondents and health profiles demonstrate weaker capacities in the areas of essential public health functions [i.e. promotion, protection, prevention, surveillance, emergency preparedness]. Financial barrers to health care include high out of pocket and household expenditures on health (SDG 3.8.2), inequitable health-care access for people of lower socioeconomic status or residents of remote area, and unmet needs for essential health services coverage (SDG 3.8.1). Gaps in the UHC coverage index and evidence of spatial, socioeconomic and ethnicity related health inequities across East Asia and the Pacific, positions financial protection and scale up of National Health Insurance as being central to realizing the social justice vision of the Astana Declaration on PHC and UHC through the Operational Framework for Primary Health Care.

The main opportunities for uptake of the PHC approach, consistent with the focus on front-line services, is investment in financial protection, decentralized management, planning and budgeting, and building community-based health action through both more available and skilled professional health workforce and a more community engaged local area PHC network. There are important opportunities for reorienting health systems towards a PHC approach through building the capacity of health systems and the health workforce in essential public health functions, community empowerment and application of digital technologies. Given these investments are reliant on strategic level decision-making through political leadership and governance and policy reforms, there is an increasing need and opportunity for global and regional health actors to engage more with the political sector, social sectors, civil society and with local government to achieve policy objectives.

Discussion: Transforming health systems and societies through the primary health care approach

Viewing systems and programmes through the primary health care approach

Are programmes or services integrated?

Does the basic package of health services incorporate essential public health functions?

Is there an approach that engages and empowers communities to manage, promote, deliver or monitor services?

Do the programmes or services engage with other sectors to support more of a whole-of-society approach to prevention and control?

Are our operational actions guided by strategic considerations of political commitment and leadership, governance and policy, resource allocation and engagement with communities?

The present landscape analysis finds that the rapidity of epidemiological, demographic and social change is driving reforms to health systems that are more aligned with a PHC approach. It finds that operational actions in the areas of models of care and the health workforce have higher prospects for success when accompanied by strategic level actions through political leadership, governance and policy, resource allocation and engagement of communities. The political decision to invest more in the health workforce, the public sector and in financial protection are necessary conditions to scale up of PHC operations, as affirmed by the UHC statement on the political determinants of health. Although countries are diverse in their PHC-related policies and strategies, the strategic approach in many cases views service integration, public health and community and sector engagement as necessary conditions for achieving UHC.

The attainment of UHC is reliant in large part on the capability of countries to design and implement pro-equity plans and strategies so that no one is left behind. There are important points of engagement between the present analysis and the Zero Dose Vaccination review in East Asia and the Pacific. The finding from the Zero Dose Review that the "greatest opportunity lies in investing where multiple deprivations are experienced" aligns with the main components of the PHC approach, which recognise the importance of integration, public health and community and sector engagement in programme and service delivery. The fact that zero dose vaccination is associated with high levels of social vulnerability reinforces the call for expression of the social justice and solidarity values of PHC as stated in the Astana Declaration, as well as reinforcing the importance of engaging with communities and multiple sectors to address multiple sector deprivations. The convergence of social, economic and health system determinants of health in shaping patterns of multiple health and social deprivation has important implications for the ways that health and related health and social services converge through governance, coordination and service delivery.

Conclusions

This Regional Landscape Analysis has identified *main PHC gaps* that include lack of adequate investment in the public sector front-line service workforce and financial protection, limited incorporation of essential public health functions and community and sector engagement into health operations, and limited adoption of a social model of health that underpins the PHC approach. Main opportunities described in this report for adoption of the PHC approach include development of models of care based on PHC networks that engage a wider range of stakeholders in management and service delivery. The PHC networks will need to incorporate community leaders and health workers, to ensure that the more disadvantaged populations have voice or representation in management, delivery, or evaluation of services. Transformation of the PHC workforce is required to support implementation of essential public health functions and decentralized planning and management. These transformations will require collaboration and commitment to PHC from political and health leaders and stakeholders based on the lessons learned from the COVID-19 pandemic and the requirement for attainment of UHC goals.

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1 Background and objectives

Several factors in recent years have revitalized discussion of the primary health care (PHC) approach in East Asia and the Pacific. The Astana Declaration and the Operational Framework for Primary Health Care have revitalized discussion on how to operationalize the PHC approach. The lessons from the coronavirus disease (COVID-19) pandemic have stimulated increased interest from political leaders in investment in the health sector. The pandemic has heighted interest in links between the economy and health, and the value of multisector and community engagement in emergency preparedness and response.

In East Asia and the Pacific, there are pressures for improved efficiencies due to narrowing of fiscal space, the above-mentioned pandemic impacts, and the opportunities for more health service delivery effectiveness and equity through implementation of the PHC approach. In some countries, there are gaps in PHC policy and implementation, especially for socially disadvantaged groups. Persisting health inequities rationalizes a wider approach encompassing the three components of PHC (integrated services and public health, community engagement and multisector collaboration). Countries in the region are adopting PHC strategies and approaches in their health sector reform agendas to support the attainment of universal health coverage (UHC) goals. Finally, the epidemiological and demographic transitions underway in the region is increasing pressures for health sector reform and multisector collaborations to enable health and social systems to adapt to these rapid transitions and respond to emerging public health threats. All of these factors are contributing to a favourable climate for adoption of the PHC approach. For those reasons, UNICEF proposed to develop the present landscape report on PHC in East Asia and the Pacific.

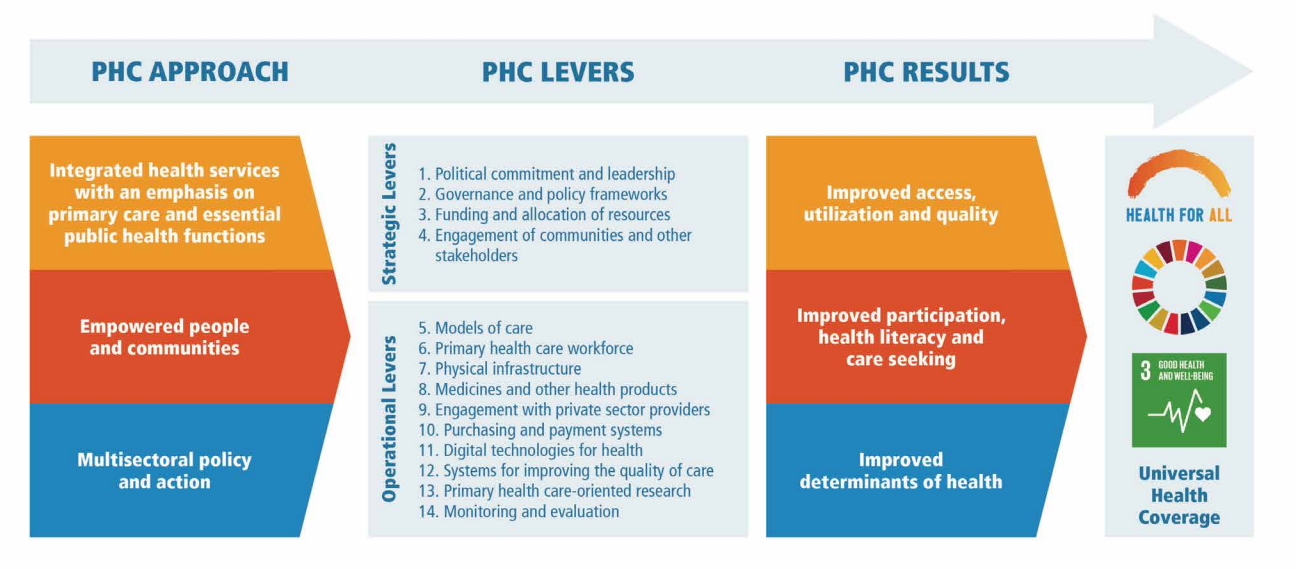
Objective

The objective of the PHC landscape analysis is to provide an overview of the status of PHC policy and strategy in the EAP Region. Based on the main findings from this analysis, priority PHC actions will be identified to inform broader regional and national joint efforts on developing and implementing the PHC approach.

Framework for analysis

A landscape analysis has been described as a participatory research method for "identifying and elucidating trends, opportunities, and gaps in the field."[1] The approach to data collection and analysis was based on the conceptualization of PHC in the Operational Framework for Primary Health Care. The report therefore describes and analyses the status of PHC from through the lens of the strategic and operational levers of PHC and the associated three components of the PHC approach [see thematic analysis in section 5]. Emphasis in data collection was on the strategic levers of PHC – namely, leadership, policy and governance, resource allocation and community engagement and their links to the operational levers of the operational framework, as well as on the three PHC components of integrated services and public health, multisector collaborations and community empowerment. Together these constitute the main elements of the PHC approach and the theory of change to achieve UHC.

Figure 1: Theory of change



1 See www.thepraxisproject.org/resource/2020/analyzing-the-landscape-community-organizing-and-health-equity.

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2 Methods

Methods and Data Sources

1. Consultations with countries and regional advisers and stakeholders on the PHC approach.
2. Review of relevant literature on PHC policy and strategy and review of data sets to examine trends in PHC context, performance and impacts.
3. Development of PHC Country profiles to provide a more in depth understanding of the challenges and opportunities presented by the PHC approach.

Consultations

Consultations were undertaken with United Nations regional and country advisers over an eight-month period between September 2022 and May 2023 (see Annex for list of respondents). During these consultations, UNICEF provided a briefing on the terms of reference, gained perspectives on current models and perceptions of PHC, and initiated discussions on priority actions at the country level for adopting the PHC approach. The second stage of consultation provided an opportunity for peer review of the country profiles. The third stage included presenting the country profiles in a regional networking meeting to identify more specific country and regional actions to scale up the PHC approach.

Literature review

A scoping review of ongoing and previous assessments of PHC in the region was conducted, with literature sourced from the UNICEF Regional Office, online, peer reviewed search engines and through recommendations from key informants on PHC plans and strategies. Consultations with UNICEF country offices enabled the identification of national documents on laws, policies and strategies relevant to PHC. These were reviewed to develop country profiles and inform the wider discussion and recommendations on PHC. Findings from the literature were complemented by analysis of health data sets. Several data sets were used to generate information and analysis on health and development trends and are referenced in the country profiles and infographics.

Country profiles

The country profiles were developed to identify gaps and opportunities for PHC policy and strategy in each country and to inform a bottom-up approach to the development of priority actions at the regional level. In recognition of the fact that PHC involves both a whole-of-society and a primary care focus, the profiles were designed to cast a wide net across the development landscape, including the coverage, equity and health system policy of each country. The profiles are complemented by infographics that highlight trends for each country in epidemiology, demography, health coverage and equity, and policy and strategy. UNICEF country offices were offered the opportunity to peer review the profiles and highlight features that were most appropriate for UNICEF resourcing and country support.

Limitations

Due to both the geographic and technical scope of this work, several strategies have been applied to set a reasonable boundary around the topic, so that it will provide sufficient information to inform the strategy region wide while having sufficient depth to reflect the PHC landscape. The regional perspective has been generated through the examination of cross-country comparisons for the main indicators, with reference to peer reviewed or unpublished reports on challenges or best practices from different countries. More detailed features of the PHC landscape have been highlighted in the country profiles.

The scope of the present reported is limited in excluding some information and data on specific PHC operational levers, such as health infrastructure and essential medicines supply. The scope of the report is limited to the review of gaps and opportunities in three PHC components, strategic levers and selected operational levers, especially models of care and the health workforce.

This report commences with a review of the global and regional PHC policy and strategy landscape (section 3) and is followed by presentation of 16 country profiles (section 4). A thematic analysis (section 5) draws on evidence from the country profiles to reach conclusions on main gaps and opportunities for development of the PHC approach for UHC. The Annex includes details of the literature and data findings on PHC in East Asia and the Pacific that informed the development of the present report.

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3 Global and regional primary health care policy and strategy landscapes

Global primary health care policies and strategies

Forty years ago, the importance of PHC was affirmed under the Declaration of Alma-Ata. Under the Astana Declaration in 2018, Governments expressed their commitment to ensuring the fundamental right of every human being to the enjoyment of the highest attainable standard of health, where health is defined in terms of physical, mental, and social well=being.[2] The Astana Decalration emphasizes primary care, public health and prevention and promotion aspects of PHC. It acknowledges the limitations in current approaches in terms of ensuring access to health for vulnerable populations. PHC is recognized as the cornerstone for development of sustainable health systems for attainment of UHC and the health-related Sustainable Development Goals. Through the Declaration, Governments and stakeholders made a commitment to invest in knowledge and capacity-building, human resources, new technologies, adequate financing, the empowerment of communities and alignment with national health and development plans and policies. These investments are the main drivers for successful implementation of the PHC approach.

The question then arises as to how the commitment to PHC will be operationalized. In 2020, global partners developed the Operational Framework for Primary Health Care to transform the vision of the Astana Declaration into action. This framework articulates the main components and operational actions areas of PHC. According to this framework, PHC is composed of three components (refer to figure 1) which reflected both a health sector and wider social view of health involving participation by communities and other sectors. The strategic levers of the operational framework include leadership and political commitment, governance and policy, resource allocation and community engagement. The operational levers mostly relate to the building blocks of the health system.

2 See www.who.int/docs/default-source/primary-health/declaration/gcphc-declaration.pdf.

In alignment with this framework, the PHC approach will be defined in this landscape analysis as "a whole-of-society approach to health that aims to maximize the level and distribution of health and well-being through three components of: (a) primary care and essential public health functions as the core of integrated health services; (b) multisectoral policy and action; and (c) empowered people and communities". The PHC approach involves a linking of strategic and operational levers for the purpose of sustaining activities in support of UHC. For the purposes of consistency and clarity in consultations, the above definition, along with following sets of sub-definitions (see table 1) will provide the initial frame through which current perceptions, policies and practices will be reviewed.

Table 1: Definitions of PHC components and strategic levers in operational framework for primary health care

PHC component	Definition in the operational framework
Integrated health services and essential public health functions*	Meeting people's health needs through promotive, protective, preventive, curative, rehabilitative and palliative care throughout the life course, strategically prioritizing key health-care services aimed at individuals and families through primary care and the population, with essential public health functions as the central elements of integrated health services
Empowered people and communities	Empowering individuals, families and communities to optimize their health, as advocates of policies that promote and protect health and well-being, as co-developers of health and social services, and as self-carers and caregivers.
Multisector collaboration	Addressing the broader determinants of health (including social, economic and environmental factors, as well as individual characteristics and behaviour) through evidence-informed policies and actions across all sectors;
Strategic lever	
Leadership	Political commitment and leadership that place PHC at the heart of efforts to achieve UHC and recognize the broad contribution of PHC to the SDGs
Governance and policy	Governance structures, policy frameworks and regulations in support of PHC that build partnerships within and across sectors, and promote community leadership and mutual accountability
Funding and resource allocation	Adequate funding for PHC that is mobilized and allocated to promote equity in access, to provide a platform and incentive environment to enable high-quality care and services and to minimize financial hardship.
Community engagement	Engagement of communities and other stakeholders from all sectors to define problems and solutions and prioritize actions through policy dialogue

* Essential public health functions – The spectrum of competencies and actions for improving the health of populations focuses on the core or vertical functions: health protection and promotion, prevention, surveillance and response, and emergency preparedness.

Source: WHO and UNICEF. Operational Framework for Primary Health Care: Transforming vision into action. Geneva, 2020. Available at www.who.int/publications/i/item/9789240017832.

In addition to the strategic levers defined in the table above, there are 10 operational levers, many of which relate to the health system building blocks as defined in WHO health system frameworks. An important element of the PHC approach, which is referred to in the global framework, is that strategic levers need to act in synergy with operational levers to support and sustain health programme actions.

> *The levers are interdependent, inter-related, and mutually reinforcing. The levers are separated into core strategic and operational levels. Core strategic levers can pave the way for actions around other levers.*[3]

This interdependence and mutual reinforcement of strategic and operational levers or actions is reflected in how policy direction and resource allocation are aligned with human resources or essential medicine supplies for health programmes or services. Primary care and PHC are often considered as synonymous terms.

> *PHC is precisely what the name says. It's where people get all the basic health services they need: vaccines, prenatal care and treatment for common yet life-threatening illnesses such as diarrhea, pneumonia, HIV, tuberculosis and malaria. PHC systems keep families healthy in normal times and are the first line of defence when global health crises like COVID-19 arise.*[4]

The terminology can in fact overlap, given that primary care teams or facilities could adopt a PHC approach to their work. In recognition of the multiple applications of the term PHC, the present analysis uses the definition in the Operational Framework as the primary lens, while paying special attention to the application of the PHC approach in primary care settings. Although contexts and perspectives may be different, it should be feasible to detect consistencies in application of the PHC approach.

3 WHO and UNICEF, 2020, Operational framework for primary health care: transforming vision into action. Geneva. Available at www.who.int/publications/i/item/9789240017832.

4 See www.gatesfoundation.org/ideas/articles/coronavirus-jean-kagubare-phc.

Regional primary health care policy and strategy

The South-East Asia Regional Strategy on Primary Health Care identified 12 priority actions for reorienting health systems towards the PHC approach. As well as reorienting health systems, this strategy adopts a whole-of-society perspective with regards to expanding engagement of communities and sectors in health and acting on the social determinants of health through governance reforms and multisector collaborations.[5] The strategic actions are as follows:

1. Review and update health related national policies and plans to reflect PHC orientation
2. Increase and improve financing of PHC
3. Implement governance reforms and multisectoral convergence action on SDH
4. Reimagine and reorganize PHC service delivery
5. Build a culture of wellness to promote well-being
6. Ensure community engagement and empowerment
7. Strengthen the availability and competence of a multidisciplinary PHC workforce team
8. Promote availability and affordability of quality essential medical products for PHC
9. Strengthen the quality of PHC care
10. Leverage the potential of digital technology to improve access to PHC
11. Strengthen health information systems to enhance PHC
12. Institutionalize learning systems for sustainable PHC

The Western Pacific Region of WHO Framework on Primary Health Care identifies several social and epidemiological changes that have altered the context for PHC. These include the rise of NCDs and the risk factors associated with them, the ageing population and health security and environmental health threats, the pandemic, and access inequities including rising health-care costs. inequity in access to care, and rising health-care costs. The pandemic, though providing negative impacts on health systems and economies, nonetheless presents opportunities for innovations service delivery, PHC health workforce development, financial protection and establishing legal and regulatory instruments for supporting PHC services. The Regional Framework on the Future of Primary Health Care in the Western Pacific states that the growing burden of NCDs and their risk factors points to lack of focus on prevention and early detection. Most of the investment is in medical goods and curative care, which rationalises more of a PHC approach on prevention. Five areas of action are identified WHO: (1) tailoring models of service delivery to local contexts; (2) facilitating community contributions to planning, decision-making and policy direction; (3) reducing the financial pressure of health care on the population; (4) making health systems financially sustainable; and (5) revising legal, policy and regulatory frameworks to support integrated and participatory services.

In the World Bank Regional Report on Primary Health Care, three main priorities for the reimagining of PHC were identified, all of which are health-services oriented. These are: adopting a multidisciplinary team-based approach, reforming health-care workforces and financing for PHC systems. Priorities identified in the report include developing a political strategy to deliver PHC financing reforms, paying for PHC through government expenditures and levying taxes on tobacco, alcohol and sugar to help finance reforms.[6]

5 See www.who.int/southeastasia/publications-detail/9789290229094#:~:text=Download%20(6.8%20MB)-,Overview,Sustainable%20Development%20Goals%20(SDGs).

6 See https://documents1.worldbank.org/curated/en/446861624530245206/pdf/At-a-Glance-Walking-the-Talk-Reimagining-Primary-Health-Care-After-COVID-19.pdf.

In general, these regional strategies adopt a "time for change" outlook, with human resources management, service delivery models, and financial protection providing opportunities for sustainable change. Although the expansion of front-line services is a shared focus for PHC strategists, there is a recognition of the whole-of-society vision of PHC, as manifested through emphases in strategic approach on multisector collaborations, community engagement and political leadership.

COVID-19 pandemic: Global and regional lessons learned for primary health care

The COVID-19 pandemic had an enormous human and financial impact on the region in terms of mortality (1.6 per cent of those infected)[7] and adverse impacts on food security, health-care access, economies and personal income. As outlined elsewhere in the present landscape analysis, the high level of out-of-pocket expenditures on health care in the region illustrates that the poorest have been disproportionately impacted by the pandemic. The pandemic also exposed social and organizational vulnerabilities based on gender.[8] A survey on the impact of the pandemic on adolescent health and well-being in six countries in the region in 2021 found that severe disruption to education and distance learning had adverse impacts on mental well-being, especially for female adolescents.[9] More than one quarter of health-care providers may have experienced depression or anxiety due to the pandemic, with women at higher risk of experiencing these conditions.[10]

A scoping analysis of PHC and the COVID-19 pandemic in 2022 found that enablers of PHC implementation during the pandemic included "equity-informed financing models, health system and governance frameworks that differentiate multisectoral PHC from more discrete service-focussed primary care, and governance mechanisms that strengthen linkages between policymakers, civil society, non-governmental organizations, community-based organizations and private sector entities."[11] It is interesting to note here that the main enablers of implementation were strategic lever actions relating to resource allocation, governance, and community engagement. The strengthening of linkages between sectors and constituencies as main enablers of PHC is an indication of the value of PHC networks, as seen in some of the country profiles.

A review of best practices of PHC in South-East Asia in 2021 identified several successful PHC reforms that included health in all policies, strengthening governance structures from the global to the local level, reallocation of resources from hospitals to primary care, and engagement of civil society for decision-making and community engagement. A main finding from this review was that approaches to programming of health were most successful when strategic and operational levers were inter linking. That is, operational levers such as health workforce, digital health interventions and models of care were successful when accompanied by strategic investments and actions in political leadership, governance and policy, resource allocation and engagement of communities.[12]

7 A. Elbehri et al., 2022, *COVID-19 pandemic impacts on Asia and the Pacific – A regional review of socioeconomic, agrifood and nutrition impacts and policy responses*. Bangkok, FAO. n

8 See https://interactive.unwomen.org/multimedia/explainer/covid19/en/index.html.

9 J. Wang et al., 2021, Gender differences in psychosocial status of adolescents during COVID-19: a six-country cross-sectional survey in Asia Pacific. *BMC Public Health* vol. 21.

10 A. Thatrimontrichai, D.J. Weber and A. Apisarnthanarak, 2021, Mental health among healthcare personnel during COVID-19 in Asia: A systematic review. *Journal of the Formosan Medical Association* vol. 120, No. 6, pp. 1296–1304.

11 A. Edelman et al., 2021, Modified scoping review of the enablers and barriers to implementing primary health care in the COVID-19 context. *Health Policy and Planning* vol. 36, No. 7, pp. 1163–1186.

12 See https://apps.who.int/iris/handle/10665/351476.

A study that examined emerging good practices and lessons learnt for maintaining essential health services during the COVID-19 pandemic in the Southeast Asian Region identified five factors that contributed to sustaining services during emergencies. Firstly, where services were decentralized service disruption was minimized. Secondly, community engagement through community health workers and volunteers was critical for dissemination of accurate information about the pandemic. Adequate protection of health worker safety was judged to be a factor in sustaining services, as was integrated system approaches to service delivery and surveillance. Finally, good governance was judged to be critical, especially through the "whole of society" approach was applied as exemplified through multisector collaborations. There were reported to be social capital gains from more responsive governance practices and a committed health workforce, which resulted in increased trust in health services.[13]

This issue of whole of society approach and reliance on social capital and trust resonates through the COVID-19 literature and validates a PHC approach. In a study in 2022 of 177 countries, a network of COVID-19 pandemic preparedness collaborators found that "pandemic-preparedness indices which measure health security capacity were not meaningfully associated with changes in infection rates for COVID-19."[14] In contrast, it was found that measures of trust in government and interpersonal trust have statistically significant associations with COVID-19 infection rates. This led the authors to conclude that health promotion and community engagement were critical for increasing public confidence in public health messaging and services.

This issue of engagement and trust is recognized by UNICEF in terms of how to improve PHC to prepare for future pandemics. UNICEF recommends several approaches, including recruiting, training and prioritizing health-care workers, establishing effective surveillance and response systems, strengthening logistics and supply, and building confidence in health services through community health. The latter action emphasizes the role of building trust to support uptake of vaccination. This trust is generated through building confidence in health-care workers, health institutions and national health agencies.[15]

The issues of leadership, engagement and trust are pivotal to transformation of health systems towards more of a pro-equity PHC approach. This is particularly the case for the marginalized groups across the region. There were an estimated 370 million people that are resident in urban slums in east and south-east Asia in 2018.[16] There are ongoing conflicts, political and cultural tensions in subnational areas of many countries which have had an impact on service coverage.

Collaboration contexts and mechanisms for primary health care

Collaboration and partnership are central to the PHC approach, especially given the fact that two of the three PHC components relate to community engagement and multisector collaboration, and the third focuses on integration of public health into service delivery systems, as well as emphasizing integrated health services delivery. Consultations in this area have found that although all agencies are working on PHC, there are few examples of interactions and synergies. Models and guidance on integration of programmes and services are not clear as yet. There are opportunities and strategies for joint actions on PHC, as exemplified by Regional Committee endorsements for regional strategies and frameworks for PHC in both the South-East Asia and Western Pacific regions of WHO.

13 M. Zakoji and T. Sundararaman, 2021, Emerging good practices and lessons learnt to maintain essential health services during the COVID-19 pandemic. WHO *South-East Asia Journal of Public Health* vol. 10(supplment 1), pp. S26–S29.
14 COVID-19 National Preparedness Collaborators, 2022, Pandemic preparedness and COVID-19: an exploratory analysis of infection and fatality rates, and contextual factors associated with preparedness in 177 countries, from Jan 1, 2020, to Sept 30, 2021. *The Lancet* vol. 399, No. 10344, pp. 1489–1512.
15 See www.unicef.org/stories/how-to-improve-primary-healthcare-to-prepare-for-pandemics.
16 See https://unstats.un.org/sdgs/report/2019/goal-11/.

International frameworks for collaboration on PHC

There is a long-standing critique of the fragmenting impact of development assistance programmes on health systems, principally due to limited commitment and capability to harmonise and align with the principles of aid effectiveness.[17] In recognition of these limitations, various international development partnership arrangements have been developed over recent years. These include the SDG Global Action Plan, which is a partnership of 13 United Nations agencies to advance collaboration on reaching SDG related health goals and targets.[18] As part of this group, certain areas of focus have been established by the partnerships which are referred to as accelerator themes, one of which is PHC.[19]

The United Nations conducted a high-level meeting on UHC in 2019, during which member States renewed their commitment to strengthen PHC. The assembly endorsed an agenda of political leadership for health, leaving no one behind and strengthening legislation and regulation for health. Political leaders and stakeholders expressed their commitment to establish multi-stakeholder mechanisms for a whole-of-society approach to health, as well as more sustainable models of public financing of health systems.[20]

The UHC 2030 partnership provides guidance on Country health compacts, which are "written commitments made by government and development partners that describe how they will work together to improve health outcomes,"[21] along with a guidance note describing the process and main content areas of a Country Health Compact.[22] A "Country Health Compact" for PHC/UHC could be just one mechanism by which development partners align with national effort to extend the PHC approach. Additional opportunities for PHC coordination and leadership are through processes for development of National PHC policies and strategies, potentially directed through national health sector forums or through multisector coordination networks or authorities.

Regional collaboration frameworks on PHC

Given the role of other partners in vaccine or epidemiological research, the immunization engagement strategy developed in 2022 recommended that UNICEF should seek external partnerships at regional level for innovations and research in health systems and PHC. This may include engagement with Asia-Pacific research networks such as the Asia-Pacific Observatory on Health Systems and Policies.[23] South to South technical collaborations[24] should be stimulated so that the Region can reorient towards a PHC approach utilising lessons from regional countries on development and implementation of PHC systems and approaches. Governments and stakeholders in East Asia and the Pacific may wish to take the opportunity for further engagement with regional networks in ASEAN,[25] and the Pacific Islands Forum[26] to advocate for better access to services for disadvantaged populations, including migrants, refugees and stateless populations.

A PHC advisory group was established during the development of the SEARO Regional Strategy on PHC, which drew on the expertise of health system advisers, government planners and representatives of academia and civil society to provide input on regional direction for PHC. This group was instrumental in revising and refining 12 priority actions for implementation of the PHC approach in SEARO.[27] This initiative is being followed up through establishment of a PHC Platform to exchange country experience in the region on PHC strategy and implementation.

17 See www.uhc2030.org/what-we-do/working-better-together/harmonised-approaches-to-health-systems-strengthening/7-behaviours-for-effective-development-cooperation/.
18 See www.who.int/initiatives/sdg3-global-action-plan.
19 See www.who.int/initiatives/sdg3-global-action-plan/accelerator-discussion-frames.
20 See www.uhc2030.org/fileadmin/uploads/uhc2030/Documents/UN_HLM_2019/UHC_Key_Asks_final.pdf.
21 See www.uhc2030.org/what-we-do/working-better-together/country-compact/.
22 See www.uhc2030.org/fileadmin/uploads/ihp/Documents/Key_Issues/Country_Compacts/ihp_guidance_compact_en_final_web.pdf.
23 See https://apo.who.int/.
24 See www.uhc2030.org/what-we-do/working-better-together/harmonised-approaches-to-health-systems-strengthening/south-south-collaboration/.
25 See https://asean.org/our-communities/asean-socio-cultural-community/health/.
26 See www.forumsec.org/who-we-arepacific-islands-forum/.
27 WHO SEARO Regional Strategy on Primary Health Care.

Internally in EAPRO in 2022, Cross EAP Regional Office Group on Immunization mechanism referred to as (CEROGI) was established to support immunization related responses to the COVID-19 pandemic. The immunization engagement strategy reported that this cross programmatic mechanism has the potential for development of "guidance and support on equity in immunization and other child health services for socially disadvantaged groups across the region such as for stateless population, cross border migrants, the urban poor, and for indigenous and ethnic minority populations."[28]

National Frameworks for collaboration on PHC

The PHC Operational Framework identifies key interventions for the strategic lever of leadership and political commitment. Nationally, this leadership is reflected through laws, rights declarations, policies and development plans that are legislated and committed to by national governments. These commitments are further reinforced through international agreements and World Health Assembly resolutions.[29] The national government leadership and commitment is expressed through resource allocation, accountability to populations, and through legislation and regulation creating the enabling environment for participation by communities in health governance and decision-making. Given the highly decentralized contexts in the region in countries such as the Philippines and Indonesia, local government leadership and collaboration is of critical importance in terms of planning, resource allocation and community engagement. At the community level, according to the PHC approach, leadership is significant for holding national and local government political leaders accountable for improving PHC.

UNICEF Internal Collaborations and PHC

UNICEF globally identifies same main areas of work that include maternal and newborn health, Immunization, childhood diseases, HIV and AIDS, non-communicable diseases (NCDs), child development, adolescent health and well-being, nutrition, healthy environments, injuries, strengthening health systems and health in humanitarian emergencies. As well as managing all these programmes, *The UNICEF Health Strategy* aims to increase focus and coherence across health programmes through three main approaches of (1) addressing inequities in health outcomes, (2) strengthening health systems (including for emergency preparedness, response and resilience) and (3) through promoting integrated multisectoral policies and programmes.

PHC may provide the policy coherence required to support coordinated efforts across programmes and sectors for improved child and adolescent health and well-being. Strengthening systems for delivering quality health services to mothers and children without access is a key priority for UNICEF in the region.[30]

Policy coherence and focus is further reinforced by the UNICEF statement on PHC:

> *UNICEF supports primary health care, especially at the community level, to help achieve universal health coverage. We work to strengthen health systems to deliver integrated services for children, adolescents and women of reproductive age – focusing on health, nutrition, early childhood development, HIV and AIDS, and WASH (water, sanitation and hygiene). Our work also promotes overall health and well-being by focusing on education, child protection and social inclusion.*

28 UNICEF Regional Strategy on Immunization Engagement UNICEF Bangkok August 2022.
29 See https://apps.who.int/gb/ebwha/pdf_files/WHA72/A72_R2-en.pdf.
30 See www.unicef.org/eap/what-we-do/health.

Given the comprehensive quality of modern PHC frameworks, UNICEF, as a multi-programmatic organization for child and adolescent health and well-being, is arguably well positioned to adopt and support the implementation of the PHC policy and strategy. This observation is mirrored by the research findings from an evaluation and strategy for immunization engagement conducted in EAPRO in 2022, which identified that UNICEF, as a multisector organization for child health and well-being, has a comparative advantage in implementing the PHC approach. The organization's expertise, communications and transition towards a social and behavioural change model is well aligned with the PHC levers of community engagement and political commitment and leadership.

The PHC concept and approach could form the central idea for galvanizng various programmes of UNICEF into a more integrated programme approach, sometimes referred to as convergence. This operational cohesion could be reinforced by shared accountability and monitoring and evaluation measures for performance across programmes, which is an approach recommended in the Astana Declaration and Operational Framework for Primary Health Care.

The engagement strategy on immunization, considering the mission of UNICEF and its varied programmatic structures, recommended development of cross programmatic strategy and mechanisms building on lessons learned from the COVID-19 pandemic and based on the PHC strategic framework. There are several functional and structural characteristics of UNICEF that would predispose the organization for cross programmatic PHC strategies. These are:

1. The cross programmatic characteristics of social and behavioural change and technology and development, and their alignment with community engagement and digital health levers of the PHC framework.
2. The networks of 14 field offices of UNICEF which have fewer staff and who are closer to communities and local governments which should enhance more collaborative and less vertical operations.
3. The network of implementing partners (national or Local NGOs, faith based and ethnic health organizations, Local Governments, private sector partners) who act as core partners for reaching missed populations for a range of health and social services.
4. The capability of UNICEF to synergise interventions between health, social and environmental sectors through expertise and operations in nutrition, WASH, social policy, and child protection through a gender responsive strategic approach.

4 PRIMARY HEALTH CARE COUNTRY PROFILES

4.1 China

Primary health care policy and development landscape

China (population 1.41 billion) is a middle-income country with a GDP per capita of $12,556 in 2021 having increased from US$ 318 per capita in the year 1990.[31] China has sustained economic growth rates of above 6 per cent per annum since 1991. Due to the impacts of the pandemic and control measures that were implemented, the growth rate dropped to 2.2 per cent in 2020 and has since recovered in 2021 to 8.1 per cent annual GDP Growth.[32] The IMF reports that despite a large increase in income inequality in China, most of the population experienced a rise in real incomes over recent decades. The percentage of the population living in poverty has decreased by 86 per cent between 1980 and 2013.[33] Economic growth, and the modernization and urbanization associated with it, is a dominant feature of the development landscape in China.

The other dominant feature of the landscape is the demographic transition that has been underway in China for decades. The total fertility rate in China has declined from 7.3 in 1963, to 2.5 in 1990, and thereafter to 1.3 in 2021.[34] There are estimated to be 168 million adolescents in China in 2023, which, though representing a high number, represents a declining 12 per cent share of the total population (11 per cent boys and 13 per cent girls), and reflects the ageing of the population in that country.[35]

Modernization and demographic change are reshaping the epidemiological landscape of the country. As has been demonstrated in other modernising societies of East Asia and the Pacific, the trend is towards a rise in non-communicable diseases (NCDs) and relative decline in communicable diseases, with associated changes in causes of death as well as the behavioural and social risks associated with these deaths. There has been a 63.7 per cent increase in the prevalence of hypertensive heart disease and a 39.9 per cent increase in ischaemic heart disease between 2009 and 2019.[36] A study on the economic and disease burden of diabetes in 33 provinces of China published in 2023 has found that the prevalence of diabetes in adults aged 20–79 years was projected to increase from 8.2 per cent to 9.7 per cent during 2020–2030, with the total economic costs projected to increase from 1.58 per cent to 1.69 per cent of GDP in the same period.[37] Ischaemic heart disease, lung cancer and diabetes are now the leading causes of death and disability combined in China.[38]

The all-cause mortality rate for adolescents was reported by UNICEF to be low in China at just 1 per 1,000 young people aged 10–19 in 2021. The main causes of mortality in 2019 were road injury and drowning for both boys and girls, with leukaemia being the second cause of death for girls. These findings reflect the downward trend of communicable diseases and the rise of causes of mortality due to social and behavioural

31 See https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=CN.
32 See https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?locations=CN.
33 S. Jain-Chandra et al., 2018, Inequality in China – Trends, Drivers and Policy Remedies. IMF Working Paper No. 2018/127.
34 See https://data.worldbank.org/indicator/SP.DYN.TFRT.IN?locations=CN.
35 See https://data.unicef.org/adp/country/cn/.
36 See www.healthdata.org/results/country-profiles.
37 J. Liu et al., 2023, Projected rapid growth in diabetes disease burden and economic burden in China: a spatio-temporal study from 2020 to 2030. The Lancet Regional Health – Western Pacific vol. 33, No. 100700.
38 See https://www.healthdata.org/results/country-profiles.

factors associated with modernization. This trend is reflected in the rising percentage of young people who are overweight, which has increased from 1 per cent in 1975 to 25 per cent in 2016 with the trajectory indicating that this trend is set to continue.[39] [see section on health coverage for more information on adolescent health].

Along with rapid economic growth, another main feature of the development landscape is the pace of urbanization in the country. Information from the United Nations Population Division republished by the World Bank indicates that in 2021, 63 per cent of the population of China now lives in urban areas. This is a dramatic shift from the 26 per cent reported to be living in urban areas in 1990.[40] By 2009 when the urbanization rate had reached 51 per cent, the rural to urban movement of people was already being described as the greatest human migration in history.[41] Given this rapid trajectory of urbanization and economic growth, China is set to reach the 80 per cent urbanization rate characteristic of most high-income countries.

Decentralization has been a feature of the development strategy in China since market reforms were initiated from the 1980s. While the central level National Health Commission has responsibility for developing health policies, strategies and development plans, local governments at each level (province, city, county, township) directly administer health services and public health programmes and develop resource allocation plans for their catchment areas.[42]

In summary, and as demonstrated by data trends on economics, fertility, and urbanization, it is not only the scale of the change that presents challenge for PHC policymakers and planners. It is the speed of the change, with social conditions being radically transformed over a single generation. The pace of social change accounts for the rapidity of the epidemiological transition, and as will be seen, increases policy and planning pressure to reform PHC.

39 See https://data.unicef.org/adp/country/chn/.
40 See https://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS?locations=CH.
41 P. Gong et al., 2012, Urbanisation and health in China. *Lancet* vol. 379, No. 9818, pp. 843–852.
42 WHO Regional Office for the Western Pacific, 2015, China health system review. *Health Systems in Transition,* vol. 5, No. 7.

Primary health care coverage and equity

Health coverage

The UHC Essential services coverage index has been scaled up from .5 in the year 2000 to .82 in 2019.[43] Along with Thailand, China has now achieved the highest UHC Index coverage in the region. However, due to the size of the population, the unmet need represents a formidable challenge for PHC planners and policymakers. A vast majority of deliveries are now by trained personnel (99 per cent),[44] and a very high percentage of women receive four antenatal care visits based on estimates between 2012 and 2017.[45] Immunization coverage (DPT3) has been above 95 per cent since 2009 and was sustained at 99 per cent during the pandemic.[46] This result contrasts with a general drop in coverage associated with pandemic impacts that was experienced by countries such as Indonesia and the Philippines in 2020.[47] There have been few measles cases in China since outbreaks that took place between 2013 and 2017, with 52,628 cases in 2014 and 24,820 cases in 2016.[48]

Maternal, child and neonatal mortality rates over recent decades in China have declined appreciably. Under-five mortality has declined from 54.7 per 1,000 live births in 1990 to 6.9 in 2021,[49] and under age 1 mortality from 41.6 per 1,000 live births to in 1990 to 6.8 in 2019. Maternal mortality was 16.1 per 100,000 live births in 2021 according to the most recent government reports having declined from 38/100,000 in the year 2000.[50]

There is no data on new infections of HIV per 1,000 uninfected population in 2021 on the Global Health Observatory database.[51] Although there have been large reductions in the incidence of tuberculosis over recent decades, China is among the top 30 countries globally for tuberculosis incidence, with an estimated 833,000 cases in 2019 (58 per 100,000),[52] compared to estimated rates of 134 per 100,000 globally and 98 per 100,000 in the Western Pacific region in 2022.[53]

A population-based study of cardiovascular health across China in 2020 found that cardiovascular health among adults was "extremely low" with diet and blood pressure the main metrics associated with low rates of cardiovascular health. The authors concluded there were substantial spatial variations across the provinces, which rationalises application of localized health strategies to narrow geographical inequities. The level of socioeconomic development was the strongest factor associated with cardiovascular health.[54] The four health behaviours for cardiovascular health (smoking, body mass index, physical activity and diet) are generally initiated in the adolescent age group.[55] UNICEF confirms this with its published data on NCDs risks in adolescence in China which confirms high levels of insufficient physical activities in the past month (80 per cent boys, 89 per cent girls) and steadily increasing rates of overweight status (32 per cent boys, 18 per cent girls).[56] Even though adolescent mortality in China has halved in the past 30 years, modernization is posing new and emerging threats not only for adolescents but for the health of people across the life course.[57] Taking

43 See www.who.int/data/maternal-newborn-child-adolescent-ageing/indicator-explorer-new/mca/uhc-service-coverage-index-(sdg-3.8.1).
44 See www.who.int/data/gho/data/indicators/indicator-details/GHO/births-attended-by-skilled-health-personnel-(-).
45 See www.who.int/data/gho/data/indicators/indicator-details/GHO/antenatal-care-coverage-at-least-four-visits.
46 See https://immunizationdata.who.int/pages/coverage/dtp.html?CODE=IDN&ANTIGEN=DTPCV3&YEAR=
47 See https://data.unicef.org/topic/child-health/immunization/.
48 See https://immunizationdata.who.int/pages/incidence/MEASLES.html?CODE=CHN&YEAR=
49 See https://data.unicef.org/resources/sowc-2021-dashboard-and-tables/.
50 See www.who.int/data/gho/data/indicators/indicator-details/GHO/maternal-mortality-ratio-(per-100-000-live-births).
51 See www.who.int/data/gho/data/indicators/indicator-details/GHO/new-hiv-infections-(per-1000-uninfected-population).
52 See www.who.int/china/health-topics/tuberculosis; S. Yu, J. Ma and Z. Jia, 2020, Estimating the Incidence of Tuberculosis – Shanghai, China, 2025–2050. *China CDC Weekly* vol. 2, No. 52, pp. 995-998.
53 WHO, 2022, *Global Tuberculosis Report 2022*.
54 M. Zhang et al., 2020, Geographical variations in cardiovascular health in China: A nationwide population-based survey of 74,726 adults. *Lancet Regional Health – Western Pacific* vol. 3, No. 100033.
55 B. Dong et al., 2020, Adolescent Health and Healthy China 2030: A Review. *Journal of Adolescent Health* vol. 67, No. 5 supplement, pp. S24–S31.
56 See https://data.unicef.org/adp/country/cn/.
57 B. Dong et al., 2020, Adolescent Health and Healthy China 2030: A Review. *Journal of Adolescent Health* vol. 67, No. 5 supplement, pp. S24–S31.

this into consideration, the Healthy China Vision 2030 is in the process of adopting multisector measures to address adolescent health [see policy and strategy section].

In summary, evidence on health coverage and outcomes demonstrates that the PHC system in China has improved coverage and equity for an increasing majority of the population over the past two to three decades. As the health needs of the community change in response to social, epidemiological, and demographic change, the question remains as to whether the health system can sustain these gains, as well as extend further to reach the more vulnerable sections of the community, which is the subject of the following section.

Health equity

The fact that China has scaled up UHC extensively over the past 20 years demonstrates improvements in access to health care for large sectors of the population that were previously had limited access. Despite these coverage and equity gains, evidence from the literature indicates that there remain pockets of low coverage and financial and other barriers to care that require ongoing policy and planning attention.

In China, an analysis over the past seven decades has shown that the highest incidence of vaccine preventable diseases is in the western provinces.[58] A meta-analysis from 2017 found that, after taking into account the effects of socioeconomic factors, ethnic minority women in western China were far less likely than majority Han women to immunize their children.[59] Despite these inequities and diversity in child health mortality outcomes across the provinces of China, there is evidence that the overall development trajectory is benefitting minority groups. A study on mortality decline between 1992 and 2013 in 33 provinces of China found that the ten most populous minority groups had experienced greater annual reductions in under-five mortality rates than the average rate of progress towards the targets of Millennium Development Goal 4.[60]

The challenge of equity of access for ethnic minorities is a consistent findings of the country profiles. Countries such as Cambodia, China, Myanmar, Indonesia, the Philippines and Viet Nam are confronted by the challenge of equity of access, use and coverage for remote ethnic minorities.

Along with ethnicity and geographic remoteness, urbanization has exposed gaps in the PHC system, just as it has done elsewhere in East Asia and the Pacific. Although urbanization offers opportunities for economic and educational advancement, it poses public health threats related to air pollution, occupational and road hazards, and the risks associated with changing diets and levels of physical activities. In a situation that has some similarities with Myanmar, Cambodia, Mongolia and Viet Nam, the system of civil registration can act as a barrier to health and social services in urban areas when large sections of the population are unregistered rural to urban migrants, which then leads to under use of health services by these population groups. Along with underutilization of services, there have been gaps in immunization coverage in the children of urban migrants, and concerns regarding level of surveillance and management of communicable diseases, including tuberculosis and HIV in these populations.[61] A further two aspects of health equity in China are spatial access to health-care services, especially in western China,[62] and financial protection, where out of pocket expenditures on health care remains a public health concern for sections of the population [see section on health financing below].

The example of tuberculosis and the multidrug-resistant version of this communicable disease illustrates some of the challenges and opportunities for reducing health inequities in China. As study on tuberculosis prevalence in China between 1990 and 2016 found that subnational inequality in tuberculosis burden was

58 J. Pan et al., 2021, Impact of immunization programs on 11 childhood vaccine-preventable diseases in China: 1950–2018.
59 Y. Huang et al., 2018, Ethnicity and maternal and child health outcomes and service coverage in western China: a systematic review and meta-analysis. *Lancet Global Health* vol. 6, No. 1.
60 Y. Wang et al., 2016, Under-5 mortality in 2851 Chinese counties, 1996–2012: a subnational assessment of achieving MDG 4 goals in China. *Lancet* vol. 387, No. 10015, pp. 273–283.
61 P. Gong et al., 2012, Urbanisation and health in China. *Lancet* vol. 379, No. 9818, pp. 843–852.
62 C. Shen et al., 2020, Measuring spatial accessibility and within-province disparities in accessibility to county hospitals in Shaanxi Province of Western China based on web mapping navigation data. *International Journal for Equity in Health* vol. 19, No. 99.

evident across provinces of China and was higher and increasing in poorer provinces.[63] A study of multidrug-resistant tuberculosis in three cities in China in 2020 found that financial hardship was the main barrier to care, especially among the poorest groups.[64] Multidrug-resistant tuberculosis can contribute to catastrophic health care costs for patients with low socioeconomic status who may need hospital stays, all of which could be prevented through financial and social protection policies.[65] An example of targeted pro-equity response is in the area of HIV, where the "Four Free and One Care" policy enables free access to testing, treatment and care services for urban poor and rural people living with HIV.[66] The Government of China has designed and implemented a programme of health reform which has many pro-equity planning and resource allocation characteristics [see section on health reform].

Models of care

The health system is administered across four levels in China with the National Health Commission and other health authorities responsible for management at provincial, city and county levels, with no independent administration at the township level. At each administrative level, there are medical service and public health delivery systems. In rural areas county level hospitals are the centre of the system, with township and village-level clinics as the grassroots level. County-level hospitals provide acute care and basic health services for the catchment population, as well as and providing technical support for township- and village-level clinics. The urban health-care system includes community-level facilities that provide basic health services and supported technically by city hospitals and by higher level general hospitals. Community health centres, township hospitals and village clinics provide primary medical care services and essential public health services. Traditional medicine hospitals are part of the health service delivery network in urban and rural areas, and the public system is complemented by a private sector with its expanding role in service delivery and in health-care financing.

The health sector review from 2015 found that "the current health resource allocation is mostly concentrated in hospitals" in the urban areas and that the number of outpatient visits to public hospitals was 1.7 times those to PHC facilities.[67,68] These examples of hospital centrism, primary care bypass, and health workforce concentration in urban areas and higher end facilities is a constant theme that runs through most of the PHC profiles from the Pacific Island States to China and Mongolia and provides a strong case for regional and national support for rebuilding of the primary care system through human resource development, management and planning [see policy and strategy section].

The Law on Basic Medical and Health Care and the Promotion of Health (2019) recommended establishment of models of care based on coordinated and collaborative medical consortium at the county level with the collaborative mechanisms involving private sector provision. At the primary level of care the law stipulates that contract-based care will be provided by family doctors in primary-level medical and health-care institutions. Under this strategic purchasing arrangement, family doctor service teams that sign contracts with local communities and residents for provision of care (articles 30 and 31). These initiatives are consistent with development in models of care in other countries of the region such as Indonesia, the Philippines and Thailand, where development of primary care networks or collaborations are regarded as essential to meet the complex health care needs of the population.

63 L. Guo et al., 2019, Health disparities in tuberculosis incidence, prevalence, and mortality in China (1990 to 2016) using data from the Global Burden of Disease Study 2016: a longitudinal analysis. *Lancet* vol. 394, p. S15.
64 P. Zhang et al., 2020, Challenges faced by multidrug-resistant tuberculosis patients in three financially affluent Chinese cities. *Risk Management and Healthcare Policy* vol. 13, pp. 2387–2394.
65 Y. Wang et al., 2020, Household financial burden among multidrug-resistant tuberculosis patients in Guizhou province, China: cross-sectional study. *Medicine (Baltimore)* vol. 99, No. 28.
66 WHO, 2021, *State of Inequality: HIV, tuberculosis and malaria.* Geneva.
67 WHO Regional Office for the Western Pacific, 2015, China health system review. *Health Systems in Transition,* vol. 5, No. 7.
68 Ibid.

Public health and emergency preparedness

From a public health perspective, tobacco is the main risk factor associated with the most death and disability combined in China between 2009 and 2019.[69] Smoking rates have been reported to be alarmingly high, and air pollution was reported to have contributed to an estimated 11 per cent of deaths in 2018.[70] In a familiar pattern with other PHC profiles across East Asia and the Pacific, there have been sharp rises in metabolic risks between 2009 and 2019 including for body mass index (45.5 per cent increase), high LDL (26.9 per cent increase), high blood pressure (21.8 per cent increase) and kidney dysfunction (15 per cent increase). There have been moderate reductions in air pollution and occupational risks between 2009 and 2019, along with a large reduction in road traffic injuries of 24 per cent, which suggest that some public health measures are starting to have effects. A 45 per cent reduction in malnutrition over this time frame further demonstrates the national and regional trend of decreasing malnutrition and increasing obesity.[71]

As outlined above in models of care, public health and medical services operate as separate systems. The public health delivery system is composed of disease prevention and control institutions, maternal and child health (MCH) and health education institutions, institutions involved with health information and research and with services management. Currently public health and treatment services tend to be isolated from each other, and that there are lessons from the COVID-19 pandemic for more balanced investments and integration of public health and treatment services in the country.[72] There were also lessons learned regarding measures to sustain services for the population during emergencies. As noted elsewhere, maintaining childhood immunization coverage during the pandemic was an important achievement. There were however examples of service interruption. One study identified that more than a fifth of people living with HIV reported supply gaps for their medication, and more than two thirds were concerned about essential medicines supply disruptions and clinical care.[73]

In China, public health lessons learned from the SARS pandemic in 2002 facilitated and informed the public health response to COVID-19 in 2020. Systems from SARS were developed including quarantine measures, and surveillance and contact tracing which were more readily applied for the COVID-19 pandemic. Three other important lessons from SARS included the role of transparency in ensuring social stability, as well as the importance of disease surveillance and testing laboratories. Building on these lessons from SARS, a narrative review of the COVID-19 pandemic response found that there were four factors or special importance. These were lockdown measures, implementation of interagency mechanisms to control the epidemic outside of Wuhan, daily reporting of cases and zero cases by all cities and provinces of China, and finally implementation of community level surveillance and support systems. Other factors associated with the strength of the response included coordination at levels of government, citizen compliance with control measures, use of digital communications for risk communication, collaboration with every level of governmental and civilian authorities, community-based surveillance and use of early detection and isolation measures.[74]

Given the importance of the role of essential public health functions in the response, a recent commentary has pointed out the importance of improved investment in prevention and public health in China. In line with global directions for PHC orientation of health systems, treatment and prevention need to be better integrated to improve the response of public health systems to both infectious disease and emerging non-infectious disease challenges such as diabetes, hypertension, stroke, cancer, and tobacco use. Consistent with findings from other PHC profiles, this commentary makes the case to support this PHC direction through building

69 See www.healthdata.org/results/country-profiles.
70 The Lancet Public Health, 2018, Public health in China: achievements and future challenges. Editorial, vol. 3, No. 10.
71 See www.healthdata.org/results/country-profiles.
72 J. Xu et al., 2021, China's public health system: time for improvement. *Lancet Public Health* vol. 6, No. 12, pp. e869–e870.
73 S. Sun et al., 2020, Challenges to HIV Care and Psychological Health During the COVID-19 Pandemic Among People Living with HIV in China. *AIDS and Behavior* vol. 24, No. 10, pp. 2764–2765.
74 M. Zanin et al., 2020, The public health response to the COVID-19 outbreak in mainland China: a narrative review. *Journal of Thoracic Disease* vol. 12, No. 8, pp. 4434–4449.

public health skills of health professionals to address increasingly complex public health issues. This will involve extending public health education beyond medical issues to incorporate skills and knowledge from other disciplines including in law, politics, and the social sciences.[75]

These lessons from COVID-19 and previous pandemics align very well with the global PHC framework that supports increased integration of public health and treatment services, and the necessity for engaging more with communities and other sectors for development of more PHC oriented health systems and societies.

Health financing

Although there has been expansion of the private sector in China over the past few decades, the public sector is the main provider of health care in China, with 82 per cent of inpatient care being provided by public hospitals in 2017.[76] Data sourced through the Global Health Expenditure data base confirms general trends in health care financing in China.[77] Government spending as a percentage of current health expenditures has increased from 32.8 per cent in the year 2005 to 54.7 per cent in 2020. The level of priority set on health by government is demonstrated by the percentage of domestic general government expenditures on health as a percentage of total government expenditures, which has increased from 7.5 per cent in the year 2000 to 8.4 per cent in 2020. Corresponding with this increased expenditure by government on health, out of pocket expenditures as a percentage of current health expenditures has declined from 57.7 per cent in 2005 to 34.8 per cent in 2020. Social health insurance has expanded from 2.2 per cent of total health expenditures to 13.94 per cent in 2019. As demonstrated in the figure on trends in health expenditures [see infographic] the decline in out-of-pocket spending as a share of current health expenditures has declined relative to the scale up of social health insurance and voluntary health insurance, which together make up 33 per cent of the sources of current health expenditure in 2020, compared to 15 per cent in 2005.

The 2019 Law on Basic Medical and Health Care and the Promotion of Health stipulated that basic health services should be delivered to the population free of charge. Despite these commitments as well as the promising trends in state investment and health insurance, there remain challenges in China with rates of catastrophic out of pocket payments for health care. Comparative data on SDG target 3.8.2 [percentage of household income on payments for health] demonstrates that China has the highest rates of catastrophic health payments in East Asia and the Pacific. In Asia generally, 15 per cent of households are investing more than 10 per cent of their household incomes on health and the proportion has increased from 11 per cent from the year 2000. In Oceania the figure is 4.65 per cent in 2019. In China, current data available through the global health expenditure data base indicates that 24.3 per cent of households spent more than 10 per cent of their household incomes on health in 2018, which is a figure that has increased substantially from a reported 12.2 per cent in the year 2002.[78]

Given that financial barriers to access to care have been a long-standing problem, a series of health reforms were initiated in 2009 that included establishment of national health insurance and financial protection systems which are discussed further in the health reform section below.

75 J. Xu et al., 2021, China's public health system: time for improvement. *Lancet Public Health* vol. 6, No. 12, pp. e869–e870.
76 Q. Meng et al., 2019, What can we learn from China's health system reform? *BMJ* vol. 365.
77 See https://apps.who.int/nha/database/country_profile/Index/en.
78 See www.who.int/data/gho/data/indicators/indicator-details/GHO/population-with-household-expenditures-on-health-greater-than-10-of-total-household-expenditure-or-income-(sdg-3-8-2)-(-).

Health workforce

On a regional and global standard, health workforce densities in China are high. Health workforce to ratio for nurse midwifes is 2.7 per 1,000 population (2017) and for physicians it is 2.39 per 1,000,[79] which compares favourably with global targets for UHC of 4.45 professional workforce per 1,000 as well as with workforce staff to population ratios in other countries of the region. In terms of workforce mix, the health system review in 2015 pointed out that China has been challenged by a shortage of nursing staff over a long period of time. As in other Asia-Pacific countries, there have been policy challenges with workforce distribution between urban and rural areas, with the health system review pointing out that in 2012, there were 8.54 health-care professionals per 1,000 population in urban areas compared to 3.41 in rural areas. Most health personnel are female in China (67.2 per cent)[80] as is the case with most other East Asia and Pacific countries.

Consistent with findings from other countries, the main shortages of health staff have been in PHC institutions which presents real barriers to development of the PHC system. One of the reforms proposed to address this imbalance is through development of a system of general practice or a "GP centred health team" to address problems of accessibility to care and costs of health services for the population.[81] The proposals by Government for health system reform (refer to Reform Measures and 2019 Basic Health Care and Health Promotion Law) both suggest increased roles of the health workforce in public health and in health networks for basic care.

Community engagement and community health workers

In the rural areas of China, village doctors have been described as the backbone of the health system, through providing basic medical care and public health services in the communities.[82] Community health worker roles were initiated in China in 1968, when "barefoot doctors" were received short-term training to provide PHC services for rural residents. From 1985, China stopped using the term barefoot doctor and shifted to a model of village doctors. In the 2019 Law on Basic Medical and Health Care stated that Medical and health-care professionals refer to licensed doctors, assistant licensed doctors, registered nurses, pharmacists, laboratory technicians, imaging technicians, village doctors and other professionals engaging in medical and health-care work. The village clinics may have certified village doctors or other health workers without the certificate.[83]

Several recent reviews and commentaries have highlighted the significance of the role of village doctors in basic health care, and some of the challenges and opportunities associated with their work. A review of the history of the development of village doctors workforce identified the main role was based on the partnerships established between the community and the formal health system. The four areas of partnership and engagement were joint ownership and design of CHW programmes, collaborative supervision, packages of incentives (financial and non-financial) and a monitoring system using data from both the health system and community.[84] Another review found that village doctors were being linked to the Health System more following the health reforms of 2009, which has had some impacts on their level of remuneration.[85] A commentary on the plight of China's village doctors found that village doctors cannot meet the growing health-care needs in rural areas because of insufficient medical knowledge, and limited opportunities for educational training to improve their skills. These gaps in primary care skills mean that patients then go

79 See www.who.int/data/gho/data/themes/topics/health-workforce.
80 WHO Regional Office for the Western Pacific, 2015, China health system review. *Health Systems in Transition,* vol. 5, No. 7.
81 Ibid.
82 S. Zhang et al., 2015, How China's new health reform influences village doctors' income structure: evidence from a qualitative study in six counties in China. *Human Resources for Health* vol. 13, No. 26.
83 WHO Regional Office for the Western Pacific, 2015, China health system review. *Health Systems in Transition*, vol. 5, No. 7.
84 D. Hu et al., 2017, Development of village doctors in China: financial compensation and health system support. *International Journal for Equity in Health* vol. 16, No. 1, p. 9.
85 S. Zhang et al., 2015, How China's new health reform influences village doctors' income structure: evidence from a qualitative study in six counties in China. *Human Resources for Health* vol. 13, No. 26.

directly to large hospitals in big cities to access better medical services. Recommendations to address this situation include improved recognition, remuneration, career pathways, and rural health equipment and facilities and other forms of support.[86]

Health Reforms in China

China has proceeded through a series of health reforms since the 1990s, principally in response to issues of access by the population to health services and in relation to the cost and affordability of services. In the 1990s most of the population did not have financial protection and out-of-pocket payments for health accounted for 60 per cent of total health expenditure at the time.[87] Market-based reforms in the 1980s were associated with inadequate public financing for health. This contributed to lower access to care, health inequalities and a depletion of the health-care workforce. To counter these effects, a programme of health reform was introduced in 2009 that included increased financing of PHC, the introduction of universal health insurance and a basic public health services program, and the establishment of an essential drugs system.[88] Other analysts have pointed out that reforms for the decade following 2009 concentrated in five areas which were aimed to address the long-standing problem of access and affordability. These five areas were social health security, essential medicines, PHC, basic package of health services and public hospitals.[89]

The Basic Public Health Services programme aimed to support community health organizations (community health centres, stations and village clinics) to provide a defined basic package of health services throughout the country. The package focuses on maternal and child health, care for older people and chronic disease patient care, and health education including controlling risk factors relating to tobacco, alcohol, and obesity. There is an emphasis on NCDs in line with WHO recommendations in this area and to the current epidemiological situation in China where NCDs now pose the major threat to public health.[90] In the context of reform, the purpose was to ensure universal access regardless of income, residence, or other social characteristics, which demonstrates the pro-equity direction of the reform strategy. This pro-equity direction is reflected in the way the reforms are being financed, where the central government finances low-income provinces on a per capita basis, and where local governments allocate their own finance in higher income provinces.[91] For example, PHC is subsidized 80 per cent by the Government in the 12 poorest provinces. The subsidy is 60 per cent for the next ten poorest provinces, 50 per cent for three average-income provinces, 30 per cent for four better-off provinces, and 10 per cent for the two richest provinces (Beijing and Shanghai).

Evidence has been published in recent years which demonstrates that the China health reforms are having impact on both health coverage and equity. A longitudinal analysis of the impacts of health reform on trends in resource allocation for PHC in China demonstrated that although there have been improvements in resource allocation in terms of finance and human resources and in developments of the PHC system, the increases are insufficient to achieve the goals of the 2009 health reform, with outpatient visits increasing by 8 per cent between 2009 and 2019.[92] Other assessments found increased coverage of social health insurance schemes are related to the improved availability and accessibility of health care.[93]

The reduction in health inequities supports the case that health reforms have had population health impacts. Differences in the maternal mortality rate between low-, middle-, and high-income provinces and between urban and rural areas have substantially decreased between 2009 and 2017.[94] The publication of evidence of increased coverage in the UHC index from 59 per cent in 2005 to 82 per cent in 2019, along with the

86 Q. Ni, F. Xie and M. Wu, 2016, The plight of China's village doctors. *Lancet* vol. 388, No. 10062, pp. 2869–2870.
87 Q. Meng et al., 2019, What can we learn from China's health system reform? *BMJ* vol. 365.
88 X. Li et al., 2017, The primary health-care system in China. *Lancet* vol. 390, No. 10112, pp. 2584–2594.
89 Q. Meng et al., 2019, What can we learn from China's health system reform? *BMJ* vol. 365.
90 X. Li et al., 2017, The primary health-care system in China. *Lancet* vol. 390, No. 10112, pp. 2584–2594.
91 Q. Meng et al., 2019, What can we learn from China's health system reform? *BMJ* vol. 365.
92 J. Feng et al., 2022, Development trend of primary healthcare after health reform in China: a longitudinal observational study. *BMJ Open* vol. 12, No. 6.
93 Q. Meng et al., 2019, What can we learn from China's health system reform? *BMJ* vol. 365.
94 Ibid.

reduction in out-of-pocket expenditures from 58 per cent to 35 per cent over the same period, further demonstrates that reform directions are likely to be supporting improved accessibility of essential health services to the population [see infographic]. These trends however do not underestimate the challenges of ongoing reform with respect to gender, socioeconomic, ethnic and local development contextual factors that influence access, increased costs of care associated with the NCD epidemic, as well as the ongoing reporting of high catastrophic health payments on essential health care [SDG target 3.8.2, see section on health financing and infographic].

In summary, given the information on gaps in the UHC index and evidence of spatial, socioeconomic and ethnicity related health inequities in China and across the region, financial protection and investment in front-line health services using a primary health care approach is central to realising the social justice vision of the Astana Declaration on PHC and UHC through the Operational Framework for Primary Health Care.

Policy and strategy directions for primary health care in China

In 2009, a programme of health reform was announced. The main elements of these reforms which are of high relevance to PHC are as follows:

- Increased financing of PHC
- The introduction of universal health insurance
- Implementation of a basic public health services program
- The establishment of an essential drugs system

In 2016, the Healthy China Plan 2030 strategized responses to adapt and respond to the changing epidemiology of China and especially the need for prevention activities to respond to the NCD epidemic. The plan emphasizes social and behavioural change to support grass roots prevention activities including early screening and diagnosis for chronic diseases. A major focus of the Healthy China Plan involves measures to support healthy lifestyles and physical fitness, the development of health literacy and school health programmes and implementing a national smoke-free law and a Healthy Cities approach. From a health system perspective, the Healthy China 2030 Plan commits to design of both basic package of health services and a major public health service package, as well as measures for financial protection and scaling up the national health insurance.

In 2019, China implemented the Basic Health and Health Care and the Promotion of Health Law, which set out the broad approach and requirements for development of PHC institutions. The law has provision for basic medical and health-care services, medical and health-care institutions and professionals, guarantees of funding and medical supplies, and health promotion. The measures are consistent with the main components of the PHC approach and reflect political commitment and leadership by the State to achive UHC. A summary of some of the main areas relevant to the PHC approach are as follows:

- ***Models of care:*** Establishment of medical consortia at county level and contract-based family doctor teams at the primary level of care (articles 30 and 31). This is referred to elsewhere as establishment of a rural medical and health-care service network and an urban community health-care service network (article 34).

- *Financing and resource allocation:* Basic health care and immunization services are provided free of charge at the point of care. The law requires the State to set up basic medical insurance funds within a multilevel medical security system. National health insurance provides coverage for a basic package of health services.
- *Strategic purchasing:* Medical and health-care institutions run by the private sector shall enjoy the same right as government-run medical and health-care institutions in terms of contract with basic medical insurance funds (article 41).
- *Health workforce:* Establishment of retention and professional development strategies for the health workforce in rural and remote areas.
- *Digital health:* Advancing application of information technologies in medical services, health information and artificial intelligence.

In summary, national laws, policies and strategies are aligned with the PHC approach. Although there are gaps in relation to front-line health services, financial protection for catastrophic illness and integration of public health into health services management and delivery, recent developments in health policy, laws and strategies support directions towards a more comprehensive model of PHC as outlined in the Global Operational Framework on PHC.

Priority actions for supporting the PHC approach in China through UNICEF and other Stakeholders.

What are the priority actions by UNICEF and other stakeholders for further development of the PHC approach in China? [According to PHC component or selected PHC lever]

Policy advocacy

The Government of China continues to increase its financing of the National Primary Health Care Service Package Programme annually. Despite tremendous changes in the national social and economic situation, the composition of PHC package, especially child related items, has not been systematically reviewed or updated since the programme was launched.

There is growing awareness and willingness to review and update the composition of the national PHC programme. UNICEF supported a national assessment on the PHC package of maternal and child health (2020–2021), in partnership with the National Health Commission (NHC). The key findings of the assessment as well as the latest evidence on issues relevant to PHC provide informative insights for key stakeholders in the broader review and reconfiguration of PHC, such as how equally accessible are PHC services for women and children? Does it meet the demands of women and children? How should PHC packages for women and children be optimized in terms of contents, delivery modality and financing mechanism?

UNICEF is supporting the Government of China to extend maternal and child health to adolescents. Adolescent health has been overlooked in health and social policy in China. To strengthen the evidence base for adolescent health services and policies, UNICEF China and Peking University Health Science Centre jointly released a Supplement to the Journal of Adolescent Health for China, entitled: Adolescent Health in China: Epidemiology, Policy, Financing and Service Provision.[95] It includes six papers, offers a comprehensive view of adolescent health needs in China, and investments needed to sustain and build on improvements over the longer term. It makes a strong case for broadening the adolescent health agenda to meet current needs in

95 See www.unicef.cn/en/press-releases/focus-adolescent-health-china-landmark-supplement-journal-adolescent-health; See www.sciencedirect.com/journal/journal-of-adolescent-health/vol/67/issue/5/suppl/S.

the areas of adolescent nutrition, mental well-being, and prevention of injuries and NCDs. The current financing mechanism on adolescent health stressed curative care and imposed a large portion of financial burden on households. Out-of-pocket spending is the major source of adolescent health financing, contributing to 57.9 per cent of total spending on adolescent health.

The findings from this supplement have been used to support the national adolescent health strategies and action plans development, particularly on the strategies related to financing and social protection for adolescent health. This strategy will be endorsed and co-released by multisectors in 2023. Once launched, the strategy will benefit every adolescent to survive and thrive in China.

Multisector collaborations

Cross-cutting engagement with government counterparts to leverage a sustainable financing mechanism is critical for scaling up implementation and maximizing the impact of UNICEF programmes. For example, the central government is increasingly aware of the importance of early child development (ECD) for children 0-3 but does not yet provide budget resources to help provinces and counties to improve access and quality. UNICEF China has worked together with the NHC and the Ministry of Finance with the aim of integrating ECD services into the PHC package and thus earmarked transfers for PHC.

UNICEF efforts have built on the positive results of a small-scale pilot to test a feasible and scalable health based ECD model for children aged 0–3, which was implemented with the NHC in 14 rural counties in the Western and Central regions in 2013–2020. The pilot aimed to promote high-quality nurturing care practices and services by using a range of channels, including parent counselling, home visits and care group activities. To support UNICEF advocacy for this integration, a costing analysis based on the pilots was carried out in the formative evaluation of the ECD pilot to estimate the cost of adding the three key ECD services to the PHC programme. This found that adding ECD services to the PHC programme is feasible and affordable at an additional cost of RMB 3.1 (labour cost only) to RMB 4.8 (full cost) per capita per year.

In 2022, the results were shared with relevant ministries, including NHC, the Ministry of Finance and the National Rural Revitalization Administration and a think tank involved in the reconfiguration of the National Primary Health Care Service Package. A national ECD scaling-up plan was endorsed by NHC, National Working Committee on Children and Women (NWCCW), and the National Rural Revitalization Administration in December 2022. This is a milestone after two years of advocacy and negotiations with key stakeholders including the Ministry of Finance. UNICEF convinced them to repurpose funds allocated under the Rural Revitalization Action Plan for ECD services. Success has hinged on the alignment with the government's major policy concerns about the risks arising from declining population growth. The Ministry of Finance has been persuaded and showed willingness to find a way to integrate the ECD package into PHC.

PHC health workforce

To increase the provision of quality basic services, UNICEF with partners help strengthen the skills and capacities of health workers at county and township hospitals and village clinics, particularly in undeveloped areas in China.

On capacity-building, UNICEF initiated a decentralized approach, supporting trainings at the subnational level, identifying and building capacity of subnational technical institutes, and relevant partners. To undertake this strategy, UNICEF is exploring new modalities, such as establishing centres of excellence at subnational level, expanding the talent pool, using digital and online systems, strengthening quality assurance, and promoting knowledge sharing and documentation at the subnational level. UNICEF supported government to develop the plan and define the role of the centres of excellence in promoting highly cost-effective interventions, such as early essential newborn care, infant and young child feeding (IYCF) and ECD, including outlining their responsibilities and standards for monitoring and performance evaluation.

Taking IYCF as an example, UNICEF made progress in addressing infant and young child nutrition with the launch of the National IYCF Counselling Training Programme. The programme will enhance the capacity of front-line health workers to deliver quality breastfeeding and complementary feeding counselling services for caregivers. The programme will train more than 290,000 primary health workers in 1,212 counties across 31 provinces by mid-2023, through the establishment of centres of excellence, training of trainers, and online and face-to-face training conducted for front-line health workers.

Digital health

UNICEF uses its global expertise to ensure that maternal, newborn and child health (MNCH) standards and indicators are aligned with global best practices on data collection, analysis and reporting. For example, from 2018 to 2020, the National Health Commission partnered with UNICEF to harness digital technologies to transform and forge a harmonized, comprehensive, and integrated MNCH information management system for improved decision-making for health programmes and policies. The key element of the project was to support the establishment of a unified national information platform which successfully integrated 23 existing vertical sub-systems. The critical step for it was to determine the data architecture around the life cycle. In line with national and international priorities and standards, the core set of 174 MNCH indicators was identified for reporting for systems, with series of standards developed to define and harmonize data exchange.

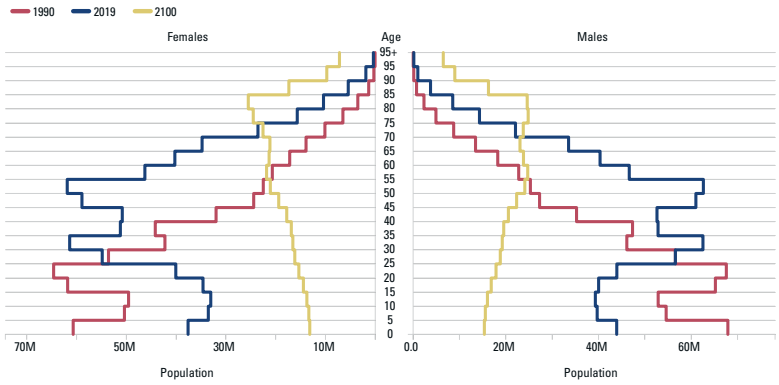
In China, digital technologies demonstrated tremendous potential to further transform the health system and, by mitigating barriers associated with distance and time, can improve how health services are accessed and delivered to further address these inequities in mortality and early childhood development. During 2018 to 2020, UNICEF supported the NHC to test a national app– the Healthy Family App (HFA). It was designed as a comprehensive, and interactive digital platform to enable mothers, caregivers, and health workers to access health information in real time, strengthen self-health management, and increase convenience of health-care services. The HFA has been specifically designed to fulfil multiple functions: online knowledge repository; facilitating household child-rearing practice and skills; facilitating communication between caregivers and health-care providers; increasing attendance for health visits through follow-up reminders.

During the pandemic, the HFA presented a unique advantage in mitigating the impacts of COVID-19 on pregnant women and children by adding a new section around the common concerns on COVID-19 and providing timely information to mother and caregivers. The HFA was used to assess the impact of COVID-19 on health-seeking behaviours among pregnant women and caregivers. Data collected has been used to inform the targeted actions of risk communication and community engagement.

UNICEF continues to increase the coverage and functionality of the HFA, including addressing some of the gendered barriers that women face in the health workforce, as they are often unable to access and use data effectively to improve their own performance, and among young mothers who can benefit from reliable and timely information that directly contribute to childcare practices. With UNICEF support, an IYCF module has been developed in the HFA. This new module targets both caregivers and health professionals, offering resources like guidance tools for IYCF counselling services, assessment of complementary feeding, IYCF education materials, and feedback surveys on IYCF practices. The HFA enables IYCF messages accessing to a larger number of caregivers and collecting real-time user feedback for programme monitoring and evaluation

PRIMARY HEALTH CARE DIRECTIONS - CHINA

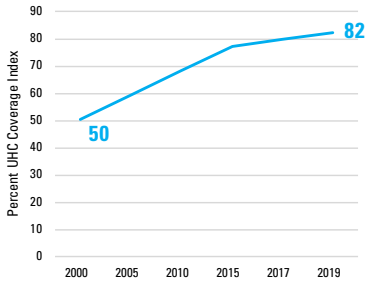
DEMOGRAPHIC TRANSITION



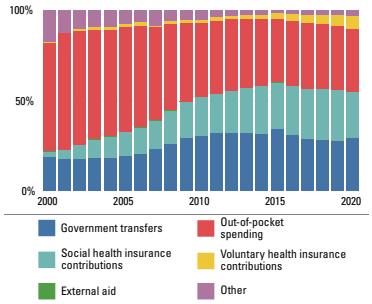
Source of Data: IHME: Country Profile Institute for Health Metrics and Evaluation (IHME). Seattle, WA: IHME, University of Washington, 2021. Available from https://www.healthdata.org/results/country-profiles

HEALTH COVERAGE AND HEALTH FINANCING (2000-2020)

UHC Coverage Index 2000 - 2019

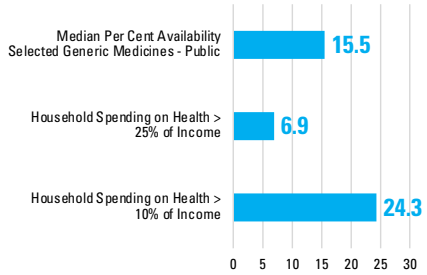


Sources of Health Expenditure 2000-2020



Sources of Data: UHC Coverage Index https://www.who.int/data/gho/indicator-metadata-registry/imr-details/4834 Expenditures: National Health Accounts Data Base: https://apps.who.int/nha/database/country_profile/Index/en

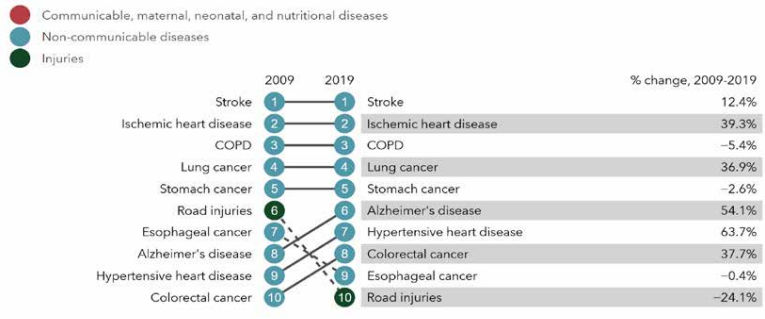
HEALTH INEQUITIES AND HEALTH ACCESS



- The **Maternal Mortality Rate** was 16.1 per 100,000 live births (2021), (Govt.Data) having declined from 38/100,000 in 2000 (GHO)
- There is unmet need of 18% for essential UHC index coverage (GHO)
- **Health Workforce** to 1000 Population ratio for nurse midwife is 2.7 (2017) and for physician 2 (World Bank/ GHO)
- 23.98% of the Population in China has > 10% of **annual household expenditure on health** (GHO, 2016)
- **Prevalence of NCDS:** Hypertension is 19.2%, Diabetes 8.8 % with diabetes prevalence rising from the previous assessment (PHCPI)

Source of Data: Source: World Health Organisation Global Health Observatory , UNICEF State of the Worlds Children 2023, , 2023. Primary Health Care Performance Initiative

EPIDEMIOLOGICAL TRANSITION



Source of Data: IHME: Country profile Institute for Health Metrics and Evaluation (IHME). . Seattle, WA: IHME, University of Washington, 2021. Available from https://www.healthdata.org/results/country-profiles

HEALTH CARE BENEFITS PACKAGE and PRIMARY HEALTH CARE POLICY DIRECTIONS

Health Care Benefits Package

The Health Law of 2019 legislated that basic public health services are provided by the state free of charge. (Article 15).

The "Basic Public Health Services" (BPHS) program, a part of the 2009 reforms, aimed to support community health organizations (community health centres, stations and village clinics) to provide the package of basic health services throughout the country.

The Basic Health Service Package was one of the main areas of the 2009 health reforms, which included investments in social health security, essential medicines, primary healthcare, basic public health service package, and public hospitals.

The essential health package focuses on maternal and child health, elderly and chronic disease patient care, and health education including controlling risk factors relating to tobacco, alcohol, and obesity. There is emphasis in the package on NCDs in line with WHO recommendations in this area and to the current epidemiological situation in China.

PHC Policy and Strategy Directions

In 2009, a program of health reform was announced. The main elements of these reforms were

1. Increased financing of primary health care,
2. The introduction of universal health insurance
3. A basic public health services program
4. The establishment of an essential drugs system.

In 2016, the Healthy China Plan involves measures to support healthy lifestyles and physical fitness, the development of health literacy and school health programs and implementing a national smoke-free law and a Healthy Cities approach.

In 2019, a Health Law on Basic Health Care and Health Promotion was legislated which set out the broad approach and requirements for development of Primary Health Care Institutions. The Law has provision for:

1. Rural medical and healthcare service network and an urban community healthcare service network
2. Establishment of medical consortia at county level and contract-based family doctor teams at the primary level of care

Sources: National People's Congress Law of the People's Republic of China on Basic Medical and Health Care and the Promotion of Health ; Healthy China Plan 2030; Li X, et al . The primary health-care system in China. Lancet. 2017 Dec 9;390(10112):2584-2594. doi: 10.1016/S0140-6736(17)33109-4. Epub 2017

4.2 Mongolia

Primary health care policy and development landscape

Mongolia (population 3.2 million) is a lower middle-income country with a most recent economic growth rates of 1.4 per cent and a GDP per capita of $12,400.[96] The country is undergoing a demographic and epidemiological transition. Despite the fertility rate rising from 2.1 in 2000 to 2.8 in 2020,[97] and the population is nonetheless ageing, with a higher proportion of the population in the 25–40-year-old age group.[98] The share of the general population who is in the adolescent age group has increased in recent years to 17 per cent of the population (n=562,605) of whom 27 per cent are reported to be living in poverty.[99]

Despite having of history of rural lifestyle and economy based on herding, Mongolia is now 68 per cent urbanized. It has been estimated recently that 59 per cent of the population of Ulaanbaatar are living in ger areas, most of whom are not connected to District heating and water systems, and with high levels of water and soil contamination. Along with the rising challenge of air pollution, environmental risk to human health is emerging a significant public health priority.

Along with urbanization, decentralization is another prominent feature of the development landscape. Prior to the political reforms which led to democratization and development of a market-based economy in the early 1990s, Mongolia implemented a centralized and planned health system, which was referred to as the "Semashko model" (1921–1990). However, since the transition to a market-oriented economy in 1990 private health care providers have emerged as key players in the operations of primary care. The PHC reforms in Mongolia involved a transition from a hospital-based curative services toward preventive approaches at the primary level of care. Under the Budget Law (2013), basic public services such as health and education became the responsibility of the local government units.[100] Given this transition to a decentralized model, family health centres (FHCs) provide services to catchment populations based on a performance contract with the local governor's office and health department.[101]

PHC, the primary level of care, is delivered by FHCs, soum health centres and inter-soum hospitals.[102] The model of FHCs is based on a public-private partnership for PHC service delivery in Mongolia. Private agencies operate FHCs through Government-owned and funded facilities.[103] The health system is based on a two-tier system that provides care through primary and secondary/tertiary levels with Tertiary care is provider in specialized centres in Ulaanbaatar. The PHC facilities (family and soum health centres) provide eight services, including immunization, maternity care, and home visits for under-five children. FHCs have the responsibility for managing public health prevention and promotion programmes. In Mongolia the lowest level of administrative unit in rural remote areas is the Bagh. Each Bagh has an established medical point with a trained Bagh feldsher (rural community health worker).[104] In urban areas, the FHCs became the first contact

96 See https://improvingphc.org/.
97 See https://data.worldbank.org/indicator/SP.DYN.TFRT.IN?locations=MN
98 See www.healthdata.org/mongolia
99 See https://data.unicef.org/adp/country/mng/
100 WHO, 2017, Primary health care systems (PRIMASYS): Comprehensive case study from Mongolia.
101 WHO Regional Office for the Western Pacific, 2013, Mongolia Health System Review. *Health Systems in Transition* vol. 3, No. 2.
102 Ibid.
103 WHO, 2017, PRIMASYS: Comprehensive case study from Mongolia.
104 WHO Regional Office for the Western Pacific, 2013, Mongolia Health System Review. *Health Systems in Transition* vol. 3, No. 2.

point for health care, especially for the poor and vulnerable, including older people, children and people with disabilities. FHCs have now become the "foundation" of the PHC system in Mongolia.[105] In remote areas, UHC partnership projects and SDG Gap signatories have been active in conducting models of integrated health services, especially for remote areas. These service models include home visits, mobile health services combined with home visits and health centre services.[106]

Primary health care coverage and equity

Health coverage

There have been substantial improvements in maternal and child health over recent decades. The under-five mortality rate in 2020 at 16 per 1,000 live births having declined from 64 per 1,000 in the year 2000.[107] The maternal mortality ratio declined from 155 per 100,000 live births in the year 2000 to 45 per 100,000 births in 2017.[108] Over 99 per cent of women are supported by a professional care giver for delivery, and imunization coverage rates for children above 95 per cent. The mortality rates for women and children's rates are some of lowest in the region (seventh lowest out of 24 countries), which demonstrates the impact of the health system strategy over the past 20–30 years on maternal and child health outcomes.[109]

In the period between 2009 and 2019, neonatal disorders and lower respiratory infections declined sharply as leading causes of death, with increases in road injury and cancers as main causes mortality in the same period. The five leading causes of death are non-communicable diseases (NCDs)[110] and these now represent 35 per cent of all deaths in adults. The prevalence of diabetes is 11.7 per cent and increasing, and hypertension prevalence is 29 per cent.[111] Obesity rates are increasing in Mongolia especially among the children under the age of five and in adolescents, with the country the second among the countries of the WHO Western Pacific Region for obesity rates among youth aged 11–17.[112] There are some important gaps in communicable disease control, with only 35 per cent of people living with HIV receiving ART, and an estimated 26.4 per cent of tuberculosis cases being detected and treated.[113] UNICEF reports that substance abuse and mental health problems are on the rise and since 2013 there has been a five-fold increase in percentage of suicide from all types of mortality among adolescents aged 10–14 since 2013.[114] Youth aged 15–24 made up 39 per cent of common sexually transmitted infections reported in 2017. Although the UHC coverage index has increased from 45 per cent in the year 2000 to 63 per cent in 2019, progress recently has stalled, with the index shifting little from 62 per cent coverage in 2015.[115]

Under the Budget Law, all PHC facilities are funded by the Government through a capitation-based funding model. Aimag and Ulaanbaatar city governors have service delivery and performance agreements with SHCs and FHCs. These service agreements define service scope, funding level, output, and performance requirements. A Health Insurance Fund reimburses for sales of essential medicines to insured people when prescriptions are received from SHC and FHC physicians.[116] The increase in demand related to NCDs is placing a lot of funding pressure on facilities, not only in terms of care, but also in terms of public health support for prevention and promotion. One assessment found that PHC funding remains low compared to per-capita

105 Altantuya Jigjidsuren, Bayar Oyun and Najibullah Habib, 2021, Supporting Primary Health Care in Mongolia: Experiences, Lessons Learned, and Future Directions. ADB Working Paper No. 35.
106 See www.who.int/news-room/feature-stories/detail/mongolia-s-mobile-health-clinics-bring-primary-health-care-to-vulnerable-communities.
107 See https://data.worldbank.org/indicator/SH.DYN.MORT?locations=MNhttps://data.worldbank.org/indicator/SH.DYN.MORT?locations=MN.
108 See https://data.worldbank.org/indicator/SH.STA.MMRT?locations=MN.
109 See https://improvingphc.org/.
110 See http://www.healthdata.org/mongolia.
111 See https://improvingphc.org/.
112 Government of Mongolia, State Policy on Health (2017–2026).
113 See https://improvingphc.org/.
114 See https://www.unicef.org/mongolia/.
115 See https://apps.who.int/nha/database/country_profile/Index/en.
116 WHO, 2017, PRIMASYS: comprehensive case study from Mongolia.

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payments for PHC in other countries at a similar level of development and is insufficient for provision of good quality basic services.[117] A concerning trend in analysis of health expenditures demonstrates that the proportion of government transfers has declined from 64 per cent in 2000 to 39 per cent in 2019, with the gaps being taken up by increasing rates of out of pocket expenditures on health, which have expanded from 20 per cent in 2000 to 35 per cent in 2019. Lower priority for health is reflected in the finding that government health expenditure as a percentage of general government expenditure declined from 12.3 per cent to 6.8 per cent in the same period.[118]

Health equity

Ensuring accessibility and availability of health services for poor and vulnerable citizens has remained a health system and social challenge in Mongolia over several decades. Vulnerable groups include the urban poor, remote area residents and migrants who lack the required civil registration. In its case study from Mongolia, WHO found that 21.4 per cent of all FHC clients are poor and vulnerable people, with the situation being most challenging in FHCs in the peri-urban areas of Ulaanbaatar. Remoteness is a barrier to household access to health in rural areas. The average distance from a rural health centre to the nearest provincial general hospital, as well as to reach a rural household for PHC service delivery, is 100 kilometres. Some inequities in access to health facilities are based on socioeconomic status. Attendance rates at SHCs and FHCs is twice that of the richest people, and the rate of attendance at private hospitals is 5–10 times less. The richest people accessed health services at central specialized centres 2–3 times more than the poorest, although the poorest and richest had equal access to the secondary-level care providers at aimag and district general hospitals.[119] Measures are adopted at SHCs and FHCs to expand access for the poorest and most vulnerable. At family health centers and SHCs, services are accessible unregistered and migrant populations, and there is a model of risk adjusted per-capita financing to enable registration and services for the poor and vulnerable.[120]

117 Altantuya Jigjidsuren, Bayar Oyun and Najibullah Habib, 2021, Supporting Primary Health Care in Mongolia: Experiences, Lessons Learned, and Future Directions. ADB Working Paper No. 35.
118 See https://apps.who.int/nha/database/country_profile/Index/en
119 WHO, 2017, PRIMASYS: Comprehensive case study from Mongolia.
120 Altantuya Jigjidsuren, Bayar Oyun and Najibullah Habib, 2021, Supporting Primary Health Care in Mongolia: Experiences, Lessons Learned, and Future Directions. ADB Working Paper No. 35.

Future health systems

The findings above have important implications for health systems. There is a double burden for communicable diseases and NCDs, with the trends towards escalating morbidity and mortality related to NCDs. Given the fact that most of the diseases are preventable, and given the escalation of health-care costs related to care needs for complex conditions, community based health prevention and promotion takes on added importance in health policy and planning. The trend towards urbanization and decentralization presents formidable challenges in preparing public health systems to respond to the social and environmental determinants through local government and civic participation through communities, NGOs and the private sector. Finally, and as outlined clearly in the National Health Policy [see below] innovations in health technologies and communications provides extensive opportunities for expanding the reach of health-care services and information.

Policy and strategy directions for primary health care in Mongolia

Leadership, policy and governance

There is no overall or specific PHC policy and strategy, although there specific laws and policies and national programme plans which reflect many of the components of the PHC approach.

Health legislation ensures provision of free access to PHC to all people regardless of their socioeconomic and insurance status. The Government pays premiums for certain vulnerable groups, including children under age 16, mothers with children less than 2 years old, pensioners and people with disabilities, which constitute 60 per cent of the entire population. Under the Health Act (2011), health services are categorized as medical care and public health services and the package of services are described for each type of public health facility. The Budget Law of 2013 gave local government units responsibility for basic public services such as health and education.[121]

The State Policy on Health (2017–2026) proposes to improve health-care services and disease prevention, introduce new technologies and ensure proper health sector financing. Although PHC is not specifically mentioned in this policy, many of the components of PHC are reflected in the various articles of this policy:

- *Multisector collaborations:* incorporate and coordinate health issues in the policies of other sectors including health education in schools, ensuring resource preparedness for response to public health emergencies and delegations of health promotion policy implementation to private sector and NGOs.
- *Integrated health services:* Expanding the package of medical care services provided in family and soum health centers and hospitals and providing health-care services in integrated manner, and developing capacities for continuum of care and Innovations in health technologies and digital health and expanding the use of mobile health technology.
- *Strategic purchasing:* Reforming payment methods from the state budget input-based financing of health facilities to the performance-based mechanism focused on results and efficiency.
- *Health financing and resource allocation:* Increasing the total financing to 12 per cent of the general government total budget on health and at least 5 per cent of GDP on health and keeping out-of-pocket payments within 25 per cent of the total health expenditures.

The Action Plan for Implementation of the State Policy on Health (2020–2026) includes improving delivery of essential services provided at the PHC level through strengthening laboratory diagnostics, day care, rehabilitation, and home care, as well as mobile services for remote population and emergency trauma care provided along the main roads and railway.[122]

121 WHO, 2017, PRIMASYS: Comprehensive case study from Mongolia.
122 Altantuya Jigjidsuren, Bayar Oyun and Najibullah Habib, 2021, Supporting Primary Health Care in Mongolia: Experiences, Lessons

Priority actions for developing the primary health care approach in Mongolia

Political commitment and leadership

There are opportunities in Mongolia for improved advocacy in relation to PHC. There is currently a lobby group in the parliament on PHC, and interest in the concept of the PHC Accelerator concept linked to SDG Gap. Opportunities here include using support from UNICEF headquarters and the regional office to engage with the political lobby group in the parliament andrequest funding for the next round of ADB funding for PHC. There is current interest in PHC as local government now recognizes the importance of health because of the impacts of the COVID-19 pandemic.

Policy and governance

There is no distinct PHC policy in Mongolia, although the State Health Policy recommends some PHC related actions [see previous section]. Capacity building workshops should be conducted on PHC with regional support. In country consultations could then be undertaken on PHC with main stakeholders. Seed funding could be sourced through SDG 3 Global Action Plan sources for accelerating the PHC approach [PHC Accelerator Planning and Funding]. This will require commitment from key stakeholders in the country to provide a PHC platform for review and development of PHC policy and strategies.

Community engagement

There was a recent meeting between 21 Provincial Governors and Directors of the Health Department. They came together to discuss PHC and community advocacy. PHC Concept was appreciated by all participants. Local authorities are now giving much more attention to health since the COVID-19 pandemic. Given the context of decentralization and the rise in NCDs, community engagement strategy and service integration are emerging as priority actions for PHC, with respect to community-based prevention, promotion and care and referral services and expanded roles for community-based health workers. It applies particularly to improving accessibility for public services to the most vulnerable, including for adolescents, people with disabilities, and the urban poor.

Multisector collaborations (urban primary health care and environmental health)

Given the rapid urban migration and the health and social conditions of the peri-urban poor, environmental health also needs to extend to the primary level of care. This activity should involve the capacity-building of public health officers at this level to oversee implementation of community based environmental health programmes. Multisectoral action is highly relevant to the coordinated actions required to support services and programmes for the well-being of adolescents and for child and social protection services.

Digital health

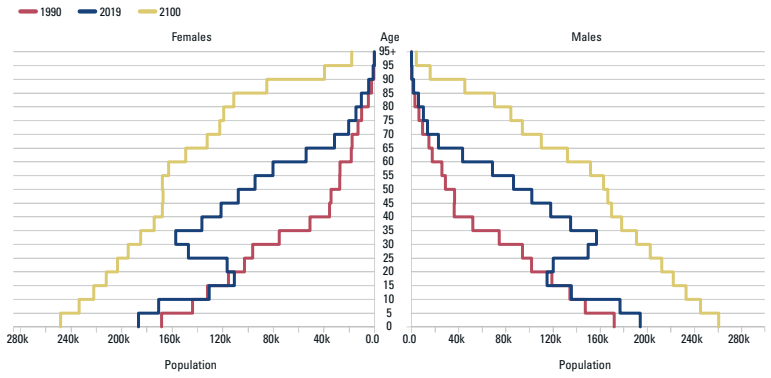
Digital health provides a significant opportunity to build back better after the pandemic. As a disruptive innovation, it has the potential for impact on both services and communications, as well as expanding the reach of services to more remote areas of the country. Due to remoteness, telemedicine is highly applicable in Mongolia, and it has been successfully implemented in some areas of the country.[123]

Learned, and Future Directions. ADB Working Paper No. 35.

123 D. Enkhmaa et al., 2021, Overview of Telemedicine Services in Mongolia. *Current Pediatrics Reports* vol. 9, No. 3, pp. 77–82.

PRIMARY HEALTH CARE DIRECTIONS - MONGOLIA

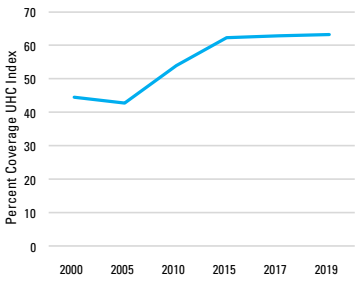
DEMOGRAPHIC TRANSITION



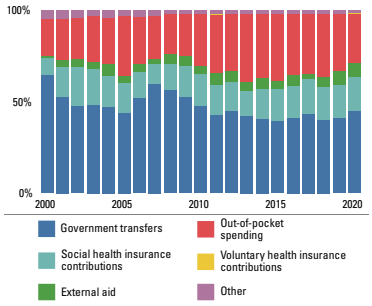
Source of Data: IHME: Country profile Mongolia Institute for Health Metrics and Evaluation (IHME). Mongolia Profile. Seattle, WA: IHME, University of Washington, 2021. Available from http://www.healthdata.org/mongolia[8/10]

HEALTH COVERAGE AND HEALTH FINANCING

Mongolia UHC Coverage Index 2000-2019

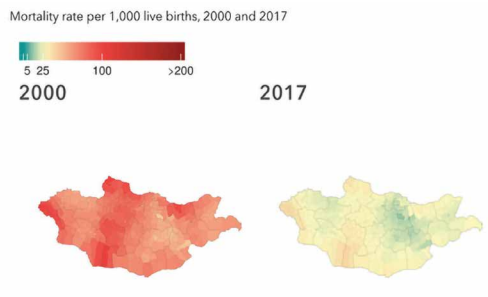


Sources of Health Expenditure



Sources : UHC Index https://www.who.int/data/gho/indicator-metadata-registry/imr-details/4834 Expenditures: Country Profile NHA Health Expenditure Data Base https://apps.who.int/nha/database/country_profile/Index/en

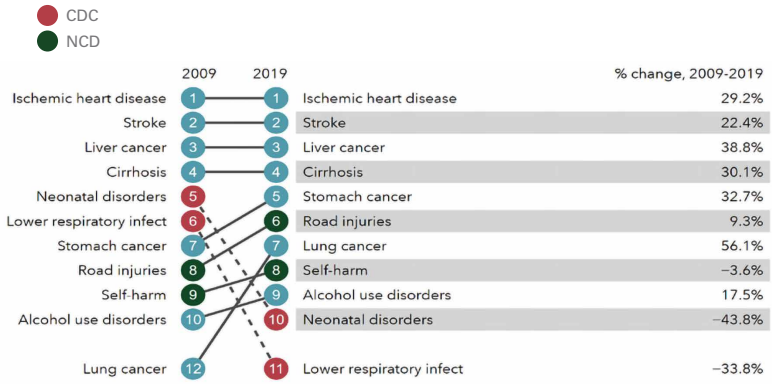
HEALTH INEQUITIES AND ACCESS and SUPPLY BARRIERS



- There is unmet need 37 % for essential UHC index (GHO)
- **Health Workforce** to 1000 Population ratio of 7.33 is well above the WHO threshold (4.45) (GHO)
- 7.9% of the Population in Mongolia has > 10% of **annual household expenditure on health (SDG 3.8.2)** (2018) (GHO)
- **Prevalence of NCDS:** Hypertension prevalence is 27%, Diabetes 11.7% with diabetes prevalence rising from the previous assessment (PHCPI)

Source of Data: IHME: Country profile Mongolia Institute for Health Metrics and Evaluation (IHME). Mongolia profile. Seattle, WA: IHME, Child Mortality University of Washington, 2021. Available from http://www.healthdata.org/mongolia

EPIDEMIOLOGICAL TRANSITION



Source of Data: IHME: Country profile Mongolia Institute for Health Metrics and Evaluation (IHME). Mongolia. Seattle, WA: IHME, University of Washington, 2021. Available from http://www.healthdata.org/mongolia [8/10]

HEALTH CARE BENEFITS PACKAGE and PRIMARY HEALTH CARE POLICY DIRECTIONS

Medical Benefits Package

PHC services are free of charge to all citizens and is financed from the general government budget revenue, as assured by the Health Act.

Services are provided through a public–private partnership model for PHC service delivery in Mongolia. Private cooperatives operate Family Health Centres through government-owned and funded facilities.

Under the Health Act (2011), health services are categorized as medical care and public health services and the package of services are described for each type of public health facility. Essential health services include Outpatient services pediatrics, rehabilitation services, elderly care, Noncommunicable and Communicable disease prevention and control programs, Emergency services , Home care and Day care, palliative care and diagnosis and tests and public health programs.

PHC Policy Directions

"The State Policy on Health" (2017-2026) proposes improving healthcare services, disease prevention, introduction of new technologies and and health sector financing. PHC directions are below:

Multi sector collaborations: incorporate and coordinate health issues in the policies of other sectors including in schools and delegations of health promotion policy implementation to private sector and non-governmental organizations

Integrated Health Services: Expanding the package of services provided in family and soum health centers and hospitals and providing services in integrated manner, and developing capacities for continuum of care and Innovations in health technologiess

Health Financing: Reforming payment methods from the state budget input-based financing of health facilities to the performance-based mechanism Increasing the total financing to 12% of total budget on health and keeping out-of-pocket payments within 25 percent of the total health expenditures.

Sources: State Policy on Health 2017-2026,

4.3 Democratic People's Republic of Korea

Primary health care policy and development landscape

The Democratic People's Republic of Korea (population 25.9 million and a population growth rate of 0.4 per cent in 2021) is classified by the World Bank as a low-income country,[124] with the country negatively impacted economically and socially by international sanctions, domestic priorities and natural disasters (including the impacts of the COVID-19 pandemic). An analysis by the OECD in 2020 found that GDP in the Democratic People's Republic of Korea is reportedly lower than in 1990, with some evidence of limited transition towards private sector activity since the early 2000s.[125] Most of the workforce remains in agriculture but domestic production often fails to meet population needs given that only 17 per cent of the land in the Democratic People's Republic of Korea is arable and the country is adversely affected economically and socially by sanctions and natural disasters. Public administration in the Democratic People's Republic of Korea is highly centralized, with the central Ministry of Public Health taking up planning, financing, and monitoring and evaluation functions. Administratively there are 10 provinces, 1 major municipality and 210 counties, with the country further divided into smaller administrative units known as Ri (in rural areas) and Dong (in urban areas). The Democratic People's Republic of Korea is 63 per cent urbanized with gradual increases in the urbanization rate of 59 per cent since the year 2000 and compares with an urbanization rate overall of 58 per cent for East Asia and the Pacific.[126]

External threats to health outcomes, status and health services capabilities are very high in the Democratic People's Republic of Korea. Between 2004 and 2016, more than 6 million people were affected by natural disasters, mostly floods and droughts, including in 2015 and 2016 when drought and flooding occurred in many parts of the country.[127] In 2023, the Democratic People's Republic of Korea is ranked 61st globally by the European Commission for exposure to natural disasters, with flood, cyclone, earthquake and drought posing the highest risks.[128] The country is exposed to high levels of geo-political risks. The consequences of these risks are international sanctions, interruptions to trade and travel, and high levels of domestic investment in national security, all of which contribute to very narrow window for investment in health. The overall development landscape demonstrates a very high level of external risks and correspondingly low levels of inputs into the health-care system. These factors, along with the impacts of income poverty, energy shortages and food insecurity, highlight the vulnerability of the population to low health-care access, undernutrition, and other external threats to health.

124 See https://data.worldbank.org/country/KP.
125 Vincent Koen and Jinwoan Beom, 2020, "North Korea: The Last Transition Economy?", OECD Economics Department Working Papers No. 1607.
126 See https://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS?locations=4E.
127 See https://reliefweb.int/sites/reliefweb.int/files/resources/DPRK%20NP%202018%20110418%20FINAL.pdf.
128 See https://drmkc.jrc.ec.europa.eu/inform-index/INFORM-Risk/Country-Risk-Profile.

Demographic transition: The population in the Democratic People's Republic of Korea has stabilized in the past two decades, with the fertility rate declining from 2.0 in the year 2000 to 1.8 in 2020.[129] This contrasts with a fertility rate of 0.8 in the Republic of Korea in the same year. This stabilization in the fertility rate over the past 20 years means that there is a sizeable proportion of population in middle age, and with ageing of the population projected to proceed more gradually in this country than in others in the region [See infographic].[130] There are 3.2 million adolescents in the country in 2023, which represents 12 per cent of the total population.[131]

Epidemiological transition: The public health threat of non-communicable diseases (NCDs) in the Democratic People's Republic of Korea is highlighted in much of the literature. An analysis of global burden of disease studies for the Democratic People's Republic of Korea between 1990 and 2019 has demonstrated that cardiovascular diseases, neoplasms and chronic respiratory diseases were leading causes of death in both 1990 and 2019.[132] An analysis of the 10 leading causes of death between 2009 and 2019 reveals that eight of the leading causes were related to NCDs, and the other two causes were low respiratory infections and road injuries.[133] Unlike other countries in the region, there is no evidence available on endocrine/metabolic disorders such as diabetes and renal disease in the Democratic People's Republic of Korea. This contrasts with the situation in the Republic of Korea, where it is estimated that the prevalence of diabetes mellitus was 16.7 per cent in 2020 in adults aged 30 and over.[134] The predominance of cardiovascular diseases in the mortality profile in the Democratic People's Republic of Korea reflects the reported high levels of smoking among adult males (52 per cent) and excessive alcohol intake (26 per cent).[135] An analysis from 2019 found that the current epidemiologic and demographic transition actually preceded the era of economic hardship that commenced in the early 1990s, and that in fact NCDs are the priority public health issue in the country.[136] All the above factors on mortality and risk rationalises an increased public health focus on prevention and promotion and on NCD management for both adults and adolescents.

Despite ongoing challenges to maternal and child health-care services, evidence from global burden of disease studies demonstrate that children have made improvements of up to 78 per cent in disease burden in the thirty-year period between 1990 and 2020.[137] The global burden of disease studies illustrate that neonatal disorders, through representing the tenth leading cause of death in 2019, has been reduced by 59 per cent in incidence since the year 2009 [see infographic].[138]

In summary, the overall development landscape in the Democratic People's Republic of Korea rationalises active national and international engagement on health system strengthening, emergency preparedness, and mobilization of essential inputs to sustain the operations of health and nutrition services for women and children. The sustained threat of NCDs rationalizes elevating this threat to the national and international public health agenda.

129 See https://data.worldbank.org/indicator/SP.DYN.TFRT.IN?locations=KP.
130 See www.healthdata.org/results/country-profiles.
131 See https://data.unicef.org/adp/.
132 E.H. Lee et al., 2022, Trends and patterns of North Korea's disease burden from 1990 to 2019: Results from Global Burden of Disease study 2019. *PLOS ONE* vol. 18, No. 7.
133 See www.healthdata.org/results/country-profiles.
134 J.H. Bae et al., 2022, Diabetes Fact Sheet in Korea 2021. *Diabetes and Metabolism Journal* vol. 46, No. 3, pp. 417–426.
135 MOPH/WHO, 2010, *Medium Term Strategic Plan for the Development of the Health Sector in DPRK* 2010–2015.
136 S. Ha and Y.H. Lee, 2019, Underestimated Burden: Non-Communicable Diseases in North Korea. *Yonsei Medical Journal* vol. 60, No. 5, pp. 481–483.
137 E.H. Lee et al., 2022, Trends and patterns of North Korea's disease burden from 1990 to 2019: Results from Global Burden of Disease study 2019. *PLOS ONE* vol. 18, No. 7.
138 See www.healthdata.org/results/country-profiles.

Primary health care coverage and equity

Health coverage

The UHC Essential services coverage index has scaled up from .44 in the year 2000 to .68 in 2019.[139] Given the the impacts of the COVID-19 pandemic and the related closure of national borders, it is likely that this coverage index has been severly impacted by shortages in essential medicine and supplies. Nevertheless, there is evidence from multiple evaluations, suveys and data sets that the Democratic People's Republic of Korea has achieved improvements in the coverage of maternal and child health services over recent decades. For example, 92 per cent of deliveries occur in hospitals and 8 per cent at home,[140] and 88 per cent of women receive four or more antenatal care visits.[141] Immunization coverage has been sustained at 90 per cent or above between 2006 and 2020,[142] with the country introducing new vaccines over this period (Hib, MMR, IPV) with support from Gavi, the Vaccine Alliance. Immunization coverage dropped sharply in 2020 to figures that were last seen in the crisis period of the mid-1990s (DPT3 41 per cent).This drop was attributable to the COVID-19 pandemic and related closure of borders preventing import of essential medicines and vaccines. UNICEF and partners have recently facilitated procurement and transport of vaccines and essential medicines in 2022 which are expected to return immunization rates to normal levels in 2023. Rates of maternal and child mortality have been reduced significantly over the past three decades, with under-five mortality declining from 55.4 per 1,000 births in 1990 to 12.7 in 2019.[143] The fact that neonatal deaths make up the vast percentage of under-five deaths (10/1,000) demonstrates the significance of neonatal care in reducing under-five mortality in the region.

Communicable disease remains as a major public health threat in the Democratic People's Republic of Korea. The pandemic was successfully suppressed through border closures in 2019. However, a rapid surge in incidence was reported due to the spread of the omicron variant (B.1.1.529), leading to a national emergency declaration in May 2022.[144] Data on tuberculosis in 2020 in the Democratic People's Republic of Korea demonstrates a rate of 641 new cases per 100,000 population.[145] UNICEF reported that there were 5,000 reported paediatric cases of tuberculosis undergoing treatment in the Democratic People's Republic of Korea in 2019.[146] WHO estimates effective treatment coverage at 55 per cent.[147] Tuberculosis is the leading cause for deaths for boys and girls aged 10-19 in the Democratic People's Republic of Korea.[148] The country has one of the high burdens of tuberculosis globally.[149] Environmental health poses a consistent public health threat, which is exacerbated by limited access to water and sanitation, which has a higher impact on young children, older people, people with disabilities and women. The World Food Programme (WFP) has reported that water systems in most parts of the country are not functional.[150] And the MICS study in 2017 found that 16 per cent of households have no access to improved sanitation including 28 per cent of households in rural areas.[151]

139 See www.who.int/data/maternal-newborn-child-adolescent-ageing/indicator-explorer-new/mca/uhc-service-coverage-index-(sdg-3.8.1).
140 See www.unicef.org/dprk/reports/situation-children-and-women-democratic-peoples-republic-korea-2019.
141 See www.unicef.org/dprk/reports/2017-dpr-korea-mics-survey.
142 See https://immunizationdata.who.int/pages/coverage/dtp.html?CODE=PRK&ANTIGEN=&YEAR=.
143 See www.healthdata.org/.
144 S.M. Jung and J. Jung, 2022, The Possible Impact of Nationwide Vaccination on Outcomes of the COVID-19 Epidemic in North Korea: A Modelling Study. *Journal of Korean Medical Science* vol. 37, No. 41.
145 See www.who.int/data/gho/data/indicators/indicator-details/GHO/incidence-of-tuberculosis-(per-100-000-population-per-year).
146 See www.devex.com/news/how-is-north-korea-coping-with-tb-one-year-after-global-fund-grant-cuts-95312.
147 See www.who.int/data/gho/data/countries/country-details/GHO/democratic-people's-republic-of-korea?countryProfileId=f9396807-7886-4350-87e0-889f93e1fcbe.
148 See https://data.unicef.org/adp/country/prk/.
149 WHO, 2017, *Global Tuberculosis Report 2017.*
150 WFP Democratic People's Republic of Korea Annual Country Report 2021 Country Strategic Plan. Available at https://docs.wfp.org/api/documents/WFP-0000137917/download/.
151 See www.unicef.org/dprk/reports/2017-dpr-korea-mics-survey.

Inadequate nutrition remain a significant public health threat in the Democratic People's Republic of Korea.[152] This is despite the fact that stunting rates improved significantly in the MICS survey in 2017 to 19 per cent of children from the previous assessment estimate of 32 per cent in the MICs study in 2009, The United Nations Office for the Coordination of Humanitarian Affairs estimated that 18 million people in the Democratic People's Republic of Korea depend on rations and experience food insecurity, with 41 per cent being undernourished. Coverage for nutritional support falls well short of this target. Unmet needs for humanitarian support are estimated as follows: food security (87 per cent); nutrition (81 per cent); health (37 per cent); and WASH (96 per cent). This estimate indicates that a total of 10.4 million people were classified as being in need, only 2.02 million were targeted for support.[153] Continued sanctions and natural disasters of flood and drought in recent years have periodically exacerbated the situation [see section on emergency preparedness].

Health equity

The same challenges to women's and children's health have persisted since the early 1990s. These include gaps in essential health commodities and supplies, including blood transfusion services, lack of reliable energy supply at facilities, weak referral systems exacerbated by poor road and communications infrastructure, all of which are related to international sanctions and domestic priorities. Reduced international exchange and movements across borders has an impact on procurement of essential medical supplies, but also on health workforce capacity, which can be affected by prolonged lack of exposure to the latest developments in global health.

Overall, as reported from the MICs study in 2017, health services coverage was assessed to be generally equitable in the Democratic People's Republic of Korea. Some inequities were noted in relation to nutritional outcomes. Although the overall rate of stunting has decreased, stunting among children aged 48–59 months in the poorest 20 per cent was 41 per cent, demonstrating the impact of economics in relation to either the affordability, accessibility or use of food. In relation to these socioeconomic factors, there was some evidence of inequities in geographic access, with some provinces reporting marked disparities between rural and urban areas, wealth groups and provinces.[154] Remote populations are likely to be affected by the gaps in transport and communication networks, although gaps in subnational data make assessments of equity in these circumstances difficult. WFP reported in 2019 that lack of analysis and the monitoring of progress towards all the SDGs is constrained by lack of data disaggregated by sex and age.[155] In relation to geographic factors associated service access, the Situation Report on Women and Children in 2017 from UNICEF reports that there has been uneven progress on social indicators with the Northeast of the country being more disadvantaged and with Pyongyang having the best health and social indicators.[156]

In summary, information on coverage and equity in the Democratic People's Republic of Korea demonstrates the links between health service availability, nutrition, water and sanitation, and communicable diseases in shaping the pattern of public health. The evidence that is available rationalizes a PHC approach that engages communities, agencies and sectors in a coordinated system building, resource mobilization and humanitarian response at both national and international level.

152 See https://docs.wfp.org/api/documents/WFP-0000137917/download/.
153 See https://dprkorea.un.org/sites/default/files/2020-04/2020_DPRK_Needs_and-Priorities_Plan.pdf.
154 See www.unicef.org/dprk/reports/2017-dpr-korea-mics-survey.
155 See https://docs.wfp.org/api/documents/WFP-0000137917/download/?_ga=2.25681533.1518447540.1680848051-2079070591.1677761592.
156 UNICEF, 2016, Situation Analysis of Children and Women in the Democratic People's Republic of Korea – 2017.

Models of care

The Democratic People's Republic of Korea operates according to a centralized model of policy and planning, budget allocation and monitoring and evaluation. The public sector is the main source of health care for the whole population. All health services are free of charge at the point of care, and there is limited information on out-of-pocket expenditures on health care in the country.

The structure of the health system, along with the general system of administration across sectors, is governed by a central Ministry of Public Health. There is a network of provincial, county and ri (village) hospitals, along with "Anti-Epidemic Stations" which provide some essential public health functions down to county level (surveillance, health information, emergency operations). The primary level of care is governed by the household doctor system, whereby a doctor takes responsibility for between 130 households for provision of primary care at the section level of administration (the lowest level of the administrative system). This system is highly labour intensive, with an estimated 44,760 section or household doctors in the the Democratic People's Republic of Korea. Services provided at the primary level include preventive, promotive, curative and rehabilitative care.[157] The scope of health infrastructure and size of the health workforce in the country demonstrates the potential for the the Democratic People's Republic of Korea health system to function effectively were it not for the fact the system is highly compromised by critical gaps in essential medicines, equipment, energy and transport systems and operational finance.

Although this represents a major gap in the health system landscape, there are opportunities as identified by effective partnerships between international agencies and the Ministry of Public Health for elimination and eradication of vaccine preventable diseases,[158] improved functioning of women's and children's health services,[159] and prevention and control of communicable and vector borne diseases.[160]

Public health: Emergency preparedness

Given the high vulnerability of the Democratic People's Republic of Korea to emergencies related to droughts and floods, formation of national and international partnerships are essential for building capacity for disaster preparedness, vulnerability mapping and risk reduction, including implementation of responses when emergencies occur.[161] Disease outbreaks such as the COVID-19 pandemic have tested the country's response capacity. The initial stage of the pandemic was controlled through border closures, after which there was a rapid surge of the omicron variant (B.1.1.529) that led to a national emergency declaration in May 2022.[162] The Global Health Security Index currently ranks the Democratic People's Republic of Korea 181 out of 195 countries for capabilities for preparedness and response for disease outbreaks.[163]

157 WHO Regional Office for South-East Asia, 2016, *WHO Country Cooperation Strategy Democratic People's Republic of Korea 2014–2019*.
158 J. Grundy, B.A. Biggs and D. Hipgrave, 2015, Public health and international partnerships in the Democratic People's Republic of Korea. *PLOS Medicine*.
159 WHO, 2012, *Improving Women's and Children's Health in DPR Korea: Mid-term evaluation report*. See https://apps.who.int/iris/bitstream/handle/10665/205341/B4717.pdf?sequence=1&isAllowed=y.
160 K.B. Park, U. Kahn and K. Seung, 2018, Open letter to the Global Fund about its decision to end DPRK grants. Lancet vol. 391, No. 10127.
161 See https://reliefweb.int/sites/reliefweb.int/files/resources/DPRK%20NP%202018%20110418%20FINAL.pdf.
162 S.M. Jung and J. Jung, 2022, The Possible Impact of Nationwide Vaccination on Outcomes of the COVID-19 Epidemic in North Korea: A Modelling Study. *Journal of Korean Medical Science* vol. 37, No. 41.
163 See www.ghsindex.org/country/north-korea/.

Health financing

The the Democratic People's Republic of Korea health system is publicly financed. No information is available on private sector activity from within the country or on out-of-pocket expenditures on health care. Access to financial information is limited in this country given that no system has been established for national health accounts that can enable transparent reporting of sources of health expenditure. A topdown costing exercise was however undertaken by the MOPH and WHO for the Medium-Term Plan for the Development of the Health Sector (2020–2015), which demonstrated a 50 per cent gap in financing of priority health programmes for women's and children's health. Another feature of this financial analysis is that programme funding was covering only parts of the country, leaving significant gaps in funding of priority programmes in other counties and provinces.[164]

Financing of development assistance in the Democratic People's Republic of Korea has been comparatively low when compared to other countries at similar levels of development. UNICEF reported in 2019 that 32 per cent of the required $19.5 million has been raised.[165] The Global Fund has been financing programmes in the Democratic People's Republic of Korea in tuberculosis/HIV and malaria control, but evidence from the Global Fund to fight HIV/ AIDS, Tuberculosis and Malaria indicates that there are no active grants currently.[166] Even when the Global Fund was investing in the country, it was described as covering only a small portion of the funds needed to diagnose and treat all of those estimated to have tuberculosis or drug-resistant tuberculosis.[167] The Global Alliance for Vaccines and Immunization in partnership with MOPH, WHO and UNICEF has arguably provided national wide impact through vaccine support for children's health nationally. Gavi has committed $83 million USD to vaccines and system support for the country between 2001 and 2023, of which $66 million has been disbursed. However, no information on vaccine use has been provided since 2020 following border closures in the country.[168] Information from UNICEF indicates that procurement and transport arrangements were identified to restore vaccine supplies to the country in 2022. Despite limited international investment in health in the Democratic People's Republic of Korea, this support has been instrumental in achieving important outcomes in immunization, malaria and tuberculosis prevention and control, in women's and children's health and in health system strengthening.[169,170,171,172]

Financial tracking of development assistance to the Democratic People's Republic of Korea through OCHA and the World Bank demonstrates a sharp downturn in development assistance (all sectors) between 2019 and 2021. OCHA reports that of the US$129 million required to meet humanitarian needs in 2019 (all sectors) just 40.7 million was mobilized.[173] The World Bank has reportedthat net development assistance had declined from $124 million in 2020 to $18.2 million in 2021.[174] The financial tracking service of OCHA revealed that assistance to Pyongyang from international organizations and other agencies in 2022 reached around $2.3 million, down sharply from their estimate of $14 million the previous year.[175] The development assistance reported by the World Bank is equivalent to less than $1 per capita [see infographic]. It is important to observe in these external financing trends that peaks in development assistance flows align with easing of international tensions through improved inter-State relations between the two Koreas.[176]

164 MOPH/WHO, 2010, *Medium Term Strategic Plan for the Development of the Health Sector in DPRK 2010–2015.*
165 See www.devex.com/news/how-is-north-korea-coping-with-tb-one-year-after-global-fund-grant-cuts-95312.
166 See https://data.theglobalfund.org/location/PRK/grants?components=TB/HIV,Tuberculosis,HIV,RSSH,Multicomponent,Malaria&status=Active [Accessed April 2023].
167 See www.devex.com/news/how-is-north-korea-coping-with-tb-one-year-after-global-fund-grant-cuts-95312.
168 See www.gavi.org/programmes-impact/country-hub/south-east-asia/korea-dpr [Accessed April 2023].
169 J. Grundy, B.A. Biggs and D. Hipgrave, 2015, Public health and international partnerships in the Democratic People's Republic of Korea. *PLOS Medicine.*
170 WHO, 2012, *Improving Women's and Children's Health in DPR Korea: Mid-term evaluation report.* See https://apps.who.int/iris/bitstream/handle/10665/205341/B4717.pdf?sequence=1&isAllowed=y.
171 K.B. Park, U. Kahn and K. Seung, 2018, Open letter to the Global Fund about its decision to end DPRK grants. *Lancet* vol. 391, No. 10127.
172 WHO, 2018, *Evaluation of the Gavi Health Systems Strengthening Support to the Democratic People's Republic of Korea.*
173 See https://fts.unocha.org/appeals/935/summary.
174 See https://data.worldbank.org/indicator/DT.ODA.ODAT.CD.
175 See https://fts.unocha.org/appeals/935/summary.
176 The "Sunshine Policy" and Inter-Korean Summits in 2000, 2007 and 2018.

From a PHC perspective and given the political determinants of health, engagement and sectoral collaborations are required regionally and globally to maintain the focus on human security and child and maternal survival in the Democratic People's Republic of Korea. This will be for the purpose of supporting resource mobilization for women's and children's health in what is one of the two major humanitarian emergency contexts in East Asia and the Pacific.

Health workforce

As noted earlier, the Democratic People's Republic of Korea has the highest public sector workforce density in Asia, with an estimated 36.71 doctors per 10,000 population in 2017, which includes more than 40,000 household doctors. This contrasts with doctor/population densities in China at 23.87 per 10,000 and in Thailand at 30.78 per 10,000. There is a similarly high density of nurses and midwives at 44.34 per 10,000 which is comparable to China and Thailand.[177] Although there is no subnational data on distribution, it is clear from the number of health facilities in the country and the primary care model of the household doctor that there is a relatively even distribution of the workforce. The challenge with human resource management in the Democratic People's Republic of Korea is the development and maintenance of skills and competencies to ensure that the health workforce keeps pace with developments in international health in medicine, nursing, laboratory and pathology services and medical specialties. In a tense international relations context, development partnerships should continue to be established with the Government to ensure that workforce knowledge and skills in child health, essential neonatal and obstetric care and in public health (prevention, promotion, protection, surveillance and emergency preparedness) are updated.

Policy and strategy directions for primary health care in the Democratic People's Republic of Korea

There is no specific PHC policy document or strategy that has been identified, although the PHC approach is reflected in various planning and United Nations development strategies. Given the humanitarian context for health in the country, PHC approaches are reflected in an emphasis on public health and multisector collaboration especially, and in provision of services at the primary level of care through the household doctor system [see below].

The strategic directions for the health sector were outlined by the Ministry of Public Health Medium Term Plan for Health Sector (2010–2015). The priorities identified were health systems strengthening, communicable disease prevention and control, NCD control, women's and children's health and environmental health. The Country Cooperation Strategy of WHO and MOPH aligns with these strategic priorities for its country planning cycle 2015–2019.[178] The priorities of the United Nations Strategic Framework (2017–2023) in the Democratic People's Republic of Korea include ending hunger, achieving food security and improved nutrition, and promoting sustainable agriculture.[179]

UNICEF in its Situation Report on Women and Children in 2017 highlighted several priority strategy directions that included a continued focus on life-saving humanitarian programming, a priority focus to neonatal and maternal health and nutrition, focusing on early childhood development, infant and young child feeding (IYCF), and hygienic practices. And finally, promoting safe water,

improved sanitary facilities and hygienic practices to households, places of work, schools, health facilities and nurseries.

177 See www.who.int/data/gho.
178 WHO Regional Office for South-East Asia, 2016, *WHO Country Cooperation Strategy Democratic People's Republic of Korea 2014–2019.*
179 See https://docs.wfp.org/api/documents/WFP-0000137917/download/.

Priority actions for developing the primary health care approach in the Democratic People's Republic of Korea

Political commitment and leadership

- Engaging with Governments in the region for peacebuilding and for advocacy and protection of women's and children's rights in the Democratic People's Republic of Korea. Identify new or utilise existing regional forums for this purpose.
- Engaging in regional forums and national consultations for assurance of national and international transport corridors for supplies of essential medicines and vaccines and for movement of technical personnel.
- Engaging in regional/global forums to restore development assistance support through global health initiatives for immunization and communicable and vector borne disease control.

Integrated services and human resources for health

- Capacity building support and essential medicines/equipment for household doctors in primary care with focus on child health and essential neonatal and obstetric care.
- Development of integrated microplans for household doctors at the county level (Country Cooperation Strategy).

Public health

The public health needs of the population in the Democratic People's Republic of Korea. Given border closures and interruptions to development assistance, the priorities for public health action remain the same as they have been for decades, namely:

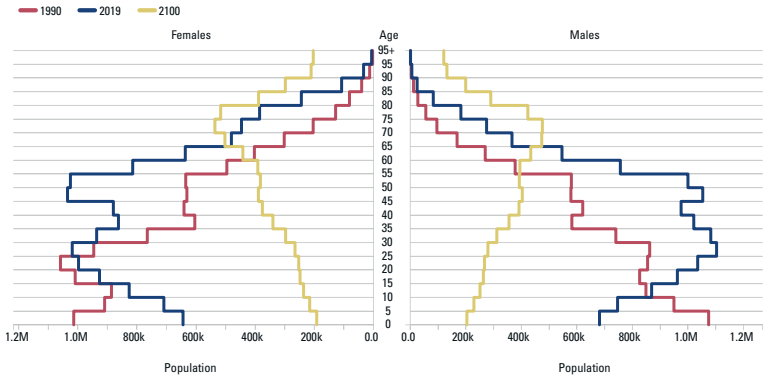
- Nutrition and early childhood development,
- Infant and young child feeding (IYCF), and hygienic practices.
- Promotion of safe water, improved sanitary facilities and hygienic practices to households, places of work, schools, health facilities, and nurseries.
- Enhancing capabilities for emergency preparedness and response

Resource allocation

- Engaging regional and global forums/dialogues on the restoration of humanitarian assistance for women and children in the Democratic People's Republic of Korea

PRIMARY HEALTH CARE DIRECTIONS DPR Korea

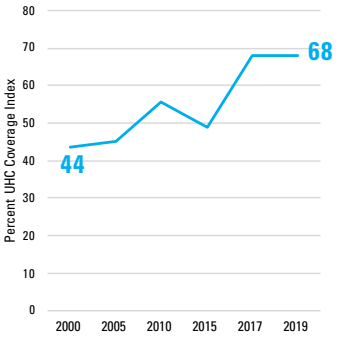
DEMOGRAPHIC TRANSITION



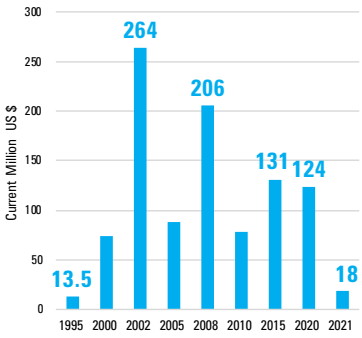
Source of Data: IHME: Country Profile Institute for Health Metrics and Evaluation (IHME). Seattle, WA: IHME, University of Washington, 2021. Available from https://www.healthdata.org/results/country-profiles

HEALTH COVERAGE AND HEALTH FINANCING (2000-2020)

UHC Coverage Index 2000 - 2019

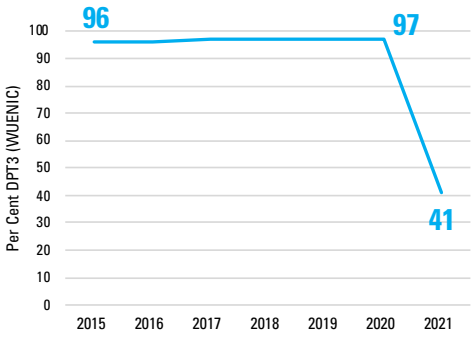


Development Assistance (current $US) 1995-2021



Sources : UHC Index https://www.who.int/data/gho/indicator-metadata-registry/imr-details/4834 Expenditures: Country Profile NHA Health Expenditure Data Base https://apps.who.int/nha/database/country_profile/Index/en

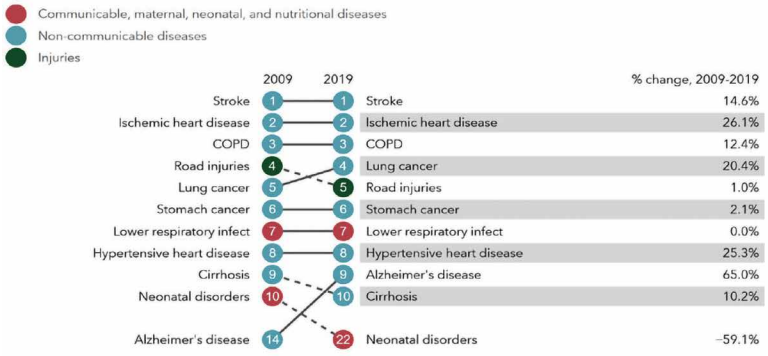
HEALTH INEQUITIES AND ACCESS and SUPPLY BARRIERS



- The **Maternal Mortality Rate** was 89 per 100,000 live births (2017), having declined from 106/10000 in 2010 (GHO)
- **Under 5 mortality** declined from 55.4 per 1000 births in 1990 to 12.7 in 2019 (IHME)
- **Health Workforce** to 1000 Population ratio for nurse midwife is 4.4 and for physician 3.7 (GHO)
- There is **unmet need** of 32% for essential UHC index coverage (GHO)
- OCHA estimates **unmet needs for humanitarian support in 2020** as follows: Food Security 87% , Nutrition 81%, Health 37%, WASH 96%

Source of Data: Immunization: WHO Vaccine Preventable Diseases IVB WHO,. Other data: Global Health Observatory WHO <, OCHA DPRK Needs and Priorities 2020

EPIDEMIOLOGICAL TRANSITION



Source of Data: IHME: Country profile Institute for Health Metrics and Evaluation (IHME). . Seattle, WA: IHME, University of Washington, 2021. Available from https://www.healthdata.org/results/country-profiles

HEALTH CARE BENEFITS PACKAGE and PRIMARY HEALTH CARE POLICY DIRECTIONS

Health Care Benefits Package

The DPR Korea operates accodring to a centralised model of policy and planning, budget allocation and monitoring and evaluation.

The public sector is the main source of health care for the whole population

All health services are free of charge at the point of care. Main services include CDC prevention and control and womens and childrens health

The main barriers to universal cover are lack of sufficient essential medicines and supplies, equipment, and transport infrastructure.

Evaluations of health system programs and projects have confirmed that adequacy of human resource capacity and essential health system inputs can result in improved health system performance.

PHC Policy and Strategy Directions

The last strategic directions for the health sector were outlined by the Ministry of Public Health and DPs in the Medium Term Plan for Health Sector (2010-2015). These priorities are Health systems strengthening, Communicable and Non communicble Disease Prevention and Control, Women's and children's health and Environmental health

Primary care is provided through a "household doctor" system. The primary care doctor works with a community team covers approximately 130 households in each community. The household doctors and health team provides frontline preventive and curative care through a large network of health facilities throughout the country.

The United Nations Strategic Framework (UNSF) (2017-2023) in DPRK has four strategic priorities that includes ending hunger, achieving food security and improved nutrition, and promoting sustainable agriculture

Sources: Medium Term Plan for Development of the Health Sector in DPR Korea; Country Coperation Strategy WHO DPR Korea. South East Asia Regional Strategy on PHC SEARO, The United Nations Strategic Framework (UNSF) (2017-2023) DPRK

4.4 The Philippines

Primary health care policy and development landscape

The Philippines (population 108 million) is classified as a Lower Middle-Income country with an economic growth rate of 6.5 per cent.[180] The society is urbanising, with 47 per cent of the population residing in urban areas, of which 44 per cent are reported to being living in urban poor areas.[181] The country is undergoing a rapid demographic transition, with the fertility rate declining from 3.8 in the year 2000 to 1.9 (which is below replacement value) as reported in the latest DHS survey preliminary results.[182]

The Philippines has a mixed health-care system with the public sector supported through tax-based financing. The Local Government Code of 1991 devolved provision and management of health services to Local Government Units (LGUs), with the Department of Health (DOH) retaining direction over now national health policy and planning, regulation, and standards. Provincial LGUs manage and operate hospitals, while municipal LGUs are responsible for providing primary care and health programmes through rural health units, health centres and barangay health stations. In 1995, the Philippine Health Insurance Corporation (PhilHealth) was established to provide financial risk protection.[183]

There are several challenges relating to the management and resourcing of the health systems. There are inadequate numbers and distribution of human resources for health in the PHC system in the Philippines, and the health system is heavily reliant on the skills of the community-based health workforce for implementation who operate mainly as a volunteer workforce and require regular training and skills development. Workloads are not commensurate with the benefits being received, there is lack of clear career development pathways and limited supportive supervision, all of which are contributing to a fast turnover of the health workforce. There will be a further transition to full devolution in accordance with Mandanas ruling in 2022, which will increase the share of national government tax revenue transferred to local governments by 55 per cent.[184] Transitioning further along the decentralization pathway will require scaling up of governance capacities, establishment of clear accountability frameworks and enforcement of relevant laws, policies, and regulations for the health sector. Subnational governance of health and nutrition will require capacity development in evidence-based planning, procurement systems, routine reporting and data quality and monitoring of the key interventions. The impact of the COVID-19 pandemic on essential health services, and on the health and well-being of young people, has reinforced the need for development of health systems with capabilities for emergency preparedness, health system resilience, and on mental health particularly in adolescence.[185]

180 See https://improvingphc.org/.
181 See https://data.unhabitat.org/datasets/cd4e1deb72ea49bd8f3403f8a9edfe6d_0/explore.
182 See https://dhsprogram.com/pubs/pdf/FR381/FR381.pdf.
183 WHO Regional Office for South-East Asia, 2018, Philippines Health System Review. *Health Systems in Transition* vol. 8, No. 2.
184 See https://www.worldbank.org/en/news/press-release/2021/06/10/philippines-mandanas-ruling-provides-opportunities-for-improving-service-delivery-through-enhanced-decentralization.
185 J. Maravilla et al., 2023, Exploring indirect impacts of COVID-19 on local health systems from the perspectives of health workers and higher education stakeholders in the Philippines using a phenomenological approach. *Lancet Regional Health – Western Pacific* vol. 30, No. 100585.

Primary health care coverage and equity

The Universal Health Coverage Index has been expanded from .35 in the year 2000 to .55 in 2019, which means coverage of essential health services has been expanding on average by 1.1 per cent per year since the year 2000.[186] This represents unmet need for essential health services a substantial. Despite evidence of these unmet needs, the PHC system has delivered on declines in childhood and maternal mortality reductions, with child mortality declining from 38 per 1,000 live births in 2000 to 27 in 2019, and maternal mortality from 160 per 100,000 live births in 2000 to 121 in 2017.[187] Recently released Demographic and Health Survey data has confirmed that child mortality has declined further to 26 deaths per 1,000 births, with neonatal deaths making up over half of these deaths, pointing to a need to redouble efforts to improve health outcomes for this specific age group.[188]

There is substantial evidence of inequities in health-care access and outcomes based on exposures relating to income, education levels, location, and cultural identity. There is a differential of 37 between the highest and lowest wealth quintiles of under-five deaths per 1,000 live births.[189] There is inadequate government support to health services especially in geographically isolated and disadvantaged areas. The density of nurses per 10,000 population is highest in the National Capital Region at 12.6 and lowest in the Bangsamoro Autonomous Region of Muslim Mindanao at 4.2.[190] Results published in 2022 confirm significant variations in fully immunized child status, with 90 per cent of eligible children fully vaccinated in the Cagayan Region, compared to 18 per cent in Bangsamoro Autonomous Region of Muslim Mindanao.[191]

186 See https://www.who.int/data/maternal-newborn-child-adolescent-ageing/indicator-explorer-new/mca/uhc-service-coverage-index-(sdg-3.8.1).
187 See https://improvingphc.org/.
188 See https://dhsprogram.com/pubs/pdf/FR381/FR381.pdf.
189 See https://improvingphc.org/.
190 WHO Regional Office for South-East Asia, 2018, Philippines Health System Review. *Health Systems in Transition* vol. 8, No. 2.
191 See https://dhsprogram.com/pubs/pdf/FR381/FR381.pdf.

The design of the future health systems in the Philippines is shaped by demographic and epidemiological transition and by the requirement to finance an increasingly costly health system through a devolved model of management, planning and financing, expansion of the national health insurance systems, and the strengthening of community-based PHC for UHC. The rapid rise in non-communicable diseases (NCDs) such as diabetes, hypertension, and renal disease,[192] and persisting health inequities will require further development of a community-based model of care that has expanded capabilities for provision of a continuum of care from prevention and promotion through to treatment and rehabilitation.

A community-based workforce will be required to meet the home-based care needs for prevention and management of chronic health conditions including for mental health and disabilities. Management of acute care needs for these chronic conditions will need to be financed through expansion of the national health insurance models. Projected impacts of climate change, pandemic threats and the growth of urban settlements will require a future health system with expanded capabilities for emergency preparedness, as well as multisector collaborations to address the social and environmental determinants of health.

Country policy and strategy directions for primary health care

The model of PHC management and care delivery in the Philippines is being shaped by the Universal Health Coverage Law and the Primary Care Policy Framework, which both affirm the primary level of care as the foundation of the health system, and the PHC approach as a pathway to achievement of UHC. The establishment of PHC networks, contracting models of population and individual services, and integration of public health functions into health services delivery at community level are central to the approach.

Leadership and political commitment: The Philippines Constitution of 1987 guarantees health as a basic human right. The Government of the Philippines has committed the country to PHC through the Universal Health Coverage Law (No. 11223). This is of high relevance to PHC given its emphasis on health structure, financing, and the continuum of care. This law is reinforced by the First 1,000 Days Law (No. 11148), relating to the health and nutrition of mother and child in the first 1,000 days of life. These laws and the laws governing further devolution of health services to LGUs promote a community-based and integrated PHC services model.

Governance and policy: The first point of contact for prevention or care is the focal point for strengthening PHC in the Philippines and represents the foundation of the health-care delivery system. This approach is articulated by the DOH in the Primary Care Policy Framework and Sectoral Strategies administrative order in 2020. The Primary Care Policy Framework is crucial to the achievement of UHC. Under this policy, it is proposed that primary care provider networks (PCPNs) will operate as the foundation of health care through public, private, or mixed models of health service delivery. The 'network' refers to a group of primary, secondary, or tertiary care providers (whether public or private) acting as the main coordinator of health care within the network.

Integrated health services and public health functions: The DOH proposes to integrate public health functions into the local health system through (a) implementation of evidence-based health promotion strategies for social and behavioural change (b) building epidemiological surveillance systems and emergency preparedness capacity (c) strengthening population-based programmes and strategies in areas such as vector control, water and sanitation and nutrition.

192 See https://www.healthdata.org/results/country-profiles.

Resource allocation: A model of strategic financing for primary care is proposed, whereby the DOH will contract province and city-wide health systems for population-based services, and where PhilHealth will contract Health-Care Provider Networks for individual-based services.

Multisector collaboration: LGUs through the Local Planning process provide a viable platform for multisector local health planning. The local planning process is the first and most important action for PHC and multisector collaboration through engagement of health services with local partners, civil society organizations (CSO) and with local government, which enables shared work on "common agendas" such as maternal mortality reduction and nutrition.

Human resource development and quality of care: The primary care policy proposes integration of primary care and public health into health professional education, including competencies for more people centred care. This reorientation of the health workforce will involve standard setting for engagement of both public and private primary care providers, including mechanisms for appropriate remuneration and incentives.

Partner priority actions for support of the PHC approach in the Philippines

There is a need to ensure an adequate number of competent personnel at all levels of the health system who have the needed knowledge, skills and attitudes in primary care and public health and who are supported by their various offices – be it at the National level or the subnational level – so they can focus on planning, programming, procurement, service delivery that is of good quality and improved coverage, and monitoring of results and issues.

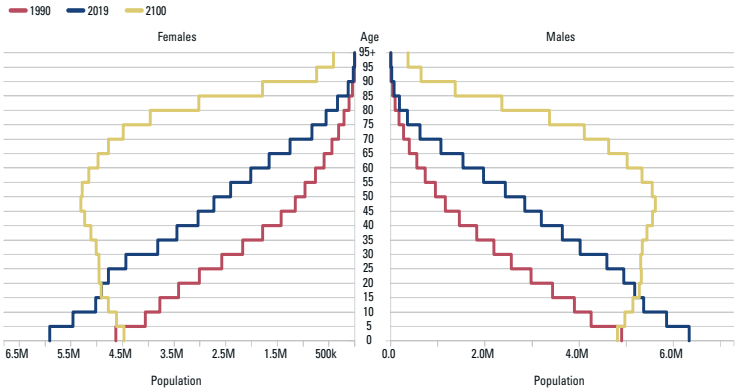
Shaping a supportive environment for optimum health, nutrition and growth for children and adolescents requires an integrated and multisectoral approach. A clear accountability framework shared by all sectors and anchored on the Universal Health Care Act, the Kalusugan at Nutrisyon ng Mag-Nanay Act, Strategic Sectoral Plans, and relevant policies and guideline must be developed and closely monitored using agreed indicators with clear contributions and investments across key stakeholders including members of the private sector, CSOs, and the academe.

Systems for surveillance, information management, procurement and supply chain management need to be strengthened to support equitable, effective, and quality health, nutrition, adolescent health, HIV, and WASH plans and service delivery, including during emergencies, with the contribution of appropriately designed behaviour change interventions embedded in system strengthening strategies.

There needs to be tailoring of UNICEF regional support for LMICs/UMICs, as countries such as the Philippines have high levels of capability in the areas of policy and strategy. Organizations such as UNICEF need to provide tailored support in the areas: (a) Evidence generation for policy, (b) Targeted operational support for disadvantaged populations and (c) addressing weaker system building blocks in such areas as health information systems, supply chains and monitoring and evaluation, and provision of more targeted guidance of models of programme integration. UNICEF Philippines Country Office will benefit from technical support from EAPRO with regard to ensuring cross-sectoral integration to address priority health and nutrition country needs.

PRIMARY HEALTH CARE DIRECTIONS - THE PHILIPPINES

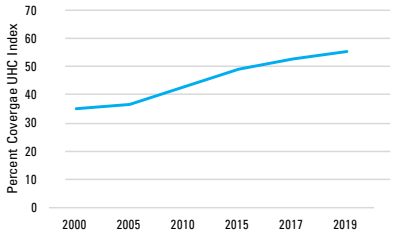
DEMOGRAPHIC TRANSITION



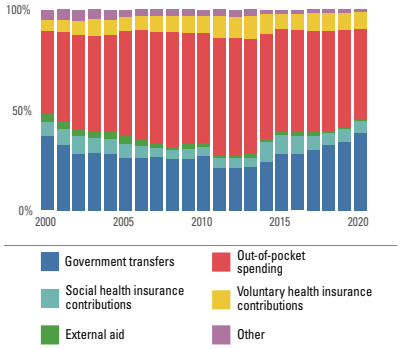
Source of Data: IHME: Country profile the Philippines Institute for Health Metrics and Evaluation (IHME). Philippines Profile. Seattle, WA: IHME, University of Washington, 2021. Available from http://www.healthdata.org/philippines [8/10]

HEALTH COVERAGE AND FINANCIAL PROTECTION

Universal Health Coverage Index

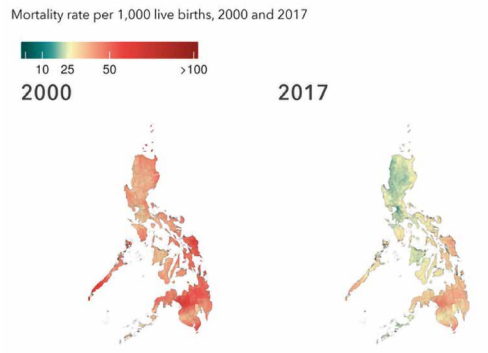


Sources of Health Expenditure



Sources : UHC Index https://www.who.int/data/maternal-newborn-child-adolescent-ageing/indicator-explorer-new/mca/uhc-service-coverage-index-(Expenditures: NHA :https://apps.who.int/nha/database/ViewData/Indicators/en

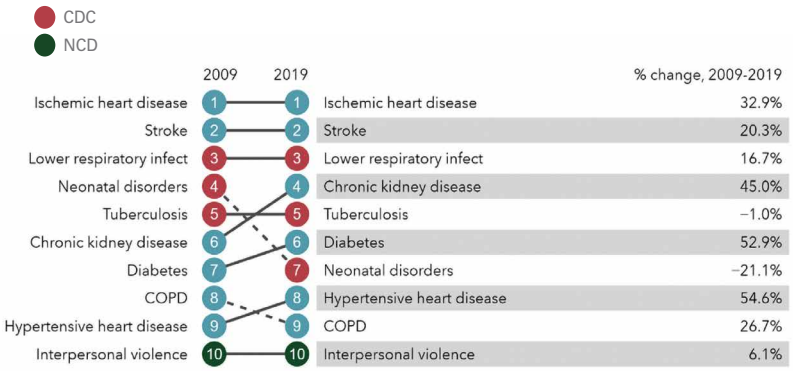
HEALTH INEQUITIES AND ACCESS and SUPPLY BARRIERS



- There is unmet need of 45% for essential UHC index (GHO)
- **Health Workforce** to 1000 Population ratio (1.35) are well below the WHO threshold (4.45) (GHO)
- There are perceived **accessibility barriers** relating to distance (22%) and affordability (48%) (PHCPI)
- 6.31% of the Population in the Philippines has > 10% of **annual household expenditure on health** (GHO)
- **Prevalence of NCDS:** Hypertension is 22.6%, Diabetes 7.2% with diabetes prevalence rising from the previous assessment (PHCPI)

Source of Data: IHME: Country profile the Philippines Institute for Health Metrics and Evaluation (IHME). Philippines Profile. Seattle, WA: IHME, University of Washington, 2021. Available from http://www.healthdata.org/philippines [8/10]

EPIDEMIOLOGICAL TRANSITION



Source of Data: IHME: Country profile the Philippines Institute for Health Metrics and Evaluation (IHME). Philippines Profile. Seattle, WA: IHME, University of Washington, 2021. Available from http://www.healthdata.org/philippines [8/10]

HEALTH CARE BENEFITS PACKAGE and PRIMARY HEALTH CARE POLICY DIRECTIONS

Intervention Classification (old)	PUBLIC HEALTH	PERSONAL CARE	
Intervention Classification (new)	POPULATION-BASED	INDIVIDUAL-BASED	
Level of Care	Primary Care	Primary Care	Secondary Care, Tertiary Care
Payer	National Government and Local Government Units	National Health Insurance Program HMO, Private Health Insurance Private Funds / Household Out-of-Pocket	
Examples	• Mass Interventions (community vaccination, vector control, water quality, sanitation, and others) • Health Promotion and Communication Epidemiologic and Disease Surveillance • Disaster Risk Reduction and Management • Program management, research and development, monitoring and evaluation, capacity building and training	• Screening and Diagnostics • Treatment • Rehabilitation • Palliation	

The model of PHC management and care delivery in the Philippines is being shaped by the Universal Health Coverage Law and the Primary Care Policy Framework, both which affirm the primary level of care as the foundation of the health system, and the PHC approach as a pathway to achievement of UHC. The establishment of primary health care networks, contracting models of population and individual services, and integration of public health functions into health services delivery at community level are central to the approach.

Sources: The The Universal Health Coverage Law and Primary Care Policy Framework, Department of Health. Philippines.

4.5 Malaysia

Primary health care development landscape

Malaysia (population 33.5 million) is a middle-income country with a GDP per capita of $11,109 having almost trebled from $4,088 per capita in the year 2000.[193] Malaysia has sustained growth rates of above 4 per cent for 18 out of the 21 years since the year 2000,[194] and is projected to move into the status of a high-income country by 2025. The country experienced a sharp contraction of growth in 2020 (-5 per cent) associated the COVID-19 pandemic but has since recovered to 3 per cent growth in 2021.

Demographic transition in Malaysia is reflected in trends in fertility rates which demonstrate a decline from 3.4 in 1990 to 1.8 in 2020.[195] The population has doubled in size since 1988. The higher fertility rates of 20–30 years ago mean that Malaysia has a relatively young population, with 15 per cent of the population (5.2 million) belonging to the adolescent age group,[196] and the share of older people in the total population is projected to rise significantly over the next century.[197]

Epidemiological transition is reflected in a rise in non-communicable diseases (NCDs). Rates of death due to diabetes have increased by 29 per cent between 2009 and 2019[198] with prevalence of diabetes (11.1 per cent) still rising.[199] Deaths to ischaemic heart disease, cancers and chronic kidney disease increased significantly in prevalence between 2009 and 2019. Eight out of the ten leading causes of death are attributable to NCDs, with the remaining two due to road traffic injury and lower respiratory infections. For adolescents, road injury (for males and females and drowning (for males) are leading causes of death.

As is the case in other rapidly urbanising and middle-income countries, populations are exposed to very high levels of behavioural and metabolic risk. Behavioural risks include tobacco and dietary risks, including malnutrition. Consistent with other countries at a similar level of development, metabolic risks are rising rapidly, including high body mass index (46.5 per cent increase between 2009 and 2019), high fasting plasma glucose (45 per cent increase) and kidney dysfunction (37 per cent increase).[200] These rapid increases in NCD risks and outcomes present a formidable challenge for current and future health systems in meeting complex health-care needs and reorienting services towards prevention and promotion.

Health system development: Malaysia has a strong tradition of investment in PHC and has been a key success factor in its social development over the past 60 years. During the years immediately after independence, the Malaysian population was largely rural and the government committed to developing a nationwide rural health service developed rapidly. The health profile of the country then started to shift as the population urbanized, the economy globalized, new technologies were introduced and the lifestyles changed.

193 See https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=MY.
194 See https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?locations=MY.
195 See https://data.worldbank.org/indicator/SP.DYN.TFRT.IN?locations=MY.
196 See https://data.unicef.org/adp/country/mys/.
197 See https://www.healthdata.org/results/country-profiles.
198 Ibid.
199 See https://improvingphc.org.
200 See https://www.healthdata.org/results/country-profiles.

The size of the urban population in Malaysia has nearly doubled from 14.2 million in 2000 to 26 million in 2021 and the population is 78 per cent urbanized in 2021.[201] Neither the World Bank nor UN Habitat have data on the percentage of the urban population who are living in slums or urban poor areas. Several reports and studies do however record situations of social disadvantage and childhood poverty in urban settings in different areas of the country.[202, 203, 204] In rural areas, there are many reports that cite higher level of disadvantage in the Eastern part of the country (Sabah, Sarawak) , which have higher proportions of migrants, ethnic minorities and some stateless or "undocumented" populations. Unlike other regional States including Indonesia and the Philippines, the Malaysian administrative system, especially in the health sector, is not highly decentralized. Policies and programmes are developed centrally, and Ministry of Health State Offices direct service delivery through district offices, hospitals and health centres, with subnational managers having limited control over fiscal allocations and human resource management.[205]

Primary health care coverage and equity

Health coverage

The UHC Essential services coverage index has been scaled up from .48 in the year 2000 to .76 in 2019 [see infographic], meaning that, along with Thailand and China, the country has one of the highest UHC coverage rates in the region.[206] A vast majority of deliveries are delivered in health facilities (99 per cent)[207] and 97.4 per cent of women receive four antenatal care visits based on estimates from 2016.[208] A study of unsafe deliveries in Malaysia between 2015 and 2017 found that although the incidence is low, a disproportionate percentage occurs among non-citizens without identification documents. The five main reasons for unsafe delivery were invalid identification documents, financial and transport barriers, distance from health facilities and mother's personal choice.[209]

Historical analysis has found that Malaysia made universal skilled birth attendance a national priority from the time of independence (1957). The country applied a strategy of gradually transitioning from skilled care at home with community midwives [partnering with traditional birth attendants], to birthing homes and thereafter to institutions,[210] resulting in sustained declined in maternal and neonatal mortality. National Immunization coverage has been sustained at between 95 per cent and 99 per cent since 2015, with only a slight decline in coverage during the COVID-19 pandemic.[211] Outbreaks of measles in 2018 (1,981 cases) and 2019 (1,077 cases), and of several polio cases in 2019 in the east of the country, demonstrates coverage gaps in some sectors of the population [see the section on equity for more details].[212] In terms of communicable diseases, the incidence of tuberculosis as 97 per 100,000 and there were no malaria cases reported to WHO in 2020. There were 0.04 new infections of HIV per 1,000 uninfected population in 2021, which is well below the global mean of 0.19 per 1,000 uninfected persons.[213] Ministry of Health statistics for 2021 reflect ongoing challenges with communicable, food and water and vector borne diseases including dengue fever (80 per 100,000), malaria (11 per 100,000), tuberculosis (67 per 100,000)

201 See https://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS?locations=MY.
202 See www.unicef.org/malaysia/reports/children-without.
203 J. Sathasivam et al., 2015, Frail Elders in An Urban District Setting in Malaysia: Multidimensional Frailty and Its Correlates. *Asia Pacific Journal of Public Health* vol. 27, No. 8 (supplement), pp. 52s–61s.
204 UNICEF Malaysia, 2020, *Situation Analysis of women and Children in Malaysia.*
205 WHO Regional office for the Western Pacific, 2012, Malaysia Health System Review. *Health Systems in Transition* vol. 3, No.1.
206 See www.who.int/data/maternal-newborn-child-adolescent-ageing/indicator-explorer-new/mca/uhc-service-coverage-index-(sdg-3.8.1).
207 See www.who.int/data/gho/data/indicators/indicator-details/GHO/births-attended-by-skilled-health-personnel-(-).
208 See www.who.int/data/gho/data/indicators/indicator-details/GHO/antenatal-care-coverage-at-least-four-visits.
209 S.A. Dahlan and M. Mohamed, 2019, Characteristics of Unsafe Deliveries in Malaysia: 2015 to 2017 (Abstract). *Malaysian Journal of Medicine and Health Sciences* vol. 15, Supplement 4, p. 92.
210 G.L. Darmstadt et al., 2009, 60 Million non-facility births: Who can deliver in community settings to reduce intrapartum-related deaths? *International Journal of Gynaecology and Obstetrics* vol. 107 (supplement) pp. S89–112.
211 See https://immunizationdata.who.int/pages/coverage/dtp.html?CODE=MYS&ANTIGEN=DTPCV3&YEAR
212 See https://immunizationdata.who.int/pages/incidence/MEASLES.html?CODE=MYS&YEAR=.
213 See www.who.int/data/gho/data/indicators/indicator-details/GHO/new-hiv-infections-(per-1000-uninfected-population).

and COVID-19 (8,099 per 100,000). The 12th Malaysia Plan 2021–2025 states that the incidence of communicable diseases such as dengue, tuberculosis, HIV/AIDS, malaria and food poisoning and some vaccine preventable diseases are on the rise.

Adolescent health is an emerging public health challenge in Malaysia due to rapid urbanization and modernization. Road injury is the leading cause of death for both boys and girls, with drowning a second leading cause of death for boys.[214] Overweight status now rivals malnutrition as a major contributor towards death and disability in Malaysia. The trend towards overweight status in adolescents has grown from 2 percent in the 1970s to 26 per cent in 2016, which raises concerns about how this trend could contribute to the further rise of NCDs in the future.[215] Data from the 2022 NHMS indicates that 1 in 3 Malaysian teens aged 13-17 years is overweight or obese, 4 in 5 are physically inactive, 2 in 3 lead sedentary lifestyles, 1 in 3 drink soft drinks daily, 1 in 10 eat fast foods at least three times per week and 4 in 5 do not eat enough fruits and vegetables. This raises concerns about increased trend in overweight status could contribute to further rise of NCDs in the future. Change the source 215 to: Institute for Public Health 2022. National Health and Morbidity Survey 2022: Adolescent Health Survey. A national survey from 2015 found that 29.2 per cent aged 16 and above reported having mental health problems, and in adolescents aged 13 to 17, one in five had depression and two in five had anxiety conditions.

The National Strategic Plan for Non-Communicable Disease – Medium Term Strategic Plan to Further Strengthen the NCD Prevention and Control Program in Malaysia (2016–2025) identified NCDs as the leading causes of morbidity and mortality in the country. The main issue relates to improvement in quality of care. However, the plan expresses the concerns of planners regarding the cost of treatment, and the emotional and economic cost this places on society.

Health equity

The scale of health inequities in Malaysia have been substantially reduced over recent decades due to economic and social development and through expansion of access to health services. The 12th Malaysia Plan indicates that 92.6 per cent of the population has access to health care in 2019, as defined by the percentage of the population that lives with 5km of a health facility.

A study on health system barriers to NCD management in Malaysia in 2015 found that health professionals were reporting non-attendance at clinics and non-adherence to medication as major problems, with access to affordable transport being the main reason for non-adherence to treatment. In remote areas of Sabah, up to one day is required to reach the nearest public health clinic.[216]

Life expectancy has been extended from approximately 65 in 1970 to 75 in 2020 (women 77.6, men 72.6). There have been sharp declines in child, neonatal and maternal mortality. Neonatal and child mortality is below 10 per 1,000 live births, and maternal mortality has declined from 141 per 100,000 live births in 1970 to 21 per 100,000 in 2019.[217] The latest available data from the Ministry of Health reports that under-five mortality rates are declining from 8.1 per 1,000 live births in 2019 to 7.4 in 2021. There has been a significant rise in maternal mortality from 21 in 2019 to 68 deaths per 100,000 births in 2021.[218] There have been some media reports that this sudden rise in maternal deaths in Malaysia was attributable to the pandemic which reduced access to health care, including for antenatal care, safe delivery, and family planning, although no research evidence has been located to confirm this observation.[219]

214 See https://data.unicef.org/adp/country/mys/.
215 See https://www.healthdata.org/results/country-profiles.
216 I. Risso-Gill et al., 2015, Understanding the modifiable health systems barriers to hypertension management in Malaysia: a multi-method health systems appraisal approach. *BMC Health Services Research* vol. 15, No. 254.
217 Khazanah Research Institute, 2020, Social Inequalities and Health in Malaysia. The State of Households 2020 Part III Media Briefing 1.
218 Ministry of Health Malaysia, Health Facts 2022. Reference Data for Year 2021 Health Informatics Centre Planning Division MOH/S/RAN/227.22(PT).
219 See https://ova.galencentre.org/why-malaysias-maternal-deaths-skyrocketed-in-2021/#:~:text=KUALA%20LUMPUR%2C%20Jan%204%20%E2%80%93%20In,the%20Department%20of%20Statistics%20Malaysia.

As illustrated in the subnational neonatal and child mortality statistics [see infographic], there are significant variations in outcomes based on location, including in rural and remote areas and in urban areas. For urban areas, a recent review found that "most of the urban poor" in the study area were experiencing NCDs such as diabetes, cardiovascular disease, and even cancer.[220] A study in the low-cost flats in Kuala Lumpur revealed issues of multidimensional child poverty, with malnourishment being a priority issue for the children.[221] In 2020, UNICEF and UNFPA conducted a study, entitled Families on the Edge, to explore the impact the COVID-19 pandemic s on women and children in low-income urban families in Malaysia. The study found that there were rising unemployment, declining incomes, and gaps in social safety nets for informal or self-employed working families. Researchers reported that deterioration in mental health was a major concern, with food and income insecurity being major drivers of mental stress.[222] Disparities in educational outcomes are associated with wealth status, gender and ethnicity.[223]

There are important urban rural disparities in health outcomes. There are for example wide disparities in child survival between urban (Kuala Lumpur) and rural areas (Sabah) [see infographic][224] There are more remote and culturally diverse regions of the country where populations have lower access to and use of health and other social services. In the State of Sabah for example there are indigenous, nomadic populations and migrant workers populations which are all classified as "hard to reach" for different reasons. These populations are often highly mobile, of low socioeconomic status, and frequently do not have access to required citizenship documentation for use of health and social services. Low immunization coverage among these social groups was evidenced by a polio outbreak in 2019 that required an immunization campaign programme response in 2020.

In summary, Malaysia has made significant progress in health and social development and is one of the leading countries in the region on the pathway to UHC. Gaps in coverage generally occur in more marginalized groups, including the urban poor, ethnic minorities and migrant workers, undocumented populations, especially in the east in Sabah and Sarawak States. Like Cambodia, Indonesia and Myanmar, corrections of these health inequities in Malaysia are a necessary part of achieving UHC. The PHC approach of community empowerment, multisector collaboration and integration of health services with public health has provided the ideal opportunity to achieve UHC.

Models of care

As is the case with most country profiles, Malaysia has a mixed health-care system supported through both the public and private sector. According to the WHO Country Cooperation Strategy, the Government funded public sector serves most of the population and 76.7 per cent of all inpatient services. The public sector is funded through budget allocations, with patients paying only nominal fees for outpatient and inpatient care.[225] Malaysia has a three-tier primary health-care model consisting of a health centre, four sub-centres and community nurse clinics.[226] According to Government of Malaysia data published in 2022, there are 2892 health clinics of which 1057 are rural clinics (Klinik Desa). Other facility and service models include maternal and child health clinics (86), mobile health clinics (229) and community clinics (255) and low risk COVID-19 quarantine clinics (219).[227]

220 J. Sathasivam et al., 2015, Frail Elders in An Urban District Setting in Malaysia: Multidimensional Frailty and Its Correlates. *Asia Pacific Journal of Public Health* vol. 27, No. 8 (supplement), pp. 52s–61s.
221 See www.unicef.org/malaysia/reports/children-without.
222 See www.unicef.org/malaysia/media/1771/file/Families%20on%20Edge%20part%203%20(factsheet).pdf
223 UNICEF Malaysia, 2020, Situation Analysis of women and Children in Malaysia.
224 Khazanah Research Institute, 2020, Social Inequalities and Health in Malaysia. The State of Households 2020 Part III.
225 See also D. Quek, 2014, The Malaysian healthcare system: A review'.
226 WHO Regional office for the Western Pacific, 2012, Malaysia Health System Review. *Health Systems in Transition* vol. 3, No.1.
227 Ministry of Health Malaysia Health Facts 2022 Reference Data for Year 2021 Health Informatics Centre Planning Division MOH/S/RAN/227.22(PT).

In contrast, the Ministry of Health reports that there were 8419 registered Private Medical Clinics in 2021.[228] A health sector review expressed the concern that a two-tier system is being developed developed with the private sector serving mostly urban regions where wealthier populations pay for services, while the public sector maintains services for poor and rural populations.[229]

There are several factors that are contributing to a re-evaluation of models of care. The National Health Plan observes the challenge for the country of the increasingly double burden of NCDs and communicable diseases. The increasing complexity of chronic conditions means there needs to be a more balanced approach between prevention and control for diseases such as diabetes, hypertension, cardiovascular disease, and chronic kidney disease. It means upskilling of health service and hospital care providers to treat and manage more complex conditions. Strategic directions recommended by the Ministry of Health to manage this situation include primary care networking and hospital cluster frameworks (12th Malaysia Plan 2021–2025). The main elements of this networking and/or clustering are: (1) integration and coordination of services for more seamless care for patients; (2) improved coordination of primary care with secondary and tertiary care; and (3) improved coordination and integration of care between health managers, providers, clinical support and allied health workforce, including potential contracting of integrated services. These models of primary care reform and networking align closely with other primary care reforms in the region, including in Thailand and the Philippines.

To address the trend of NCDs, the Ministry of Health Malaysia developed enhanced PHC to improve care coordination across the different levels of the health system network. The main elements of the approach include triage, appointment of care coordinator, NCD risk management and referral systems. The main challenges associated with this approach include Issues with human resource availability, digital support, and organizational processes to support these issues.[230]

Networking and integration of services are reliant on the ability to share information between levels of services and sectors, and with clients and the community. Currently only a small percentage of MOH hospitals and health clinics are equipped with electronic medical records. Horizontal and vertical integration of information systems, including shared public and private sector data platforms, have not yet been fully developed.

In summary, changes in sociodemographics and digital health technologies, as well as the persistence of health inequities and the rise in more complex chronic conditions, are placing significant pressure on policymakers and health managers to transition towards more networked, community engaged, coordinated and integrated models of health management and service delivery.

228 Ibid.
229 WHO Regional office for the Western Pacific, 2012, Malaysia Health System Review. *Health Systems in Transition* vol. 3, No.1.
230 Lee Lan Low et al., 2021, Process evaluation of enhancing primary health care for non-communicable disease management in Malaysia: Uncovering the fidelity and feasibility elements. *PLOS ONE* vol. 16, No. 1.

Public health and emergency preparedness

Over the past several decades, Malaysia has been exposed to many disease outbreak and pandemic threats including cholera, Nipah virus, the SARS outbreak in 2002, the HIN1 pandemic threat in 2009, MERS in 2012, the Zika outbreak in 2015, polio outbreak in 2019 and the COVID-19 pandemic in 2020. The country is exposed to natural disasters such as the floods disaster in 2014 on the east coast. The COVID-19 pandemic, highlighted the importance of strengthening national capacities in the surveillance, prevention, control and response system. The experience from the pandemic demonstrated the importance of collaboration between different agencies and public and private sectors to manage the outbreak. Multisector collaborations through the National Disaster Management Agency enabled the establishment and operations of COVID-19 low risk quarantine and treatment centres. The pandemic response was highlighted the importance of preparedness of hospital services in responding to sudden outbreaks of infectious diseases. As shown in other country profiles, the experience of the COVID-19 pandemic revealed the importance of a whole of society effort for outbreak preparedness and response. It demonstrated gaps in response preparedness, gaps in health system availability in remote areas, the disproportionate impact of the pandemic on remote and socially disadvantaged populations to the pandemic, and the need for better integration of information for decision-making. In terms of disaster preparedness and response, a recent review by UNICEF and partners confirmed that children and poorer communities are most at risk in Malaysia from the impacts of climate change. The increased health risks of climate and the environment are associated with worsening floods and vector-borne diseases, declines in the quality of air, and improper disposal of hazardous wastes.[231]

The scale of the NCD epidemic has elicited a range of public health responses from the National Government, including the development of a national mental health strategy and implementation of range of public health measures to prevent NCDs. These measures include obesity intervention programmes at schools and workplaces, expansion of the scope of the sugar tax, nutrition advocacy activities for women to prevent the double burden of malnutrition and obesity, the implementation of quit-smoking programmes and the development of a national health literacy policy. The aim of the Better Health Programme Malaysia is to reduce obesity and other NCD risks in urban poor communities in Kuala Lumpur (in households in the lowest two income quintiles).[232]

Mental health is an emerging public health issue in Malaysia. Mental illness is one of the leading causes of disability and health loss in Malaysia, accounting for 8.6 per cent of total disability-adjusted life-years (DALYs). This review of mental health in Malaysia found that here has been a "dramatic increase" in the prevalence of mental disorders over the past decade in Malaysia.[233] In the context of rapid modernization and stress, economic hardships and cultural change, especially for adolescents, the focus of primary care should shift towards more psycho-social and whole-of-society and whole-of-government approaches to mental health prevention and promotion.[234] According to the National Mental Health Strategy 2020–2025 mental health care in Malaysia had progressed from reliance on custodial treatment and hospital admissions to the introduction of mental health services in PHC through a community mental health programme. Given the trends in mental health and the multiple social and environmental determinants of mental health, the plan recommends multisectoral action plans and improved networking for better mental health care.

In summary, recent Malaysia experience with infectious disease outbreaks, including COVID-19, elevated risks associated with climate change and environmental degradation, and the rise of NCDs, including escalating challenges with mental health, validates a PHC approach with increased focus on the core elements of public health, emergency preparedness, and multisector and community collaborations.

231 See www.unicef.org/malaysia/environment-and-climate
232 Wan Farihah Ahmad Fahmy et al., 2022, Building the capacity of community health volunteers for non-communicable disease prevention in low-income urban communities in Malaysia. *Journal of Global Health Reports* vol. 6.
233 S. Raaj et al., 2021, Mental disorders in Malaysia: an increase in lifetime prevalence. *BJPsych International* vol. 18, No. 4, pp. 97–99.
234 See https://apps.who.int/iris/bitstream/handle/10665/361248/sea-rc75-3-eng.pdf?sequence=1&isAllowed=y

Health financing

Malaysia has a mixed public-private sector funded health-care system. Government spending as a percentage of current health expenditures has been sustained at approximately 50 per cent between 2005 and 2020 (52.8 per cent in 2020), with the Ministry indicating that this figure increased further to 53.25 per cent in 2021. The high level of priority set on health by the Government is reflected in the fact that government health expenditure as a percentage of domestic general government expenditures has increased from 5.6 per cent in the year 2000 to 8.6 per cent in 2020. In 2021, the Ministry of Health reported that this figure has now increased to 10.3 per cent.[235] As judged from a regional standard, out-of-pocket expenditures on health are relatively lower at 35.9 per cent of current health expenditures, and have declined from 38 per cent in 2005. Voluntary health and other sources of finance remain relatively low at just over 11 per cent. Overall, the patterns in financing of health care have shifted very little over the past 20 years [see infographic].[236] The relatively high UHC Coverage Index (SDG 3.8.1) may be attributable in part to the high level of financial protection. The country reports that just 1.32 per cent of the population in Malaysia invests more than 10 per cent of their household income annually on health-care services,[237] which is one of the lowest rates of catastrophic health-care payments in the region.

Malaysia has a hybrid financing system of tax-funded publicly provided care that coexists with out-of-pocket financed private care. Public sector services are subsidized and goods and services are free to the user with small co-payments.[238] One analysis of health financing reform in Malaysia has reported that reforms have been hindered by lack of consensus for transition towards a social health insurance model.[239] The 12th Malaysia Plan 2021–2025 raises serious concern regarding the high human and health-care costs associated with NCDs and the threat this poses to the sustainable financing of the health system. Financing strategies proposed to make the health-care system more sustainable include identifying new sources of financing, extension of the protection system to cover the informal workforce, strategic purchasing and service agreements with private sector agencies, and establishment of a national health literacy policy to raise awareness among the population of health knowledge for prevention and to raise awareness of availability of services.

Health workforce

A health workforce profile developed in 2018 found that Malaysia had 18.88 doctors per 10,000 population, which was reported to be lower than the average for upper-middle-income countries (21.52 doctors per 10,000 population). Nurses in Malaysia had a density of 32.85 per 10,000 population in 2018 which was lower than the average of upper middle-income countries. The Ministry of Health in 2021 reported that there were 77,775 certified medical practitioners and 115,230 registered nurses.[240] The density of nurses is lower than the average for the Western Pacific region. In terms of workforce distribution, the health workforce is predominantly female in most professions including nursing, dentistry, pharmacy and medicine. According to Government regulation, the public health workforce is permitted to undertake private practice at agreed times. In Malaysia, most of the health workforce is engaged in the public sector, with the ratio of public to private sector doctors being 3:1 in 2019 [which is also the case for the nurses]. In terms of geographic distribution, the workforce profile states that west coast region of Peninsular Malaysia has the highest concentration of health workforce personnel, with the regions in the east of the country having the lowest concentrations. The report notes that there has been no changes to the skills mix of the workforce in recent years. This data raises questions about equitable distribution of the health workforce for effective PHC, and whether a static skills mix aligns with changing needs of the population as reflected in the demographic and epidemiological transition [see infographic].[241]

235 See www.moh.gov.my/moh/resources/Penerbitan/Penerbitan%20Utama/HEALTH%20FACTS/Health_Facts_2022-updated.pdf.
236 See https://apps.who.int/nha/database/country_profile/Index/en
237 See www.who.int/data/gho/data/themes/topics/financial-protection
238 WHO Regional office for the Western Pacific, 2012, Malaysia Health System Review. *Health Systems in Transition* vol. 3, No.1.
239 Kevin Croke et al., 2019, The political economy of health financing reform in Malaysia, Health Policy and Planning, Volume 34, Issue 10, December 2019, pp. 732–739.
240 See www.moh.gov.my/moh/resources/Penerbitan/Penerbitan%20Utama/HEALTH%20FACTS/Health_Facts_2022-updated.pdf.
241 Ministry of Health, Malaysia, 2015, *Human Resources for Healthy Country – Profile 2015–2018.*

A case study conducted on the history of the health workforce in Malaysia found that nurses, midwives and medical assistants formed the backbone of the primary care system especially in the early years of development of the health system. As the system developed, task shifting was applied to support changing service needs. Challenges in the modern setting include the loss of workers from the public into the private sector, a mismatch between workforce competencies and community needs and the rapid development of technologies which will require new competencies.[242]

In summary, inequitable distribution of the workforce and the need for new skills mix and competencies to match changing community needs and development of new technologies are major challenges and opportunities for scaling up the PHC approach in Malaysia.

Community engagement and community health workers

Community engagement is critical in implementing primary prevention and the containment of escalating health-care costs related to prevention of disease outbreaks. This is illustrated by the case of low vaccine coverage among undocumented populations in the east of the country (in the State of Sabah) which resulted in a polio outbreak in Sabah in 2019 and the response in 2020. UNICEF worked with a range of authorities and agencies including NGOs, local leaders, security agencies and plantation companies and their estate clinics to facilitate access to vaccination services for undocumented populations through a campaign strategy. The role of community volunteers and local leaders was considered by UNICEF to be "instrumental" in ensuring that children and their families reached the vaccination posts. In fact, it was concluded that coordinated responses from multiple agencies is a feasible approach for improved routine immunization in these hard-to-reach areas. These lessons have been taken up in a recent proposal to improve immunization services for hard to reach populations in Sabah, recommended roles for community volunteers in microplanning through providing information on " local learning on barriers to access and solutions to reaching additional children."[243] In Sabah and Sarawak, there has a been a history since the 1980s of community health volunteer work in village sanitation and water supply, referral, and malaria surveillance. A health system review reported "a rapid decline in malaria cases" from the 1990s that has been associated with this volunteer work.[244]

As has been the case in other countries in the region, the Government of Malaysia through the 12th Malaysia Plan proposes establishment of Wellness Facilities/Activities to improve health literacy and awareness through better engagement on health issues with school children, local leaders and community members. This approach involves capacity building programmes for community leaders and volunteers to support health promotion and counter misleading information. In a similar way, the Better Health Programme Malaysia, designed by the Ministry of Health in 2013, engaged and trained community health volunteers (CHVs) to reduce NCD risks in poor urban communities in Kuala Lumpur. Evaluations of this intervention found sustaining community health volunteers' roles have been challenging due to inadequate buy-in from multiple stakeholders, lack of ongoing volunteer training, and an environment that is not supportive of healthy lifestyles.[245] One other evaluation of CHV roles in health education on NCD risks factors in Sarawak involved training volunteers in identifying risk factors, and communication of healthy behaviours and lifestyle in relation to five main components of active lifestyle, no smoking, weight management, and NCD detection through health screening. This evaluation found that to sustain CHV programmes, there needs to be adequate remuneration, incentives, training and supervision as well as expansion of the roles with recruitment of a younger and more educated cohort of volunteers.[246] As has been observed in Thailand, there are calls for more engagement of community health volunteers in home based care for older people, those with chronic

242 See https://www.cambridge.org/core/books/systems-thinking-analyses-for-health-policy-and-systems-development/health-workforce/EA575522CA4D7D75690C56DC2743748C.
243 UNICEF Malaysia, 2012, Leaving No One Behind: Improving Access to Immunization for Hard-to-Reach Under 5 Children in Sabah.
244 WHO Regional office for the Western Pacific, 2012, Malaysia Health System Review. *Health Systems in Transition* vol. 3, No.1.
245 Wan Farihah Ahmad Fahmy et al., 2022, Building the capacity of community health volunteers for non-communicable disease prevention in low-income urban communities in Malaysia. *Journal of Global Health Reports* vol. 6.
246 Melvin Hsien Liang Chung, Helmy Hazmi and Whye Lian Cheah, 2017, Role Performance of Community Health Volunteers and its Associated Factors in Kuching District, Sarawak. *Journal of Environmental and Public Health* vol. 2017.

conditions and people with disabilities. The three roles identified in one review for home care included internal care activities support, social care activities support and social health-care support. In one other study on home-based care, researchers identified roles of CHVs in provide culturally appropriate health education and information, counselling and guidance on health behaviours, referral, advocacy on community health needs and provision of some direct services.[247]

The role of Community Health Volunteers in Malaysia is reflective of many developments in this role in the region. The CHVs focus on gaps in services and are operating in contexts where there is low accessibility to services or where there are vulnerable populations including in urban poor areas, and remote areas with undocumented or indigenous populations. Although volunteers are maintaining roles in some locations in maternal and child health and immunization, there is an increasing emphasis in strategy and operations now on the role of CHVs in reducing NCD risk factors and providing home-based care. The challenges of CHV programmes have some similarities with other countries in the region, especially in relation to the adequacy of remuneration, training, supportive supervision, and recognition from other stakeholders. They demonstrate the main potential of Government policy [see below] in implementing a PHC "whole of society" approach in response to modern health challenges.

Policy and strategy directions for primary health care in Malaysia

Although no distinct PHC policy and strategy was identified in the literature, the 12th Malaysia Plan and related strategy documents of the Ministry of Health reflected many of the main components of the PHC approach. Main gaps in services include undersupply of health workforce and health system development in the eastern part of the country, and a requirement to reorient health and social systems to reduce the existing and emerging public threats of both communicable diseases and NCDs. Several of the main strategies policies and strategies of relevance to the PHC approach that are recommended by the Government are outlined below.

Leadership, policy and governance

The 12th Malaysia Plan outlines several priorities for the next planning cycle that includes improving emergency preparedness, ensuring the population have equal access to health-care services, developing more sustainable health financing systems, closer integration of public and private sector data systems, and addressing mismatch of services in some remote areas.

The Government proposes to achieve these goals through implementing a "whole of nation" approach in handling health crises, by improving collaboration between public, private and civil society sectors, introducing more sustainable health financing models, and digitalising health services.

The National Strategic Plan for Non-Communicable Disease – Medium Term Strategic Plan to Further Strengthen the NCD Prevention and Control Program in Malaysia (2016–2025) calls for a whole-of-government and whole-of-society approach to address the common risk factors of smoking, poor nutrition, physical inactivity and unhealthy use of alcohol. Improved disease control is proposed through reorientation of health-care services toward more integrated models of care and through people-centred PHC and UHC.

Community engagement

The Ministry of Health proposed and is implementing community-based initiatives through support of Community Health Volunteer networks and through schools and community leaders to reduce risk factors for NCDs. Examples include the Better Health Programme Malaysia and proposed establishment of wellness

247 Muhammad Najib Ali and Aini AhmadAini Ahmad, 2020, The role of home care community health volunteers (CHV) in Malaysia. *International Journal for Studies on Children, Women, Elderly and Disabled* vol. 10, pp. 54–60.

facilities. CHV networks, along with NGO and other agency collaborations are being used in parts of the country (e.g. Sabah) to improve access to maternal and child health and immunization services for disadvantaged groups including undocumented populations, migrants and indigenous groups.

Models of care

The Ministry of Health recommends transforming health systems towards more coordinated models of care to prevent and manage more complex social and health-care conditions. This involves development of primary care networking and hospital cluster frameworks characterized by more coordinated and team-based models of care.

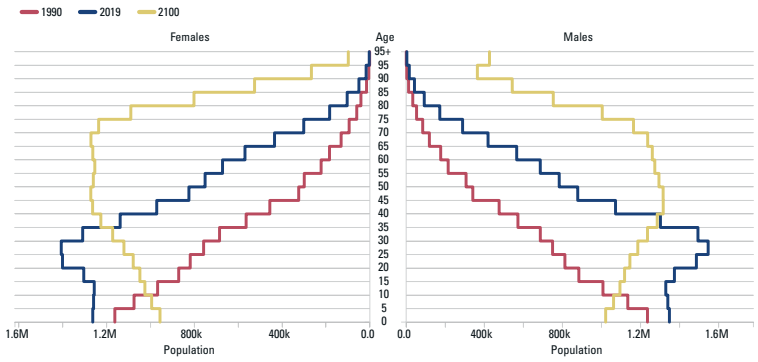
The initiative for enhanced PHC aims to improve care coordination across the different levels of the health system network using care coordinators and improved information exchange between levels of service. The main challenges associated with this approach include Issues with human resource availability, digital support, and organizational processes to support these issues.

Priority actions for developing the primary health care approach in Malaysia to be supported by UNICEF and other stakeholders

1. **Leadership –** Development partners such as UNICEF applying strong advocacy, sharing of resources, and knowledge generation for development of political will for policies that support UHC, especially free immunization for under-five children and free primary education for all children.
2. **Multisector action and public health:** (a) Ensure a public health orientation for health services through increased emphasis on prevention and promotion. (b) Taking a population health perspective and reducing health inequities by focussing on the needs of children, especially the more vulnerable ones, in Eastern Malaysia (Sabah and Sarawak) and in urban poor areas. (c) Integration of public health and PHC must be a whole of government and whole of society approach which means support for environmental health including healthy urban environments (e.g., water and sanitation, sport and recreation, healthy transport options), wellness centres and programmes at all public facilities.
3. **Health workforce –** Development of workforce roles and skills in public health – prevention, promotion, protection, surveillance, and emergency preparedness.
4. **Community engagement –** Expanding the roles of CHWs and sustaining related programmes through adequate remuneration, training and supervisory support.
5. **Models of care –** There should be improved Integration in health services delivery as exemplified by primary care networks and collaborations, public-private sector and civil society collaborations. There are widening gaps and cracks in the health system in which those who are hard to reach (indigenous, remote, marginalized, stigmatized, undocumented) have fallen into. This needs to be addressed through pro-equity policy frameworks that support improved access to and use of health and other public services for these groups.
6. **Digital health –** Improve integration of information through expansion of digital health strategy especially for electronic medical records.
7. **Health financing –** Gaps in the health system gaps in the health services and inadequacy in the health system are linked to the way health is financed in Malaysia. UNICEF and other agencies should technically support and advocate for a sustainable financial mechanism, including health insurance and trust accounts, and for financial and social protection for socially disadvantaged sectors of the population.

PRIMARY HEALTH CARE DIRECTIONS - MALAYSIA

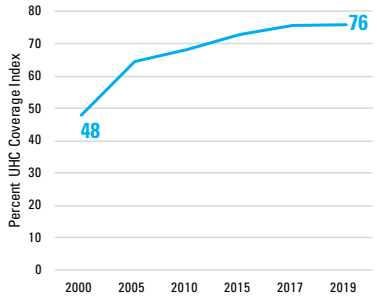
DEMOGRAPHIC TRANSITION



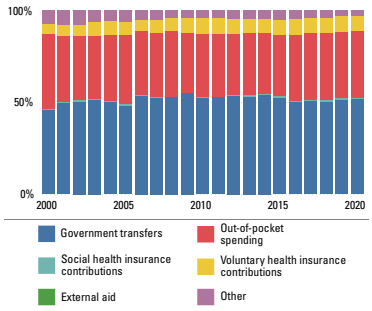
Source of Data: IHME: Country Profile Institute for Health Metrics and Evaluation (IHME). Seattle, WA: IHME, University of Washington, 2021. Available from https://www.healthdata.org/results/country-profiles

HEALTH COVERAGE AND HEALTH FINANCING (2000-2020)

UHC Coverage Index 2000 - 19

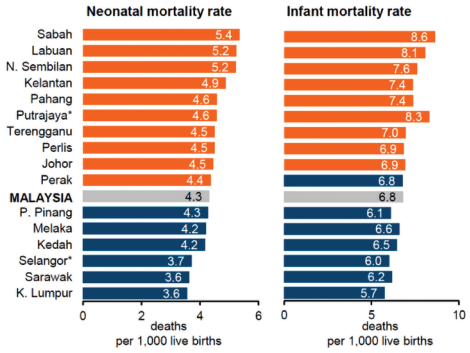


Sources of Health Expenditure 2000-2020



Sources of Data: UHC Coverage Index https://www.who.int/data/gho/indicator-metadata-registry/imr-details/4834 Expenditures: National Health Accounts Data Base: https://apps.who.int/nha/database/country_profile/Index/en

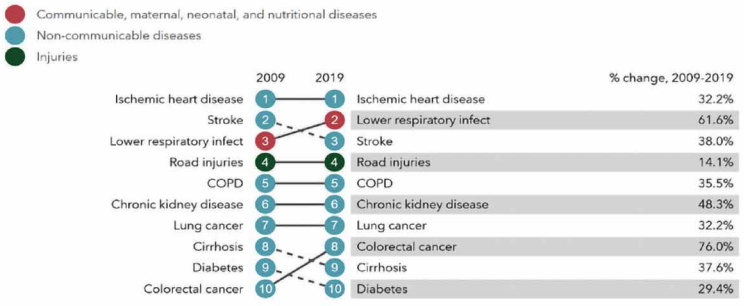
HEALTH INEQUITIES AND HEALTH ACCESS



- The **Maternal Mortality Rate** was 29 per 100,000 live births (2017), having declined from 38/100,000 in 2010 (GHO)
- There is unmet need of 24% for essential UHC index coverage (GHO)
- **Health Workforce** to 1000 Population ratio for nurse midwife is 4.2 (2016) and for physician 1.5 (World Bank/ GHO)
- 1.52 % of the Population in Malaysia has > 10% of **annual household expenditure on health** (GHO, 2020)
- **Prevalence of NCDS:** Hypertension is 22.9%, Diabetes 11.1% with diabetes prevalence rising from the previous assessment (PHCPI)

Source of Data:INF ANT MORTALITY RATES BY STATE: KRI - The State of Households 2020 Part III Media Briefing Dec 2020 https://www.krinstitute.org/assets/contentMS/img/template/editor/KRI%20-%20Presentation%20Slides.pdf

EPIDEMIOLOGICAL TRANSITION



Source of Data: IHME: Country profile Institute for Health Metrics and Evaluation (IHME). . Seattle, WA: IHME, University of Washington, 2021. Available from https://www.healthdata.org/results/country-profiles

HEALTH CARE BENEFITS PACKAGE and PRIMARY HEALTH CARE POLICY DIRECTIONS

Health Care Benefits Package

The predominant source of health-care financing is general government health expenditure (GGHE), which is mainly financed through general taxation.

Malaysia has a "hybrid" financing system of tax-funded publicly provided care that coexists with out-of-pocket financed private care

Public sector services are subsidized and goods and services are free to the user with small co-payments

Malaysia has a history of free immunisation for children.

PHC Policy and Strategy Directions

The main priorities for the health sector are improving emergency preparedness, ensuring the population have equal access to healthcare services, developing more sustainable health financing systems, closer integration of public and private sector data systems, and addressing mismatch of services in some remote areas.

The Ministry of Health recommends transforming health systems towards more coordinated models of care to prevent and manage more complex social and health care conditions. This involves development of primary care networking and hospital cluster frameworks characterised by more coordinated and team-based models of care.

The Enhanced Primary Health Care (EnPHC) initiative aims to improve care coordination across the different levels of the health system network using care coordinators and improved information exchange between levels of service.

The Ministry of Health proposes and is implementing community-based initiatives through support of Community Health Volunteer networks and through schools and community leaders to reduce risk factors for NCDs. Examples include the Better Health Programme Malaysia and proposed establishment of Wellness Facilities.

Sources: 12th Malaysia Plan 2021 - 2025

4.6 Indonesia

Primary health care policy and development landscape

Indonesia (population 270 million) is a lower middle-income country with a GDP per capita of $4,292 in 2021 having increased from $700 per capita in the year 2000.[248] Despite a growth downturn associated with the COVID-19 pandemic when GDP reduced by 2.1 per cent in 2020, Indonesia has sustained growth rates of above 4 per cent since 2002.[249]

Demographic transition in Indonesia is reflected in fertility rates which have declined from 4.4 in 1980 to 2.5 in 2000 and to 2.3 in 2020.[250] The higher fertility rates of 20–30 years ago mean that Indonesia has a young population, with 17 per cent of the population (46 million) belonging to the adolescent age group,[251] and the share of older people the total population is projected to rise significantly over the next century.[252]

Epidemiological transition is reflected in a rise in non-communicable diseases (NCDs). Rates of death due to diabetes increased by 50 per cent between 2009 and 2019[253] with prevalence of diabetes (7.7 per cent) still rising.[254] There has been some decline in infectious diseases as a cause of death in the past decade in relation to tuberculosis and diarrhoeal diseases, although they remain in the top 10 causes of death in 2019. Although deaths due to neonatal disorders have declined by 44 per cent in the same period, such disorders are the twelfth leading cause of death in the country, and a leading cause of death and disability combined.[255] Neonatal deaths make up 50 per cent of all deaths in the first year of life. Although under-five and infant mortality rates more than halved between 1990 and 2017, more than 1 in 10 children die in some districts of eastern Indonesia.[256] Pneumonia, congenital disease, and diarrhea are the leading killers in early childhood. Alteration in environment, technology and lifestyle have shifted disease patterns in Indonesia which are now dominated by diseases such as diabetes, heart disease, obesity, kidney disease, lung disease, and malignancy.[257] Indonesia therefore is exposed to the triple burden of communicable diseases, NCDs and maternal and child health challenges despite significant gains made in health outcomes over the past decade.

Decentralization and urbanization are reshaping the administrative and social context of the country. In relation to urbanization, over half the population in Indonesia is urbanized (57 per cent) in 2021. The country is on a steep trajectory or urban growth having increased the share of population in urban areas from 42 per cent in 2000.[258] UN Habitat reported in 2018 that 30.4 per cent of the urban population is residing in slum

248 See https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=ID.
249 See https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?locations=ID.
250 See https://data.worldbank.org/indicator/SP.DYN.TFRT.IN?locations=ID.
251 See https://data.unicef.org/adp/country/idn/.
252 See https://www.healthdata.org/results/country-profiles.
253 Ibid.
254 See https://improvingphc.org.
255 See https://www.healthdata.org/results/country-profiles.
256 See https://www.unicef.org/indonesia/health.
257 Dyah Purnamasari, 2018, The Emergence of Non-communicable Disease in Indonesia. *Acta Medica Indonesiana* vol. 50, No. 4, pp. 273–274.
258 See https://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS?locations=ID.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areas,[259] which is equivalent to a population of 45 million currently residing in these locations. Despite the significant advantages of *decentralization* through responding to local health needs, disparities in the resources and performance of local governments can impact on service provision.

Primary health care coverage and equity

Health coverage

The UHC Essential services coverage index has been scaled up from .22 in the year 2000 to .59 in 2019, which along with Cambodia, represents one of the fastest scale ups of UHC in the region.[260] A vast majority of deliveries are now by trained personnel (94.7 per cent).[261] 90.6 per cent of women receive four antenatal care visits based on estimates between 2012 and 2017.[262] Immunization coverage rates have declined significantly associated with the impacts of the COVID-19 pandemic, with WUENIC estimates for 2021 being 67 per cent for DPT3 which is significantly lower than the estimates of 85 per cent in 2019. There large numbers of measles cases in 2015 (15,099 cases), demonstrating high levels of vulnerability to vaccine-preventable diseases.[263] There were 524 cases reported in 2020.[264] There were 0.08 new infections of HIV per 1,000 uninfected population in 2021,[265] and an incidence rate of 301 per 100,000 per year of new tuberculosis cases,[266] both of which demonstrate ongoing challenges communicable disease prevention and control. Other

259 See https://data.unhabitat.org/datasets/cd4e1deb72ea49bd8f3403f8a9edfe6d_0/explore.
260 See www.who.int/data/maternal-newborn-child-adolescent-ageing/indicator-explorer-new/mca/uhc-service-coverage-index-(sdg-3.8.1).
261 See www.who.int/data/gho/data/indicators/indicator-details/GHO/births-attended-by-skilled-health-personnel-(-).
262 See www.who.int/data/gho/data/indicators/indicator-details/GHO/antenatal-care-coverage-at-least-four-visits.
263 See https://immunizationdata.who.int/pages/coverage/dtp.html?CODE=IDN&ANTIGEN=DTPCV3&YEAR=.
264 See www.who.int/data/gho/data/indicators/indicator-details/GHO/measles---number-of-reported-cases.
265 See www.who.int/data/gho/data/indicators/indicator-details/GHO/new-hiv-infections-(per-1000-uninfected-population).
266 See www.who.int/data/gho/data/indicators/indicator-details/GHO/incidence-of-tuberculosis-(per-100-000-population-per-year).

priorities for vector borne and communicable diseases include malaria, dengue fever, influenza, and avian flu. More than half of districts are now free of malaria,[267] with a recent report indicating that 362 districts out of 514 and now malaria free.[268] Indonesia ranks 5th highest for stunting (30.8 per cent) and 4th for wasting in the world, demonstrating that children are not benefitting from adequate feeding practices and complementary foods.[269]

Adolescent health is an emerging public health challenge in Indonesia. Risk factors for adolescents in the Indonesia context include child marriage for girls and substance use, with road injury and tuberculosis being among the top three causes of deaths in adolescents.[270] Other female and male adolescent health issues include HIV in the cities, tobacco use in young people, unmet reproductive health needs and child marriage as well as the risks associated with long-term exposure to air pollution. Adolescents experience a significant burden of preventable NCD, including mental disorder, asthma and chronic pain. They represent an important group in relation to reduction in the burden of NCDs, since many of the risk factors for adult NCD (such as tobacco use, physical inactivity, and poor diet) are modifiable risk factors that occur in the adolescent age group (girls and boys aged 10–19).[271] Although NCDs have been in the mandate for minimum standards of care for Districts (diabetes, hypertension, and mental health), care and support services for adolescents, along with older people and people with disabilities and girls and boys who have not yet been included in the minimum standards for primary care.

Basic mental health services are integrated into general health services, but the shortage of mental health specialists has been identified as a constraint on service utilization. Community-based mental health organizations play a significant role in reducing stigmatization and discrimination against women and men with mental health disorders.[272]

Health equity

Health disparities are reflected in regional variations in service coverage and health outcomes. There are wide ranges of inequality in immunization throughout the region due to socioeconomic and demographic factors with complete immunization status significantly associated with birth order, age of mother at delivery, mother's education, father's occupation, and availability of PHC centres.[273] Disparities in rates of stunting is more prevalent in the west and far east of the country and is more prevalent in rural areas.[274] As demonstrated in the infographic on PHC, child mortality rates understandably range significantly across the country.[275] A national review of health inequalities in Indonesia found wide variations subnationally in adolescent fertility rates.[276] Although there are reported barriers to access related to distance (11 per cent) and treatment costs (15 per cent) in Indonesia, there are the lowest reported accessibility barriers for the six countries with data in the PHC Performance Initiative, with all the other five countries recording higher distance and treatment cost barriers to access.[277]

267 See www.unicef.org/indonesia/health.
268 It is projected that more than 70 per cent of the country in 2022 will be free of malaria. See MOR Report 2022.
269 See www.unicef.org/indonesia/health.
270 See https://data.unicef.org/adp/country/idn/.
271 See www.burnet.edu.au/projects/285_non_communicable_diseases_in_adolescents_in_indonesia.
272 WHO Regional Office for South-East Asia, 2017, Indonesia health system review. *Health Systems in Transition* vol. 7, No. 1.
273 I. Siramaneerat and F. Agushybana, 2021, Inequalities in immunization coverage in Indonesia: a multilevel analysis. *Rural Remote Health* vol. 21, No. 3, p. 6348.
274 See www.unicef.org/indonesia/health.
275 See www.healthdata.org/results/country-profiles.
276 WHO, 2017, *State of health inequality: Indonesia.*
277 See https://improvingphc.org.

Models of care

The public sector: The health system in Indonesia is decentralized, with a mixed public and private model of both health-care delivery and health services. In the public sector for individual health care, there are national referral hospitals (tertiary) and provincial hospitals (tertiary). At district level, there are district hospitals (secondary), and at sub-district level, at least one *puskesmas* (public PHCs or health center) should be available. The *puskesmas* (public health centres) provide both curative and public health services, with a focus on six essential service areas: health promotion, communicable disease control, ambulatory care, MNCH and family planning, community nutrition and environmental health, including water and sanitation.[278] The *puskesmas* act as the gatekeeper for referral to high levels of the health system and provide health care for the estimated number of 85,000 villages in the country. Under *puskesmas*, there are satellite services called: *Pustu* (auxiliary *puskesmas*), Poskesdes-at village level, and posyandu at community level/hamlet. There is cadre of village health volunteers (Kader) whose main task is to organize integrated services at monthly health posts referred to as *posyandus*. There are approximately 300,000 hamlets in Indonesia where posyandus and *Posbindu* services are provided. The *Posbindu* health posts enables opportunities for community participation in the activities of early detection, monitoring and follow-up of people with NCD risk factors.[279] The community health workforce, known as *kaders*, have the primary task of organizing monthly *posyandus* with services that include health and nutrition counselling, immunization and screening activities for diabetes and hypertension, and maternal and child health-care services are provided under supervision of *puskesmas*.[280]

The private sector in Indonesia consists of hospitals as well as physician-run clinics/group practices, private practices, midwifery clinics, clinical laboratories, and pharmacies. Private sector services regulated centrally and locally by the government through accreditation, licensing, and registration systems. A health system review published in 2017 found that the private sector had a greater share of health expenditure than the public (government) sector, and that the private sector makes up 46.4 per cent of all hospital beds in the country. Private primary care clinics (klinik pratama) and solo practices include services provided by general practitioners (GPs), midwives, and nurses. A case study from 2017 reported that more than half of PHC facilities are *puskesmas* (55.8 per cent), with the rest provided through general practices (22.9 per cent) and medical centres (13.7 per cent).[281] Private health services are mostly self-funded and purchased through out-of-pocket payments. Most of the public sector health professionals work in the private sector. In urban areas, the private sector is estimated to be the major provider of secondary health care.

The health sector review in 2017 reported challenges with the mixed health-care model.[282] Reporting of health information to the private sector is a challenge, as is assessment of quality in the private sector. Although dual practice is permitted by government regulation to expand access to and availability of care, it is contributing to maldistribution of health personnel, as medical professionals may be reluctant to move to rural or remote areas without private practice and with less well-equipped medical facilities.

Private sector engagement provides opportunities for partnerships and expanding accessibility to care in some circumstances. There have been successful partnerships with private sector and civil society for HIV prevention and care and to support malaria elimination.[283] Private facilities are required to communicate and collaborate with *puskesmas* in relation to disease surveillance and reporting on public health programmes, such as immunization, family planning, and tuberculosis and HIV programmes. There has been experience with contracting of providers through publicly funded schemes although more work is required on using reimbursement or payment policies to drive improvements in quality improvement or efficiency.[284]

278 See https://apps.who.int/iris/handle/10665/254716.
279 Ibid.
280 T. Gadsden et al., 2022, Understanding community health worker employment preferences in Malang district, Indonesia, using a discrete choice experiment. *BMJ Global Health* vol. 7, No. 8.
281 WHO, 2017, Primary health care systems (PRIMASYS): Case study from Indonesia.
282 WHO Regional Office for South-East Asia, 2017, Indonesia health system review. *Health Systems in Transition* vol. 7, No. 1.
283 Ibid.
284 WHO, 2017, Primary health care systems (PRIMASYS): Case study from Indonesia.

Public health

At the local level there are Provincial and District Health Offices (PHOs, DHOs) who are responsible for Public Health Programmes/efforts for its areas. Although the MOH sets directions on health-related technical matters, it is Local Governments who administer health related tasks and functions at the local level. Public health functions are a high priority in Indonesia considering impacts on health of air pollution, tobacco use and climate related threats. Despite public health being a high priority, there are challenges with implementation of public health functions, and it is important area for strengthening of the health system and PHC. A recent report on climate risk in Indonesia found that children in Indonesia are at high risk from vector borne diseases, air pollution, and coastal floods, and that investments in health and nutrition, education, and social protection are important measures to assist adaptation to climate change.[285] All these public health trends, including the impact of the COVID-19 pandemic, point to the need for PHC oriented approaches to public health including multisector collaboration and community engagement. A Healthy Indonesia Programme was launched by the MOH in 2015 which aimed to promote healthy behaviours, environment and accessible quality services. The Healthy Indonesia programme consists of three main areas: (1) paradigm of health; (2) PHC strengthening; and (3) national health insurance.[286] The programme also incorporates a family health approach through integrated service approach strategy and home visits, and through operations informed by family health profile data.[287] District health offices have an environmental health section that has the main responsibility to implement technical training for environmental health improvement.[288]

Health system capacity

In the Indonesian context with its decentralized systems and diverse socio economic, geographic and cultural make-up, there are huge disparities in PHC accessibility and capacity. These disparities are due to infrastructure challenges, geographic accessibility and diversity (Indonesia being a country of 17,000 islands), variations of budget allocations, human resources and essential medicines availability. Maldistribution and disparities in resource allocation and system capabilities need to be therefore cautiously considered in making general assessments about health system capacity in Indonesia. Several policies and technical guidelines are available for PHC activities, but most of the time there are implementation constraints related to lack of enforcement and resourcing for implementation. Information systems and digital technologies are underutilized and highly fragmented, with one Ministry of Health Report from 2021 indicating that 80 per cent of health-care facilities in Indonesia are currently without digital technology. There are varying health sector applications and lack of regulation for standardization of digital applications.[289]

A systematic review of decentralization challenges in the health sector in Indonesia found that the health system building blocks of service delivery, financing and the health workforce should be prioritized to improve overall health system performance at the district level and below.[290] One recent case study of PHC in 2017 found that there is a degree of hospital-centrism in Indonesia related to decentralization processes. For example, some local governments see hospital construction as being associated with revenue collection, so that these hospitals become the priority rather than primary care services, which are considered as less professional, cheap and low-technology services.[291]

Health financing: Indonesia provides an important example in the region of leadership on issues related to health financing. This is mostly related to commitment to financing of the public health sector and the

285 See www.unicef.org/indonesia/press-releases/children-indonesia-high-risk-impacts-climate-crisis-unicef.
286 WHO Regional Office for South-East Asia, 2017, Indonesia health system review. *Health Systems in Transition* vol. 7, No. 1.
287 Henni Febriawati et al., 2020, Analysis of Indonesian Health Program through Family Approach (PIS-PK) in the Working Area of Public Health Center of Jalan Gedang. *Pakistan Journal of Medical and Health Sciences* vol. 14, No. 1, pp. 581–585.
288 WHO Regional Office for South-East Asia, 2017, Indonesia health system review. *Health Systems in Transition* vol. 7, No. 1.
289 See https://dto.kemkes.go.id/ENG-Blueprint-for-Digital-Health-Transformation-Strategy-Indonesia%202024.pdf.
290 Trisya Rakmawati, Reece Hinchcliff and Jerico Franciscus Pardosi, 2019, District-level impacts of health system decentralization in Indonesia: A systematic review. *International Journal of Health Planning and Management* vol. 34, No. 2, pp. e1026–e1053.
291 WHO, 2017, Primary health care systems (PRIMASYS): Case study from Indonesia.

establishment of a national health insurance scheme. Government spending as a percentage of current health expenditures has increased from 29.7 per cent in the year 2000 to 48.9 per cent in 2019. The level of priority set on health by government is reflected in the fact that government health expenditure as a percentage of domestic general government expenditures has increased from 3.6 per cent in the year 2000 to 8.7 per cent in 2019. By law, the health expenditure should be at least 5 per cent of general government allocation at national level, and at least 10 per cent at sub-national level. Out of pocket expenditures in the same period (2000–2019) have declined from 45 per cent to 34.7 per cent. Social health insurance has expanded from 2.2 per cent of total health expenditures to 13.94 per cent in 2019.

A national health insurance system was introduced in 2014 (JKN – Jaminan Kesehatan Nasional, mandatory national social health insurance, with subsidies for the poor). It pools contributions from members and the Government into a single national scheme under a single national agency. There were two major milestones in the development of this system. In 2005 the Government launched *Askeskin* (insurance for the poor), followed by JKN. It incorporates a national care package and funds providers through capitations and diagnosis related groups for hospitals, while salaries for public staff are provided through budget allocations.[292] UNICEF has reported that JKN is the world's largest single payer health insurance programme,[293] and a recent assessment confirmed that by the end of 2019, 83 per cent of the population was covered by the national scheme.[294] The most recent data from the National Health Insurance agency confirms that by November 2022, JKN enrollemnts totalled 246,947,033.[295] A review of JKN in 2021 found that members were less likely to make out-of-pocket payments for health care, and this was especially the case for groups in the two lowest socioeconomic quintiles.[296] Challenges related to this scheme include equity in resource allocation for underserved areas of the country, and the focus of capitation-based models more on curative care in contrast to public health functions. This is significant not only in relation to equity, but also in relation to the capacity for PHC orientation of services towards prevention and promotion. Variations in economic capacity subnationally are reflected in variations in opportunities for investment in health facilities and in incentives for health-care workers.[297]

Health workforce: The staffing ratio of doctors, nurses, and midwives to 1,000 population is 2.32, which is well below the levels of 4.45 per 1,000 as recommended by WHO to reach UHC. Nonetheless, this is almost a doubling in health workforce from 1.42 per 1,000 population in 2009.[298] The Strategic Plan of the Ministry of Health (2015–2019) notes that the main issue is not numbers, but the distribution and mix of health staff, especially for the *puskesmas*.[299] To develop a more people-centred model of health care, the Medical Education Act No. 20 of 2013 created a new category of the medical profession referred to as primary care physicians, which re equivalent to the family physician in other countries.[300] Nurses make up the major proportion of the Indonesian health workforce (38 per cent), followed by medical doctors (19 per cent), midwives (17 per cent), allied health workforce (13 per cent), public health personnel (7 per cent) and pharmacists (6 per cent).

Community health workers are not formally trained workers and work on a voluntary basis, and the *puskesmas* train and engage these workers. In previous years, these workers were the benchmark for PHC. They were allocated a set number of households and were supported by Government centrally and by local government. After decentralization, this level of community engagement has become weaker, and there has been a decline in mandate and directions from central and local government. The community health workers have traditionally supported immunization, family planning and nutrition, but have had limited training in the areas of NCDs, adolescent health and disability support.

292 WHO Regional Office for South-East Asia, 2017, Indonesia health system review. *Health Systems in Transition* vol. 7, No. 1.
293 See www.unicef.org/indonesia/health.
294 Qinglu Cheng et al., 2022, Equity of health financing in Indonesia: A 5-year financing incidence analysis (2015–2019). *The Lancet Regional Health – Western Pacific* vol. 21, No. 100400.
295 See https://faskes.bpjs-kesehatan.go.id/aplicares/#/app/peta.
296 N. Maulana et al., 2022 How Jaminan Kesehatan Nasional (JKN) coverage influences out-of-pocket (OOP) payments by vulnerable populations in Indonesia. *PLOS Global Public Health* vol. 2, No. 7.
297 WHO, 2017, Primary health care systems (PRIMASYS): Case study from Indonesia.
298 Ministry of Health, Indonesia, 2020, *Human Resources for Health – Country Profiles*.
299 Decree HK.02.02/MENKES/52/2015.
300 WHO, 2017, Primary health care systems (PRIMASYS): Case study from Indonesia.

Policy and strategy directions for primary health care in Indonesia

Laws, policies and regulations

There are various acts, decrees, regulations, and guidelines that reflect the implementation PHC approach in Indonesia. PHC is led in Indonesia through the Directorate of Public Health Governance under the Director General of Public Health, and the Directorate of Primary Health Care under the Director General of Health-Care Facilities.

Legislation passed in 1997 (Law No. 4) guarantees equal rights and opportunities for people with disabilities, and obliges government and society to provide rehabilitation, social assistance, and social welfare. In 2007, Indonesia ratified the United Nations Convention on the Rights of Persons with Disabilities (4) and, in 2011, Law No. 19 was enacted, which reaffirmed Indonesia's commitment to the rights outlined in the Convention (5). In 2004, five government ministries (namely, the Ministry of Health, the Ministry of Transportation, the Ministry of Police, the Ministry of Education and the Ministry of Settlement and Infrastructure) jointly issued a decree on measures to control traffic accidents (6).

Public health policy reforms stipulated by Health Act No. 36 of 2009 declared a shift in health-care development to reorient from disease cure and towards health promotion and prevention. This Act regulates resource allocation from central and local government, where the central government is required to allocate at least 5 per cent of its annual budget to health, and the local government 10 per cent.

A new version of the health-care system was established in 2012, termed the National Health System (Sistem Kesehatan Nasional, SKN) (decree 72/2012).

The Medical Education Act No. 20 of 2013 introduced a category of the medical profession referred to as the primary care physician.

According to MOH Regulation No. 75 of 2014, pus*kesmas* function as the first level of public health and clinical care provider in its service area. Each puskesmas has six essential public health services: health promotion; disease control, including immunization and surveillance; ambulatory care; MNCH and family planning; community nutrition; and environmental health, including water and sanitation.

This was revised as MOH Regulation No. 43 of 2019, which outlined the roles of Community Health centres in prevention and promotion. The regulation stipulated that there should be at least one community health centre per subdistrict, and additional centres in subdistricts based on local requirements and capacity.

Additional decrees and regulations are listed below.

MOH regulation 27/2019 on accreditation for primary care is the second amendment to the previous MOH reg. no 42/2016 and MOH reg. 46/2015 concerning Accreditation of *Puskesmas*, Pratama Clinics, Independent Practice Places for Doctors, and Independent Practice Places for Dentists. This regulation stipulates that since the independent accreditation survey institution has not been available, the institution appointed by the Minister of Health will function as the PHC accreditation survey institution. The institution will responsible not only to conduct the survey and specify the accreditation status of the PHC, but also to provide analysis and recommendation to the Minister in appointing the upcoming independent institution.

MOH regulation 44/2016 on Community Health Center Management Guideline provides the following guidance for *puskesmas*: 1) developing a five-year strategic plan which is then detailed into an annual plan; 2) mobilizing the implementation of health efforts and managing resources efficiently and effectively; 3) carrying out supervision, control and assessment of the *puskesmas*' performance; and 4) applying the right leadership patterns in mobilizing, motivating and building a good work culture to improve quality and performance.

It provides guidance for DHO in supervising and providing technical assistance to management of *puskesmas*.

MOH regulation 8 2019 on Community Empowerment in Health Sector is a revision of the previous MOH reg. no. 65/2013, defining community empowerment in health sector, its scope, and its operationalization.

Strategies related to primary health care

The MOH launched the Healthy Indonesia Programme in 2015 to promote healthy behaviours, environment and deliver quality health service. The Healthy Indonesia Programme consists of: (1) paradigm of health; (2) PHC strengthening; and (3) national health insurance.[301]

The primary care service delivery models of *puskesmas* (health centres), *posyandu* (integrated health posts or outreach) and *posbindu* (promotion of healthy behaviours for preventions of NCDs) are the front-line strategies that are intended to integrate service delivery and public health functions and support delivery of the six essential functions of PHC.

In response to the challenge of achieving UHC, a proposed "PHC Transformation" agenda aims to make services more accessible to the population through location of additional primary care facilities across rural areas of the country between the level of the community and the *puskesmas*.

A World Bank project, the Primary Health Care Reform Program for Indonesia, is organized round three pillars that include promoting a healthy paradigm and strengthening health-care services and the JKN insurance scheme, with an investment focus on the three more disadvantaged provinces of Nusa Tenggara Timur, Maluku and Papua.[302]

The Ministry of Health is proposing a digital health transformation strategy that will focus on integration and digitization. Innovations proposed for scale up include the provision of electronic medical records as well as the integration of applications from various health service providers in one digital health information platform.[303]

301 WHO Regional Office for South-East Asia, 2017, Indonesia health system review. *Health Systems in Transition* vol. 7, No. 1.
302 See https://projects.worldbank.org/en/projects-operations/project-detail/P164277.
303 Ministry of Health, Indonesia, 2021, Blueprint for Digital Health Transformation Strategy 2024.

Priority actions for developing the primary health care approach in Indonesia

Multisector collaboration

There are major public health challenges in Indonesia related to rapid urbanization, malnutrition, air pollution adolescent health, tobacco use and climate change impacts. All these challenges require a coordinated multisector response. Development of a clear strategy or mechanism for a Health in All Policies approach should be a priority action for stakeholders in the PHC approach. Benchmarking on the Health in All Policies approach from other countries may be used to guide and inform a country-specific approach.

Essential public health functions

Given the impacts of the pandemic, high levels of NCD risks and emerging environmental health threats associated with climate change and urbanization, further integration of public health functions into health policy, planning and service delivery is likely to be a high priority for PHC orientation of health systems. A priority action could be to integrate essential public health functions and aspects of NCD prevention and care activities into the minimum standards of care for districts.

Community engagement

The strategy on Community Health Workers needs to be revitalized in the context of the community engagement component of PHC. Given the rise of NCDs and challenges with adolescent health, disability support, mental health and environmental health, as well as ongoing unmet needs in maternal and child health in more socially disadvantaged areas of the country, revisioning the role of community health workers should be a priority action for PHC for UHC.

Strategic purchasing

Strategic purchasing of primary care and other services includes main components of benefits design, provider payment methods and contracting arrangements, all of which can serve to strengthen the PHC orientation of models of care, promote the integration of services, improve provider accountability, and align primary care with broader health and development objectives. The scope of work of both the private sector and civil society presents an opportunity for governments nationally and locally to "strategically purchase" services through these sectors to expand coverage, and develop capacity for delivery of essential public health functions, especially for more vulnerable populations. It presents an opportunity for development of more regulated and supported PHC networks to support the directions of PHC for UHC.

PHC health workforce

PHC orientation of health systems is reliant on PHC competencies of the health workforce. Given the significant gaps in implementation of essential public health functions in primary care, priority actions should include conducting assessments, curriculum developments and guidance to support professional development and performance in essential public health functions (promotion, prevention, protection, surveillance, emergency preparedness).

Digital health

A priority action will be to operationalise this digital transformation through financial and technical investment to improve accessibility and use of integrated health information for decision-making at all levels. Digital health is a focal point for partnership and coordination based on the need to resolve the fragmentation of data and data systems ("Millions of data and hundreds of Apps").[304]

Adolescent health

The development of adolescent health strategy within a PHC framework will provide opportunities to address improved utilization of public health services in such areas as reproductive health and mental health with other action areas potentially including comprehensive reproductive health education as part of school curricula. Other priority actions include establishment/strengthening of adolescent-friendly health centres and reproductive health education and counselling for premarital couples as well as improving access to health and social services for remote and vulnerable communities including people with disabilities.[305]

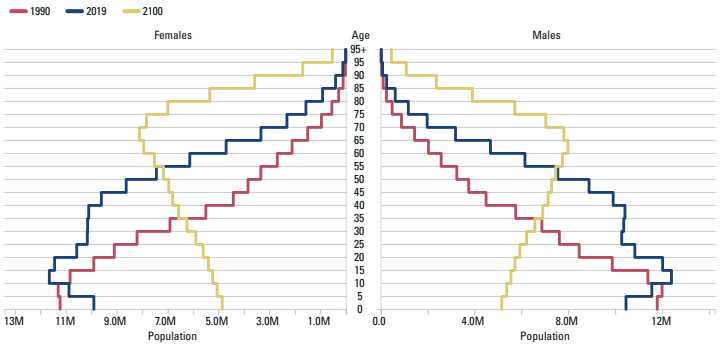
Regional action for cross country learning and benchmarking

Regional mechanisms should be activated to share country lessons learned on PHC across national borders. WHO Region SEARO is currently facilitating development of a PHC Platform for this purpose. A priority action could be for UNICEF to utilise this PHC platform as an opportunity for country sharing of PHC approaches, as well as support improved information sharing between UNICEF country offices for lessons learned on PHC.

304 Ministry of Health, Indonesia, 2021, Blueprint for Digital Health Transformation Strategy 2024.
305 WHO, 2017, *State of health inequality: Indonesia.*

PRIMARY HEALTH CARE DIRECTIONS - INDONESIA

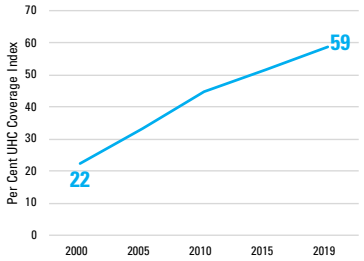
DEMOGRAPHIC TRANSITION



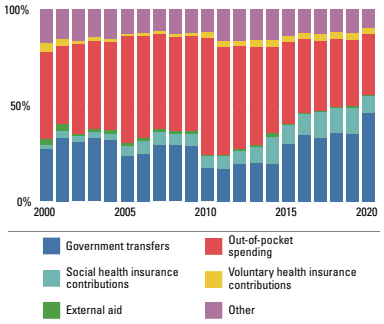
Source of Data: IHME: Country Profile Institute for Health Metrics and Evaluation (IHME). Indonesia profile. Seattle, WA: IHME, University of Washington, 2021. Available from https://www.healthdata.org/results/country-profiles

HEALTH COVERAGE AND HEALTH FINANCING (2000-2019)

Indonesia UHC Coverage Index 2000-2019

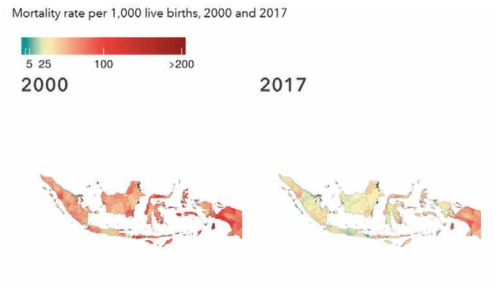


Sources of Health Expenditure 2000-2019



Sources of Data: https://www.who.int/data/gho/indicator-metadata-registry/imr-details/4834 Expenditures: National Health Accounts Data Base: https://apps.who.int/nha/database/country_profile/Index/en

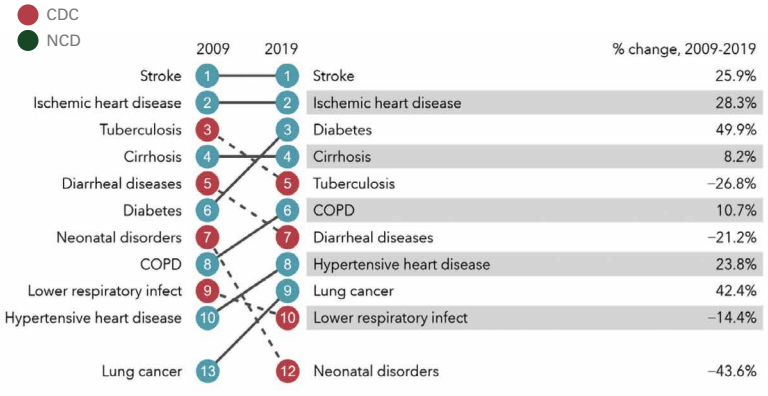
HEALTH INEQUITIES AND ACCESS and SUPPLY BARRIERS



- There is unmet need 41 % for essential UHC index coverage (GHO)
- **Health Workforce** to 1000 Population ratio (2.3) are well below the WHO threshold (4.45) (GHO)
- There are perceived **accessibility barriers** relating to distance (11%) & treatment cost (15%) (PHCPI)
- 4.52% of the Population in Indonesia has > 10% of **annual household expenditure on health** (GHO)
- **Prevalence of NCDS:** Hypertension is 24%, Diabetes 8% with diabetes prevalence rising from the previous assessment (PHCPI)

Source of Data: IHME: CHILD MORTALITY Country profile Institute for Health Metrics and Evaluation (IHME). Indonesia Profile. Seattle, WA: IHME, University of Washington, 2021. Available from https://www.healthdata.org/results/country-profiles

EPIDEMIOLOGICAL TRANSITION



Source of Data: IHME: Country profile Institute for Health Metrics and Evaluation (IHME). Indonesia Profile. Seattle, WA: IHME, University of Washington, 2021. Available from https://www.healthdata.org/results/country-profiles

HEALTH CARE BENEFITS PACKAGE and PRIMARY HEALTH CARE POLICY DIRECTIONS

Health Care Benefits Package

The primary care service delivery model of puskesmas (health centres), posyandu (integrated outreach) and posbindu (promotion of healthy behaviours for preventions of NCDs) are the frontline strategies that are intended to integrate service delivery and public health functions and support delivery of the six essential functions of primary health care..

The six essential functions of PHC are health promotion; disease control, including immunization and surveillance; ambulatory care; MCH and family planning; community nutrition; and environmental health, including water and sanitation.

The benefit package of the JKN was introduced in MoH Regulation 69 of 2013 on the implementation guidelines for the national health coverage programme. offers comprehensive basic benefit package provided based on medical indications, The health services covered in JKN are promotive, preventive, curative and rehabilitative

PHC Policy and Strategy Directions

The MoH launched the Healthy Indonesia Programme in 2015 to promote healthy behaviours, environment and deliver reach quality health service. The Healthy Indonesia Programme consists of: (1) paradigm of health; (2) primary health care strengthening; and (3) national health insurance.

In support of UHC a "PHC Transformation" agenda is proposed, which aims to make services more accessible to the population through location of additional primary care facilities across the rural areas of the country.

A digital health transformation strategy is proposed that will focus on integration and digitization. Innovations proposed for scale up include (a) provision of Electronic Medical Record (EMR) integration of applications from various health service providers in one digital health information platform

In support of "people centred" models of health care, the Medical Education Act No. 20 of 2013 created a new category of the medical profession referred to as the "primary care physician "

Sources: (1) Asia Pacific Observatory Health System Review Indonesia. 2017 (2) Primary health care systems (PRIMASYS): case study from IndonesiaGeneva: World Health Organization; 2017. (3) Blueprint for Digital Health Transformation Strategy 2024. Jakarta: Ministry of Health 2021

4.7 Viet Nam

Primary health care development landscape

Viet Nam (population 97 million, 2021)[306] is a lower middle-income country with a GDP per capita of $3,756 in 2021, having increased from US$395 per capita in the year 2000.[307] GDP Growth has been sustained between 5 per cent and 7.5 per cent since the year 2000, except for 2021, where growth declined to 2.1 per cent due to pandemic economic impacts.[308]

World Bank data indicate that fertility rates have remained stable since the year 2000 between 2.0 and 2.1, after declining sharply from 4.9 in 1980. The higher fertility rates of 40 years ago and the decline in fertility since 2000 mean that Viet Nam has an ageing population and a declining proportion of the population in the under-five and adolescent age group (see population pyramid in the infographic). The adolescent age group represents 14 per cent of the total population[309] and the share of older people in the total population is projected to rise significantly over the next century.[310]

Viet Nam has been undergoing an epidemiological transition.[311] This is reflected is reflected in a rise in non-communicable diseases (NCDs). Rates of death due to diabetes have increased by 50 per cent between 2009 and 2019[312] with prevalence of diabetes (5.3 per cent) still rising.[313] Communicable diseases, including tuberculosis and lower respiratory infections have declined as leading causes of death over the same period.[314] This shift in the distribution of causes of death towards NCDs is reflected in tracking of risk across this 10-year period. While there has been a 44 per cent decrease in malnutrition between 2009 and 2019, high body mass index has increased by 92 per cent, high fasting plasma glucose by 52 per cent and kidney dysfunction by 41 per cent. A recent review of behavioural risk in Viet Nam found that harmful alcohol consumption, lack of appropriate nutritional and salt intake and reduced physical activity were all adverse trends that demonstrate the need for behavioural risk surveillance systems.[315] There have been some public health gains, with air pollution risk and mortality related to road traffic injury having declined between 2009 and 2019.[316]

306 See https://data.worldbank.org/indicator/SP.POP.TOTL?locations=VN.
307 See https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=VN.
308 See https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?locations=VN.
309 See https://data.unicef.org/adp/country/vnm/.
310 See www.healthdata.org/results/country-profiles.
311 WHO, 2018, Viet Nam: Improving equity in access to primary care.
312 See www.healthdata.org/results/country-profiles.
313 See https://improvingphc.org.
314 See www.healthdata.org/results/country-profiles.
315 Nguyen Thuy Duyen et al., 2020, Patterns of behavioral risk factors for non-communicable diseases in Viet Nam: A narrative scoping review. *Health Psychology Open* vol. 7, No. 2.
316 See www.healthdata.org/results/country-profiles.

The combination of behavioural, metabolic, and environmental risk is in all probability being accelerated by the rapid urbanization of the country. Since the year 2000, the proportion of the population residing in urban areas has increased from 24 per cent to 38 per cent in 2021, with urban growth set to continue on its current trajectory.[317] UN Habitat reported in 2018 that 13.5 per cent of the urban population is residing in slum areas, having declined significantly from 60 per cent in 1990.[318]

Macroeconomic and policy reforms since the 1980s have transitioned the country towards a mixed public private model of social organization. Reforms launched in 1986 (Doi Moi reforms) spurred assisted to transition the country into a lower middle-income country status and lifted more than 45 million people out of poverty. However, these reforms presented challenges in terms of increased demand and expenditure on health care.[319]

Although Viet Nam has traditionally operated more centralized administrative systems, there is more evidence now that provincial, district and local government authorities are taking on additional responsibilities for management and financing social sector operations, including health and education. People's committees of provinces or cities have been delegated functions of overseeing management, supervision and financing of the basic package of health services.[320] The National Assembly enacted a directive that 30 per cent of the budget for health should be allocated to preventive medicine, but implementation of this directive has been limited.[321]

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317 See https://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS?locations=VN.
318 See https://data.unhabitat.org/datasets/cd4e1deb72ea49bd8f3403f8a9edfe6d_0/explore.
319 Wenhui Mao et al., 2020, Advancing universal health coverage in China and Viet Nam: lessons for other countries. *BMC Public Health* vol. 20, No. 1791.
320 See http://asemconnectViet Nam.gov.vn/law.aspx?ZID1=10&ID1=2&MaVB_id=2620.
321 UNICEF Consultation Hanoi Country Office, 6 April 2023.

Primary health care coverage and equity

Health coverage

The UHC Essential services coverage index (SDG target 3.8.1) has been scaled up from .4 in the year 2000 to .7 in the year 2019, which, though demonstrating a major improvement in coverage, represents an significant unmet need for essential health services.[322] A recent nationwide survey conducted in 2021 confirmed high rates of reproductive health coverage.[323] The survey found that 88.2 per cent of women receive four antenatal care visits and a vast majority of deliveries are now by trained personnel (96 per cent) and occur in health facilities (96 per cent). Immunization coverage in Viet Nam has remained above 90 per cent for DPT3 vaccine in Viet Nam for six of the past ten years (WHO – UNICEF) and experienced a drop in coverage to 83 per cent in 2021.[324] In Viet Nam, more than 251,000 children missed out on one or more doses of DTP through routine immunization services in 2021 which was a fourfold increase from 2019. This result is consistent with the observation that the largest reductions in immunization coverage in 2021 were in the East Asia and the Pacific.[325] Although both NCD services and including services for mental health and adolescent health have expanded in recent years, studies and reviews confirm gaps in service coverage, human resources capacity and financing for service operations.[326, 327, 328, 329] The responsiveness by government and society to the emergence of NCDs mirrors the policy and implementation challenges experienced by countries across the region, as they struggle to adapt health systems to the rapid pace of the epidemiological and demographic transition.

Health equity

As demonstrated by the expansion of coverage of essential health interventions (UHC Coverage Index), Viet Nam has made solid progress in improving both coverage and equity of health care provision over recent decades, especially in the areas of maternal, newborn and child health and in immunization. Child mortality has been reduced from 45 per 1,000 live births in 1990 to 12.7 per 1,000 live births in 2019.[330] As illustrated by mapping of child mortality [see infographic], higher rates are observed in remote highland provinces, which have high proportions of ethnic minority populations.

Despite representing 16 per cent of the global population (with 89 per cent living in low and LMIC countries), there is limited data on the mental health of adolescent populations, including in Viet Nam.[331] Case studies and reviews published on adolescent health in Viet Nam in 2021 found that substantial progress had been achieved in information provision, education, communication for reproductive health, as well as service provision for the adolescent and youth over the past 10 years (2006–2017). However, there are policy and service provision gaps for adolescent health for disadvantaged groups, including people with disabilities, migrants, ethnic minorities and boys and girls aged 10–14 years.[332] Broader public health measures in such

322 See www.who.int/data/maternal-newborn-child-adolescent-ageing/indicator-explorer-new/mca/uhc-service-coverage-index-(sdg-3.8.1).
323 See www.unicef.org/vietnam/reports/viet-nam-sdg-indicators-children-and-women-survey-2020-2021.
324 See https://immunizationdata.who.int/pages/coverage/dtp.html?CODE=VNM&ANTIGEN=DTPCV3&YEAR=.
325 See www.unicef.org/vietnam/press-releases/covid-19-pandemic-fuels-largest-continued-backslide-vaccinations-three-decades.
326 H. Khanh Chi et al., 2021, The Content and Implementation of Policies and Programs on Adolescent Sexual and Reproductive Health in Viet Nam: Results and Challenges. *Health Services Insights* vol. 14.
327 D.B. Duong et al., 2019, Readiness, Availability and Utilization of Rural Viet Namese Health Facilities for Community Based Primary Care of Non-communicable Diseases: A CrossSectional Survey of 3 Provinces in Northern Viet Nam. *International Journal of Health Policy and Management* vol. 8, No. 3, pp. 150–157.
328 T.T. Nguyen and M.V. Hoang, 2018, Non-communicable diseases, food and nutrition in Viet Nam from 1975 to 2015: the burden and national response. *Asia Pacific Journal of Clinical Nutrition* vol. 27, No. 1, pp. 19–28.
329 H.T. Le et al., 2022, Non-communicable diseases prevention in remote areas of Viet Nam: Limited roles of health education and community workers. *PLOS ONE* vol. 17, No. 9.
330 See www.healthdata.org/results/country-profiles.
331 H.E. Erskine et al., 2023, Measuring the Prevalence of Mental Disorders in Adolescents in Kenya, Indonesia, and Viet Nam: Study Protocol for the National Adolescent Mental Health Surveys. *Journal of Adolescent Health* vol. 72, No. 1(Supplement), pp. S71–S78.
332 H. Khanh Chi et al., 2021, The Content and Implementation of Policies and Programs on Adolescent Sexual and Reproductive Health in Viet Nam: Results and Challenges. *Health Services Insights* vol. 14.

areas as air quality and road and safety are of high benefit to adolescent cohorts, especially given rapid urbanization and the fact that road injury is the leading cause of death for both boys and girls aged 10–19.[333]

The epidemiological transition represents major challenges for policymakers with regards to equity of access and equity of outcomes in relation to NCDs. A cross sectional study conducted in 2020 found that the level of household wealth and the availability of social health insurance were the main factors associated with increased socioeconomic inequalities in self-reported NCDs in urban and rural areas, with the effects of inequality being more pronounced in urban areas.[334] Readiness of health systems to respond to NCD prevention and service needs is another factor in ensuring equity of access. A cross sectional survey of 89 rural CHCs in 2014 found that just 25 per cent of CHCs conducted activities on NCD prevention, with the study concluding that despite government policy commitment to NCD prevention and control, there was limited-service capacity at the primary care level.[335]

Health systems and primary health care

Models of care

Although Viet Nam has a mixed public-private health-care system, the country relies on the network of public health-care providers from the commune to central level to provide universal cover of essential health services.[336] There are 63 provinces in Viet Nam, where a provincial department of health oversees health services for 700 districts and over 11 000 communes. For health service delivery, there are three major levels of services with the primary level including districts and communes, secondary level with provinces, and tertiary level with tertiary hospitals. District health centres and commune health stations comprise the PHC service delivery, or grassroots health care systems.[337] The grassroots level of the health-care system consists of over 700 medical centres in districts, towns and cities, and more than 11,100 health clinics in communes, wards and townships. The commune health centres are linked to networks of village health workers. A basic package of health services has been mandated by the Ministry of Health and includes maternal and child health services and prevention and treatment services for NCDs.[338] The national health plan aimed to restructure the grassroots health-care network, given the changes in epidemiology and disease patterns, and develop integrated models of care based on the principles of family medicine.[339] Over recent decades, the Governmnet has implemented successful national programmes in the areas of immunization and disease prevention and control, but there have been recent policy pressures to merge programmes into routine work with delivery managed through the provincial level (in line with the general direction towards decentralization). Other reforms under consideration include designingfinancing mechanisms for primary care, shifting from targeted programmes to merged or integrated models of care, decentralizing the management and delivery of services to the provincial level, and reviewing the basic package of health services for PHC.

333 See https://data.unicef.org/adp/country/vnm/.
334 D.D. Le et al., 2021, Socio-economic-related health inequality in non-communicable diseases among older people in Viet Nam. *Ageing & Society* vol. 41, Special Issue 6, pp. 1421–1448.
335 D.B. Duong et al., 2019, Readiness, Availability and Utilization of Rural Viet Namese Health Facilities for Community Based Primary Care of Non-communicable Diseases: A CrossSectional Survey of 3 Provinces in Northern Viet Nam. *International Journal of Health Policy and Management* vol. 8, No. 3, pp. 150–157.
336 Wenhui Mao et al., 2020, Advancing universal health coverage in China and Viet Nam: lessons for other countries. *BMC Public Health* vol. 20, No. 1791.
337 See www.who.int/vietnam/health-topics/health-systems-governance.
338 See http://asemconnectViet Nam.gov.vn/law.aspx?ZID1=10&ID1=2&MaVB_id=2620.
339 See https://faolex.fao.org/docs/pdf/vie179587.pdf.

Health financing

The level of priority placed on health by the government has increased in recent years [see infographic] as measured by government spending as a percentage of current health expenditures, which has increased from 36.7 per cent in the year 2005 to 45.1 per cent in 2020. The level of priority set on health by the Government is reflected in the fact that government health expenditure as a percentage of domestic general government expenditures has increased from 7.1 per cent in the year 2005 to 9.4 per cent in 2020. The level of out-of-pocket expenditures as a percentage of total health expenditures has risen slightly from 2005 and reached 39.6 per cent in 2020. Social health insurance as a source of expenditure for health reached 21 per cent of total health expenditure in 2020, which is only a slight expansion from 2005 (20 per cent). The level of external assistance as a proportion of total health expenditure has declined from 4 per cent in 2005 to less than 1 per cent in 2020, which is line with general trends on external financing in the region.[340] Despite significant policy innovations for health financing and financial protection, 8.46 per cent of the population in Viet Nam has greater than 10 per cent of annual household expenditure on health (SDG target 3.8.2).[341] Pro-poor financial protection measures commenced the 1990s post market reforms, and social health insurance in Viet Nam was established in 1992. A Law ensuring health insurance for all was enacted in 2014. Gaps remain in translating enrolment in health insurance schemes into effective coverage, which is particularly the case in relation to insurance coverage for preventive and promotive services.[342] The government uses its tax revenues to subsidize vulnerable groups such as the poor, the ethnic minority, children under age 6, and people age 80 and older. By 2018, social health insurance coverage had reached 87 per cent, with much of the financial coverage provided for secondary and tertiary care.[343] Consultation have suggested that use of services is low at the primary care level, as PHC is a shrinking system with relatively low rates of investment. There are questions about the extent to which health insurance mechanisms cover the costs of primary care. This contributes to the use higher level hospitals to bypass primary care facilities Identifying improved financing mechanisms and reviewing the basic package of health services are underway nationally to support improvements to primary care use and coverage.[344]

Health workforce

The ratio of the health workforce to 1,000 population for nurse midwifes is 1.4 (2016) and for physicians it is 0.8 (2016) as reported in the latest statistics available through the Global Health Observatory.[345] This is well below the target of 4.45 professional health staff per 1,000 population recommended by WHO to achieve UHC. The Ministry of Health reported in 2018 that the grassroots health-care system has been extended to harder to reach areas of the country with 87.5 per cent of commune health clinics having doctors, and 96 per cent of commune health clinics have midwives/obstetricians and more than 95 per cent of villages have hamlet or village health workers.[346] A Human Resources for Health Profile of Viet Nam published in 2016 indicated that the country has more than 400,000 health workers in the public sector that includes doctors, assistant doctors, nurses, and medical technicians. Female staff account for 62.2 per cent of the health workforce and the health workforce is distributed unevenly across the six regions of the country. There are higher numbers of the health workforce in the Red River Delta and Mekong Delta and fewer in the Central highlands. Analysis of workforce numbers to relative to population size demonstrates that the South East has the highest density of health workers per 10,000 population with 71 per 10,000 people and the Mekong Delta the lowest with 42 per 10,000 people and Central highlands with 43 per 10,000 people.[347] Reasons for

340 See https://apps.who.int/nha/database/country_profile/Index/en.
341 See www.who.int/data/gho/data/themes/topics/financial-protection.
342 WHO, 2018, Viet Nam: Improving equity in access to primary care.
343 See www.who.int/vietnam/health-topics/health-financing#:~:text=Social%20health%20insurance%20in%20Viet,and%20the%20elderly%20above%2080.
344 UNICEF – Consultation with UNICEF Viet Nam country office, Hanoi, 5 April 2023.
345 See www.who.int/data/gho/data/themes/topics/health-workforce.
346 See https://moh.gov.vn/web/ministry-of-health/top-news/-/asset_publisher/EPLuO8YEhk19/content/grassroots-healthcare-system-is-the-ground-for-healthcare-sector?inheritRedirect=false.
347 WHO Regional Office for the Western Pacific, 2016, Human Resources for Health – Country Profiles: Viet Nam.

maldistribution include demand and supply side issues including limited capacity for employment of graduates, low remuneration in the public sector and especially in remote areas, financial barriers and cultural factors.[348] Along with health workforce numbers and distribution, there are limitations in terms of quality of care, health worker competency, and adaption of services to the changing needs of the population,[349] which is particularly the case in remote areas.[350] These factors, along with the National Health Plan strategy for development of the grassroots health-care network, have implications for workforce development and planning with regards to orientation of health systems towards a PHC approach.

Community engagement – Community health workers

As reported above, more than 95 per cent of villages and hamlets have Village Health Workers (VHWs). The Ministry of Health Circular 07/2013/TT-BYT dated 08/03/2013 provides standards, functions, and tasks of village health workers (VHW), including village midwives who work in areas where there is a high population of ethnic minorities and where there is less access to or use of services at facilities. To be a VHW, it is necessary to have at least an elementary health-care qualification or complete at a three-month training course through the Ministry of Health (midwives complete a six-month course). The main functions of VHWs are to provide primary and maternal and child health care in villages. Specific tasks include disseminating knowledge on health protection, environmental hygiene and food safety, on HIV/AIDS prevention and control and on family planning. VHWs participate in community-level public health activities, including monitoring and reporting status of epidemics, infectious diseases, NCDs, and water and sanitation quality monitoring and food safety. Services are provided for maternal and child health including family planning, including linking of mothers and their families to commune health station services. VHWs work are under the direct management and guidance of commune-level health-care stations and are supervised by commune-level People's Committees and Heads of villages. Circular 07/2013/TT-BYT stipulates allowances for VHWs be provided according to State regulations. According to the national health plan (2016–2020), 1,737 village birth attendants throughout the country have been trained and have contributed to health improvement in relation to maternal and child health especially in ethnic minority and disadvantaged areas.[351] Research studies and evaluations of health programme interventions or outcomes associated with VHW participation in PHC in Viet Nam have highlighted successes in such areas as tobacco control,[352, 353, 354] improvement of confidence in HIV/addiction-related service delivery,[355] adherence to micronutrient supplementation both before conception and during pregnancy,[356] community event-based surveillance,[357] and community-based monitoring and incidence reduction for malaria.[358] A review of VHWs in mountainous areas of Viet Nam found that their role was not recognized, and the reviewers concluded that the capacity and involvement of VHWs in NCD prevention activities and programmes should be increased.[359]

348 M.P. Nguyen, T. Mirzoev and T.M. Le, 2016, Contribution of health workforce to health outcomes: empirical evidence from Viet Nam. *Human Resources for Health* vol. 14, No. 68.
349 See https://moh.gov.vn/web/ministry-of-health/top-news/-/asset_publisher/EPLuO8YEhk19/content/grassroots-healthcare-system-is-the-ground-for-healthcare-sector?inheritRedirect=false.
350 See https://faolex.fao.org/docs/pdf/vie179587.pdf.
351 See https://faolex.fao.org/docs/pdf/vie179587.pdf.
352 N. Jiang et al., 2019, Effectiveness of Village Health Worker-Delivered Smoking Cessation Counselling in Viet Nam. *Nicotine and Tobacco Research* vol. 21, No. 11, pp. 1524–1530.
353 D. Shelley et al., 2022, Effectiveness of a Multicomponent Strategy for Implementing Guidelines for Treating Tobacco Use in Viet Nam Commune Health Centers. *Nicotine and Tobacco Research* vol. 24, No. 2, pp. 196–203.
354 N. Nguyen et al., 2020, Impact of a tobacco cessation intervention on adherence to tobacco use treatment guidelines among village health workers in Viet Nam. *Global Health Promotion* vol. 27, No. 3, pp. 24–33.
355 L. Li et al., 2022, Community Capacity Building for HIV and Addiction Service Integration: An Intervention Trial in Viet Nam. *AIDS and Behavior* vol. 26, No. 1, pp. 123–131.
356 I. Gonzalez-Casanova et al., 2017, Predictors of adherence to micronutrient supplementation before and during pregnancy in Viet Nam. *BMC Public Health* vol. 17, No. 1, p. 452.
357 A. Clara et al., 2018, Factors Influencing Community Event-based Surveillance: Lessons Learned from Pilot Implementation in Viet Nam. *Health Security* vol. 16(S1), pp. S66–S75.
358 N.D. Thang et al., 2009, Rapid decrease of malaria morbidity following the introduction of community-based monitoring in a rural area of central Viet Nam. *Malaria Journal* vol. 8, No. 3.
359 H.T. Le et al., 2022, Non-communicable diseases prevention in remote areas of Viet Nam: Limited roles of health education and community workers. *PLOS ONE* vol. 17, No. 9.

Policy and strategy directions for primary health care in Viet Nam

There is no specific updated PHC law, policy or strategy, other than the Communist Party directive on Strengthening PHC 2002. However, both the decisions of the Government and the National Health Plan set out reform agendas for the health system, which in large part reflect the PHC strategic and operational levers as described in the Operational Framework. General directions for reform include decentralization, the strengthening of primary care, the transition from targeted programmes to packages of services, and innovative approaches and mechanisms to financing primary care.

The main elements of the **national health plan, Government Decision (No. 2348/QD-TTg) on the grassroots healthcare network and related decrees** that are of high relevance to PHC policy and strategy directions are summarized below:

Governance

- Technically supporting the "merging" of national programmes into routine work, with the focus of effort being on the Provincial level of management (in line with decentralization approach)
- Support structural reform for management integration from central to local levels. Areas for integration include integrating district hospitals and district health centres into a unified district health office, merging provincial preventive medicine centres to provincial centres for disease control (CDC).
- To strengthen inter-sectoral collaboration during the implementation of hygiene and nutrition interventions to reduce the stunting rate in children; to promote community involvement in improving nutritional status for mothers before and during pregnancy and providing nutritional supplements for children of all ages.

Finance, financial protection and resource allocation

- Building collaborations between the Ministry of Finance, Ministry of Planning and Ministry of Health and the Social Security of Viet Nam for policies and laws to support growth in health insurance and ensuring of resources for grassroots health care.
- Reforming financing mechanisms for the grassroots health-care network to make the public budget the main source of finance, establishing health insurance payment mechanisms for family doctor clinics, and for home-based and community-based health services.
- A series of laws has been enacted since the since market openings in the 1990s (Doi Moi Reforms] that have included PHC fee exemptions for the extreme poor (1994), a service package including free health care to nearly 1800 poor communes (1998), an MOH decision mandating a provincial health-care fund for the poor and free health services for children under age 6 years (2005), the Social Health Insurance Law for enrolment of the poor in health insurance by the poor (2009) and a law mandating health insurance for all (2014).[360]
- Redesign of financing mechanisms for primary care.

360 WHO, 2018, Viet Nam: Improving equity in access to primary care.

Models of care

- Improving effectiveness of the grassroots health-care network through models of care promoting a continuum of service provision including: health monitoring and consultancy; palliative care; functional rehabilitation; care for older people, maternity and child care; prevention and control of communicable diseases or NCDs, management of chronic diseases; treatment services and referral of patients to higher level health-care establishments. Promote health education and communication activities, and apply household-based health management, particularly for NCDs (NHP).
- To restructure the organization and operation of the grassroots health-care network given the changes in epidemiology and disease patterns, and to link it to specialized health facilities at
- upper levels; Integrate the model and principles of family medicine into the operation of the
- grassroots health-care network (NHP).
- Shifting from targeted programmes to more "merged" or integrated models of care, decentralization of management and delivery of services to Provincial level, and review of the essential health-care package for primary care.

Human resource development

- Improving distribution and competencies of the health workforce for working in work permanently in mountainous, remote and disadvantaged areas (NHP).
- Building public health capacity at the grassroots level for NCD management and prevention school health, emergency preparedness.

Digital health

- Digitize grassroots health-care activities through connecting communication systems of commune-level health-care stations and district-level health-care centres to monitor and design and develop electronic medical records (NHP).

Other circulars and decrees relevant to PHC include the following:

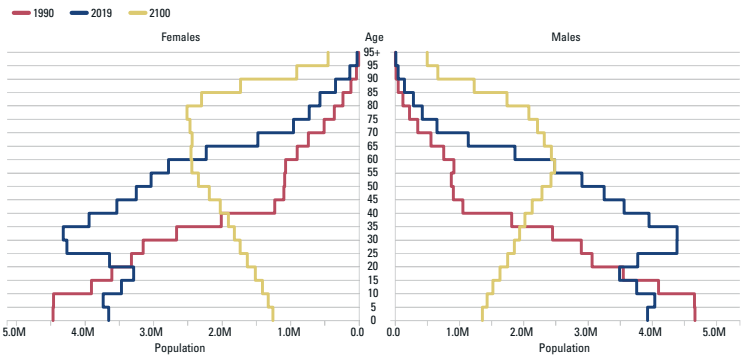
- Circular No. 39/2017/TT-BYT dated October 18, 2017 of the Ministry of Health includes the basic package of health services applied to grassroots health facilities. See https://lawnet.vn/en/vb/Circular-39-2017-TT-BYT-basic-package-of-health-services-applied-to-grassroots-health-facilities-59702.html.
- Decree No. 75/2017 NDCP delineates the functions, tasks, authority and organization structure of the Ministry of Health for 2016–2020. See https://vanbanphapluat.co/decree-75-2017-nd-cp-defining-functions-tasks-powers-organizational-structure-of-ministry-of-health.
- Decree No. 51/2015/TTLTBYT-BNV was issued by the Ministry of Health and Ministry of Home Affairs in 2015 to guide the functions, tasks, authority and organizational structure of the departments of health and district health offices. See https://lawnet.vn/en/vb/Joint-Circular-51-2015-TTLT-BYT-BNV-functions-tasks-of-Departments-of-Health-affiliated-61031.html.
- Circular 07/2013/TT-BYT dated 08/03/2013 was issued by the Ministry of Health on standards, functions and tasks of village health workers (VHW). See https://thuvienphapluat.vn/van-ban/EN/Bo-may-hanh-chinh/Circular-07-2013-TT-BYT-standards-and-functions-of-village-health-workers/518986/tieng-anh.aspx.

Areas of work for investment by UNICEF and partners in PHC:

- **Policy and governance:** Support for provincial health management strengthening in line with the trend toward decentralization and merging of targeted programmes into routine work.
- **Resource allocation:** Advocacy and technical support to ensure adequate breadth and depth of health insurance coverage, and to identify improved financing mechanisms for primary care
- **Community engagement**: Technical and financial support for strengthening of village based cadre to support broader coverage for integrated health services package
- **Health financing:** Advocacy on health financing for primary care to improve access to and use of communities in remote areas, and to reduce high rates of bypass of primary care.
- **Public health:** Supporting PHC focus on environmental health and development of climate resilient health systems and programmes.
- **Models of care:** Technical support and policy dialogue on strategies to "merge" vertical programmes into routine service delivery. Maintaining traditional technical and advocacy support for maternal, newborn and child health (MNCH) and nutrition in underserved areas of the country.

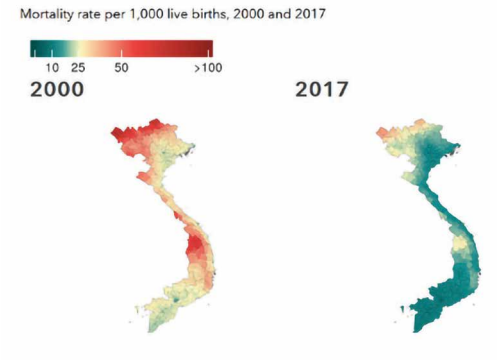
PRIMARY HEALTH CARE DIRECTIONS - VIET NAM

DEMOGRAPHIC TRANSITION



Source of Data: IHME: Country Profile Institute for Health Metrics and Evaluation (IHME). Seattle, WA: IHME, University of Washington, 2021. Available from https://www.healthdata.org/results/country-profiles

HEALTH INEQUITIES AND HEALTH ACCESS

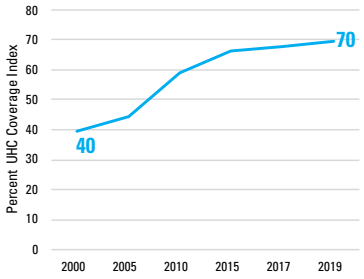


- The **Maternal Mortality Rate** was 43 per 100,000 live births (2017), having declined from 47/100,000 in 2000 (GHO)
- There is unmet need of 30% for essential UHC index coverage (GHO)
- **Health Workforce** to 1000 Population ratio for nurse midwife is 1.4 (2016) and for physician .8 (2016) (World Bank/ GHO)
- 8.46% of the Population in Viet Nam has > 10% of **annual household expenditure on health** (GHO, 2020)
- **Prevalence of NCDS:** Hypertension is 23%, Diabetes 5.3% with diabetes prevalence rising from the previous assessment (PHCPI)

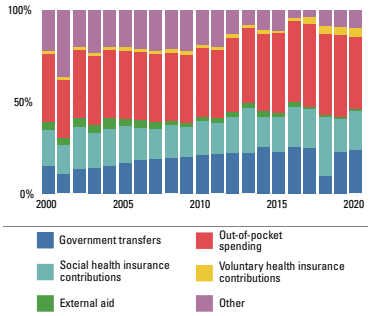
Source of Data: IHME: CHILD MORTALITY Country profile Institute for Health Metrics and Evaluation (IHME). Available from https://www.healthdata.org/results/country-profiles

HEALTH COVERAGE AND HEALTH FINANCING (2000-2019)

UHC Coverage Index 2000 - 2019

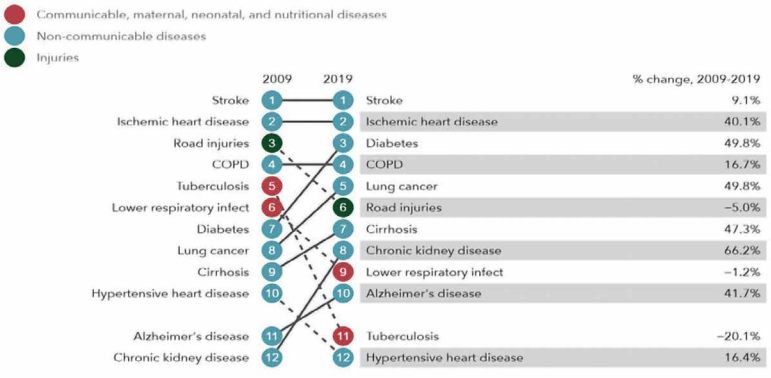


Sources of Health Expenditure 2000-2020



Sources of Data: UHC Coverage Index https://www.who.int/data/gho/indicator-metadata-registry/imr-details/4834 Expenditures: National Health Accounts Data Base: https://apps.who.int/nha/database/country_profile/Index/en

EPIDEMIOLOGICAL TRANSITION



Source of Data: IHME: Country profile Institute for Health Metrics and Evaluation (IHME). . Seattle, WA: IHME, University of Washington, 2021. Available from https://www.healthdata.org/results/country-profiles

HEALTH CARE BENEFITS PACKAGE and PRIMARY HEALTH CARE POLICY DIRECTIONS

Health Care Benefits Package

Service Model
District health centres and commune health stations comprise the primary health care service delivery, or "grassroots health care systems." The grassroots level of the health care system consists of over 700 medical centers in districts, towns and cities, and over 11,100 commune, ward and township health clinics, after which the commune health centres are linked to networks of village health workers.

Benefit Package
A basic service package has been mandated by the Ministry of Health and includes maternal and child health services and more recently introduction of prevention and treatment services for non-communicable diseases.

Reform Agendas
Reforms under consideration include design of financing mechanisms for primary care, shifting from targeted programs to more "merged" or integrated models of care, decentralisation of management and delivery of services to Provincial level, and review of the essential health care package for primary care.

PHC Policy and Strategy Directions

Improving effectiveness of the grassroots health care network through models of care promoting a continuum of service provision including: health monitoring and consultancy; palliative care; functional rehabilitation; elderly, maternity and child care; prevention and control of communicable or non-communicable diseases, management of chronic diseases; treatment services and referral of patients to higher-level healthcare establishments. Promote health education and communication activities, and apply household-based health management, particularly for NCDs. (NHP)

Restructuring the organization and operation of the grassroots health care network given the changes in epidemiology and disease patterns, and to link it to specialized health facilities and integrating the model of family medicine into the operation of the

grassroots health care network (NHP)

Reforming financing mechanisms for the grassroots health care network to make the public budget the main source of finance, establishing health insurance payment mechanisms for family doctor clinics, and for home-based and community-based health services.

Sources: World Health Organisation Health Systems Governance in Viet Nam https://www.who.int/Viet_Nam/health-topics/health-systems-governance, Ministry of Health Viet Nam. Circular No. 39/2017/TT-BYT dated October 18, 2017 of the Ministry of Health on basic package of health services , Ministry of Health Viet Nam PLAN For people's health protection, care and promotion 2016-2020, Hanoi 2016

4.8 Cambodia

Primary health care policy and development landscape

In Cambodia (population 15,552,211) has experienced rapid economic growth in the past two decades, and the process of decentralization and urbanization has accelerated. The country has been on a steady pathway of economic and social development in the post conflict period from the early 1990s up until the current time. The country has now entered lower middle income country status, with a GDP growth rate of 3 per cent in 2021 and GDP per capita of $1,591 (current United States dollars).[361] The country, though urbanizing, has 77 per cent of the population residing in rural areas.[362]

Demographic transition in Cambodia is reflected in steady decline in fertility rates from 3.8 in 2000 and to 2.7 in 2021. This varies by residence in which the total fertility rate in rural areas is 3 compared to 2.4 in the urban setting.[363] The age-specific fertility rate peaks for women aged 20–24 at 154 births per 1,000 compared to 48 per 1,000 women aged 15–19. The pregnancy rate for women aged 15–19 is 9 per cent, of which 59 per cent are currently married women aged 15–19 who did not use contraceptive methods. Teenage pregnancy is associated directly with the level of education, where 35 per cent of teenagers aged 15–19 with no education have been pregnant compared to 7 per cent with secondary education. The higher fertility rates of 20–30 years ago mean that Cambodia has a young population, with 18 per cent of the population (3 million) belonging to the adolescent age group.[364] Risk factors for adolescents in Cambodia include young marriage, low contraceptive use, road injury, violence, inadequate levels of physical activity, increasing rates of obesity, unemployment and substance use, alcohol consumption and low knowledge about HIV prevention among young people (aged 15–24). The leading cause of deaths for the adolescent age group for both males and females is road injury. Suicide rates in Cambodia for those aged 10–19 are 6 per 100,000 for boys and 3 per 100,000 for girls, consistent with the regional rate of 4 per 100,000.[365] The adolescent and youth friendly health service has started and endorsed by the Ministry since 2008 with support from UNFPA.-care services, especially in rural areas. A review of mental health services in Cambodia in 2020 reported that specialist out-patient mental health services were mainly located in urban areas. The Centre for Child and Adolescent Mental Health was reported in 2020 as the only specialist child and adolescent mental health service in Cambodia.[366] There is, however, evidence of the expansion of adolescent and youth-friendly health services. By the end of 2022, UNFPA found that 23 out of 50 facilities in eight target provinces were providing 12 adolescent and youth-friendly health services in line with the National Guidelines on Adolescent Youth Friendly Service that conformed to the 12 WHO recommendations.

Epidemiological transition is reflected in a rise in non-communicable diseases (NCDs). Cardiovascular and chronic respiratory disease, as well as cancer and diabetes are identified as large and growing problems in the National Strategic Plan for the Prevention and Control of Noncommunicable Diseases (2013–2020). Most

361 See https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=KH
362 See https://data.worldbank.org/country/cambodia?view=chart
363 See https://dhsprogram.com/pubs/pdf/PR136/PR136.pdf.
364 See https://data.unicef.org/adp/country/khm/
365 UNICEF Adolescents Data Portal. Available at https://data.unicef.org/adp/snapshots/health/.
366 S.J. Parry and E. Wilkinson, 2020, Mental health services in Cambodia: an overview. *BJPsych International* vol. 17, No. 2, pp. 29–31.

NCDs are linked to the risk behaviours of tobacco use, harmful use of alcohol, unhealthy diet, indoor air pollution and physical inactivity. The strategy points out that hepatitis B and C, human papilloma virus (HPV) and helicobacter pylori are attributable to preventable infections. Rates of death due to diabetes and heart disease increased by 50 per cent between 2009 and 2019 [see infographic].[367] The share of older people in the total population is projected to double from 5.2 per cent in 1998 and to 11 per cent in 2030[368] [see infographic]. These trends all confirm the need for the PHC approach to address the determinants of health, as outlined in the national multisectoral action plan for prevention and control of NCDs (2018–2027), which focuses actions on creating healthy and supportive environments in villages, towns and cities.

There has been some decline in infectious diseases as a cause of death in the past decade, although lower respiratory infections and tuberculosis remain in the top five causes of death in 2019. Cambodia have achieved the child related Sustainable Development Goals (SDGs) through declines in the under-five mortality rate from 124 to 16, infant mortality rate from 95 to 12, the neonatal mortality rate from 37 to 8 between the year 2000 and the year 2021.[369] A recent study on neonatal deaths in Cambodia found that the main direct causes of mortality were sepsis and asphyxia, highlighting the need to focus on improve quality of care and infection prevention and control in the neonatal period to reduce both neonatal and under-five mortality rates.[370] Although the maternal mortality ratio has been declining slowly, the direct causes of mortality include delay in seeking health care and receiving care after reaching the health facility. This is a result of limited empowerment of women and lack of a supportive environment, with post-partum haemorrhage as the main cause of death.[371]

Decentralization and urbanization are reshaping the administrative and social context of the country. The Census of 2019 found that of the 15.5 million population living in the country, 6.9 million were living in urban areas. This represents 39.4 per cent of the population of Cambodia, which is a significant increase from 18.8 per cent reported by UN Habitat in the year 2000.[372] In 2018, UN Habitat reported that 45.6 per cent of the urban population is residing in slum areas.[373] Decentralization is an ongoing development and reform pathway, with objectives including reform management, good governance, human resource development, service delivery and local development and financial decentralization. Many of these challenges have been taken up by the health sector in the past 15–20 years, through development of more decentralized planning and budgeting systems and engagement of local communities in health through health centre management committees and village health support groups, supported by effective partnerships with international agencies and civil society organizations. Ongoing challenges include the decentralization of leadership functions to subnational authorities, especially for overseeing regulatory function, human resources management and financial delegations of authority.[374] In 2019, subdecree No 193 ANK.BK accelerated the decentralization of health management functions to provincial, district and commune/sangkat administrations.

A PHC policy developed in 2000 under the guidance of an Inter-Ministerial Committee on PHC has been successful in terms of achieving the Millennium Development Goals for reducing child and maternal mortality. The PHC policy was complemented by the development of the Community Participation Policy in 2003, which established Health Centre Management Committees with elected representatives and village groups to support community-based health activities. Experience from the COVID-19 pandemic in Cambodia provided important lessons regarding the need for strengthening of local governance, surveillance, community engagement and public health actions at subnational and local levels.[375]

367 See www.healthdata.org/results/country-profiles.
368 National Strategic Development Plan (NSDP) 2019–2023.
369 See https://dhsprogram.com/publications/publication-FR377-DHS-Final-Reports.cfm.
370 A.N. Bazzano et al., 2019, Neonatal deaths in Cambodia: findings from a community-based mortality review. *BMC Research Notes* vol. 12, No. 1, p. 236.
371 Ministry of Health, Cambodia, 2022, Maternal Deaths Audit Report.
372 See https://data.unhabitat.org/pages/urban-population-and-demographic-trends.
373 See https://data.unhabitat.org/datasets/cd4e1deb72ea49bd8f3403f8a9edfe6d_0/explore.
374 National Strategic Development Plan (NSDP) 2019–2023.
375 See https://www.who.int/cambodia/news/speeches/speech/remarks-by-dr-li-ailan-who-representative-to-cambodia-at-the-virtual-provincial-workshop-to-develop-provincial-preparedness-and-action-plans-for-covid-19-and-beyond.

Implementation across three strategic health plans has been based on a strategy of providing PHC services through the Minimum Package of Activities and Complementary Package of Activities. Efforts are focused mainly on provision of maternal and child health and communicable diseases control services.[376] The strategy has been implemented through a district health operational model, with networks of health centres, referral, and provincial and tertiary level hospitals. Despite these developments, the private sector remains the first choice for most Cambodians seeking care,[377] based on convenience and availability of providers close to communities. The PHC Policy is currently being reviewed in response to contextual trends which see health inequalities based on location and socioeconomic status, the emergence of NCDs and concerns that the health system may no longer be financially sustainable as demand grows for management of more complex health conditions.

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376 WHO Regional Office for the Western Pacific, 2015, Cambodia health system review. *Health Systems in Transition* vol. 5, No. 2.
377 See https://dhsprogram.com/pubs/pdf/FR312/FR312.pdf.

Primary health care coverage and equity

Health coverage

The UHC essential services coverage index has been scaled up from Replace with from .19 in the year 2000 to .61 in 2019.[378] Although the coverage rate is lower than the regional average, the rate of improvement is the highest. Although services are verticalized to some extent[379] there have been successful approaches to development of integrated planning and budgeting systems for operational districts and health centres. The vast majority of deliveries are now attended by trained personnel (99 per cent), and 86 per cent of women receive four ante natal care visits, which illustrates a high level of access and utilization of primary care services compared to the situation of 30 years ago when most deliveries were supported by traditional birth attendants.[380] According to WHO/UNICEF estimates, immunization coverage rates have remained consistently high in Cambodia in the past 15 years, with coverage of the third dose of DPT remaining above 90 per cent since 2006.[381] The percentage of children who are fully immunized has increased from 40 per cent in the year 2000 to 76 per cent in the year 2021, with just 3 per cent of eligible children receiving no vaccines at all in 2021 (a decline from 22 per cent in the year 2000).[382]

Elimination of malaria disease in the country is targeted by 2023.[383] The rate of detection of expected tuberculosis cases is 54.5 per cent. It estimated that there are 16,950 missing people with tuberculosis in 2020 of whom 3,043 were children.[384] The Fourth Health Strategic Plan 2021–2030 aims to end tuberculosis as a public health threat by 2030 and eliminate new HIV infections by 2023. New HIV infections have declined by 31 per cent between 2012 and 2020 and deaths due to HIV by 18 per cent over the same period, with ART coverage of 86 per cent (males) and 82 per cent (females) and 60 per cent coverage in children aged under 15 in 2020.[385] These programme achievements for maternal and child health, communicable disease control and immunization demonstrate the capability for programme coverage and reach in Cambodia.

Health equity

Although as reported above there have been significant improvements in health coverage over the past 15–20 years, lower socioeconomic groups and remote and ethnic populations generally have lower rates of access to and use of public health services. Successive DHS surveys (2000–2022) have identified ongoing unmet needs of populations in remote areas and the poorest wealth quintiles in both urban and rural areas of the country. Remaining malaria cases are found living and working in remote, forested or mountainous areas, which results in cases not being detected or in communities being requited to travel long distances.[386] Lack of tuberculosis detection and diagnosis is related to low levels of perception of threat, stigma and seeking out private health care or self-medication first.[387] Zero dose children for vaccination tend to congregate in remote areas and in lower socioeconomic groupings, including migrant and urban poor populations.[388] Despite improvements in food availability, water supplies and sanitation, one in three under-five children are stunted, and the estimated cost of malnutrition to the country amounts to approximately $400 million in GDP annually.[389] A recent Demographic Health Survey has demonstrated that there have been gradual

378 See www.who.int/data/maternal-newborn-child-adolescent-ageing/indicator-explorer-new/mca/uhc-service-coverage-index-(sdg-3.8.1).
379 Consultation on PHC in Cambodia, Chhea Chhordaphea, MOH 2022.
380 See https://dhsprogram.com/publications/publication-FR377-DHS-Final-Reports.cfm.
381 See https://immunizationdata.who.int/pages/coverage/dtp.html?CODE=KHM&ANTIGEN=&YEAR=.
382 See https://dhsprogram.com/publications/publication-FR377-DHS-Final-Reports.cfm.
383 See www.who.int/news-room/feature-stories/detail/the-last-mile-of-malaria-elimination-in-cambodia.
384 See www.stoptb.org/static_pages/KHM_Dashboard.html.
385 Global Fund to fight HIV/ AIDS, Tuberculosis and Malaria, 2020, Country profile Cambodia.
386 See www.who.int/news-room/feature-stories/detail/the-last-mile-of-malaria-elimination-in-cambodia.
387 A.K.J. Teo et al., 2020, Determinants of delayed diagnosis and treatment of tuberculosis in Cambodia: a mixed-methods study. *Infectious Diseases of Poverty* vol. 9, No. 1, p. 49.
388 UNICEF Cambodia Country Office, 2022, Zero Dose Desk Review.
389 See *https://data.opendevelopmentcambodia.net/laws_record/national-strategic-development-plan-nsdp-2019-2023/resource/bb62a621-8616-4728-842f-33ce7e199ef3.*

improvements in some measures of nutritional status, with stunting rates declining from 50 per cent in 2000, to 32 per cent in 2014 and to 22 per cent in 2021–2022. Rates of wasting in children however have not improved, with wide variations in prevalence rates across provinces ranging from wasting rates of 30 per cent in Kg Chhnang to 6 per cent in Takeo.[390]

Health system capacity

The delivery of primary services is provided through health facility premises with sessions of outreach for a limited set of services. Reorientation of health service delivery model is currently being considered as critical to achieve comprehensive and people-centred care that can be tailored to the local context. Despite the rebuilding of the health-care workforce after the conflict in the 1980s, the health workforce ratio per 1,000 population (1.05)[391] are well below the WHO threshold requirement of 4.45 per 1,000 to achieve UHC.[392]

Data published through the Global Health Expenditure Data base of WHO confirms the general trends in sources of health expenditure. At its highest point in 2007, external aid comprised 32.7 per cent of the national health expenditures, but in 2019 external aid comprised 6.5 per cent. Out of pocket expenditures on health are high when compared with regional countries, with the rates of these expenditures declining only marginally from 68.8 per cent in 2000 to 64.39 per cent in 2019. Government transfers represent 22.25 per cent of health expenditures in 2019. Government priority setting for health, as measured by government health expenditure as a percentage of general government expenditures, has declined from 8.6 per cent in the year 2000 to 7 per cent in 2019. Some 18 per cent of the population of Cambodia has annual household expenditure on health greater than 10 per cent, which is high by regional standards. Expenditure on health as a percentage of GDP was 7 per cent in 2019, having increased from 6 per cent in 2010.[393] Social health protection coverage relating to health equity funds, and social health insurance under the National Social Security Fund reached 39.5 per cent in 2020.[394] Many of these health financing outcomes are below global averages or targets for financial allocations in such areas as investment in health as a percentage of GDP, out of pocket expenditures on health, and annual expenditures by households on health.[395]

Future health systems

Given the successful scaling up of essential health services and reductions in the rates of under-five and maternal mortality over the past 20–30 years, there is a solid foundation on which to build future health systems. The main challenges with modelling for future health systems include transforming models of care towards NCD prevention and control, expansion of mental health services,[396] addressing persisting health inequities in access, delay in seeking health care and receiving care after reaching the health facilities, main cause of maternal mortality – post-partum haemorrhage, women empowerment and support environment to access health care and sustaining resourcing of the health system as health-care costs continue to rise. Human resource capacity will need to be expanded to accommodate provision of services closer to home, and to support integration of core public health functions into service delivery systems. Accelerated trends towards decentralization will require commitment to building subnational local government capacity in health management and administration. Expanding telecommunications/telemedicine and mobile coverage will enable the country to take up initiatives in digital health strategy. The country is in a relatively strong position to lead on PHC system development given the expanding fiscal space associated with a growing economy, a

390 See *www.dhsprogram.com/pubs/pdf/FR377/FR377.pdf*.
391 See *www.who.int/data/gho/data/themes/topics/health-workforce*.
392 See https://cdn.who.int/media/docs/default-source/gho-documents/world-health-statistic-reports/worldhealthstatistics_2022.pdf.
393 See https://apps.who.int/nha/database/ViewData/Indicators/en.
394 Fourth Health Strategic Plan 2021–2030.
395 According to the High-Level Declaration on UHC, one third of national health expenditure globally is covered by out-of-pocket expenses and 10 per cent of global GDP is invested in health. Governments are called upon to increase their allocations for health by 1 per cent of GDP.
396 S.J. Parry and E. Wilkinson, 2019, Mental health services in Cambodia: an overview. *BJPsych International* vol. 17, No. 2, pp. 29–31.

track record of successful direction through national health policy and planning, expanding capacity for decentralized governance, and potential to tap further into the resources and capabilities of an expanding private and civil society sector.

Policy and strategy directions for primary health care

The Health Sector Plan aims for a safer and healthier Cambodia through five transformative agendas that include PHC, health financing and social protection, healthy behaviours and community engagement, digital health and innovation and governance, regulation and compliance. The plan is informed in part by the lessons from the COVID-19 pandemic, which reflect in many ways lessons learned from its impacts in other country settings. These include raised awareness of the links between investment in health and economic growth, the value of a whole of society and health security approach, and increased recognition of the importance of resilient health systems that can absorb shocks and sustain essential health services for more vulnerable populations.

All five strategic objectives of Fourth Health Strategic Plan 2021–2030 have direct links with the Operational Framework. It is proposed that a UHC road map is developed on population service and financial coverage.

A PHC policy or strategy is being developed which is referred to as the PHC Booster Implementation Framework, with a model of care based on a health services and community approach. The main elements of this strategy are as follows:

- *Leadership and commitment:* There is engagement of the Ministry of Interior, Ministry of health and Local Government authorities at provincial district and commune levels in both development and implementation of the proposed initiative.
- *Community engagement, :* The community engagement approach is based on a model of health centre management committees, village health support groups and increasing engagement with local authorities and education and social sectors.
- *Multisector engagement:* The new strategy will look to innovate through closer collaborations with local authorities and other sectors in health work including education and social services.
- *Models of care:* It is proposing one model of care with two approaches which include: (1) the health services approach; and (2) the community approach, which includes public and private health services and social services. The benefit package for health is being re-visioned to engage people more in policymaking and decision-making, for shared management and community care with more focus on public health and quality of care and integrated health services with expanded availability of services for NCDs, mental health, ageing conditions and adolescent health services, reproductive health, including family planning, and life-saving skills to address maternal an neonatal mortality and health care, gender-based violence and harmful social norms. PHC networks are proposed in the Health Sector Plan (village, commune, health centre and district hospital) as well as in key community settings, such as schools and workplaces. Health centres will act as service providers as well as connecting to social services in such areas as disability support, rehabilitation support and social welfare services.
- *Digital health:* Digital solutions are high priorities in the PHC-Booster Implementation Framework through development of patient data bases, identifications numbers and increased use of digital technologies for communications.
- *Health workforce development:* The development of a "fit for purpose" workforce is a requirement for reorientation of the health system towards a PHC approach.

Priority actions to develop the primary health care approach in Cambodia

Leadership, governance and policy – subnational stewardship

As part of the decentralization and de-concentration process, a priority action should be to expand the capabilities of subnational leaders in provinces, districts and communities for public health functions including for prevention, protection, promotion, and emergency preparedness, in addition to development of human resource, regulatory and financial management capacities. A PHC Policy framework (currently under development) could consider the feasibility of supporting PHC orientation of the health system through integrating in a step-by-step manner essential public health functions into the essential health-care services package and operational guidelines for health centres and operational districts on PHC orientation of services. This aligns with the Sub-Decree on the Assignment of Health Management Function and Health Service Delivery to the Capital and Province Administration (No. 193 ANK.BK) in which management function of health are delegated to provincial, district and commune/sangkat administrations. An important approach for subnational stewardship of the PHC approach is capacity building both within PHC networks and in local government (including commune leaders and Health Centre Management Committees) on the main elements and responsibilities for implementation of the PHC approach for UHC.

Community engagement and multisector action on health

The PHC approach relies for its impact on a "whole of society" approach which requires closer engagement with communities, constituencies (civil and private) and other sectors. As part of the decentralization and de-concentration process, a priority PHC action may be to identify points of engagement between local authorities, health and other sectors to address emerging public health threats and challenges that include adolescent health; disability support services; early childhood development and child protection; injury prevention; social policy and social protection; school health; environmental health; emergency preparedness; community based promotion and prevention strategies and support services for older people and those with mental health conditions and chronic diseases.

Mechanisms to operationalize PHC include developing a Health in All Policies approach, and national multisectoral policy, strategies and operational frameworks, and costed operational plans for multisector action on health. This includes development of guidance for multisector action on the social determinants of health for front-line services.

Integration of health services and public health functions

A PHC approach involves further integration of public health functions with health services. This includes services in the areas of health protection, prevention, promotion, surveillance, and emergency preparedness. The PHC-Booster Implementation Framework may provide an opportunity for re-evaluation of essential services to ensure public health functions are adequately reflected, and that financial resources and human resource capacity are aligned towards further development of these functions at subnational level. This could include a step by step scale up of the MPA to reflect inclusion of public health functions, based on a costing and planning exercise to determine the human resources and finance required for implementation.

Resource allocation and health financing

Three main actions will be required to ensure allocations for PHC:

(a) Advocacy and financial management capacity development to support adequate and equitable budget allocations for health from Provincial Health Administrations and other subnational authorities given the increasingly decentralized context for health services management

(b) Ensuring that there is budgetary guidance and public sector allocations for essential public health functions that are integrated into annual planning and budgeting systems

(c) Reducing rates of out-of-pocket expenditures in health care through expansion of social health insurance, increasing uptake of health equity funds by vulnerable groups, minimising user fees in public facilities, and improved regulation of private sector care.

Models of care

The PHC-Booster Implementation Framework provides an opportunity to support the development of the prevention and promotion strategy at the community level. The model of integration with education and social sectors opens opportunities to design priority actions for school health, adolescent health, disability support services and social protection. The PHC network approach provides opportunities for engaging local government, private sector, civil society and other sectors in developing models of care more aligned to both the implementation of essential public health functions [prevention, promotion, protection, surveillance, emergency preparedness] and the strategic goals of the health sector plan. The proposed development of community health profiles to inform PHC planning and action through the Health Centre Management Committee will provide opportunities to develop models of care that are more responsive to community needs and priorities.

Strategic purchasing

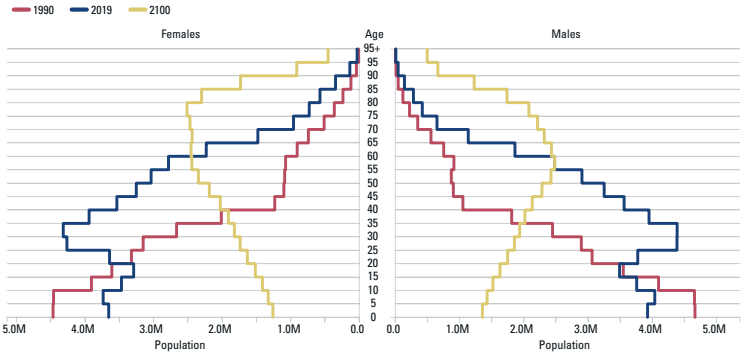
Several factors are now accelerating the policy and strategy requirements for models of strategic purchasing for PHC for UHC. These include an extensive private sector, and the commitments to expanding essential public health functions and establishing a PHC networks approach A model of private sector engagement through legislation, accreditation, regulation and partnership (including regulation of dual practice issues) will need to be reinforced to regulate and support PHC approaches in both public and private sectors.

Human resource development

All the above actions to support the PHC orientation of health systems would require the development of a workforce that is fit for purpose with skills/competencies in the areas of public health and for provision of services across a continuum of care (health promotion, disease prevention, treatment diagnosis, case management, rehabilitation, and palliative care). The transformative agenda for health sector planning assumes a transformative agenda for health workforce management and the development and long-term human resources planning. Areas of focus for professional development could include essential public health functions, the continuum of care, community engagement and digital health, and the development of community health worker capacity for prevention, promotion and community and home-based care.

PRIMARY HEALTH CARE DIRECTIONS - CAMBODIA

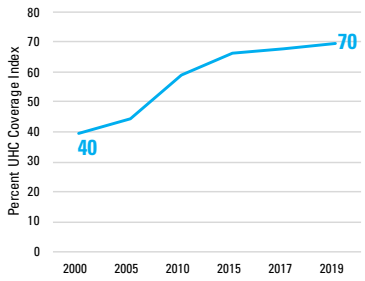
DEMOGRAPHIC TRANSITION



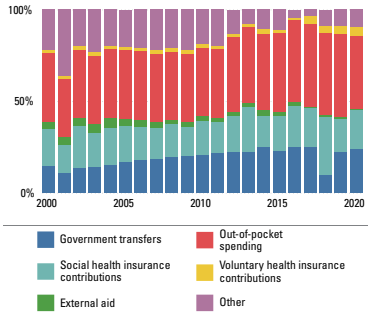
Source of Data: IHME: Country Profile Institute for Health Metrics and Evaluation (IHME). Cambodia profile. Seattle, WA: IHME, University of Washington, 2021. Available from https://www.healthdata.org/results/country-profiles

HEALTH COVERAGE AND HEALTH FINANCING (2000-2019)

UHC Coverage Index 2000 - 2019

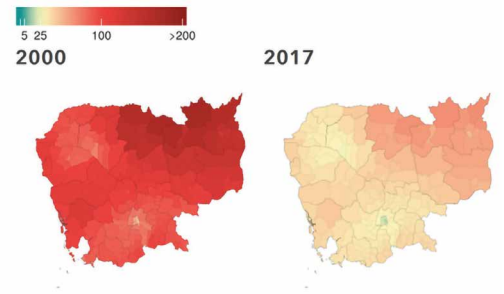


Sources of Health Expenditure 2000-2020



Sources of Data: https://www.who.int/data/gho/indicator-metadata-registry/imr-details/4834 Expenditures: National Health Accounts Data Base: https://apps.who.int/nha/database/country_profile/Index/en

HEALTH INEQUITIES AND ACCESS and SUPPLY BARRIERS



See related publication: https://doi.org/10.1038/s41586-019-1545-0

Key Facts on the Rationale for Investing in PHC

Unmet Needs: 39% for essential UHC index (GHO SDG Target 3.8.1)

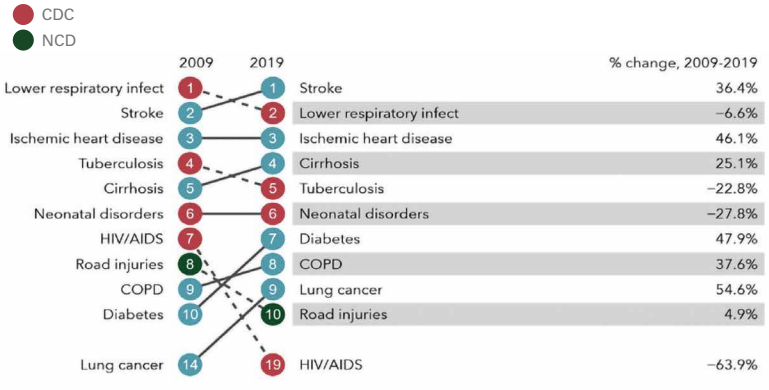
Health Workforce to 1000 Pop. ratios (1.09) are well below the WHO threshold (4.45) (GHO) (SDG Target 3.8.2)

18% of the Population in Cambodia has > 10% of annual household expenditure on health (GHO)

NCDs are on the rise in Cambodia. Most NCDs are linked to the risk behaviours of tobacco use, harmful use of alcohol, unhealthy diet, indoor air pollution and physical inactivity.

Source of Data: IHME: CHILD MORTALITY Country profile Institute for Health Metrics and Evaluation (IHME). Cambodia. Seattle, WA: IHME, University of Washington, 2021. Available from https://www.healthdata.org/results/country-profiles, Global Health Observatory WHO. Ministry of Health National NCD Strategy 2013-2020

EPIDEMIOLOGICAL TRANSITION



Source of Data: IHME: Country profile Institute for Health Metrics and Evaluation (IHME). Cambodia Profile. Seattle, WA: IHME, University of Washington, 2021. Available from https://www.healthdata.org/results/country-profiles

HEALTH CARE BENEFITS PACKAGE and PRIMARY HEALTH CARE POLICY DIRECTIONS

Health Benefits Package

MPAs and CPAs stands for Minimum Package of Activities (MPA) and Complementary Package of Activities (CPA). These are standardized guidelines and packages of activities that are assigned for Health Centers in the case of MPAs and for referral hospitals in the case of CPAs for the public health system in Cambodia.

The benefit package for health is being re-visioned to engage people more in policy and decision making, for shared management and community care.

The benefit package is proposed to be more people centred and comprehensive, and stress more the linkages between health and social services, and more focus on public health and quality of care and integrated health services.

The health benefits package is proposed to be extended to incorporate non-communicable diseases, mental health, ageing conditions, and adolescent health services.

PHC Policy Directions

Primary Health Care has been identified as one of the five "transformative agendas" for the upcoming Health Sector Strategic Plan 4 (HSP4). A new PHC policy or strategy is being developed which is referred to as the PHC Booster Implementation Framework, with a model of care based on 1) The Health Services Approach and Community Approach , which includes public and private health services and social services.

MultiSector Collaboration: Ministry of Interior, Health and Local Government authorities at provincial district and commune levels engaged in development and implementation of the proposed initiative. with closer linkages between education, health and social services. Health centres are proposed as the hub of a PHC network proviing health services and linking to relevant social services in the catchment area.

Community engagement, integrated health services and digital solutions are high priorities as entry point into operationalising PHC, along with the development of a "fit for purpose" workforce. The engagement approach is based on a model of health centre management committees, village health support groups and increasing engagement with local authorities and education and social sectors.

Models of Care: The proposed PHC Model of Care is composed of – (1) The Healthy Village – (2) Health and Social services , which includes public , private and social services including and more focus on public health and quality of care and integrated health services.

4.9 Thailand

Primary health care development landscape

Thailand (population 71 million, 2021)[397] is an upper-middle-income country with a GDP per capita of $7066 in 2021, having more than trebled from US$ 2004 per capita in the year 2000.[398] Thailand experienced a sharp contraction of the economy in 2020 of minus 6.2 per cent GDP Growth but has since recovered to a growth rate of 1.5 per cent in 2021.[399]

Demographic transition: Fertility rates have declined In Thailand from a high of 6.3 in 1963 to well below well population replacement value of 1.3 in 2020.[400] The population is projected to peak in 2028 at 70.4 million people, after which it will move into a projected decline.[401] The population pyramid of the country [see infographic] demonstrates the sharp decline in the size of the birth cohort over the past 30 years and the ageing of the population. The adolescent age group represents 12 per cent of the share of the total population[402] and the share of older people in the total population is projected to rise significantly over the next century.[403]

Epidemiological transition: Thailand has been undergoing a rapid and sustained epidemiological transition. Of the top 10 causes of death and disability combined, eight are related to non-communicable diseases (NCDs) and just two to communicable diseases (HIV AIDs and lower respiratory infections). Rates of death due to diabetes and chronic kidney disease have both increased by 50 per cent or more between 2009 and 2019[404] with prevalence of diabetes (8.5 per cent) still rising.[405] Out of an estimated 8,000,000 patients with chronic kidney disease nationwide, approximately 100,000 of those are suffering from end-stage renal disease requiring renal replacement therapy and the number is increasing by 15–20 per cent annually.[406] These outcomes are associated with increasing metabolic risk, as evidenced by rapid increases in fasting plasma glucose (58 per cent), high body mass index (56 per cent) and kidney dysfunction (32 per cent) between 2009 and 2019. Tobacco is a leading cause of behavioural risk along with alcohol and dietary risks, which are continuing to increase. Most of the risk behaviours and subsequent years lost due to mortality or morbidity originate from behaviours and social conditions in adolescence. Half of all mental health disorders in adulthood start by age 14, and high rates of alcohol and tobacco use, poor diet and low rates of physical exercise in many cases all originate in adolescence.[407]

397 See https://data.worldbank.org/indicator/SP.POP.TOTL?locations=TH.
398 See https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=VN.
399 See https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?locations=TH.
400 World Bank Data Portal, Thailand Fertility Rates.
401 See https://worldpopulationreview.com/countries/thailand-population.
402 See https://data.unicef.org/adp/country/vnm/.
403 See www.healthdata.org/results/country-profiles.
404 Ibid.
405 See https://improvingphc.org.
406 Twenty-Year National Strategic Plan for Public Health (2017–2036) Revision 2018.
407 See www.who.int/news-room/fact-sheets/detail/adolescents-health-risks-and-solutions.

The combination of behavioural, metabolic, and environmental risk is in all probability being accelerated by the rapid urbanization of the country. Thailand is now a predominantly urbanized society. Since the year 2000, the proportion of the population residing in urban areas has increased from 31 per cent to 52 per cent in 2021, with urban growth on an upward trajectory.[408] UN Habitat reported in 2018 that 25 per cent of the urban population is residing in slum areas, highlighting the challenge of ensuring health and social service access for socially disadvantaged populations as the society continues to urbanise.[409] Emerging infectious diseases such as COVID-19, Middle East Respiratory Syndrome (MERS), avian influenza and influenza are ongoing risks. These risks are being elevated by movements of populations and trade across borders. As is the trend across the region, Thailand is also undergoing a process of decentralization, most recently reflected in the transfer of the subdistrict health promotion hospitals from the MOPH to the Provincial Administrative Organizations in each province. This is part of the Decentralization Plan, and now one-third of the sub-district hospitals have been transferred. It is remains to be seen how this decentralization effort will affect the access, management, and quality of the primary health care provision.

These demographic, health and social trends have several implications for PHC. Given the elevation of metabolic, environmental, and behavioural risk over the past 10 years, NCD rates are set to rise further, placing significant pressure on the financing and operations of health systems. The trends rationalise large scale investments in public health, community engagement and multisector collaborations, to refocus health and social systems on prevention, promotion, and protection, as well as to develop the capacity of the medical and community sector to respond to a growing burden of chronic disease management.

Primary health care coverage and equity

Health coverage

The UHC Essential services coverage index (SDG target 3.8.1) has been scaled up from .41 in the year 2000 to .83 in 2019.[410] Thailand, along with China, has demonstrated the highest rises in the UHC coverage index over this two decade period in East Asia and the Pacific. The country has reached high levels of maternal and child health-care coverage, with of 90 per cent of eligible women receiving four antenatal care visits and the vast majority of deliveries now occurring in health facilities (99 per cent).[411] Immunization coverage in for DPT3 vaccine has remained at 97 per cent and above since 2004according to WHO UNICEF estimates.[412] However recent official estimates of coverage, and findings from the 2022 MICS Survey, are reporting a drop in DPT3 coverage post COVID 19 pandemic (MICS Survey 2022 DPT3 88.7%).[413]

The Twenty-Year National Strategic Plan For Public Health (2017–2036) notes ongoing concerns with access to neonatal health care, with leading causes of neonatal death include preterm birth (25 per cent), birth asphyxia (24 per cent), congenital heart disease (14 per cent), and other (10 per cent). Proposed solutions include increasing the number of trained medical personnel and nurses and establishing neonatal intensive care units in provinces.

Given the rapid rise of NCDs in the country, efforts are underway to reorient primary and hospital care services to address more complex health needs for more people[414] and to invest more in health prevention and promotion.[415] This includes services for mental health. Between 2009 and 2017, 53 per cent of persons

408 See https://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS?locations=TH.
409 See https://data.unhabitat.org/datasets/cd4e1deb72ea49bd8f3403f8a9edfe6d_0/explore.
410 See www.who.int/data/maternal-newborn-child-adolescent-ageing/indicator-explorer-new/mca/uhc-service-coverage-index-(sdg-3.8.1).
411 See https://data.unicef.org/topic/maternal-health/delivery-care/#.
412 See https://immunizationdata.who.int/pages/coverage/dtp.html?CODE=THA&ANTIGEN=DTPCV3&YEAR=.
413 National Statistical Office of Thailand. 2023. Thailand Multiple Indicator Cluster Survey 2022, Survey Findings Report. Bangkok, Thailand: National Statistical Office of Thailand.
414 V. Yiengprugsawan et al., 2017, Reorienting Health Services to People with Chronic Health Conditions: Diabetes and Stroke Services in Malaysia, Sri Lanka and Thailand. *Health Systems and Reform* vol. 3, No. 3, pp. 171–181.
415 T. Tuangratananon et al., 2021, Healthcare providers' perspectives on integrating NCDs into primary healthcare in Thailand: a mixed method study. *Health Research Policy and Systems* vol. 19, No. 1, p. 139.

with depressive disorders had access to mental health services.[416] The availability of mental health-care facilities is reported to be uneven across the country with a concentration of facilities for treatment concentrated in urban areas. A health sector review in 2015 found that strengthening PHC is a requirement for an effective mental health system where the main barriers are the inadequate number of health-care workforce with skills in mental health. A psychosocial care system has been established in schools, although these schools lack full time mental health-care professionals. The National Strategic Health Plan proposes more engagement between parents, communities, and schools in taking care of physical/mental health of school-age children and adolescents, which highlights the importance of community-based health and social support in addressing the challenges of the epidemiological transition.

Gaps in coverage for adolescent health have been identified by some studies in Thailand. Despite the high level of contraceptive prevalence and equitable access to reproductive health services, there are unmet contraceptive needs among unmarried young couples and unprotected sex among young adolescents resulting in HIV AIDs, pregnancies in teenage years and unsafe abortions. These all remain priority health issues for young people.[417] Currently, implants are free for adolescents and a safe abortion law was revised in 2021.

Around 15 per cent of the world's population[418] and 240 million children globally[419] have a disability. The National Statistics Office reports there were more than 3.69 million people with disabilities in Thailand in 2017, with an estimated 1.64 million (44.4 per cent) having disability cards to be eligible for social assistance. According to the Annual Report of the Disabled People in Thailand 2021, the disability prevalence rate in Thailand is 3.1 per cent, and over the past three decades the country has progressively developed data collection systems on disability through such sources as school enrolment, health coverage schemes, and employment sources.[420]

In summary, declining fertility and an ageing population, the rapid growth in chronic conditions, and service gaps already evident for prevention and promotion and treatment of complex health and social care needs, all point to the need for building further on the PHC approach in Thailand, especially for front-line health services and community-based care and support.

Health equity

As demonstrated by the expansion of coverage of essential health interventions (UHC Coverage Index), Thailand has made substantial progress in improving both coverage and equity of health-care provision over recent decades, especially in the areas of maternal, newborn and child health and in immunization. Child mortality has been reduced from 28.7 per 1,000 live births in 1990 to 7.5 per 1,000 live births in 2019.[421] As illustrated by mapping of child mortality rates [see infographic], these trends have been associated with a narrowing of geographic inequities between regions. The Multiple Indicator Cluster Survey of 2019 demonstrated that there are very narrow gaps between socioeconomic quintiles in relation to delivery at a facility and between urban and rural areas, which provides some evidence of the equity of the health care systemin Thailand. This is reinforced by findings from the 2022 Multi Cluster survey, which found just a 5% gap in Ante Natal Care Visits (4 or more) between women in rural areas and women in urban areas.[422] The gaps between the overall rate of deliveries in facilities between the eligible female population (90 per cent) when compared to the delivery rate at facilities for girls aged 15–19 (81 per cent)[423] demonstrates the importance of advocacy for reproductive health access for young girls. There is evidence of inequities of

416 Twenty-Year National Strategic Plan for Public Health (2017–2036) Revision 2018.
417 WHO Regional Office for the Western Pacific, 2015, Thailand Health System Review. *Health Systems in Transition* vol. 5, No. 5.
418 See www.unhcr.org/th/en/people-with-disabilities.
419 See www.unicef.org/thailand/press-releases/new-unicef-report-finds-240-million-children-disabilities-globally.
420 See www.disabilitydataportal.com/news/article/new-thailand-data-launched-on-the-disability-data-portal-82/.
421 See www.healthdata.org/results/country-profiles.
422 National Statistical Office of Thailand. 2023. Thailand Multiple Indicator Cluster Survey 2022, Survey Findings Report. Bangkok, Thailand: National Statistical Office of Thailand.
423 See https://data.unicef.org/topic/maternal-health/delivery-care/#.

access to reproductive health care and knowledge between social groups. In the MICS survey results from 2022, there are wide ranges in adolescent fertility rates (girls aged 15-19) based on education status, income levels and ethnicity.

There is some evidence of inequities of health-care access and outcomes for some population subgroups in Thailand. Findings from the recently realsed 2022 Multi Cluster Survey found significant disparities in immunisation coverage (DPT3) between regions, between children with mothers with different levels of education and between Thai (90.5%) and Non Thai residents (76.9%).[424] Recent measles outbreaks there have been linked to the conditions of Myanmar migrant factory workers,[425] as well as to the misinformation and cultural beliefs of populations in southern Thailand near the border with Malaysia. These measles outbreaks in 2018 (6,035 cases) and 2019 (5,412 cases)[426] suggest that some marginalized groups are not being captured in population estimates or are not accessing health services. Statelessness is an issue in Thailand where there has been a large inflow of refugees from Myanmar as well as migrant workers from neighbouring countries.[427] Lack of identity documents and birth registration have been cited as reasons for non-eligibility for services. The Office of the United Nations High Commissioner for Refugees has estimated that at the end of 2021, there were 553,969 people registered by the Government as stateless.[428] One response has been to enrol stateless students in the national health-care system through an initiative called the National Healthcare Fund for Persons with Legal Status Problems,[429] and through political commitments to enable stateless persons to access services through the health system.[430]

In summary, Thailand has rapidly expanded coverage and reduced health inequities substantially over the past three decades, As will be seen, these developments are attributable to development of a comprehensive PHC system reinforced by models of community engagement and financial protection that has enabled the achievement of almost universal access to health care.

Health systems and primary health care

Models of care

The health-care system in Thailand is based on a district health system model and is well developed with good geographical coverage which has been achieved since the mid-1990s. At the district level there is a community hospital covering 50,000 population catchment, and at provincial level there is a general hospital covering an estimated population of 600,000.At the sub-district level there is a health centre with an average population of 5000.[431, 432]

The Universal Coverage Scheme finances PHC through a model of health contracting. These are referred to as "contracting units for primary care". The contracts stipulate minimum staffing requirements for service delivery. The contracting units may contain a network of several health centres and a hospital. There are opportunities for contracting of contracting units through the private sector as in an urban setting.[433] This

424 National Statistical Office of Thailand. 2023. Thailand Multiple Indicator Cluster Survey 2022, Survey Findings Report. Bangkok, Thailand: National Statistical Office of Thailand.
425 S. Wongsanuphat et al., 2020, Investigation of Measles Outbreak among Thai and Migrant Workers in Two Factories in Nakhon Pathom, Thailand, 2019. *International Journal of Environmental Research and Public Health* vol. 17, No. 13, p. 4627.
426 See https://immunizationdata.who.int/pages/incidence/polio.html?CODE=CHN&YEAR=.
427 WHO Regional Office for South-East Asia, 2021, Moving towards culturally competent, migrant-inclusive health systems: a comparative study of Malaysia and Thailand. *Comparative country studies* vol. 4, No. 1.
428 See www.unhcr.org/th/en/statelessness.
429 See https://www.refworld.org/docid/60b8d6d84.html.
430 See https://eng.nhso.go.th/view/1/DescriptionNews/Healthcare-rights-of-stateless-people-/158/EN-US.
431 WHO Regional Office for the Western Pacific, 2015, Thailand Health System Review. *Health Systems in Transition* vol. 5, No. 5.
432 V. Tangcharoensathien et al., 2018, Health systems development in Thailand: a solid platform for successful implementation of universal health coverage. *Lancet* vol. 391, No. 10126, pp.1205–1223.
433 WHO Regional Office for the Western Pacific, 2015, Thailand Health System Review. *Health Systems in Transition* vol. 5, No. 5.

strategic purchasing model for a specific population catchment , operated by an adequate number of qualified health workers, forms the foundation of the UHC Coverage Scheme through a PHC network approach.[434, 435] The Universal Coverage Scheme covers 76 per cent of the population (with the remaining covered by the other two schemes) and includes a comprehensive benefit package with a focus on primary care but with provision for care for more complex conditions[436] [see infographic]. Recent reforms, as described in the national health plan and PHC case studies,[437] include the development of primary care clusters to establish multidisciplinary family care teams in communities to provide a better quality of essential services and manage larger and more complex health problems that are now emerging.

Some shortcomings have been documented with this approach. A health sector review in 2015 found that although there is good access to primary care in rural areas, there were reported to be weak PHC systems in urban areas,[438] with the national health plan taking note of people in these areas who have been unable to gain access to primary care services, leading to overcrowding in higher level facilities.[439] The review found that, despite the reach of the PHC system and the facility and health workforce network, the health system in Thailand is organized for acute care, while long-term care requires integrated health and social care.[440]

Public health

Despite legislative action on control,[441] tobacco has remained as the leading risk factor for death and disability in Thailand between 2009 and 2019.[442] Even though limited progress on the primary prevention strategies to reduce injuries and mortalities due to traffic injury, road injuries have declined from being the third to the tenth leading cause of death in Thailand between 2009 and 2019.[443] As of 2019, road traffic injury remains the leading cause of death for both boys and girls aged between 10 and 19 in Thailand[444] and the National Strategic Plan reports that drowning is a leading cause of death among Thai children aged less than 15 years.[445]

Increasing urbanisation, emission from traffic and industry, and agricultural burning practices are contributing to an increasing public health threat from air pollution in Thailand. A recent nationwide study that aimed to quantify the magnitude and distribution of disease caused by ambient air pollution found that "all causes mortality attributable to PM2.5, was about 38,410 deaths or 6% of total deaths in Thailand."[446]

The COVID-19 pandemic provided valuable lessons in Thailand and internationally on factors associated with an effective emergency/pandemic response. These included the importance of political commitment and a whole of society response including political, sector and civil society partnerships, robust health systems as a baseline for the response, and engagement of community volunteer networks to support a bottom-up approach. Areas for improvement that were identified by stakeholders in 2022 included barriers faced by some vulnerable populations to care, inadequate urban PHC, insufficient alignment of information systems and data bases between different government agencies, and finally, pandemic fatigue and complacency.[447]

434 V. Tangcharoensathien et al., 2020, Financial risk protection of Thailand's universal health coverage: results from series of national household surveys between 1996 and 2015. *International Journal for Equity in Health* vol. 19, No. 163.
435 WHO Regional Office for the Western Pacific, 2015, Thailand Health System Review. *Health Systems in Transition* vol. 5, No. 5.
436 See www.social-protection.org/gimi/gess/RessourcePDF.action?ressource.ressourceId=54059#:~:text=The%20UCS%20is%20a%20tax,medical%20treatment%2C%20and%20emergency%20care.
437 WHO, 2017, Primary health care systems (PRIMASYS): Case study from Thailand.
438 WHO Regional Office for the Western Pacific, 2015, Thailand Health System Review. *Health Systems in Transition* vol. 5, No. 5.
439 Twenty-Year National Strategic Plan for Public Health (2017–2036) Revision 2018.
440 WHO Regional Office for the Western Pacific, 2015, Thailand Health System Review. *Health Systems in Transition* vol. 5, No. 5.
441 Ibid.
442 See https://www.healthdata.org/results/country-profiles.
443 WHO Regional Office for the Western Pacific, 2015, Thailand Health System Review. *Health Systems in Transition* vol. 5, No. 5.
444 See https://data.unicef.org/resources/adolescent-health-dashboards-country-profiles/.
445 Twenty-Year National Strategic Plan for Public Health (2017–2036) Revision 2018.
446 Pinichka C, Makka N, Sukkumnoed D, Chariyalertsak S, Inchai P, Bundhamcharoen K. Burden of disease attributed to ambient air pollution in Thailand: A GIS-based approach. PLoS One. 2017 Dec 21;12(12):e0189909. doi: 10.1371/journal.pone.0189909. PMID: 29267319; PMCID: PMC5739428.
447 See https://www.who.int/thailand/news/detail/12-05-2022-thailand-shares-lessons-learned-from-the-covid-19-pandemic-with-who.

Thailand has implemented several innovations that align very closely with the PHC approach, especially about public health functions and multisector collaborations for health. The national parliament adopted the Health Promotion Foundation Act in 2001 which led to the establishment of a *Health Promotion Foundation*.[448] The foundation implements national campaigns on NCD risk factors, and is funded by taxes on tobacco and alcohol, and reports some reductions in risk factors in the country in relation to alcohol and tobacco use and sedentary behaviours. A National *Health in all Policies* approach in Thailand was initiated through a National Health Act in 2007 which promoted a whole of society approach to health, and which has now been active for 15 years. A National Health Commission was established supplemented by a National Health Assembly (NHA), the purpose of which is to engage government agencies, academia, civil society, health professionals, the private sector to make resolutions to inform national health policy.[449] Other initiatives to support more promotive and public health orientation have been supported through the National Health Security Office (NHSO).. For example, Community Health Funds (CHF) have been established in rural and urban areas to improve individual health promotion and prevention activities through matching contributions from the NHSO and from local government.[450]

Health financing

Although the private health sector is highly active in Thailand, the health system in the country is primarily financed through taxation. The level of priority placed on health by the government [see infographic] as measured by government spending as a percentage of current health expenditures, has increased from 63.7 per cent in the year 2005 to 70.4 per cent in 2020.[451] The level of priority set on health by Government is reflected in the fact that government health expenditure as a percentage of domestic general government expenditures has been sustained at 13 per cent since 2005. Sustaining high levels of government transfers and growing health insurance schemes has meant that out of pocket health expenditures on health care have declined from 28 per cent in 2005 to just 11 per cent in 2020. As a result of this approach, not only has the country achieved a high level of coverage of essential health interventions, it has also achieved this result through minimal financial hardship on the population. Just 1.87 per cent of the population in Thailand has expended greater than 10 per cent of their annual household expenditure on health (SDG target 3.8.2).[452] In fact, using this 10 per cent threshold, household expenditures on health have declined from 6 per cent in 1996 to the 2 per cent figure in 2015.

These positive trends in financial protection have been enhanced and guided by the health policy environment in Thailand over the past three decades which have centred on financial protection and UHC. Thailand achieved UHC in 2002 when the whole population was covered by one of three health insurance schemes that included the Civil Servant Medical Benefit Scheme, the Social Health Insurance scheme for private-sector employees and finally the Universal Coverage scheme for the remaining population. Additional factors contributing to the scale up of UHC included establishment of a comprehensive PHC package, removal of costs to the client at the point of care, and introduction of strategic purchasing to improve health system efficiency.[453] These initiatives require additional revenue raising, which Thailand has achieved to some extent through new and ear marked taxes for health on tobacco and alcohol and formation of private sector and philanthropic partnerships.[454] A financing study on health promotion from 2017 found that spending on prevention and public health was higher in Thailand than in many other middle-income countries.[455]

448 Suladda Pongutta et al., 2019, Lessons from the Thai Health Promotion Foundation. *Bulletin of the World Health Organization* vol. 97, No. 3, pp. 213–220.
449 See https://en.nationalhealth.or.th/15-years-of-health-in-all-policies-hiap-in-thailand/.
450 National Health Security Office Thailand https://eng.nhso.go.th/view/1/DescriptionNews/Enhance-the-role-of-local-government-organizations-in-Thai-health-system/215/EN-US
451 See https://apps.who.int/nha/database/country_profile/Index/en.
452 See https://www.who.int/data/gho/data/themes/topics/financial-protection.
453 V. Tangcharoensathien et al., 2020, Financial risk protection of Thailand's universal health coverage: results from series of national household surveys between 1996 and 2015. *International Journal for Equity in Health* vol. 19, No. 163.
454 K. Sumriddetchkajorn et al., 2019, Universal health coverage and primary care, Thailand. *Bulletin of the World Health Organization* vol. 97, No. 6, pp. 415–422.
455 Watabe A, Wongwatanakul W, Thamarangsi T, Prakongsai P, Yuasa M. Analysis of health promotion and prevention financing mechanisms in Thailand. Health Promot Int. 2017 Aug 1;32(4):702-710. doi: 10.1093/heapro/daw010. PMID: 26989011; PMCID: PMC5914417.

In summary, given the health financing context, there is a favourable environment in Thailand for the further growth of the PHC approach. All the above-mentioned health financing initiatives rest upon the platform of political leadership on health, as measured by the open and innovative policy environment and sustained public investment in health. The future challenge is to sustain this effort in the face of escalating health care costs as demands for management of more chronic and complex conditions continues to rise.

Health workforce

Health workforce ratio per 1,000 population for nurse midwife is 3.1 (2020) and for physician 0.93 (2020) as reported in the latest statistics available through the Global Health Observatory.[456] This is close to the target of 4.45 professional health staff per 10,000 population recommended by WHO to achieve UHC. With regard to the PHC approach, there are two issues related to health workforce distribution and competencies. Despite the substantial investments in primary and community-based care, challenges relate to the reorientation of workforce capacity from acute care to meeting the needs for public health, chronic care, disability support, primary care and prevention,[457] multidisciplinary team-based care[458] and home health services.[459, 460] In terms of health workforce distribution, although 54 per cent of the population resides in rural areas, only 19 per cent of doctors are working in rural locations, and there is a projected shortfall of 47,000 nurses by 2026.[461] The issues of numbers, distribution, public health competencies and a workforce for community-based care are consistent themes across many of the PHC country profiles.

Community engagement – Community health workers

Community health workers have been a feature of the Thailand health system since the 1960s. There are more than 1 million village health volunteers (VHVs) in Thailand. They have been involved in a wide range of primary care functions over the years including health surveys and data collection, maintaining family health records and implementing disease prevention campaigns and disease outbreak responses. More specific functions include in prevention, surveillance and control of dengue in high-risk areas,[462] growth monitoring in northern hill tribe villages,[463] health communications for cross-border migrant health care and community health programmes in north-east Thailand,[464, 465] long term community based care for older people,[466] improving access to services for people with disabilities,[467] and screening and referral for tuberculosis control in southern Thailand.[468] During the COVID-19 pandemic, VHVs assisted with contact tracing, quarantine and monitoring compliance with control measures.[469]

456 See www.who.int/data/gho/data/themes/topics/health-workforce.
457 WHO Regional Office for the Western Pacific, 2015, Thailand Health System Review. *Health Systems in Transition* vol. 5, No. 5.
458 N. Pagaiya et al., 2021, From village health volunteers to paid care givers: the optimal mix for a multidisciplinary home health care workforce in rural Thailand. *Human Resourcres for Health* vol. 19, No. 2.
459 K. Potempa et al., 2022, Thailand's Challenges of Achieving Health Equity in the Era of Non-Communicable Disease. *Pacific Rim International Journal of Nursing Research* vol. 26, No. 2, pp. 187–197.
460 N. Pagaiya et al., 2021, From village health volunteers to paid care givers: the optimal mix for a multidisciplinary home health care workforce in rural Thailand. *Human Resourcres for Health* vol. 19, No. 2.
461 Ibid.
462 O. Nontapet et al., 2022, Understanding dengue solution and larval indices surveillance system among village health volunteers in high- and low-risk dengue villages in southern Thailand. *One Health* vol. 15.
463 A. Roesler et al., 2018, Health Workers' and Villagers' Perceptions of Young Child Health, Growth Monitoring, and the Role of the Health System in Remote Thailand. *Food and Nutrition Bulletin* vol. 39, No. 4, pp. 536–548.
464 S. Sirilak et al., 2013, Community participation of cross-border migrants for primary health care in Thailand. *Health Policy and Planning* vol. 28, No. 6, pp. 658–664.
465 S. Promthet et al., 2012, Evaluation of health education in the Multi-professional Intervention and Training for Ongoing Volunteer-based Community Health Programme in the north-east of Thailand. *Asian Pacific Journal of Cancer Prevention* vol. 13, No. 5, pp. 1753–1755.
466 P. Lloyd-Sherlock et al., 2017, Volunteer provision of long-term care for older people in Thailand and Costa Rica. *Bulletin of the World Health Organization* vol. 95, No. 11, pp. 774–778.
467 WHO Regional Office for the Western Pacific, 2015, Thailand Health System Review. *Health Systems in Transition* vol. 5, No. 5.
468 B. Phomborphub et al., 2008, Village health volunteer participation in tuberculosis control in southern thailand. *Southeast Asian Journal of Tropical Medicine and Public Health* vol. 39, No. 3, pp. 542–548.
469 See https://www.who.int/thailand/news/feature-stories/detail/thailands-1-million-village-health-volunteers-unsung-heroes-are-helping-guard-communities-nationwide-from-covid-19.

A review of the VHV programme in 2015 found that government oversight, collaboration with public health officials and community trust were the three main factors associated with the effectiveness of health worker programmes.[470] This aligns with a study on the use of VHVs for growth monitoring, which found that the lack of oversight and resource support were detrimental to the effectiveness of growth monitoring programmes.[471] Positive outcomes of VHV programmes have been associated with programmes for tuberculosis screening and referral[472] and health communications.[473] A study on the role of volunteers in supporting the physical and mental health care of older people found it benefitted older people and led to greater uptake of other services, although a large burden of unmet service needs remained.[474] The capacity of VHVs to take on community monitoring, communication and prevention roles for COVID-19 has enabled the pandemic response to reach the household level across the nation.[475]

Several themes are associated with these findings. Volunteer programmes are active in areas with more remote geographic locations, and among more marginalized or socially disadvantaged ethnic or social groups, and where communication and service gaps are more evident. The increased prevalence and chronicity of health conditions is increasing pressures for community-based network support for care in the community and to support connections to higher level services where there is unmet need. Although there is evidence of effectiveness of such programmes, they rely on levels of community and health system trust, technical training and supervision, and adequate resource support. One community-based study on the role of VHVs in response to the pandemic in 2022 found that volunteers contribute to forming local social networks and collaborative systems that enable engagement between stakeholders, including groups of volunteers, villagers, households, local politicians and officials, and private sector actors,[476] which serves to remind that health outcomes relate as much to social systems as they do to health systems. The National Health Plan of Thailand, in recognition of the growing need for community-based care in the face of epidemiological transition, initiated a project in 2016 to have one "Family Health Volunteer" for each household to promote social support and self-care, and who is intended to work closely with community health volunteers for that support.[477] In summary, the capacity of VHVs to reach the household level enhances the reach of public health communications, self-care and emergency response – all of which are central to the PHC approach.

470 S.D. Kowitt et al., 2015, Community Health Workers as Agents of Health Promotion: Analyzing Thailand's Village Health Volunteer Program. *Journal of Community Health* vol. 40, No. 4, pp. 780-788.
471 A. Roesler et al., 2018, Health Workers' and Villagers' Perceptions of Young Child Health, Growth Monitoring, and the Role of the Health System in Remote Thailand. *Food and Nutrition Bulletin* vol. 39, No. 4, pp. 536–548.
472 B. Phomborphub et al., 2008, Village health volunteer participation in tuberculosis control in southern thailand. *Southeast Asian Journal of Tropical Medicine and Public Health* vol. 39, No. 3, pp. 542–548.
473 S. Sirilak et al., 2013, Community participation of cross-border migrants for primary health care in Thailand. *Health Policy and Planning* vol. 28, No. 6, pp. 658–664.
474 P. Lloyd-Sherlock et al., 2017, Volunteer provision of long-term care for older people in Thailand and Costa Rica. *Bulletin of the World Health Organization* vol. 95, No. 11, pp. 774–778.
475 See https://www.who.int/thailand/news/feature-stories/detail/thailands-1-million-village-health-volunteers-unsung-heroes-are-helping-guard-communities-nationwide-from-covid-19.
476 Poonnatree Jiaviriyaboonya, 2022, Anthropological study of village health volunteers' (VHVs') socio-political network in minimizing risk and managing the crisis during COVID-19. *Heliyon* vol. 8, No. 1.
477 Twenty-Year National Strategic Plan for Public Health (2017–2036) Revision 2018.

Policy and strategy directions for primary health care in Thailand

The Ministry of Public Health has set future directions for health in the c The plan has four content areas, all of which are directly relevant to the PHC approach: 1) excellence in promotion, prevention and protection; 2) service excellence; 3) people excellence; and 4) governance excellence. Other policy directions are set through related national health policies strategies on UHC, health promotion and health in all policies. Some main directions of this plan are organized according to PHC levers below.

Governance and policy

The Ministry of Public Health (MOPH) has drawn up a policy for the development of a primary care cluster and family medicine clinic, with the proposal to establish family medicine doctors and interdisciplinary medical teams. This plan involves a proposal to establish a megacity/urban area/rural area service model and the systematic establishment of service providers/teams both in health-care facilities and health-care networks, with every district across the country having a functional district health board.

A Decentralization Act was legislated in 1999 which mandated that that all public services including health and education should be gradually devolved to Local Government Organisations including Provincial Administration Organizations and municipalities. A series of Decentralization Action Plans followed which focussed on issues including share of local government budgets for health and the organisation and networking of health care facilities, as well as transfer of public health functions from the central MOPH to local government organisations.[478] A recent statement from the National Health Commission of Thailand on the lessons learned from COVID 19 was that society has learned that centralized problem solving was unable to resolve health and economic problems, and that in contrast, decentralised provincial governors, local organizations and community based health systems have the capability for more efficient solutions. These lessons have important implications for future health systems reforms in Thailand in terms of decentralisation of power.[479]

Community engagement

Strengthen community-based health-care systems in such areas as mental health, prevention and promotion, adolescent health and emergency response through multidisciplinary PHC networks/primary care clusters and village and urban health volunteer networks.

Multisector collaboration

School health, adolescent health and early childhood development: The National Strategic Plan advocated for legislation for promotion of early childhood development and for collaboration at the policy level to implement health promotion programmes for school-age children through multisectoral action. The Early Childhood Development (ECD Act) was legislated in 2019.

The National Strategic Plan also proposes the following:

- Developing physical and mental health-care systems that are teenager-friendly and ensuring linkage between the health-care system and schools, and developing guidelines , and environments that contribute to capacity building and strengthening of school-age children and adolescents.

478 WHO Regional Office for the Western Pacific, 2015, Thailand Health System Review. Health Systems in Transition vol. 5, No. 5.
479 National Health Commission Thailand Post COVID-19 Thailand needs power decentralization for national reform See: https://en.nationalhealth.or.th/post-covid-19-thailand-needs-power-decentralization-for-national-reform/

- Developing measures to prevent drowning and road accidents and implementing information and data system in an effort to prevent NCDs and emerging health issues, including those caused by environmental pollution.

Models of care

Recent reforms, as described in the National Health Plan and PHC Case studies,[480] involves development of primary care clusters with the aim of establishing family care multidisciplinary teams with links to communities for providing better quality of essential services and managing larger and more complex health problems that are now emerging.

Sustaining UHC and addressing escalating health-care costs will require transitioning from care models largely focussed on management of acute care conditions towards primary care models with greater focus on the prevention and promotion services and programmes of support to meet long term care needs of those with chronic conditions. The system has to move from its traditional role of providing basic disease-based care to being the first point of contact in integrated, coordinated, community-oriented and person-focused care.[481]

Human resources

Upskilling of the health workforce will be required to improve quality of health-care system on treatment and care of NCDs and to develop health workforce competencies in the area of public health [promotion, prevention, protection, surveillance and emergency preparedness]. The changing demograhics and the transition towards more life course approaches for womens and children's health will require development of workforce capabilities in such areas as early childhood development, school health and adolescent health, in addition to expanding comptetencies in maternal, neonatal and child health care.

Health financing

Improving financial management aspect of health insurance system and reduce disparities by ensuring consistency in the management of all state-run health-care schemes.

The policy on universal health coverage needs to balance investment in health prevention and promotion as well as on the financial protection for coverage of high-cost services associated with chronic conditions.

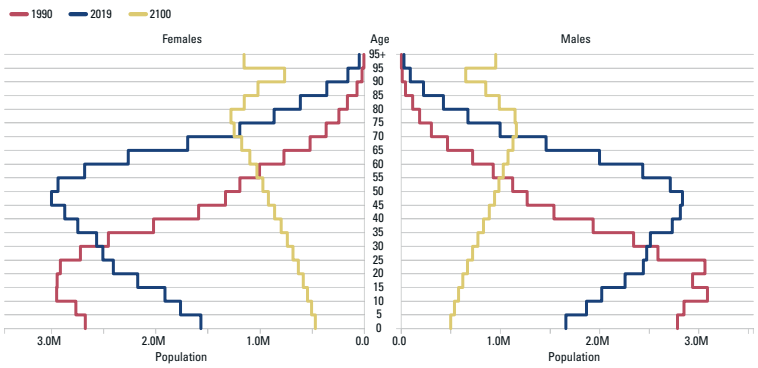
Digital technologies

Ensuring all patients have access to equal, modern, and continued medical services at all health facilities through digital technology system to ensure access of clinicians to electronic medical records, to ensure all health facilities are capable of exchanging health information via Health Information Exchange (HIE) platform, and to ensure that all recipients of health-care services can access their personal health record. Telemedicine is currently being piloted in 5 provinces including in Bangkok to improve access to care.

480 WHO, 2017, Primary health care systems (PRIMASYS): Case study from Thailand.
481 K. Sumriddetchkajorn et al., 2019, Universal health coverage and primary care, Thailand. *Bulletin of the World Health Organization* vol. 97, No. 6, pp. 415–422.

PRIMARY HEALTH CARE DIRECTIONS - THAILAND

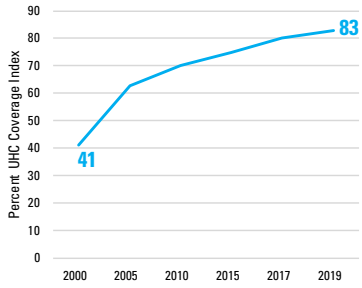
DEMOGRAPHIC TRANSITION



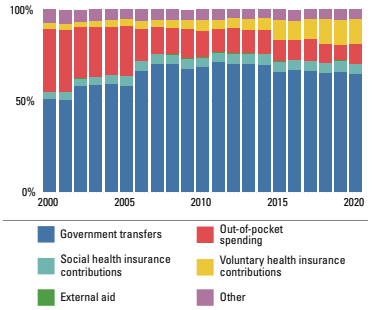
Source of Data: IHME: Country Profile Institute for Health Metrics and Evaluation (IHME). Seattle, WA: IHME, University of Washington, 2021. Available from https://www.healthdata.org/results/country-profiles

HEALTH COVERAGE AND HEALTH FINANCING (2000-2020)

UHC Coverage Index 2000 - 2019

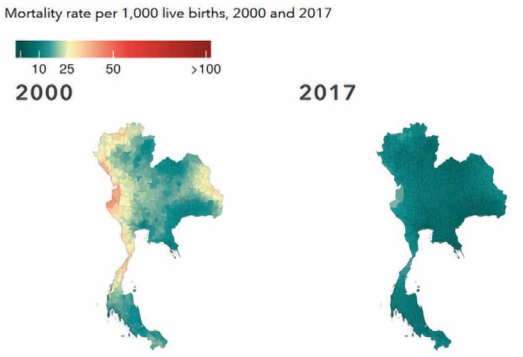


Sources of Health Expenditure 2000-2020



Sources of Data: UHC Coverage Index https://www.who.int/data/gho/indicator-metadata-registry/imr-details/4834 Expenditures: National Health Accounts Data Base: https://apps.who.int/nha/database/country_profile/Index/en

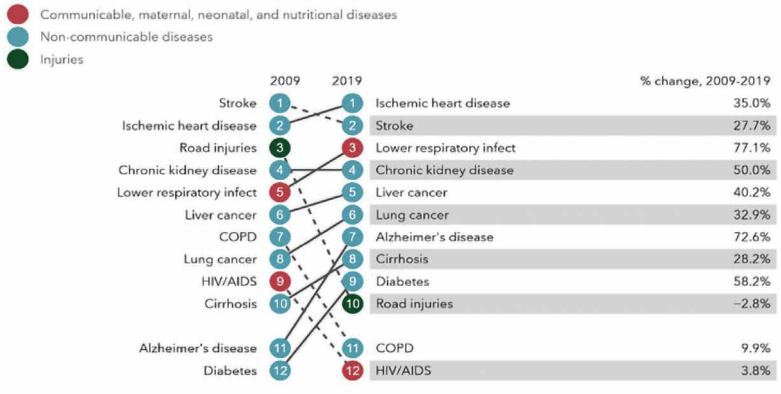
HEALTH INEQUITIES AND HEALTH ACCESS



- The **Maternal Mortality Rate** was 37 per 100,000 live births (2017), having declined from 42/100,000 in 2010 (GHO)
- There is unmet need of 17% **for essential UHC index coverage (GHO)**
- **Health Workforce** to 10,000 Population ratio for nurse midwife is 3.2 (2019) and for physician .9 (World Bank/ GHO)
- 1.87% of the Population in Thailand has > 10% of **annual household expenditure on health** (GHO, 2020)
- **Prevalence of NCDS:** Hypertension is 22.3%, Diabetes 8.5% with diabetes prevalence rising from the previous assessment (PHCPI)

Source of Data: IHME: CHILD MORTALITY Country profile Institute for Health Metrics and Evaluation (IHME). Available from https://www.healthdata.org/results/country-profiles

EPIDEMIOLOGICAL TRANSITION



Source of Data: IHME: Country profile Institute for Health Metrics and Evaluation (IHME). . Seattle, WA: IHME, University of Washington, 2021. Available from https://www.healthdata.org/results/country-profiles

HEALTH CARE BENEFITS PACKAGE and PRIMARY HEALTH CARE POLICY DIRECTIONS

Health Care Benefits Package

The Universal Coverage Scheme of Thailand provides financial coverage for outpatient, inpatient and accident and emergency services; dental and other high-cost care; and diagnostics, special investigations, medicines (at least including those in the National List of Essential Medicines) and medical supplies. The UCS also includes preventive and health-promotion services.

The Universal Coverage Scheme (UCS) covers 76% of the population (with the remaining covered by another two schemes) and includes a comprehensive benefit package with a focus on primary care but with provision for care for more complex conditions.

The Universal Coverage Scheme finances primary health care through a model of strateguc purchasing referred to as "contracting units for primary care" (CUPS). The contracts stipulate minimum staffing requirements and service packages under the UCS. The CUP may also contain a "network" of several health centres and a hospital.

PHC Policy and Strategy Directions

The Ministry of Public Health has set future directions for health in the National Health for Public Health. The plan has four content areas all of which are directly relevant to the primary health care approach – these are 1) Promotion, Prevention and Protection, (PP&P) Excellence; 2) Service Excellence; 3) People Excellence; and 4) Governance Excellence. Other policy directions are set through related national health policies strategies on universal health coverage, health promotion and health in all policies.

The Ministry of Public Health (MOPH) proposes development of Primary Care Clusters (PCC) and family medicine clinics, with family medicine doctors and interdisciplinary medical teams.

This plan also involves proposes establishing an urban area/rural area service model and the systematic establishment of service providers/teams both in healthcare facilities and healthcare networks, with every district across the country having a functional District Health Board (DHB).

Sources: ILO, Universal Health Coverage Scheme Thailand . Ministry Of Public Health Twenty-Year National Strategic Plan For Public Health (2017-2036)

4.10 Lao People's Democratic Republic

Primary health care development landscape

Development context: Lao People's Democratic Republic (population 7.4 million, 2021), is a lower middle-income country with a GDP per capita of $2536 in 2021, having expanded substantially from US$ 310 per capita in the year 2000.[482] The country experienced a sharp contraction of the economic growth rate from 5.5 per cent of GDP in 2019 to just 0.5 per cent in 2020.[483] The economy has rebounded slightly in 2021 (2.5 per cent). In its Five-Year National Socio-Economic Development Plan (2021–2025), the Government attributed the economic contraction to several factors, including the COVID-19 pandemic and natural disasters including typhoons, dam collapse and severe flooding in 2019. The Lao People's Democratic Republic is ethnically diverse with 49 distinct ethnicities many of whom reside in remote mountainous locations. The country has a relatively low population density when compared to other Mekong countries.[484]

Demography: The fertility rates in the Lao People's Democratic Republic have nearly halved in the past 20 years from 4.4 birth per woman in 2000 to an estimated 2.5 in 2021 based on World Bank projections from previous survey results.[485] As illustrated in the population pyramid [see infographic], the size of birth cohorts are starting to decline, with a large proportion of the population in the adolescent age group and a projected increase in the proportion of the population of middle aged and older people.[486] The adolescent age group represents 19 per cent of the share of the total population (20 per cent boys, 19 per cent girls).[487] and the share of older people in the total population is projected to rise significantly.

Epidemiology: The Lao People's Democratic Republic has been undergoing an epidemiological transition as demonstrated in a rise in non-communicable diseases (NCDs). Mortality has increased over the past 10 years due to NCDs such as diabetes (30 per cent increase), chronic kidney disease (20 per cent increase) and ischaemic heart disease (27 per cent). The prevalence of hypertension is 24.8 per cent and diabetes 7.7 per cent, with diabetes prevalence rising from the previous assessment.[488] Although neonatal mortality over the ten-year period has declined from the third to the fourth leading cause of mortality in the country between 2009 and 2019,[489] the rate of 21 per 1,000 births represents nearly half of the under-five mortality rate of 43 per 1,000 births.[490] In terms of causes of both death and disability combined, neonatal mortality and lower respiratory infections are the leading causes of death.[491] The Millenniy Development Goal target related to malaria deaths was achieved in the Lao People's Democratic Republic before 2015, and the prevalence of all forms of tuberculosis has been halved from 1990 levels.[492] Tuberculosis remains a major public health

482 See https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=LA.
483 See https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?locations=LA.
484 WHO Regional Office for the Wetern Pacific, 2018, *Overview of Lao health system development 2009–2017.*
485 See https://data.worldbank.org/indicator/SP.DYN.TFRT.IN?locations=LA.
486 See www.healthdata.org/results/country-profiles.
487 See https://data.unicef.org/adp/country/vnm/.
488 See www.improvingphc.org.
489 See www.healthdata.org/results/country-profiles.
490 See https://data.unicef.org/country/lao/.
491 See www.healthdata.org/results/country-profiles.
492 WHO Regional Office for the Wetern Pacific, 2018, *Overview of Lao health system development 2009–2017.*

problem, with tuberculosis incidence of 149 per 100,000, treatment coverage for 2020 at 74 per cent, tuberculosis patients facing catastrophic total costs at 63 per cent and a tuberculosis case fatality ratio of 18 per cent in 2020.[493] Although malnutrition risks have declined substantially over the past 10 years (2009–2019), it remains the main health risk to the population. Behavioural risks including alcohol and tobacco use remain in the top 10 risks showing no signs of decline, while metabolic risks such as high body mass index (66 per cent increase) and fasting blood glucose (34 per cent) are rising significantly. Environmental risk related to water and sanitation are reported to have declined by over 50 per cent across this 10-year period.[494]

Social trends: The combination of behavioural, metabolic, and environmental risk is in all probability being accelerated by the rapid urbanization of the country. Since the year 2000, the proportion of the population residing in urban areas has increased from 22 per cent to 37 per cent in 2021, with urban growth set to continue on its current trajectory.[495] UN Habitat reported in 2018 that 18 per cent of the urban population is residing in slum areas.[496] Even in the countries with lower national incomes in East Asia and the Pacific, the trajectory for urbanization in the Lao People's Democratic Republic remains quite steep. Although the Lao People's Democratic Republic has a centralized system of governance, there has been some progress towards devolution, with constitutional amendment d and policies delegating increased powers of Provincial Governors and assemblies to plan and budget [Sam Sung Policy"].[497] Even though these trends towards urbanization and decentralization are gradual in the Lao People's Democratic Republic, they align well with similar social and administrative trends across the region.

Primary health care coverage and equity

Health coverage

The UHC Essential services coverage index (SDG target 3.8.1) has been scaled up from .26 in the year 2000 to .5 in 2019, which, though demonstrating a significant improvement in coverage, represents an unmet need of 50 per cent for essential health services.[498] The rate of increase for the UHC Coverage Index is just 1.3 per cent per year, which demonstrates the importance of financial protection for those with less access to care as the country scales up capacity for universal cover [see health financing section].

Reproductive health-care coverage remains quite low although has improved in recent years. 62 per cent of women receive four antenatal care visits and most deliveries occur in health facilities now (64.5 per cent in 2017), which is a significant improvement from the year 2000 when the facility delivery rates was just 13 per cent.[499] Immunization coverage in the Lao People's Democratic Republic has remained above 80 per cent for DPT3 vaccine in the years between 2013 and 2019, (WHO – UNICEF) and recent years have seen a drop in coverage to 75 per cent.[500] Mental health needs remain largely unaddressed both in terms of service provision and appropriate training for health professionals.[501] There are high needs for adolescent health in the Lao People's Democratic Republic in the areas of injury prevention and reproductive health. The adolescent birth rate is 83 per 1,000, and both drowning, and road traffic injury are leading causes of death for both boys and girls.[502]

493 WHO, 2021, *Global Tuberculosis Report 2021.*
494 See https://www.healthdata.org/results/country-profiles.
495 See https://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS?locations=VN.
496 See https://data.unhabitat.org/datasets/cd4e1deb72ea49bd8f3403f8a9edfe6d_0/explore.
497 WHO Regional Office for the Wetern Pacific, 2018, *Overview of Lao health system development 2009–2017.*
498 See https://www.who.int/data/maternal-newborn-child-adolescent-ageing/indicator-explorer-new/mca/uhc-service-coverage-index-(sdg-3.8.1).
499 See https://apps.who.int/gho/data/view.main.SRHIBv.
500 See https://immunizationdata.who.int/pages/coverage/DTP.html?CODE=LAO&ANTIGEN=DTPCV3&YEAR=.
501 WHO Regional Office for the Wetern Pacific, 2014, Lao People's Democratic Republic health system review. *Health Systems in Transition* vol. 4, No. 1.
502 See https://data.unicef.org/adp/country/lao/.

Health equity

Although important progress has been made in health coverage over the past 20 years in the Lao People's Democratic Republic, there is a 50 per cent gap in coverage of essential health interventions (UHC Coverage Index), Despite these gaps, maintaining and improving coverage of child health and reproductive health has resulted in important declines in child and maternal mortality. Child mortality has been reduced from 165 per 1,000 live births in 1990 to 40.9 in 2019.[503] The neonatal mortality rate (22/100) represents nearly half of the under-five mortality rate. As illustrated by mapping, higher mortality rates have tended to occur in remote, peripheral areas largely populated by ethnic minorities, which is a trend from across the region (Cambodia, Indonesia, Myanmar, the Philippines). The maternal mortality rate in 2017 was 185 per 100,000 live births, and skilled birth attendance 73.2 per cent (2020). Various geographic, cultural, health system and financial barriers have been reported to health-care access in the Lao People's Democratic Republic. From a geographic perspective, access is hindered by mountainous terrain and lack of year-round transport access. There is wide variation in mortality rates between wealth quintiles and between communities with and without road access.[504] The country has great cultural diveritye, with 34 per cent of the population made up of 49 different ethnic groups. Minority ethnic groups are behind the ethnic Lao majority in a range of health and nutrition indicators, including for stunting, low birth weight and anaemia.[505] The Lao Expenditure and Consumption Survey demonstrated there were much high access by higher wealth quintiles to services with distance being the main reasons for non-use. Supply side barriers impacting on use include health-worker and medical supply availability especially in remote locations and delayed and unpredictable funding flows for service operations. Cultural diversity, distance and socio economic inequalities can present barriers to use, which rationalises a more "people centred" approach as exemplified through the PHC approach.[506]


© UNICEF/UN0268873/Brown

503 See www.healthdata.org/results/country-profiles.
504 Ministry of Health, 2022, Strengthening PHC in Lao PDR. PHC Accelerator meeting on 24 March.
505 UNICEF Country Office Vientiane, Community Health Services Strengthening.
506 WHO Regional Office for the Wetern Pacific, 2018, *Overview of Lao health system development 2009–2017.*

Health systems and primary health care

Models of care

The Lao People's Democratic Republic has a mixed public-private health care system, with the public system being the main provider in rural areas while the private sector has a strong presence in urban areas. A 2014 health sector review described a two-tier system, whereby higher income families use private providers while the public sector remains a safety net for the poor. The health system is composed of seven central hospitals, 17 provincial hospitals, 135 district hospitals (type A and B), and 1,061 health centres.[507] Health centres are staffed by a medical assistant, a nurse and/or a midwife. Each health centre provides a common set of services, including vaccinations, antenatal care, birth assistance, postnatal care and home visits to patients suffering from chronic conditions. Each health centre serves a population of 1,000–5,000. There are outpatient or emergency departments at district or provincial hospitals, private clinics and pharmacies. At the village level and in harder to reach areas, village health volunteers (VHVs) provide primary care services.[508] In recent years models of integrated outreach for remote areas have been implemented (reproductive health, maternal, newborn and child health (MNCH), the expanded programme on immunization, nutrition) to provide each village with four integrated outreach sessions per year.[509] The National Health Reform Strategy states that priority should be given to MNCH, including for antenatal care, family planning and immunization, with services added based on local health centre capacity. The core services defined in the Health Sector Reform Strategy and Framework till 2025 include MNCH, immunization, communicable disease detection and ongoing management, diagnosis and treatment of minor ailments, the provision of essential drugs, health education and health promotion, and practical nutritional advice.

Health financing

The level of priority placed on health by the Government [see infographic] is measured by spending as a percentage of current health expenditures. This has increased from 27 per cent in the year 2005 to 43 per cent in 2020. Government health expenditure as a percentage of domestic general government expenditures has increased from 5.9 per cent in the year 2005 to 6.2 per cent in 2020. The level of out-of-pocket expenditures as a percentage of total health expenditures has declined slightly from 2005 and reached 41.8 per cent in 2020. Social health insurance represents a small fraction of overall sources of financing for health. The level of external assistance as a proportion of total health expenditure has been sustained across several decades. External assistance as a proportion of current health expenditures in the Lao People's Democratic Republic has declined from 20 per cent in 2005 to 15 per cent in 2020, which is line with general trends on external financing in the region.[510] Just 3 per cent of the population in the Lao People's Democratic Republic has greater than 10 per cent of annual household expenditure on health (SDG target 3.8.2).[511]

The health sector reform framework identifies three main priorities for health financing that includes increasing domestic budget allocations to the health sector, ensuring efficient use of funding, and improving financial health protection. Financial protection schemes already implemented in the Lao People's Democratic Republic include Community-based health insurance, health equity funds and free maternity services and for under-five children. In 2012, these schemes were then harmonized under the management of the Ministry of Health and the National Health Insurance Bureau. Since its introduction in 2016, the National Health Insurance Bureau has drastically increased the number of people protected from 45 per cent in 2016 to 94 per cent in 2021, and use of public health services by 10-30 per cent, with plans to transition the system towards a single

507 Ministry of Health, 2022, Strengthening PHC in Lao PDR. PHC Accelerator meeting on 24 March.
508 WHO Regional Office for the Wetern Pacific, 2014, Lao People's Democratic Republic health system review. *Health Systems in Transition vol. 4, No. 1.*
509 WHO Regional Office for the Wetern Pacific, 2018, O*verview of Lao health system development 2009–2017.*
510 See https://apps.who.int/nha/database/country_profile/Index/en.
511 See www.who.int/data/gho/data/themes/topics/financial-protection.

payer model of health insurance. Funded through taxation, the system is supported through co-payment at the point of care. Some challenges have been identified with the scheme that include requests for payment additional or excessive fees at point of care, and policy concerns regarding the financial sustainability of the scheme.[512] Findings from a recent review outlining the impact of national health insurance / social protection scheme on use of services found that overall, the share of the population who sought care increased from 21 to 36 per cent between 2007/2008 and 2018/2019, but with wealthier quintiles seeking out care more often. Poorer quintiles reported both geographical and financial barriers, and one in 10 households reported they had difficulty in accessing health services in 2018/2019. The policy brief provides options to address the gap that included investing in strengthening PHC, as well as addressing the geographical and financial barriers to access to health services for the poor.[513] The National Strategy and Action Plan for Integrated Services for RMNCH 2016–2025 provides that MNCH/under-five services are free of charge to users nationwide, and that supply measures will be improved through placing one midwife in each health centre and ensuring no stock out outs of essential medicines at these health facilities by 2025.

Strategic purchasing arrangements have been considered through proposed changes to provider payment mechanisms for the National Health Insurance Bureau as well as implementation of disbursement-linked indicators at central and provincial level under a through a World Bank pilot programme.

Health workforce

Health workforce to 1,000 population ratio for nurse midwifes is 0.7 (2019) and for physicians it is 0.4 (2014) according to the latest statistics in the Global Health Observatory.[514] Progress in human resource placements was reported to a recent PHC Accelerator meeting: there were 19,926 public sector health workers at a ratio per 1,000 population of 2.85 in 2021. The percentage of health centres with midwives had risen from 52 per cent in 2015 to 70 per cent in 2021, and there are 12,000 VHVs.[515] Though improving significantly, professional workforce numbers are still well below the target of 4.45 professional health staff per 1,000 population recommended by WHO to achieve UHC. The primary care workforce is female dominated (64 per cent) through deployment of nurses and midwives in primary care facilities across the country. The same health workforce distribution issues seen across the region are evident in the Lao People's Democratic Republic, including shortages of professional health workers in rural areas and their concentration in urban areas, and lack of adequate human resource retention strategies for rural placement – especially in relation to remuneration and career development opportunities.[516]

Community engagement – Community health workers

Services in remote areas are supported by VHVs, who are responsible for health education and promotion services and engaging in outreach activities, patient referrals, and community-based surveillance and ante natal care clinics.[517] The health sector review in 2014 reported that there were 14,812 VHVs,[518] and a recent MOH publication indicated that there were more than 12,000 VHVs supporting outreach activities.[519] Consultations with UNICEF indicate this figure reached 20,000 in 2023. The National Health Plan noted the need for a healthy village model and the deployment of village health workers (VHW) to replace VHVs to close the gaps in delivering the minimum package of services in hard-to-reach areas.[520]

512 WHO Regional Office for the Wetern Pacific, 2018, *Overview of Lao health system development 2009–2017.*
513 WHO, 2023, Health or hardship? The impact of National Health Insurance on financial protection in Lao PDR. 5 April.
514 See www.who.int/data/gho/data/themes/topics/health-workforce.
515 Ministry of Health, 2022, Strengthening PHC in Lao PDR. PHC Accelerator meeting on 24 March.
516 WHO Regional Office for the Wetern Pacific, 2018, *Overview of Lao health system development 2009–2017.*
517 D. Nonaka et al., 2022, Primary health care situations in remote rural villages of the Savannakhet province, Lao People's Democratic Republic. *Tropical Medicine and Health* vol. 50, No. 90.
518 WHO Regional Office for the Wetern Pacific, 2014, Lao People's Democratic Republic health system review. *Health Systems in Transition* vol. 4, No. 1.
519 Ministry of Health, 2022, Strengthening PHC in Lao PDR. PHC Accelerator meeting on 24 March.
520 WHO Regional Office for the Wetern Pacific, 2018, *Overview of Lao health system development 2009–2017.*

The current reform agenda of the Government proposes changes to the terms of reference of VHV management, financing and service delivery. Training of VHVs has been absent or limited until now, with current initiatives underway to develop standardized training periods and curricula. Until recently, VHV training, supervision and services were highly compartmentalized and fragmented, based on online programme management and programme specific support from development partners. Thus, the systems and methods for training, supervision, remuneration and scope of work were not consistent.

Under the proposed PHC law, the terms of reference of VHVs would be updated to ensure consistent application of community-based services across the country. A decree on the revision of the terms of reference has already been published. Other reform measures include installing systems of digitized registration, providing identity cards for VHVs and creating logos and issuing uniforms in support of VHV brand identity. Standardized curricula, training programmes and VHV toolkits are under development. The integration of human resources information into digitized health management information systems enables coverage monitoring of the VHV programme across the country by clearly identifying which VHVs are linked to which health facilities. This PHC model, or a community system strengthening approach, is viewed as a foundation for health sector reform in support of achieving UHC. Wider community engagement activities have been recognized through the development of an MOU for joint health-related initiatives between the Ministry of Health and Ministry of Home Affairs in village planning and leadership.

Public health and emergency preparedness and response

A STEP survey in 2013 and population-based surveys on NCDs have demonstrated levels of behavioural and metabolic risk factors and prevalence of various NCD conditions in the Lao People's Democatic Republic. A National Multisector Plan published in 2014 recommends a wide set of public health actions for NCD prevention and control including for tobacco, alcohol, unhealthy diets and physical inactivity. Implementation of a protocol for a package of essential NCD interventions is recommended, although no document is available on the status of implementation of public health measures.[521] A health system overview outlined a number of measures on multisector action. There is an annual roundtable organized by the Ministry of Planning and Investment with health as one of the areas considered for investment. Within the health sector a sector-wide mechanisms has been established since 2011. There has been a Vientiane Declaration of Aid Effectiveness and a published Aid Effectiveness Agenda. There is potential for increased sector collaborations at local level, especially given the delegation of authorities to Provinces and Districts. A study of remote area PHC in the Lao People's Democratic Republic found that potential risk factors could be managed at local level provided there was collaboration between health and other sectors at local level to address such issues as environmental health, food shortages and indoor air pollution.[522]

The COVID-19 pandemic and response provided valuable lessons learned for future planning. The response demonstrated the value of high-level political commitment to the response, which was reflected in the trust placed by political leaders in advice provided through the Ministry of Health and development partners. The establishment of governance mechanisms to facilitate communication and implementation was an important factor in the response. An emergency operations committee was established in January 2020. A Vice Minister chaired the committee and invited relevant line Ministries or agencies including, child protection, border control, education and home affairs, to discuss the situation analysis, preparedness and response activities. The committee elevated priority issues to the Cabinet of Ministers where emergency decrees were issued. This mechanisms was replicated at Provincial level to facilitate and coordinate the response at subnational level. The outcomes of these political and technical responses is that COVID-19 mortality rates were relatively low, and furthermore that there was a successful implementation of a vaccine deployment plan that ensured

521 See https://extranet.who.int/nutrition/gina/sites/default/filesstore/LAO_2014-2020-NCD.pdf.
522 WHO Regional Office for the Wetern Pacific, 2018, *Overview of Lao health system development 2009–2017.*

the majority of the population was vaccinated with the primary series of the vaccine. As of 31 March 2023, there have been just 671 deaths attributed to COVID-19. Some 75 per cent of the population has completed the primary series of the vaccine, and 33 per cent a booster dose.[523] According to consultations with UNICEF staff in country, the Lao People's Democratic Republic is better positioned to respond to other public health emergencies including future pandemics, floods or vaccine preventable disease outbreaks as a result of the lessons learned from the COVID-19 pandemic. Another key success factor in the outcome was the effectiveness of the partnerships between the Governments of China, other development partners with the Government of the Lao People's Democratic Republic, especially for vaccine supply, deployment and technical exchange.

Policy and strategy directions for primary health care in the Lao People's Democratic Republic

Political leadership and governance and policy

A PHC law is currently being drafted to ensure conformance with implementation by all relevant authorities, and a consultation road map is now available for development of the law. The law is the foundation for health sector reform stage 3 to achieve UHC and includes the development of a model of community system strengthening that aims to better engage, recognize and support the role of VHVs in PHC.

Other relevant laws and policies for PHC in the Lao People's Democratic Republic have been identified by the MOH in a recent consultation on the PHC accelerator:

- Community Health Systems Strengthening (CHSS) Action Plan 2021–2025
- Hygiene and Health Promotion Law (2019)
- Law on Health Care (2014)
- National COVID-19 Strategic Preparedness and Response Plan 2020–2025

Updated PHC Policy: The policy outlines 12 core activities of PHC that will be implemented by public health volunteers in collaboration with village administration, village PHC committees and personnel of small hospitals.

Health sector reform agenda: Policy and strategy directions for PHC[524] are outlined in the health sector reform agenda which aims to achieve UHC by 2025. Key reforms include the introduction of national health Insurance, the reform of the health information system and the introduction of an essential service package. Health system strengthening is a main approach, especially in the areas of health financing, health governance, human resources for health, health service delivery and the health information system. The reform agenda is designed to be implemented in three phases. The first phase focuses on PHC (front-line care), the second phase on hospital and tertiary care and the third on the UHC objective. The first phase on PHC has the main entry point of building capacity for delivery of an MNCH service package. Main activities include health financing initiatives [see below], increasing resource allocations for primary care, expanding health workforce numbers and improving skills in midwifery care, and improved birth registration and reporting from community level.

Delegation of authorities: There is increased delegation of responsibilities to subnational level (the "*Sam Sang Policy*)" to strengthen governance with clear accountability and capacity for planning, implementation

523 See www.who.int/laos/internal-publications-detail/covid-19-situation-report-for-lao-pdr-77.

524 PHC has the following related activities: support reproductive health, mothers, newborns and children, vaccination for target groups, nutrition support, supply of safe clean water with quality, hygiene and sanitation, communication for health and health education, communicable disease control and prevention, primary treatment service and patient send-off, basic necessary medicine supply, mental health support, oral health, NCD prevention and support of support of older people and disabled people health.

and monitoring of development at subnational level and strengthen local governance through delegation of authorities and responsibilities.[525]

Governance and policy

The multisectoral National Commission for Health Sector Reform has been established to coordinate the Sam Sang and Health Sector Reform. Sector wide coordination is enabled through Cabinet and Department of Planning and Finance/MOH. A PHC division has been established with a focus on community health under the Dept. Hygiene and Health promotion. Committees for Sam Sang and Health Sector Reform have been established at the subnational level in provinces, districts and villages (village health committees).

The National PHC committee has been established to coordinate between the Ministry of Health, other sectors, and development partners. Improved coordination is a necessary condition for reductions in fragmentation in health programmes and development of standardized training, supervision and technical guidance for VHVs.

Health financing and resource allocation

This area of the reform agenda includes strengthening of the national health insurance system by merging of all social health protection schemes under the one national health insurance agency and setting a target of allocating not less than 9 per cent of general government expenditure to the health sector. All MNCH services and services for under-five children will be free of charge nationwide. The national health reform agenda indicates that as the benefit package only covers the direct cost for health services. Other safety net programmes, such as cash transfers, conditional cash transfers, and voucher schemes, should be considered as additional financial protection measures.

Community engagement

In addition to the PHC Policy, the following legislation, policies and guidelines have been developed to support community engagement:

- Law on Hygiene and Health Promotion (2019)
- Revised Primary Health Care Policy (2019)
- Village Health Volunteer (VHV) Guideline (2019)
- Model Healthy Village Guideline (2018)
- Community Health System Strengthening Action Plan (2021)

The three main elements of the community engagement strategy are VHVs, Model Healthy Villages and Community Based Integrated Health Services.

Models of care

The basic integrated service package has a focus on MNCH and that is provided at facilities at health centres and district hospitals. The proposal in the national health sector reform agenda is to extend the service package to include NCD prevention and treatment at a later phase of the UHC plan. A model of integrated outreach MNCH services is being supported in line with the package of services concept and the UHC targets. The package includes the expanded programme on immunization for children and reproductive aged women, family planning, ANC, PNC, growth monitoring, nutrition and health promotion related services.

525 Ministry of Health, 2022, Strengthening PHC in Lao PDR. PHC Accelerator meeting on 24 March.

The model of the healthy village is in the process of being expanded. This involves deployment of village health workers (VHWs) to address the needs of the population through the provision of the basic package of health services in harder to reach areas. The model of the healthy village is outlined in detail in the draft PHC policy (2019) [updated version of PHC Policy 2000] and includes main action areas such as collecting and reporting basic data or village public health status, setting up and improving a village revolving medicine fund to ensure access to essential medicines and equipment, and expanding the public health network to ensure universal access to and use of PHC services. This PHC model, or a community system strengthening approach, is a foundation for health sector reform in support of UHC.

Human resources for health

The National Health Reform Strategy and National Reproductive Health Strategy is proposing the placement of at least one skilled birth attendant/community midwife at each health centre. Primary care will be strengthened by upgrading the skills of village health workers to provide the basic package of public health services in remote locations. Participants in the PHC accelerator meeting proposed defining the minimum requirement for health-care workers in HC of at least three health-care workers (physician, nurse and midwife).

Strategic purchasing

The Health System Reform strategy proposes models of payment for performance/strategic purchasing to drive service delivery performance improvements. A Quality and Performance Scorecard is proposed to with main features of Performance payment linked to QPS score, results verification by 3rd Party verification agency and National Health Insurance performance linked payments to Health Centers. The expansion of the private sector in the Lao People's Democratic Republic provides opportunities for exploration of strategic purchasing of essential health services or products through public private partnerships or agreements.

Monitoring and evaluation/ digital health

The National Health Reform strategy proposes a set of standardized national indicators and the introduction of compulsory birth and death registration.

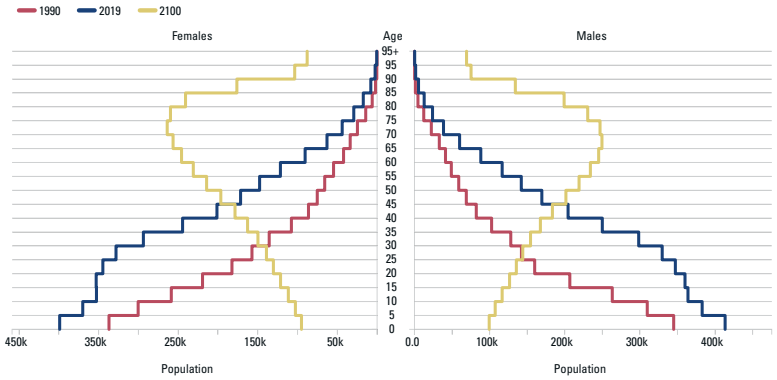
There is a proposal for a single platform to monitor all health data through integration and interoperability with other systems. Initiatives currently being implemented include disbursement linked indicators through DHIS2, inclusion of community level data in DHIS 2 (Family Folder household census), quality of care information in DHIS2, and interoperability with drugs logistics information systems.

Further opportunities for digital health include resourcing and technical support digitization of all health centres, introduction of eLearning opportunities for primary care workers, and digitization of physical inventories and management information systems.

The community system strengthening approach will include the development of a live registry of VHVs across the country [a master list] with a system of online reporting. Digitalizing of annual household surveys will provide opportunities for accessing up to date information on health status and services in communities.

PRIMARY HEALTH CARE DIRECTIONS - LAO PDR

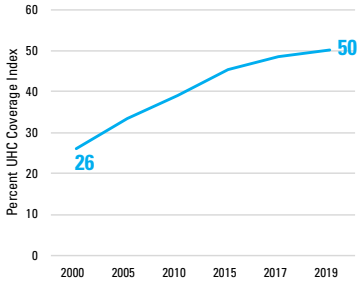
DEMOGRAPHIC TRANSITION



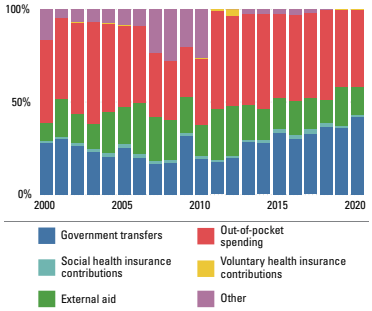
Source of Data: IHME: Country Profile Institute for Health Metrics and Evaluation (IHME). Seattle, WA: IHME, University of Washington, 2021. Available from https://www.healthdata.org/results/country-profiles

HEALTH COVERAGE AND HEALTH FINANCING (2000-2020)

UHC Coverage Index 2000 - 2019

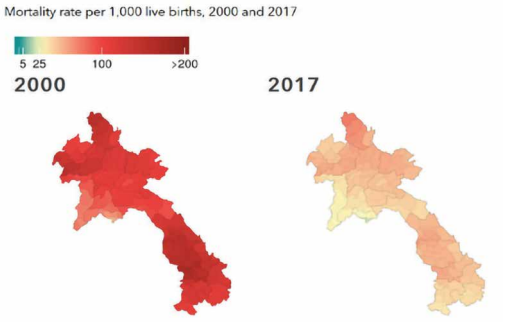


Sources of Health Expenditure 2000-2020



Sources of Data: UHC Coverage Index https://www.who.int/data/gho/indicator-metadata-registry/imr-details/4834 Expenditures: National Health Accounts Data Base: https://apps.who.int/nha/database/country_profile/Index/en

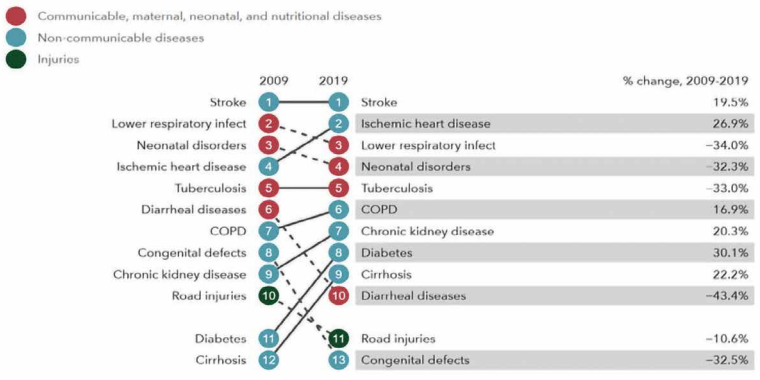
HEALTH INEQUITIES AND HEALTH ACCESS



- The **maternal mortality Ratio** was 185 per 100,00 live births (2017), having declined from 292/100,000 in 2010 (GHO)
- There is unmet need of 50% for essential UHC index coverage (GHO)
- **Health Workforce** to 1000 Population ratio for nurse midwife is 0.7 (2019) and for physician 0.4 (2014) (World Bank/GHO)
- 3% of the Population in Lao PDR has > 10% of **annual household expenditure on health** (GHO, 2007)
- **Prevalence of NCDS:** Hypertension is 24.8%, Diabetes 7.7% with diabetes prevalence rising from the previous assessment (PHCPI)

Source of Data: IHME: CHILD MORTALITY Country profile Institute for Health Metrics and Evaluation (IHME). Available from https://www.healthdata.org/results/country-profiles

EPIDEMIOLOGICAL TRANSITION



Source of Data: IHME: Country profile Institute for Health Metrics and Evaluation (IHME). . Seattle, WA: IHME, University of Washington, 2021. Available from https://www.healthdata.org/results/country-profiles

HEALTH CARE BENEFITS PACKAGE and PRIMARY HEALTH CARE POLICY DIRECTIONS

Health Care Benefits Package

The basic integrated service package has a focus on MNCH and that is provided at facilities at health centres and district hospitals. The proposal in the national health sector reform agenda is to extend the service package to include non-communicable diseases prevention and treatment at a later phase of the UHC plan.

A model of integrated outreach for MNCH services is also being supported in line with the package of services concept and the UHC targets. The package includes EPI for children and reproductive aged women, family planning, ANC, PNC, growth monitoring, nutrition and health promotion related services.

The National Health Insurance system aims to merge all social health protection schemes under the one national health insurance agency. The country has set a target of mobilising not less that 9% of General Government Expenditure (GGE) being allocated to the health sector. All MNCH services and services for children under 5 will be free of charge nationwide.

PHC Policy and Strategy Directions

An updated PHC Policy outlines 12 core activities of PHC that will be implemented by public health volunteers in collaboration with village administration, village primary health care committees, personnel of small hospitals. It is also proposed to draft a PHC/Public Health Law to provide legal recognition to VHVs and Village Health Committees as an integral part of the health system as well as with other government and civil society sectors

A Health Sector Reform Agenda prioritises National Health Insurance, the reform of the health information system and the introduction of an essential service package. Health system strengthening is refelcetd in priority reas of health financing, health governance, human resources for health, health service delivery and the health information system.

The Model Healthy Village is being rolled out nationally and innvolves collecting and reporting basic data or village public health status, setting up and improving a village revolving medicine fund to ensure access to essential medicines and equipment, and expanding the public health network to ensure universal access to and use of primary health care services. This approach is being reinforced through **community system strengthening** through the agncy of the village volunteer network.

Sources of Information: Lao People's Democratic Republic Health Sector Reform Strategy And Framework Till 2025 Ministry of Health Lao PDR Strengthening PHC in Lao PDR Primary Health Care Accelerator Meeting 24 March 2022 PPT

4.11 Myanmar

Primary health care development landscape

Myanmar, (population 53.8 million, 2021)[526] is a lower middle-income country with a GDP per capita of $1,210 in 2021.[527] The country consists of seven regions and seven states, with the states dominated by culturally diverse communities of groups including Chin, Kachin, Kayah, Kayin, Mon, Shan and Rakhine. There are over 130 ethnic groups in Myanmar. Myanmar's growth gross domestic product (GDP) averaged 7.8 per cent per year between 2011 and 2015.[528] Although the country has been on a pathway of economic growth over the past decade, the combined impacts of pandemic and civil conflict resulted in a sharp contraction in the economy from a 6.8 per cent growth rate in 2019 to negative growth in 2021 of -17.9 per cent in 2021.[529] Before the political instability and civil conflict which commenced in early 2021, constitutional rule had been re-established, economic growth sustained, administrative and social sector reforms commenced along with the rebuilding of civil society and an emerging private sector.

As of February 2023, UNHCR estimated that there are over 1.2 million internally displaced persons, and a further 1.01 million who have fled from the conflict to neighbouring countries as refugees or asylum seekers.[530] OCHA estimates in 2023 that there are a total of 17.6 million people who are expected to be in need of humanitarian assistance in 2023, compared to 14.4 million 2022 and one million people before the military takeover, with a third of those in need being children.[531] Existing health inequities in the country are being exacerbated by the conflict and humanitarian crisis associated with it, with OCHA reporting in February 2023 that areas of the country with food insecurity are now being threatened by increased rates of malnutrition, and that nearly a quarter of the population (23 per cent) are now classified as being in "severe need" for humanitarian assistance.[532] There are reports that health system "has all but collapsed." Both the conflict and the blockages to aid associated with it are increasing risks for escalation in both infectious and chronic diseases, including for COVID-19, hypertension, diabetes, and HIV.[533] The Health Cluster response partnership is targeting 2.3 million people for humanitarian health assistance and which includes displaced, returned, stateless and other crisis-affected people.[534]

While taking into consideration the impacts of civil conflict and the implications this has for PHC, this profile will focus largely on the health reforms undertaken over the past 10–15 years as the starting point for description and analysis of the PHC approach in Myanmar, with the assumption that restoration of peace will likely result in re-engagement with the existing or similar programme of health development and reform (as set out in the National Health Plan 2017–2021).

526 See https://data.worldbank.org/indicator/SP.POP.TOTL?locations=MM
527 See https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=MM
528 See www.researchgate.net/publication/329487365_Myanmar_-_Health_Financing_System_Assessment.
529 See https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=MM
530 See https://reporting.unhcr.org/document/4315.
531 See https://reliefweb.int/report/myanmar/myanmar-humanitarian-needs-overview-2023-january-2023
532 Ibid.
533 Wei-Ti Chen et al., 2023, Infrastructure collapsed, health care access disrupted, Myanmar people with chronic diseases are in danger. *Journal of Global Health* 11 January.
534 See https://reliefweb.int/report/myanmar/myanmar-humanitarian-response-plan-2023-january-2023.

Demographic trends: As has been reflected in profiles from across East Asia and the Pacific, fertility rates have been declining steadily in Myanmar from 3.5 births per woman in 1990 to 2.1 in 2020.[535] The adolescent age group represents 16 per cent of the share of the total population[536] and the share of older people in the total population is projected to rise significantly over the next century.[537] Population displacement and mobility are a feature of the demographic landscape. Although urbanization is developing at a slower rate than in other countries in the region (have expanded from 27 per cent in the year 2000 to 31 per cent in 2021),[538] the overall urban population has expanded significantly in this time, especially in the peri-urban areas of Mandalay and Yangon.

Epidemiological trends: Myanmar has been undergoing a gradual epidemiological transition. This is reflected in a rise in non-communicable diseases (NCDs). Rates of death due to diabetes have increased by 25 per cent between 2009 and 2019,[539] along with significant rises in mortality due to cardiovascular and chronic kidney diseases. This shift in causes of death distribution to NCDs is accompanied by declines in prevalence of communicable diseases (HIV AIDS -71 per cent, tuberculosis -40 per cent, neonatal disorders -36 per cent). Despite these trends, neonatal disorders and lower respiratory infections are the second and third causes of death and disability combined. The reductions in tuberculosis and HIV prevalence are in all likelihood attributable to successful communicable disease control activities support by the national authorities, global health initiatives and development partners/civil society over the decade 2008–2018. The escalation in NCD prevalence is consistent with the tracking of risk between 2009 and 2019, which have seen sharp rises in fasting plasma glucose (23.7 per cent), alcohol use (31 per cent) and high body mass index (55 per cent) between 2009 and 2019.[540] There are more than 9 million adolescents, making this group a high public health priority. Road injury and tuberculosis are the two leading causes of death for boys and girls aged 10–19 in Myanmar. For girls, maternal conditions represent the fifth leading cause of death.[541]

Health and social trends: Myanmar was one of the early pioneers in the PHC movement from the 1960s through establishment of a network of Township level hospitals, station hospitals, and rural and sub-rural health centres, with strong links to community-based volunteers and auxiliary midwives. Rural Health Centres were established 1965, and later upgraded into Station Hospitals, and CHWs and auxiliary midwives were established to take health services deeper into the community. The National Health Committee (NHC) was formed in 1989 as a mechanism for intersectoral collaboration and coordination and for policy development, with an important policy change being the emphasis on expanding health services in border areas.[542]

Despite these impressive beginnings, the quality and coverage of care declined during the 1980s due to lack of state investment in the sector, and resulted in resource gaps being taken up by out-of-pocket payments and internationally funded vertical projects and programmes for disease control and maternal and child health. A further boost in health sector financing from the global health initiatives in the early 2000s reinvigorated vertical health programmes in immunization and disease prevention and control, with a shift towards health system strengthening approaches from 2008. The Nargis disaster in the delta region and post recovery efforts in 2008, as well as the Constitutional reforms in 2011, set the scene for reforms of the health system including trialling of health financing initiatives, health system strengthening strategies, development of coordinated planning systems, and closer engagement with civil society including ethnic health organizations. There were plans for implementation of a decentralization process, with delegation of authority to states and regions for planning, human resource management and monitoring and evaluation, and to townships for engaging with stakeholders in a coordinated and inclusive planning process. Moreover, the constitutional reforms in 2011 resulted in the formation of regional/state legislatures and proposed engagement of ethnic health organizations in health planning and dialogue with MOHS. These reforms culminated in UHC goals in the National Health Plan 2017–2021.

535 See https://data.worldbank.org/indicator/SP.DYN.TFRT.IN?locations=MM.
536 See https://data.unicef.org/adp/country/vnm/.
537 See www.healthdata.org/results/country-profiles.
538 See https://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS?locations=MM.
539 See www.healthdata.org/results/country-profiles.
540 Ibid.
541 See https://data.unicef.org/adp/country/mmr/.
542 WHO Regional Office for the Western Pacific, 2014, Myanmar health system review. *Health Systems in Transition* vol. 4, No. 3.

Political trends and the PHC approach: The overthrow of democratic and constitutional rule in early 2021 and the subsequent conflict has been catastrophic in terms of loss of life and internal displacement, and it is a major setback for PHC and health reform agendas and a major interruption to essential health services and programme function. The collapse in Myanmar immunization coverage in 2021 [see section on coverage and equity] is a good indicator of the extent to which civil conflict has contributed to the health and humanitarian crisis in the country.

Primary health care coverage and equity

Health coverage

The UHC Essential services coverage index (SDG target 3.8.1) has been scaled up from .27 in the year 2000 to .61 in 2019, which, though demonstrating a significant improvement in coverage, represents an significant unmet need for essential health services.[543] 58 per cent of women receive four antenatal care visits in 2016, with coverage having risen for 38 per cent in 2007.[544] There is a large unmet need in terms of maternal care, with the latest estimate from 2016 demonstrating that just 37 per cent of women have deliveries in health facilities[545] and 60 per cent of births being attended by a trained provider (2016).[546] Myanmar has been a strong performer in immunization coverage for many years with coverage for DPT3 consistently above 80 per cent for 15 of the past 20 years (2000–2020), before the sudden conflict related drop in coverage to 41 per cent for DPT3 in in 2021.[547] A Health Sector Review in 2014 indicated that the failure to achieve coverage goals is attributable to a number of factors including low investment in rural health services, weak State investment due to access to alternative financing mechanisms, and the transfer of financial burden to households.[548]

A systematic review has indicated that although there is limited data in Myanmar, 2016 survey data has demonstrated high prevalence for depression (27.2 per cent) and suicidal ideation (9.4 per cent) among adolescents aged 13–17 years. At the same time, the review highlighted limited evidence of interventions to address the problem.[549] Both the Government and non-governmental organizations have experience implementing community-based psychosocial interventions in Myanmar. Mental health needs have the potential to increase significantly, given the impacts of both the ongoing political conflict and the COVID-19 pandemic.[550] Other assessments have noted poor accessibility and quality of adolescent-friendly health services, low rates of condom use and limited knowledge about HIV, and limited access to gender and sexuality education.[551] Given these coverage gaps and the size of the adolescent population in Myanmar (over 9 million), the development of adolescent friendly services and programmes should be a high priority for health investment.

The Ministry of Health and Sports (MOHS) in 2017 proposed a strategic plan to address the emerging challenge of NCDs. Main interventions focus on the areas of multisector action, health promotion, health system strengthening and evidence generation for decision-making. The plan proposes adopting a "healthy settings" approach in schools, workplaces and local government (township) locations, and establishment of a

543 See www.who.int/data/maternal-newborn-child-adolescent-ageing/indicator-explorer-new/mca/uhc-service-coverage-index-(sdg-3.8.1).
544 See https://platform.who.int/data/maternal-newborn-child-adolescent-ageing/indicator-explorer-new/mca/antenatal-care-coverage---at-least-four-visits-(-).
545 See www.who.int/data/maternal-newborn-child-adolescent-ageing/indicator-explorer-new/mca/proportion-of-births-delivered-in-a-health-facility.
546 See https://data.worldbank.org/indicator/SH.STA.BRTC.ZS?locations=MM.
547 See https://immunizationdata.who.int/pages/coverage/dtp.html?CODE=VNM&ANTIGEN=DTPCV3&YEAR=.
548 WHO Regional Office for the Western Pacific, 2014, Myanmar health system review. *Health Systems in Transition* vol. 4, No. 3.
549 Dominic Carroll et al., 2021, Mental health of adolescents in Myanmar: A systematic review of prevalence, determinants and interventions. *Asian Journal of Psychiatry* vol. 61, No. 102650.
550 S. Shoib, S.M. Yasir Arafat and M. Thuzar, 2021, Conflict (Rohingya, COVID-19, and coup) in Myanmar: unmet need of mental health. *Global Mental Health* vol. 8, p. e24.
551 See www.burnet.edu.au/projects/340_integrated_multi_sectoral_approach_imsa_to_improve_the_sexual_and_reproductive_health_of_adolescents_in_magway_myanmar.

"nodal agency" for health promotion in Myanmar. The plan stresses the importance of building human resource and system competencies for prevention, detection, treatment, and management of NCDs (including expansion of the package of essential NCD interventions), as well as building the capacity of communities and individual for self-care.[552] As has been the case in other PHC profiles, and in line with the PHC approach, Myanmar has expressed the need for building public health, multisector and community capability to prevent and control these emerging public health threats.

Health equity

Myanmar has had a long-standing challenge of ensuring access to health services for the socially disadvantaged, for ethnic minorities, for conflict affected populations and those recovering from natural disasters, for the growing numbers of peri-urban poor and more recently for the internally displaced. Almost one third of children in Myanmar were estimated by UNDP to be living in poor households in 2021, with children with disabilities being at high risk.[553] Child mortality has been reduced from 142.9 per 1,000 live births in 1990 to 40.5 per 1,000 live births in 2019.[554] Despite these gains, there remain wide variations in child mortality based on location, with much higher rates recorded in border regions where ethnic minorities predominate and communities are remote from health facilities. The Myanmar Census of 2014 found that the under-five mortality rate ranges from 108 in Magway Region to 48 in Mon State. Similarly, the maternal mortality rate in Chin State was 357 compared to 213 in Yangon. A study of child poverty in 2021 found strong geographic association with child poverty, with Chin State (63.4 per cent) and Rakhine State (49 per cent) having the highest share of poor children.[555] An analysis of findings from the 2016 Demographic and Health Survey found that coverage of coverage of adequate sanitation, no indoor use of solid fuels, antenatal and postnatal care, skilled birth attendance, and institutional delivery were the most inequitable interventions

552 See www.who.int/docs/default-source/searo/ncd/mmr-ncd-action-plan-2017-2021.pdf.
553 See www.unicef.org/myanmar/media/6091/file/Overcoming%20Child%20Poverty%20in%20Myanmar.pdf.
554 See www.healthdata.org/results/country-profiles.
555 See www.unicef.org/myanmar/media/6091/file/Overcoming%20Child%20Poverty%20in%20Myanmar.pdf.

associated with wealth status.[556] Over recent decades, health inequities for immunization coverage and other essential health interventions have been significantly lower in the ethnic minority States and in conflict affected areas, which required the implementation of area specific health programme strategies to reach these groups.[557] The National Health Plan 2017–2021 documents wide variation in human resource availability and functioning health facilities between the different states and regions.

The health reforms since the Nargis disaster in 2008 culminating in the National Health Plan development have proposed pro equity health strategies that include free access to the essential health-care package, increasing government investment in health to reduce out of pocket payments, inclusion of equity indicators in a proposed monitoring and evaluation framework, and establishment of health equity funds, community cost sharing mechanisms and hospital trust funds to expand access to care for poorer populations. Although these initiatives have the potential to be re-started post conflict, the reality of the current situation is that financial barriers to care are being worsened by insecurity, lack of transport and interruptions to aid and supply chains,[558] which will serve to further entrench and exacerbate existing health inequities in the country.

Health systems landscape

Public health

The National Health Plan notes that the MOHS does not have the sole responsibility for health, recognising that the social determinants of health inequities require closer collaborations across agencies and ministries. As alluded to earlier, the national NCD strategy advocates for the establishment of a national health promotion agency (as in Cambodia and Thailand) and the building of human resources competencies in public health.

Emergency preparedness and response and the health cluster

Following the Nargis cyclone in May 2008, MOHS worked with other agencies and development partners to form a health cluster to manage disease outbreaks and malnutrition following the disaster. A health sector review in 2014 identified lessons learned for the tragedy and the response regarding the need for improved readiness in the areas of early warning, emergency preparedness. and response at both central and regional levels, which enabled improved responses to later natural disasters. Reviewers observed that traditional social welfare support systems played a role at village level, which included spontaneous formation of self-help groups. The involvement of communities and townships in response became a guiding principle in the recovery effort, along with much closer working partnerships between NGOs, township authorities and MOHS in the affected area of the Ayeyarwady delta.[559] Despite these experiences, the Global Health Security Index ranked Myanmar at 72 out of 195 countries, indicating a moderate level of preparedness to respond to a public health emergency, with weaker areas being in prevention and health systems preparedness, and stronger in the areas of detection, rapid response, and international norm compliance.[560, 561] One review of the response noted mitigation measures in the areas of quarantine for foreign arrivals, expansion of testing capacity, enforcement of non-pharmaceutical interventions and COVID-19 vaccination. The challenges included human resources shortages in the health sector and lack of vaccine demand.[562] Other reviews and assessments highlight the overlap of conflict and the pandemic in exacerbating the pandemic situation. There

556 Su Myat Han et al., 2018, Progress towards universal health coverage in Myanmar: a national and subnational assessment. *The Lancet Global Health* vol. 6, Issue 9, pp. E989–E997.
557 N. Tin et al., 2010, An approach to health system strengthening in the Union of Myanmar. *Health Policy* vol. 95, No. 2–3, pp. 95–102.
558 Wei-Ti Chen et al., 2023, Infrastructure collapsed, health care access disrupted, Myanmar people with chronic diseases are in danger. *Journal of Global Health* 11 January.
559 WHO Regional Office for the Western Pacific, 2014, Myanmar health system review. *Health Systems in Transition* vol. 4, No. 3.
560 See https://centerforpolicyimpact.org/our-work/the-4ds/myanmar-policy-response-to-covid-19/.
561 See https://opendocs.ids.ac.uk/opendocs/bitstream/handle/20.500.12413/17244/IDS_Policy_Briefing_188.pdf?sequence=1&isAllowed=y.
562 Y.M. Htun et al., 2023, Trajectory of confirmed cases and deaths: fourth wave of COVID-19 epidemic in Myanmar. *Virology Journal* vol. 20, No. 1, p. 3.

is a higher risk of COVID-19 infection among internally displaced persons (IDPs) in Myanmar under the military coup including he military attacks on IDP camps, deliberately blockings of all humanitarian aid to IDPs.[563] Lack of health system readiness was reflected in widespread shortages of essential medicines, PPE, and oxygen supplies, all in the context of an overloaded and under prepared health system.[564]

Development partners and NGOs have developed the "Health Cluster" method applied in earlier humanitarian emergencies in Myanmar to plan and implement the humanitarian response, which involves capacity support for 43 health partners. The objective of the cluster is to reduce morbidity and mortality in crisis affected, displaced, returned and stateless people who are exposed to health threats, by working collectively to close gaps in PHC. The Health Cluster implements programmes to support six core functions relating to public health information, planning and establishing a health response strategy, monitoring and evaluating health response, building capacity and advocating for better outcomes. More specifically, the aim is to Improve availability and accessibility of PHC services (focussing on basic and complementary packages including MNCAH, integrated psychosocial care including responses to gender based violence, communicable diseases, disability support, and emergency health for surgical care, trauma, and referrals. The target group for support is in conflict affected areas in rural parts of the country. The Health Cluster works across other clusters to adopt a multisector approach, to advocate for safe access and service delivery for crisis affected people, and through joint logistics and risk communication operations.[565] The emergency response from health adopts a PHC approach not only through a focus on front-line PHC services in the highest need areas, but also committing to apply community engagement, multisectoral and integrated service models where these are feasible.

Models of care

Myanmar has a mixed public-private health-care system, but with the public health sector considered as the main vehicle for achievement of UHC goals. The country has a network of Rural Health Centres that are administered through a Township health system under the direction of a Township Medical Officer (TMO) with Township population catchments of between 100 and 200,000. Each RHC administers approximately four sub-rural health centres that are staffed by a midwife and public health inspector, after which auxiliary midwives and community health workers (CHWs) provide community-based PHC services.[566] The health sector review in 2014 found that since the 1980s, rural health centres (RHCs) activities have focused on delivery of programmes or projects funded through development partners. The challenge for PHC is that these programmes were often limited in geographic scope and were verticalized, meaning that Townships without these supports were often short on technical, financial, and material support. Weak health system support, and low salaries for health workers, meant that the public sector workforce increasingly took up private sector practice work.[567] A considerable proportion of the population therefore seeks care outside the public sector through services provided by ethnic health organizations, NGOs and private GP clinics. The Demographic and Health Survey in 2015 found that parents initially sought out care for fever of their child from the private sector or other non-public outlet in 30 per cent of cases and from the public sector in 38 per cent of cases.[568] Although there was increased investment after 2011 in the primary care system, the neglect of primary care is a longstanding problem. Trends in health infrastructure spending in 2014–2015 demonstrate that there was a just under 8 per cent increase in hospital infrastructure compared to a less than 1 per cent investment in the construction of new rural health units.[569]

563 T. Sawn Khai, 2022, Higher risk of COVID-19 infection among internally displaced persons (IDPs) in Myanmar under the military coup. *Global Public Health* vol. 17, No. 12, pp. 3967–3971.
564 World Vision, 2021, Myanmar Crisis Response 2021 Situation Report #3, 5 August.
565 See https://reliefweb.int/report/myanmar/myanmar-humanitarian-response-plan-2023-january-2023.
566 N. Tin et al., 2010, An approach to health system strengthening in the Union of Myanmar. *Health Policy* vol. 95, No. 2–3, pp. 95–102.
567 WHO Regional Office for the Western Pacific, 2014, Myanmar health system review. *Health Systems in Transition* vol. 4, No. 3.
568 See https://dhsprogram.com/publications/publication-fr324-dhs-final-reports.cfm.
569 Ministry of Health and Sports, Myanmar, National Health Plan 2017–2021, figure 4. Available at www.aidsdatahub.org/sites/default/files/resource/myanmar-national-health-plan-2017-2021.pdf.

The National Health Plan identified essential health packages for the medium to long term, with the medium term largely focussing on primary care services for MNCH, communicable diseases, NCDs, nutrition and basic treatment of minor conditions [see section on policy and strategy directions].[570]

Health financing

Decades of low levels investment in health by the national government has resulted in the highest levels of out-of-pocket expenditure on health in the East Asia and Pacific Region. However, prior to the conflict in 2021, there is evidence that the national government, in response to the agenda for health reforms in support of universal health coverage objectives, had commenced to boost social sector investment including in health. The was nine-fold increase in the financing of delivery of health care and expansion of service coverage between 2010–2011 and 2016–2017.[571] The level of priority placed on health by the government (prior to the 2021 military takeover) as measured by government spending as a percentage of current health expenditures had increased from 7.3 per cent in the year 2005 to 20 per cent in 2020. The level of priority set on health by government is reflected in the fact that government health expenditure as a percentage of domestic general government expenditures has increased from 1.3 per cent in the year 2005 to 3.4 per cent in 2020. The level of out-of-pocket expenditures as a percentage of total health expenditures has declined from 83 per cent of current health expenditures in 2005 to 73 per cent in 2020. Social health insurance as a source of expenditure for health represents a very small fraction of overall health investment. The level of external assistance as a proportion of total health expenditure has been sustained at between 5 per cent and 10 per cent of health expenditures since 2004.[572] Despite some policy innovations for health financing and financial protection, and expansion of state investment in health, 12.7 per cent of the population in Myanmar has greater than 10 per cent of annual household expenditure on health (SDG target 3.8.2).[573] This is the third highest level in East Asia and the Pacific, with only China (23.98 per cent) and Cambodia (12.7 per cent) having higher rates of household expenditures on health for SDG target 3.8.2.

Given the high rates of poverty and out of pocket expenditures, the MOHS was required to develop financial protection measures to progress toward universal health coverage goals. In the previous decades and in the pre reform era, the MOHs established a system of Hospital Trust Funds and Community Cost sharing that were intended to support the poor to improve their access to health care. However, evidence available demonstrated that these funds were unable to mobilise anywhere the sufficient amount to protect the poor.[574] Various initiatives were then trialled using development assistance to implement smaller scale health equity funds[575] emergency hospital referral schemes and maternal health voucher schemes.[576] Despite these various demand side investments and initiatives, it is supply side investments in facilities, health human resources and essential medicines that are critical for achievement of the UHC goal and in reducing the high rates of out of pocket expenditures on health. The National Health Plan and a recent financial assessment (2019)[577] recommend transitioning towards a model of strategic purchasing to through a semi-autonomous agency. In the short to medium term, resource mobilization to support the humanitarian response through the health cluster remains a major health financing priority for Myanmar.

570 National Health Plan 2017–2021.
571 Ibid.
572 See https://apps.who.int/nha/database/country_profile/Index/en.
573 See www.who.int/data/gho/data/themes/topics/financial-protection.
574 WHO Regional Office for the Western Pacific, 2014, Myanmar health system review. *Health Systems in Transition* vol. 4, No. 3.
575 Ibid.
576 S. Pilasant et al., 2016, Maternal and child health voucher scheme in Myanmar: a review of early stage implementation. *BMC Health Services Research* vol. 16, No. 600.
577 See www.researchgate.net/publication/329487365_Myanmar_-_Health_Financing_System_Assessment.

Health workforce

Nationally, the ratio of the health workforce to 1,000 population for nurse midwifes is 1.1 (2019) and for physicians it is 0.7 (2016) according to the latest statistics in the Global Health Observatory.[578] This is well below the target of 4.45 professional health staff per 1,000 population recommended by WHO to achieve universal health coverage. rural retention. In 2016 there were 1.33 health workers (doctors, nurses and midwives) per 1,000 people, with these low numbers exacerbated by maldistribution of the workforce. As in other countries in the region, professional health workers are largely concentrated in urban areas, including Yangon and Mandalay.[579] An assessment of health workforce density in 2019 found that there 16,292 medical doctors and 36,054 nurses working under the direction of the MOHS in 2016. The assessment found that 13 out of 15 states and regions were below the minimum number of 1 doctor per 1,000 population for medical doctor. There were found to be wide disparities in distribution, with one medical doctor per 633 population in urban areas compared to one doctor per 3,447 population in rural areas 2015–2016. Main barriers to rural placement included lower remuneration, unstable policy, and uneven workload, as well as migration of health professionals to places where better working conditions and remuneration are offered.[580]

The Health Workforce Strategic Plan (2012–2017) outlines current human resource challenges that along with shortages in numbers and maldistribution, and includes competency gaps and an inappropriate mix of skills. In the States and border areas where parallel health systems have operated through ethnic health organizations, there are a different cadre of health workers with no recognition from the MOHS, which presents policy challenges in terms of standardization of the professional workforce in the country.

Community engagement – Community health workers

Auxiliary midwives and community health workers (CHWs) traditionally have had a strong role in implementation of the PHC system in Myanmar. Based on available data from 2022, there were estimated to be 40,910 trained CHWs, of which about half were reported to be active (20,956). At this time, of the 31,580 auxiliary midwives, 21,034 were reported to be active. The high attrition rates have been attributed to lack of resources for recurrent operations, which has an impact on supervision, training opportunities and on mobility.[581] This observation is consistent with findings from two surveys of over 700 CHWs and 1,185 auxiliary midwives in 21 townships in 2012, which found that supports from the rural health centres (RHC) were inadequate in particular in relation to technical supervision, equipment supply, finance and transportation.[582, 583] This reinforces the networking function in primary care, whereby two-way support systems are required between primary care professionals and a community based workforce to sustain health-care coverage.

A policy on Community Health Workers, published by MOHS in 2019, sets out the broad functions of auxiliary midwives and CHWs in the Myanmar health system. These wrokes are members of the PHC team and act as a bridge between local health staff and communities. Functions are specified in relation to data collection, health promotion, prevention, treatment and referral. Auxiliary midwifes provide materhnal, newborn and child health (MNCH) and nutrition services, and CHWs support provision of environmental health and disease control services. Auxiliary midwifes and CHWs support all the government employees in the health sector at the primary care level. While all auxiliary midwives are female, both males and females can be nominated as CHWs by a village health committee, with final selection occurring at township level.[584]

578 See www.who.int/data/gho/data/themes/topics/health-workforce.
579 Health Workforce Strategic Plan (2012–2017).
580 Y.M. Saw et al., 2019, Myanmar's human resources for health: current situation and its challenges. *Heliyon* vol. 5, No. 3, e01390.
581 National Health Plan 2017–2021.
582 A. Sommanustweechai et al., 2016, Community health worker in hard-to-reach rural areas of Myanmar: filling primary health care service gaps. *Human Resources for Health* vol. 14, No. 1, p. 64.
583 S. Wangmo et al., 2016, Auxiliary midwives in hard to reach rural areas of Myanmar: filling MCH gaps. *BMC Public Health* vol. 16, No. 1, p. 914.
584 Ministry of Health and Sports, 2019, Community based health worker policy: a comprehensive, institutionalized approach for extending services to communities.

In terms of effects, a retrospective analysis of CHWs between 2011 and 2016 found that CHWs had overseen programmes (through screening and treatment) that resulted dramatic declines in malaria in rural Myanmar. The study recommended that CHW roles should be extended to include other general primary care services to have a wider impact.[585] A mixed methods study in a remote area in Myanmar in 2021 found that community delivered neonatal HBV vaccination programme by ethnic health organizations is feasible and effective in rural Myanmar.[586] Studies have shown no effect. In Yangon, there were decreases in tuberculosis detection rates associated with implementation of CHW programmes, with researchers concluding that more support is required from local NGO personnel, incentives for the volunteers, and improved supervisory and monitoring and evaluation support for such programmes to be effective.[587]

Surveys have shown high levels of activity of CHWs in prevention and referral, with one study finding that CHWs provided a bridge between local communities and health facilities through supporting health promotion and referral of severe cases to township hospitals to save lives. Their strengths are physical accessibility, cultural sensitivity and language-friendly services for the local people.[588] This bridging function is supported by an evaluation of the work of more than 1,185 auxiliary midwives in 2011, which found that all auxiliary midwives were able to provide essential maternal and child health services, including antenatal care, normal delivery and postnatal care. They could identify and refer high-risk pregnancies to larger health facilities for proper management,[589] which is a finding supported by similar studies in other parts of Myanmar.[590] The bridging role is related closely to the gap-filling functions of CHWs, which is achieved through task shifting or delegating professional functions to less specialized community-based staff, providing time for development and placement of professional basic health staff in these locations at a later date.[591] These studies highlight the importance of CHW strategy in areas of the country designated as hard to reach, which further reinforces the importance of the gap-filling role of CHWs. Given the current crisis in Myanmar and the depletion of the professional health workforce, these gaps have been drastically widened, meaning that CHWs are likely to form an integral and essential part of the primary care system for many years to come.

585 A.R.D. Mclean et al., 2018, Malaria elimination in remote communities requires integration of malaria control activities into general health care: An observational study and interrupted time series analysis in Myanmar. *BMC Medicine* vol. 16, No. 1, p. 183.
586 T.H. Guan et al., 2021, Implementation of a neonatal hepatitis B immunization program in rural Karenni State, Myanmar: A mixed-methods study. *PLOS ONE* vol. 16, No. 12, e0261470.
587 H.M.W. Maung et al., 2017, The contribution of a non-governmental organisation's Community Based Tuberculosis Care Programme to case finding in Myanmar: trend over time. *Infectious Diseases of Poverty* vol. 6, No. 51.
588 Ministry of Health and Sports, 2019, Community based health worker policy: a comprehensive, institutionalized approach for extending services to communities.
589 S. Wangmo et al., 2016, Auxiliary midwives in hard to reach rural areas of Myanmar: filling MCH gaps. *BMC Public Health* vol. 16, No. 1, p. 914.
590 K.K. Sein, 2012, Maternal health care utilization among ever married youths in Kyimyindaing Township, Myanmar. *Maternal and Child Health Journal* vol. 16, No. 5, pp.1021–1030.
591 These studies do not incorporate an assessment of quality of care of CHWs.

Policy and strategy directions for primary health care in Myanmar

Policy and governance

The main policy directions for Myanmar have been set out in the National Health Plan. PHC is the main approach to attain UHC. The main features of this direction include the following:

- A focus on ensuring access to essential health services for the entire population
- An emphasis on PHC delivered at township level and below;
- Consideration for involvement of health-care providers outside the MOHS;
- Switching from top-down planning to a more inclusive bottom-up approach;
- Recognition of the importance of health systems strengthening from all perspectives.

In the national strategic health planning context, the main policy and governance directions are:

- A staged development of a universal health coverage strategy, with the plan including development of Basic-Essential Package of Health Services (EPHS) by 2020, an intermediate-EPHS by 2025 and a comprehensive-EPHS by 2030.
- Improved integration and decentralization of the health system through development of inclusive and coordinated Planning Systems

In the emergency context, the main policy and governance directions through the health cluster are:

- Apply health cluster coordination to improve availability and accessibility of PHC services (focussing on basic and complementary packages including MNCAH, integrated psychosocial care including responses to gender based violence, communicable diseases, disability support, and emergency health for surgical care, trauma and referrals). The target group for support is in conflict affected areas in rural parts of the country.
- The health cluster works across other clusters to adopt a multisector approach, to advocate for safe access and service delivery for crisis-affected people, and through joint logistics and risk communication operations.

Community engagement

The focus of community engagement is on building partnerships with CSOs and EHOs to expand access to primary care services, both in the UHC health system planning context, and in the humanitarian context.

Multisector collaborations and public health

The National NCD Plan proposes adopting a "healthy settings" approach in schools, workplaces and local government (township) locations, and establishing a nodal agency for health promotion in Myanmar (National Strategic Plan on NCD Prevention and Control 2017–2021).

Health workforce

Filling gaps in human resources for health in rural areas by capacity-building and recruitment of more basic health staff to improve PHC. This will need to be accompanied by retention strategies, career development of basic health staff, and quality of care with a special focus on fulfilling the Basic Essential Package of Health Services at the township level and rural areas in line with the National Health Plan (2017–2021).[592]

Health financing and resource allocation

The UHC goals are not achievable without a peace process, financial protection measures, and scale up of national and international investment in the health system.

Financial protection: While risk pooling mechanisms are being developed and national and international resources are being mobilized, temporary financial protection measures will be required to reduce financial barriers to access, utilising innovations nationally and internationally in pro poor health protection measures [National Health Plan 2017–2021] [e.g. Health Equity Funds, Hospital Trust Funds, maternal voucher schemes, reimbursement of emergency referral costs, community cost sharing, cash transfers, user fee exemptions etc.].

Resource mobilization for humanitarian emergency: Scale up levels of international resource mobilization for civil partners working directly through the health cluster for humanitarian support for the most vulnerable groups –stateless, conflict-affected and internally displaced people.

Models of care

The main priority of the National Health Plan is to extend the basic EPHS to the entire population which will require substantial investments by the MOHS in supply-side readiness at township level and below.

Given the scale of the humanitarian crisis and the complexity of the health system, active engagements of health providers outside the public sector will be required through EHOs and NGOs, with including private-for-profit GP clinics.

In terms of models of care, and consistent with the PHC approach, clearer differentiation is needed between community-based services and outreach, so as services are available on a continuous basis within a community. Services can be provided on a scheduled basis through outreach services, to be most feasibly and effectively delivered to meet community health needs.

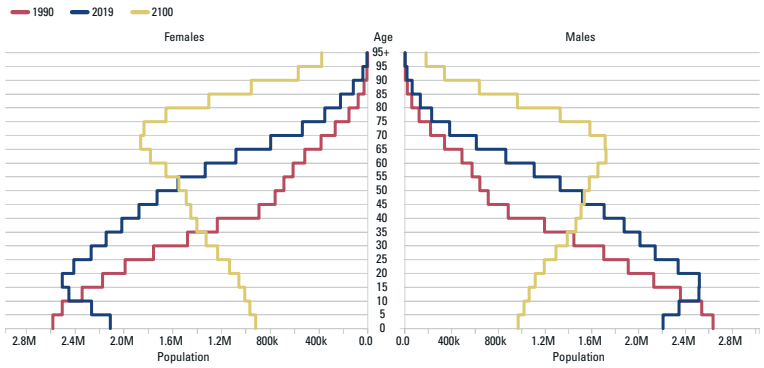
Digital health and monitoring and evaluation

Consistent with the PHC component of integrated services and public health, the many parallel systems that are currently supported and promoted by vertical programmes should be integrated into a common platform (the DHIS-II). This will involve enabling inter-operability with other systems including logistics and human resource management information systems, the NCD data base and vital statistics.

592 Ministry of Health and Sports, Myanmar, National Strategic Plan for Prevention and Control of NCDs 2017–2021.

PRIMARY HEALTH CARE DIRECTIONS - MYANMAR

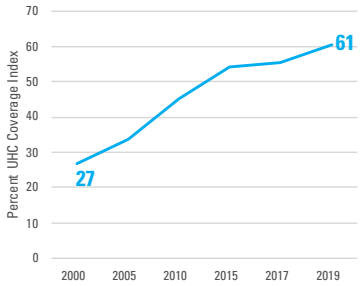
DEMOGRAPHIC TRANSITION



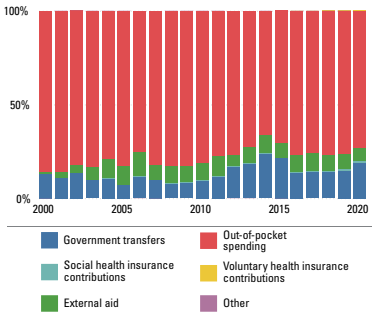
Source of Data: IHME: Country Profile Institute for Health Metrics and Evaluation (IHME). Seattle, WA: IHME, University of Washington, 2021. Available from https://www.healthdata.org/results/country-profiles

HEALTH COVERAGE AND HEALTH FINANCING (2000-2020)

UHC Coverage Index 2000 - 19

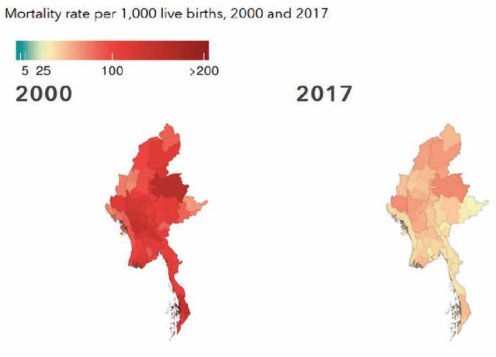


Sources of Health Expenditure 2000-2020



Sources of Data: UHC Coverage Index https://www.who.int/data/gho/indicator-metadata-registry/imr-details/4834 Expenditures: National Health Accounts Data Base: https://apps.who.int/nha/database/country_profile/Index/en

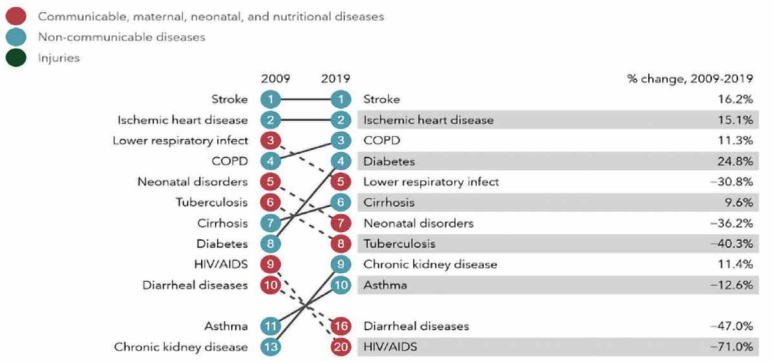
HEALTH INEQUITIES AND HEALTH ACCESS



- The **Maternal Mortality Rate** was 250 per 100,000 live births (2017), having declined from 265/100,000 in 2010 (GHO)
- There is unmet need of 39% for essential UHC index coverage (GHO, 2019)
- **Health Workforce** to 1000 Population ratio for nurse midwife is 1.1 (2019) and for physician .7 (World Bank/GHO)
- 12.7% of the Population in Myanmar has > 10% of **annual household expenditure on health** (GHO, 2020)
- **Prevalence of NCDS:** Hypertension is 24.6%, Diabetes 7.4% with diabetes prevalence rising from the previous assessment (PHCPI)

Source of Data: IHME: CHILD MORTALITY Country profile Institute for Health Metrics and Evaluation (IHME). Available from https://www.healthdata.org/results/country-profiles

EPIDEMIOLOGICAL TRANSITION



Source of Data: IHME: Country profile Institute for Health Metrics and Evaluation (IHME). . Seattle, WA: IHME, University of Washington, 2021. Available from https://www.healthdata.org/results/country-profiles

HEALTH CARE BENEFITS PACKAGE and PRIMARY HEALTH CARE POLICY DIRECTIONS

Health Care Benefits Package

Access to the Basic Essential Package of Health Services (EPHS) should be free at the point of care, at least in public facilities. The Basic EPHS has a strong focus on primary health care services and interventions that the poor and vulnerable need most. Increased government spending on health will allow reducing out-of-pocket payments by poor and vulnerable households.

The Basic EPHS include essential services and interventions related to RMNCAH, the main communicable diseases, some of the noncommunicable diseases, nutrition and basic treatment of minor conditions and will have a strong primary health care focus.

The National Health Plan (2017-2021) proposes a staged development of a UHC Strategy with the plan including development of Basic- EPHS by 2020, an intermediate-EPHS by 2025 and comprehensive-EPHS by 2030.

The Health Cluster response partnership is targeting 2.3 million people for humanitarian health assistance and which includes displaced, returned, stateless and other crisis-affected people. The Health Cluster aims to improve accessibility of conflict affected populations to primary health care services (focussing on basic and complementary packages including MNCAH)

PHC Policy and Strategy Directions

Health System Response: The main policy directions for Myanmar have been set out in the National Health Plan. Primary health care is viewed as the main vehicle by which to attain the stated Universal Health Coverage goal. Main features of this direction include the following:

- A focus on ensuring access to essential health services for the entire population
- An emphasis on primary health care delivered at township level and below;
- Consideration for involvement of healthcare providers outside Ministry of Health and Sports;
- Switching from top-down planning to a more inclusive bottom-up approach;
- Recognition of the importance of health systems strengthening from all perspectives.

Humanitarian Response: Improve availability and accessibility of primary health care services in conflict affected areas in rural parts of the country. The Health Cluster works across other clusters to adopt a multi sector approach, to advocate for safe access and service delivery for crisis affected people, and through joint logistics and risk communication operations

Sources: (1) Ministry of Health Sports National Health Plan 2017-2021. (2) OCHA Humanitarian Response Plan Myanmar Humanitarian Programme Cycle 2023 Issued January 2023

4.12 Timor-Leste

Primary health care policy and development landscape

Timor-Leste (population 1.29 million) is a lower middle-income country with a GDP growth rate of 4.4 per cent and GDP per capita of $3,253.[593] The country is divided into 12 municipalities and one special administrative region, 65 administrative posts and thereafter 452 sucos (villages) and 2,233 aldeias (hamlets).[594] The country is undergoing a demographic transition, with a steep decline in the fertility rate from 6.1 in the year 2000 to 3.9 in 2020.[595] Timor-Leste is young country, and it is a country of young people. 24 per cent of the population are in the adolescent age group (12 per cent each for boys and girls), with maternal conditions and tuberculosis being the major causes of death for girls, and road injury and collective violence for boys.[596] Timor-Leste is predominantly a rural population, with just 31 per cent of the population being urbanized, most of whom reside in the capital Dili. Of the urban population, 30.1 per cent are reported to be living in urban poor areas.[597] The country is currently in the process of implementing a programme of administrative decentralization which requires substantial investments in integrated planning and financial management systems, and development of leadership and managerial capacities at subnational and municipal level.[598, 599]

A prolonged period of conflict resulted in a serious depletion of both human resources for health and health infrastructure. Since independence in 2002, the Government in collaboration with development partners and communities has made substantial progress towards the reconstruction of the health system. The PHC system functions through a District Health Service structure, and at the subdistrict level includes a network of community health centres, health posts and outreach services, with secondary hospital care provided through regional hospitals and a national tertiary hospital based in Dili. The recent experience of the COVID-19 impact has demonstrated the value of multisector strategy with both education and social affairs being involved with COVID-19 vaccination. It has stimulated increased recognition by political leaderships and local government of the importance of health sector investment and emergency preparedness.

Primary health care coverage and equity

Disease burden

Communicable diseases however are persisting as major causes of death, with tuberculosis, HIV and lower respiratory infections remaining the third, seventh, and eight leading causes of death in the country.[600] Under-five mortality rate of 44 per 1,000 live births, of which 20 are neonatal deaths. Just more than half of all

593 See https://improvingphc.org/.
594 Government of Timor-Leste and UNICEF, 2020, Situation Analysis of Children in Timor-Leste, Dili, Timor-Leste.
595 See https://data.worldbank.org/indicator/SP.DYN.TFRT.IN?locations=TL.
596 See https://data.unicef.org/resources/adolescent-health-dashboards-country-profiles/.
597 See https://data.unhabitat.org/datasets/cd4e1deb72ea49bd8f3403f8a9edfe6d_0/explore.
598 See www.dfat.gov.au/sites/default/files/timor-leste-health-review-report.pdf.
599 A.G. Lopes et al., 2020, An assessment of management competencies for primary health care managers in Timor-Leste. *International Journal of Health Planning and Management* vol. 35, No. 2, pp. 520–531.
600 See www.healthdata.org/results/country-profiles.

mothers deliver their infants in health facilities (56.7 per cent). This is reflected in the maternal mortality rate of 142 per 100,000 live births, which, though improving from very high rates 20 years ago, is the sixth highest in the region. It is important to note that malaria deaths have declined by 100 per cent in this period, demonstrating that the country has the capacity to make substantial public health improvements in a relatively short time. Nutrition and environmental health are major concerns in Timor-Leste, with one in two children under the age of five being stunted, and 50 per cent of health posts having no access to water.[601] An analysis of causes of death between 2009 and 2019 demonstrates an increase in rates of death from non-communicable diseases (NCDs), including ischaemic heart disease and strokes. The diabetes rate of 5.5 per cent. is one of the lowset prevalence rates of diabetes in East Asia and the Pacific. However, these rates are rising when compared to the previous assessment, and prevalence of hypertension is 27 per cent.[602]

Health coverage

terms of communicable diseases, although immunization coverage is relatively high at 86 per cent, there are gaps in other areas of communicable disease control, with 51 per cent of people PLHIV received anti-retroviral therapy, and an estimated 53 per cent of tuberculosis cases being detected and treated, although treatment success rates for tuberculosis are high at 91 per cent. The fact that immunization dropout rates are only 5 per cent demonstrates that once populations gain access to the service, they will return to use the services subsequently.

Health equity

In terms of equity in health outcomes, there is a differential of 35 between the highest and lowest wealth quintiles for under-five mortality. In terms of service coverage, the UHC index is now 52.21 per cent, which represents an unmet need of 48 per cent of the population for access to or use of essential health services. Geographic remoteness is a main feature of the Timor-Leste landscape. Surveys have indicated that 46 per cent of the population perceive barriers to health-care access related to distance to facilities, and 37.8 per cent

601 Government of Timor-Leste and UNICEF, 2020, Situation Analysis of Children in Timor-Leste, Dili, Timor-Leste.
602 See https://improvingphc.org/.

perceive access barriers related to cost.[603] The COVID-19 vaccine roll out has demonstrated that it is the last 15 per cent that are hard to reach. This is confirmed by a recent analysis of zero dose immunization in the country, which found that vaccination coverage was significantly associated with household wealth quintile, household size, education of father, and ante natal and postnatal care visits.[604] Despite these many health challenges, the fact that the country has reduced maternal and child mortality rates, is polio-free, and is on track to eliminate malaria[605] demonstrates significant potential for improvement in health outcomes in the coming decade.

Health system capacity

Trends in health financing demonstrate that there have been reductions in out-of-pocket spending from 41 per cent of total health expenditure in the year 2000 to just 8 per cent in 2019. In this period both government transfers for health and development assistance financing have been scaled up and sustained. Nevertheless, the proportion of the national budget which is allocated to health has increased from 4 per cent in 2006 to only 4.5 per cent in 2019. Transitioning to more of a PHC approach will require a higher priority being set on domestic financing of health. Although rebuilding the health workforce is Timor-Leste has been a significant development achievement since the conflict period, there remain significant challenges with health workforce numbers and distribution. These problems are compounded by high turnover, political intervention, lack of job descriptions, and inadequate supervision and monitoring at field level. The overall workforce ratios of 1.38 per 10,000 is well below the recommended WHO level of 4.45.[606] The quality of health infrastructure and service availability can be significant constraints to coverage and equity of care. While about half of all deliveries are now in health facilities, only half of these deliveries are in facilities that have capacity for delivery of emergency obstetric and neonatal care.[607] Quality is affected by the availability of water and sanitation at facilities, infection prevention and control, and medical waste management.

Implications for future health systems

The persistence in communicable diseases, the rise in NCDs, and the relatively high maternal and neonatal mortality rates represents a 'triple burden' of health challenges for Timor-Leste society. The impacts of the COVID-19 pandemic have demonstrated the importance of readying the health system and society for emergency preparedness and response. The large cohort of adolescents in the country will require a focus on the health of young people including responding to their mental health needs. The rise in NCDs has implications for future health systems in terms of increased requirements for community-based prevention and home-based care, as well as specialist referral for more complicated conditions. This in turn has major implications for the financing of the health system in Timor-Leste in the coming two decades as costs of service provision escalate.

The ongoing needs of more disadvantaged populations in remote areas of the country will mean the future health systems will be more effective in financing outreach operations to meet the ongoing maternal and child health and communicable disease control needs of these groups. Future health systems will be more digitally connected, with the opportunity to connect people and providers to services and information. The decentralization policy of Timor-Leste will require the development of subnational management capacity, which will require investment in financial management systems, integrated planning and budget, and greater engagement of multisector and community voice in health strategy and operations.

The following section will examine the evidence for how Timor-Leste is preparing for the future through current PHC Policy and health system directions.

603 Ibid.
604 See https://apps.who.int/iris/handle/10665/345264.
605 See https://sustainabledevelopment.un.org/memberstates/timorleste.
606 See https://improvingphc.org/.
607 See www.dfat.gov.au/sites/default/files/timor-leste-health-review-report.pdf.

Policy and strategy directions for primary health care in Timor-Leste

Primary health care policy and strategy

PHC Policy Directions are set through the National Health Plan and the "Programa Nasional Saúde na Família" (SNF) (National Programme on Family Health) which was launched in 2015. This is designed to provide free universal health care to the people of Timor-Leste and the PHC Policy is directed through a PHC Directorate in the Ministry of Health. This policy incorporates a comprehensive service package of PHC at the household level through domiciliary visits, clinical consultation, treatment and referrals by team of health professionals. A package of essential NCD interventions was adopted by the Ministry of Health in Timor-Leste in 2017[608] and the PHC essential service package for UHC is currently being updated through the UHC partnership project.[609] The approach allows for early identification of priority NCDs and risk factors including hypertension, tobacco and alcohol use, as well as clarification of delivery models for primary care and referrals.

Political commitment and leadership

The COVID-19 pandemic generated increasing interest and advocacy from national political leaders for investment in PHC. The emergency nature of COVID-19 highlighted gaps in investment for politicians, especially in relation to emergency preparedness and health security. The Ministry of Health is using COVID-19 resources to invest in health facilities, equipment and facility renovations, and maximizing funding from partners to use COVID-19 money for Saude na Familia. Although commitment of political leadership and local governments for health in Timor-Leste is well established, such leadership needs to be further galvanized to support the PHC approach, especially in relation to leadership advocacy for improved collaborations between education and health, as well as closer linkages with child and social protection and environmental health.

Resource allocation and financing

Given accessibility and affordability strategies described earlier, financial protection is major priority for financing strategy. Given the fact that most financial protection is provided through public financing of the health sector, the main financial protection mechanisms is domestic financing for health. Growing domestic financing and sustaining international development investment are two main sources of supply for the Saude na Familia strategy. Other main components of the health financing strategy include Increasing health funding to cover unmet needs for essential services and for care for financial needs associated with NCDs, reducing inequities in resource availability and service utilization, and improving system allocative and technical efficiency.[610]

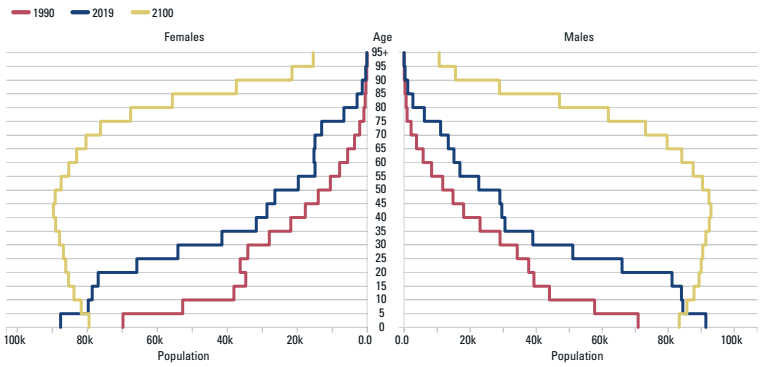
Models of care

The model of care of Saude da Familia represents the main direction for PHC in Timor-Leste at the current time, which focuses on provision of services that operate through a decentralized participatory model of governance. The practice of regular home visits and development of family health profiles enables services to address health needs as well as environmental and other social determinants of health factors. The PHC Platform of Saude da Familia is backed up by the outreach and mobile service model of community-based care referred to as SISCa. This model of community-based care is delivered by a health team that operates in areas of the country with limited health service and facilities. Services are provided for women and children including services related to NCDs.

608 WHO and Ministry of Health, Timor-Leste, 2017, Package of Essential Non-communicable Disease Interventions in Timor-Leste. Available at https://extranet.who.int/ncdccs/Data/TLS_D1_Timor-Leste%20PEN%20%20revised%2021%20April%202017.pdf.
609 See https://extranet.who.int/uhcpartnership/country-profile/timor-leste.
610 See https://extranet.who.int/countryplanningcycles/sites/default/files/planning_cycle_repository/timor-leste/stories_from_the_field_issue3_timor-leste.pdf.

PRIMARY HEALTH CARE DIRECTIONS - TIMOR-LESTE

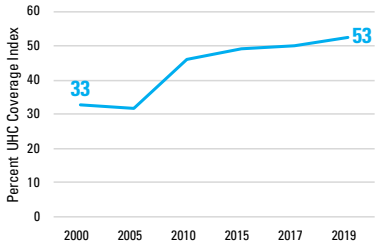
DEMOGRAPHIC TRANSITION



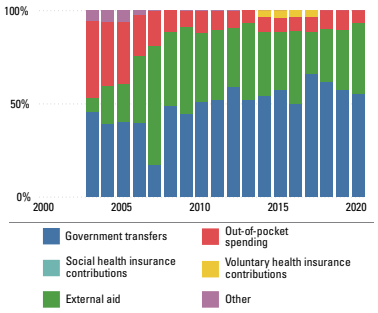
Source of Data: IHME: Country Profile Institute for Health Metrics and Evaluation (IHME). Timor-Leste profile. Seattle, WA: IHME, University of Washington, 2021. Available from https://www.healthdata.org/results/country-profiles

HEALTH COVERAGE AND HEALTH FINANCING (2000-2019)

Timor Leste UHC Coverage Index 2000-2019

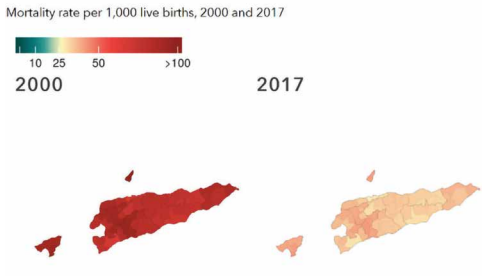


Sources of Health Expenditure 2000-2019



Sources of Data: https://www.who.int/data/gho/indicator-metadata-registry/imr-details/4834 Expenditures: National Health Accounts Data Base: https://apps.who.int/nha/database/country_profile/Index/en

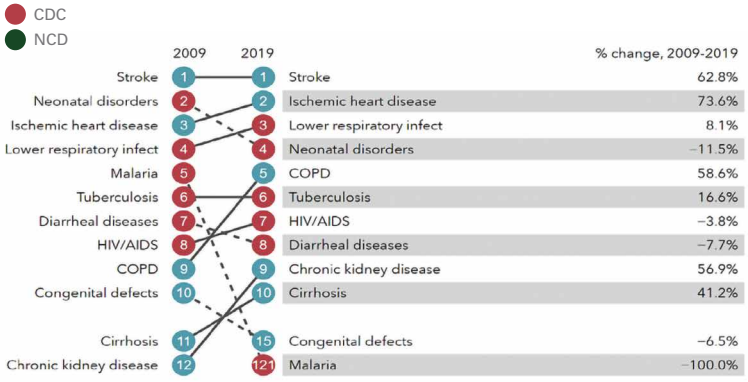
HEALTH INEQUITIES AND ACCESS and SUPPLY BARRIERS



- There is **unmet need** of 47 % for essential UHC index (GHO)
- **Health Workforce** to 1000 Population ratio (1.38) ais ell below the WHO threshold (4.45) (GHO)
- There are perceived **accessibility barriers** relating to distance (46%) and affordability (38%) (PHCPI)
- 2.61% of the Population in Timor-Leste has > 10% of **annual household expenditure on health** (GHO) (2014)
- **Prevalence of NCDS:** Hypertension is 27.6%, Diabetes 5.5 % with diabetes prevalence rising from the previous assessment (PHCPI)

Source of Data: IHME: Country profile Institute for Health Metrics and Evaluation (IHME). Timor-Leste Profile. Seattle, WA: IHME, University of Washington, 2021. Available from https://www.healthdata.org/results/country-profiles

EPIDEMIOLOGICAL TRANSITION



Source of Data: IHME: Country profile Institute for Health Metrics and Evaluation (IHME). Timor-Leste Profile. Seattle, WA: IHME, University of Washington, 2021. Available from https://www.healthdata.org/results/country-profiles

HEALTH CARE BENEFITS PACKAGE and PRIMARY HEALTH CARE POLICY DIRECTIONS

Health Care Benefits Package

The Constitution of the Democratic Republic of Timor-Leste includes Article 57 which states that health and medical care are fundmental rights of all its citizens. It directs the State to establish a National Health System that is free of charge and managed through a decentralised participatoru Structure.

The National Health Care System is a tax based public health system so services for the essential package are free at the point of care

Health Care Benefit Packages that are specific to each level of the health system have been defined in the National Health Plan for outreach services, health posts, health centres, District Hospitals, Regional Hospital and for one central National Hospital.

Health services eligible to the population includes services for women and children including services related to non communicable diseases, through a model of care incorporating fixed and outreach health care services (SiSca) and specilty care through secondary and teritary fracilities

PHC Policy and Strategy Directions

PHC Policy Directions are set through the National Health Plan and the "Programa Nasional Saúde na Família" (National program on Family Health) which was launched in 2015.

The program is designed to provide free universal health care to the people of Timor-Leste.

The program aims to provide a "Comprehensive Service Package of Primary Health Care" to the household level through domiciliary visits, clinical consultation, treatment and referrals by team of health. professionals.

Regular Home Visits and development of family health profiles enables services to address health needs as well as environmental and other social determinant factors

Saúde na Família aligns with general directions for PHC in Timor-Leste, which focus on provision of services that operate through a decentralized participatory model of governance (NHP)

Sources: National Health Plan Timor-Leste 2011 - 2030, SAÚDE NA FAMÍLIA. Part of Comprehensive Primary Healthcare Package. Success stories from the field. New Delhi: World Health Organization, Country Office for Timor-Leste; 2021.

4.13 Papua New Guinea

Primary health care policy and development landscape

Papua New Guinea (population 8.78 million) is a lower middle-income country with recent economic growth rate of 1.5 per cent and a GDP per capita of $4,569 (2021).[611] Growth rates have been variable between 2000 and 2020, with negative growth rates in 2018 and 2020. Economic growth is generated through mining and agriculture industries with high growth rates in 2014 (13.5 per cent) and 2019 (4.5 per cent). The country is 87 per cent rural, with 37 per cent classified as living in poverty. The country is made up of four geographically and culturally diverse regions of Highlands, Momase, the New Guinea Islands and the Southern Region. About 85 per cent of the land area of Papua New Guinea consists of the eastern half of the island of New Guinea. The rest is composed of about 600 smaller islands, including New Ireland, New Britain and Bougainville.[612] Due to mountainous terrain, accessibility to many parts of the country can only be made by foot, air or by boat. There are 22 provinces, 89 districts, 318 local level governments and 31 urban local governments.

Demography: Despite fertility rates declining from 4.5 in the year 2000 to 3.5 in 2020, this fertility rate is one of the highest in region.[613] The rapid population growth in Papua New Guinea (see infographic) is largely a result of a high birth rate and a moderately declining death rate.[614] The high fertility rates, which have been sustained for decades mean that Papua New Guinea has a very young population, with 21 per cent of the total the population belonging to the adolescent age group (compared to 17 per cent in Indonesia and 19 per cent in the Philippines).[615] The main cause of mortality for both boys and girls aged 15–19 is tuberculosis.[616]

The high fertility rate highlights the ongoing public health significance of investment in maternal and child health, especially in rural areas where 86 per cent of the population live. UNICEF estimates that children make up almost half of the country's largely rural population.[617] Despite most of the population living in rural areas, urbanization rates have been 2 per cent or higher since 2001.[618] The National Capital District is the fastest-growing district or province in the country. Although all age groups migrate to urban areas, it is particularly young people who have had some degree of education and cannot find a worthwhile means of livelihood in their rural localities that migrate to urban areas.[619]

Epidemiology: Due primarily to weaknesses in the health-care system, Papua New Guinea has higher maternal and child mortality rates than average in the region. Only the Lao People's Democratic Republic and Myanmar have higher under-five mortality rates. Neonatal deaths (22 per 1,000 births) make up nearly half of under-five mortality which highlights weaknesses in the delivery system in the first 28 days of life. Although

611 See https://improvingphc.org.
612 See https://pngnri.org/images/Publications/DP130_-_201309_-_Sembajwe_-_Demographic_Trends_in_PNG_2.pdf.
613 See https://data.worldbank.org/indicator/SP.DYN.TFRT.IN?locations=PG.
614 See https://pngnri.org/images/Publications/DP130_-_201309_-_Sembajwe_-_Demographic_Trends_in_PNG_2.pdf.
615 See https://data.unicef.org/adp/country/png/.
616 See https://data.unicef.org/resources/adolescent-health-dashboards-country-profiles/.
617 See www.unicef.org/png/children-papua-new-guinea.
618 See https://data.worldbank.org/indicator/SP.URB.GROW?locations=PG.
619 See https://pngnri.org/images/Publications/DP130_-_201309_-_Sembajwe_-_Demographic_Trends_in_PNG_2.pdf.

neonatal disorders are the sixth leading cause of death in Papua New Guinea (see infographic) lower respiratory infections and neonatal causes are the leading causes of death and disability combined.[620] Papua New Guinea has the highest tuberculosis incidence in the region and tenth highest globally, with rising rates of multidrug-resistant tuberculosis.[621] Detection and completion of tuberculosis treatment was estimated to be 51 per cent in 2021.[622] In addition to the burden of diseases attributable to communicable diseases, non-communicable diseases (NCDs) are now an emerging public health threat. Diabetes is now the sixth leading cause of death and disability combined, and the incidence of the condition has increased by over 50 per cent in the past 10 years.[623] The high prevalence of diabetes (14.8 per cent) and hypertension (25.6 per cent) poses a significant challenge for current and future health systems, in terms of reorientation of systems towards prevention and promotion, as well as developing capabilities for screening, treatment and specialist management of chronic conditions.

Decentralization: The Papua New Guinea health system operates within a decentralized context through the legislated mandates of Provincial Health Authorities and District Local Level governments, who have the responsibility for most of the funding and delivery of provincial- and lower-level health-care services. Policy and Planning direction is set through the Federal Department of Health and through decentralized Provincial Health Authorities. The health system is highly decentralized and local governments have the primary responsibility for management of health services. The Organic Law of Provincial and Local Level Government mandates that provincial health authorities take responsibility for services management, while the National Department of Health has the role of setting policies and standards. Churches and NGOs play a crucial role is supporting provision of health services in rural areas, where they operate over 50 per cent of the rural health services network through support from government subsidies. Employer provided services through the mining and agriculture sectors, NGOs and the traditional health sector add further to the complexity of this decentralized and diverse health sector in Papua New Guinea.

620 See www.healthdata.org/papua-new-guinea.
621 See www.who.int/papuanewguinea/news/detail/13-02-2018-let-s-kick-tb-out-of-png.
622 See https://improvingphc.org.
623 See www.healthdata.org/papua-new-guinea.

Primary health care coverage and equity

Health coverage

The UHC essential services coverage index has shifted only slightly since the year 2000 when it was .27 to .33 in 2019, demonstrating an substantial unmet need for essential health services for a large proportion of the population.[624] Just over half of deliveries are attended by trained health personnel (56 per cent) which aligns with the rate of ANC visits (4) of 49 per cent in 2021. Immunization coverage rates have declined significantly associated with the impacts of the COVID-19 pandemic, with WUENIC estimates for 2021 being just 39 per cent for DPT3 and has been consistently below 50 per cent since 2015. Survey findings from 2018 found that 24 per cent of children aged 12–23 months had zero doses of scheduled vaccines, and furthermore established a trend of declining coverage and rising numbers of zero doses of vaccines between 2006 and 2018.[625] The polio outbreak in 2018/2019 was widespread across 9 provinces necessitating a national emergency response that included a nation-wide campaign, risk communication, and enhanced surveillance.[626] Given that 51 per cent of expected tuberculosis cases are being detected and treated, and 65 per cent of PLHIV are receiving ART, there is ample evidence of lack of coverage pf essential health interventions in Papua New Guinea that are having a direct impact on the survival and well-being of mothers and their children. NCDs pose an increasing threat to health and well-being with 25 per cent hypertension and 15 per cent diabetes prevalence (and both of which are rising in prevalence since previous assessments).[627] There is no operational, multisectoral NCD policy, strategy or action plan that integrates several NCDs and their risk factors.[628]

Health equity

Both the development and geographic landscape shape the patterns of health inequities in Papua New Guinea. Physical barriers include rugged topography, poor communications, poor transport systems and the lack of rural electrification. The country was ranked 140 out of 155 countries on the United Nations Gender Inequality Index in 2017,[629] highlighting a fundamental problem of social disadvantage and political marginilization of women that impacts on decisions regarding allocation of resources for the health of women and children. Demographic and Health Survey findings illustrate wide gaps in coverage between regions and provinces, and between population groups based on education levels and wealth quintiles.[630] Survey findings illustrate that up to 55 per cent of the population report distance as a barrier to health services access.[631] Engagement tends to be weaker with the urban poor populations and reaching remote area residents. Significant gaps in supply of health services in rural and remote areas, and a preponderance of funding allocations for hospitals, acutely disadvantages populations residing in rural and remote areas. The importance of close to community delivery for immunization services and for screening, detection and treatment for tuberculosis cases for example, all rely on the availability of a fully staffed front-line health services with links to community health workers. As illustrated elsewhere in this document, the tendency towards hospital and urban centrism for operational finance and human resources structurally disadvantages rural and remote populations in Papua New Guinea. In the short to medium term therefore, rebuilding the health system and financing operations in rural and remote areas is the priority challenge for addressing health inequities in Papua New Guinea, as exemplified in a back to basics approach now advocated in the National Health Plan (2021–2030) [see section on PHC directions]. Recommended operational actions to increase service access

624 See www.who.int/data/maternal-newborn-child-adolescent-ageing/indicator-explorer-new/mca/uhc-service-coverage-index-(sdg-3.8.1).
625 See www.dhsprogram.com/publications/publication-fr364-dhs-final-reports.cfm.
626 John J Hall et al., 2019, Poliomyelitis outbreak in Papua New Guinea: health system and health security implications for PNG and Australia. *Medical Journal of Australia* vol. 211, No. 4.
627 See https://improvingphc.org.
628 See https://data.unicef.org/resources/adolescent-health-dashboards-country-profiles/.
629 See https://apps.who.int/iris/handle/10665/280088.
630 See www.dhsprogram.com/publications/publication-fr364-dhs-final-reports.cfm.
631 See https://improvingphc.org.

for these more disadvantaged groups include increase the number of outreach services provided in rural areas and for the urban disadvantaged, improving availability of medical supplies, funding for operational activities and transport for referral services, and finally establishing community health posts with facilities and staff to deliver MCH services.[632]

Models of care

The National Health Plan envisions seven health-care levels including basic primary care delivered through health posts, sub-centres and health centres. It proposes an expended model of care based on a PHC approach. It is proposed that provincial health authorities develop a model of care that supports the range of essential clinical, PHC and public health interventions and services that incorporates self-care management, community engagement, prevention and promotion, early detection and intervention, and integration and continuity of health care. Reorientation of the health system towards this PHC approach would require addressing existing health system gaps and challenges as outlined below, as well as build governance and health provider capacity to manage and implemented more integrated and public health-oriented models of services.

Health system capacity

A recent health sector review confirmed significant gaps in human resource availability, and irregular and insufficient resource allocations for service provision in Districts and primary care centres which have been contributing factors to the widespread closure of primary care Aid Posts across the country. Facilities are open only 5-6 hours per day and most of the rural health facilities are closed due to gaps in human resources and operational financing. The main barriers to development of the health system therefore relate directly to the exercise of political power centrally and sub-nationally for resource allocation for health. The main barriers to health system development in Papua New Guinea are therefore related to development and follow through on health and planning policy commitments, and the political will to mobilise and commit resources to rebuilding the health system. The health system review found that execution of reforms was "patchy" and was constrained by unpredictable funding, health workforce shortages and maldistribution, a growing population size, and the double burden of communicable and MCH problems with the increasing burden of NCDs.[633]

Health financing and resource allocation

Health is predominantly public sector funded in Papua New Guinea. The Government developed a Policy on Free Primary Health Care and Subsidized Specialist Services (2014) which aimed at reducing barriers to care through removal of user fees for primary care access at aid posts, community health centres and urban clinics. Government spending as a percentage of current health expenditures has increased from 84.3 per cent in the year 2000 to 57.7 per cent in 2019. The level of priority set on health by the Government is reflected in the fact that government health expenditure as a percentage of domestic general government expenditures has declined from 8.3 per cent in the year 2000 to 6.4 per cent in 2019. Out of pocket expenditures in the same period (2000–2019) have remained static at around 9 per cent across this period, while external aid has scaled up significantly from 6.3 per cent in the year 2000 to 32.4 per cent in 2019.[634] The development partnership between the Government Australia and Papua New Guinea includes an overall budget allocation of 748 million for the fiscal year 2020–2021, with health security include COVID-19 preparedness and mitigation measures comprising one of the three development pillars in the budget allocation.[635]

632 See https://apps.who.int/iris/handle/10665/280088.
633 Ibid.
634 See www.health.gov.pg/pdf/NHP_1A15.pdf.
635 See www.dfat.gov.au/geo/papua-new-guinea/development-assistance.

Despite recent economic growth, the proportion of government investment in current health expenditures is declining while the proportion of external funding remains high, reinforcing the need for leadership advocacy and development cooperation consensus on PHC. A recent study found that fragmentation of responsibilities in the decentralized system is having an impact on the flow of recurrent expenditures for health operations. While provincial health authorities are responsible for recurrent financing in the delivery of primary care, other provinces rely mostly on national grants for funding operations.[636] The "back to basics" approach advocated for in Papua New Guinea to address gaps in access and outcomes requires substantial supply side inputs including for drugs, functioning equipment, supplies, skilled human resources for health and infrastructure) across the country, as well as more developed health management capabilities are required at provincial and districts levels.[637]

Health workforce

A health human resource profile of Papua New Guinea in 2018 found that the ratio of doctors, health extension officers, nurses, midwives and community health workers per 1,000 population was 1.03, which though increasing from 0.59 per 1,000 from the previous decade, is well below the recommended WHO threshold of 4.45 per 1,000 for attainment of universal health coverage. Information through the PHC performance initiative indicates a professional health workforce ratio to 1,000 population of just 0.59.[638] The health workforce, which is predominantly female, is inequitably distributed across the country, with the National Capital District having the highest proportion of health workers. In common with trends in other countries in the region, there is a high concentration of health staff in urban areas. Although 87 per cent of the population live in rural areas, just 34 per cent of the health workforce are based there. These inequities in distribution are exacerbated by high rates of absenteeism in rural areas. The inability to retain staff in these areas is linked with undersupply of essential medicines, poorly maintained infrastructure, and lack of operational finance.[639] Of the reported number of health facilities (n=2,672), it has been estimated that 776 (22.5 per cent) are closed.[640] Community health workers and village volunteer networks are major contributors to primary care. There are an estimated 5000 CHWs in Papua New Guinea who are trained in through a two-year certificate programme with access to clinical sites for their practical placements. There role includes promoting community action and participation for individuals, families and the community as a whole.[641] Papua New Guinea has a long tradition of village health volunteer networks (often referred to as village health assistants) providing support for first aid, treatment of diarrhoea and for nutrition support, and thereafter a traditional sector of village birth attendants and traditional health providers.

636 C. Wiltshire et al., 2020, *Papua New Guinea's Primary Health Care System: Views from the Front Line.* Canberra and Port Moresby: ANU and UPNG.
637 See https://apps.who.int/iris/handle/10665/280088.
638 See https://improvingphc.org.
639 See www.who.int/publications/i/item/9789290619246.
640 WHO Regional Office for South-East Asia, 2019, Papua New Guinea Health System Review. *Health Systems in Transition* vol. 9, No. 1.
641 C.L. Pilang, M.A. Gray and F.I. Oprescu, 2017, The evolution of the Community Health Worker program in Papua New Guinea University of the Sunshine Coast, Sippy Downs, Queensland, Australia. *Rural and Remote Health* vol. 17, No. 4, p. 3961.

Policy and strategy directions for primary health care in Paua New Guinea

Although there is no specific policy on PHC, there are broader strategic frameworks of high relevance to PHC that include the National Health Plan 2021–2030 and the Healthy Islands Concept.

Government expressed political commitment to health through the Alotau Accord and Alotau II, detailed in 2017, which outlines the Government's vision, mission and strategies, including that every citizen has the right to quality health care.

The National Health Plan 2021–2030 sets an objective for all partners to support the Free Primary Health Care and Subsidized Specialised Health Policy implementation.642 Although this policy introduces the Alma Ata definition of PHC in its introduction, for the purposes of this policy specifically, PHC is defined as "as ambulatory care in non-hospital or outpatient settings."

The National Health Plan 2011–2020 identified specific key investment areas or essential packages, such as child survival, maternal health, communicable disease control, emergency preparedness and response to outbreaks and promotion of healthy lifestyles. The updated plan discusses the need to refine specific essential packages of care for each level of the health system. Strategy 3.1.1 states the commitment to strengthening the integration of clinical services, public health interventions and PHC at all levels of care (essential health intervention package), demonstrating the intent to reorient services towards a PHC approach.

The Organic Law of Provincial and Local Level Government mandates that provincial health authorities take responsibility for services management while the National Department of Health has the role of setting policies and standards.

The National Health Plan 2021–2030 proposes implementation of a "back to basics" strategy that emphasizes community engagement, promotion and prevention and packaging of essential services supported through appropriate resource inputs (finance, human resources, medical products) and governance and leadership arrangements. A set of 10 key interventions for UHC are proposed in this plan that include:

- Building village health assistance
- Revitalising health promotion and prevention – healthy Islands concept
- Building stronger partnerships with all stakeholders
- Developing essential health intervention packages
- Strengthening the medical supplies pull system
- Developing e-health systems and strategies

50 per cent of health services in Papua New Guinea are provided through Church health services. The Christian Health Services of Papua New Guinea Act (2014) stipulates that these are private entities that receive government monies and who administer services under this Act and according to contractual agreements.

642 See www.health.gov.pg/pdf/FPHCSSSP_2014.pdf.

Priority actions for developing the primary health care approach in Papua New Guinea

The fundamental health priority in Papua New Guinea is availability and accessibility of basic front-line health services for women and children especially.

Leadership and collaboration

Even though there is no specific PHC policy, there is a wide range of national Laws, Health Plans and policies to support the PHC approach. A critical question in the Papua New Guinea analysis is on the strategy by which governments and partners can mobilise and commit resources to financing the back-to-basics PHC approach in Papua New Guinea. There are various leadership levels that require this level of commitment, including the parliament and office of the Prime Minister, the National Department of Health and the provincial and district level government authorities. The level of external aid has increased in recent years, and churches, NGOs and commercial companies are all active in health-care support or provision. In recognition of this complex services management and delivery environment, the National Health Plan 2021–2030 considers the need for strengthening collaborations with other sectors, civil society and development partners (strategies 2.2.1–2.2.3). A priority action could be to develop advocacy and consensus on PHC, potentially through the development of a health compact on PHC for UHC that specifies the roles and responsibilities and reporting and financing arrangements for different stakeholders for achieving the objectives of the National Health Plan.

Policy and governance

Country specific recommendations and policy on PHC is required. There is no clear consensus on the PHC approach. Global and Regional Frameworks for PHC needs to be contextualized into the Papua New Guinea context that would support more of a collective understanding on the PHC approach. A priority action could be to conduct national or provincial level capacity building seminars on the PHC approach as defined regionally and globally, as a step towards development of (a) a national PHC strategy or vision to drive forward implementation of the National Health Plan and potentially (b) national agreement or compact on PHC in Papua New Guinea to coordinate implementation from a multiple range of stakeholders, potentially facilitated through SDG3 Global Action Plan PHC accelerator coordination support or UHC partnership financing.643 Papua New Guinea is in the initial selection of intensified-support countries (13) under the SDG3 Global Action Plan PHC-Accelerator roll-out globally.[644]

Health workforce and health financing

The National Health Plan outlines core actions for human resource development and health financing. Human resource actions include improve the recruitment, deployment, and retention of competent health workers, developing the capacity of accredited health educational institutions to increase production of health professionals, introducing facility-based budgeting across all provincial health authorities to improve the visibility of budget allocations and as a means of improving resource allocation. Costing of implementation of the essential health package for UHC may provide an opportunity for local governments to plan and budget their investments in PHC for UHC. Given the extent of health system gaps in these two areas, a priority action could be for government and development partners to reach a national agreement or compact on PHC in Papua New Guinea to coordinate resource inputs from a multiple range of stakeholders for implementation based on the "back to basics" PHC approach already defined by the Government of Papua New Guinea. Based on the back to basics approach, this should focus on ensuring availability of primary care services in

643 See https://extranet.who.int/uhcpartnership/country-profile/papua-new-guinea.
644 See https://uhcplaunch.com/sites/default/files/media_documents/Deep%20Dive%20on%20SDG3%20GAP_WHO_UHC-P_Annual-report_2021.pdf.

rural areas 24/7. This means that in every LGA there is a functional health facility with adequate health financing, human resources, data for planning and management and a functional referral system.

Strategic purchasing

Given the scope of the work of the churches and other NGOs and commercial entities in health service delivery in Papua New Guinea, and the highly decentralized context, strategic purchasing of health care is a central direction for maintenance and revitalization of PHC services. Priority action will inform the how strategic purchasing policy and standards will operate nationally. The priority action should be to conduct an assessment of strategic purchasing arrangements and based on this assessment develop national policy, strategy and standards for management, financing and oversight of contractual arrangements for health service delivery.[645]

Community and multisector engagement

The National Health Plan and review have indicated several priority actions for strengthening community and multisector engagement and which include the following:

- Strengthening community health systems through engaging/Increasing Community Health Workers, monitoring and supervision.
- Ensure greater recognition of the PHC role played by Village Health Assistants (VHAs), supported by Community Health Workers.
- Developing sustainable incentive packages for VHAs that focus on health promotion and disease prevention and are responsive to individual settings (NHP).
- Establishing mechanisms for Multisector collaboration at all levels with local government and with churches, MOE and local government authorities.
- Strengthen the use of data and digital health for health planning, decision-making and health communications.

Adolescent health strategy

There are several reasons to focus on adolescent health strategy in Papua New Guinea.

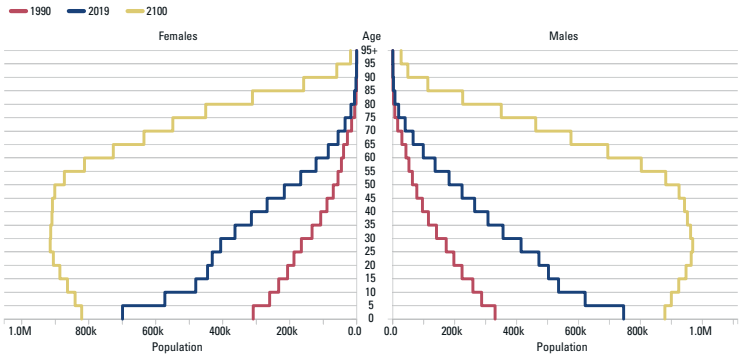
1. This age group represents 21 per cent of the population.
2. There are increasing risk factors for NCDs including high rates of tobacco use in boys (40 per cent) and girls (28 per cent) and increase in overweight status increasing from 6 per cent in 1975 to 31 per cent in 2016, as well as high exposure to communicable disease risk including tuberculosis.
3. The adolescent birth rate is very high at 68 per 1,000, and the regional value is 20.[646]
4. There are high rates of gender-based violence and HIV transmission risk among young people.
5. Adolescents in Papua New Guinea experience a substantial burden of poor mental health with mental disorders and self-harm which account for 10 per cent of the total burden of disease among youth aged 10–19, with suicide a leading cause of death among youth aged 15–19.[647] The COVID-19 pandemic has heightened the need for mental health and psychosocial support.
6. High rates of migration from rural areas to urban areas.

All of the above suggest need for priority actions in adolescent health through community engagement, adolescent friendly health services and sector collaborations with health, education and local government.

645 See https://apps.who.int/iris/bitstream/handle/10665/330247/9789240000025-eng.pdf.
646 See https://data.unicef.org/adp/snapshots/health/.
647 See www.healthdata.org/papua-new-guinea.

PRIMARY HEALTH CARE DIRECTIONS - PAPUA NEW GUINEA

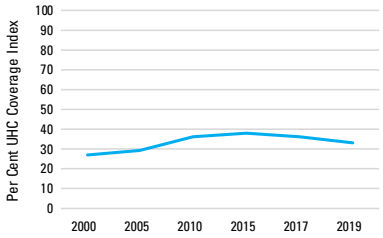
DEMOGRAPHIC TRANSITION



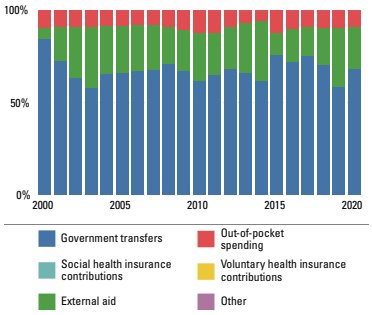
Source of Data: IHME: Country Profile Institute for Health Metrics and Evaluation (IHME). PNG profile. Seattle, WA: IHME, University of Washington, 2021. Available from https://www.healthdata.org/results/country-profiles

HEALTH COVERAGE AND HEALTH FINANCING (2000-2020)

PNG UHC Coverage Index 2000-2019

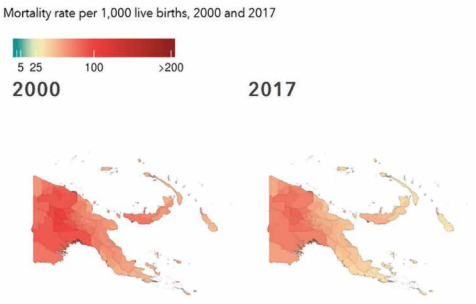


Sources of Health Expenditure 2000-2019



Sources of Data: https://www.who.int/data/gho/indicator-metadata-registry/imr-details/4834 Expenditures: National Health Accounts Data Base: https://apps.who.int/nha/database/country_profile/Index/en

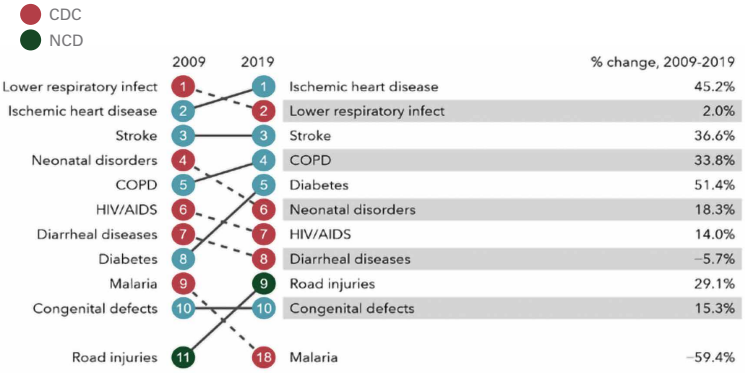
HEALTH INEQUITIES AND ACCESS and SUPPLY BARRIERS



- There is unmet need 67% for essential UHC coverage index index (GHO) (SDG 3.8.1)
- **Health Workforce** to 1000 Population ratio (.59) is well below the WHO threshold (4.45) (to reach UHC
- There are perceived **accessibility barriers** relating to distance (55%) (PHCPI)
- There is no data avaiable on the % Population in PNG that has > 10% of **annual household expenditure on health** (GHO)
- **Prevalence of NCDS:** Hypertension is 25%, Diabetes 15% with diabetes prevalence rising from the previous assessment (PHCPI)

Source of Data: IHME: Country profile Institute for Health Metrics and Evaluation (IHME). PNG Profile. Seattle, WA: IHME, University of Washington, 2021. Available from https://www.healthdata.org/results/country-profiles

EPIDEMIOLOGICAL TRANSITION



Source of Data: IHME: Country profile Institute for Health Metrics and Evaluation (IHME). PNG Profile. Seattle, WA: IHME, University of Washington, 2021. Available from https://www.healthdata.org/results/country-profiles

HEALTH CARE BENEFITS PACKAGE and PRIMARY HEALTH CARE POLICY DIRECTIONS

Health Care Benefits Package

The government developed a free primary health care policy 2014 which aimed at reducing barriers to care through removal of user fees for primary care access at aid posts, community health centres and urban clinics.

The National Health Plan identifies essential packages that include child survival, maternal health, communicable disease control, emergency preparedness and response to outbreaks and promotion of healthy lifestyles. The updated plan discusses the need to refine specific essential packages of care for each level of the health system., icnluding strtegies for integration of clinical services, public health interventions and primary healthcare at all levels of care .

PHC Policy and Strategy Directions

The National Health Plan 2021-2030 proposes implementation of a "back to basics" strategy that emphasizes community engagement, promotion and prevention and packaging of essential services supported through appropriate resource inputs (finance, human resources, medical products) and governance and leadership arrangements. A set of 10 key interventions for UHC are proposed in this plan that include:

- Building Village Health Assistance
- Revitalising health promotion and prevention – healthy Islands concept
- Building stronger partnerships with all stakeholders
- Developing essential health intervention packages
- Strengthening the medical supplies pull system
- Developing e-health systems and strategies

Sources: Government of Papua New Guinea Policy on Free Primary Health Care and Subsidized Specialist Services (2014) https://www.health.gov.pg/pdf/FPHCSSSP_2014.pdf , Government of Papua New Guinea (2010b). National health plan 2011–2020 - Volume 1: Policies and strategies. ;m http://www.health.gov.pg/publications/PNGNHP%20Vol1_2014.pdf , Government of Paua New Guinea National Health Plan 2021-2030 https://www.health.gov.pg/pdf/NHP_1A15.pdf

4.14 Vanuatu

Primary health care policy and development landscape

Vanuatu (population 319,137 in 2021)[648] is a Pacific Island lower middle-income country with GDP per capita of $3,274.[649] As is the case with many Pacific Island countries, the GDP of Vanuatu was reported to have contracted by 2.6 per cent in 2020, principally because of COVID-19 pandemic measures that had an impact on external trade and tourism.[650] The country has experienced a steady decline in the fertility rate from 4.7 in the year 2000 to 3.7 in 2020.[651] Vanuatu has a very young population. 22 per cent of the population are in the adolescent age group, with birth rate of 51 per 1,000 for girls aged 15–19 (2013).[652] Vanuatu has a predominantly rural population, with 25 per cent of the population being urbanized, most of whom reside in the capital Port Vila with its growing areas of peri-urban poor. There are external constraints on the country's development related to exposure to natural disasters (Cyclone Harold in 2020), climate vulnerability, a small formal labour market and limited diversification of the economic system. In the year 2020, 43 per cent of the population was affected by Cyclone Harold which has a serious impact on the economy, public services access and on food security, leading to a contraction of 9.8 per cent of the economy in that year.[653]

Vanuatu is subject to a double burden of communicable diseases and NCDs, with the trend towards death and disability from NCDs. The adult mortality ratio of 40 due to NCDs is one of the highest rates in the region. Diabetes and chronic kidney disease are now the third and sixth leading causes of death in 2019, with diabetes related mortality increasing by 59 per cent in the past 10 years. Both lower respiratory diseases and neonatal disorders, despite declining in incidence over the past 10 years, are the third and fourth causes of the most death and disability.[654] The Vanuatu Health Sector Strategy reports mental health to be a growing need.[655] Recent initiatives in NCD prevention and control have included 2020 has seen establishment of primary eye care and oral health outreach services, mind care services for improved mental health, and reduced tobacco use through adherence to legislation. Under-five mortality has declined from a rate 36/1,000 in 1990 to 23/1,000 in 2021, with a neonatal mortality rate of 10.2/1,000.[656, 657, 658] Over 45 per cent of all under-five deaths are estimated to be associated with under nutrition, with high rates of stunting (29 per cent).[659] The maternal mortality rate is 72 per 100,000 live births. It is important to note that malaria deaths have declined significantly over the past 10 years, demonstrating that the country has the capacity to make substantial public health improvements in a relatively short time. The Vanuatu Ministry of Health aims to eliminate indigenous malaria transmission from Vanuatu by the end of 2023.[660]

648 See https://data.worldbank.org/indicator/SP.POP.TOTL?locations=VU.
649 See https://improvingphc.org/.
650 See www.dfat.gov.au/sites/default/files/2020-21-vanuatu-development-program-progress-report.pdf.
651 See https://data.worldbank.org/indicator/SP.DYN.TFRT.IN?locations=TL.
652 See https://data.unicef.org/resources/adolescent-health-dashboards-country-profiles/.
653 See www.dfat.gov.au/sites/default/files/2020-21-vanuatu-development-program-progress-report.pdf.
654 See www.healthdata.org/results/country-profiles.
655 Ministry of Health Vanuatu Health Strategic Plan
656 See www.healthdata.org/results/country-profiles.
657 See https://improvingphc.org/.
658 IGME Draft UN estimates for child mortality indicators.
659 UNICEF Health and Nutrition Country Profile UNICEF Fiji 2020.
660 See www.nab.vu/document/health-national-strategic-plan-malaria-elimination-2021-2030#:~:text=Elimination%202021%2D2030-

Primary health care coverage and equity

Between the years 2000 and 2019, the universal health coverage index increased from .4 to .52,[661] which means there is a significant gap in the use of essential health services. Gaps in coverage are reflected in the findings that 64 per cent of expected tuberculosis cases being detected and treated, 78 per cent DPT3 coverage, and 51.4 per cent of pregnant women having 4 ante natal visits or more.[662] Vanuatu has a prevalence of hypertension of 24 per cent,[663] and of diabetes of 15.9 per cent.[664] The National Health Plan addresses the problem of health inequities by stating universal health coverage objectives of ensuring that all people of Vanuatu who need health services receive them, including women, youth, older people and vulnerable groups, without undue financial hardship. The National Health Strategy prioritizes the needs of the following groups for improved access to health-care services:

- ***People with disabilities:*** People with disabilities have poor access to health and rehabilitative care. Public health services for both public health and preventive services should be accessible as well as providing services that meet the specialized needs of people with disabilities in such areas as rehabilitation, and prosthetic and orthotic services.[665]
- ***Young people:*** The National Health Plan reports low access reproductive health information and services for young people, despite high rates of teenage pregnancy and the threat of HIV and other sexually transmitted infections. Challenges related to access for youth to health and social services include teenage pregnancy, drugs and alcohol, school dropout, sexual exploitation and barriers to school access.
- ***Urban poor:*** Slums are growing, and their growth has accelerated after recent disasters. Land access, unemployment, overcrowding, water and sanitation and food insecurity are some of the main issues for the urban poor.
- ***Women:*** Gender equality (equal access for women and men to resources and opportunities) and social inclusion are identified in the National Plan as being critical factors in determining equal access to and use of health and other services.

Health system capacity

The health system of Vanuatu has an extensive network of six hospitals, 34 health centres, 91 dispensaries and 245 aid posts. The 2020 UNICEF health and nutrition country profile states that although health facilities are well distributed, there is heavy reliance on tertiary care due to health workforce shortages at the primary level of care.

The health system of Vanuatu is highly verticalized even though a decentralization process is in progress. Provincial health authorities do not have full responsibility yet. To ensure transfer of responsibilities, there needs to be more clarity on accountability for performance and for implementation through standard operational procedures so that health system and PHC policies and plans can be translated into practice. There is limited integration of curative and public health services leading to siloed programme management and challenges with coordination with financial and human resources management. The human resources strategy reports that although there are some good models of care such as Integrated Management of Childhood Illness (IMCI) and the malaria programme that link with the system according to a continuum of care, more attention needs to be given to integration for people with complex and chronic health-care needs.[666]

,Health%20%2D%20National%20Strategic%20Plan%20for%20Malaria%20Elimination%202021%2D2030,Vanuatuby%20the%20end%20of%202023.

661 See www.healthdata.org/results/country-profiles.

662 See https://improvingphc.org/.

663 Proportion of the adult population with hypertension on medication with blood pressure controlled (Systolic BP < 140, diastolic BP < 90).

664 The proportion of the adult population with raised fasting blood glucose (>=7.0 mmol/L or on medication)(age-standardized estimate).

665 Ministry of Health, Vanuatu Health Strategic Plan 2021–2030.

666 Ministry of Health, Workforce Development Plan 2019–2025.

From a health financing perspective, out of pocket expenditures on health as proportion of total health spending have declined from 10.05 per cent in the year 2000 to 8.45 per cent in 2019. As measured from the perspective of domestic priority of health, the share of general government health expenditure as a share of domestic general government expenditure has declined over the same period from 9.7 per cent to 5.0 per cent. Gaps in financing have been taken up through international financing, which has expanded from 14.9 per cent to 31.27 per cent of total health expenditure in 2019.[667] The Workforce Development Plan highlights the fact that resource allocation is currently skewed towards curative services particularly those at Vila Central Hospital (VCH). As more funding has flowed to hospitals, the share of resource allocation for primary care has fallen. Health services are funded publicly and through the government and international cooperation. The Role Delineation Policy specifies that user fees, if applied, should not deter an individual's access to services and in particular should not obstruct the development of strong preventive health services.[668]

From a human resources management perspective, human resources have been reported to be the biggest development challenge for the health sector in Vanuatu. These challenges are associated with vacant posts, insufficient workforce numbers, and understaffing, which contributes to further loss of motivation for over worked health staff.[669] There is a significant gap between the numbers of staff required to meet standards as specified in the Role Delineation Policy and the actual number working in their posts. Workforce shortages contribute to inequities in health services access. This is driven in part by reluctance of medical professionals to work in provinces and remote locations. Given the significant human resources numbers, distribution, and competency gaps, volunteer community volunteer health workers (VHWs) have a critical role in sustaining coverage through community based primary care. The Role Delineation Policy defines the VHW as an informal health worker trained to achieve specific, necessary skills and practices with roles in facilitating operations and maintenance of Aid Posts, providing health information reports and collecting and recording user fees for outpatient consultations.

Future health systems

There are important Implications for Future PHC Oriented Health Systems based on some of the findings on the development landscape, disease burden, and coverage and equity. The persistence in communicable diseases, the rise in non-communicable diseases (NCDs), and the relatively high maternal and neonatal mortality rates represents a 'triple burden' of health challenges for Vanuatu society. The large cohort of adolescents in the country will require a focus on the health of young people including responding to their mental health needs. NCDs are placing an increasing burden on the health system, which rationalises increased investment in promoting and supporting healthier lifestyles through community-based prevention and home-based care, early intervention as well as specialist referral for more complicated conditions.

The ongoing needs of more disadvantaged populations in remote areas of the country will mean the future health systems will be more effective in financing outreach operations to meet the ongoing maternal and child health and communicable disease control needs of these groups. Future health systems will be more digitally connected, with the opportunity to connect people and providers to services and information. The decentralization policy outlined in the role delineation policy will require the development of subnational management governance capacity, which will require investment in middle-level human resource capacity, financial management systems, integrated planning and budget and greater engagement of multisector and community voice in health strategy and operations. As a small island state, Vanuatu is highly vulnerable to the natural disasters and the impacts of climate change, which, together with the threat of pandemics, provides a strong rationale for investment in emergency preparedness, resilience and response capacity. This includes the planning and construction of health facilities so that they are more resilient to the impacts of extreme weather events. The following sections outlines some of the policies and plans of the Government of Vanuatu for preparing for the future through PHC policy and strategy development.

667 See https://apps.who.int/nha/database/country_profile/Index/en.
668 See https://moh.gov.vu/images/health_policies/policies/Role_Delineation_Policy-_Final.pdf.
669 Ministry of Health Vanuatu, Health Strategic Plan 2021–2030.

Policy and strategy directions for primary health care

Governance and policy

In Vanuatu, PHC directions are governed by national policies and plans, including legislation.

Healthy Island Vision: The objective of this policy is to strengthen the capacity of the country for promoting, preventing, and protecting health.[670] The Policy Statements defines the principles of Health Promotion as the main a vehicle for to revitalize PHC. The healthy island vision includes a "Vision to Action" plan that focuses on translating concepts to action implementation strategies from national to community level.

Public Health Act: The Public Health Act (1994)[671] sets out regulations on notifiable diseases, vector control, water supply, housing, smoking regulations and road safety, with various amendments made to the Act regarding management of public health emergencies in 2021 and 2022.

Health sector strategy: The new health sector strategy of the Government of Vanuatu aims to improve population health through an effective decentralized health system that has a PHC focus. This involves redesign of the health system to ensure that the system is more resilient to health shocks, and through promotion and active facilitation of healthy lifestyles and health-seeking behaviours. Specific components and levers of PHC are outlined in the strategy:

- Integrated health services based on a continuum of care.
- Community engagement that involves "collective participation in health promotion, policy contribution, and accountability at all levels.
- Multisectoral action based on partnerships with government agencies, development partners, civil society, and the private sector.
- Governance of the health sector through enhanced decentralized management and human resources. This process involves periodic review of relevant sectoral policies such as the Role Delineation Policy and the National Referral Policy. This process aims to guide the continued decentralization of PHC service management, delivery and quality assurance.

Role Delineation Policy: The policy identifies the minimum package of services that should be delivered through all health facilities in Vanuatu. It identifies staff requirements, facility and equipment requirements to deliver these services. The MOH has lead responsibility for public health functions, including for CDC, immunization, environmental health, and food safety regulation and other disease prevention and screening programmes. The elements of PHC are defined in the Role Delineation Policy, including health promotion and the principles of PHC; community participation; maternal newborn and child health (aged 0-5); child and adolescent health (aged 5–17); food and nutrition; environmental health and water, sanitation and hygiene (WASH); endemic communicable diseases (assessment, diagnosis, management and referral); NCDs (prevention, management and/or referral); and the provision of essential medicines and commodities.

670 See https://moh.gov.vu/images/health_policies/policies/National_Policy_and_Strategy_for_Healthy_Islands_ver2_2011-2015-_Final.pdf.
671 See www.ilo.org/dyn/natlex/natlex4.detail?p_isn=112766.

Models of care

The model of care in Vanuatu is informed by the PHC approach. The concept of PHC includes all levels from national to the community level and supportive system. At the community level, an Aid Post is established by the community, and a Village Health Worker is elected by the community to work in this location. Aid posts refer to a Dispensary and Heath Center where the community nurses work. Provincial Hospitals function as referral hospital and provide secondary level care. Tertiary care is provided by Villa Central Hospital. PHC Policy and Strategy is coordinated nationally through the Public Health Department at the Ministry of health and Provincial Health Offices implement activities in collaboration with community-based services.[672] The 8 key elements of effective of PHC described above are used as a guiding framework to describe services to be delivered at each level of care and by each type of health facility.[673] The following section outlines some priority action areas for stakeholder support for the PHC approach.

Priority actions for developing the primary health care approach in Vanuatu

Governance and policy

As outlined in this profile, Vanuatu has the basis of many PHC policies and strategies. The key issue relates to implementation with potentially three pathways to accelerating the PHC approach:

- Capacity-building on PHC and the PHC approach for all levels of the health system
- Development of standard operation procedures and resourced plans to support and guide implementation of the PHC approach especially at the Provincial level
- Decentralization is a strategic direction of the health sector in Vanuatu. More investment is required in human resource development at Provincial level for decentralized management of integrated service packages. Accountability for performance can be developed through inclusion of PHC indicators into annual plans.

Resource allocation

The finding that there has been a levelling of health funding, and a concentration of funding in the hospital sector, has the potential to result in a decline in the quality and availability of primary care facilities and preventive services. Financing of prevention, protection and promotion are central to the PHC approach.

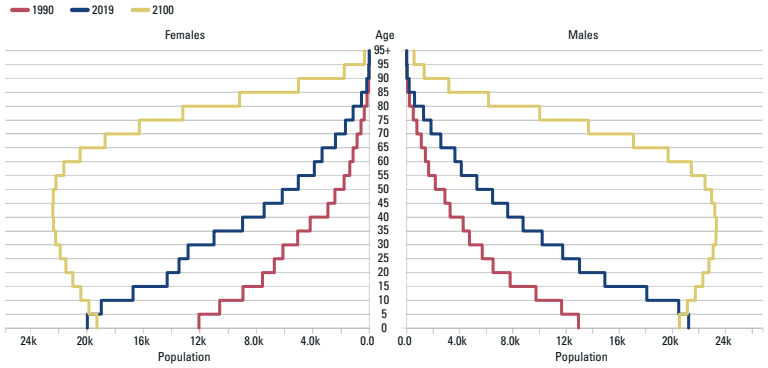
Community engagement

The current demographic trends illustrate the rising impacts of NCDs on population health. There is potential for building community engagement strategies at country level to ensure adequate availability of a community-based workforce to support prevention and promotion for maternal and child health and nutrition, home based care for chronic conditions and for referral in the event of acute conditions, and for emergency preparedness and response planning.

672 See https://moh.gov.vu/images/health_policies/policies/National_Policy_and_Strategy_for_Healthy_Islands_ver2_2011-2015-_Final.pdf.
673 See https://moh.gov.vu/images/health_policies/policies/Role_Delineation_Policy-_Final.pdf.

PRIMARY HEALTH CARE DIRECTIONS - VANUATU

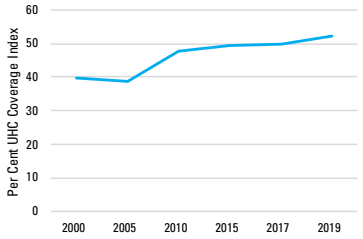
DEMOGRAPHIC TRANSITION



Source of Data: IHME: Country profile Vanuatu Institute for Health Metrics and Evaluation (IHME). Vanuatu rofile. Seattle, WA: IHME, University of Washington, 2021. Available from https://www.healthdata.org/results/country-profiles

HEALTH COVERAGE

Vanuatu UHC Coverage Index 2000-2019

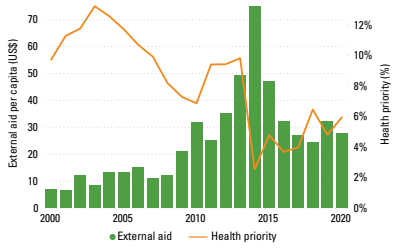


- PHC indicators
- There is unmet need 48% for essential UHC index
- Ante Natal Care Coverage 51.8%
- Delivery by Trained Personnel 89.4%
- DPT3 Coverage 78%
- TB Cases Detected and Treated 64.3%
- Maternal Mortality Ratio 72/100,000
- Under 5 Mortality 23 per 1000 live births
- Adult Mortality Ratio due to NCDs 40%
- Prevalence of Diabetes 15.9%

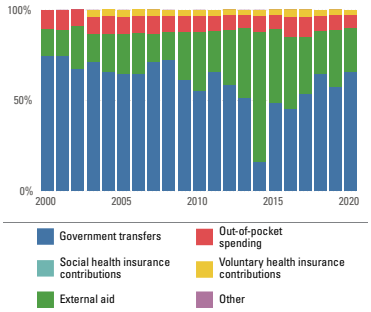
Sources of Data: Primary Health care Performance Initiative : https://improvingphc.org/east-asia-pacific/vanuatu

HEALTH FINANCING

External aid and Health Priority (External aid per capita and GGHE-D%GGE)

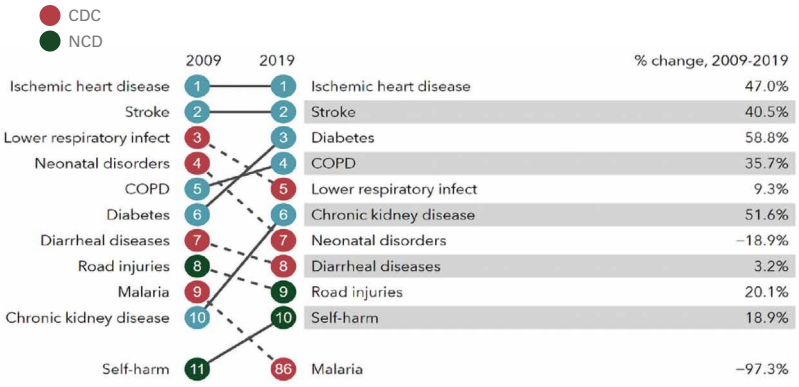


Sources of Health Expenditure



Source of Data: Health Financing Country profiles National Health Expenditure Dat Base WHO: https://apps.who.int/nha/database/country_profile/Index/en

EPIDEMIOLOGICAL TRANSITION



Source of Data: IHME: Country profile Vanuatu Institute for Health Metrics and Evaluation (IHME). Vanuatu Profile . Seattle, WA: IHME, University of Washington, 2021. https://www.healthdata.org/results/country-profiles

HEALTH CARE BENEFITS PACKAGE and PRIMARY HEALTH CARE POLICY DIRECTIONS

Health Care Benefits Package

This Role Delineation Policy (RDP) identifies the minimum package of services that should be delivered through all health facilities in Vanuatu. It also identifies staff requirements, facility and equipment requirements to deliver these services. The Ministry of Health (Vanuatu) has lead responsibility for public health functions.

All packages of services are informed by the following PHC components:

1. Health Promotion and community particiption
2. Maternal newborn and child health (aged 0-5).
3. Child and adolescent health (aged 5-17)
4. Food and nutrition
5. Environmental health and water, sanitation and hygiene (WASH)
6. Endemic communicable diseases (assessment, diagnosis, management and referral)
7. Non-communicable diseases (prevention, management and/or referral)
8. Provision of essential medicines

PHC Directions

The model of care in Vanuatu is governed by the Decentralization Act which provided for the creation of the present six provinces and the devolution of health care service provision (preventive, curative and rehabilitation) to provincial health care administrations. Policies indicate a commitment to devolve health service functions to all areas of Vanuatu in accordance with the principles of access, equity and health needs.

The "eight key elements of effective Primary Health Care " are used as a guiding framework to describe services to be delivered at each level of care and by each type of health facility

A Healthy Islands policy provides the platform for enabling action across and within settings to

address health priorities using a primary health approach. In Vanuatu these settings are: Healthy

Villages; Healthy Schools, Healthy Markets, and Healthy Clinics.

In line with Role Delineation Policy, the development of decentralised human resource management and service delivery capacity will remain a major strategic direction for PHC in the coming decade.

Sources: .Ministry of Health Role Delineation Policy RDP). Ministry of Health. Healthy Island Vision, National Health Sector Strategy

4.15 Solomon Islands

Primary health care development landscape

Solomon Islands (population 707,851, 2021)[674] is a lower middle-income Pacific Island State with a GDP per capita of $2,305 in 2021, having increased from US$ 974 per capita in the year 2000.[675] Since the year 2003, up until 2019, Solomon Islands maintained GDP growth rates that ranged between 1.2 per cent (2014) and 9.7 per cent (2010). In line with many of the other Pacific Island States, the country experienced negative growth in 2020 and 2021 due to COVID-19 pandemic related interruptions to tourism and trade.[676] Most of the population subsides on cash crop or subsistence agriculture. Given the economy is narrowly based, with a population dispersed across a wide geographic region that includes over 900 islands, the country is highly vulnerable to shocks such as the COVID-19 pandemic, which was expected to result in a further contraction of the economy in 2022.

The fertility rate is currently 4, have declined somewhat from a rate of 4.8 in 2000.[677] The country has doubled in population size since 1993 (354,086).[678] There is therefore a comparatively large birth cohort,[679] and the adolescent age group represents 22 per cent of the share of the total population.[680] This aligns with the UNICEF estimate that, across the Pacific Island States, 14 per cent of the 2.57 million population are aged between 0-5 years, and 40 per cent are aged under 18.[681] The country is therefore in the early stages of demographic transition. Although the share of older people in the population is expected to increase across the twenty-first century, Solomon Islands remains a country of young people [see infographic].

Demographic and social trends have meant that the country is undergoing an epidemiological transition, as reflected in a rise in in prevalence of non-communicable diseases (NCDs). Rates of death due to diabetes have increased by 48 per cent between 2009 and 2019[682] with prevalence of diabetes (13.9 per cent) still rising.[683] In terms of communicable diseases, although there has been a decline in the prevalence of malaria, tuberculosis and vaccine preventable diseases, these remain major public health priorities in the country, along with sexually transmitted infections, acute respiratory tract infections, diarrhea, viral hepatitis, dengue fever, and measles. Recent outbreaks suggest immunization coverage is insufficient.

The Ministry of Health and Medical Services (MHMS) reports that NCDs now account for 66 per cent of the total burden of disease, in contrast to a reported 4 per cent of morbidity and mortality due to NCDs in 1990.[684] This shift in the distribution of causes of death towards NCDs is reflected in tracking of risk between 2009 and 2019. Prevalence of metabolic risk has increased sharply over the past 10 years (2009–2019) including for

674 See https://data.worldbank.org/indicator/SP.POP.TOTL?locations=SB.
675 See https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=SB.
676 See https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?locations=SB.
677 See https://data.worldbank.org/indicator/SP.DYN.TFRT.IN?locations=SB.
678 See https://data.worldbank.org/indicator/SP.POP.TOTL?locations=SB.
679 See www.healthdata.org/results/country-profiles.
680 See https://data.unicef.org/adp/country/vnm./
681 UNICEF Pacific Multi-Country Profile 2023–2027.
682 See www.healthdata.org/results/country-profiles.
683 See https://improvingphc.org.
684 MHMS, 2021, Environmental and Social Management Framework

high fasting plasma glucose (60 per cent increase), high body mass index (40 per cent increase) and high blood pressure (32 per cent increase). Tobacco use and dietary risks are among the main behavioural risk, with risk from malnutrition having declined by 31 per cent over the same period[685] while more than half of children aged 5–19 in 10 Pacific Island countries are overweight.[686] The rates of these behavioural risks indicate that the prevalence of NCDs is likely to persist and/or increase over the coming decades.

The combination of behavioural, metabolic, and environmental risk is in all probability being accelerated by urbanization. Since the year 2000, the proportion of the population residing in urban areas has increased from 16 per cent to 25 per cent in 2021, with urban growth set to continue its current trajectory.[687] Informal settlements in Honiara are reported to be growing at 12 per cent per year and represent 40 per cent of the population of Honiara.[688, 689] Main challenges for these communities include housing availability, water and sanitation, and high vulnerability to extreme weather events. *Urbanization* has had an impact on adolescent well-being and child protection, given the breakdown in traditional support networks and children's separation from families.[690] Rapid urbanization represents major challenges for PHC and local government planners, given the pace of growth and the challenge of mounting a timely policy and public health infrastructure response.

Despite the growth of urban centres, the population of Solomon Islands is predominantly rural (75 per cent) so the main challenge is ensuring services and resources are adequately decentralized. The Government of Solomon Islands is moving towards a system of decentralization and performance culture to promote efficient use of funds and to bring public services closer to the population. In terms of practical outcomes, there is greater focus on the provincial level and front-line services. From the perspective of PHC, decentralization of resources to the provincial level will provide opportunities for closer collaborations with churches, businesses, NGOs and local members of parliament in developing a coordinated approach to health. Analysis of the implementation of the most recent National Health Plan found that decision makers at provincial level were unable to allocate resources to areas of highest need, and the operational budget could not be used to support core functions in the provinces.[691]

In summary, trends in urbanization and decentralization, and measures for increasing accountability are three themes that are consistently addressed by health planners and policymakers in Solomon Islands, as are the challenges of addressing the triple burden of communicable diseases and NCDs and the unfinished agendas in the areas of maternal, neonatal, child and adolescent health.

Primary health care coverage and equity

Health coverage

The UHC Essential services coverage index (SDG target 3.8.1) remains one of the lowest in East Asia and the Pacific, having reached just .50 in 2019. This coverage has increased from .35 in the year 2000, which represents an increase of 0.8 per cent in the coverage index per year since 2000.[692] Two assessments of the proportion of births delivered in facilities in 2007 and 2015 remained at 84 per cent.[693] Immunization coverage (Diphtheria, Pertussis and Tetanus vaccine 3) has been sustained at 85 per cent or above since 2018 (WHO-

685 See www.healthdata.org/results/country-profiles.
686 UNICEF Pacific Multi-Country Profile 2023–2027.
687 See https://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS?locations=SB.
688 See www.adb.org/sites/default/files/project-documents/49460/49460-001-dpta-en.pdf.
689 See http://sites.utexas.edu/climatesecurity/2020/03/01/informal-settlements-oceania/.
690 UNICEF, 2018, State of the Children Report – Pacific Island Countries.
691 National Health Plan 2016–2020.
692 See www.who.int/data/maternal-newborn-child-adolescent-ageing/indicator-explorer-new/mca/uhc-service-coverage-index-(sdg-3.8.1).
693 See www.who.int/data/maternal-newborn-child-adolescent-ageing/indicator-explorer-new/mca/proportion-of-births-delivered-in-a-health-facility.

UNICEF) and experienced a drop in coverage of 7 per cent from the previous year in 2021.[694] The National Health Plan reports that malaria and tuberculosis deaths have been reduced by two thirds in the past 10 years, and that the threat from these diseases is decreasing. NCDs such as cardiovascular disease, diabetes, cancer and chronic lung diseases are the leading cause of morbidity and mortality in Solomon Islands [see infographic], where health facilities were designed to treat acute illness. The National Plan (2016–2020) reports that outpatient visits for diabetes and hypertension were not increasing despite rising prevalence NCDs. In response to this situation, WHO has been assisting MHMS to develop a systems-based initiative (Solomon Islands Package of Essential Non-communicable Disease programme) to identify and treat people who have NCDs.[695]

There is reported to be limited health data on mental health conditions for adolescents in the Pacific Island States, although the data that is available is reported to be an emerging area of concern.[696] A health system review from 2015 found that although primary care facilities have the capacity to treat and refer patients, most facilities are poorly equipped to do so.[697] Risk factors for youth in the Pacific include low secondary school retention rates (though improving), limited access to reproductive health rights, high rates of informal or seasonal work and exposure to domestic and gender-based violence.[698] The National Youth Policy states that, like some of the other Pacific Island States, there is a wide definition of youth that includes young people aged between 15 and 34 years of age. 70 per cent of the total population are under the age of 34 with 28 per cent in the above-mentioned youth bracket, with this projected to continue to increase. The Youth Policy proposed strategies focussing on empowering youths to combat and reverse the threat of communicable diseases and NCDs, address sexual and reproductive health including teenage pregnancy, and mental and psycho-social health issues including drug abuse and suicides and nurturing cultural wellness and social wellness, strategies for sports and recreation. The youth policy proposes that 75 per cent of all marginalized youths and youths living with disability have equal opportunity and access to all development benefits including in health, education and employment.[699]

Health equity

Child mortality has been halved between 1990 (49.5 per 1,000 live births)[700] and 2021 (19 per 1,000 live births). A large proportion of these deaths are in the neonatal period (8 per 1,000 live births).[701] Demographic and Health survey data from 2015 highlights significant geographic variations in mortality rates, ranging from 37 per 1,000 in Malaita to 18 per 1,000 in Western Province[702] [see infographic]. Along with location, mothers' education level was associated with mortality rates, with children of mothers with no education having a child mortality rate of 47 per 1,000, which is nearly twice as high as mothers who have primary (21 per 1,000) or secondary level education (26 per 1,000). In 2023, a statistical analysis of trends in under-five mortality in Solomon Islands found that sociodemographic factors, including ethnicity, religion, rural location and maternal age greater than 35 years, were all associated with under-five mortality.[703] Solomon Islands has among the highest maternal mortality rates in the region, at 104 per 100,000 live births (2017).[704] A mapping of health facilities by the Government provides a clear picture of the health services network and the vast geographic distances and sea crossings between primary care facilities, provincial centres and hospital facilities (more than 300 in total). These vast distances contribute to geographic isolation, and health-care access disparities reflect population dispersal with provincial centres and the capital city having better hospital access.[705]

694 See https://immunizationdata.who.int/pages/coverage/DTP.html?CODE=SLB&ANTIGEN=DTPCV3&YEAR=.
695 See www.who.int/news-room/feature-stories/detail/addressing-ncds-in-solomon-islands.
696 UNICEF, 2018, State of the Children Report – Pacific Island States.
697 WHO Regional Office for the Western Pacific, 2015, Solomon Islands health system review. *Health Systems in Transition* vol. 5, No. 1.
698 UNICEF, 2018, State of the Children Report – Pacific Island States.
699 Ministry of Women, Youth, Children and Family Affairs, National Youth Policy 2017–2030.
700 See www.healthdata.org/results/country-profiles.
701 See www.improvingphc.org.
702 See https://pacificdata.org/data/dataset/oai-www-spc-int-f5f42ae3-baef-4317-9f90-c6f7233ff7d2.
703 Lydia S. Kaforau et al., 2023, Prevalence and risk factors associated with under-five mortality in the Solomon Islands: an investigation from the 2015 Solomon Islands demographic and health survey data. *The Lancet Regional Health -Western Pacific* vol. 33, 100691.
704 See www.who.int/data/gho/data/indicators/indicator-details/GHO/maternal-mortality-ratio-(per-100-000-live-births.
705 See https://openknowledge.worldbank.org/bitstream/handle/10986/30022/AUS0000153.pdf?sequence=1&isAllowed=y.

Public health

A recent multisector profile by UNICEF of Pacific Island countries found that there were 690,265 people without basic sanitation in Kiribati, Solomon Islands and Vanuatu. The profile reports that 11 countries have access to basic water and sanitation above 60 per cent, but key challenges were identified in Kiribati and Solomon Islands. Furthermore, stunting effects one third of children in Solomon Islands.[706] At the same time, there are trends towards increasing overweight status in young adolescents, especially girls. Rates of overweight in girls (aged 10–19) have increased from 14 per cent in 1990 to 31 per cent in 2016, with low rates of physical activity being one of the main factors associated with this outcome (82 per cent for boys and 85 per cent for girls).[707] The annual probability of a natural disaster in Solomon Islands is 13.5 per cent, which, is a lower risk than all other Pacific Island countries apart from Samoa (18.9 per cent) and Vanuatu (29.7 per cent).[708] A recently published profile of climate change identified elevated risks for Solomon Islands of vector borne (dengue) and infectious diseases. The increased risk is related to changes in temperature, precipitation and humidity and elevated NCD risks associated with impacts of climate on food security, agriculture and fisheries. The Government has developed a national health and climate change plan, although implementation status of the plan is reported to be limited in relation to health mitigation and health budget allocation. As of 2020, there was no reported multisector agreement on climate between health and other sectors.[709] The Health Promotion and Healthy Settings Policy (2021) reflects arrangements for multisector engagement in health at the provincial level, in area health centres and in community settings that include villages, schools, marketplaces, workplaces, health facilities and towns.[710] A policy brief on MNCH notes that health and nutrition issues are not identified in the National Education Strategic Framework for the development of the education sector, except for the section on Early Childhood Care and Education (ECCE). There are health related components in the National Food Security and Safety Plan 2016–2020.

COVID-19 and emergency preparedness and response

In terms of emergency preparedness and pandemic response capability, recent outbreaks in the country, low levels of investment in essential health services and in trained health-care workers are reported to have exacerbated the risks associated with COVID-19 response. The National Health Emergency Operations Center oversees all operations and activities relating to COVID-19, and it has teams, including the provincial team, public health team, planning and operation team, clinical team, administration and finance team, and risk-communication team. No information has been identified that would inform and evaluation of the effectiveness of the response.

In summary, in Solomon Islands there are distinct advantages to expanding public health capacity, given that many of the determinants of population health are external to the sector in such areas as climate, disaster and pandemic response, food security, behavioural risk and environmental health. These areas all require investment in the main elements of public health as defined globally in the PHC approach – namely promotion, protection, prevention, surveillance capacity and emergency response.

Health systems and primary health care

The network of public health care provides universal cover of essential health services. Six levels have been defined for the health systems which include community health centres, rural health centres, area health centres, urban health centres, general hospitals and the National Referral Hospital. Community level health services are delivered by facility-based staff. These staff partner with community volunteers, faith-based

706 See www.unicef.org/pacificislands/reports/unicef-pacific-multi-country-profile-2023-2027.
707 See https://data.unicef.org/resources/adolescent-health-dashboards-country-profiles/
708 UNICEF, 2018, State of the Children Report – Pacific Island States.
709 WHO, 2019, Health and Climate Change Country Profile 2020: Solomon Islands.
710 MHMS, Solomon Islands, National Healthy Settings Policy, May 2021.

organizations, community groups, non-government organizations and other stakeholders. Outreach services aim to provide both clinical and preventive health-care services.[711]

Due to the public sector character of the health system in Solomon Islands, coverage and equity rely in large part on supply side investments and efficient and equitable use of such resources. The National Health Plan (2016–2020) reports that many provinces have health facilities that are closed, health workers are absent from posts and 73 per cent of primary care facilities are receiving adequate essential medicines and equipment supply. The National Health Plan identified success factors in health system performance that included skilled leadership in provinces and programmes, resource availability and formation of partnerships at national and provincial levels.

Health financing

Public sector funding makes up a significant proportion of total health expenditures in Solomon Islands on health, taking up 81.2 per cent of total domestic current health expenditures [see infographic]. A financing assessment conducted in 2018 found that the largest expenditure is on staff payroll and benefits, and the largest spending groups are provincial divisions, the National Referral Hospital (NRH) and corporate services.[712] Social health insurance systems have not been developed in the country. The level of priority placed on health by the government as measured by government spending as a percentage of domestic general government expenditure on health, has declined significantly from 19.2 per cent in the year 2005 to 10.1 per cent in 2020. The level of out-of-pocket expenditures as a percentage of total health expenditures remains very low as is the case in most of the Pacific Island countries and has risen slightly from 2005 and reached 3.8 per cent in 2020. As services are primarily funded through the MHMS, access is in principle low cost. However, care should be taken in interpreting this as meaning there are limited financial barriers, given that many of the costs incurred by patients and their families relate to indirect costs such as travel and time.[713] There is no data currently available on the proportion of household budget expended on health (SDG target 3.8.2). External sources of expenditure make up a significant proportion of total health expenditure, which reached 50 per cent in 2009 and has since declined to 15 per cent in 2020 which is line with general trends on external financing in the region. Consistent with these trends in external financing, national financing of the health systems as a proportion of total health expenditures has expanded from 63 per cent in 2010 to 81 per cent in 2020.[714]

In summary, limited private sector financing, declining external assistance and the absence of insurance systems mean that the commitment of national leadership to the public financing of PHC is a main pillar for scaling up a PHC approach. The fact that health spending has increased only slightly from $89 to $99 per capita over a 15-year period (2005–2020) demonstrates that health investment is declining in real terms and is not keeping pace with economic and population growth.

Health workforce

The health workforce to population ratio for nurse midwifes is 2.2 (2018) and for physicians it is 0.2 (2016) per 1,000.[715] This is well below the target of 4.45 professional health staff per 1,000 population recommended by WHO to achieve UHC. In terms of workforce distribution, medical staff are concentrated at the National Referral Hospital. One report from the National Health Plan indicated that of the 86 practicing doctors in the country, 73 were located at the National Referral Hospital (2014). However, the plan indicates a scale up of the medical workforce between 2016 and 2020 with recent graduates. Rural Health centres and area health centres are staffed by nurses and nurse aids, meaning that the front-line services are essentially nurse led with referral to doctors at a higher level. Overall, the health workforce is 54 per cent female.[716] The Role

711 See https://solomons.gov.sb/wp-content/uploads/2020/02/MHMS-Role-Delineation-Policy.pdf.
712 See https://openknowledge.worldbank.org/bitstream/handle/10986/30022/AUS0000153.pdf?sequence=1&isAllowed=y.
713 See https://openknowledge.worldbank.org/bitstream/handle/10986/30022/AUS0000153.pdf?sequence=1&isAllowed=y.
714 See https://apps.who.int/nha/database/country_profile/Index/en.
715 See www.who.int/data/gho/data/themes/topics/health-workforce.
716 WHO, 2014, Health Workforce Profile Solomon Islands.

Delineation Policy proposes reforms to orient the workforce towards more of a PHC approach through shifting from the current nurse-based model for primary care to a multidisciplinary model, with the aim of transitioning the nurse aides roles to community based work, while at the same time developing multi-skilled clinical and public health staff capacity at area health centres.[717]

Community engagement – Community health workers

A National Health promotion Policy describes the role of a "Healthy Village Promoter" that is linked to a Village Health Committee, although no information is available on implementation.[718] There is limited information available in the literature on the role of village health volunteers (VHVs) in the Solomon Islands. There are some examples, however. Roles have been described mainly in relation to social mobilization of mothers for ANC.[719] Volunteers were engaged in COVID-19 operations and vaccination roll out. MHMS engaged with Solomon Islands Red Cross Society and Solomon Islands Planned Parenthood Association to engage through the work of 55 volunteers support current COVID-19 operations and vaccination roll out.[720] Given that many health workers were infected with COVID-19, authorities trained non-health workers on how to scale up rapid testing to address gaps in the health workforce.[721] World Vision reports on develop of networks of VHVs to assist with growth monitoring and nutrition education in communities for supporting improvements in maternal and Child health.[722] Aside from these initiatives, there is limited information on engagement strategy and on the functions and scope of work of community health workers. Peak national documents including the National Health Plan and the Role Delineation Policy do not make significant reference to the role of community/volunteer health workers in expanding health-care access or coverage or of engaging in public health activities such as prevention or promotion. As outlined above, there are proposals in the Role Delineation policy to transition the nurse aid positions into more of community-based health-care approach, while developing multidisciplinary public health and clinical skills at the Area Health Centre level.

Policy and strategy directions for primary health care in Solomon Islands

Although these is no specific PHC policy or strategy identified in this review, other national policy and planning documents (the National Health Plan, Role Delineation Policy, National Health Promotion Policy and Healthy Settings Policy) identify main elements of the PHC approach. The following strategy directions for PHC have been identified from national policy and strategy documents and the health literature from Solomon Islands.

Primary health care governance and policy

The Role Delineation Policy of MHMS contains a strategy for UHC that includes:

- Strengthening provincial PHC management capacity;
- Increasing quality of health service provision at all levels;
- Identification of packages of services;
- Upgrading of Area Health Centre services and expansion of health service outlets.

717 S. Whiting et al., 2016, Moving towards Universal Health Coverage through the Development of Integrated Service Delivery Packages for Primary Health Care in the Solomon Islands. *International Journal of Integrated Care* vol. 16, No. 1.
718 MHMS, Solomon Islands, National Health promotion Policy, May 2021.
719 See www.wvi.org/video/village-health-volunteers-making-difference-solomon-islands.
720 See https://solomons.gov.sb/volunteers-for-covid-19-operations-and-vaccination-roll-out-trained/.
721 See www.ifrc.org/press-release/solomon-islands-vaccines-vital-covid-overloads-health-system.
722 See www.wvi.org/sites/default/files/MCH%20FACT%20Sheet%20Solomon%20Islands%20Draft%20-%20February%202014.pdf.

The policy outlines PHC-related aspects of health-care systems at each level that include continuity of care, close to client multidisciplinary teams and collaboration with social services and community organizations.

The National Health Plan (2016–2020) proposes governance processes that should facilitate progress towards UHC using a PHC approach:

- The National Health Plan proposes decentralization of resources to the provincial level through a provincial planning process which will require closer collaboration between government, churches, businesses, development partners, NGOs and local members of parliament.
- The National Health Plan and associated policy on aid effectiveness supports improved collaborations through aligning with government priorities and ensuring development partner investments are on budget.
- Building decentralized PHC management capacity at the provincial level and below in line with the Government's decentralization approach.

The National Health Promotion Policy (2021) provides guidance on the role of MHMS and its Department of Health Promotion in health promotion and health protection and proposes establishment of network of cross programme health promotion committees and establishment of health promotion structures at Provincial and Area Health centre Level. Areas of action relate to the five action areas of the Ottawa Charter – build healthy public policy, create supportive environments for health, strengthen community action for health, develop personal skills and reorient health services.

The National Healthy Settings Policy (2021) aims to implement interventions for health promotion, prevention and protection, working through the health promotion department and a network of partners (key government ministries, United Nations agencies, international organizations, bilateral agencies, NGOs, faith-based and community organizations, the private sector and civil society). The programme is proposed to be implemented in villages, marketplaces, schools, workplaces, facilities and towns. It involves the development of healthy public regulations and rules, creating supportive environment, empowering individuals, families, groups and communities.

A health system review conducted in 2015 identified a health reform trajectory, which is consistent with the principles of PHC. Success is defined in the short term through application of a "back to basics approach" that entail the following main strategies:

- Ensuring funding and resources reaching the periphery with well-trained nurses and nurse aides providing the majority of care.
- Low drug stock-outs and minimal out-of-pocket costs.
- Provision of universal access to an affordable service package, costed operationalized through a planning and budgeting system, delivered through government services and non-state providers.

Financing and resource allocation

Public investment in the health sector must be scaled up in partnership with external support, to ensure the delivery of the package of services.

Given the scale and speed associated with the rise in NCDs and the focus on public sector financing in the country, policy discussion should focus on identifying new sources of health sector revenue through taxation on tobacco, sugary foods and alcohol products.

Community engagement and multisector collaborations

Improving the capability of PHC system to withstand climate-induced challenges and support disaster preparedness planning.

The Healthy School Strategy should be reviewed to ensure health and nutrition components are included.

Identify opportunities for strengthening the NCD strategic plan to take a life course approach to nutrition, starting with the first 1,000 days, with the addition of nutrition indicators and related actions including reducing salt intake, food fortification, reducing anaemia, and healthy eating initiatives and policies.

Models of care

Consistent with the PHC related UHC goal, four service delivery packages are identified for public health and clinical services that should be delivered at each level of the health system. These packages are as follows:

- RMNCH (reproductive health, maternal, newborn and child health) and child welfare
- Immunization [EPI], adolescent health, nutrition and HIV/STI)
- Communicable diseases (tuberculosis/leprosy and malaria)
- NCDs (cardiovascular diseases, diabetes, chronic respiratory diseases, cancers, eye and ear health, mental health and dental health)
- Community health, including health promotion, social welfare, community-based rehabilitation, environmental health and rural water, sanitation and hygiene (WASH), disaster risk reduction and climate change.

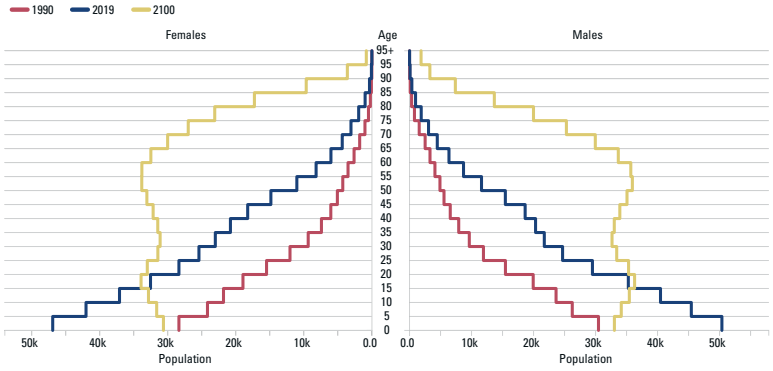
Integrate health and nutrition services into the delivery of PHC, which includes immunization and maternal, newborn and adolescent health and nutrition services and build local capacity to manage PHC services.

Human resources

- Investment in production of adequate numbers and placement of trained health professional staff in peripheral and underserved areas of the country.
- Building into undergraduate and continuing education the development of competencies in public health [promotion, prevention, protection, surveillance, emergency preparedness and response].
- Supporting human resources reform measures a multidisciplinary primary care models with skills in both clinical care and public health.
- Epidemiological transition and the rise in NCDs will necessitate development of competencies in the health workforce for management and treatment of NCDs, as well as investment in community based public health activities to scale up level of effort in prevention, promotion, surveillance and emergency preparedness.

PRIMARY HEALTH CARE DIRECTIONS - SOLOMON ISLANDS

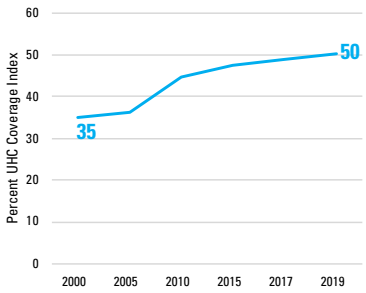
DEMOGRAPHIC TRANSITION



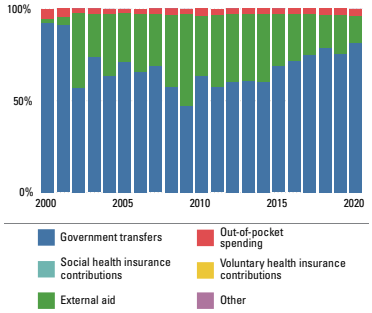
Source of Data: IHME: Country Profile Institute for Health Metrics and Evaluation (IHME). Seattle, WA: IHME, University of Washington, 2021. Available from https://www.healthdata.org/results/country-profiles

HEALTH COVERAGE AND HEALTH FINANCING

UHC Coverage Index 2000 - 2019



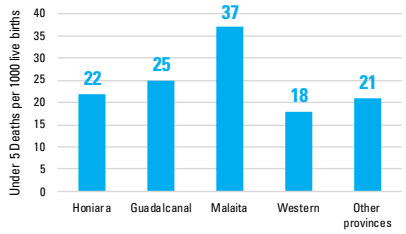
Sources of Health Expenditure 2000-2020



Sources of Data: UHC Coverage Index https://www.who.int/data/gho/indicator-metadata-registry/imr-details/4834 Expenditures: National Health Accounts Data Base: https://apps.who.int/nha/database/country_profile/Index/en

HEALTH INEQUITIES AND HEALTH ACCESS

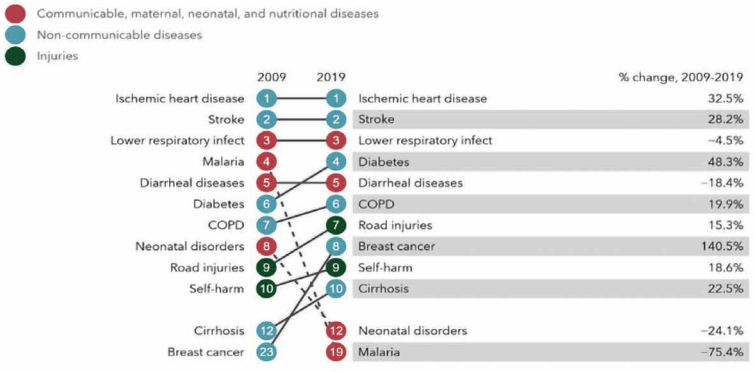
Under 5 Child Mortality By Region



- The **Maternal Mortality Rate** was 104 per 100,000 live births (2017), having declined from 141/100,000 in 2010 (GHO)
- There is unmet need of 50% for **essential UHC index coverage** (GHO)
- **Health Workforce** to 1000 Population ratio for nurse midwife is 2.2 (2018) and for physician 0.2 (2016) (World Bank/GHO)
- **Prevalence of NCDS:** Hypertension is 22%, Diabetes 13.9% with diabetes prevalence rising from the previous assessment (PHCPI)

Source of Data: IHME: CHILD MORTALITY Solomon Islands National Statistics Office Demograhic and Health Survey Solomon Islands 2015

EPIDEMIOLOGICAL TRANSITION



Source of Data: IHME: Country profile Institute for Health Metrics and Evaluation (IHME). Seattle, WA: IHME, University of Washington, 2021. Available from https://www.healthdata.org/results/country-profiles

HEALTH CARE BENEFITS PACKAGE and PRIMARY HEALTH CARE POLICY DIRECTIONS

Health Care Benefits Package

The Health Sector in the Solomon Islands is public sector funded and provided. The National Health Plan (2016-2020) supports the attainment of a Universal Health Coverage Goals

Consistent with the PHC related UHC goal, four service delivery packages are identified for public health and clinical services that should be delivered at each level of the health system. These packages are as follows:

RMNCAH (reproductive health, maternal and child health [MCH], child welfare, Expanded Program of

Immunisation [EPI], adolescent health, nutrition and HIV/STI)

Communicable diseases (TB/leprosy and malaria)

Non-communicable diseases (cardiovascular diseases, diabetes, chronic respiratory diseases, cancers, eye and ear health, mental health and dental health)

Community health (health promotion, social welfare, community-based rehabilitation, environmental health and rural Water, Sanitation and Hygiene [WASH], Disaster Risk Reduction and climate change)

PHC Policy and Strategy Directions

The Role Delineation Policy of the Ministry of Health and Medical Services includes a strategy for UHC though primary health care that includes:

1. Strengthening provincial PHC management capacity;
2. Increasing quality of health service provision
3. Identification of packages of services;
4. Upgrading of Area Health Centre services and expansion of health service outlets.

The RDP policy outlines PHC related aspects of health care systems at each level that include continuity of care, close to client multidisciplinary teams and collaboration with social services and community organisations.

Reform measures for frontline services include a multi-disciplinary primary care model with skills in both clinical care and public health, and transition of nurse aid roles into community based care

A Health Promotion and Healthy Settings Policy (2021) reflect arrangements for multi sector engagement in health at Provincial and Area Health centre level, and in community settings that include villages, schools, marketplaces, workplaces, health facilities and towns.

Sources: Ministry of Health and Medical Services National Health Plan 2016-2020; Role Delineation Policy (2018):, National Health promotion and Healthy Settings Policy (2021)

4.16 Kiribati

Primary health care policy and development landscape

Kiribati (population 128,874) has a GDP per capita of $1,606.5 having declined from a peak US$ 1699 per capita in the year 2012.[723] In 2020, Kiribati achieved an economic growth rate of 1.5 per cent, with the economy having contracted at a rate of 0.5 per cent in the previous two years.[724] Economic growth is constrained by a rapidly growing population, remoteness from major trading routes, exposure to impacts of climate change and a narrow based for economic production (fish and copra). Kiribati is a Micronesian independent republic that consists of 33 islands, which are divided into three groups of the Gilbert Islands, Phoenix Islands and the Line Islands.[725] Despite the population being dispersed across these island groups, the country is on a steep trajectory of urbanization which reached 54 per cent of the population in 2021, compared to 34 per cent in 1990.[726] The vast majority of the population resides in locations below 5 metres altitude, which means that Kiribati is among the most vulnerable countries to the impacts of climate change.[727] The projected health impacts that will arise from climate change and extreme weather events include heat-related illness, food and water insecurity and malnutrition, and increased frequencies of respiratory illnesses and NCDs.[728]

Data are not available from UN Habitat on the percentage of the urban population residing in informal settlement areas in South Tarawa. An ADB report indicates that 40 per cent of urban residents are in informal and squatter settlements in capital towns or cities,[729] and UN Habitat reports that there is limited land and overcrowding in South Tarawa, with urban vulnerability interpreted in terms of adaptation to climate change and environmental degradation.[730]

Demographic transition in Kiribati is reflected in trends in fertility rates which demonstrate a gradual decline from 4.6 in 1990 to 3.3 in 2020,[731] which is equal to the average fertility rate for Pacific Island small states.[732] The higher fertility rates of 20–30 years ago mean that Kiribati has a relatively young population, with 20 per cent of the population (27,006) belonging to the adolescent age group,[733] and the share of older people in the total population is projected to rise over the next century.[734]

723 See https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=MY.
724 See https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?locations=MY.
725 UNICEF Health and Nutrition Country Profile, Kiribati.
726 See https://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS?locations=KI.
727 UN Habitat, 2015, Urbanization and Climate Change in Small Island Developing States.
728 See https://climateknowledgeportal.worldbank.org/sites/default/files/2021-06/15816-WB_Kiribati%20Country%20Profile-WEB.pdf.
729 ADB, 2015, The Emergence of Pacific Urban Villages - Urbanization Trends in the Pacific Islands.
730 See https://unhabitat.org/sites/default/files/2020/06/pacific_nup_report_web.pdf.
731 See https://data.worldbank.org/indicator/SP.DYN.TFRT.IN?locations=KI.
732 See https://data.worldbank.org/indicator/SP.DYN.TFRT.IN?locations=S2.
733 See https://data.unicef.org/adp/country/kir/.
734 See www.healthdata.org/results/country-profiles.

Epidemiological transition is reflected in a rise in non-communicable diseases (NCDs). Rates of death due to diabetes have increased by 29 per cent between 2009 and 2019[735] with the prevalence of diabetes of 22.3 per cent still rising.[736] Deaths due to ischaemic heart disease (23 per cent increase), diabetes (20.1 per cent increase), and chronic kidney disease (14.5 per cent) have risen significantly between 2009 and 2019, with some declines in mortality attributable to neonatal disorders and infectious diseases.[737] Tuberculosis remains the fourth leading cause of death in 2019, and the third leading cause of deaths for adolescents.[738] Self-harm is the tenth leading cause of death, pointing to mental health as a priority public health problem. This is reflected in adolescent health status, which indicates that self-harm is the leading cause of death of boys aged 15–19, and the second leading cause of death for girls. The rate of self-harm for boys aged 15–19 is 52 per 100,000 which is one of the highest in the region. One UNICEF report from 2017 indicates that almost one third of children aged 13–15 had attempted to commit suicide which demonstrates the scale of mental health issues in young people in Kiribati.[739]

Other indications of the challenges for adolescent health in Kiribati include a high adolescent birth rate (52/1,000) and rates of overweight status which have risen from 11 per cent in 1975 to 54 per cent in 2016 and are on a trajectory that indicates further rises in the coming years.[740] Obesity rates are 20 per cent for boys and 22 per cent for girls aged 10–19, and assessments of risk for adolescents demonstrates that physical inactivity rates of 79 per cent for boys and 86 per cent for girls.[741] These trends in risk have the potential to fuel a further rise in NCDs as these proportionally large adolescent cohorts age in the coming decades.

Overall, the demographic and epidemiological profile and trends illustrate the need for urgent behavioural, environmental and social change to reduce risk of development of more complex conditions in later years for a large proportion of the population. The challenges of physical and mental health for adolescents demonstrates just how important the multisector and community engagement aspects of the PHC approach are, and demonstrates the importance of focus on public health to address the social and environmental determinants of health.

Primary health care coverage and equity

Health coverage

The UHC essential services coverage index has been scaled up from .3 in the year 2000 to .51 in 2019.[742] A vast majority of deliveries are now by trained personnel (92 per cent), having scaled up coverage from 85 per cent in the year 2000.[743] The most recent data indicate that 67 per cent of women receive four antenatal care visits.[744] Kiribati has maintained immunization coverage (DPT3 WUENIC estimates) above 90 per cent since 2017, with coverage increasing to 92 per cent in 2021. Since 2019, there has been a sharp reduction in coverage for the second dose of the measles vaccine, which reached 91 per cent in that year and which has declined to 57 per cent in 2021.[745] The under-five mortality rate in Kiribati is high when compared to regional and subregional rates at 48 per 1,000 live births, though having declined from 92 in 1990. As is the case with

735 Ibid.
736 See https://improvingphc.org.
737 See www.healthdata.org/results/country-profiles.
738 See https://data.unicef.org/adp/.
739 UNICEF, 2017, Health Profile Kiribati.
740 See https://data.unicef.org/adp/.
741 See https://data.unicef.org/resources/adolescent-health-dashboards-country-profiles/.
742 See www.who.int/data/maternal-newborn-child-adolescent-ageing/indicator-explorer-new/mca/uhc-service-coverage-index-(sdg-3.8.1).
743 See www.who.int/data/gho/data/indicators/indicator-details/GHO/births-attended-by-skilled-health-personnel-(-).
744 See www.who.int/data/gho/data/countries/country-details/GHO/kiribati?countryProfileId=fbebea17-72e9-437b-8c7c-939e0672e5ed.
745 See https://immunizationdata.who.int/pages/coverage/dtp.html?CODE=IDN&ANTIGEN=DTPCV3&YEAR=.

other Pacific Island Countries, the neonatal mortality rate of 21 per 1,000 live births[746] contributes to nearly half of all under-five mortality in the country. In fact, the UNICEF health profile in 2017 indicated that Kiribati had the highest child mortality rate among Pacific Island countries and territories.[747] The maternal mortality rate, though high by regional standards, is showing signs of decline. From a rate of 131 per 100,000 live births in 2012, WHO has estimated a rate of 76 per 100,000 in 2020.[748] Kiribati is overburdened with communicable disease, with tuberculosis incidence among the highest globally at 424 per 100,000 population in 2021.[749]

NCDs represent a current public threat to the population of Kiribati. National development and health planning has an emphasis on supporting behaviour change that will contribute to prevention and control of the epidemic of NCDs. The NCD STEPS survey in 2016 demonstrated that there has been little improvement from the previous STEP survey in 2006, with little attention yet provide for priority NCD conditions that include mental illness, suicides, domestic violence, and injuries. Kiribati has one of the highest rates of diabetes (22.3 per cent) and hypertension (21.5 per cent) with rates still rising,[750] which is consistent with previous evidence presented of sharp rises in overweight and obesity status and rates of physical inactivity in adolescents. Although no country specific data is available, it has been estimated that estimated that 17 per cent of people in the Pacific Island States have a disability.[751]

Despite challenges with coverage of health services for these merging NCDs, there remain persisting problems with childhood health and nutrition in the country. The situational analysis on children in 2017 found that 34 per cent of under-five children are stunted, and 37 per cent have anaemia while 64 per cent of children aged 0-5 months are exclusively breastfed.[752]

The country cooperation strategy of the WHO in Kiribati identified widespread gaps in the health system related to increased population pressure and demand for services, but at the same time widespread supply side shortages of essential medicines and equipment, human resources, and deteriorating health infrastructure. There are external impacts on the health sector that include poverty, poor sanitation and gender inequality.[753]

Health equity

A review of health development in The Pacific Island Countries over the past 20 years has found that the main barriers to health development include insufficient health workforce and health finance, and fragmentation of implementation, which rationalises a health systems strengthening and PHC approach. The main barriers according to this review are not vision and strategy [such as the Health Islands Vision], but more so modalities for implementation such as implementation mechanisms and the resources for implementation.[754] In terms of resources for implementation, the concentration of health human and financial resources in Tarawa has meant that there is under-resourcing of health facilities in rural and remote areas.

746 See https://childmortality.org/wp-content/uploads/2023/01/UN-IGME-Child-Mortality-Report-2022.pdf.
747 UNICEF, 2017, Health Profile Kiribati.
748 See www.who.int/data/gho/data/indicators/indicator-details/GHO/maternal-mortality-ratio-(per-100-000-live-births).
749 See www.who.int/data/gho/data/indicators/indicator-details/GHO/incidence-of-tuberculosis-(per-100-000-population-per-year).
750 See www.improvingphc.org/.
751 National Disaster Committee Strategic Roadmap for Emergency Management in Kiribati
752 UNICEF, 2017, Health Profile Kiribati.
753 See www.who.int/publications/i/item/WPR-2017-DPM-011.
754 D. Matheson, K. Park and T.S. Soakai, 2017, Pacific Island health inequities forecast to grow unless profound changes are made to health systems in the region. *Australian Health Review* vol. 41, No. 5, pp. 590–598.

An assessment of key performance indicators of the 2016–2019 health plan found that although there successes in relation to increased or maintained tuberculosis treatment success rate as well as Increasing the proportion of births attended by skilled health personnel, there still remain major health service targets that were not achieved. Key performance indicators for outpatient contacts per capita, diabetes related amputations, adolescent birth rates and neonatal, infant and under-five years mortality rates per 1,000 live births were not achieved in the last planning cycle.

Models of care

Health services are delivered free of charge in Kiribati. Services are provided through a health facilities network that is made up of 4 hospitals, 22 health centres (staffed by medical assistants and nurses) as well as 87 village clinics staffed by public health nurses.[755] A review of quality of care in Kiribati identifies health centres and clinics and the staff who work in them have been identified as the "backbone" of the PHC structure. Clinics are smaller than health centres and usually have public health nurse working alone in these locations. Common barriers to availability and quality of care include gaps in supervision of peripheral facilities, inadequate engagement with local councils, and lack of equipment and materials.[756] The Development Plan 2020–2023 states that on the services side there is inadequate quality of health facilities and an insufficiently skilled workforce, while on the population side there is a high population growth rates, lack of awareness on preventive measures and poor dietary lifestyles.[757] The Role Delineation Policy (2019) describe the different levels of health facility within the Kiribati health system and the packages of services to be provided at each level, including staffing and facility requirements for mental health service provision as well as for adolescent friendly health services. The Role Delineation Policy proposes five levels of care:

1. Primary Health Clinic
2. Rural Health Centre
3. Urban Health Centre
4. District Hospital
5. Referral Hospital

Urban and rural clinics have the same functions of basic clinical (general outpatients) services, although outpatient contacts are much higher in urban locations and hence require different staffing levels. The defined package of services for primary care includes health promotion and disease prevention, treatment of common illnesses and injuries; screening, diagnosis and monitoring of communicable diseases and NCDs, reproductive health, maternal and child health; immunization and outreach visits.

Public health and emergency preparedness

Public health measures for reductions in NCDs have become a high public health priority in Kiribati as they have been elsewhere in the Pacific. In the Western Pacific Region, obesity rates are 6 per cent for males and 6.7 per cent for females, in comparison with Kiribati where the obesity rates are 41.6 per cent for males and 50.4 per cent for females in 2016.[758] In response, Kiribati is one of four countries in the Pacific (the other three being Nauru, Samoa, and Tonga) that have been reported to have "strong" measures in place to promote healthier nutrition behaviours, that include fiscal policies for taxation on sugar sweetened beverages and unhealthy foods, and tax exemptions for fruit and vegetable imports. However only four PICTs (19 per cent) (of which one is Kiribati) were rated as having 'strong' measures in place. A baseline study on public health and policy and law conducted in 2020 found that multisector collaboration for reduction in child obesity through actions in the areas of health, education, law, trade

755 See www.who.int/publications/i/item/WPR-2017-DPM-011.
756 G. Appleford et al., 2021, Back to the future: Putting 'primary' back into the Kiribati health care system. *Nursing and Health Care* vol. 2, No. 1, p. 8.
757 Government of Kiribati 2020–2023 Kiribati Development Plan (KDP).
758 See https://apps.who.int/gho/data/view.main.CTRY2450A?lang=en.

has not yet been achieved in most of the Pacific Island Countries and Territories.[759] The National Development Plan highlights the importance of raising community awareness on behavioural risk and accelerating community programmes for promotion of sporting activities to address these risks.[760] Gaps in water and sanitation and food security are reported to lag behind global standards in one published review of health development in Kiribati over the past 20 years.[761]

Both Healthy Islands and the Sustainable development goals call for an integrated view of health in development, although one review highlighted the fact that there is a disconnect on occasions between sector roles. For example, it is argued that trade agreements are negotiated without assessment of health and environmental impacts on Pacific peoples.[762] A UNICEF policy brief on nutrition and reproductive health, maternal, newborn and child health (RMNCH) observed insufficient integration of nutrition and other programmes into health and development planning. Despite these limitations, the policy profile notes some level of integration of health into education (health promoting schools) and development policy. The policy brief identifies some gaps for multisector collaborations on health and nutrition which could be addressed through integration of relevant RMNCH and nutrition interventions in health, education and food security policies and plans.[763]

There are several Pacific Regional frameworks for addressing issues of emergency preparedness and response. These include the Framework for Resilient Development in the Pacific: An Integrated Approach to Address Climate Change and Disaster Risk Management and the Pacific Health Security Coordination Plan 2017: Areas of action to strengthen national response to outbreaks and other health emergencies.[764] The latest COVID-19 updates demonstrated lower impact of the COVID-19 pandemic on the population in Kiribati, with 24 reported deaths and just over 5,000 cases in total.[765]

Health financing

As is the case in most if not all the Pacific Island States, public sector financing is the main source of financing [see infographic] and constitutes 80 per cent of current expenditures on health. There is a relatively high proportion of health investment sourced through development assistance, with 17 per cent of the health sector funded externally. Due to the dominance of the public sector and limited presence of a private economic sector in the country,[766] out of pocket expenditures on health are under 1 per cent. Health spending per capita however is very low at just $167 per capita in 2020, having shifted only slightly from $132 per capita in 2005.This rate compares with per capita rates of $742 in East Asia and the Pacific (excluding high income countries) for 2019.[767] The proportion of government health expenditure as a percentage of domestic general expenditure on health has declined from 11.4 per cent in 2005 to 8.4 per cent in 2020.

In addition to inadequate levels of public sector and international financing, there are issues related to concentration of health expenditures at central level resulting in weak systems at subnational and inadequate capacity for scale up and expansion of services at the primary level of care. According to one review of quality of care in Kiribati, this has contributed to low service coverage and the phenomenon of people migrating to Tarawa where additional pressures are placed on the urban environment and on public facilities.[768] This issue of hospital centrism and weak subnational financial flows to peripheral facilities is frequently stated as a barrier to health-care availability and access, not only in

759 S.T.W. Tin et al., 2020, Baseline status of policy and legislation actions to address non-communicable diseases crisis in the Pacific. *v* vol. 20, No. 660.
760 Government of Kiribati 2020–2023 Kiribati Development Plan (KDP).
761 D. Matheson, K. Park and T.S. Soakai, 2017, Pacific Island health inequities forecast to grow unless profound changes are made to health systems in the region. *Australian Health Review* vol. 41, No. 5, pp. 590–598.
762 Ibid.
763 UNICEF Kiribati, 2017, Maternal, Newborn and Child Health and Nutrition Policy Profile.
764 Ibid.
765 See https://experience.arcgis.com/experience/e1a2a65fe0ef4b5ea621b232c23618d5.
766 Government of Kiribati 2020–2023 Kiribati Development Plan (KDP).
767 See https://data.worldbank.org/indicator/SH.XPD.CHEX.PP.CD?locations=4E-S2-KI
768 G. Appleford et al., 2021, Back to the future: Putting 'primary' back into the Kiribati health care system. *Nursing and Health Care* vol. 2, No. 1, p. 8.

the Pacific, but also in parts of East Asia.

Given very low rates of economic growth in Kiribati (despite rapid population growth), it is unlikely there will be sufficient fiscal space for financing of health services to meet the SDG targets for UHC.[769] This suggest that external financing will need to be sustained over long periods to reach UHC goals, and rationalizes implementation of development assistance partnerships that are aligned to the principles of aid effectiveness, especially given that policy analysis in 2021 has demonstrated that project fragmentation and aid volatility are said to be on the rise in the Pacific.[770]

Health workforce

The Pacific Island States and territories generally face considerable challenges with availability, accessibility and quality of the health workforce especially for primary care. The most recent workforce data indicates that there are workforce densities of nurses and midwives 3.8 per 1,000 [2018] and of physicians 0.2 per 1,000 [2013].[771] A workforce analysis in 2014 found that Registered nurses made up 36.1 per cent of the health workforce, nurse aides 23.8 per cent of the workforce and and medical assistants 5.3 per cent.[772] The Development Plan 2020–2023 of Kiribati observes that the key performance indicators target of sustaining 40 health workers per 10,000 population was not achieved in the period of the latest health planning cycle [2019–2023], suggesting that production, placement, and retention of the health workforce remains challenging in this country.

There are human resource development gaps related to the skills of the workforce. A human resources for Health Profile from Kiribati in 2014 found that medical doctors are scarce in Kiribati and most of the services are provided by nurses. Most of the health staff who work in specialities such as laboratories, radiography, health promotion, environmental health and health information are trained on the job and lack formal qualifications.[773]

Health workforce migration and concentration of the workforce in urban areas has been a documented health system limitation for many years in the Pacific.[774] As observed elsewhere in this profile, distribution of the workforce is a major challenge in Kiribati, given that population, and financial and human resources tend to be concentrated in urban areas. Factors that are attributable to workforce gaps in the Pacific include lack of workforce production, ageing of the workforce, inadequate opportunities for training, all in the context of rising demand related to the rise of NCDs, and threats related to climate change emergencies and pandemics.[775] The WHO Health Workforce profile from 2014 found that medical staff are largely concentrated in Tarawa or on Kiritimati atoll, and allied health services are only available in Tarawa.

Community engagement

A review of quality of care and health plans in Kiribati observed that in the early health sector plans in the 1980s post Alma At there was more emphasis on community engagement, but since that time there had been a progressive lack of involvement due to inadequate governance capabilities at subnational level,[776] which aligns with profile findings from the Solomon Islands and Vanuatu. The review of quality of care in Kiribati found that there were positive outcomes associated with inclusion of community engagement in an integrated supervision checklist and was instrumental in motivating Island Councils and communities to become more involved in PHC. A community engagement guideline has been developed to support the

769 D. Matheson, K. Park and T.S. Soakai, 2017, Pacific Island health inequities forecast to grow unless profound changes are made to health systems in the region. *Australian Health Review* vol. 41, No. 5, pp. 590–598.
770 T. Wood and I. Nicholls, 2021, Aid fragmentation and volatility in the Pacific. *Asia and the Pacific Policy Studies* vol. 8, No. 1, pp. 114–128.
771 See https://data.worldbank.org/indicator/SH.MED.PHYS.ZS?locations=4E-S2-KI.
772 See www.who.int/publications/i/item/9789290616689.
773 Ibid.
774 T.S. Yamamoto et al., 2012, Migration of Health Workers in the Pacific Islands: A Bottleneck to Health Development. *Asia Pacific Journal of Public Health* vol. 24, No. 4, pp. 697–709.
775 See https://phd.spc.int/sites/default/files/p-related-files/2022-08/DCS2.1%20Human%20resources%20for%20Health%20WHO_0.pdf.
776 G. Appleford et al., 2021, Back to the future: Putting 'primary' back into the Kiribati health care system. *Nursing and Health Care* vol. 2, No. 1, p. 8.

approach.[777] The National Development Plan 2020–2023 indicates that the management of the NCD epidemic comes down to behavioural change relating to tobacco, excessive alcohol consumption, poor diets, physical inactivity, and related metabolic risks of obesity, high blood pressure, raised blood glucose and high cholesterol. Among the high level priorities for building a healthier nation are strengthening community awareness programmes on sanitation, reproductive health and on healthier life styles, including promotion of engagement in sport. There is limited detail on implementation, although the plan stresses the importance of community-based programmes and involvement of political and community leaders and churches in implementation as well as increased effort in sanctions and on evaluating the effectiveness of programmes. The role delineation policy, although outlining staffing and equipment requirements for each level of services, has little to say on community participation and briefly mentions the role of volunteers in service support in district and health centre facilities. The Healthy Islands Vision is the health promotion model for the Pacific Island States and relies on a healthy local settings approach (healthy villages, schools, markets through local community action).[778] The documentation reviewed so far has not clarified how this strategy is implemented in the Kiribati settings through community engagement.

Policy and strategy directions for primary health care in Kiribati

The policy and strategy directions for PHC are consistent with the Operational Framework for Primary Health Care with regards to the components of the PHC approach – namely integrated services and public health, community engagement and multisectoral collaborations. Review of existing policy demonstrates gaps in community engagement/empowerment implementation arrangements , with limited discussion [based on review of available documentation] of how communities are involved in priority setting, governance, or delivery of services. There are opportunities in the role delineation policy to scope out roles in prevention, promotion and protection at community level, especially given the documented challenges of NCD risks and mental health in young people. Existing PHC related policies and strategies for Kiribati are documented below:

Governance and policy

Kiribati Development Plan 2020–2023

"Improving our Health" is one of the six key priority areas (KPAs) of the Kiribati Development Plan 2020–2023, with all other five areas of human development, equitable wealth generation, environmental protection, good governance, and infrastructure development all having health related implications.

Specific health sector and health related multisector actions include:

1. Strengthen community awareness programmes on sanitation, neo-natal care, reproductive controls and healthier lifestyles.
2. Reduce the incidences of serious diseases;
3. Reduce child mortality and morbidity rate.
4. Improve health-care facilities and service delivery;
5. Adopt international benchmarks as targets to measure achievement regularly and
6. Promote engagement in sport.

777 Ibid.
778 WHO Regional Office for the Western Pacific, 2013, Framework of Action for Revitalization of Healthy Islands in the Pacific. Available at https://apps.who.int/iris/handle/10665/207669.

Healthy Islands Framework

There are five main strategies in the Healthy Islands vision which include the following:

1. Strengthen advocacy, healthy policy and leadership;
2. Prioritize country actions following community and sector-wide consultations;
3. Enhance multisectoral planning, partnerships and networking;
4. Strengthen health systems based on PHC; and
5. Improve information for action.

The focus is on health promotion and health protection measures implemented through integrated health and development programming (utilising multisector involvement and community engagement).

Role delineation policy

A role delineation policy has been developed, the purpose of which is to:

1. Define the different levels/types of health facility within the Kiribati health system
2. Clarify the range of services to be provided at each level of facility.
3. Identify minimum standards required to provide safe and sustainable services.

Pacific Heads of Health – Strengthening primary health care as a vehicle for universal health coverage 2023

This analysis of PHC based on meetings with Pacific Heads of Health reached the following conclusions regarding the role of PHC in supporting achievement of UHC.

- Service models are required that support integrated people centred PHC with a focus on prevention and promotion at community level.
- Based on triple burden of disease and threats of climate change there needs to be a major shift in focus from treating ill health to maintaining well-being.
- Human and financial resources constraints are the main barriers to implementation of role delineation policies and delivery of essential packages of care.
- Review, update and cost role delineation plans and operationalise through integration of vertical programmes, strengthening links between national and subnational governance, and increased subnational support for front-line services.
- Increasing funding allocation for governments and donors for PHC with a focus on service readiness, quality, outreach and community engagement.

Priority actions for developing the primary health care approach in Kiribati

In proposing an agenda for the next four years, the UNICEF Multi-country Programme for health and nutrition in the Pacific has proposed output areas and actions. These areas focus on the PHC approach in relation to multisectoral engagement, public health and on community engagement across most output and activity areas, with Kiribati being a focus country for support for most of these actions.

Governments in targeted countries have strengthened capacities for climate and risk informed and evidence-based PHC and nutrition policy, planning and financing.

- Guiding the inclusion of climate and other emergency risks into PICTs policies
- Guide the development of equity- and rights-based policies and plans and evidence-based equity agendas
- Strengthen multi-stakeholder action in the PHC system.
- Strengthen MOH capacity to guide, incorporate and absorb development partner plans and budgets.
- Improve the adequacy, efficiency, and equity of public spending for PHC and children.
- Ensure essential health and nutrition supplies on EMLs and their availability in practice.
- Strengthen MOH and PHC system capacity for early action to emergencies.

Ministries of Health and their partners in targeted countries demonstrate strengthened capacities to ensure improved, affordable, and equitable quality PHC and nutrition services and practices, including in emergencies.

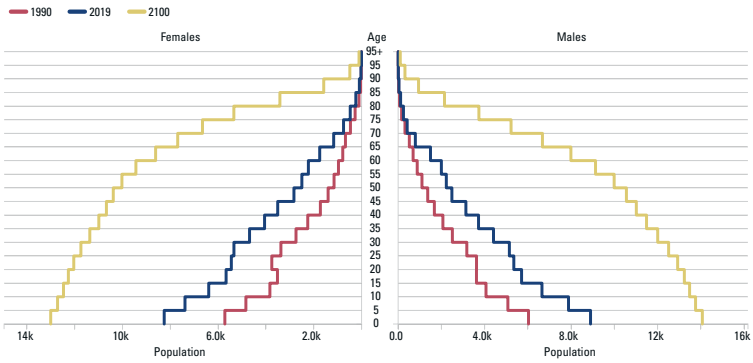
- Assess and address the climate and environmental resilience of PHC systems.
- Integrate public health and nutrition into PHC delivery.
- Strengthen health and nutrition services to promote nurturing care.
- Establish adolescent friendly services.
- Strengthen budgeting, planning and execution by PHC teams.
- Strengthen the integration of health worker engagement with communities in PHC routines.
- Improve health worker/team performance.
- Strengthen the community role in the PHC system.

Government authorities in targeted countries demonstrate strengthened capacities to undertake multisectoral coordinated actions to reduce the triple burden of malnutrition and improve ECD, including in emergencies.

- Strengthen legislative and regulatory frameworks for nutrition and early childhood development.
- Implement a systems approach to nutrition:
- Strengthen school nutrition programmes.
- Promote caregiving behaviours, demand for services and social norms for improved nutrition and positive parenting.
- Lead on nutrition sub-cluster for emergencies.

PRIMARY HEALTH CARE DIRECTIONS - KIRIBATI

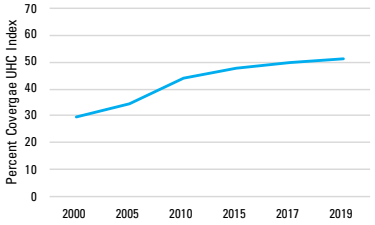
DEMOGRAPHIC TRANSITION



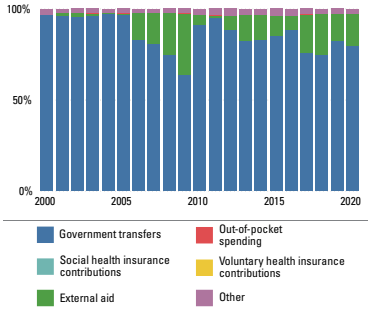
Source of Data: IHME: Country profile Kiribati Institute for Health Metrics and Evaluation (IHME). Philippines Profile. Seattle, WA: IHME, University of Washington, 2021. Available from http://www.healthdata.org/philippines [8/10]

HEALTH COVERAGE AND FINANCIAL PROTECTION

UHC Coverage Index 2000 - 2019



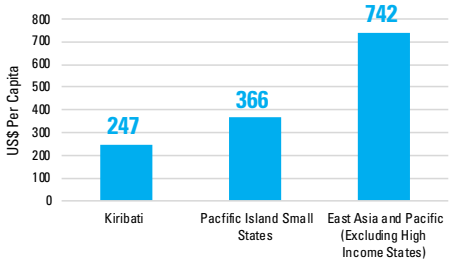
Sources of Health Expenditure 2000-2020



Sources : UHC Index https://www.who.int/data/maternal-newborn-child-adolescent-ageing/indicator-explorer-new/mca/uhc-service-coverage-index-(Expenditures: NHA : https://apps.who.int/nha/database/ViewData/Indicators/en

HEALTH INEQUITIES AND ACCESS and SUPPLY BARRIERS

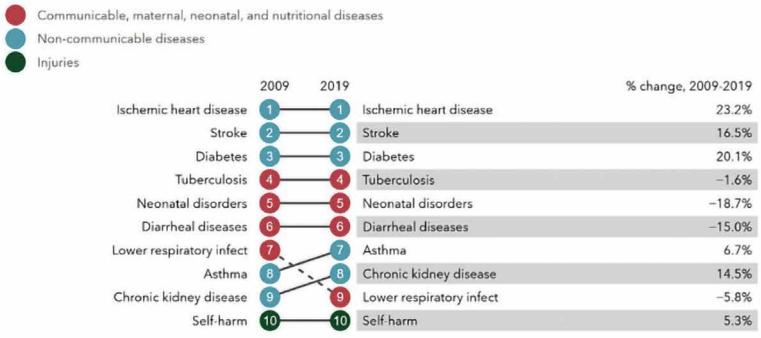
Current Health Expenditure Per Capita 2019



- There is unmet need of 49% for **essential UHC index** (GHO)
- **Health Workforce** - nurses and midwives 3.8 per 1000 [2018] and of physicians .2 per 1000 [2013], (World Bank]
- **Health Financing: In 2019,** Health expenditure was 247 USD per capita, well below regional per capita rates for Pacific and East Asia. (World Bank)
- **Prevalence of NCDS:** Hypertension is 21.5%, Diabetes 22.3% with diabetes prevalence rising from the previous assessment (PHCPI)

Source of Data: WHO Global Health Observatory (GHO); World Bank Data Portal; Primary Health Care Performance Initiative.

EPIDEMIOLOGICAL TRANSITION



Source of Data: IHME: Country profile the Philippines Institute for Health Metrics and Evaluation (IHME). Philippines Profile. Seattle, WA: IHME, University of Washington, 2021. Available from http://www.healthdata.org/philippines [8/10]

HEALTH CARE BENEFITS PACKAGE and PRIMARY HEALTH CARE POLICY DIRECTIONS

Health Care Benefits Package

The health sector is financed by the public sector, and Health services are delivered free of charge in Kiribati.

The Role Delineation Policy specifies the package of services to be delivered at each level of the system.

The defined package of services for primary care includes health promotion and disease prevention, treatment of common illnesses and injuries; screening, diagnosis and monitoring of communicable and non-communicable diseases, reproductive health, maternal and child health; immunisation and outreach visits.

The Role Delineation policy identifies service, staffing and facility requirements for mental health service provision as well as for adolescent friendly health services

The Pacific Ministers for Health are calling for Service models and increased PHC finance that supports integrated people centred PHC with a focus on prevention and promotion at community level

PHC Policy and Strategy Directions

The Kiribati Development Plan 2020-2023 highlights specific Health Sector and health related multi sector actions include: strengthening community awareness programmes on sanitation, neo-natal care, reproductive controls and healthier lifestyles, including promoting engagement in sport.

The Healthy Islands Framework proposes five main strtegies that include strengthening advocacy, healthy policy and leadership, prioritizing country actions following community and sector-wide consultations, enhancing multisectoral planning and networking;, strengthening health systems based on primary health care and improving information for action.

The Role Delineation Policy defines the different levels/types of health facility within the Kiribati health system, the range of services to be provided at each level of facility, and the minimum standards required to provide safe and sustainable services.

Sources: Pacific Steering Group for Revitalization of Healthy Islands WHO Framework of Action ; Kiribati Ministry of Health And Medical Services Role Delineation Policy Final draft November 2019 MHMS; Government of Kiribati 2020-2023 Kiribati Development Plan (KDP).

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5 Thematic analysis of country profiles

The present PHC landscape analysis has identified important gaps and opportunities in East Asia and the Pacific related to uptake of the PHC approach. The gaps and opportunities are variable based on the level of development and geographical regions, but at the same time there are consistent themes that have emerged across the region, which are described and analysed below according to PHC components, strategic levers and selected operational levers.

Political leadership and commitment

Leadership is expressed across the region in terms of laws, regulations and policies that reflect the PHC approach even if they are not labelled as PHC. Although the importance of multisectoral approaches has been reinforced by the experience of the COVID-19 pandemic, there are few examples from the region of the development or implementation of multisectoral approach. The experience in Thailand showed how it can be designed and implemented through citizens health assemblies. In the Philippines, multisectoral collaborations at local levels had a role in child health and nutrition. Political commitment was expressed through investments in health, especially in front-line care, and to scale up development of national health insurance and financial protection measures in Cambodia, China, Indonesia and the Lao People's Democratic Republic. Development of the basic health care and promotion law in China,[779] the Universal Health Coverage Act in the Philippines[780] and proposed PHC law in the Lao People's Democratic Republic all reflected high level leadership and political commitment to PHC. The Governments of China, Indonesia and the Philippines have developed laws and regulations to support reorientation from treatment to promotion and prevention, as well as regulate resource allocation from central to local governments.[781]

779 See www.npc.gov.cn/englishnpc/c23934/202012/0e545b3ed6544a4fa93a1bb2feb13b3a.shtml.
780 See https://doh.gov.ph/sites/default/files/publications/UniversalHealthCareinthePhilippinesFromPolicytoPractice.pdf.
781 WHO, 2017, Primary health care systems (PRIMASYS): Case study from Indonesia.

Governance and policy

Governance arrangements for PHC are shifting dramatically as countries across the region urbanize and decentralize. In large-population decentralized countries such as Indonesia and the Philippines, local governments and provincial health managers are now key actors in management, implementation, and financing of health services. Pacific Island States such as the Solomon Islands and Vanuatu and Papua New Guinea are applying decentralization to facilitate shifting of human and financial resources to the periphery where there are major gaps in services. This means developing decentralized management capacity as a major thrust in health system strengthening for improved primary care. The fact that East Asia and the Pacific is now 58 per cent urbanized[782] presents significant governance challenges in networking care between the private, public and civil society sectors, as well as between municipal governments and central ministries of health. Urban PHC will be a major agenda in twenty-first century public health, given the environmental and social determinants of health related to the growth of cities, especially as relating to the persistence of large informal settlements in both the Pacific Island Countries and in East Asia.

Financing and resource allocation

Financial protection and investment in health are major themes of the country PHC profiles. As well as having among the highest out of pocket expenditures globally, households in some countries such as China and Cambodia are affected by high rates of out-of-pocket payments as a proportion of household incomes. In the Pacific Island States, out of pocket expenditures are very low, with the State taking up the role of financing of health care. The challenge in these settings is that economic growth is inadequate to the task of scaling up public sector investment as the populations continue to grow. In the large population States such as China, Indonesia and the Philippines, efforts are currently being made at a policy level to expand the depth and breadth of coverage of national health insurance schemes, while other States including Cambodia, the Lao People's Democratic Republic and Viet Nam are in earlier stages of developing national health insurance systems [see the health financing sections and infographics in the country profiles]. In the highly centralized and humanitarian context countries of Myanmar and the Democratic People's Republic of Korea external financing takes on a much higher significance, with resource mobilization internationally being an important source of finance for alleviating the health and social conditions of the people. This applies in the Pacific, where slow growth in economies and small population States require some external assistance to implement PHC oriented health reforms. Viewed through more of a PHC lens, there is some evidence of countries utilising National Health Accounts methodologies for costing of PHC [see the health system section of literature review for details]. Regardless of diversity in country context, scale up of public sector financing, national health insurance systems, financial protection and decentralized financial management capacity are major strategic directions for health financing based on the evidence from the country profiles.

Community engagement

Community engagement is widely strategized and implemented in East Asia and the Pacific, although such strategizing often lacks visibility in PHC and health system policy and planning. Although not universal, there is still a wide recognition that models of community-based engagement and empowerment are essential conditions for ensuring that services reach more people and that more people reach services. Community engagement and empowerment are viewed in policy and planning documentation as being central to scaling up prevention and promotion to counter the widespread epidemic of non-communicable diseases (NCDs). There is widespread evidence of impact of community health worker roles in national programmes for

782 See https://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS?locations=4E.

tuberculosis and malaria prevention and control[783] and in immunization and the COVID-19 vaccine roll-out,[784, 785] and the importance of expanding these roles to accommodate challenges of mental health, chronic disease management, community and home-based care[786, 787] and community level disease prevention, health promotion and front-line care.[788] There are at least five gaps or opportunities in the region that are pushing countries towards development and acceleration of community engagement strategy.

1. Health inequities and the zero-dose agenda for immunization mean that there are added policy and strategy pressures to engage with and empower local community leaders and members in health service delivery, health communications or in health management.
2. The epidemic of NCDs, increasing awareness of health-related disabilities, the ageing of the population and the challenges of adolescent and mental health, and the role of community based workers in the pandemic response all rationalize the development of a much stronger community based public health strategy.
3. The escalation of health-care costs and the growth of more complex health conditions and chronic diseases mean that countries are now realizing that investment in prevention and promotion and environmental protection are necessary conditions for placing health systems along a more sustainable and affordable pathway.
4. Models of care that are transitioning towards primary care networks or community system strengthening requires a community-based cadre for interventions, referral and early intervention.
5. Undersupply of the health workforce in remote areas and poor urban areas requires the community-based workforce to keep communities networked to health facilities and programmes.

Public health

Public health has been defined in the Operational Framework as referring to prevention, promotion, environmental protection, surveillance, and emergency preparedness. There are several factors across the region that are accelerating the push for expansion of public health action and integration of essential public health into health systems.

The NCDs epidemic is accelerating policy pressures for investment in health promotion and prevention as a way for not only improving public health but for placing health systems along a more sustainable pathway. The epidemiological transition is reshaping the disease profiles of countries, with traffic accidents and drowning becoming in the leading causes of death for adolescents in such countries as Malaysia, while infectious diseases such as tuberculosis continue to threaten young populations in Papua New Guinea. Mental health in young people is a rising concern, with self-harm being a leading cause of death for adolescents in Pacific Island States such as Kiribati and Vanuatu.[789] The risk behaviours of lack of physical exercise, tobacco and alcohol use and poor diet are being adopted in adolescence and are entrenching lifelong behaviours that are fuelling the NCDs epidemic in later years,[790] where countries are now seeing sharp rises in the incidence of ischaemic heart disease, diabetes and renal disease [see infographics in the country profiles].[791] The environmental determinants of health have increased in significance due to the rapid pace of urbanization in the region and

783 N.D. Thang et al., 2009, Rapid decrease of malaria morbidity following the introduction of community-based monitoring in a rural area of central Viet Nam. Malaria Journal vol. 8, No. 3.
784 See https://solomons.gov.sb/volunteers-for-covid-19-operations-and-vaccination-roll-out-trained/.
785 See www.who.int/thailand/news/feature-stories/detail/thailands-1-million-village-health-volunteers-unsung-heroes-are-helping-guard-communities-nationwide-from-covid-19.
786 See www.who.int/news-room/feature-stories/detail/mongolia-s-mobile-health-clinics-bring-primary-health-care-to-vulnerable-communities.
787 WHO Regional Office for the Western Pacific, 2015, Thailand Health System Review. *Health Systems in Transition* vol. 5, No. 5.
788 C.L. Pilang, M.A. Gray and F.I. Oprescu, 2017, The evolution of the Community Health Worker program in Papua New Guinea University of the Sunshine Coast, Sippy Downs, Queensland, Australia. *Rural and Remote Health* vol. 17, No. 4, p. 3961.
789 See https://data.unicef.org/adp/country/png/.
790 Tuhin Biswas et al., 2022, Prevalence of multiple non-communicable diseases risk factors among adolescents in 140 countries: A population-based study. *eClinicalMedicine* vol. 52, 101591.
791 See www.healthdata.org/gbd.

the emergence of public health threats related to air pollution, the growth of urban poor settlements and threats of climate change. While these threats emerge, others persist, in relation to poor standards for water and sanitation in rural and remote areas, under nutrition and weak health services access for maternal and child health-care services in humanitarian emergency settings in Myanmar and the Democratic People's Republic of Korea, or in countries with weaker health systems in Papua New Guinea and some of the Pacific Island States.

All these factors are placing significant pressures on policymakers to invest more in health system strengthening and creating pressures for more investment in public health to address the social, environmental and commercial determinants of health through more concerted multisector action and through policy, law, regulation and taxation. These factors provide a strong rationale and opportunity for investment in a public health workforce to support reorientation of health and social systems towards a population health perspective. There are multiple opportunities for health stakeholders to invest more in public health, which will require the development of strategies for engagement with communities and other sectors, as well as building a skills base within stakeholder agencies for public health competencies in such areas as prevention, promotion, protection, surveillance and emergency preparedness.

Models of care

There are several factors reflected in the country profiles that are accelerating reforms in models of care. Most of these factors are external to the health-care sector, but which impact on the capability of health systems to sustain operations in a rapidly shifting social and epidemiological context.

Pandemics and emergencies: Although the evidence is limited, the experience of the COVID-19 pandemic was that the health system alone was not capable of absorbing the shocks, handling population surges, and disseminating information on prevention and control measures. It has highlighted the importance to political leaders and other stakeholders of the importance of investment in the health sector in securing social and economic stability and the value of multisector collaborations in coordinating and supporting emergency responses, and the vital role that a well-developed PHC system with local community engagement can play in responding to emergencies. This was illustrated by the case of Thailand, where political commitment and a whole of society response including political, sector and civil society partnerships, robust health systems as a baseline for the response, and engagement of community volunteer networks to support a bottom-up approach were all factors associated with the strength of the response.[792]

Demographic and epidemiological transitions: These transitions are forcing the hand of policymakers in each country to shift health policy and practice towards prevention and promotion. They are challenging political leaders and policymakers to reconsider the ways that health systems are organized, financed and sustained, given the escalating burden of the NCDs epidemic on the cost of health-care systems. Larger adolescent cohorts in some countries, especially in the Pacific Island States, provide opportunities to develop adolescent friendly health services and programmes that should contribute to reductions in NCDs in the future. In line with SDG targets, all countries are defining basic packages of health services with targets for universal coverage. Increasingly models of care will need to be adapted to the changing health needs of populations in demographic and epidemiological transition.

Mixed health-care systems: In Cambodia, Indonesia, the Philippines, Thailand and Viet Nam, the private sector has now emerged as an equal partner or dominant first contact provider for primary care. The country profiles report the emergence of a two-tier system of public and private care in some cases, with gaps in communication of health information from the private to the public sector and inadequate regulation of quality of care. The concentration of medical professionals in urban areas is another reflection of the impacts of private sector on UHC. In some cases, opportunities have been identified for public private collaborations or strategic purchasing of services from the private sector by the public sector, and expansion of national health insurance systems to reduce out of pocket expenditures.

792 See www.who.int/thailand/news/detail/12-05-2022-thailand-shares-lessons-learned-from-the-covid-19-pandemic-with-who.

Primary health care networks, including more public health and community-oriented models of care, are a major theme of the country PHC profiles. There are different perspectives on the networking model that includes building partnerships with local governments, faith based organizations and NGOs (Pacific Island States, including Papua New Guinea), developing healthy village models or "community system strengthening" through community health worker supported service delivery (Cambodia and the Lao People's Democratic Republic and Pacific Island States), and development of primary care networks (China, Philippines, Cambodia) or hospital cluster approaches (Malaysia)[793] that both aim to link health providers and facility levels into multidisciplinary or multilevel health teams. In Thailand, The Universal Coverage Scheme finances PHC through a model of health contracting referred to as "contracting units for primary care". The contracting units contain a network of several health centres and a hospital.[794] In the Pacific Island States there is an emphasis on Role Delineation Policies[795] and the Health Islands vision and strategy,[796] which propose a more decentralized model of service delivery and broader engagement with sectors and agencies in community settings that include villages, schools, marketplaces, workplaces, health facilities and towns. The text box below describes some examples of the legal, policy and regulatory instruments derived from the profiles that are being applied in China,[797] the Philippines[798] and Malaysia[799] to strengthen PHC networks and collaborations in countries.

In China, the *Health Law on Basic Health Care and Health Promotion (2019)* set out the broad approach and requirements for development of PHC institutions. The law has provisions for rural medical and health-care service network, an urban community health-care service network, a county-level medical consortium and contract-based family doctor teams at the PHC level.

The model of PHC management and care delivery in the Philippines is being shaped by the *Universal Health Coverage Law and the Primary Care Policy Framework,* which affirm the primary level of care as the foundation of the health system, and the PHC approach as a pathway to achievement of UHC. The establishment of primary health care networks, contracting models of population and individual services, and integration of public health functions into health services delivery at community level are central to the approach.

The Ministry of Health in Malaysia recommends transforming health systems towards more coordinated models of care to prevent and manage more complex social and health care conditions. This involves development of *primary care networking and hospital cluster frameworks* characterized by more coordinated and team-based models of care. The Enhanced Primary Health Care (EnPHC) initiative aims to improve care coordination across the different levels of the health system network using *care coordinators and improved information exchange* between levels of service.

793 Government of Malaysia, 12th Malaysia Plan 2021–2025.
794 WHO Regional Office for the Western Pacific, 2015, Thailand Health System Review. *Health Systems in Transition* vol. 5, No. 5.
795 See https://moh.gov.vu/images/health_policies/policies/Role_Delineation_Policy-_Final.pdf.
796 WHO Regional Office for the Western Pacific, 2013, Framework of Action for Revitalization of Healthy Islands in the Pacific. Available at https://apps.who.int/iris/handle/10665/207669.
797 See www.npc.gov.cn/englishnpc/c23934/202012/0e545b3ed6544a4fa93a1bb2feb13b3a.shtml.
798 See www.officialgazette.gov.ph/2019/02/20/republic-act-no-11223/.
799 Government of Malaysia, 12th Malaysia Plan 2021–2025.

An important driver of the network and multidisciplinary approach is the epidemiological transition, where primary care presentations are now shifting from episodic illnesses to chronic longer-term care and related public health interventions for prevention of such chronic conditions. Common theme across these primary care network models are the establishment of central "hubs" or "clusters" to coordinate care, and the related need for development of team-based care to draw on skills from different levels, health providers and communities for management of more complex health conditions. These examples of development of PHC networks are evident in the profiles from the Philippines, Cambodia, China, Thailand and Malaysia.

Urban PHC: Given that 61 per cent of the population of East Asia and the Pacific is now living in urban locations with this urbanization still on an upwards trend,[800] models of Urban PHC should now be high on the PHC policy and planning agenda. This is particularly the case when considered against the backdrop of the environmental hazards of the built environment and its relationship to the NCD epidemic. Aside from the rapid pace of urbanization, the Country profiles demonstrate that some countries have between 25 per cent and 40 per cent of their urban populations living in informal settlements,[801] which provides added impetus for a focus on Urban PHC models of care for UHC in the coming decades.

Health workforce

The PHC country profiles have identified that health workforce numbers in most locations are insufficient, distribution inequitable, and competencies not keeping pace with epidemiological change. The gaps are most noticeable for front-line primary care. The market and public sector "mixed health systems" model that is flourishing across the region is leading to concentration of health workforce and financial investments in cities and towns, and a corresponding depletion in numbers and skills at the front-line especially in rural and remote areas. This has been referred to in the profiles as the phenomenon of hospital centrism, with many countries attempting to address this challenge through decentralization in settings such as Indonesia and the Pacific Island States.

A consistent message running through the country profiles is the impact of health workforce shortages and operational finance on the effective functioning of public sector primary care. Most of the health workforce is female in East Asia and the Pacific,[802] and insufficient policy attention has been given to placement, retention, professional development, health system support and living conditions for the health workforce, especially in remote areas. In some situations, in Pacific Island States and Papua New Guinea, this has led to higher rates of absenteeism and abandonment of primary care health posts.

As demonstrated in the country profiles, the UHC Coverage Index (SDG target 3.8.1) is increasing by only 1–2 per cent per year at best, which means that poorer or more remote populations have been left behind for decades.[803] Community health workers in countries such as Cambodia, the Lao People's Democratic Republic and Viet Nam assist to address these gaps as countries scale up and strategize on the placement of a professional nursing and medical workforce in these locations. As the professional workforce scales up, it by no means logically follows that they will be placed and retained in hard-to-reach or poor urban locations, especially given the impact of private sector development on the concentration of the professional health workforce in cities and towns.

The additional challenge identified in the profiles is reorientation service provision towards PHC, which raises questions about the public health competencies required to support this reorientation. The PHC workforce extends beyond medicine and nursing to incorporate providers working across the continuum of care for health promotion, disease prevention, treatment, rehabilitation, and palliative care services. It includes the

800 See https://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS?locations=Z4.
801 See https://data.unhabitat.org/datasets/cd4e1deb72ea49bd8f3403f8a9edfe6d_0/explore.
802 See https://data.unwomen.org/features/covid-19-and-gender-what-do-we-know-what-do-we-need-know.
803 See www.who.int/data/maternal-newborn-child-adolescent-ageing/indicator-explorer-new/mca/uhc-service-coverage-index-(sdg-3.8.1).

public health workforce, and those engaged in addressing the social and environmental determinants of health. Given the integrated and multi-component characteristics of the PHC operational framework, service provision will need to be transformed through development of human resource capacities for public health and multidisciplinary team approaches.[804] The idea of the transformation of health care models towards a PHC approach implies a transformation of the workforce to expand its capabilities to work in teams and to work across disciplines through task sharing and task shifting.

Despite these gaps in health workforce numbers, distribution and competencies, the country PHC profiles illustrate a several opportunities for addressing these health workforce gaps which are summarized below.

1. *Decentralization of health-care management and delivery* is a main theme of the PHC profiles, and sustaining essential services during emergencies is an important lesson from the COVID-19 pandemic. In the Pacific, role delineation policies highlight the importance of decentralized management capacity for planning and financing of operations at the PHC level.[805] The profiles confirm the need for decentralized health workforce development for PHC planning and budgeting and health workforce management and retention.
2. *Strategic purchasing* as illustrated in some countries, becomes an important way to improve accountability for performance and to engage the private sector and civil society in supporting public health objectives. In Papua New Guinea, the Churches and other NGOs and commercial entities all provide support for basic health services, and in the case of the Churches are subsidized by the State to provide these services. Under the Basic Medical and Health Care Law in China legislated in 2029, family doctor service teams sign contracts with local communities and residents for provision of care.[806] In Malaysia, the 12th Malaysia Plan proposes strategic purchasing and service agreements with private sector agencies.[807] In Indonesia, a strategic purchasing model for a specific population catchment , operated by an adequate number of qualified health workers, which forms the foundation of the UHC Coverage Scheme through a PHC network approach.[808, 809] In Mongolia, services are provided through a public–private partnership model for PHC service delivery. Private cooperatives operate Family Health Centres through government-owned and funded facilities.
3. *Development of public health competencies* in such areas as prevention, promotion, protection, surveillance, and emergency preparedness is an opportunity for investment to support orientation of health system towards a PHC approach for UHC. The rationale for such investments has been reinforced by the experience of the pandemic and the emergence of NCD public health threats, which require wide population and whole of society approaches for prevention and control.
4. *Community Health Worker* engagement is reflected in most of the PHC profiles , as a means of more effectively engaging with local communities and addressing critical health professional workforce gaps [see section on community engagement above].

Digital technologies

The health profiles demonstrate wide application of innovations in digital health technologies and strategies. These innovation stem in part from the lessons of the pandemic [see literature review in Annex], but also from a commitment to integrate information and service delivery systems. In Indonesia for example, digital technologies are underutilized and fragmented. The Ministry of Health is proposing a digital health

804 G. Dussault et al., 2018, Building the primary health care workforce of the 21st century - Background paper to the Global Conference on Primary Health Care: From Alma-Ata Towards Universal Health Coverage and the Sustainable Development Goals. Geneva: WHO.
805 See https://moh.gov.vu/images/health_policies/policies/Role_Delineation_Policy-_Final.pdf.
806 See www.npc.gov.cn/englishnpc/c23934/202012/0e545b3ed6544a4fa93a1bb2feb13b3a.shtml.
807 Government of Malaysia, 12th Malaysia Plan 2021–2025.
808 V. Tangcharoensathien et al., 2020, Financial risk protection of Thailand's universal health coverage: results from series of national household surveys between 1996 and 2015. *International Journal for Equity in Health* vol. 19, No. 163.
809 WHO Regional Office for the Western Pacific, 2015, Thailand Health System Review. *Health Systems in Transition* vol. 5, No. 5.

transformation strategy that will focus on integration and digitization through provision of electronic medical records as well as integration of applications from various health service providers into one digital health information platform.[810] Similarly in Malaysia, it is proposed to digitalize health services, and improve integration of information through the expansion of the digital health strategy, especially for electronic medical records. In China, the National Health Commission has partnered with UNICEF to harness digital technologies to transform and forge a harmonized, comprehensive and integrated MCH-MIS for improved decision-making for health programmes and policies. In Mongolia, digital health is expanding reach of health services into remote areas to build back better post-pandemic. Telemedicine is highly applicable in the remote areas of Mongolia.[811] In Cambodia, digital health and innovations is one of the five transformative agendas of the upcoming health sector plan along with PHC.[812] In summary, the digitalization of health systems is a pronounced agenda for PHC across the region, with demonstrated potential for the integration of information and systems and for improving engagement with communities.

Discussion: Transforming health systems and societies through the primary health care approach

The present landscape analysis finds that the rapidity of epidemiological, demographic and social change is driving reforms to health systems that are aligned with a PHC approach. It finds that operational actions in the areas of models of care and the health workforce have higher prospects for success when accompanied by strategic level actions through political leadership, governance and policy, resource allocation and engagement of communities. The political decision to invest more in the health workforce, the public sector and in financial protection are necessary conditions to scale up PHC operations, as affirmed by the UHC statement on the political determinants of health.[813] Although countries have diverse PHC policies and strategies, in many cases the strategic approach includes service integration and community and sector engagement as necessary for achieving UHC.

Viewing systems and programmes through the lens of the primary health care approach

Are programs or services integrated?

Does the basic package of health services incorporate essential public health functions?

Is there an approach that engages and empowers communities to manage, promote, deliver or monitor services?

Do the programs or services engage with other sectors to support more of a whole of society approach to prevention and control ?

Are our operational actions guided by strategic considerations of political commitment and leadership, governance and policy, resource allocation and engagement with communities?

810 See https://dto.kemkes.go.id/ENG-Blueprint-for-Digital-Health-Transformation-Strategy-Indonesia%202024.pdf.
811 D. Enkhmaa et al., 2021, Overview of Telemedicine Services in Mongolia. *Current Pediatrics Reports* vol. 9, No. 3, pp. 77–82.
812 Ministry of Health, Cambodia, 2022, Booster Implementation Framework.
813 See www.un.org/pga/73/wp-content/uploads/sites/53/2019/07/FINAL-draft-UHC-Political-Declaration.pdf.

The attainment of UHC is reliant in large part on the capability of countries to design and implement pro-equity plans and strategies so that no one is left behind. In this regard, there are important points of engagement between the present analysis and the Zero Dose Vaccination review in East Asia and the Pacific.[814] The finding from the Zero Dose Review that the "greatest opportunity lies in investing where multiple deprivations are experienced" aligns with the main components of the PHC approach, which recognise the importance of integration, public health and community and sector engagement in programme and service delivery. The fact that zero dose vaccination is associated with high levels of social vulnerability reinforces the social justice and solidarity values of PHC as stated in the Astana Declaration, and the importance of engaging with communities and multiple sectors to address multiple sector deprivations. The convergence of social, economic and health system determinants of health in shaping patterns of health has important implications for the ways that health and social services converge through governance, coordination and service delivery arrangements.

Conclusions

The present landscape analysis has identified the main PHC gaps, including the lack of adequate investment in the public sector front-line service workforce and financial protection, limited incorporation of essential public health functions and community and sector engagement into health operations, and limited adoption of a social model of health that underpins the PHC approach. The main opportunities described in this report for adoption of the PHC approach include development of models of care based on PHC networks that engage a wider range of stakeholders in management and service delivery. The PHC networks will need to incorporate community leaders and health workers, to ensure that disadvantaged populations have a voice or representation in the management, delivery or evaluation of services. Transformation of the PHC workforce is required to support implementation of essential public health functions and decentralized planning and management. These transformations will require collaboration and commitment to PHC from political and health leaders and stakeholders based on the lessons learned from the COVID-19 pandemic and the requirements to achieve UHC.

On the basis of these conclusions, the following text outlines some suggested regional and country actions/approaches to supporting the PHC for UHC, while noting that country level policies and actions are specified in each country PHC profile.

Strategic Levers PHC Approach

This report concludes that priority actions to support the PHC approach are required that could be facilitated through global and regional PHC technical and financial support and implemented in country settings through UNICEF and their partners. The priority approach is informed by a definition of health that incorporates a "state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity" and which engages communities, muti-sectors, public health, and health services in a whole of society and health system approach. Examples of priority actions for developing and implementing the PHC Approach include the following:

814 UNICEF East Asia and the Pacific, 2022, Zero Dose Desk Review: The status of zero dose children and what else they are missing out on.

1. Support for **PHC policy review and capacity building** on the PHC approach at national and subnational level, including exchange of lessons learned and best practices through Regional and National PHC policy platforms and capacity building seminars.
2. Development of **models, frameworks, and guidance for multisector action for PHC** through two main avenues of collaboration of Health in All Policies Framework at National level and models of engagement by District and front-line health services with schools, workplaces, community leaders and with NGOs/CBOs
3. **Building collaborative mechanisms for PHC** at regional national and subnational levels to accelerate the PHC approach through exchange of challenges and innovations in PHC policy and practice [e.g. Regional PHC Platforms, National Health Sector Forums, UHC partnership investments, SDG3 Gap technical and financial support through PHC Accelerator investments, Development of Country Compacts on PHC for UHC]
4. **Resource allocation and financing measures (5) for supporting PHC reforms for UHC** identified in this Landscape analysis that will require technical guidance and advocacy support :
    - Scale up of *public sector investment* (and the political leadership and international cooperation it relies on) through national health insurance and tax-based financing
    - Scale up of *financial and social protection systems,* especially for supporting care for complex and chronic health conditions especially for vulnerable groups
    - *Strategic purchasing of PHC benefit packages* inclusive of essential public health functions and services will be required as health care costs escalate and societies increasingly decentralise, urbanise and age.
    - *Decentralized planning and financial management systems* to expand the capacity of countries to finance front-line health service operations including for fixed facilities, health outreach and mobile health services.
    - Joint development partner advocacy and technical support for levying taxes on tobacco, alcohol and sugar to mobilize additional resource support for PHC reforms (per World Bank recommendation).
5. **Incorporation of essential public health functions** into the basic package of health services [promotion, prevention, protection, surveillance, emergency preparedness] and services to respond to emerging public health threats [NCDs, mental health, nutrition, environmental health, adolescent health and disability support, natural disasters]
6. **Pro-equity management and planning, through mainstreaming of gender and social inclusion** into programme design, implementation, reporting and monitoring and evaluation. Adopting gender, cultural and disability support and other related equity perspectives into human resource management will be a necessary condition for improving primary care workforce competencies, availability and retention for front-line PHC.

Operational Levers PHC Approach

1. **Developing PHC Models of Care** incorporating essential public health functions and a multidisciplinary team care approach with the capability to respond to emerging public health issues in such areas as non-communicable diseases, environmental health, nutrition, adolescent health, and disability support services.
2. **Establishing PHC Networks for service provision** for front-line services, referral systems, essential public health functions and multisector collaborations [Schools, Workplaces, Local Government, Community Based Health Workforce, Private Sector, Civil Society partnerships]
3. **Tailoring models of PHC to local area contexts,** with the three main contexts for modelling being urban Primary Health Care [61 per cent of population in East Asia and Pacific now urban], Rural and Remote Primary Health Care [Areas with high inequities in access] and Primary Health Care in Humanitarian Emergency settings [Conflict and Disaster settings].
4. **Strategies to address zero dose vaccinations** will require development of models of care that demonstrate a high level of coordination between health and social programs, given that zero dose vaccination status is associated with multiple health and social deprivations.
5. **Reorientation of health workforce development** to support PHC models of care based on multidisciplinary health teams, primary health care networks, the continuum of care and implementation of essential public health functions.
6. **Innovations in digital health and new technologies** (including supply chain and logistics systems) to engage communities and other sectors, and to support integration and analysis of information for decision-making.

Annex 1

Literature review – Primary health care

A. The development landscape in East Asia and the Pacific

Economic growth and the Human Development Index

The East Asia and Pacific Region is the fastest growing in the world. The World Bank estimates 5 per cent growth in 2022 which represents some level of recovery from the pandemic, but with the potential to slow to 4 per cent due to external impacts.[815] Of the 23 countries for which data is available, 7 countries have been classified by the World Bank as upper middle-income countries, and 14 lower income countries. There is just one high income country classification (Palau) and one low-income country (the Democratic People's Republic of Korea).[816] The only countries or regions which experienced a decline in 2021 were in the Pacific Island Countries[817] and Myanmar where downturns in trade associated with the pandemic in the former, and civil conflict in the latter, were the main drivers of economic decline.

Several other development reports and indices reflect the potential for growth and the development challenges associated with this growth. Countries rely on rapid investment in infrastructure to facilitate and sustain growth, especially in the rapidly expanding cities of the region. These investment areas include improving housing, expanding broadband access, adequate sanitation and safe water, and meeting growing electricity needs while reducing green house gas emissions.

Measurement of the Human Development Index[818] in 2021 demonstrates that of the 19 countries in East Asia and Pacific which have a reported HDI, 14 countries declined from the previous year.[819] Although economies may still be growing, decline in these wider development indices demonstrate the widespread impacts of the pandemic, climate related disasters and conflict on human development (as measured by educational status, incomes, and life expectancy).

These findings validate the "whole of society" approach to PHC as stated in the Astana Declaration, as well as highlighting the emerging public health threats associated with external social and environmental impacts. The other implications for PHC is that although economic growth has the potential to expand fiscal space for investment in health, PHC policy and strategy needs to adapt to the impact of external political and environmental factors and structured inequalities and their impacts on health and human development.

815 See www.worldbank.org/en/region/eap/overview#:~:text=Growth%20is%20now%20projected%20at,in%20a%20low%20case%20scenario.
816 See https://datatopics.worldbank.org/world-development-indicators/the-world-by-income-and-region.html.
817 A. Tandon et al., 2020, Economic Contraction from COVID-19 in the Pacific: Implications for Health Financing. Health Syst Reform 6(1):e1847991.
818 The Human Development Index is a composite Index that measures level of development based on years of education, national incomes, and life expectancy.
819 See https://hdr.undp.org/content/human-development-report-2021-22.

Demographic and epidemiological trends

There are 2.1 billion people living the Asia-Pacific region, of whom 1.4 billion live in China (66 per cent), and 271 million live in Indonesia (19 per cent).[820] There are several demographic trends in the region that are of high relevance to the PHC landscape and the current epidemiological transition.

The World Bank estimates that the total fertility rate has declined from 2.5 in 1990 to 1.8 in 2020. Countries with previously high total fertility rates are declining rapidly. In Cambodia, the total fertility rate has declined by more than half from 5.6 in 1990 to 2.5 in 2020. In Indonesia, the total fertility rate has declined from 3.1 to 2.3 over the same period. These fertility trends are having an impact on the ageing of societies, as demonstrated in many of the country profiles.

Demographic changes are contributing to rapid epidemiological transitions in East Asia and the Pacific. It has been estimated that more than half (54 per cent) of the global deaths due to non-communicable diseases (NCDs) occur in Asia, and that reductions in four risk factors in young people of tobacco use, harmful use of alcohol, physical inactivity, and unhealthy diet could substantially reduce the burden of disease.[821] In the Pacific Island States NCDs are the leading cause of premature death and disability and have some of the highest rates in the world of type 2 diabetes and obesity.[822] Childhood obesity is an emerging public health concern across the Pacific. Rising rates of type 2 diabetes in young people mean that they have greater risks of complications such as renal disease, poor pregnancy outcomes and depression. Higher prevalence of endocrine-related disorders are strongly linked to the commercial determinants of health, which are private sector activities that impact public health. Modern marketing and promotion strategies have exposed young populations to higher availability and demand for highly processed, nutrient-poor, energy-rich foods and beverages.[823] The country profiles illustrate that many countries are experiencing a 50 per cent increase in diabetes in the past 10 years.

The diversity in income status and level of human development across the region means that while some upper-middle-income countries are confronted by rapid epidemiological transition, lower-middle-income countries are challenged by persistently high maternal and child mortality rates. Lower-income countries such as the Lao People's Democratic Republic and Myanmar have higher child mortality rates, with neonatal mortality contributing to nearly half the under-five mortality rate.

Several important implications for PHC policy and strategy arise from these demographic and epidemiological trends. Given the slow onset nature of NCDs and their linkages to early childhood and adolescent exposure to risk, the life course approach to health care takes on added significance. Health systems will be challenged by the complications of NCDs and of ageing, with much more pressure on these health systems to respond to the acute and chronic care needs of communities, and the requirement to both reorient service towards public health functions while in investing more in health systems to manage chronic conditions.

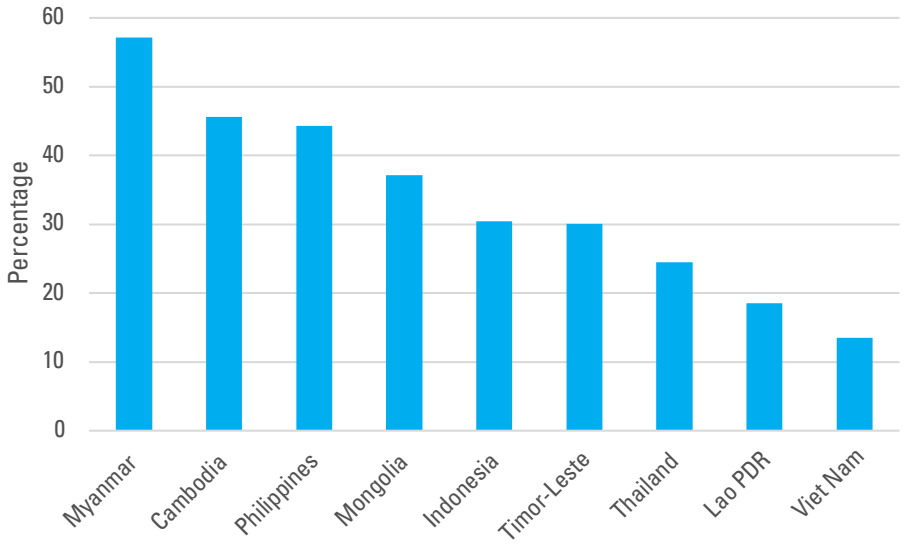
Urbanization

By 2030 it is estimated that 60 per cent of the world's population will live in cities.[824] In East Asia and the Pacific, based on the latest population figures, there are more than 1 billion people (1,152,274,732)[825] living in urban centres, which represents 55 per cent of the total population. The World Bank estimates that 61 per cent of the population in East Asia and the Pacific is now living in urban areas.[826] By 2030, there will be 15

820 See https://improvingphc.org/explore-data-around-world.
821 Sanjeet Bagcchi Young people in Asia carry high risk for non-communicable diseases, finds report BMJ 2016; 354.
822 See www.spc.int/updates/blog/2019/09/non-communicable-diseases-in-focus-at-the-13th-pacific-health-ministers#:~:text=NCDs%20are%20the%20leading%20cause,health%20concern%20across%20the%20Pacific.
823 Metabolism and risk The Lancet Child & Adolescent Health Published: March, 2022 EDITORIAL| VOLUME 6, ISSUE 3, P137, MARCH 01, 2022
824 See https://population.un.org/wup/Publications/Files/WUP2018-KeyFacts.pdf
825 Population data from PHCPI. Urban population data from UN Habitat.
826 See https://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS?locations=Z4.

megacities in the region.[827] Most of the population now live in urban areas In large population countries such as China (63 per cent) and Indonesia (57 per cent), and the rates of urbanization are escalating.[828] Of the estimated 1 billion people living in slums and informal settlements globally, most are living in South Asia and in central and southern Asia. In the East Asia and Pacific Region, it is estimated that 26 per cent of the urban population across the region are living in slums, and estimates from the United Nations indicate that there are 370 million people living in slums or informal settlements in Eastern and South Eastern Asia.[829] The barriers of these populations in accessing public health infrastructure and health and social services have been well documented in the literature and relates to lack of legal recognition of settlements, crowded living conditions, low investment in infrastructure and lack of civil registration. Other risks include "air pollution, overcrowding, poor WASH facilities, limited access to health and other essential services, and social marginalization", all of which serve to increase risks of existing and emerging infectious diseases, vaccine preventable diseases such as diphtheria and measles, and deterioration in physical and mental and physical health and well-being.[830] These social trends and challenges place urban PHC firmly on the agenda of any PHC policy and strategy development across East Asia and the Pacific.

Figure 2: Percentage of the urban population living in slums 2018



Source: See https://data.unhabitat.org/datasets/cd4e1deb72ea49bd8f3403f8a9edfe6d_0/explore.

Decentralization is a regional trend which has important implications for the governance and resourcing of PHC. With the growth of urban centres an increasing proportion of the population is within the primary jurisdiction of municipal health authorities rather than central ministries of health. Accountabilities for governance and financing of urban health can overlap, leading to some questions about who is responsible for what. This is especially the case in relation to health services for the urban poor, as the lack of civil registration and informal/illegal settlements in poor urban areas are obstacles to national and municipal governments to invest in health. Cities such as Yangon, Phnom Penh and Ulaanbaatar all have dual or shared accountabilities by central and municipal health authorities. High rates of internal migration into urban and peri-urban areas place pressure on ministries and urban local governments to upgrade urban health services and public health infrastructure planning.[831]

827 See https://en.unesco.org/events/eaumega2021/megacities.
828 See https://data.worldbank.org/indicator/SPURB.TOTL.IN.ZS.
829 See https://unstats.un.org/sdgs/report/2019/goal-11/.
830 WHO Western Pacific Regional Office, 2022, Regional Framework on the Future of Primary Health Care in the Western Pacific.
831 WHO Regional Office for the Western Pacific, 2014, Myanmar health system review. *Health Systems in Transition* vol. 4, No. 3.

Many countries in the region have undergone process of administrative decentralization in recent years or decades (Cambodia, Indonesia, Papua New Guinea and the Philippines). The main challenges of these processes which have been well documented in the literature include lack of clarity of national and local governments in relation to decentralized financing, competing priorities in decentralized budgets for local government, lack of clarity on decision-making space for human resources management and planning, and limited capabilities and knowledge of local government managers on public health.[832, 833, 834] A further challenge is that, although decentralization of powers brings management and potentially services closer to people, it can limit central powers in ensuring health system integration and equity of resource allocation. In Indonesia for example, there are significant regional disparities in health, which have not been able to be corrected through decentralized funding.[835] Where these disparities persist, as in the case of Papua New Guinea, and where local governments inadequately resource local services, faith-based organizations and NGOs often step in to address gaps.[836]

These trends in decentralization have important implications for PHC in relation to strategic levers of leadership, governance, and resource allocation and to the PHC component of multisector collaboration. By bringing management and services closer to where people live, the approach has the potential to enable services to be more people centred and engaged with communities.

Environmental health

WHO estimates that 23.1 per cent of all disability adjusted life years globally is attributable to the environment.[837] One in four under-five deaths are attributable to unhealthy environments. Air pollution, lack of adequate water and sanitation, hazardous chemicals and increasing exposure to the impacts of climate change are the main factors contributing to these environmentally related deaths.[838] An estimated 2.2 million deaths in the WHO Western Pacific region are attributable to air pollution.[839] The mortality rate attributed to household and ambient air pollution in East Asia and the Pacific is estimated at 122 per 100,000.[840] Air pollution poses the greatest environmental threat to children's health from both indoor and outdoor pollution,[841] and rapid urbanization across the region is escalating the outdoor risk.[842]

UNICEF reports that although significant gains have been made in water, sanitation and hygiene, there remain significant gaps in access, with an estimated 910 million people not having access to safe sanitation services and 116 million lacking basic drinking water. In 13 countries for which data is available, 93 million lack access to adequate hand washing facilities.[843] A regional review of children's environment and health found that the proportion of the population with access to at least basic safe drinking water was less than 75 per cent in Cambodia, Myanmar and Timor-Leste.[844] This contributes to the two leading causes of child mortality in the region: pneumonia and diarrhoea.

UNICEF estimates that close to 90 per cent of the burden of disease attributable to climate change is borne by children under the age of 5 and that climate impacts on the rights of the child.[845] Reducing climate risk is of

832 WHO Regional Office for South-East Asia, 2019, Papua New Guinea Health System Review. *Health Systems in Transition* vol. 9, No. 1.
833 WHO Regional Office for South-East Asia, 2017, Indonesia health system review. *Health Systems in Transition* vol. 7, No. 1.
834 WHO Regional Office for the Western Pacific, 2014, Myanmar health system review. *Health Systems in Transition* vol. 4, No. 3.
835 WHO Regional Office for South-East Asia, 2017, Indonesia health system review. *Health Systems in Transition* vol. 7, No. 1.
836 See https://apps.who.int/iris/bitstream/handle/10665/280088/9789290226741-eng.pdf?sequence=5&isAllowed=y.
837 See www.who.int/data/gho/data/themes/public-health-and-environment.
838 UNICEF Children's Environment and Health in East Asia and the Pacific Situation Analysis and Call for Action www.unicef.org/eap/reports/childrens-environment-and-health-east-asia-and-pacific.
839 WHO Western Pacific, Regional Framework on Primary Health Care.
840 See https://data.worldbank.org/indicator/SH.STA.AIRP.MA.P5?end=2016&start=2016&view=map.
841 See www.who.int/news-room/facts-in-pictures/detail/children's-environmental-health#:~:text=Air%20pollution%20is%20the%20greatest%20environment%20risk%20to%20children's%20health.
842 See www.unicef.org/eap/reports/childrens-environment-and-health-east-asia-and-pacific.
843 See www.unicef.org/eap/what-we-do/wash.
844 See www.unicef.org/eap/reports/childrens-environment-and-health-east-asia-and-pacific.
845 See www.unicef.org/environment-and-climate-change.

high priority given that East Asia and the Pacific is home to 13 of the world's top 30 most climate vulnerable countries.[846] An agenda for action on children and the environment calls for improved sectoral collaborations between health ministries and environment sectors, including deepening engagement with other sectors for the purpose of research, communication and policy advocacy.[847] UNICEF currently supports communities and policy stakeholders on resources improving water quality, securing water supplies and safer sanitation facilities as well as scale-up of WASH in schools and the support for facilities that are climate resilient.[848]

Nutrition

UNICEF identifies three classifications of undernutrition in the East Asia and Pacific Region that include undernutrition (stunting and wasting), micronutrient deficiencies and the growing prevalence of overweight and obesity.[849] A review of nutritional interventions for universal health coverage found that nutrition actions are required at multiple levels of health service delivery, including at secondary and tertiary levels. As well as integrating nutrition-related actions into national health systems, it is essential to implement multisectoral action to achieve nutrition- and health-related Sustainable Development Goals.[850]

UNICEF identifies priority actions include preventing malnutrition among women during pregnancy and breastfeeding, supporting optimal breastfeeding practices in early childhood, promote age-appropriate complementary foods, strengthening the early detection and treatment of severe wasting, providing micronutrient fortification and supplementation, supporting the nutrition of children and adolescents in schools, improving food environments and preventing childhood overweight, and protecting the nutrition rights of children and women affected by emergencies. As well as developing a health specific approach, UNICEF adopts a wider approach to nutrition based on the food system. This involves working across sectors with health, water and sanitation, education, and social protection systems.[851] In addition to the food system, attention in nutrition programming needs to be given to the social system and the intersectional relationships between the nutritional needs of adolescent girls and pregnant women in in relation to location, class and ethnicity.

Emergency preparedness and COVID-19

Despite being the most rapidly growing economic region in the world, East Aisa and the Pacific is by no means exempt from humanitarian emergencies. The COVID-19 pandemic has had widespread impacts on economies and health across the region, with the Pacific Island States experiencing sudden economic shocks resulting from interruptions to trade. There are ongoing humanitarian emergencies in Myanmar related to civil conflict, and in the Democratic People's Republic of Korea due to floods, droughts, sanctions, and food shortages. In addition to these specific cases, the region at large is highly exposed to the impact of climate change in low lying PICs and in coastal communities in Asia. Although these humanitarian emergencies and external threats of climate and pandemics demonstrate the landscape for PHC in East Asia and the Pacific is by no means even, there are common external threats of climate and pandemic impacts and related economic downturns that have region wide impacts.

The COVID-19 impact has demonstrated in East Asia and the Pacific the value of the whole of society approach for response to emergencies. This was evident in the use of a whole of society approach for social distancing and lockdowns and demonstrates the central role of political leadership in guiding response.[852] The

846 See www.worldbank.org/en/region/eap/overview#:~:text=Growth%20is%20now%20projected%20at,in%20a%20low%20case%20scenario.
847 See www.unicef.org/eap/reports/childrens-environment-and-health-east-asia-and-pacific.
848 See www.unicef.org/eap/what-we-do/wash.
849 See www.unicef.org/eap/what-we-do/nutrition.
850 WHO, 2019, Nutrition in universal health coverage.
851 See www.unicef.org/eap/what-we-do/nutrition.
852 Masahiro Zakoji, T Sundararaman Emerging good practices and lessons learnt to maintain essential health services during the COVID-19 pandemic WHO South-East Asia Journal of Public Health | February 2021 | 10 (Suppl. 1).

COVID-19 response demonstrated the value of empowering communities to be more engaged in-service delivery processes.[853] Use of integrative systemwide approaches that moved away from vertical surveillance and programme approaches during the COVID-19 pandemic has been reported as a more effective model for pandemic response.[854]

In addition to the benefits of CHWs improving community engagement, the resilience of health systems has been promoted though involvement of CHWs in emergency preparedness and response activities.[855] Community health have expanded their roles during the pandemic to include surveillance, maintenance of essential health services, provision of essential medicines to homes, isolation and quarantine support and community education which helped to demonstrate the "resilience" of health systems in their response to the pandemic. This was part of a broader strategic direction towards decentralising decision-making to front-line levels of care where local contexts are understood and where there are more opportunities for community engagement. These roles reflect the potential for more people-centred models of PHC, implemented through community participation in planning, education and services, including addressing the structural determinants limiting access by marginalized groups.[856] Overall, the COVID-19 impacts demonstrated the value of the PHC approach through integrated service models, and enhanced political leadership and sector collaborations, and an expanded role for a community-based front-line health workforce.

Gender mainstreaming

The importance of mainstreaming of gender thinking and strategy into programme operations is reflected in theoretical discussions around intersectionality, which confirm that different aspects of social identity converge to produce particular experiences of marginalization.[857] In adolescence for example, gender disparities are more pronounced with girls facing a disproportionate amount of unpaid work, risks of early pregnancy and sexual and gender-based violence,[858] which can expose these same young people to increased risk of HIV transmission.[859] These gender inequalities are factors associated with zero dose vaccination, with one review confirming that health, education, protection, and a safe environment are the four domains that describe how gender inequalities can have an impact on child health at an individual level.[860]

The fact that gender determinants of health are intersectional with other related social determinants of health such as class, ethnicity and location, supports the case for "mainstreaming" of gender into health and social programmes. This mainstreaming means applying gender perspectives "as an integral part of all activities across all programmes" including in such areas as policy, research, advocacy, and project planning and monitoring.[861] Access to reproductive health programmes, gender barriers to health care, the health of adolescents, the well-being of the front-line health workforce and the role of gender norms in shaping health related behaviours and decision-making are far from being specific to any single program, but in contrast reflect the importance of integrating gender perspectives across programmes and organizations.

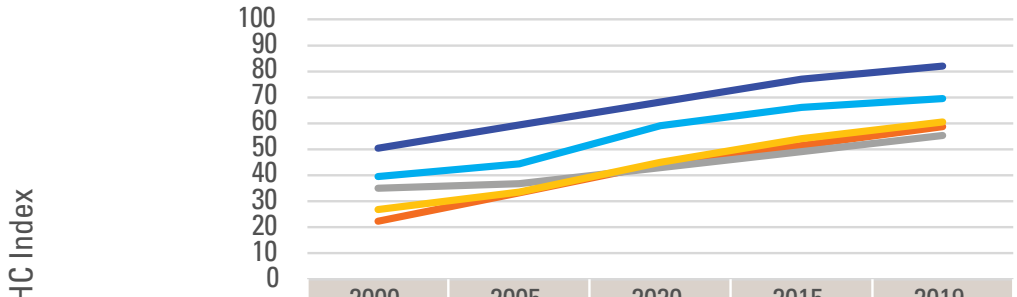
853 Guisset A-L, Travis P, Bagheri Nejad S, Ved R, Rouleau K. Unpacking the service delivery function: COVID-19 provides an opportunity for some reverse thinking. WHO South-East Asia J Public Health. 2021;10(Suppl. 1):S30–S32.
854 Ibid.
855 Bezbaruah S, Wallace P, Zakoji M, Padmini Perera WLS, Kato M. Roles of community health workers in advancing health security and resilient health systems: emerging lessons from the COVID-19 response in the South-East Asia Region. WHO South-East Asia J Public Health. 2021;10(Suppl. 1):S41–S48.
856 See https://apps.who.int/iris/bitstream/handle/10665/155004/WHO_HIS_SDS_2015.7_eng.pdf?sequence=1.
857 Baird et al, Intersectionality as a Framework for Understanding Adolescent Vulnerabilities in Low and Middle Income Countries: Expanding Our Commitment to Leave No One Behind The European Journal of Development Research (2021) 33:1143–1162.
858 See https://data.unicef.org/adp/snapshots/gender-equality/.
859 See https://data.unicef.org/topic/gender/gender-and-hiv-aids/.
860 United Nations Children's Fund. Gender Counts: A quantitative assessment of gender inequality and its impact on girls and boys in East and Southeast Asia. UNICEF East Asia and the Pacific, Bangkok, 2019. www.unicef.org/eap/media/3601/file/EAP%20gender%20count.pdf.
861 See www.un.org/womenwatch/osagi/pdf/factsheet2.pdf.

B. Health coverage landscape

UHC Service Coverage Index

Target 3.8 of the Sustainable Development Goals (SDGs) is defined as the achievement of universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all."[862] Two indicators are used to measure progress towards the UHC goal. These are health service coverage (3.8.1) and health expenditures on household budgets to measure financial hardship (3.8.2). The health service coverage index measures the average coverage of essential services based on 14 tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, NCDs and service capacity and access.[863, 864] Evidence from the EAPRO Region demonstrates coverage of essential health interventions has been trending upwards since 2000. In this group of large population countries, both China and Viet Nam have been the most successful in utilising their PHC systems to extend essential health services to their populations.

Figure 3: Expansion of health services as measured by the UHC Index in East Asia and the Pacific 2000–2019

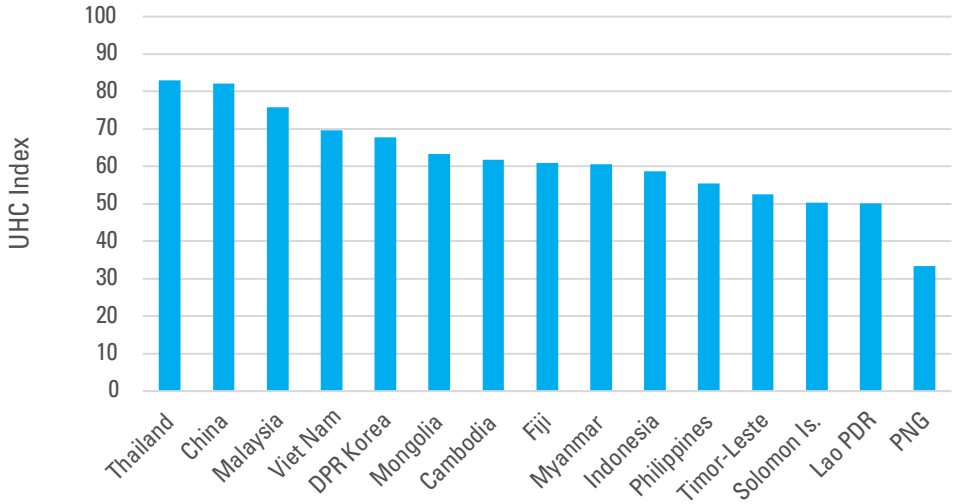


	2000	2005	2020	2015	2019
China	50	60	68	77	82
Indonesia	22	33	45	52	59
Philippines	35	37	43	49	55
Myanmar	27	34	45	54	61
Viet Nam	40	45	59	66	70

The data in figure 4 reflect coverage in 2019 in all East Asia and Pacific countries. In lower income countries, such as Papua New Guinea, Timor-Leste and Solomon Islands, close to 50 per cent or more of the population are not accessing essential health services.

862 See https://www.who.int/data/gho.
863 Ibid.
864 UHC COVERAGE INDEX SDG 3.8.1 FULL DEFINITION: Coverage of essential health services (defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, non-communicable diseases and service capacity and access, among the general and the most disadvantaged population). The indicator is an index reported on a unitless scale of 0 to 100, which is computed as the geometric mean of 14 tracer indicators of health service coverage. The tracer indicators are as follows, organized by four components of service coverage: reproductive, maternal, newborn and child health; infectious diseases; non-communicable diseases; and service capacity and access. See www.who.int/data/gho/indicator-metadata-registry/imr-details/4834.

Figure 4: UHC Coverage Index East Asia and Pacific 2019



Analysis of the UHC Index gaps in the UHC service coverage index in large population countries demonstrate significant gaps in services.

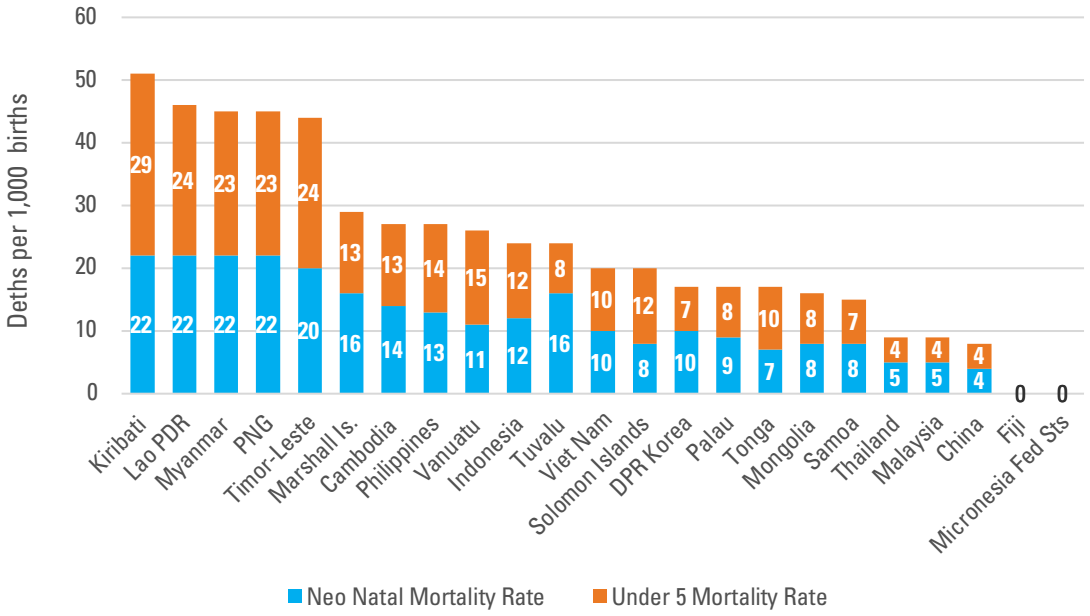
Maternal and child health

As illustrated in the PHC profiles, societies, and health systems in many of the countries are being challenged by a triple burden of communicable diseases, NCDs and reproductive, neonatal, child and adolescent health priorities, all of which link closely to the social, environmental and political determinants of health.

Countries have demonstrated successful outcomes in many areas related to maternal and child health over the past 10–20 years. The under-five mortality rate ranges from 8 per 1,000 in China to 51 in Kiribati and 46 in the Lao People's Democratic Republic. The under-five mortality rate has declined in 22 of the 23 countries for which data are available since 2010. The neonatal mortality rate (within the first 28 days after birth per 1,000 live births) ranges from 4 in China to 22 in Kiribati, the Lao People's Democratic Republic, Myanmar and Papua New Guinea.

There has been significant progress in reducing neonatal mortality in the region. Since 2010, for the 23 countries for which trend data are available, the neonatal mortality rate has declined in 21 countries, with several Pacific Island countries recording slight increases in rates in this time frame. Despite these gains, the fact that such a large proportion of child deaths are in the first 28 days of life raises questions about the effectiveness of the PHC system in addressing the acute care needs of women and children in the neonatal period.

Figure 5: Under-five and neonatal mortality rates in East Asia and the Pacific



Source: Primary Health care performance Initiative PHCPI Measure Data https://improvingphc.org/explore-data-around-world

Maternal mortality ranges from 250 deaths per 100,000 live births in Myanmar to 29 in China and Malaysia. Other countries with higher rates include the Lao People's Democratic Republic (185), Indonesia (177), Cambodia (160) and Papua New Guinea (145). Of the 20 countries which have related data, all have declined since 2010, illustrating improvements in access to and use of health services across East Asia and the Pacific over the past 10 years for maternal and child health services. Of the 22 countries for which data are available, 14 countries have 90 per cent or more of deliveries attended by skilled personnel. Concerning the other eight countries, four have weak health systems with lower rates of investment in front-line health workforce and functional health referral systems. These findings, along with the declining neonatal, child and maternal mortality rates, all reflect the significant improvements on maternal and child health care in the region.

Adolescent health

It has been estimated that there are currently 329 million adolescents in the East Asia and Pacific Region.[865] The challenge is to ensure adequate access to health, education, and skills development in this age group. UNICEF indicates that there are large disparities in access, with the disadvantaged groups including ethnic minorities, people with disabilities, young girls, and adolescents from poor families. Specific threats to well-being include teenage pregnancy, mental health, exposure to violence and abuse and lack of freedom of expression.

The figure following highlights some of the indicators on adolescent health and well being from a selection of countries across the region. Variations in indicators highlight the impacts of country specific social contexts on adolescent health.

865 UNICEF East Asia and Pacific Region, Adolescent Development – Second Window of Opportunity. www.unicef.org/eap/what-we-do/adolescent-development.

Table 2: Adolescent and Gender Related Health Indicators

Country	Adolescent population		Adolescent birth rate	Child marriage	Youth literacy	Youth suicide		Intimate partner violence
	M	F				M	F	
Papua New Guinea	21	21	68	27%	-	2	1	60%
Fiji	18	18	23	4%	-	8	8	-
Vanuatu	23	21	81	21%	96%	16	8	-
Solomon Is.	22	22	78	21%	-	17	1	-
Timor-Leste	23	22	42	15%	84%	4	2	38%
Indonesia	17	16	36	16%	100%	2	1	-
Cambodia	19	18	30	19%	-	3	1	7%
Lao People's Democratic Republic	20	19	83	33%	-	4	3	14%
Thailand	11	11	32	20%	98%	4	1	-
Malaysia	15	15	9	-	97%	3	1	-
Viet Nam	15	14	29	11	99%	2	1	-
Myanmar	17	16	21	-	95%	3	1	22%
Philippines	20	19	36	17	98%	1	1	11%
Mongolia	18	17	27	12	99%	12	5	8%
China	13	11	6	-	100%	2	1	-

Notes:
Adolescent population: Percentage of the total population aged 10–19 years (2023).
Adolescent birth rate: Births per 1,000 adolescent girls.
Child marriage: Percentage of women aged 20–24 years who were married before age 15 or 18. Youth literacy: Percentage aged 15–24 years who can read and write.
Youth suicide: Deaths due to self-harm per 100,000 adolescents (2019).
Intimate partner violence: Percentage of ever-married girls aged 15–19 years who experienced physical and/or sexual violence committed by a husband or partner in the past 12 months.

Source: https://data.unicef.org/adp/.

Important implications of this data for PHC are as follows:

- In six of the fifteen countries included above, boys and girls make up more that 20 per cent of the share of the total population, demonstrating the importance of a focus on adolescent health in PHC programming and services in East Asia and the Pacific.
- Wide variations in child marriage, adolescent birth rates and youth suicide between countries highlights the importance of tailoring country programmes to national health priorities, whilst recognising at the same time the regional significance of some of these findings
- High adolescent birth rates and rates of child marriage in some countries, and higher suicide rates in young boys, highlights the significance of adopting gender perspectives in PHC programming and service provision.
- Significantly higher rates of child marriage in lower income countries, in rural areas and in lower socioeconomic quintiles highlights the importance of addressing the gender and social determinants of health in PHC services and programmes.

UNICEF describes several approaches which are intended to protect and advance the interests and well-being of adolescents:

1. Advocate for adherence to Article 12 of the Convention on the **rights of the child.**
2. Promotion of **policies and programmes** that invest in your people.
3. **Partnerships** with United Nations agencies, governments, the private sector, youth organizations, civil society networks, and others for collective action and engagement with young people.
4. **Pro-equity programming,** with special attention placed on to adolescents from the most disadvantaged groups (stateless, migrants and those with disabilities) and for investment in gender responsive programming. There is a focus on mental health and psychosocial well-being in adolescent health programming.

The COVID-19 pandemic has widened income gaps with the lowest socioeconomic quintiles experiencing the highest rise in poverty rates. Based on the health and economic threats posed by the pandemic for young people, UNICEF has developed an agenda for actions to increase investment in social protection and by "building back stronger" through ensuring quality education, protection and good mental health for children.[866]

Despite the above-mentioned challenges and commitments to the well-being of young people, a review of school-based health interventions in the Western Pacific Region could identify only eight studies. These studies covered such topics as AIDS, sexual and reproductive health, de-worming, nutrition, obesity, tobacco use, and suicide. Success factors associated with implementation included policy support, stakeholder engagement, incorporating interventions into the existing curriculum and levels of student participation.[867] These cases of resilience to pandemic impacts and school-based interventions highlight the roles of the PHC approach of community engagement and multisector collaborations in improving access to health and social services for vulnerable groups. The limited extent of school health policy development and implementation highlights a potential gap that could be addressed through the PHC approach.

866 See www.unicef.org/reports/unicef-75-preventing-a-lost-decade.
867 Xu T, Tomokawa S, Gregorio ER, Jr, Mannava P, Nagai M, Sobel H (2020) Schoolbased interventions to promote adolescent health: A systematic review in low- and middle-income countries of WHO Western Pacific Region. PLoS ONE 15(3): e0230046.

Globally in 2021, there were 38.4 million [33.9 million–43.8 million] living with HIV. UNAIDS identifies the key populations globally as sex workers and their clients, gay men and other men who have sex with men, people who inject drugs, transgender people and their sexual partners. Together they constitute 70 per cent of HIV infections globally. 94 per cent of new HIV infections are outside of sub-Saharan Africa.[868] A recent assessment in the region has found that there are approximately 220,000 adolescents living with HIV, but is no accurate assessment of the number of children living and working on the street.[869] Child orphans are vulnerable due to exploitation, physical and psychosocial harm from stigma, sexual violence. As a result of these exposures, they have limited access to education health, nutrition, and social protection. Adolescents who are out of school often live in unsafe places and are at higher risk for HIV AIDS.[870]

Once recent overview of HIV and adolescents in the region identified epidemics of HIV among young men who have sex with men, young people who sell sex, young people who inject drugs and young transgender people. The report identifies high impact interventions as being condom use, harm reduction, testing and counselling and antiretroviral treatment. This report identifies three enablers for improvements to the health and social situation for these groups. These enablers include political commitment, a rights-based approach and community services focusing on adolescents, highlighting again the role of strategic levers in facilitating reform.

Significant gaps in programmes and services for adolescents in relation to HIV, health and social services are identified in in such areas as income support, prevention against violence and sexual abuse, legal access, and child protection. Synergies between development initiatives are required through closer collaboration between child protection, law enforcement, juvenile justice, social welfare and HIV and health services to be effective in supporting vulnerable adolescents at higher risk for sexual violence and HIV. Development as well as gender responsive synergies[871] are essential for providing a foundation for effective programming in the field of adolescent health.

> *Strong social and child protection programmes and high rates of primary and secondary school enrolment and completion generate knowledge, lower health risks and are powerful barriers against the spread of HIV.*[872]

868 See www.unaids.org/sites/default/files/media_asset/UNAIDS_FactSheet_en.pdf.
869 See www.unicef.org/eap/reports/adolescents-under-radar.
870 See www.unicef.org/eap/what-we-do/hiv-aids.
871 See https://data.unicef.org/adp/snapshots/gender-equality/.
872 See www.unicef.org/eap/reports/adolescents-under-radar.

Mental health and psychosocial support

Globally in 2019 it was estimated that one in seven adolescents experience mental disorders, which is equivalent 166 million adolescents (89 million boys and 77 million girls).[873] Similar to these global figures, in the region, 1 in 7 boys and 1 in 9 girls aged 10–19 years have a mental health disorder with suicide being the third leading cause of death of young people aged 15–19.

According to Global Burden of Disease data published 2019, suicide is the second leading cause of death of girls aged 15–19 years, and the third leading cause for adolescent boys in East Asia and the Pacific. The burden of disease due to mental is highest during later childhood and early to mid-adolescence, with girls more affected by anxiety disorders and boys by self-harm [see table 1 for adolescent incidence of suicide]. Analysis of resource allocation and burden of disease confirms there is substantial unmet need for mental health and psychosocial support (MPHSS) in East Asia and the Pacific.[874] This includes unmet needs in health services provision and social support, with <0.5 specialists and two outpatient facilities for children/ adolescent mental health per 100,000 population.[875]

MPHSS applies an integrated approach to the promotion of mental health and well-being, and

focusses on community-level action and resilience, community-support including support for the most vulnerable populations with specialized needs. In the humanitarian context, there are a pyramid of interventions extending from specialized and focussed care, to family and community support and further to social considerations relating to basic services and security. The integrated approach involves engagement with health education, social welfare and the justice system. Other actions associated with the approach include the following:[876]

- Legislation, policy, institutional and capacity-building steps.
- National multisectoral committees.
- Standard screening, referral and case management approaches.
- Improved collection and analysis of data on mental health.
- Engaging with stakeholders to reduce stigma and discrimination.

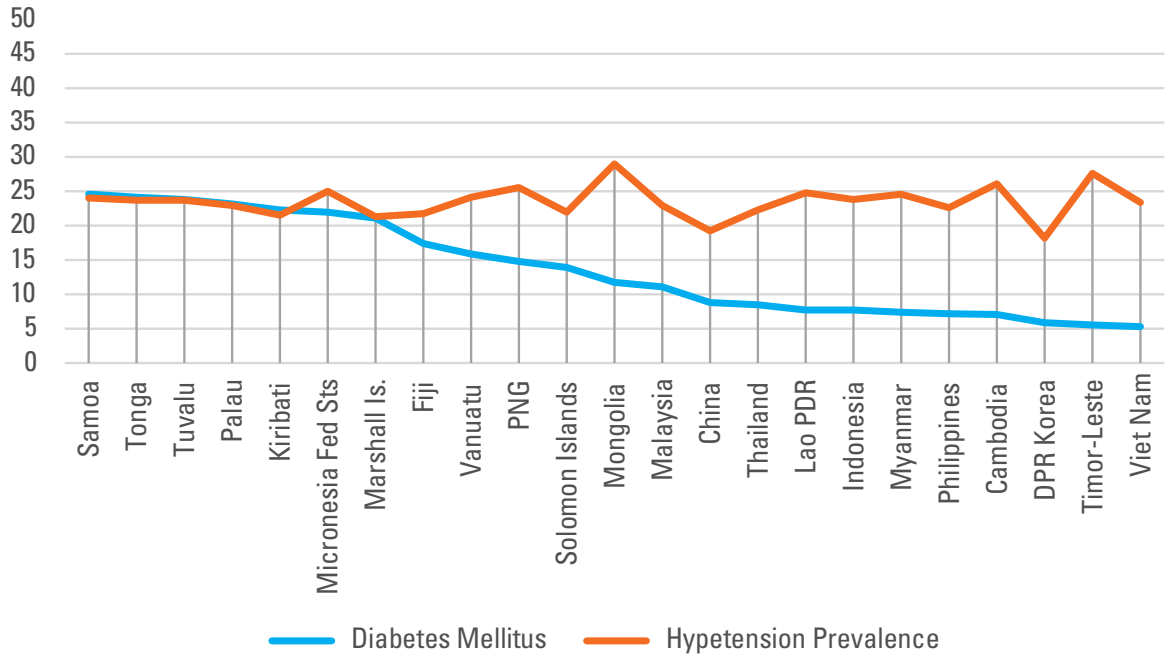
As is demonstrated elsewhere throughout this Landscape Report, the PHC approach is the best fit for responding to chronic and emerging public health threats. As is illustrated in this case of MHPSS, engaging with communities and multiple sectors, and adapting integrated health services and public health response are necessary conditions for achieving universal coverage for mental health services and psychosocial support.

873 See https://data.unicef.org/topic/child-health/mental-health/.
874 MENTAL HEALTH AND PSYCHOSOCIAL SUPPORT (MHPSS): "the composite term mental health and psychosocial support is used to describe any type of local or outside support that aims to protect or promote psychosocial well-being and/or prevent or treat mental health conditions." UNICEF Technical Note MHPSS. See www.unicef.org/media/73726/file/UNICEF-MH-and-PS-Technical-Note-2019.pdf.pdf.
875 UNICEF, Burnet Institute: Strengthening Mental Health and Psychosocial Support Systems and Services for Children and Adolescents in East Asia and the Pacific Region. Regional Report. UNICEF, Bangkok, 2022
876 Ibid.

Non-communicable diseases

Data available through the Primary Health Care Performance Initiative indicates that all 18 countries have increased prevalence of diabetes since the previous year of measurement.[877, 878] [see footnote] Of the 15 countries which have available data on prevalence of hypertension, 9 have increased since the last measurement. The first 11 countries with the highest prevalence of these conditions are from Pacific Island States (including Papua New Guinea). The remaining countries from Asia have all however increased their prevalence in diabetes from previous readings. These findings not only reflect increasing health risk in the region, but also alert to the increasing pressure on health systems to effectively respond. Given these health impacts are so strongly associated with urbanization and globalization in East Asia and the Pacific,[879] the strength of multisector collaborations and improvements in urban PHC are likely to be a necessary condition for prevention and control of NCDs in the coming decades.

Figure 6: Proportion of population with diabetes and hypertension, East Asia and the Pacific



877 See https://improvingphc.org/

878 "The data presents the proportion of the adult population with hypertension on medication with blood pressure controlled (Systolic BP < 140, diastolic BP < 90), and the proportion of the population , as well as the proportion of the adult population with raised fasting blood glucose (>=7.0 mmol/L or on medication)(age-standardized estimate)."

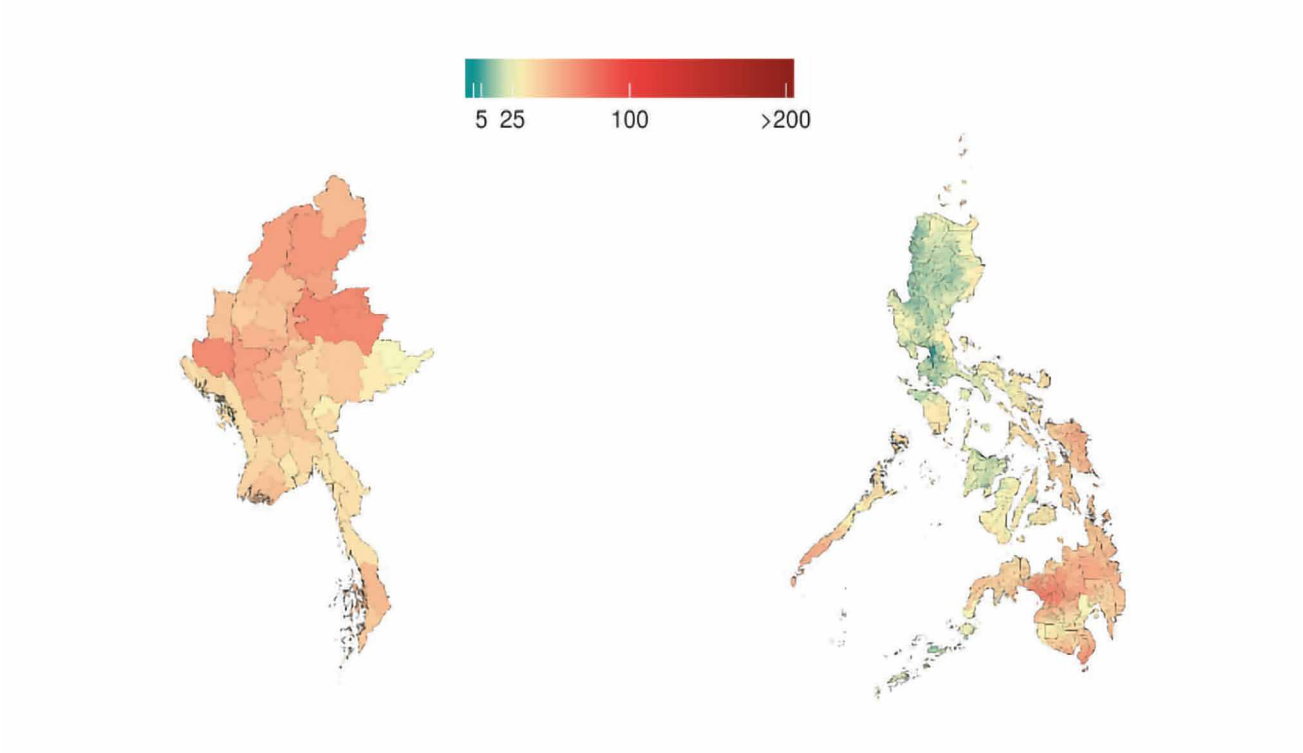
879 WAH-YUN LOW, YEW-KONG LEE, and ALEXANDER LOURDES SAMY Non-Communicable Diseases In The Asia-Pacific Region: Prevalence, Risk Factors And Community-Based Prevention International Journal of Occupational Medicine and Environmental Health 2015;28(1): 20–26.

There is sufficient evidence to make the claim that systems have broadened their capabilities to expand access to essential health services especially for maternal and child health services and some aspects of communicable disease control. The response to NCD prevention and control and for adolescent health, and of health inequities more generally, will require a significant scale up of both health system and multisector response to address the social and environmental determinants of health. The attribution of NCD health conditions to lifestyle factors is likely to require more public health policy action on the built environment and its relationship to health and on the commercial determinants of health. Evidence of widespread inequities in access to essential services, as measured by DHS surveys and the UHC index, provides clear evidence of systematic inequities of health-care access based on location, wealth quintiles, education levels, and ethnicity. Although success in the areas of communicable disease control and maternal and child health provide a foundation for building the PHC approach, modern health systems are less fit for purpose to achieve UHC in a twenty-first century setting characterized by persisting health inequities, emerging public health threats and the rise of NCDs.

C. The health equity landscape

Global data from the Institute of Health Metrics and Evaluation provides some insights on the locations in countries with higher under-five mortality rates. The two maps below from Myanmar and the Philippines on the distribution of child mortality rates within countries is a picture that is reflected across the region. A similar picture is available for both Indonesia and Cambodia, where remote areas dominated by ethnic minority populations tend to have higher child mortality rates.

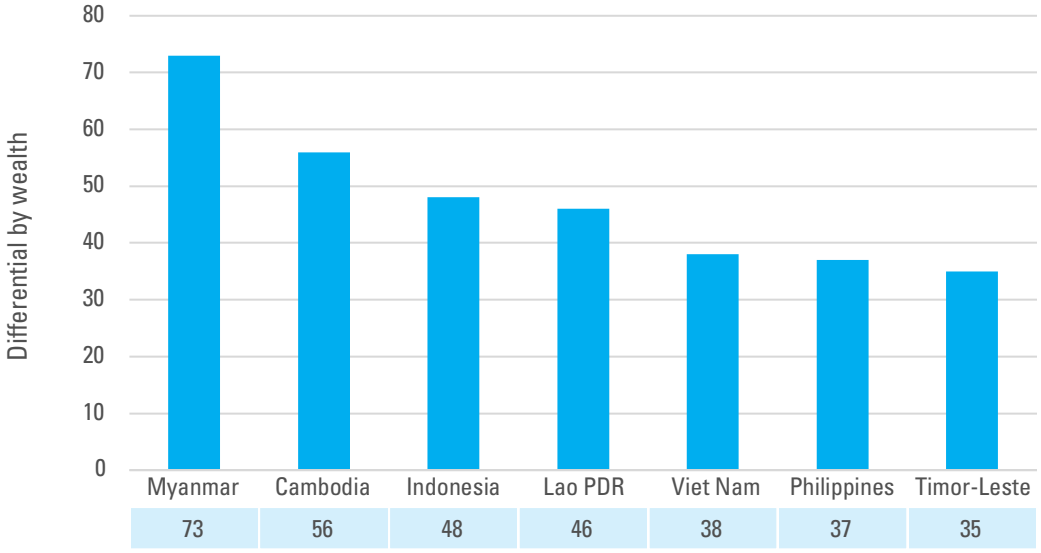
Figure 7: Mapping of child mortality in Myanmar and the Philippines



Source: Institute for Health Metrics and Evaluation (IHME). See http://www.healthdata.org/

The hot spots for child mortality within countries represent a convergence of the economic, social and cultural determinants of health. Demographic surveys in the region from the past two decades have consistently established strong associations between social exposures such as income, levels, education status, ethnicity and location and health coverage and outcomes.

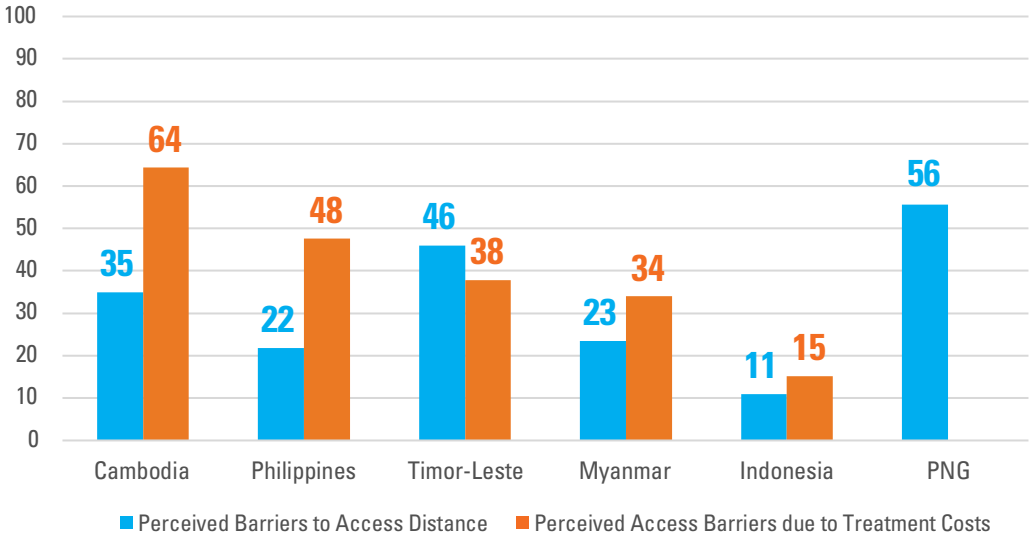
Figure 8: Differentials in under-five mortality rates between highest and lowest wealth quintiles



Accessibility

Of the 24 countries in East Asia and the Pacific, six have information in the Primary Health Care Performance Initiative Database.[880] In five of those countries, 20 per cent or more of the population identify distance to facilities as a barrier to access PHC, and more than 30 per cent of the population of four countries (Cambodia, the Philippines, Timor-Leste and Myanmar) report cost as a barrier to care.

Figure 9: Perception of distance and treatment cost as access barriers to health care in selected countries (percentage of the population)



880 See https://improvingphc.org/phcpi-indicators.

Lack of information on these access barriers in the other 18 countries demonstrates the extent to which decision makers are not being sufficiently exposed to the evidence that would support more pro-equity health policy and planning.

Social determinants of health

A desk review undertaken by UNICEF on immunization engagement[881] in 2022 found that immunization coverage inequities were strongly associated with income levels, ethnicity and location in Indonesia,[882] Myanmar,[883, 884, 885] and Cambodia.[886] The first case of polio in 13 years in Indonesia was reported in 2019 in remote Papua Province along with low immunization coverage.[887] In Thailand, recent measles outbreaks have been linked to the conditions of Myanmar migrant factory workers.[888] In China an analysis of incidence of vaccine preventable disease over the past seven decades has shown that the highest incidence of disease is in the Western provinces of that country.[889] After taking account the effects of socioeconomic factors, ethnic minority women in western China were far less likely to immunise their children compared with majority Han women.[890] In the Philippines, surveys have shown that coverage is lowest in the conflict-affected Autonomous Region in Muslim Mindanao (fully immunized 9 per cent in 2017) with immunization being associated with wealth.[891] In Sabah Province, Malaysia, there is a high proportion of the population who are migrants or who belong to an indigenous minority and who are exposed to high rates of poverty and lack of civil registration.[892] This area was the site of a polio outbreak in 2019. In these situations, social determinants of low incomes, ethnicity, remoteness and at times conflict and exclusion converge and set in place multi-decade patterns of social and health inequalities. The task of a PHC oriented system is to change the power and service dynamics to engage and empower local communities more successfully through direct engagement with, and delivery of health and social services, especially in the areas of prevention and promotion.

Gender equality and gender discrimination in health outcomes

In addition to socio economics, location and ethnicity, gender is a major consideration in relation to equity of service provision. The dimensions of gender that can be taken into consideration in planning equitable health services include the decision-making authority of female primary carers, accessibility to reproductive health-care services, the "gender friendly" quality of health-care facilities and provision including the availability of female health providers, and the safety of the front-line female health workforce. This is an important consideration given that most of the nurses are women in East Asia and the Pacific.[893]

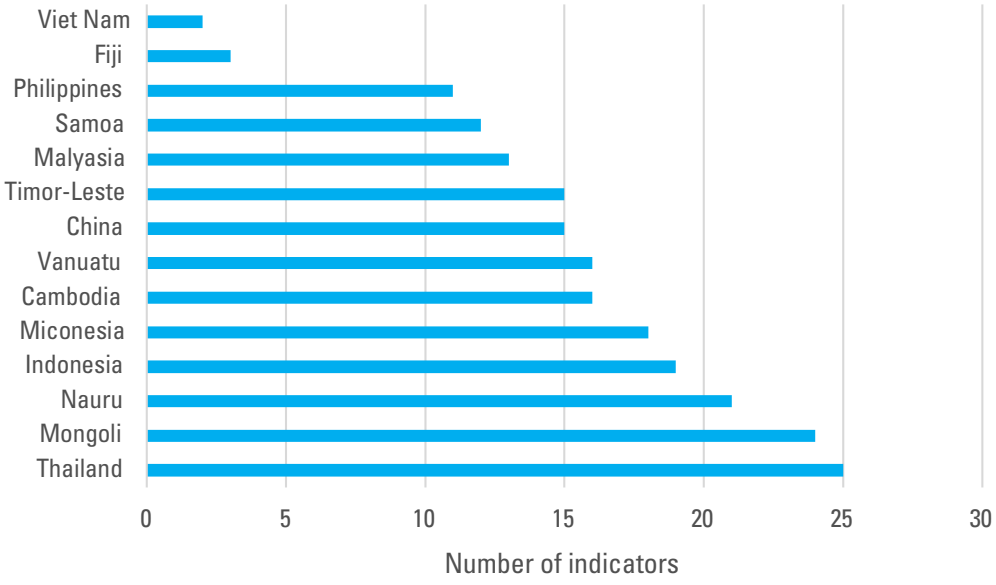
881 UNICEF, 2022, Desk Review of Evaluation of Immunization Engagement in east Asia and the Pacific 2022, Bangkok.
882 Herliana P, Douiri A. Determinants of immunisation coverage of children aged 12–59 months in Indonesia: a cross-sectional study. BMJ Open 2017;7:e015790.
883 Nozaki, I., Hachiya, M. & Kitamura, T. Factors influencing basic vaccination coverage in Myanmar: secondary analysis of 2015 Myanmar demographic and health survey data. BMC Public Health 19, 242 (2019). https://doi.org/10.1186/s12889-019-6548-0.
884 See https://extranet.who.int/countryplanningcycles/sites/default/files/planning_cycle_repository/myanmar/myanmar_cmyp_2017-2021.pdf.
885 See https://apps.who.int/iris/bitstream/handle/10665/329987/Myanmar2019_epi-eng.pdf?sequence=1&isAllowed=y.
886 See https://dhsprogram.com/pubs/pdf/FR312/FR312.pdf.
887 See www.outbreakobservatory.org/outbreakthursday-1/2/21/2019/indonesia-confirms-first-polio-case-since-2006.
888 Wongsanuphat S, Thitichai P, Jaiyong R, et al. Investigation of Measles Outbreak among Thai and Migrant Workers in Two Factories in Nakhon Pathom, Thailand, 2019. Int J Environ Res Public Health. 2020;17(13):4627.
889 Jinhua Pan,1,7 Yesheng Wang,1,7 Lingsheng Cao,3 Ying Wang,4 Qi Zhao,1,2 Shenglan Tang,5 Wenfeng Gong,6 Lei Guo,5 Zhixi Liu,1 Zexuan Wen,1 Bo Zheng,1 and Weibing Wang1,2, Impact of immunization programs on 11 childhood vaccine-preventable diseases in China: 1950–2018, 2021.
890 Yuan Huang, David Shallcross et al Ethnicity and maternal and child health outcomes and service coverage in western China: a systematic review and meta-analysis Lancet Global Health 2017.
891 See https://psa.gov.ph/sites//files/PHILIPPINE%20NATIONAL%20DEMOGRAPHIC%20AND%20HEALTH%20SURVEY%202017_new.pdf.
892 See www.unicef.org/malaysia/reports/situation-analysis-women-children-malaysia-2020.
893 See https://data.unwomen.org/features/covid-19-and-gender-what-do-we-know-what-do-we-need-know.

UNICEF defines gender equality as equal rights and opportunities for girls and boys [to] help all children fulfil their potential. Ensuring gender equality involves addressing issues of gender norms and discrimination. Such gender norms can heighten the risk of unwanted pregnancy, HIV and AIDS, and malnutrition, especially in emergency settings.[894] In addition to health services and emergency settings, there is an intersection between gender and adolescent health. UNICEF identifies the main indicators of gender equality as the number of girls out of school, youth literacy, child marriage and new HIV infections, all of which have the highest impacts in the adolescent age groups (see section on adolescent health and HIV). To ensure evidence-based advocacy and planning for health programmes, data collection, reporting, and analysis as well as project monitoring and evaluation should include a gender responsive approach.

Disability support

Nearly 1 in 10 children and young people worldwide have disabilities, and many of them remain the most marginalized members of society. The region has an estimated 690 million persons with disabilities, and UN ESCAP reports that people with disabilities encounter widespread barriers to education, employment, social protection and political participation. People with disabilities in low- and middle-income countries have poorer health service coverage including for childhood vaccination. The growth of chronic diseases and mental health conditions means the disability burden will increase, which will have implications for the quantity and skills mix of a community-based workforce, as well as the extent to which the health system links in with community-based programmes and homebased care. WHO estimates that the global average for the proportion of the population living with disabilities is 16 per cent (1.3 billion or 1 in 6 people).[895] In contrast, disability prevalence in the region as reported by Governments varies between 1.1 and 24 per cent, illustrating significant gaps in data on disability. A regional survey found wide variability in the availability of baseline data on disability for countries in EAPRO as illustrated in figure 10.

Figure 10: Baseline data availability of 30 ESCAP disability core indicators



Source: UNESCAP Building Disability-Inclusive Societies in Asia and the Pacific: Assessing progress of the Incheon Strategy. United Nations Publication, 2018.

894 See www.unicef.org/gender-equality.
895 See www.who.int/news-room/fact-sheets/detail/disability-and-health.

The UNICEF Strategic Plan 2022–2025 and Disability Inclusion Policy and Strategy 2022–2030 address inequities affecting children and young people with disabilities, including in programmes to support emergency preparedness and response. The Convention on the Rights of Persons with Disabilities aims to elaborate in detail the rights of persons with disabilities and set out a code of implementation. In the form of policies, laws and administrative measures for recognition of rights and prevention of discrimination. As of 19 January 2023, all countries have ratified the Convention except for Solomon Islands and Tonga, with Timor-Leste having just ratified the convention on 17 January 2023.

There are several implications for PHC that arise from this regional analysis. Primary care services need to be adequately resourced and include options for mental health, and disability and psychosocial support services. Health and social services are required to be inclusive of children with disabilities, especially in connection with addressing issues of stigma and discrimination. The multisector and community engagement component of PHC is critical in this context with regards to linking of support with birth registration, access to education and access to social and child protection services and addressing the unequal power relationships that enable stigma and exclusion.[896]

Zero dose vaccination and health inequities

The issues of health inequities have been revitalized in recent years in relation to the global public health discourse on "zero dose vaccination." Zero dose vaccination refers to children under one who have not received their first dose of diphtheria, pertussis and tetanus vaccine (DPT).

A desk review in East Asia and the Pacific in 2022 found that zero dose vaccination was associated with multiple other deprivations in areas such as education, child protection, water and sanitation, nutrition, and social policy.[897] The review revealed striking patterns of deprivation for certain countries, across multiple outcomes. Countries that consistently fall into the category of high deprivation in both immunization coverage and a selection of other core indicators are Cambodia, Indonesia, the Lao People's Democratic Republic, Myanmar, Papua New Guinea, Philippines, Samoa and Timor-Leste. There are countries in the region with low zero dose burden and low deprivation in other outcomes. These countries included Fiji, Kiribati, Mongolia, Thailand and Tuvalu.

There are points of engagement between the present PHC landscape analysis and the Zero Dose Vaccination review in East Asia and the Pacific. One finding from the Zero Dose Review is that the greatest opportunity lies in investing where multiple deprivations are experienced, and this aligns with the main components of the PHC approach. The fact that zero dose vaccination is associated with high levels of social vulnerability reinforces the social justice angle of PHC, and the importance of engaging with communities and multiple sectors to address multiple sector deprivations. The convergence of social, economic and health system determinants of health in shaping patterns of multiple health and social deprivation has important implications for the ways that health and related health and social services are managed, coordinated and delivered.

896 UNICEF Inclusion of Children And Young People With Disabilities In Routine General Health Care – A Practice Guide UNICEF Inclusion of Children And Young People With Disabilities In Routine General Health Care – A Practice Guide www.unicef.org/documents/inclusion-children-and-young-people-disabilities-routine-general-health-care-practice.
897 UNICEF East Asia and the Pacific, 2022, Zero Dose Desk Review: The status of zero dose children and what else they are missing out on.

D. Health system landscape for primary health care

Models of care

There is a wide range of front-line service delivery models across the region. These models have several contextual variables which include the following:

- Level of centralization and decentralization of planning/budgeting and decision-making space
- Level of integration of services
- Level of engagement with other sectors at community level
- Type of health personnel and their scope of practice
- Size of population catchments
- Extent to which services are mobile or fixed
- Level of private sector participation
- Levels of community engagement in facility governance
- Availability of supply side levers (personnel, medicines, infrastructure, operational finance)

There are common aspects across the region. Front-line services in the public sector are generally dominated by employment of nurses and midwives and community health workers, most of whom are female. In South-East Asia, 79 per cent of nurses are women and 81 per cent of nurses in the Western Pacific are women.[898] There is usually a model of community-based reinforcement of front-line services in the form of community health workers (see section on models of care). As often being the first point of contact services and for programme delivery, the front-line workforce is largely responsible for achievement of health-related outcomes in such fields as maternal and child health, immunization, family planning and ante natal care. Roles in the fields of nutrition, environmental health and NCD prevention are less clear in the region but are likely to emerge in the coming decade.

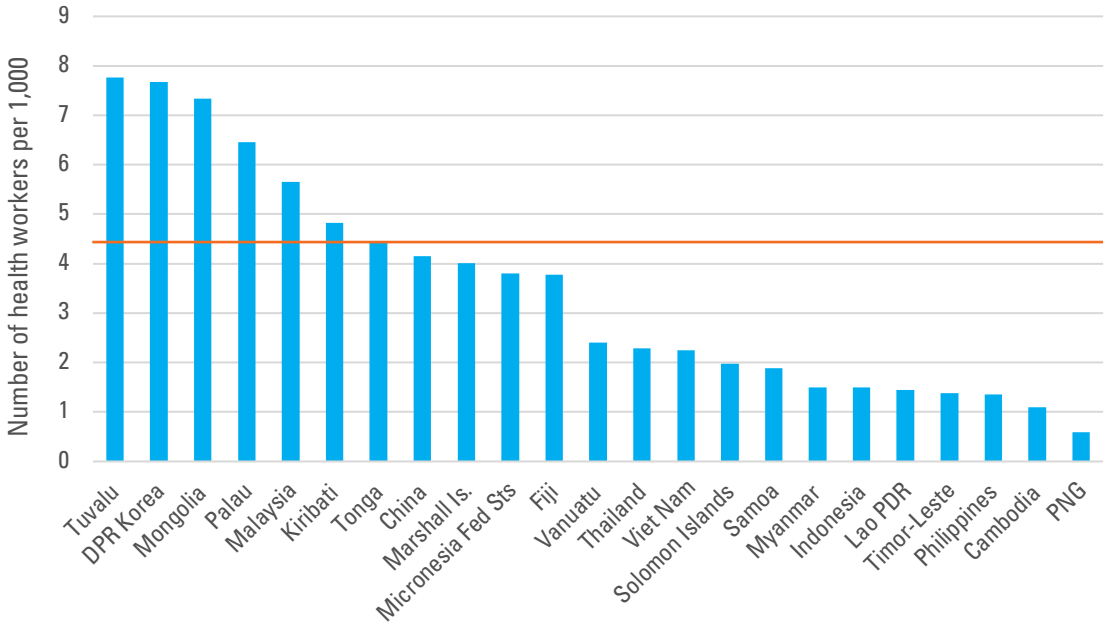
The PHC profiles in the sections that follow illustrate sone of the diversity and challenges with models of care. In Cambodia, a new PHC policy or strategy is being developed with a model of care based on both a health services approach and community approach , which includes public and private health services and social services. Mongolia has a adopted a public-private model of care, and proposes expanding the basic package of health services provided in family and soum health centres and hospitals. Papua New Guinea has been operating on a decentralized model of governance, with a back-to-basics approach, and support for development of a model of "Village Health Assistance." Timor-Leste implements the family health approach, based on family health profiles and domiciliary visits (Saude Na Familia). A proposal was made in Indonesiato finance promotion and prevention in the benefit package of JKN. In the Philippines, policy now directs establishment of PHC networks, contracting models of population and individual services, and integration of public health functions into health services delivery at community level are central to the approach. Common approaches in these models of care include linking with providers and communities through PHC networks, and enabling access to services for the most disadvantaged through human resources and health financing strategies, and building functional capacity for health systems in the area of essential public health functions (including emergency preparedness). Refer to section 5.7 of this report for more detail on models of care.

898 See https://data.unwomen.org/features/covid-19-and-gender-what-do-we-know-what-do-we-need-know

Human resources for health

In 2021, Zapata et al undertook an analysis of health workforce densities in the Southeast Asian Region and found that although the density of the health-care workforce had increased by 21 per cent since 2014, there were only two countries above the new WHO threshold of workforce densities of 4.4 per 1,000 population.[899] The SDG target threshold is 4.45 health staff per 1,000 population. This human resource target is a composite index of the number of physicians, nurses, and midwives, and of the 23 countries for which data is available in 2021, just 6 countries meet this threshold in East Asia and the Pacific. In the World Health Report 2006,[900] it was reported that countries with fewer than 2.3 physicians, nurses, and midwives per 1,000 population generally fail to achieve adequate coverage rates for selected PHC interventions as prioritized by the Millennium Development Goals framework. Even by this older standard, 11 countries of the 23 countries with data are below this threshold of 2.3 health workers per 1,000 in 2021. On a more optimistic front, the latest human resource density data illustrates that of the 23 countries reporting, 13 countries have reported a rise in human resources densities from the previous reported estimate.[901]

Figure 11: Health worker densities per 1,000 population in 2021



Note: The orange line corresponds to the WHO estimate of the median level of health workforce density needed to achieve UHC.

899 Zapata T, Zakoji M, Kanda M, Travis P, Tangcharoensathien V, Buchan J, Jhalani M. Implementing a decade of strengthening the health workforce in the WHO South-East Asia Region: achievements and way forward for primary health care. WHO South-East Asia J Public Health 2021;10, Suppl S1:76-86.
900 World Health Organization (2006). The world health report 2006: working together for health. https://apps.who.int/iris/handle/10665/43432.
901 PHCPI https://improvingphc.org/indicator/nurse-and-midwife-density-1000-population#?loc=9,66,25,44,57,67,102,68,90,80,45,85,83,100,101,99,137,109,121,124,125,128,136,135&viz=0&ci=false.

The PHC approach has significant implications for human resource management and development. It is not simply a question of the numbers. Distribution of the health workforce is a critical issue not only between countries but more importantly within them. However, analysis of policy options on distribution is limited by lack of disaggregated subnational data with regards to location, sex, age of the workforce, their function and the facility type in which they work.

There are major implications for PHC policymakers and planners with regards to competencies for PHC. The PHC workforce extends beyond traditional professions of medicine and nursing to incorporate all those engaged in work across the continuum of care for health promotion, disease prevention, treatment, rehabilitation, and palliative care services. It includes the public health workforce, and those engaged in addressing the social determinants of health. Given the multi-component characteristics of PHC, and the focus on integration, public health and multisector engagement, it is proposed that service provision be transformed through development of human resource capacities for a multidisciplinary team approach. The idea of "transformation" of models of care towards a PHC approach implies a transformation of the workforce to expand capabilities to work in teams and to work across disciplines through task sharing and shifting. Adopting multidisciplinary team approaches required for implementation of the PHC approach, including engaging with communities and other sectors, will require widening scopes of practice, and adopting new occupational categories. A PHC workforce will cover the continuum of care from promotion to palliative and will furthermore require capabilities to address the social and environmental determinants of health.[902, 903]

There are other implications for the health workforce based on contextual determinants of health outlined in the first section:

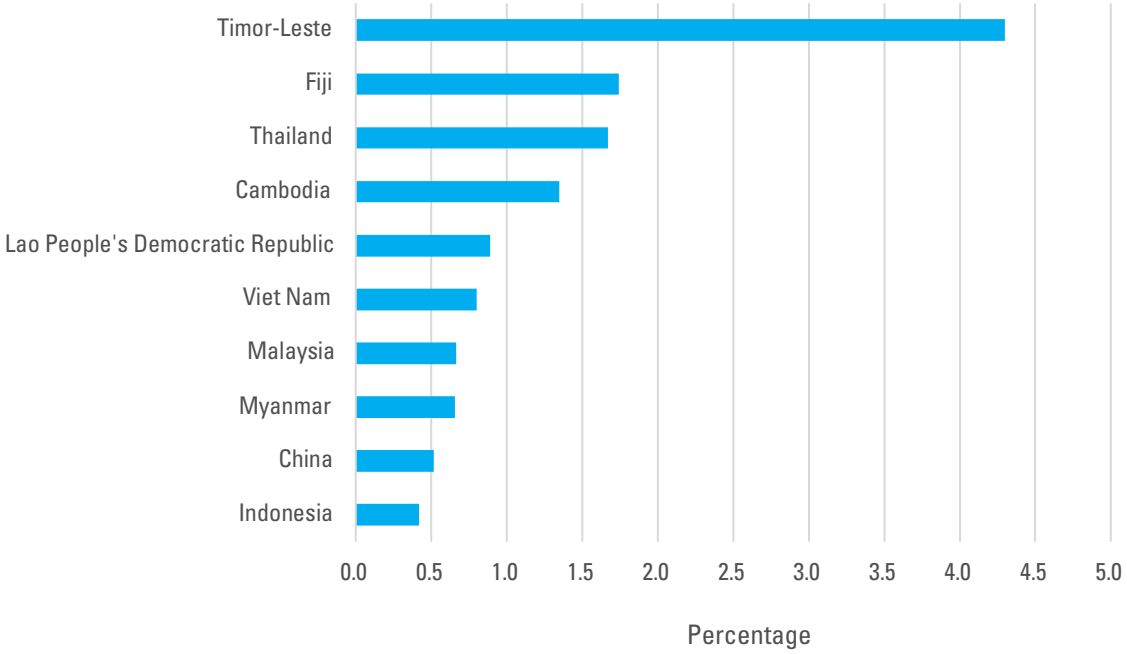
- Growth of economies and private markets will lead to increased dual practice and the potential for workforce concentration in urban areas.
- Expanding inequalities and the push for UHC will means more emphasis on workforce distribution and retention in hard-to-reach areas
- Demographic and epidemiological transitions leading to ageing of population and growth of chronic diseases means the disability burden will increase, which will have implications for the quantity and skills mix of a community-based workforce
- Growth in digital technologies for communications, therapeutics and diagnostics will influence requirements for workforce competencies and skills mix.

902 G. Dussault et al., 2018, Building the primary health care workforce of the 21st century - Background paper to the Global Conference on Primary Health Care: From Alma-Ata Towards Universal Health Coverage and the Sustainable Development Goals. Geneva: WHO.
903 See https://apps.who.int/iris/bitstream/handle/10665/250368/9789241511131-eng.pdf.

Health financing and resource allocation

Ten countries (including Pacific Island Countries) have information on PHC expenditure (figure 12), and less than 1 per cent of GDP is invested in PHC in six of those countries.

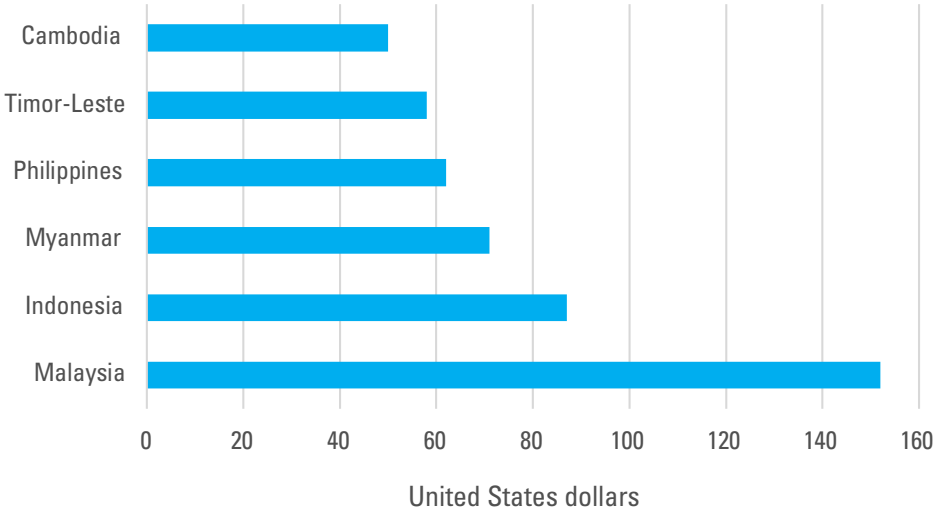
Figure 12: Government and donor expenditure on PHC as percentage of GDP, 2019



It has been estimated by WHO that scaling up PHC interventions across low- and middle-income countries could save 60 million lives and increase average life expectancy by 3.7 years by 2030. To achieve this outcome, an additional investment of around US$200 billion to US$370 billion a year would be required for implementation of a more comprehensive package of health services. Based on these findings, WHO recommends countries allocate an additional 1 per cent of GDP to PHC.[904] Just six countries are reporting data on PHC spending per capita as outlined in the figure that follows:

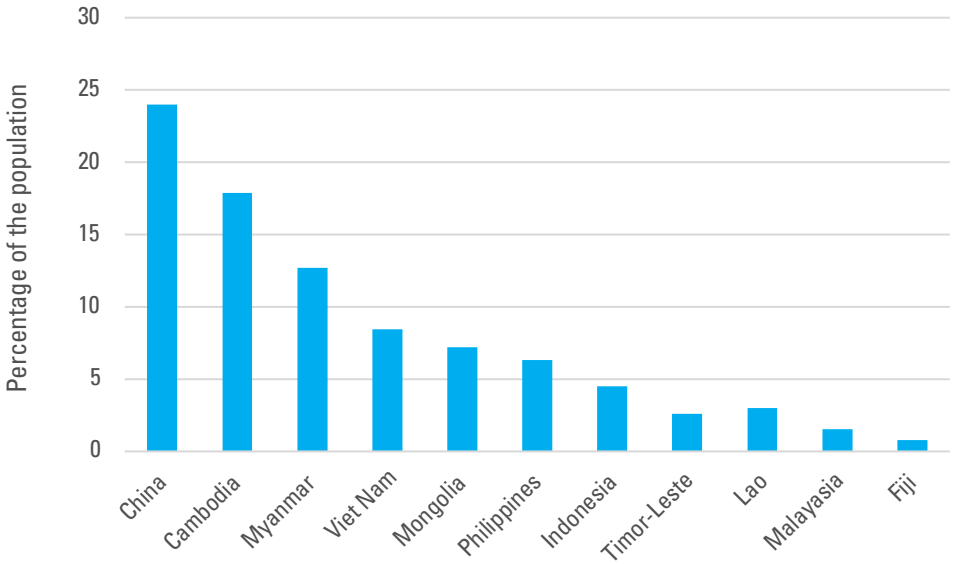
904 See www.who.int/news-room/fact-sheets/detail/primary-health-care.

Figure 13: PHC spending per capita (latest data)



SDG indicator 3.8.2 is the second priority indicator for the SDG target for UHC (the other being (essential services coverage 3.8.1 indicator). Indicator 3.8. 2 measures the proportion of the population with household spending greater than 10 per cent of Household Budget (SDG 3.8.2).[905] [See Footnote] Of the 11 countries with data, three countries have reported more than 10 per cent of income expenditure on health (China, Cambodia, and Myanmar). In fact, both Cambodia (4.92 in 2019) and China (9.18 per cent in 2016) report significant proportions of the population being even above the even higher threshold of 25 per cent.

Figure 14: Proportion of Population with Household Expenditure > than 10 per cent on Health SDG Indicator 3.8.2



Soure: See www.who.int/data/gho/data/themes/topics/indicator-groups/indicator-group-details/GHO/incidence-of-catastrophic-health-spending-sdg-indicator-3-8-2-.

905 FINANCIAL PROTECTION INDICATOR SDG TARGET 3.8.2 Population with household expenditures on health greater than 10 per cent of total household expenditure or income (percentage). See www.who.int/data/gho/data/themes/topics/financial-protection.

Gaps in the essential services coverage, limited data on PHC expenditures and evidence of catastrophic health expenditures across East Asia and the Pacific raises questions about the limited extent to which PHC is prioritized by leadership and within health systems.

As illustrated by trends in sources of health expenditures in East Asia and the Pacific and the PHC country profiles that follow, there are some general trends in health expenditures across the region that are as follows:

- Of the 17 countries for which data are available, seven countries have rates of out-of-pocket expenditures above 30 per cent. Nine out of the 17 countries have reduced OOP rates since 2005.
- Government spending as a percentage of all current health spending has increased in 14 out of 17 countries between 2005 and 2010. However, Government investment in health and a proportion of domestic general government expenditures has declined or remained static in eight out of 17 countries.
- External assistance funding as a proportion of current health expenditures has declined in most countries, and increased in only three (Vanuatu, Kiribati and Timor-Leste).

Table 3: Trends in health expenditures 2005–2020, selected countries in East Asia and the Pacific

Country	Health spending (Dollars per capita)		Government spending as a percentage of health spending		OOP as a percentage of current health expenditure		GGHE as a percentage of domestic government spending		GDP (Dollars per capita)		External Expend on Health as a percentage of current health expenditure	
YEAR	2005	2020	2005	2020	2005	2020	2005	2020	2005	2020	2005	2020
China	73	583	33	55	58	35	7.5	8.4	1755	10430	0	0
Mongolia	37	200	61	64	32	27	9	9	986	4041	4	7
Philippines	47	165	33	45	52	45	7	9	1245	3222	4	< 1
Indonesia	34	133	29	55	55	32	4	10	1359	3894	2	0.5
Viet Nam	35	166	37	45	37	40	7	9	880	3551	4	0.8
Cambodia	33	116	18	28	61	61	10	7	475	1542	14	7
Lao People's Democratic Republic	17	68	27	42	44	42	6	6	521	2534	20	15
Myanmar	8	58	7	20	83	73	1.3	3.4	326	1559	10	7
Thailand	91	305	64	70	28	11	13	13	2876	6999	0	0
Malaysia	162	419	49	53	38	36	6	9	5800	10151	0	0
Papua New Guinea	28	64	66	68	8	8	8	8	1129	2530	26	23

Country	Health spending (Dollars per capita)		Government spending as a percentage of health spending		OOP as a percentage of current health expenditure		GGHE as a percentage of domestic government spending		GDP (Dollars per capita)		External Expend on Health as a percentage of current health expenditure	
YEAR	2005	2020	2005	2020	2005	2020	2005	2020	2005	2020	2005	2020
Timor-Leste	25	121	40	55	33	7	4	7	477	12227	8	38
Vanuatu	60	114	65	66	9	7	12	6	1815	2877	22	24
Fiji	121	186	74	69	12	14	10	8	3723	4970	9	3
Solomon Islands	89	99	71	81	2	4	19	10	988	2237	27	15
Kiribati	132	167	96	80	< 1	< 1	11	8	1144	1431	15	17
Tuvalu	244	1071	91	84	1.3	< 1	12	16	2311	4974	16	14

Source: WHO Global Health Expenditure Data Base Country Profiles https://apps.who.int/nha/database/country_profile/Index/en.

As identified in National Health Accounts data, "priority for health" is measured in terms of the percentage of domestic general government expenditure invested in health. The mixed results for this indicator, and the decline in external assistance, presents challenges in the coming years for resource mobilization for PHC. From a PHC perspective, pooling of resources through extension of national insurance mechanisms and tax financed supply side investments, as well as strategic purchasing of PHC services in decentralized settings, provide the best opportunities for investing in the PHC approach. The World Bank recommends levying taxes on tobacco, alcohol and sugar to mobilize additional resource support for PHC reforms, which may be a means of addressing commercial determinants of health.[906]

Given that private markets for health are not responsive to multisector collaborations, prevention and promotion services and other essential public health functions including emergency preparedness and health protection, scale up of public sector investment (and the political leadership and international cooperation it relies on) is a necessary condition for reorientation of societies and health systems towards a PHC approach.

> *"Reorienting PHC systems towards health promotion and prevention means that countries cannot rely on market-based solutions. Investing in public health functions through domestic resources is a critical strategy for improving health and equity outcomes and for building resilient and responsive health systems."*[907]

906 See https://documents1.worldbank.org/curated/en/446861624530245206/pdf/At-a-Glance-Walking-the-Talk-Reimagining-Primary-Health-Care-After-COVID-19.pdf.

907 Regional Framework on the Future of Primary Health Care in the Western Pacific WHO Manila 2022.

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