Building the primary healthcare workforce in Romania to promote child and adolescent well-being

This brief aims to contribute to strengthening the capacity of the Romanian Primary Healthcare (PHC) workforce to provide high-quality health promotion and disease prevention, health education and healthcare services to children, adolescents, youth, and mothers, with a special focus on the most vulnerable of the poor, rural, or Roma communities, as well as on children and adults with disabilities. The document provides an overview of the current state of the workforce involved in delivering primary healthcare services to children, adolescents, youth, and mothers in Romania. The three main categories of personnel which are hereby explored are family doctors and nurses, community health workers and school doctors and nurses. In collecting and analyzing data, the health workforce has been described focusing on contextual factors, health system factors, health workforce processes and outcomes, and health system outcomes.[1] To assess the stock and distribution of the primary healthcare workforce and to explore opportunities for task shifting and task sharing, key health workforce data and indicators have been used covering the 10-year period from 2010 to 2020, as well as interviews with key decision makers.

Background

In Romania, infant mortality rate dropped from 7.5% to 5.8% between 2015 and 2019. However, Romania still ranks first in the European Union (EU) in terms of infant mortality rates.[2] Moreover, there are significant differences between rural and urban areas; in 2019 the rate was 7.7% in rural areas, as compared to 4.7% in urban areas.[3] Maternal mortality in Romania is also one of the highest in the entire EU, with 17.9 per 100,000 live births[4] compared to 5 per 100,000 live births, the mean maternal mortality in Western Europe[5].

In Romania, one out of ten children are born to a teenage mother. In 2019, 16,639 adolescent pregnancies were registered, a decrease by 9% compared to 2018.[6] However, Romania ranks second in the European Union by adolescent birth rates. Pregnancies in adolescence have many negative consequences on expectant mothers, as well as social and economic costs. One in six teenagers who had a child before

[1] Sonderegger, S., Bennett, S., Sriram, V., Lalani, U., Hariyani, S., & Roberton, T. (2021). Visualizing the drivers of an effective health workforce: a detailed, interactive logic model. *Human resources for health*, *19*(1), 1-15.

[2] Țarcă, E., Roșu, S. T., Cojocaru, E., Trandafir, L., Luca, A. C., Rusu, D., & Țarcă, V. (2021). Socio-Epidemiological Factors with Negative Impact on Infant Morbidity, Mortality Rates, and the Occurrence of Birth Defects. *Healthcare (Basel, Switzerland)*, *9*(4), 384.

[3] INSP-CNSIPS. (2019). Mortalitatea infantilă în România. Available here: http://cnsisp.insp.gov.ro/wp-content/uploads/2020/10/MORTALITATEA-INFANTILA-2019-1.pdf

[4] INSP-CNSIPS. (2020). Mortalitatea maternală. Available here: https://insp.gov.ro/download/cnsisp/Fisiere-de-pe-site-CNSISP/mortalitatea_materna/Mortalitatea-materna-in-Romania-2020.pdf

[5] UNICEF. (2019). Maternal mortality. Available here: https://data.unicef.org/topic/maternal-health/maternal-mortality/

[6] UNICEF. (2021). Adolescent pregnancy in Romania. Available here: https://www.unicef.org/romania/reports/adolescent-pregnancy-romania

the age of 15 will have a second child before the age of 18. The phenomenon is cyclical, repeating within the same families from one generation to another together with economic, social and health precariousness[6]. Moreover, the risk of maternal mortality is highest for teenage girls under 15, and complications in pregnancy and childbirth are higher among teenage girls aged 10 to 197.

As for children, 29% of examined children showed "deviations from normal growth" (underweight/overweight for age), with overweight being slightly predominant[8]. Between 20,000 and 24,000 premature children are born in Romania each year; prematurity and low birth weight are important risk factors in infant mortality9. Moreover, as many as 33% of children from urban and 15% of children from rural areas had at least one chronic health problem (the most frequent ones: visual disorders and obesity)8. Romania has lower immunization rates (82%) for vaccine-preventable diseases (measles, rubella, diphtheria-tetanus-pertussis) compared to other countries in the region: Serbia 95%, Bulgaria 92%, Northern Macedonia 91%, Republic of Moldova 88%, and Montenegro 87%[10].

According to the Euro Health Consumer Index 2018, Romania occupies the 34th place out of 35 in the ranking of the health system. High rates of adolescent pregnancy, caesarean section, infant and maternal mortality, institutional discrimination of marginalized groups, difficulties in accessing health services for certain groups, and fragmentation of nationally available data are just some of the barriers to improving services at both the institutional and human levels[11]. Mothers in both disadvantaged communities and in small and large urban areas face several challenges, of different natures and causes, but of a rather high severity. The deepest problems are observed in vulnerable groups, where mothers do not know their rights, do not make regular visits to the doctor, and health education is a luxury they do not have[11].
In order to properly monitor and prevent the above-mentioned conditions, a well-trained health workforce in the primary care sector is needed in Romania. Thorough monitoring and disease prevention measures may considerably lower morbidity and mortality rates in children, mothers and vulnerable groups.

Introduction

Primary healthcare (PHC) largely focuses on maternal, newborn, child and adolescent health and nutrition services, early childhood development, immunization, sanitation and hygiene, disease control and prevention, antenatal care, and vaccination coverage[12].
Through medical offices located at the community level, family doctors in Romania are the patients' first point of contact with the health system, thus serving as gate keepers. Family doctors and nurses provide medical services to insured and uninsured patients, based on a contract with the National Health Insurance House[13].
According to EGO 18/2017, community healthcare includes all programs, health services, and public health actions provided at the community level, especially for vulnerable groups, to increase the population's

6 UNICEF. (2021). Adolescent pregnancy in Romania. Available here: https://www.unicef.org/romania/reports/adolescent-pregnancy-romania

7 Ministerul Sănătății. (2021). "Sănătatea reproducerii – tu decizi ce este mai bine pentru tine!" – Analiză de situație. Available here: https://www.dspsv.ro/uploads/PromovareaSanatatii/Sanatatea%20reproducerii%202021/Analiza-situatie-SANATATEA-REPRODUCERII-2021.pdf

8 UNICEF. (2021). Adolescent pregnancy in Romania. Available here: https://www.unicef.org/romania/reports/adolescent-pregnancy-romania

9 Țarcă, E., Roșu, S. T., Cojocaru, E., Trandafir, L., Luca, A. C., Rusu, D., & Țarcă, V. (2021). Socio-Epidemiological Factors with Negative Impact on Infant Morbidity, Mortality Rates, and the Occurrence of Birth Defects. *Healthcare (Basel, Switzerland)*, *9*(4), 384.

10 CivicLab. (2020). Raport- Grijă pentru sănătatea mamei și a copilului. Available here: https://civiclabs.ro/ro/byproducts/raport-grija-pentru-sanatatea-mamei-si-a-copilului

11 Bjornberg, A. (2018). 2017 Euro Health Consumer Index. *PharmacoEconomics & Outcomes News*, *796*, 31-10.

12 UNICEF (2020). Health Results 2020 Primary Health Care. https://www.unicef.org/media/102671/file/Health-Results-2020-Primary-Health-Care.pdf

13 Contract-cadru din 26 iunie 2021 care reglementează condițiile acordării asistenței medicale, a medicamentelor și a dispozitivelor medicale, tehnologiilor și dispozitivelor asistive în cadrul sistemului de asigurări sociale de sănătate pentru anii 2021-2022: http://legislatie.just.ro/Public/DetaliiDocument/243848

access to health services, especially those focused on prevention[14]. Community healthcare aims to improve the population's health by ensuring equitable access to health services for all people in each community, regardless of socioeconomic status, level of education, location in rural or urban areas or distance from the medical services provider. Community healthcare workers (CHWs) include community health nurses (CHN) and Roma health mediators (RHM) (in communities where Roma population is above 700 individuals).

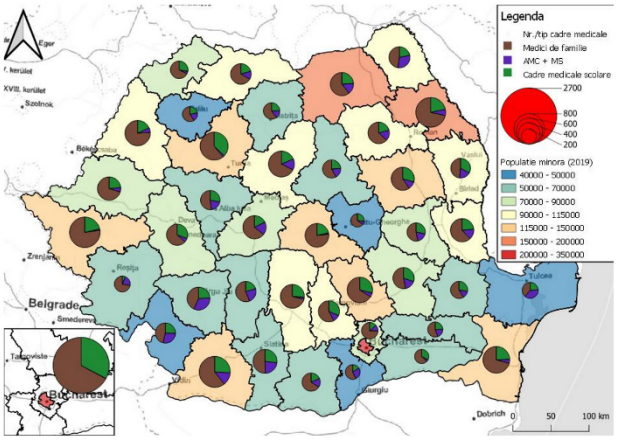
According to the Framework Contract adopted by the Government on 26 June 2021, school based medical services for preschoolers, pupils and students are provided by school doctors, school dentists and school nurses in medical offices and dental medical offices in pre-university and higher education facilities[15]. In rural areas where schools lack dedicated school medical offices, family doctors can provide services in the respective or nearby locations, according to EGO 162/2008[16] and Law 174/2011[17].

The current stock and distribution of the PHC workforce in Romania

Family medicine

According data released by the National Institute of Statistics, there were 12,424 family doctors in Romania in 2020, almost two thirds of them in urban areas. If evenly distributed, a family doctor would have to care for 1,550 persons[18]. In 2020, more than half of the communities in Romania (53%) did not have family doctor or had insufficient family doctors, according to data centralized by the National Federation of Family Physicians' Associations[19].

Distribution of PHC for children population from Romania in 2019



Most of them (78%) were women, and 65% were in urban areas. The largest age group of family doctors in Romania is 55-64 years old (around 30%), while only 12% of family doctors are aged 25 to 34 years old. Given the current situation, Romania could lose approximately 18% of its current family doctors stock in the following 10 years due to the retirement of those currently aged over 55 and insufficient younger workforce to replace them. Data from the National Federation of Family Physicians' Associations (FNPMF) approximated that in 2020 there was a real deficit of 2,187 family doctors in Romania and those numbers are increasing each year[20]. The same data shows that around 20,000 nurses,

[14] Ordonanță de urgență nr. 18 din 27 februarie 2017 privind asistența medicală comunitară: http://legislatie.just.ro/Public/DetaliiDocument/186978

[15] Contract-cadru din 26 iunie 2021 care reglementează condițiile acordării asistenței medicale, a medicamentelor și a dispozitivelor medicale, tehnologiilor și dispozitivelor asistive în cadrul sistemului de asigurări sociale de sănătate pentru anii 2021-2022: http://legislatie.just.ro/Public/DetaliiDocument/243848

[16] Ordonanța de urgență 162/2008 privind transferul ansamblului de atribuții şi competențe exercitate de Ministerul Sănătății Publice către autoritățile administrației publice locale – Articolul 12, paragraful 3: http://legislatie.just.ro/Public/DetaliiDocument/99731

[17] Legea 174/2011 privind transferul ansamblului de atribuții şi competențe exercitate de Ministerul Sănătății Publice către autoritățile administrației publice locale: http://legislatie.just.ro/Public/DetaliiDocumentAfis/132225

[18] INSP. (2021). Anuarul de statistică sanitară pe anul 2020.

[19] Avocatul Poporului. (2021). Raport special privind lipsa medicilor de familie din zona rurală sau din zonele defavorizate sau greu accesibile. Available here: https://avp.ro/wp-content/uploads/2021/04/Raport-special-privind-lipsa-medicilor-de-familie-din-zona-rurala-si-din-zonele-defavorizate-sau-greu-accesibile.pdf

[20] FNPMF. (2020). Harta accesului cetățenilor români la serviciile de asistență medicală primară oferite de către cabinetele medicilor de familie. Available here: http://www.fnpmf.ro/wp-content/uploads/2021/07/harta-MF-2020.pdf

medical registrars, accountants, and other support staff work in the primary care system in 2021[21], and the proportion of active nurses in primary care is much lower than the proportion of family doctors[22].

The fact that family doctors often practice well beyond 65 years of age – the standard retirement age in Romania – land that some work even after 75 years old, signal insufficient entries in the system. Insufficiencies are further complicated by the paucity of quality data on this topic. There is a difference between the total number of family doctors reported by the National Institute of Statistics in 2020 (12,424) and the Romanian College of Physicians in 2020 (15,349) based on how the data is collected. The National Institute of Statistics receives data from the annual research conducted by the Public Health Directorates, while data reported by the Romanian College of Physicians comes from compiled data reported by College of Physicians from each county from Romania. However, both data sources show an aging population of family doctors.

> *"We already have around 700 rural areas where we don't have a doctor or where two communes have merged, and we try to find a solution for the respective communities, which have lost their doctor"* – ***Excerpt from interview with key decision maker - family medicine***

Community healthcare

According to data provided by the Ministry of Health, there were 2,285 CHWs in Romania in 2021 – 1,822 CHNs and 463 RHMs, out of which 90% are women, and 75% work in rural areas. However, the number of CHW is insufficient in relation to the existent needs. The budget allocated by the Ministry of Health for CHW has not increased in the past two years, thus making it difficult for local public authorities to employ new CHW. Community health workers are not equally distributed geographically across Romania according to the actual need.

> *"It would be normal to have at least one community health worker in every rural and small urban community from Romania, but there are areas without a family doctor where the real need would be for 2-3 community health workers"* – ***Excerpt from interview with a key decision maker - community healthcare***

School medicine

With a school population of almost 3.5 million[23], the latest data from 2019 show that the national coverage with school doctors, both in general medicine and dentistry, in Romania is uneven, varying from 299 school doctors in the capital city, Bucharest, to no school doctors in Călărași county. According

> "In a city, there are a number of schools, a number of kindergartens, and there are a number of doctors and a number of nurses. A school doctor is responsible of 4-5 educational units. There are cities where the coverage is better, and then doctors have 1-2 schools, but these cities are exceptions, and in most cities in the country, every doctor has at least 3-4 schools, at least. So, there are colleagues who have 5-6 schools. This is how the distribution to doctors is done. Nurses, theoretically, are present in every school." – ***Excerpt from interview with a key decision maker - school medicine representative***

[21] FNPMF. (2021). Rectificarea bugetara – apel catre premier. Available here: http://www.fnpmf.ro/rectificarea-bugetara-apel-catre-premier/

[22] FNPMF. (2011). Evaluarea structurii si frunizarii asistentei primare in Romania. Avalable here: http://www.fnpmf.ro/wp-content/uploads/2021/07/Raport_OMS_Nivel_CPSS_-_Evaluarea_structurii_si_furnizarii_asistentei_primare_in_Romania_martie_2012.pdf

[23] https://www.agerpres.ro/economic-intern/2021/06/25/populatia-scolara-din-romania-in-scadere-in-anul-scolar-2020-2021-un-cadru-didactic-se-ocupa-de-15-elevi-studenti-ins--737137

to data provided by the Ministry of Health, the number of school doctors in rural areas (21 doctors) is insufficient. The number of school nurses in both general medicine and dentistry in urban areas is slightly higher compared with school doctors and dentists. However, it still does not cover the needs, especially because schools usually have several buildings that need to be covered by school doctors and nurses, and many a time these buildings are not in the same compound. Access to services provided by school doctors and nurses is uneven for children studying in different locations of the same school.

Challenges experienced by the PHC workforce in Romania

- PHC is underutilized, frequently bypassed and does not play a central role in coordinating care[24], thus burdening the secondary and tertiary levels and limiting access to healthcare for children, adolescents, mothers and families;

- Availability of PHC service providers and specific health services varies significantly depending on the particularities of the geographical areas and so does the access to care for children, adolescents, mothers and families, especially for the vulnerable ones from poor, rural, Roma and children and persons with disabilities;

- Inconsistency in training policies, funding, and access to resources for PHC leads to a fragmented model of care and inequalities between the urban and rural areas in terms of access to health services;

- Insufficient integration between levels of care for children, adolescents, mothers and families – i.e. primary care does not have sufficient functional links with secondary and tertiary care, while health promotion and prevention are not properly connected with curative care, with a strong negative impact on continuity and quality of care since most collaboration is unstandardized, unstructured, and mainly based on personal relationships.

[24] Wang, H., Chukwuma, A., Comsa, R., Dmytraczenko, T., Gong, E., & Onofrei, L. (2021). Generating Political Priority for Primary Health Care Reform in Romania. *Health Systems & Reform*, *7*(2), e1898187.

Recommendations

Based on the information provided above and findings from the interviews and frameworks for international best practices[25], the following recommendations are suggested:

Stakeholders	Recommendations		
	Short-term actions (up to 1 year)	**Medium-term actions (up to 5 years)**	**Long-term actions (up to 10 years and beyond)**
Ministry of Health	Equip PHC workers with the tools, devices and materials needed to offer proper care (e.g. emergency health kits for community health workers);	Increase the numbers and capacities of the current PHC workforce, with a focus on developing prevention skills across all professions;	Ensure equitable distribution of the PHC workforce and resources among urban and rural areas, especially for serving vulnerable populations; (i.e., better enforcement of residency training at the future workplace; literal translation from Romanian: "rezidențiat pe post")
	Improve the CHW activity recording and reporting system;	Strengthen policy development and effective planning capacity of PHC by including task-shifting and task sharing in the health-sector financing policy;	Align educational programs (basic, in-service and continuing), learning content and methods for PHC using a people-centered practice, as well as community and population needs (e.g., decentralizing education programs and expanding rural health training, improve the availability and distribution of health workers using financial and non-financial incentives, particularly in areas where care is most needed);
	Provide better regulation of PHC professional categories' training related to specific health needs of children, adolescents, mothers, and vulnerable groups;	Facilitate improved communication and collaboration at primary, secondary and tertiary level – preferably using standardized, digital tools (e.g. electronic health records);	Create new primary healthcare specialties in dentistry, medicine, nursing, pharmacy, public health, and social work, to train workers with specific competencies in prevention and health promotion and in managing risk factors and chronic conditions, which require coordinated and continuous care; (i.e., rehabilitation therapist)

[25] World Health Organization & United Nations Children's Fund (UNICEF). (2020). Operational framework for primary health care: transforming vision into action. World Health Organization

	Facilitate better coordination with relevant ministries in terms of planning workforce needs;	Improve legislation and inter-sectoral strategies on provision of PHC and their work conditions and duties (e.g. medical offices equipped properly as stated by the law and not only "on paper"; ensuring consistence between what is reported as activity and what is actually performed; avoiding overlapping of tasks done by community health workers, members of the family doctor's office and nurses in school medical offices);	Strengthen policy development and effective planning capacity of PHC by including task-shifting and task sharing in the health-sector financing policy, and focusing on preventive services;
		Ensure the quality and consistency of PHC workforce data by establishing and upkeeping an integrated health professionals' registry;	Increase the numbers and capacities of the current PHC workforce;
		Increase focus on developing prevention skills across all professions;	
National Health Insurance House	Design incentives in order to attract PHC professionals in under-served areas;	Regulate proper composition of the family doctor's office team, to ensure that administrative tasks are performed by especially trained professionals (e.g. registrars, receptionists etc.) instead of the family doctor and/or their nurse;	Develop and implement pilot models of integrated, inter-professional services dedicated to children, adolescents, and mothers;

Health professionals; Health professionals' associations	Catalyze better and more frequent interactions between secondary and tertiary healthcare workers, on the one hand, and PHC professionals, on the other hand, to discuss the latest practices in the field;	Identify and develop areas susceptible to successful task shifting and task sharing;	Develop a performance monitoring framework for professional development, mentoring, and developing the future generations of professionals, focused on prevention services offered by PHC;
Local Authorities (Local Councils and County Councils)	Provide logistics support to PHC professionals – e.g. transportation, lodging etc.;	Increase access of CHWs to training programs;	Catalyze stronger cooperation between health professionals serving the local community;
	Facilitate the identification of additional funding sources (local / regional / national / European projects);	Provide support to local initiatives emerged from PHC professionals;	