

## Undertaking rapid assessments in the COVID-19 context: Learning from UNICEF South Asia

### Child and Family Tracker: A case study in Nepal



### A Case Study

#### Context

In March 2020, the Government of Nepal announced a nationwide lockdown to curb the spread of the COVID-19 pandemic. A large proportion of households and children were likely to be adversely affected. Even prior to the pandemic, approximately 28% of Nepal's population was estimated to be facing multidimensional poverty, and children up to 10 years, who represent 21% of the population, were estimated to belong to the poorest age subgroup.<sup>1</sup> With the immediate loss of income as a result of slowing down of economic activity due to the lockdown, families were less likely to afford basics such as food and water, access health care and education, and children were more at risk of child marriage, violence, exploitation and abuse.

In response to the evolving context of COVID-19, UNICEF Nepal set up the Child and Family Tracker (CFT), an evidence generating exercise in the form of a longitudinal survey to rapidly and iteratively capture data for a comprehensive analysis of the

situation. The CFT aims to monitor and assess the social and economic impact of COVID-19 on children and their families, and raise visibility of and awareness on children's issues that emerge and intensify due to the pandemic. The CFT also intends to contribute to evidence-based programming in response to COVID-19.

#### Implementation arrangements

The CFT was implemented by UNICEF Nepal, in partnership with Sharecast Initiative, Nepal, a media and research organization. UNICEF Nepal designed the data collection tools and analysed the data, while Sharecast implemented the main survey. Viamo, a global social enterprise that specializes in mobile engagement and ICT for development, was contracted to conduct complementary data collection via Interactive Voice Response (IVR) calls. Six rounds of CFT data collection were scheduled every 4-6 weeks starting in May 2020. By end November 2020, four rounds had been completed: a baseline survey (round 1) in May 2020, and

<sup>1</sup> [https://ophi.org.uk/wp-content/uploads/VF-Nepal\\_2018\\_vs9\\_21Dec-2\\_online.pdf](https://ophi.org.uk/wp-content/uploads/VF-Nepal_2018_vs9_21Dec-2_online.pdf)

rounds 2, 3 and 4 respectively in July, August and October 2020. Rounds 5 and 6 of the survey were completed by February 2021. The target population were households with at least one child below 18 years. The cost of the study was approximately USD 190,000.

## Data collection and analysis

The main, longitudinal survey covered a panel of 6,500 to 7,500 households with children, who were contacted during each data collection round; collecting both quantitative and qualitative data through multiple data collection modalities. Telephone interviews were conducted with a caregiver in the panel household (household head or parent), followed by IVR calls with a randomly selected sub-sample of caregivers.<sup>2</sup> Back check calls, implemented for quality assurance purposes with a limited random sample of respondents after each round, were leveraged to collect qualitative information. In addition, a telephone survey with female community health volunteers (FCHVs) was conducted in selected districts. Each household survey round took 8-10 days to complete, while IVR calls and FCHV survey round took six days and two days, respectively to complete.

Key areas of enquiry in the household questionnaire were the impact of COVID-19 on employment, livelihood and migration; immediate household needs; receipt of the COVID-specific security package; children's access to education; nutrition and food security; health care seeking; COVID-19 risk perception, awareness and behaviour, and mental wellbeing. Children's health, psychosocial wellbeing, nutrition and child labour were also covered. Furthermore, questions on disability were included to identify households having members with a disability and collect information on access to disability grants.<sup>3</sup> A gender lens was included asking about domestic violence and household relations, and in households with pregnant and lactating women information was sought on ANC and delivery services, and breastfeeding. The qualitative back check survey asked respondents to further describe their situation and how COVID-19 affected them socially and economically.

The household survey included approximately 75 questions on average, although it varied across rounds, and took around 20-30 minutes to complete. In a longitudinal phone survey questions need to be pertinent and specific. The same respondents are repeatedly contacted and may tire of answering the same questions in every round. The survey questionnaire was revised in each subsequent round to suit changing priorities of the programme and the situation, as well as rationalise questions to avoid fatigue among respondents. Overall, respondents showed interest in the survey outcomes, which motivated their continued engagement. At the same time, to compensate for their time and for spending talk-time on the survey, household respondents and FCHVs were given a top-up of NPR 100 for their mobile phones, which also helped to keep respondents engaged. Furthermore, after the third round respondents were offered a cash transfer to respond to their needs, which also incentivized survey participation in subsequent rounds.<sup>4</sup>

The IVR module was designed as a short survey (7 questions), which could be completed in



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<sup>2</sup> IVR calls were sent to 1,500 respondents (from the sampled group of 7,500) after the phone survey.

<sup>3</sup> Disability was assessed during the first round based on Washington Group questions.

<sup>4</sup> All 7,500 households were called in the third round to consult them on the cash transfer. Following high interest, a transfer of NPR 2,000 per child was provided for maximum two children.

just three minutes. The IVR survey gathered complementary information on the availability of water for drinking, cooking and handwashing and the psychological wellbeing of children and adults. It also included questions respondents may have been uncomfortable answering in a telephone survey such as whether the fear of Corona virus had led to job loss or anxiety about going out. The IVR was added to test its value as a modality for community-level data collection (see discussion below).

FCHVs were interviewed to monitor the situation on the ground (e.g. child and maternal mortality) and to follow up on the types of services provided to households in the community during the pandemic. The FCHV survey was kept short, including 22 questions. Keeping FCHVs engaged across the survey rounds was not a challenge as they are familiar with UNICEF and other partners, and had been collaborating with them.

To ensure quality of the data, the survey tools were piloted before each round, enumerators and supervisors rigorously trained, the data monitored through back-checks<sup>5</sup> and the use of the ONA App<sup>6</sup> for live monitoring of incoming data flow from each enumerator. Standard ethical practices were observed during the survey. Verbal informed consent was obtained prior to each survey round; and respondents were informed that they could end the interview at any time and their information would remain confidential. Only respondents in Sharecast's database who had agreed to participate in future surveys were contacted for the telephone survey; and, only respondents' phone numbers and household ID (without any name) were shared with Viamo for the IVR survey. Furthermore, enumerators were trained to ask about sensitive issues such as domestic violence and child protection and to respond appropriately with information and links to support services such as counselling centres, child helplines and sources of information on COVID-19 to those in need. Psychosocial counsellors were available on call to provide services to respondents, if needed, during data collection.



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All the data from the telephone survey were captured in real time on the ONA App on a tablet, from where it was transferred to Python and R programmes for analysis. Information from the IVRs and FCHV survey was used to triangulate the telephonic data. After each survey round, UNICEF analysed the data and prepared graphic summary presentations of the key findings.<sup>7</sup> To enable analysis by gender and equity, data were disaggregated by sex, income, geographical location, employment, caste, family size, female versus male headed households, and disability status. Qualitative information was planned to be analysed at the end of round 6, and the qualitative and quantitative data will be synthesised in the end line report.

The CFT demonstrates that the entire process of data collection can be digitized combining multiple modalities (and respondents) in a way that considers the strengths and weaknesses of each. The phone survey could cover more questions as rapport is built with the respondent, while the IVR had to be kept short and complementary but allowed self-administration of more sensitive questions. Data science packages (ONA, Python) supported capturing data in real time and efficient quality assurance and analysis. The use of common, unique respondent identification codes

<sup>5</sup> During each round, 10% of randomly selected household survey respondents were called back to confirm the call, duration and quality of the interview.

<sup>6</sup> <https://ona.io/home/>

<sup>7</sup> After the first round a comprehensive baseline report was prepared. A comprehensive end line report is planned

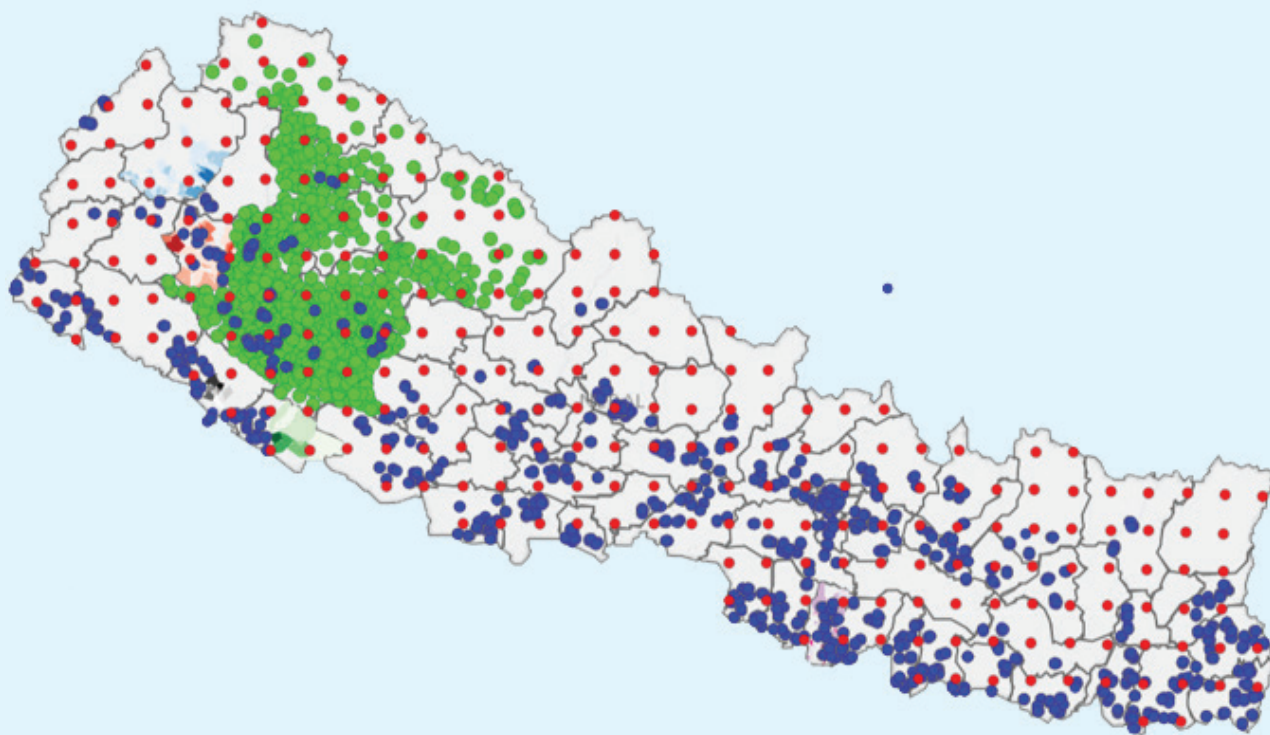
across data collection modalities enables efficient merging of the data. However, the multi-method approach covering a wide range of topics requires allocating sufficient resources in terms of questionnaire design and coordination, data collection and quality control, as well as analytical capacity.

## Sampling

Grid-based random sampling was used to ensure geographic coverage across Nepal. Initially 250 wards (out of 6,744) were randomly selected within each grid on the map of Nepal through distance and density optimization algorithms.<sup>8</sup> Subsequently,

households from a universe of 18,000 respondents with contact details (13,000 respondents drawn from Sharecast Initiative’s existing database<sup>9</sup>, and an additional 5,000 from UNICEF’s database), located in these wards or in proximate wards, were sampled (see Figure 1). Households were randomly selected but only those who were identified in the baseline round as having one child below the age of 18 were retained as eligible for the survey. In total 7,500 households were selected from 1,837 wards in 640 municipalities.<sup>10</sup> Using random sampling, 1,500 households from the sampled 7,500 households were further selected to participate in IVRs.<sup>11</sup> A sample of around 500 FCHVs in selected districts

**Figure 1:** Map of Nepal with sampled wards, overlaid with existing household databases



Red dots=grids; blue dots=locations of wards based on Sharecast Initiative database; green dots=locations of ward secretaries based on UNICEF database

**Source:** UNICEF Nepal (2020), Guidelines for monitoring and analyzing socio-economic impact of COVID-19

<sup>8</sup> Wards were selected to be uniformly distributed throughout the grid.

<sup>9</sup> The database includes households who have been part of Nepal Media Landscape surveys conducted by the Sharecast Initiative over the past years, and additional contacts provided by Sharecast’s district-level media partners, community members and local groups.

<sup>10</sup> Ca. 80% of municipalities/cities in Nepal are included in the sample.

<sup>11</sup> Sharecast provided Viamo the list of phone numbers for the IVRs.

was randomly drawn from UNICEF's database containing contact details.<sup>12</sup> Finally, for qualitative interviews, in each round, supervisors randomly selected and contacted up to 90 respondents during back-check calls.

A strength of the grid-based sampling design is that the sample is geographically representative of Nepal. However, as the available household databases had limitations in terms of representation of specific groups, some provinces and ethnic groups (according to the Census of Nepal) were underrepresented after round 1. Sharecast used its networks (community members, media network, and local bodies) to contact these groups remotely and recruit respondents for the survey. This model demonstrates that unlike a face-to-face survey, where it is difficult and expensive to cover every location across the country, in a telephone survey with appropriate sampling it is possible to achieve national coverage in a short time period.

Inclusiveness of the survey was further pursued by collecting data on household members with a disability; and the gender of the household head was asked to understand the gender distribution of the sample data. Almost equal gender representation was achieved (51% men and 49% women) in the sample, and 14% of households included members with difficulty in functioning. A limitation was that people who did not own a phone were not included in the sample, and hence the most vulnerable groups were not represented. Limitations in terms of reaching the more marginalized could be addressed by involving ward officials and other partners on the ground through remote means via the adoption of appropriate technology.

The main household survey was designed as a panel. The respondent was contacted in each round. This allowed for the measurement of the social and economic impact of COVID-19 among the same households over time. Some attrition



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took place in the sample (from around 7,500 in round 1 to around 6,500 respondents in round 4) because of seasonal agricultural activities, operational issues (change of phone number, lack of connectivity/difficulty connecting to the number and inconvenient timing of the call), respondents lack of interest, and change in work/residence status from round 1 (during lockdown) to round 2 (post lockdown). The follow-up IVR calls did not follow a panel format but 1,500 respondents from the same sample group were drawn for each round. In the FCHV survey, the same respondents were contacted in each round.

IVRs can generate robust data and some questions, such as job loss, may be better answered in IVRs rather than in a telephone survey. However, IVRs generally have lower response rates as respondents may lack the technical aptitude to respond to the IVR. People may not be accustomed to listening and responding to automated calls, and may find it easier to engage in a telephone conversation. In the CFT, the number of completed calls rose from around 400 in the first two rounds to approximately 700 in rounds 3 and 4.<sup>13</sup> The direct cash transfer, offered after round 3, helped to increase participation of the IVR, as well as the phone survey.

<sup>12</sup> The FCHV sample was 515 in round 1; 477 in round 2; 507 in round 3 and 506 in round 4.

<sup>13</sup> The engagement rate (i.e. percentage of unique calls that made contact with the targeted respondent) increased from around 50% in the first two rounds to 95% in subsequent rounds.

## Partnerships

UNICEF's collaboration with Sharecast and VIAMO supported the implementation of the CFT. Sharecast had previous experience conducting surveys in the country, including COVID-19 related phone surveys;<sup>14</sup> and its existing database of phone contacts across Nepal, which had been factchecked and cleaned, was an important asset that could be leveraged, as well as its networks across the country to include households to make the database more representative. Furthermore, Sharecast's familiarity with the media landscape in Nepal facilitated the dissemination of the evidence through its network of media channels. Viamo's expertise in implementing IVR surveys also supported the efficient rollout of data collection via IVRs. In sum, the availability of local partners with good capacity and presence in the country helped to roll out the survey. However, as it takes time to find a suitable partner and establish a Long Term Agreement, it is important to map organizations on the ground in advance who could be potential partners, so they can be brought on board immediately in emergency contexts.

## Agility/timeliness

This model of a longitudinal survey covering a large sample, with multiple rounds of data collection and analysis, demonstrates that in-depth robust data can be gathered in a short period of time. The quick turnaround of each round of survey required the use of appropriate technology (such as Python that quickly analyses a large amount of data) and a large human resource base. For example, in the household survey, 45 enumerators conducted the interviews and in parallel five supervisors and two research staff monitored the quality of the data.

Nonetheless, it was challenging to complete each survey round every month. The entire process—coordinating with UNICEF programme staff for input and review, preparation and testing the survey tool, conducting interviews and regular monitoring, data cleaning, analysis and writing

up the findings—took time. The time needed to complete all these activities was underestimated and there were unforeseen delays. For example, respondents had to be called multiple times for the survey. Furthermore, since the questionnaire covered multiple socio-economic issues and was designed to be adjusted to evolving information needs, time was needed to be invested in getting inputs from UNICEF programme staff across a range of strategic indicators that were of interest to different programmes. To rapidly implement multiple survey rounds, a full-time data consultant is required to oversee the process. For these reasons, the last three survey rounds were conducted every six weeks instead of every month.

A learning is that given the time and resources needed to analyse each round of data, synthesize and report on the findings at the end of each round, findings can be quickly disseminated by presenting key highlights of the survey data as a dashboard and updating the data in real time. At the same time, the data can be uploaded to a platform with a user-friendly interface, and downloaded for analysis by multiple stakeholders. UNICEF Nepal is developing a dashboard, and the Regional Office integrated CFT data on the regional dashboard to be used by the SAR country offices.

## Use of findings

By mid-December the findings of four rounds of the survey had been disseminated to a range of stakeholders including the Government of Nepal, donors/UN agencies (UN Country Team, International Development Partners Group) and NGO partners. UNICEF has been continuously sharing the data with the Government through advocacy and programming, and the National Planning Commission, Ministry of Education and other ministries are using the data. The round 4 results were presented at the e-conference on social protection, which was attended by representatives from line Ministries, development partners, UN agencies and other international organizations.

<sup>14</sup> Sharecast had conducted a rapid KAP survey and a follow-up survey around COVID-19 in Nepal in April-May 2020 during the lockdown via mobile phone. Sharecast also had prior experience of conducting in-person surveys across the country, including the Nepal Media Landscape survey.

The findings are also available on UNICEF’s website.<sup>15</sup> The data have been shared internally with the UNICEF Regional Office and HQ to be used for regional comparison, and anonymized data have been uploaded on a regional dashboard for easy access by UNICEF country offices. The evidence is being used for UNICEF’s internal programming, and findings on the impact on COVID-19 have informed UNICEF’s digital cash transfer programme for surveyed households in Nepal.

Through Sharecast’s communication outreach, enumerators have been sharing survey findings, links to news stories and the UNICEF website with respondents during telephone interviews and back-check calls. Respondents have also been seeking information from enumerators about the survey findings during these calls. Nepal is currently undergoing a process of federalization, and it is

anticipated that empowered communities could use the evidence to inform behaviour change communication messaging for the prevention of COVID-19 in their areas.

Sharecast is also sharing the survey findings with their media networks, including news agencies and radio networks, for wider reach among the general public. Several newspapers such as Nepal Times and Kathmandu Post have published findings from the CFT. Sharecast and UNICEF are collaborating to publish the key strategic results of the study as advocacy briefs.

## Summary learnings

The strengths, challenges, learnings and innovations related to the implementation of this rapid assessment are summarized in the table below.

**Table: Child and Family Tracker, Nepal: Summary Learnings**

Strengths	Challenges
<ul style="list-style-type: none"> <li>• Use of grid-based sampling ensured well-distributed national coverage.</li> <li>• Availability of local partners with capacity, networks and databases in Nepal facilitated implementation and reach of households and ethnic groups across the country.</li> <li>• The integrated, multi-method approach enabled coverage of a wide range of socio-economic data; as well as information on ethnicity, income and disability, allowing for an equity lens to be applied.</li> <li>• Used the survey to feed information back to respondents about COVID-19 and helplines.</li> <li>• Technology was leveraged for efficient real-time data collection and monitoring.</li> </ul>	<ul style="list-style-type: none"> <li>• The initial, monthly periodicity was too ambitious for each survey round given time required for questionnaire iterations, data collection and analysis.</li> <li>• People who do not own a phone, who may be the most marginalized, are not included in the survey.</li> <li>• The panel sampling approach across survey rounds resulted in attrition.</li> <li>• The long questionnaires for remote data collection are time consuming and can cause fatigue among respondents.</li> </ul>

<sup>15</sup> <https://www.unicef.org/nepal/reports/covid-19-child-and-family-tracker-baseline-findings>

### Learnings and innovations

- In order to rapidly leverage local partner capacity and expertise, potential partners are best mapped in advance and long-term agreements established, so that they can be immediately brought on board to work in emergencies.
- The large amount of data generated through multiple survey rounds, survey modalities and a large sample require sufficient investment in trained personnel and appropriate technology.
- Different remote data collection modalities can be effectively integrated through the use of common, unique respondent identification codes and analysis software.
- A phone survey can yield robust data that can be used for a descriptive analysis of the situation as well as advanced, multi-variate analysis to test relationships between different variables.
- Incentives can play a key role in increasing the interest of respondents to participate in surveys.
- Limitations in terms of reaching the more marginalized could be addressed by involving local officials and other partners on the ground through remote means via the adoption of appropriate technology.



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**For more information visit:**

UNICEF Regional Office South Asia website <https://www.unicef.org/rosa/>

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