ASSESSMENT OF CROWDING OUT OF ROUTINE SERVICES DUE TO COVID-19 EXPENDITURES IN NEPAL

Acknowledgments

First and foremost, this research would not have been possible without financial support from GAVI – the global alliance for vaccinations and immunization. Nor would it have been possible without the unwavering encouragement and support of Elke Wisch (Rep, UNICEF Nepal Country Office) and my supervisor Ushra Misra (Dep. Rep, a.i and Chief of Social Protection Evaluation and Evidence, UNICEF Nepal Country Office). This research also benefitted greatly from the help and guidance I received from my colleagues in the Social Protection Evidence and Evaluation team (UNICEF Nepal Country Office) namely, Thakur Dhakal, Sunil Rajbhandari, Tara Kanel, and Yendra Rai. In tandem, invaluable data and information were provided by members of the Health team (UNICEF Nepal Country Office) including Budhi Setiawan, Tariku Behranu, Pradeep Shrestha, Mohammad Reazul Hasan, Abhilasha Gurung, and Yanti Pasaribu. I thank them for providing me with the requisite data and explaining the intricacies of them to me with patience.

In addition, this research also acknowledges the contribution of Deepak Raj Dawadi and Durga Nidhi Sharma in the interviews of key informants and literature reviews. The participants in the qualitative discussions devoted time and effort and their contribution is hereby acknowledged with sincere thanks.

Thanks, are also due to Bishnu Nepal for translating some of the budget data.

Very critically, deep gratitude is owed to Jennifer Asman, Nikhil Mandalia (UNICEF Headquarters, Social Policy and Social Protection, Public Finance and Local Governance), and Ulla Griffiths (UNICEF Headquarters, Health Section - Immunization) for their support and guidance during several meetings to discuss progress and approaches. At the same time, I am also indebted for their encouragement, insightful comments, and suggestions on earlier drafts.

Finally, I would like to acknowledge the encouragement, patience, and love of my mother and my wife.

Your generosity and expertise have no doubt been instrumental in improving the research in innumerable ways while at the same time, saving me from many errors. Those that inevitably remain are entirely my own responsibility.

I sincerely thank all of you.

Dr. Aniruddha Bonnerjee (Lead Author)

September 2022

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ADB	ASIAN DEVELOPMENT BANK
AEFI	ADVERSE EVENT FOLLOWING IMMUNIZATION
BCG	BACCILLE CALMETTE GUÉRIN VACCINE
BOPV1,3	BIVALENT ORAL POLIO VACCINE TYPES 1 AND 3
CBS	CENTRAL BUREAU OF STATISTICS
CARES	COVID ACTIVE RESPONSE AND RECOVERY EXPENDITURE SUPPORT
CDO	CHIEF DISTRICT OFFICER
CFT	CHILD AND FAMILY TRACKER
CMO	CRISIS MANAGEMENT ORDINANCE
CMC	CRISIS MANAGEMENT CENTRE
COVAX	COVID-19 VACCINES GLOBAL ACCESS INITIATIVE
COVID-19	CORONA VIRUS 19
CPI	CONSUMER PRICE INDEX
DOH	DEPARTMENT OF HEALTH
EDU	EDUCATION
E-LMIS	ELECTRONIC LOGISTICS MANAGEMENT INFORMATION SYSTEM
EPI	EXPANDED PROGRAM ON IMMUNIZATION
EXP	EXPENDITURE
DTVP-HIB-HEPB	WHOLE CELL VACCINE
FCHV	FEMALE COMMUNITY HEALTH VOLUNTEERS
FG	FEDERAL/CENTRAL GOVERNMENT
FY	FISCAL YEAR
GAVI	GLOBAL ALLIANCE FOR VACCINES AND IMMUNIZATION
GDP	GROSS DOMESTIC PRODUCT
GON	GOVERNMENT OF NEPAL
HEOC	HEALTH EMERGENCY OPERATION CENTRE
HLTH	HEALTH
IFT	INTRAGOVERNMENT FISCAL TRANSFER
IMF	INTERNATIONAL MONETARY FUND
IPV	INACTIVATED POLIO VACCINE
JE-LIVATD	JAPANESE ENCEPHALITIS LIVE ATTENUATED VACCINE
LG	LOCAL GOVERNMENT
LTD	LIMITED
MOF	MINISTRY OF FINANCE
MOFAGA	MINISTRY OF FEDERAL AFFAIRS AND GENERAL ADMINISTRATION
MOHA	MINISTRY OF HOME AFFAIRS
MOHP	MINISTRY OF HEALTH AND POPULATION
MOICS	MINISTRY OF INDUSTRY, COMMERCE, AND SUPPLY

MOLESS	MINISTRY OF LABOR, EMPLOYMENT, AND SOCIAL SECURITY
MR	MEASLES-RUBELLA VACCINE
NEP	NEPAL
NEPSE	NEPAL STOCK EXCHANGE
NIP	NATIONAL IMMUNIZATION PROGRAMME
NJAR	NATIONAL JOINT ANNUAL REVIEW
NMICS	NATIONAL MULTIPLE CLUSTER INDICATOR SURVEY
NPR	NEPALESE RUPEE
NRB	NEPAL RASHTRA BANK
NRP	NATIONAL RELIEF PROGRAM
OECD	ORGANIZATION FOR THE ECONOMIC COOPERATION OF DEVELOPING COUNTRIES
PCR	POLYMERASE CHAIN REACTION
PCT	PERCENT
PCV-10	PNEUMOCOCCAL CONJUGATE VACCINE 10-VALENT VACCINE
PEMS	PRIME MINSTER'S EMPLOYMENT GUARANTEE SCHEME
PHEOC	PROVINCIAL PUBLIC HEALTH EMERGENCY OPERATIONS CENTRE
PF4C	PUBLIC FINANCE FOR CHILDREN
PPE	PERSONAL PROTECTIVE EQUIPMENT
PVT	PRIVATE
R&D	RESEARCH AND DEVELOPMENT
RT-PCR	REVERSE TRANSCRIPTION POLYMERASE CHAIN REACTION
RV-1	ROTOVIRUS 1
SNG	SUBNATIONAL GOVERNMENT
SP	SOCIAL PROTECTION
SWAp	SECTOR WIDE APPROACH
TD	TETANUS TOXOID AND DIPHTHERIA VACCINE
VAT	VALUE ADDED TAX
UN	UNITED NATIONS
UNICEF	UNITED NATIONS CHILDREN'S FUND
USD	UNITED STATES DOLLAR
WASH	WATER SANITATION AND HYGIENE
WB	WORLD BANK
WHO	WORLD HEALTH ORGANIZATION
WFP	WORLD FOOD PROGRAMME
Y-O-Y	YEAR ON YEAR
%	PERCENT
$	DOLLAR

INTRODUCTION

Following the first COVID-19 case registration on 24 January 2020 and the increasing domestic and global trend of COVID-19 cases, a nationwide lockdown was imposed on 24 March 2020 and lifted in July 2020 – which consisted of the last trimester of FY 2019/2020.[1] Partial lockdown continued till November in some districts. The national lockdown severely impacted children, households, and the social and economic sectors (MoF, 2022, UNICEF, 2022)[2].

The government faced multiple challenges including, among others, maintaining the emergency supply system on health-related logistics, including medicines, equipment, testing kits, Personal Protective Equipment (PPE), upgrading hospitals, and imparting skill training (MoF, ibid). By the first week of February 2020, Nepal reported a shortage of masks and protective gear having failed to procure them due to global shortages. During this time, there were incidents of price gouging and the department of commerce, supplies, and consumer affairs had to intervene and some arrests were reported.[3] As the necessity for 'quarantine sites' became obvious due to the rapid rise in caseload, there was also some initial resistance faced by locals – mainly because some viewed these sites as endangering the community.

During the early phase of the COVID-19 pandemic in Nepal, there was considerable public angst about the slow speed of response from the government as well as concerns about the governance of funds and donations the government had received. Public interest litigation was filed in the supreme court.[4] A report by the International Budget Partnership (Freedom Forum) found Nepal, along with 55 other countries, as having 'limited' levels of accountability for the COVID-19 finances.[5] There were allegations of corruption (kickbacks in medical procurement from China for example) that proved embarrassing for the ruling party. In May 2021, the President dissolved the house of representatives (for the second time in six months) and called for a snap election creating nationwide protests and furor. The supreme court overturned the decision and reinstated parliament. A new prime minister was sworn in with an entirely new cabinet in July 2021. Political turbulence, even as the second wave was peaking in Nepal, proved to be a distraction in the delivery of services as there were numerous and frequent changes to key administrative personnel.

The Government of Nepal (GoN) established a COVID-19 Crisis Management Centre (CCMC) under the supervision of the Deputy Prime Minister to respond to the rising number of illnesses, and the Incident Command System was activated and mobilised at the MoHP (Figure 1). Some of the key strategies adopted to curb the COVID-19 cases were multiparter engagement, Risk Communication and Engagement, surveillance, deployment of rapid response teams, case investigation, strengthening of points of entry, limits to international travel and transport, expansion of laboratories for COVID-19 testing, vaccine and logistics supply, and development and updates of COVID-19 protocols and guidelines.

The National Relief Program (NRP) was announced on 29 March 2021 (FY 2021/22) with three broad pillars. These were[6]:

i) addressing health emergencies with an output focus on strengthening the health system's capability to respond to the pandemic,
ii) addressing social protection for the poor and vulnerable by providing immediate food relief and employment support to those who lost their jobs due to the COVID-19 pandemic, including returning and potential migrants, and,

[1] https://kathmandupost.com/national/2020/03/23/nepal-goes-under-lockdown-for-a-week-starting-6am-tuesday

[2] Ministry of Finance (MoF), Project Completion Report. Nepal Covid-19 Active Response and Expenditure Support. March 2022. UNICEF, 2021/22: Child & Family Tracker. Various. Rounds.

[3] COVID-19 pandemic in Nepal - Wikipedia

[4] PIL filed against the government demanding Nepalis in China be brought home. The Himalayan Times, 11 February 2020.

[5] Transparency and accountability of Covid-19 fiscal management, International Budget Partnership, 2022.

[6] Refer to Annex figures for infographics on the timeline and key actions (Figure 36 to Figure 38)

iii) providing stimulus packages to the economic sector for their early recovery by providing concessional loans to enterprises affected by the COVID-19 pandemic, including tax reliefs to businesses and consumers.

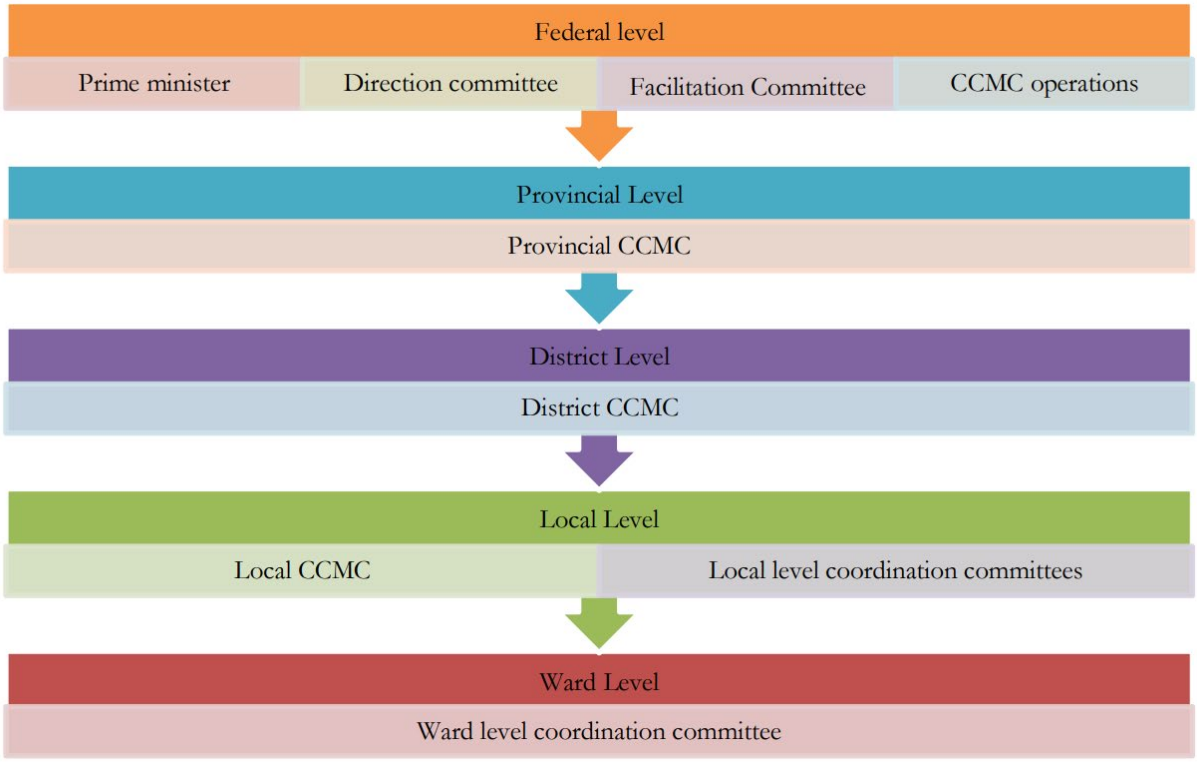

Figure 1: COVID-19 management and response structure

The government's focus on the poor and disadvantaged while implementing the national relief programme (NRP) is evidenced through specific targets for women and disadvantaged groups included in the National Relief Program. The total estimated cost for NRP was US$ 1.26 billion. The three broad pillars remain areas of priority even as Nepal recovers.

Donors contributed significantly to the government's response. The financial costs, implementation monitoring, and reporting were tracked through the COVID-19 Active Recovery and Support (CARES) programme set up at the Ministry of Finance. The Ministry of Federal Affairs and General Administration (MOFAGA), Ministry of Labor, Employment, Social Security (MOLESS), Ministry of Health and Population (MOHP), Ministry of Industry, Commerce and Supply (MOICS), Ministry of Agriculture Development and Livestock (MOALD) and Nepal Rastra Bank (NRB) are represented in the CARES committee.

There were three performance indicators identified for the NRP. The first was to ensure that the food insecure population in Nepal (estimated by GoN and WFP) was kept below 4.65 million (this includes about 1.8 million malnourished pregnant and lactating women). The second performance indicator related to keeping the daily number of COVID-19 cases below 10,000. The last performance indicator was that 90 percent of the medium, small, and micro-enterprises receiving government support under the NRP remained operational.

Of these three performance indicators, only two are likely to be met: keeping the food insecure population below 4.6 million and keeping 90 percent of small, medium, and micro enterprises receiving support operational. As of Jan 2022, the government had distributed food to 1.92 million households. However, the government could not keep the

daily number of cases below 10,000 because of the severity of the impact of the delta variant that spiked cases from May 2020 onwards coupled with incidences of large numbers of people crossing into Nepal across the porous Indian border without any screening.

A pictorial infographic of the timelines and government responses from January 2020 to February 2020 and then from March 2020 to January 2021 (beginning of the vaccination campaign) are shown in the Annex (Figures and Data, in Figure 44 and Figure 45). The Health Emergency Operation Center (HEOC) under the Health Emergency and Disaster Management Unit (HEDMU) of the MoHP guided actions during the early pandemic phase. The Incident Command System accelerated the evidence-informed decision-making process within the MoHP and helped to improve the overall effectiveness of the COVID-19 response. A software was developed by the Information Management Unit (IMU) under the MoHP secretary aiming to capture and provide the right data to the right persons at the right time through a one-door policy.

The MoHP was successful in being able to align support from partners in priority areas identified in the early phase of the pandemic, which were regularly updated, reviewed, and shared in cluster meetings. A key element was that the Swap programmes being financed through a joint financing agreement, were allowed to be curtailed temporarily to allow financing for the COVID-19 response. Further details are available when analyzing the health sector budget later.

There were some early challenges in engaging the private sector in testing and service delivery. However, in later stages, the role of the private sector remained crucial in expanding the health system capacity for testing and delivery of COVID-19 tools as well as non-COVID-19 services.

A slew of communication activities was initiated by MoHP and other partners to spread awareness of COVID-19 and help increase compliance to protective health and safety measures.[7] Strengthening situational awareness systems that provides better understanding of the disease situation and bolstering modelling/forecasting capabilities within the country based on real time collected data remain priority areas for action.

As of November 2021, public places, including schools and colleges, re-opened and general restrictions on movements were eased. However, in the global context, there are countries where the cases of COVID-19 are increasing and the risk of a resurgence of COVID-19 cases remains. Accordingly, MoHP continues to disseminate messages for public awareness and promote the use of public health measures while continuing to focus on other preparedness measures. There was a high emphasis on contact tracing and community isolation systems in Nepal over the course of the pandemic. However, the performance was constrained by some operational challenges, including household reluctance in the early stages because of fear and a lack of human resources at local level.

This paper examines whether the response to COVID-19 had collateral damage in terms of crowding out of childhood vaccinations, other essential services, and allocations to the social sector. The conceptualization examines crowding out from a demand and supply perspective by identifying four factors that determine coverage or utilization of services: (i) availability of services, (ii) availability of equipment, (iii) demand for services, and (iv) access to services. It follows that coverage can drop if there is a demand shock (e.g., from income or fear) or access shock (e.g., from closures). The supply of services and availability of equipment were also affected along with the demand for them during the lockdown (movement restrictions, fear). However, in the most recent fiscal year for which data are available (with recovery and easing of restrictions), these factors have improved.

The data sources used for this research included public finance data from the Ministry of Finance, health sector reports, such as the National Joint Annual Review, and other administrative health sector data, such as coverage

[7] These included radio and television placements, SMS messaging, and the use of web-based tools. More than 500 radio stations and 22 television channels throughout the country disseminated COVID-19-related information in multiple languages.

rates.[8] However, the macro data masks vivid disparities in Nepal. To enrichen the discussion and bring out the equity dimension and a child focus, data from the UNICEF Child and Family Tracker (UNICEF, 2020-2022. CFT) was also analyzed from a crowding out perspective regarding basic child rights. There were also special edition surveys directed at female community health volunteers in May 2020 and Ward Mayors in Jan 2021. These special edition surveys brought out the challenges and bottlenecks faced by female health care workers and ward mayors.

The structure of this report is as follows. It begins by summarizing the overall macro and fiscal trends in the COVID-19 context while also discussing the social sector and health sector budget in detail. It then examines the crowding out of vaccines. The data do not suggest any crowding out in financing.

The National Immunization Program (NIP) in Nepal is a high-priority program (P1) in the government's plans and budget allocations.9 It is funded through taxation and development partners. Interestingly, the GoN has been making contributions into a 'National Immunization Fund' each year since the National Immunization Law came into being in 2016. This fund is included as a line-item of the NIP budget. The data examined show no fiscal crowding out of vaccination budgets due to a variety of factors including strong donor support and GoN commitment.

Unfortunately, there was a sharp crowding out in coverage observed during movement restrictions with a recovery in 2021. This was attributable to the closures and restrictions, fear and suspicion, and other factors that came into play as the pandemic unleashed in Nepal. Following the easing of movement restrictions coverage has recovered sharply.

At a micro level, the pandemic shocked the employment and income status of a vast number of families all across Nepal. In the absence of any large-scale social protection, this would translate into education, health, and other shocks. Data from the high-frequency periodic surveys carried out by UNICEF[10] suggests that a disproportionate number of children lived in households that experienced multiple shocks and experienced a 'crowding-out' of basic services.

- Nearly 75 percent of all households surveyed experienced a shock in employment (lost jobs) or incomes during May 2020-Dec 2021. Although the situation has improved since then, 1 in 5 households is still estimated to be at risk of income poverty.
- Household indebtedness and depletion of wealth to cope during the pandemic was reported in the first six round of the CFT.
- Households continue to struggle for food, despite the government's achievement of reaching 1.9 million households. Across all nine rounds of the survey, nearly 1 in 5 reported struggling for food every day. The recent price hikes in Nepal are worrisome because of the negative impact on food access.
- Between 10-25 percent of respondents (across various rounds) reported they were worried their children were becoming too thin. Nearly 20 percent of respondents from Sudurpaschim reported changes to their children's dietary intake.
- The top immediate needs of households throughout most rounds of the survey related to cash/financial assistance, food, employment, and medications (8-10 percent of households).
- Some 6 to 10 percent of households reported they were unable to buy masks due to high prices and non-availability even as late as August 2021.
- Amidst a heightened sense of fear, households reported difficulties in receiving treatment and being too stressed to go out and purchase essentials (IVR, 2021).

[8] The public finance and administrative data were scraped directly from pdf or word files using R and Python data scraping tools. All the analyses, including the household-level data, are done in R and Python.

[9] On January 26, 2016, Nepal's National Immunization law was established and requires the financing of routine immunization through a combination of sources including a 'National Immunization Fund' to be replenished from tax revenues and a channel for the private sector and other contributions through a Sustainable Immunization Support Fund.

[10] COVID-19 child and family tracker: Findings | UNICEF Nepal

- Across all nine rounds of the CFT over nearly two years (May 2020-April 2022), the data show households have tried to mitigate the financial impact of job and income losses by resorting to various coping mechanisms including incurring debt, selling assets, curbing expenditures, dipping into savings, relying on friends and family, and often reducing dietary intake for their children.
- Although the most recent CFT (April 2022) data show recovery in incomes and employment, the recovery has been highly uneven when seen through a regional, ethnic, income, or gender perspective. It follows that inclusive delivery of essential basic services must be prioritized and strengthened.

This research has shown that children in Nepal were deeply affected by the COVID-19 pandemic. Some lost their lives. Far more lost their caretakers or other adult relatives. Child rights were adversely affected as the rights to education, health, protection, security, safety, and well-being were all squeezed during this time. The situation was worst among the poorer income households or those living in remote areas or belonging to certain ethnic group. The combined impact of these shocks will only unfold over time. Till then, the appropriate policy response would be to focus not only on restoring and improving vaccination coverage but to restore all the rights of all children, including the most marginalized and crowded out. The solution is not one-dimensional but would require sustained multisectoral global, regional and local cooperation to accelerate high-quality and inclusive service delivery. The time to act is now.

MACRO UPDATE

The COVID-19 impact on GDP was severe and considerably worse than the devastation produced by the earthquake in Nepal in 2015. While Nepal was recovering from the earthquake and implementing wide-scale institutional changes necessitated by federalism amid considerable political tension, the COVID-19 pandemic unleashed in Nepal. The impact of COVID-19 undermined significantly an already declining growth trajectory (Figure 2). Real GDP growth rates declined from 8.6 percent in the fiscal year (FY) 2016/2017 to 7.4 percent in FY 2017/18 and 6.4 percent in 2018/19 just before COVID-19 (NRB 2022). Despite the declining trend, the average growth for these three years was 7.7 percent, which means an average 25 percent increase in GDP from FY 2016/17 to FY 2018/19.

This all changed in 2020 when the daily rate of COVID-19 infections kept rising till November 2020 and lockdowns were imposed, relaxed, or restricted to combat the spread of COVID-19. As the economy collapsed in Nepal, as it did globally, GDP growth rates became negative to -2.4 percent.

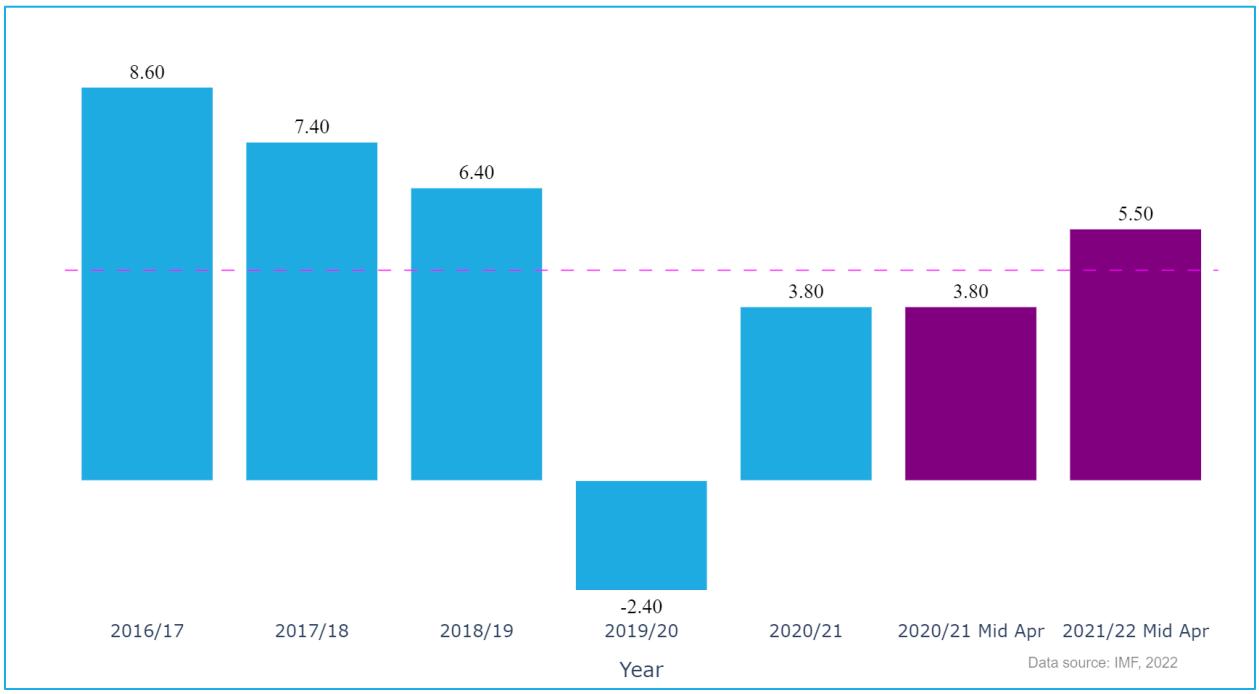

Figure 2: Real GDP Growth (FY 2016/17-FY 2021/22)

From FY 2020/21 and beyond, the economy was expected to rebound. The latest data from the Nepal Rashtra Bank (NRB 2022) suggests that on a year-on-year (y-o-y) basis, GDP growth in mid-April 2022 was about 5.5 percent compared to 3.8 percent a year earlier. It is interesting to note that these growth projections are substantially higher than the recent International Monetary Fund (IMF 2022), Asian Development Bank (ADB 2022), and World Bank (WB 2022) projections for FY 2022/23, which are more pessimistic.

Following the sharp contraction in FY 2019/20, GDP was estimated to have grown by nearly 4% in FY 2020/21 as restrictions were eased, mobility increased, and services were gradually restored. As expected from historical data, the services sector was the biggest contributor to GDP, but the agricultural sector, employing nearly 70% of Nepal's workforce, struggled, owing to the disruptions from unseasonal and heavy rain in October 2021. The forecasts from the Asian Development Bank (ADB, 2022), the World Bank (World Bank, 2022), and the International Monetary Fund (IMF, 2022) suggest that through 2024, the GDP growth rates would recover more gradually from around 2% in

2021 to 4% by 2022, 5% by 2023 and 6% by 2024: the growth being driven by a recovery in services as well as industry and agricultural sectors that are expected to fuel consumption and investment.[11]

Of recent concern, inflation has more than doubled when comparing mid-April 2021 to mid-April 2022. Rising inflation is a major concern on multiple fronts including crowding out of essential health care. It can hurt the well-being of children and adversely affect the intake of medicines, food, nutrition as well as other critical services as prices rise against a milieu of incomes, increased poverty, and uncertainty in labour markets.

Inflation in Nepal is highly correlated to inflation in India – and as inflation in India has spiked – it has also passed through to Nepal. However, Nepal has also steadily been increasing oil prices through the past seven months of FY 2021/22 as the price of petroleum surged from an average of NPR 133 per liter in October 2021 to NPR 170 per liter by May 2022 – an increase of nearly 30 percent.[12] This would have also had a critical impact on prices (Figure 3). Finally, it is important to remember that with incomes and employment are recovering, demand for goods and services has increased compared to the first half of the fiscal year 2020/21 while the supply side has yet to catch up, due to various factors, including weather-related disruptions (severe flooding in October 2021).

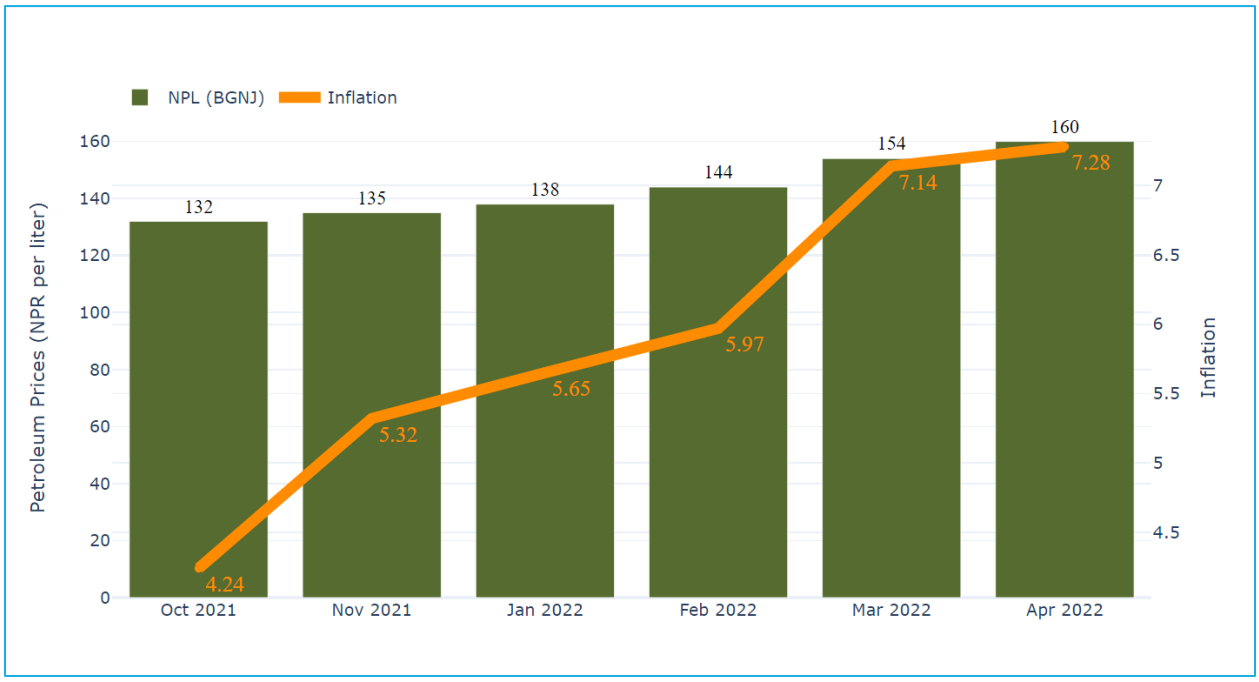

Figure 3: Recent trends in petroleum prices (left axis) and inflation (right axis) in Nepal

Most recently, since March, as the Ukraine War began, global oil prices have risen. However, Nepal's trade imports from Ukraine and Russia account for less than 2 percent of total trade. Hence, the direct impact of the Ukraine war is likely to be muted – any indirect effect would be passed through its trade partners among whom India and China exert considerable influence.

[11] The NEPSE index shot from 1,362 in FY 2019/20 to 2,833.4 the next fiscal year on bullish speculations about recovery and remained above the 2000 level mark in 2022. (Data accessed from www.nepalstock.com on May 01, 2022)

[12] Source. Nepal Petroleum Corporation, 2022.

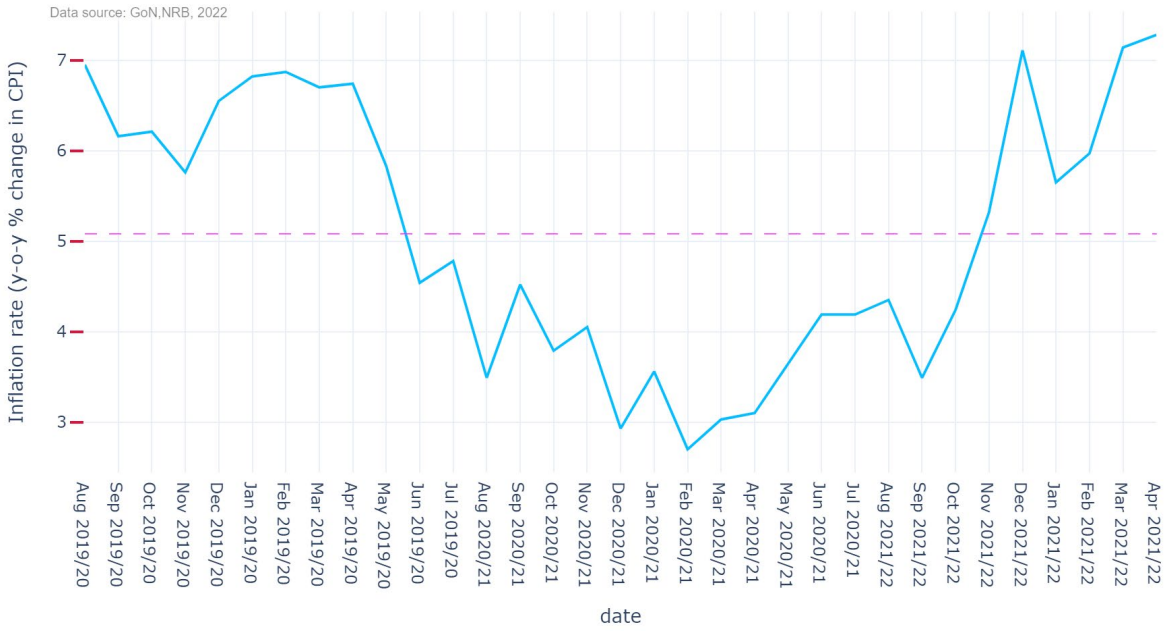

Figure 4: Monthly inflation rates (Aug 2019 - Apr 2022)

An examination of the monthly time series for inflation (Figure 4) shows that inflation dropped, on a year-on-year basis from just under 7 percent in August 2019, before the pandemic, to below 3 percent Feb 2021. It then started rising from Feb 2021 and climbed rapidly to over 7 percent in Jan 2022 and again in April 2022. It is noteworthy that inflation surged following October 2021 when Nepal witnessed unseasonal and heavy rain, landslides, and road damages. It is important to note that prices remained high throughout the first phase of the lockdown in Nepal. By the time the lockdowns were lifted in May 2020, inflation began dropping along with the economic collapse. Following the low point in Feb 2021, as incomes, jobs, and demand increased, prices rose.

- On an annual average basis for each year (to eliminate monthly fluctuations), inflation dropped from over 6 percent in FY 2018/19 and FY 2019/20 to 3.6 percent in FY 2020/21 and rose to 5.16 percent for the first 9 months of FY 2021/22.

Unpacking inflation by its components, the impact of oil-related price increases in Nepal comes to the fore. Food inflation outpaced non-food inflation on a year-on-year basis comparing April 2021 with April 2022. The average CPI doubled from mid-April 2021 to mid-April 2022. In particular, the price of petroleum products and sectors relying on them have experienced high inflation.

The CPI for food and beverages (contributing 44 percent to the CPI) rose from 130 in April 2020 to 134 in April 2021 and continued to rise to 144 in April 2022. This implies food inflation rates of 3.5 percent when comparing April 2021 to April 2020 and 7.4 percent when comparing April 2022 to April 2021. In other words, the food CPI rose by over 10 percent in just two years. Over the same period, the non-food CPI (contributing 56 percent to CPI) also rose from 136 to 140 and then to 150, implying inflation rates of 3 percent for April 2021 and 7.2 percent for April 2022 implying non-Food prices also rose by over 10 percent the last two years.

Figure 5: Food and non-food year-on-year inflation (size reflects weightage in overall CPI)

The highest rates of price increases (Figure 5) were seen in ghee and oil (28.4 percent) as well as transportation, which affected the supply chain of essential goods and commodities (20.2 percent). Housing and utilities, which determines 1/5th of the CPI, have risen by 5.4 percent below the overall inflation rate of 7.28 percent in terms of services, education, miscellaneous services, and transportation experienced the highest inflation rates. In the food and beverage category, ghee and oil, milk products and eggs, pulses and legumes, sugar and sugar products, and fruits, rose by more than the average inflation, especially ghee and oil (petroleum driven).

In terms of other indicators, most recently, Nepal's economy is facing risks from the external sector (Figure 6). Very recent data (NRB, ibid.) suggest a widening current account balance, stagnating remittance flows, and a sharp decline in foreign exchange reserves. The current account balance, which was steady -7 percent of GDP for FY 2017/18 and FY 2018/19 improved strongly to -1percent of GDP, thereby adding to foreign exchange reserves in FY 2019/20, as imports contracted significantly due to the global recession. With recovery, the current account balance has worsened to -8% of GDP and is projected to fall even further to -12% of GDP as the demand for imports has strongly outpaced the demand for exports. In short, substantially more dollars are leaving Nepal than flowing in from trade, merchandise, and services. Remittances have remained stagnant at about 22-23 percent of GDP. The developments, among others, had led to a sharp decline in foreign exchange reserves: it plunged from a high of 36 percent of GDP in FY 2019/20 to 24 percent of GDP in FY 2021/22. These estimates suggest that Nepal's foreign exchange (estimated at NPR 1,167.92 billion in mid-April 2022) can cover only 7 percent of imports and this situation is risky because it translates into coverage of less than two months of imports.

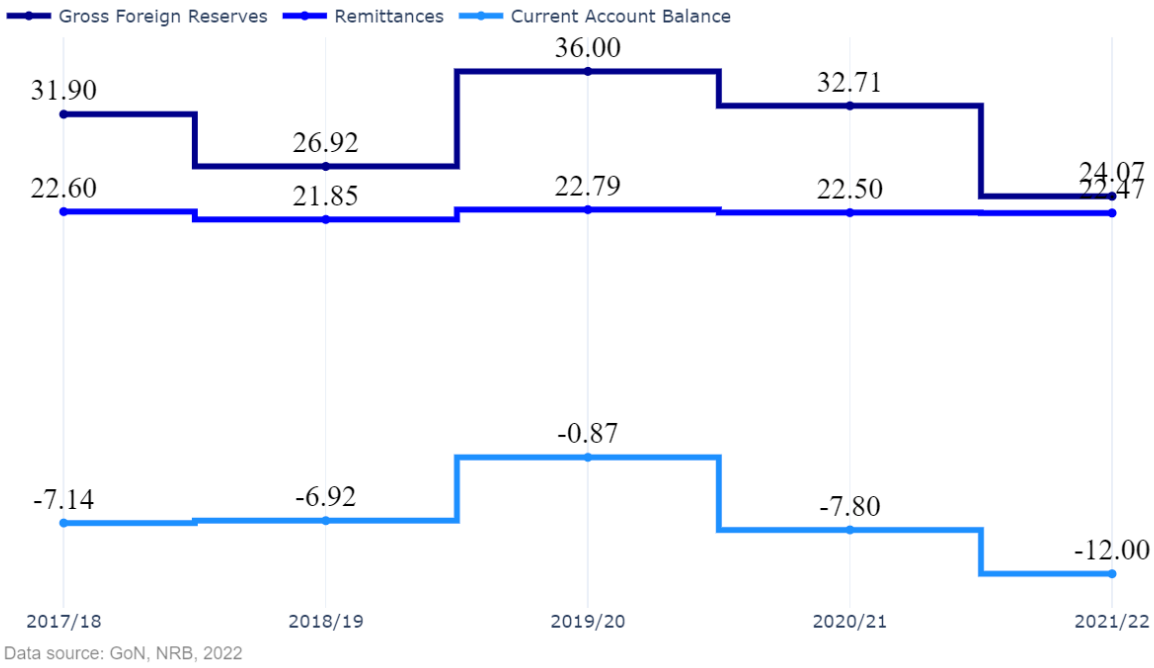

Figure 6: Trends in the external sector (select indicators as % GDP) (FY 2017/18 – FY 2021/22)

COVID-19 IN NEPAL

TRENDS IN CASES

The first case in Nepal was detected on January 23, 2021 – an imported case. The person recovered subsequently. No new cases were reported for a few weeks. The last week of March saw a strong inflow of people from India where cases had already risen alarmingly. Since then, the total number of confirmed cases began rising and crossed 100 by early May 2021, just as the lockdown was imposed (this also corresponds to the 'stringency index', an index designed to capture containment measures, being high during that period). The stringency index[13] for Nepal is illustrated in Figure 7. However, as lockdowns were lifted ('stringency index decreased), the cumulative caseload started rising. By the second week of August 2020, the cumulative caseload crossed 23,980 posing great challenges in the management of COVID-19 (tracing, quarantine, ventilator shortage, information and knowledge networks, shortage of other emergency medical necessities, etc.). More than a year later, in mid-June 2022, the caseload had surged to 979,262 cases. The most recent data for Nepal[14] (as of September 13, 2022) suggest a further rise to 998,870 cumulative cases with 984,584 recoveries (recovery rate 98.5 percent) and 12,015 deaths (mortality rate 1.2 percent).

The time-series data for new cases in Nepal suggest three 'waves' of different magnitudes and durations (Figure 8). The data suggest that the first lockdown was successful in lowering the reproduction rate to under 1 (Figure 9). However, as soon as the lockdowns were lifted, the reproduction rate climbed rapidly as did the new caseload. Similarly, the second lockdown was also successful in reducing the reproduction rate. On many days the average caseload was well over 1000 – the government's maximum caseload target. On average, the reproduction rate has hovered close to 1 although more recently it has risen again from its all-time low observed in February 2022, even though the ongoing vaccination campaigns have been in place for more than a year.

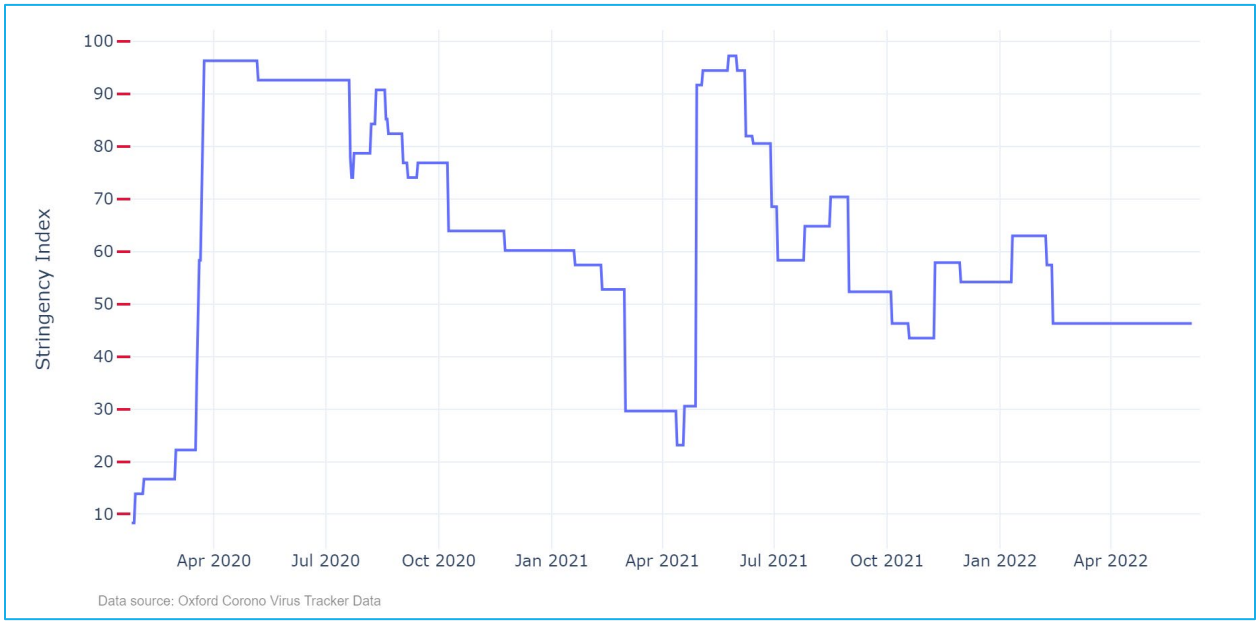

Figure 7: Stringency Index in Nepal (Jan 2020-July 2022)

[13] The Oxford Coronavirus Government Response Tracker (OxCGRT) project calculates a Stringency Index, a composite measure of nine of the response metrics.

[14] CoVid19-Dashboard (mohp.gov.np)

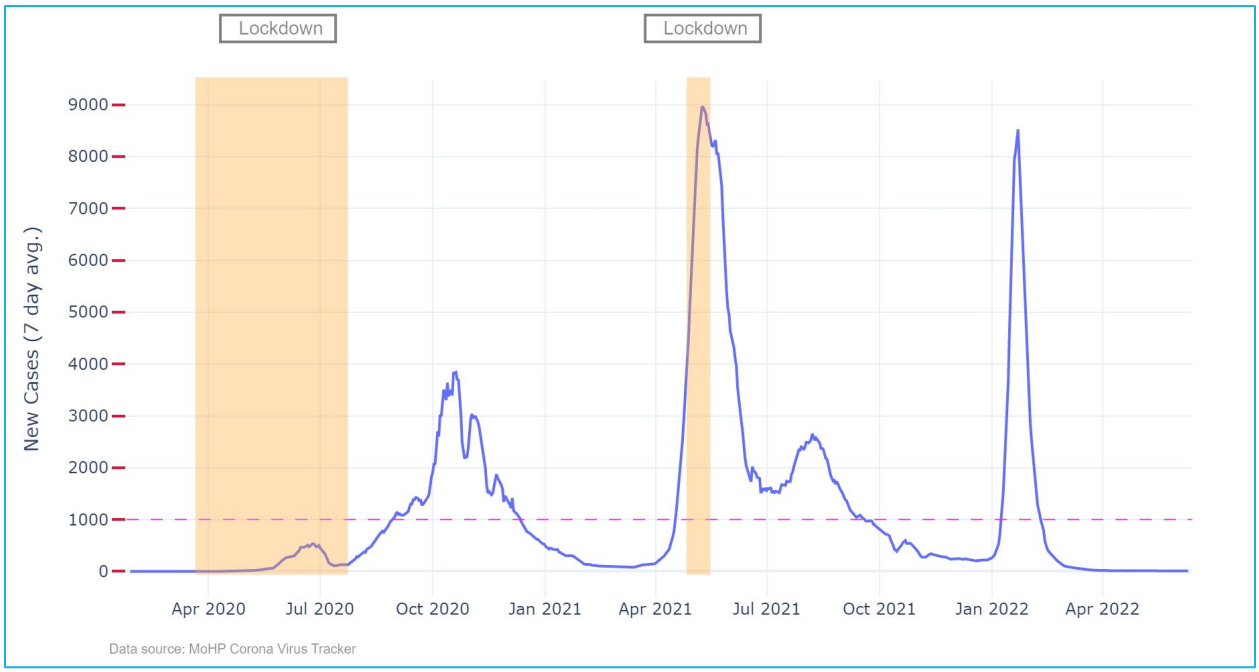

Figure 8: New cases (Jan 2020-July 2022)

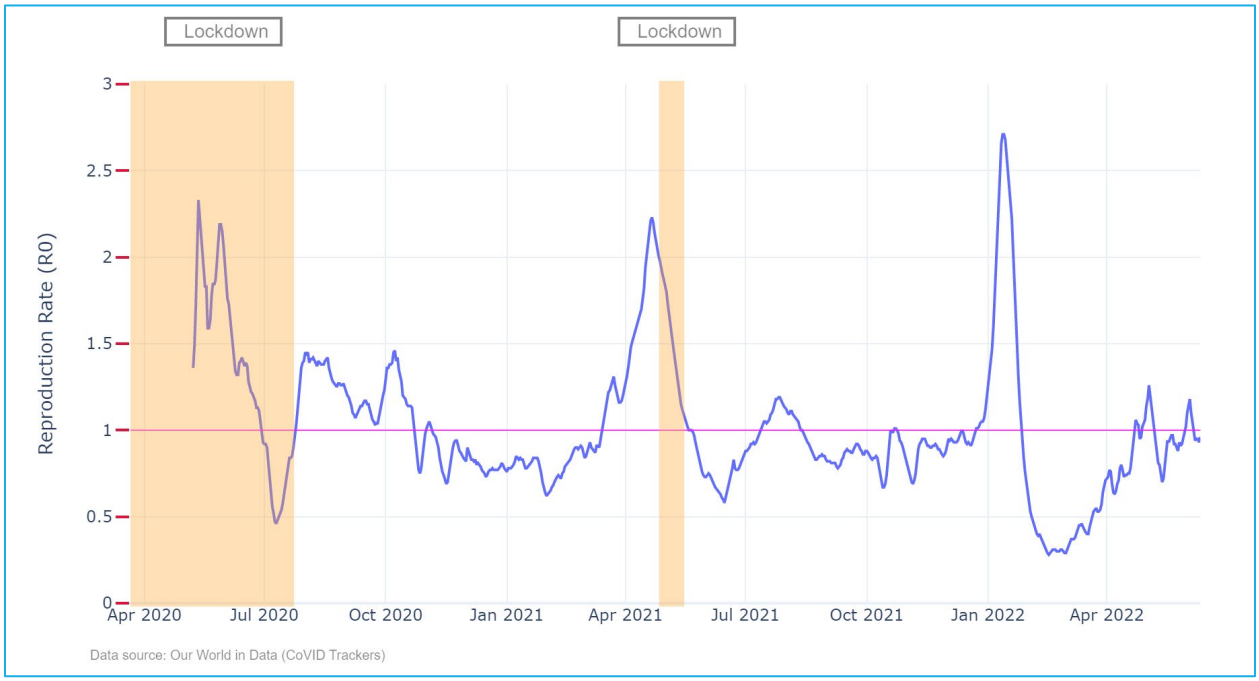

Figure 9: Reproduction Rate (April 2020-July 2022)

Data from the UNICEF CFT can be used to track household safety measures through the survey period. A noticeable trend is the decline in social distancing and wearing masks as the lockdown unfolded (UNICEF, CFT, op cit). The data for August 2020 suggest that nearly 8 percent of respondents did not wash hands for twenty seconds, and 23 percent wore a mask only sometimes, rarely, or never. Social distancing was affected most adversely: 37 percent sometimes,

rarely, or never maintained social distancing. One of the common reasons for not being able to follow safety measures was discomfort at the workplace and lack of supporting infrastructure. Not surprisingly, during this time there was also a spurt in the number of new cases as the reproduction rate also surged above 1.

The aggregate data hides the significant variation by region, age and gender in the spread of COVID-19 in Nepal. There was considerable regional variation in the daily caseload, new infections and deaths across Palikas. There were also reports of community tensions related to discrimination and stigma against infected people and their families, concerns regarding quarantine facilities, contact tracing and other safety protocols.[15]

The difference in the cumulative caseload across provinces is quite significant with Bagmati having more than 54 percent of the total cumulative cases. The latest data suggest that the highest numbers of cases (as of August 12, 2022) were in Bagmati (5.4 Lakhs, about 54 percent of the total cumulative caseload), followed by Province 1 (1.3 Lakhs), Lumbini (1.1 Lakhs), Gandaki (0.95 Lakhs), Madhes Province (0.53 Lakhs), Sudurpaschim (0.44 Lakhs) and Karnali (0.24 Lakhs). When further analyzing the data with respect to the underlying estimated population of the province (Figure 10), it can be seen that Bagmati and Gandaki have the highest infection rates (total cases divided by total population). Surprisingly, with low human development indicators, high multiple overlapping deprivations and sharing the border with India, Province 2 has the lowest reported infection rates in Nepal.

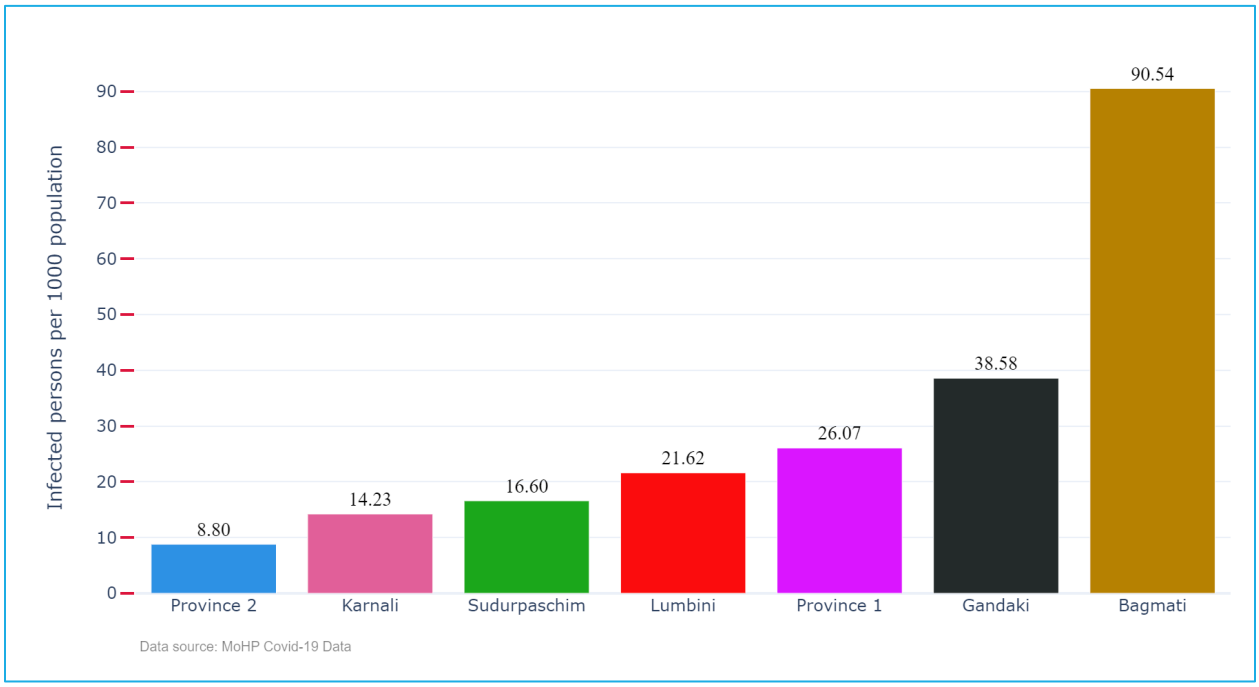

Figure 10: Infection rate (per 1000 population) as of end of August 2022

Unpacking the total cumulative cases by gender (Figure 11), nearly 59 percent of infected persons were male and 41 percent female. The heaviest impact was on the age group 21-30 and 41-50. However, there was also a significant impact on children and adolescents, especially in the 11-to-20-year age group. More than 20,000 young children were infected.

[15] WHO 2020. Nepal unlashes a movement to stop discrimination and stigma (who.int)

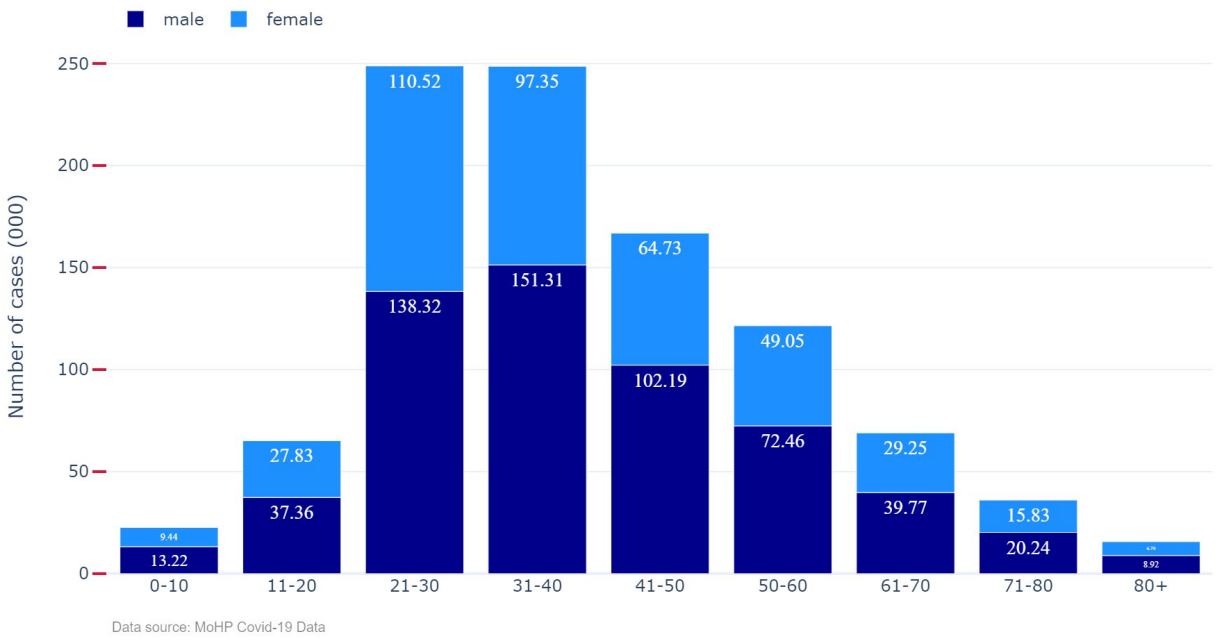

Figure 11: Cumulative cases by age and gender

In July 2021, UNICEF implemented a special edition Child and Family Tracker for Ward Mayors (2,500 respondents comprising about 38% of all Wards in Nepal). Along with other questions, ward mayors also responded to questions on preparedness in terms of contact tracing and home isolation. Their answers revealed considerable challenges as well as immense diversity.

62 percent of respondents reported having contact tracing mechanisms in place while 69% reported having mechanisms for monitoring home isolation. However, in Karnali, the data suggest that only 56% of wards had a contact tracing mechanism in place and less than half had mechanisms to monitor home-isolation.

The major difficulties in implementing these mechanisms related to people avoiding disclosure of COVID-19 or avoiding testing, lack of fiscal resources in the ward, human resources, logistics bottlenecks, remoteness and fear of infection (Figure 12)

Source: UNICEF, Special Edition CFT, Ward Mayors (UNICEF, CFT, cit op.)

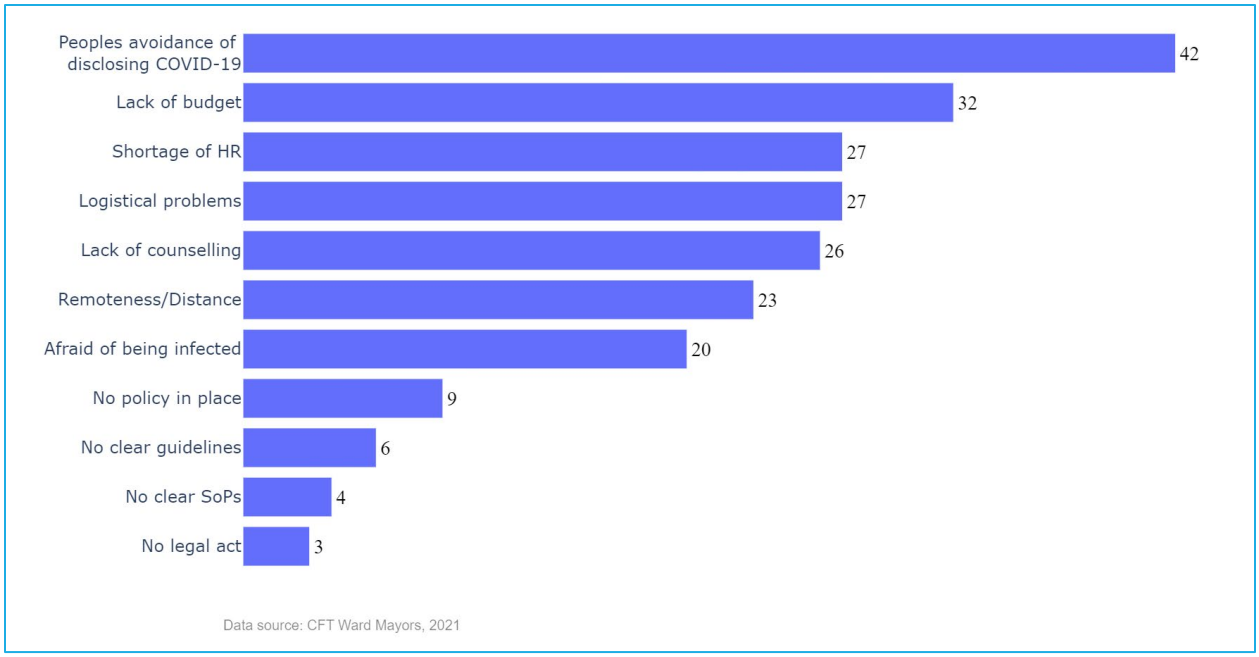

Figure 12: Challenges faced in implementing quarantine and contact tracing

TRENDS IN VACCINATIONS

Nepal began its vaccination campaign on January 27th, 2021, with 1 million doses of the Oxford-Astrazeneca provided as a grant from India while another 2 million were purchased from the Serum Institute in India. The delivery of the first million doses arrived only on 21st February 2021. Subsequently, India's decision to ban exports of COVID-19 vaccines created considerable uncertainty over the vaccination campaign in Nepal. By April 2021, the Serum Institute of India had provided only half the agreed doses although Nepal had already paid in full. The Chinese made Sinopharm BIBP vaccine was approved for emergency measures in February 2021. The first doses began arriving in late March 2021. By July, 1.8 million doses had been provided by China as a donation. Separately, the government purchased 4 million doses in June and another 6 million doses in July. During the same month (July 2021), Nepal also received around 1.52 million doses of the Janssen vaccine as aid from the USA and a further 100,000 doses of the Pfizer-BioNtech vaccine through the COVAX facility (GAVI). Nepal also received about 1.2 million doses of Oxford-Astrazeneca vaccine from Japan. A list of key government actions leading up to the vaccination campaign is shown below in Figure 13.

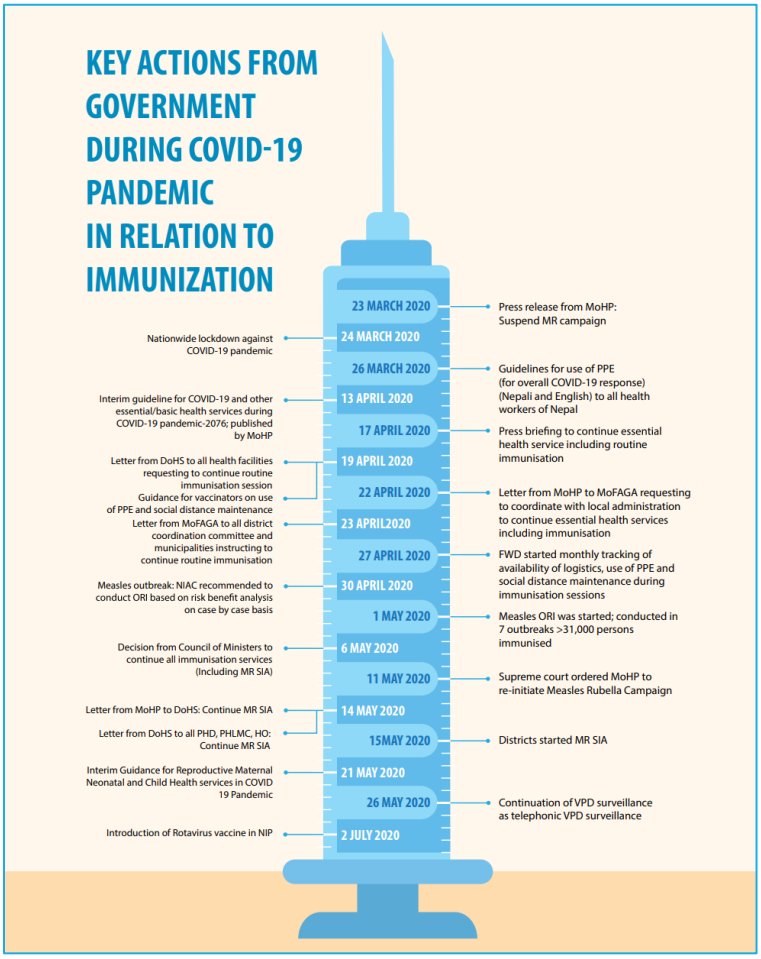

Figure 13: Key immunization actions during COVID-19 in Nepal

Around 430,000 frontline workers (health workers, supporting staff at health facilities, female community health volunteers, security personnel and sanitation workers) as well as prisoners and elderly people living in care homes – were listed as priority groups for vaccination. After the first round of the first phase was completed, the government announced that journalists and diplomatic staff could receive vaccinations. When the government announced that the first phase was completed on 5 March, as many as 438,000 had received their first dose.

More recent data show that in August 2022, Nepal crossed a landmark of 50 million vaccinations administered. A month later, it crossed 60 million vaccinations. In September 2022, as per the latest data from Palikas and Districts, Nepal had achieved 95 percent coverage (population >18) for the first dose and 83 percent for full primary schedule. Another 26 percent had been administered a booster dose. Furthermore, some 96 percent children aged between 12-17 years had received their first dose while 83 percent had received their full primary doses.

Table 1: Vaccinations procured doses and types (September 2022)

Source	A-Z (Covishield)	Sinopharm (Sinovac)	Janssen	Moderna	Pfizer	Pfizer	Total
Government Self-Procured	2,000,000	10,000,000					**12,000,000**
Bilateral Donation	1,662,720	7,800,000					**9,462,720**
COVAX AMC	6,735,000			1,685,200	100,620	8,395,200	**16,916,020**
COVAX dose-sharing	5,620,000		3,711,500	1,965,600	2,163,330		**13,460,430**
Cost sharing (ADB/WB)		5,936,400		4,000,800			**9,937,200**
Total	**16,017,720**	**23,736,400**	**3,711,500**	**7,651,600**	**2,263,950**	**8,395,200**	**61,776,370**
Current Stock (as of 2nd Sep. 2022)		**4,391,404**	**23,095**		**62,458**	**2,065,260**	**6,542,217**

The data for vaccinations (doses) procured is shown in Table 1. There were 6.5 million COVID-19 vaccine doses in stock (as of September 02, 2022). Nearly 20 percent of the vaccines were self-procured by Nepal. Another 15 percent were accrued from bilateral donors. The rest was sourced from COVAX-AMC (27 percent), COVAX dose-sharing (22 per cent), and cost-sharing[16] (16 percent).

Nearly 26 percent of the vaccines were Oxford-Astrazeneca Covishield vaccines, another 38.4 percent were Sinopharm Sinovac vaccines. Janssen vaccinations constituted around 6 percent of the total, Moderna 12.3 percent, Pfitzer-BioNTech 4 percent and Pfitzer pediatric dose 14 percent.

Progress of coverage, though impressive has been uneven across Nepal. The bottom fifty Palikas in Nepal have on average barely managed to cover half of their target populations (Figure 14). Except for Gandaki and Lumbini which have only 1 Palika each in this category, all the five other provinces have Palikas that need to accelerate their vaccination drive against Covid-19. A major bottleneck is not the lack of vaccines, but delivery costs. Delivery 'at the last mile' to ensure nobody is left out is the current challenge to be overcome. The delivery costs of the vaccine from 'tarmac to arm' is estimated to be about USD 8.35, five times higher than the global average.[17] In some areas (mountain areas, people with low mobility, and communities living far from health facilities), the costs are beyond USD 30 per dose. A vast share of these costs are for personnel (70 percent) to ensure vaccines reach people at the last mile. There is an urgency to improve investments in vaccine delivery, especially for the frontline healthcare workers who are most often at risk.

[16] Cost sharing refers to vaccine purchases by GoN through International Financial Institutions such as the ADB and the World Bank.

[17] CARE. 2022

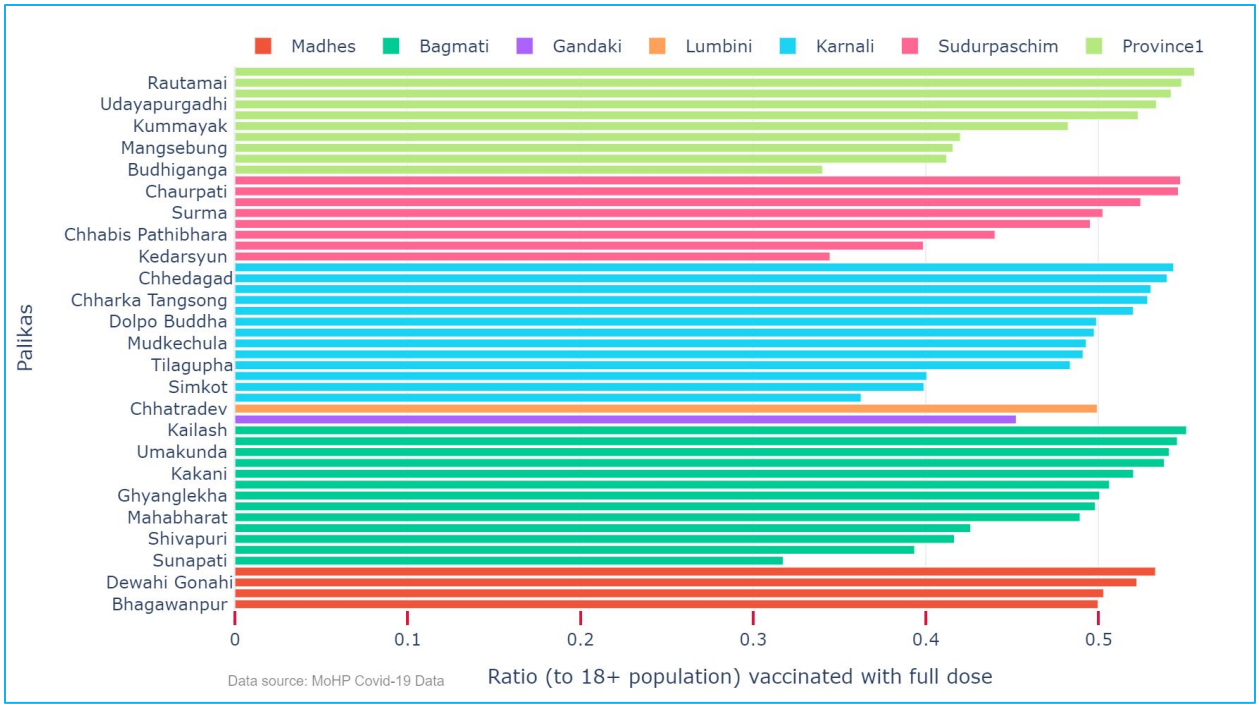

Figure 14: Bottom 50 palikas in terms of COVID-19 vaccination coverage (Sep 2022)

Key lessons learnt during the first year of COVID-19 included :[18]

- **Preparation**: The preparation phase experienced difficulties as the setting up of quarantine and isolation sites took longer than expected, revealing limited intersectoral coordination and a lack of clarity in the roles of three tiers of government. The establishment of testing laboratories, purchasing of essential items including PPE was delayed. This affected public confidence while the frontline workers were exposed to considerable risk.
- **Early detection and action:** The Ministry of Health and Population developed guidelines and standards to effectively implement its clinical, public health, and social interventions. However, problems arose. The first was ensuring there was strict compliance with the guidelines and standards. The second was the implementation of the guidelines, which was difficult as they were changed at regular intervals. Finally, the level of 'fear' among the households led many to avoid contact tracing or testing.
- **Health system capacity building:** The COVID-19 pandemic brought out the urgent need to upgrade the health system and infrastructure including human resources. The health system needs to be strengthened to avoid crowding out of non-COVID-19 related health issues.
- **Partnerships with the private sector:** The private sector's role in the provision of medical services and supplies during the pandemic demonstrated the possibility of success with private sector partnerships. Nevertheless, the private sector, operating on private incentives, should have been brought in from the very beginning as part and parcel of the overall health system in Nepal. The government was also late in rolling out incentives that protected small and medium businesses.
- **Risk communication and community engagement:** Compliance with social distancing and safety protocols needs to be monitored and reported. In Nepal, as well as globally, there was some misinformation being spread about the virus on various social media platforms. The government did extremely well in delivering regular risk communication through a variety of platforms. The critical role of the community in supporting COVID-19 risk and information campaigns must be bolstered even further.

[18] Ministry of Health and Population. 2021. Responding to COVID-19. Health sector preparedness, responses and lessons learned.

- **Information management:** The establishment of information systems and its management across the three-tiers of government remains challenging. Although the data are updated through the governments internal systems, and daily statistics are made publicly available, there are gaps in the reporting of deaths, cases and tests.
- **Effective logistics system:** The supply chain for vaccine delivery and other health services needs to be backed by an effective supply chain mechanism.

CROWDING OUT

The term 'crowding out' stems from economics in situations where public spending fails to raise GDP due to offsetting decreases in private sector spending. In the context of this research, crowding out is used in a more literal sense: 'curtailment or reduction'.

One of the basic issues this research examined was whether the routine immunization budget was crowded out in Nepal due to the increased expenditures on COVID-19 vaccinations.

The very short answer is no. This is because routine vaccine procurement in Nepal is typically done through multi-year contracts (Table 2) and also financed through donors (60 percent of the total expenditure on routine immunization). The COVID-19 vaccines were mostly from bilateral and multilateral sources (India, China, GAVI, US) while the government also procured some (estimated around 10-12%) of the doses. In FY 2019/20, Nepal saw a steep fall in GDP growth rates that plummeted to -2.4 percent, thereby also shocking the revenue stream for financing GoN budgetary expenditures. Nevertheless, health sector allocations rose in real terms as well as a share of the total budget until FY 2021/22 before declining in FY 2022/23. Since FY 2021/22 a large share of the health budget (e.g., COVID-19 response and recovery programme) was financed through bilateral and multilateral debt instruments and grants.

Table 2: Routine vaccine procurement mechanisms in Nepal

Vaccine	Manufacturer	Procurement mechanism	Contract length
BCG (Baccille Calmette Guérin) vaccine	Serum Institute of India Pvt. Ltd.	Self-procurement	3 years
bOPV1,3 (Bivalent Oral polio vaccine - Types 1 and 3)	PT Bio Farma (Persero)	Self-procurement	3 years
MR (Measles and rubella) vaccine	Biological E. Limited	Self-procurement	3 years
JE-Livatd (Japanese Encephalitis live-attenuated) vaccine	Chengdu Institute of Biological Products Co.,Ltd	Self-procurement	3 years
Td (Tetanus toxoid and diphtheria for older children and adults) vaccine	Biological E. Limited	Self-procurement	3 years
DTwP-Hib-HepB (Whole cell) vaccine	Serum Institute of India Pvt. Ltd.	UNICEF Supply Division	1 year
PCV-10 (Pneumococcal conjugate vaccine 10-valent) vaccine	GlaxoSmithKline Biologicals SA	UNICEF Supply Division	1 year
IPV (Inactivated polio vaccine)	Bilthoven Biologicals	UNICEF Supply Division	1 year
RV-1 (Rotavirus 1-valent) vaccine	GlaxoSmithKline Biologicals SA	UNICEF Supply Division	1 year

Macro level crowding out can be quite different from micro-level crowding out. Even if there was limited crowding out in terms of the overall macro framework, households in Nepal went through (and still going through) a bitter experience with closures and mobility restrictions to contain COVID-19, multiple job losses, income shocks, losses in education and human capital, access to health and nutritious food, increased exposure to psychosocial shocks and child rights violations. This can affect coverage at the household level.

Crowding out at the macro level also depends on a number of co-evolving factors such as political will and stability, existing infrastructure and systems, access to debt markets and instruments, as well as overall macro-economic conditions. There was considerable uncertainty at the federal level government as fissures intensified among political coalitions. The federal level parliament was suspended twice during FY2020/21, requiring supreme court intervention to reinstate the federal parliament with a new prime minister. This may have affected relations, structures, and communication between the federal government and sub-national governments. It is interesting to note that Federal elections are slated for November 2022. The recently concluded LG elections (May 2022) saw a notable increase in the number of independent candidates winning elections (e.g., Kathmandu), suggesting increasing awareness among households (especially new voters who may be more social-media savvy) about the level of services being provided by leaders selected along traditional party line networks and hierarchies.

At the micro or household level, the impact is seen through household vaccination coverage rates. This depends on both demand and supply (Figure 15). From a supply perspective, the coverage of routine vaccination in Nepal does not only depend on the availability of vaccines and medical equipment, but also on the availability of healthcare workers to deliver services. From the demand perspective, it depends on access to services (distance and travel costs) and household demand, which is heavily influenced by, income levels, the extent of out-of-pocket expenditures, preferences, as well as other factors such as mobility.

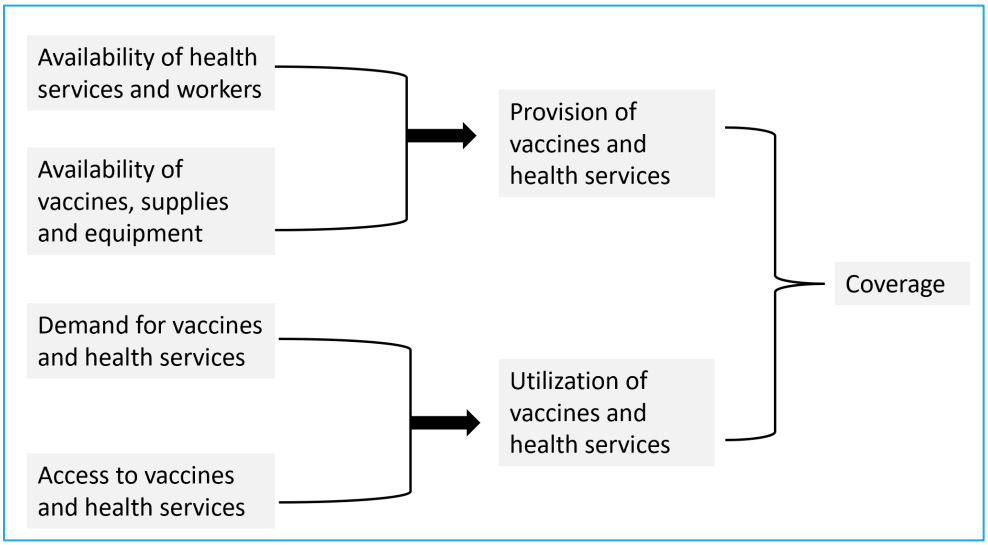

Figure 15: Key drivers of coverage

In addition, this research also examines 'crowding out' through a child-related perspectives: did other social sector budget allocations, household access to employment and incomes, children's access to nutrition and food, health, education, child protection, WASH and other related services get crowded out during the pandemic? To answer this, we use UNICEF's rolling Child and Family Trackers where each round contains data on a wide range of socio-economic issues (nine rounds of a panel data set consisting of 6500-7500 caretakers of children). The data make it possible to examine outcomes through equity lenses, such as income levels, gender, ethnicity, disability status, and place of residence.

CROWDING OUT OF FISCAL SPACE DURING COVID-19

Expenditure utilization became problematic during the COVID-19 pandemic as lockdowns and containment measures put pressure in executing the proposed budget allocations. As lockdowns were imposed in March 2020 when the local levels were completing their Annual Work Plan Budgets (AWPBs), some local levels were unable to submit their AWPBs in time and were also hampered by the inability to conduct participatory planning and budgeting procesess during this time (MoF, 2022). Hence, there was a divergence of more than 30% between budgeteded expenditures of NPR 1,533 billion in FY 2019/20 and realized expenditures of 1,074 billion that same year. Budget utilization was over 80% prior to the pandemic, but dropped to between 70 and 77 per cent during FY 2019/20 and FY 2021/22. Revenues plummetted in FY 2019/20 due to containment measures imposed in Nepal and globally, forcing expenditures to be curtailed in nominal and real terms. In FY 2020/21 expenditures were only marginally above the expenditures of FY 2019/20. It is commendable that despite this fiscal contraction, social sector expenditures were largely protected. However, they were reduced in terms of allocations in FY 2022/23.

- As a percent of GDP (Figure 16), total realized expenditures rose from 30% of GDP in FY 2017/18 to 31% of GDP in FY 2018/19 before the pandemic. It then dropped sharply to 28% of GDP in FY 2019/20 and continued to drop to 25% of GDP in FY 2020/21. In FY 2021/22, expenditures rose to 26% of GDP and are estimated at 28% of GDP in FY 2022/23. Although expenditures have recovered in the last two fiscal years, they remain below the pre-pandemic years.
- In nominal terms (Figure 17), total consolidated fiscal expenditures (actual estimates, a.e) rose from Nepalese Rupee (NPR) 1,047 billion (30% of GDP) in FY 2017/18 to NPR 1,209 billion (31% of GDP) in FY 2018/19[19]. In FY 2019/20 expenditures as revenues collapsed, expenditures shrank to NPR 1,073 billion: a drop of 11%. In FY 2020/21, expectations of a stagnating or shrinking revenue base, along with concerns about execution and implementation, especially at the local levels due to COVID-19, led to curtailed expenditures that rose only marginally to NPR 1,075 billion. As the economic recovery began and revenues increased, total consolidated expenditures rose by 18% to NPR 1,271.96 billion in FY 2021/22. This figure is only marginally higher to that observed for FY 2018/19. In FY 2022/23, allocations have been projected at NPR 1,794 billion: an increase of 41% over the revised estimate for FY 2021/22.

[19] Source, Ministry of Finance (MOF) Redbooks, various years and Minister of Finance budget speeches

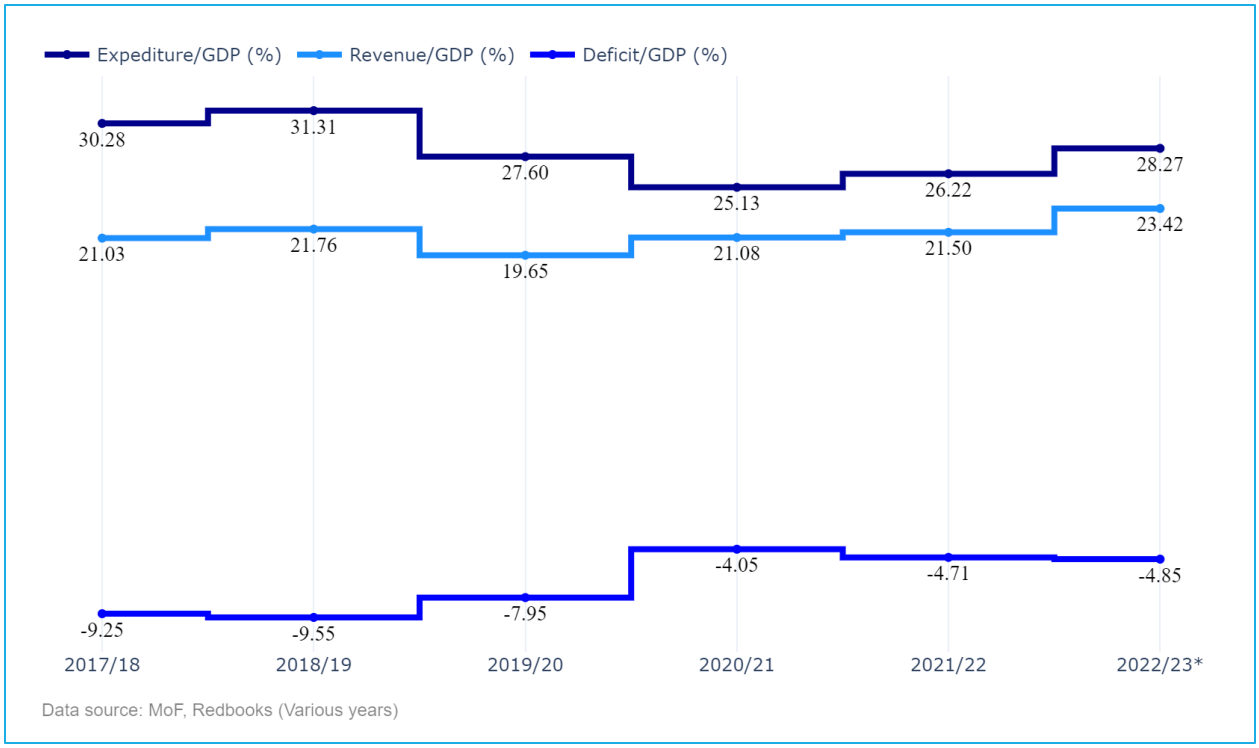

Figure 16: Revenues, Expenditures, and deficits (as % GDP) (FY 2017/18 – FY 2022/23)

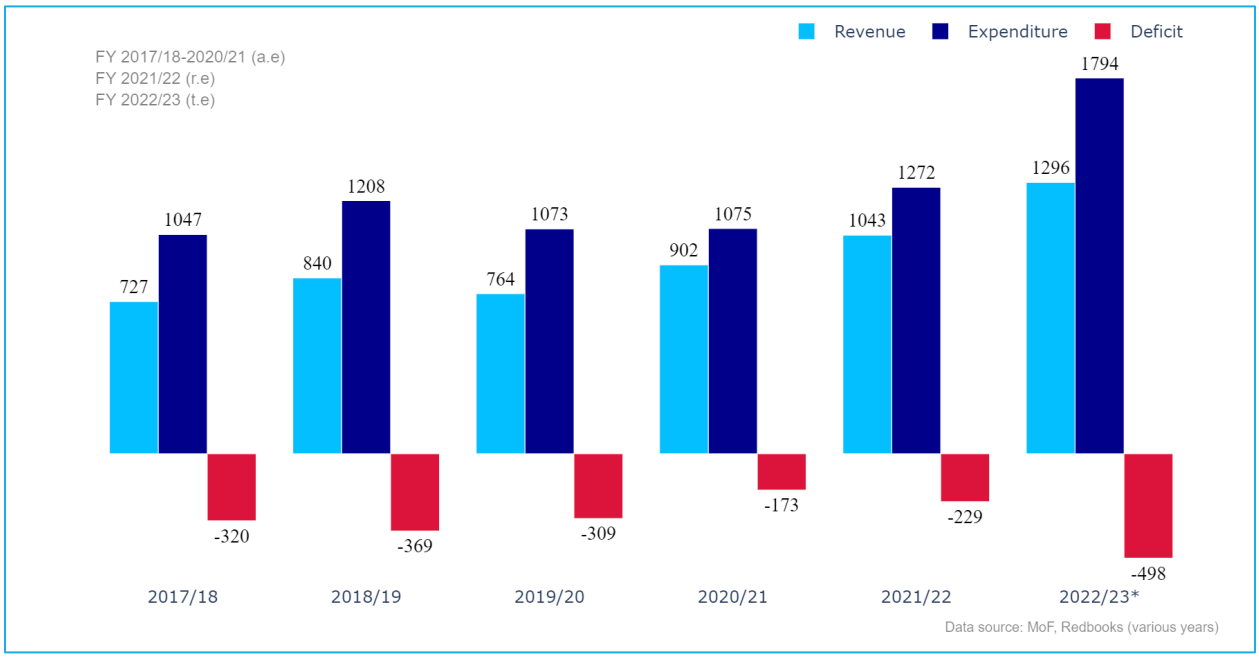

Figure 17: Revenues, Expenditures and Deficits (NPR Bill.) (FY 2017/18- FY 2022/23)

- Revenues in Nepal[20] are primarily tax-based (VAT, income, excise, foreign trade). Total revenues (excluding the revenue sharing component) rose by 16 percent between 2017/18 and 2018/20 from NPR 727 billion (21% of GDP) to NPR 840 billion (22% of GDP). However, in FY 2019/20, revenues contracted to NPR 764 billion (20% of GDP) – a drop of 9 percent compared to FY 2018/19. Since then, revenues have risen by 18 percent to NPR 902 billion (20% of GDP) in FY 2020/21 and continued to rise above 1 trillion (21% of GDP) in FY 2021/22 as the economy began to recover. In FY 2022/23 the revenue target is at NPR 1,296 billion: an increase of 24% over the revised estimated for FY 2021/22.

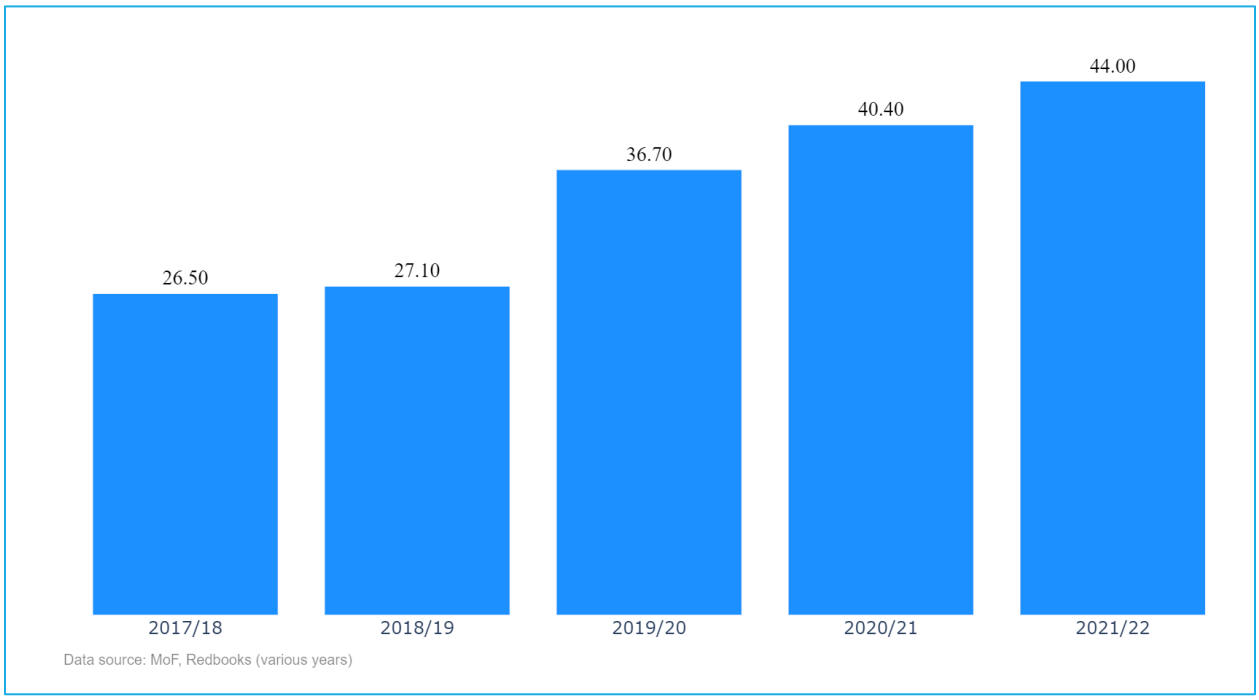

Figure 18: Debt to GDP ratio (in percent) (FY 2017/18 – FY 2021/22)

- It is interesting to note that due to the contraction of both revenues and expenditures during FY 2019/20 and the continued progress in revenues in FY 2020/21, the overall fiscal deficit improved for Nepal. Deficits as a share of GDP fell from -9 percent in FY 2017/18 to -4 percent during FY 2019/20. Since then, it has drifted upwards to an estimated -4.9 percent in FY 2022/23. The persistence of a gap between revenues and expenditures implies leveraging increasing amounts of debt (Figure 18). Debt as a percent of GDP rose from around 27 percent in the pre-COVID years to 37 percent of GDP in FY 2019/20 - a rise of more than 35 percent and 9.6 percent of GDP (NRB, ibid.). Debt is expected to continue to rise to 44 percent of GDP by FY 2021/22. Loans received by Nepal are not only used to finance the primary deficit but also for principal repayment of loans as well as investments domestically and internationally). Although Nepal's debt to GDP ratio is not as high as some of her neighbours[21] (International Monetary Fund, World Economic Outlook, 2021), as per the FY 2021/22 budget, some 8 percent of expenditures are diverted for debt servicing mostly for multilateral debt. These recent years have also seen a substitution of domestic debt for external debt in recent years: the share of domestic debt rose from 41 percent of the total in FY 2017/18 to 46 percent total debt in FY 2021/22.

[20] Source: Ministry of Finance Redbooks, various years and Minister of Finance budget speeches

[21] International Monetary Fund (IMF), World Economic Outlook (WEO), April 2022.

CROWDING OUT OF SOCIAL EXPENDITURES

A notable feature of the fiscal response during the height of the pandemic was that social sector allocations (as a share of the total) were held constant or increased, especially in FY 2020/21 and FY 2021/22. In the most recent fiscal year for FY 2022/23, however, social sector allocations are projected to fall even as GDP and revenues are projected to recover modestly, and the overall expenditure envelope has increased considerably. Given the rising inflation rates experienced over the last fiscal year, this suggests a drop in real allocations towards the social sector and a significant cause for concern even as vast numbers of households were buffeted by various socio-economic shocks during the COVID-19 pandemic.

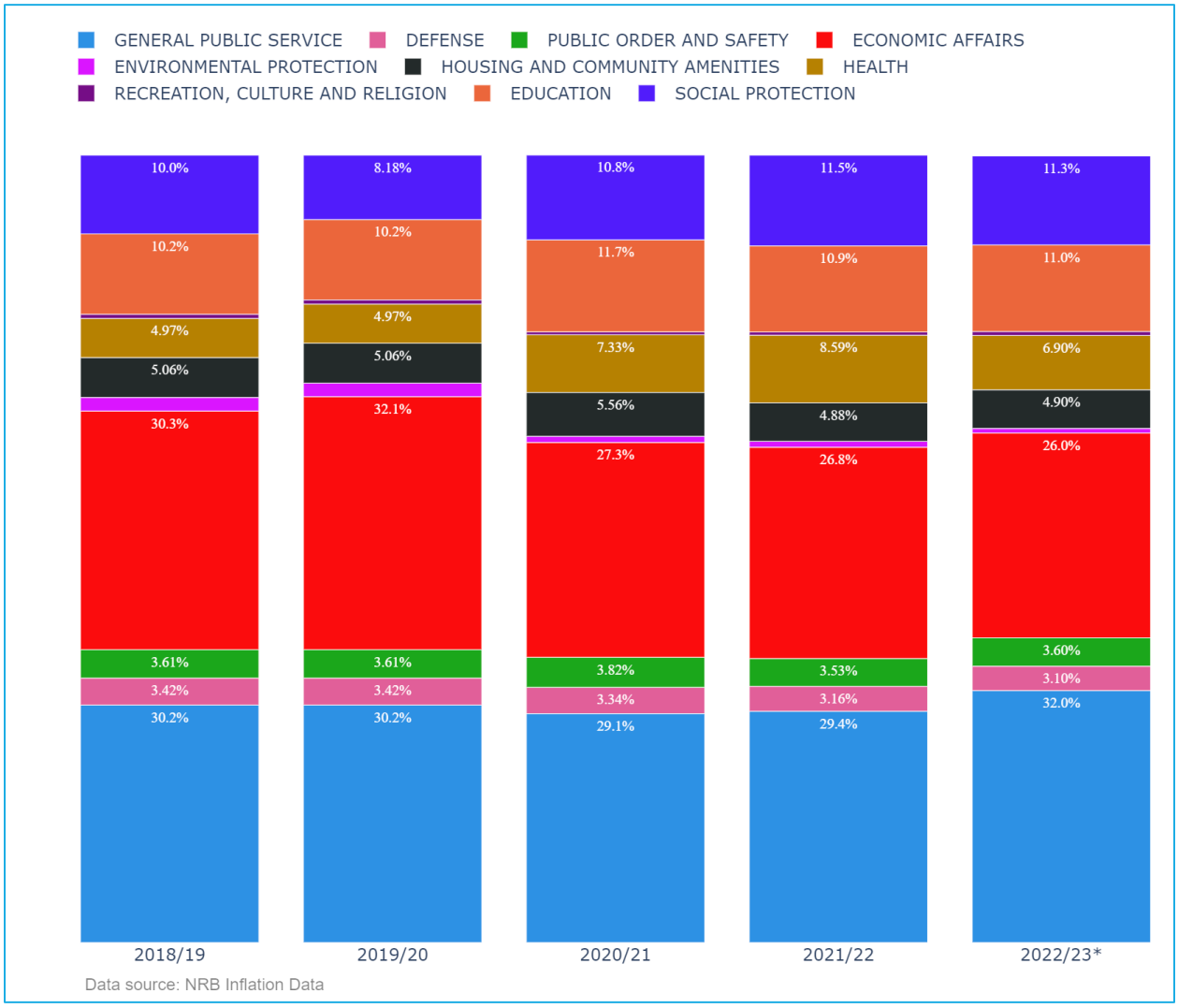

Figure 19: Sector composition of expenditure allocations (FY 2018/19 - FY 2022/23)

The breakdown of expenditures (budget estimates) according to the Classifications of the Functions of Government (COFOG) is shown in Figure 19. From a sectoral perspective, the largest share of expenditures is for general public services (which includes transfers and funding for the executive and legislative branches of the government) and economic affairs (which consists of sectors such as transport, communication, agriculture, etc.) comprising over 55 percent of all expenditures in the last several fiscal years.

Social sector allocations fell from 25 percent of total expenditures in FY 2018/19 to 23 percent of total expenditures during FY 2019/20 (by reducing the social protection expenditure share). In FY 2020/21 expenditures in health, education, and social protection increased as a percent of total expenditure and hence social sector allocations rose to over 30 percent of total expenditures. This was achieved by reallocating away from economic affairs (sectors such as transport, communication, agriculture, etc.) and general public services ((legislative and executive branches of the government and transfers). The COVID-19 recovery and response programme had targeted increasing social protection coverage (e.g., through the Prime Minister's Employment Guarantee scheme, expanding child grant coverage to 11 additional districts). In FY 2021/22 the share of expenditures comprising social protection (benefit increases for social security allowances including that for children) and notably health continued to increase while the share of education fell. Total social sector expenditures rose to over 31 percent of the total in FY 2021/22. In FY 2022/23, total social sector spending has been projected to drop to 29 percent of targeted expenditures.

- Health, comprising around 5 percent of consolidated expenditures in FY 2018/19 and FY 2019/20, jumped to about 9 percent by FY 2021/22, but is projected to drop to 7 percent in FY 2022/23. Social protection rose most notably in FY 2019/20 and FY 2020/21 to reach 12 percent of total expenditures as coverage was expanded, benefits were raised, and emergency relief packages were introduced during FY 2019/20 – FY 2020/21. Since then, social protection expenditures have remained at 11 percent of the total. The education sector saw a drop in expenditures from 10 percent of the total to 8.2 percent of the total during FY 2018/19 and FY 2019/20. It rose to 11 percent of total expenditures in FY 2020/21 and continued to rise to 12 percent by FY 2021/22 as schools had reopened. However, in FY 2022/23, targeted education sector expenditures dropped back to 11 percent – well below the government's own target of 15 percent.

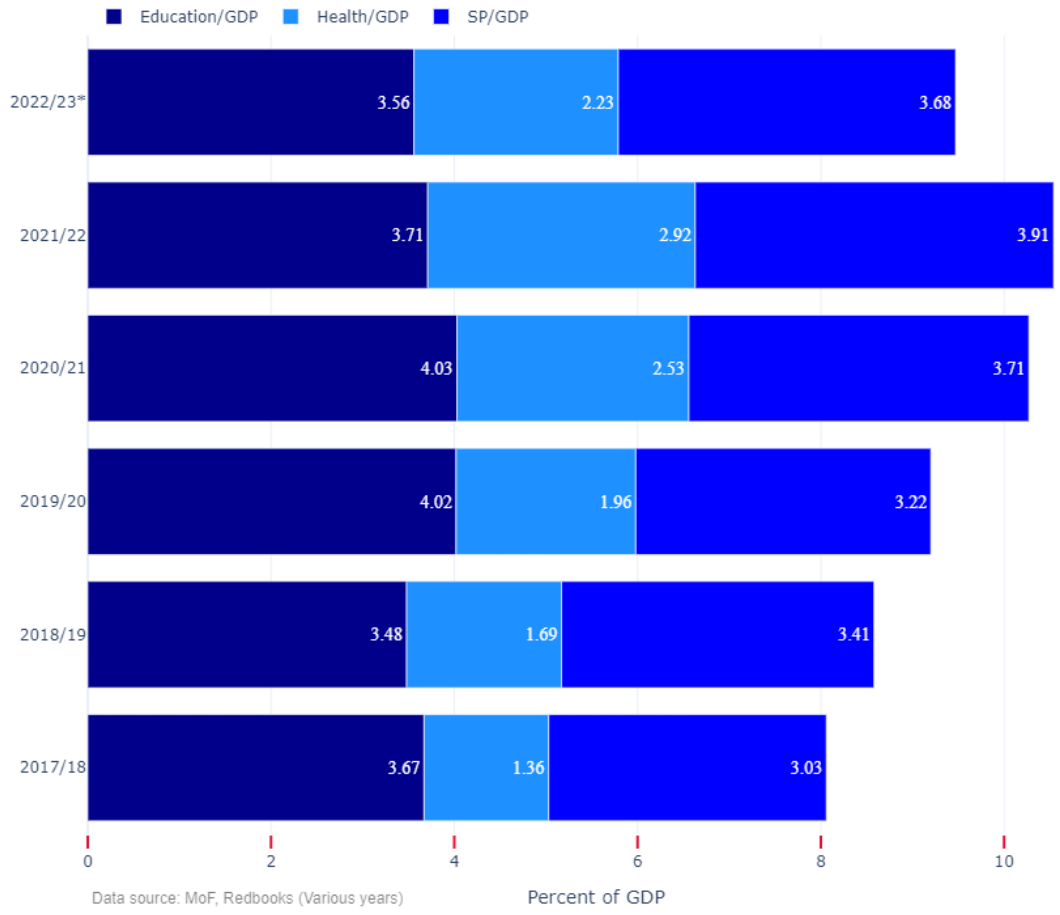

Figure 20: Social sector allocations as percent of GDP (FY 2017/18 – FY 2022/23)

As a percent of GDP (Figure 20) total social sector allocations rose from 8.06 percent in FY 2017/18 to 8.58 percent in FY 2018/19. It then increased to 10.10 percent in FY 2019/20 and continued to increase to 10.54 percent in FY 2021/22. In FY 2022/23 however, the estimated expenditures on the social sectors are 9.5 percent of GDP – a notable decrease and a matter of concern. Per capita expenditures are low and have dropped even further signaling a decline in real per capita spending (Figure 21)[22].

- Within the social sector, the biggest growth in expenditures has been for the health sector where the expenditure to GDP ratio doubled in FY 2021/22 compared to FY 2017/18. In FY 2022/23 however, allocations dropped to 3.7 percent of GDP.
    - In FY 2019/20 all the sectors had increased expenditures to GDP ratios compared to pre-pandemic times except for social protection. In FY 2020/21, all the sectors saw an increase compared to the previous fiscal year, especially health and social protection. In FY 2021/22 expenditures on health and social protection rose while the expenditure to GDP ratio for education

[22] Calculated from various sources including NRB exchange rate data, NRB Economic Outlook, GoN, MoF Redbooks for various years, and CBS population data (2021). Table 3 presents a summary of some key indicators over the last five fiscal years in Nepal.

declined even as the overall allocation to the social sector increased. In FY 2022/23 all sectors saw a decline in budget allocations to GDP ratios.

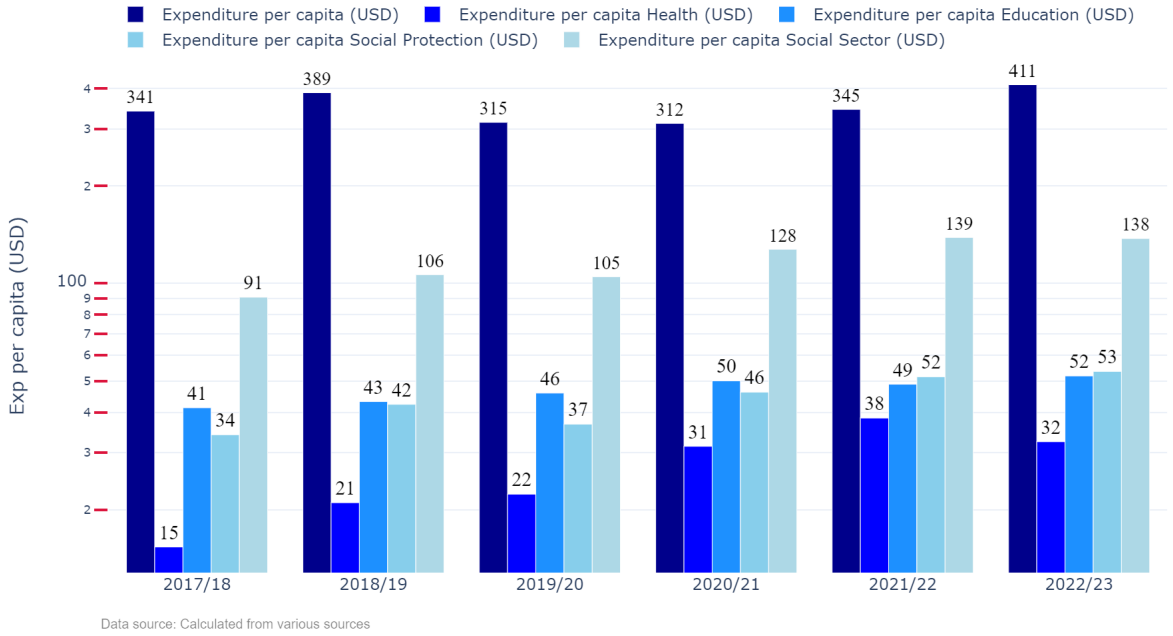

Figure 21: Expenditure per capita (USD) (FY 2017/18 – FY 2022/23)

Table 3: Summary of trends in key indicators by sector (FY 2017/18-FY2022/23)

Macro Assumptions	2017/18 (a.e)	2018/19 (a.e)	2019/20 (a.e)	2020/21 (a.e)	2021/22 (r.e)	2022/23 (b.e)
Real GDP growth (basic)	7.37	6.39	-2.42	3.83	5.50	5.65
GDP (nominal, Bill. NPR)	3,455.95	3,858.93	3,888.70	4,277.30	4,851.62	5,530.85
Inflation rate (% change CPI)	4.60%	6.02%	6.15%	3.60%	5.16%	4.5%
USD Exchange Rate (NPR)	106.21	104.37	112.88	115.20	120.49	125.00
Estimated pop (mill. Mid Yr.)	27.63	28.10	28.47	28.84	29.22	29.1
Gross domestic savings /GDP	40%	42%	32%	33%	32%	n.a
Social Sector Exp (Bill. NPR)	2017/18 (a.e)	2018/19 (a.e)	2019/20 (a.e)	2020/21 (a.e)	2021/22 (r.e)	2022/23 (b.e)
1. Education (Edu)	126.78	134.19	156.41	172.19	180.04	196.89
2. Health (Hlth)	47.09	65.34	76.17	108.05	141.55	123.26
3. Social Protection (SP)	104.65	131.54	125.40	158.89	189.90	203.34
Total Social Sector (1+2+3)	278.52	331.07	357.97	439.12	511.49	523.49
Public Finance	2017/18 (a.e)	2018/19 (a.e)	2019/20 (a.e)	2020/21 (a.e)	2021/22 (r.e)	2022/23 (b.e)
Total Expenditure (Exp, Bill. NPR)	1,046.51	1,208.37	1,073.50	1075.05	1271.96	1,793.84
Total Revenue (Rev, Bill. NPR)	726.72	839.66	764.26	901.85	1,043.04	1,295.58
Rev /GDP	21.03%	21.76%	19.65%	21.08%	21.50%	23.42%
Exp /GDP	30.28%	31.31%	27.60%	25.13%	26.22%	28.27%
Deficit/GDP	9.25%	9.55%	7.95%	4.05%	4.71%	4.85%
Debt /GDP	27%	27%	37%	40%	44%	n.a
% Debt domestic	41%	43%	43%	43%	46%	n.a
Social Sectors (% GDP and EXP)	2017/18 (b.e)	2018/19 (b.e)	2019/20 (b.e)	2020/21 (b.e)	2021/22 (b.e)	2022/23 bt.e)
Education /GDP	3.67%	3.48%	4.02%	4.03%	3.71%	3.56%
Health /GDP	1.36%	1.69%	1.96%	2.53%	2.92%	2.23%
SP /GDP	3.03%	3.41%	3.22%	3.71%	3.91%	3.68%
Total SS /GDP	8.06%	8.58%	9.21%	10.27%	10.54%	9.46%
Education /Exp	9.91%	10.20%	10.20%	11.68%	10.93%	10.98%
Health/ /Exp	3.68%	4.97%	4.97%	7.33%	8.59%	6.87%
SP /Exp	8.18%	10.20%	10.20%	11.68%	10.93%	10.98%
Total SS /Exp	21.78%	25.17%	23.35%	29.78%	31.05%	29.18%
PC expenditure in USD	2017/18 (a.e)	2018/19 (a.e)	2019/20 (a.e)	2020/21 (a.e)	2021/22 (r.e)	2022/23 (t.e)
Exp per capita USD	365.57	412.07	334.04	323.59	362.76	429.86
Exp per capita USD Edu	43.20	45.76	46.88	51.83	51.35	54.13
Exp per capita USD Hlth	16.04	22.28	23.70	32.52	40.37	33.88
Exp per capita USD SP	35.66	44.86	39.02	47.82	54.16	55.90
Exp per capita USD SS	94.90	112.90	111.40	132.18	145.88	143.91
External Sector	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23
Current Account Balance /GDP	-7.14%	-6.92%	-0.87%	-7.80%	-12.00%	n.a
Remittances /GDP	22.60%	21.85%	22.79%	22.50%	22.47%	n.a
Gross Foreign Exchange (GFE) /GDP	31.90%	26.92%	36.05%	32.71%	24.07%	n.a
GFE (Bill. NPR)	1102.60	1038.90	1401.84	1399.03	1167.92	n.a
GFE (Mill. USD)	10084.00	9500.00	11646.06	11752.56	9610.96	n.a

Compiled from Redbooks various years, FY 2022/23 budget speech and NRB Economic Outlook (April 2022)

CROWDING OUT OF THE HEALTH SECTOR BUDGET

As a share of GDP, actual health sector expenditures increased from 1.69 percent of GDP in FY 2018/19 to 1.96 percent of GDP in FY 2019/20. In FY 2020/21 it rose to over 2.5 percent and continued to rise to just under 3 percent in FY 2021/22. However, in FY 2022/23, the proposed budget allocation for health as a percent of GDP has fallen: it is about 2.2 percent of GDP.

In nominal terms, the total health sector budget grew from actual spending of NPR 65.34 billion (actual estimate) in FY 2018/19 to a proposed NPR 85.37 (budget estimate) in FY 2019/20: a proposed increase of about 30 percent. However, due to lockdowns imposed and the contraction of revenues, only 82 percent of the proposed allocations could be spent in FY2019/20. Nonetheless, health sector expenditures increased in nominal terms despite a contraction in overall revenues in FY 2019/20. It then rose to NPR 142 billion by 2021/22 (Figure 22). There was no change in the share of health expenditures – for both fiscal years, it remained below 5 percent (Figure 23). In FY 2020/21 there was a significant (over 40 percent) increase in actual budgetary spending of the health sector as actual expenditures rose to NPR 108.5 billion and as a share of the budget to 7.3 percent. Health sector expenditures continued to rise in FY2021/22 by over 30 percent to NPR 141.6 billion (revised estimate), comprising 8.6 percent of total government expenditures.

In FY 2022/23 the proposed budget allocation for health shows a drop of 13 percent to NPR 123.2 billion, also dropping as a share of total expenditures to 7 percent. This is the first time in several years that the overall health budget has shrunk. Not only in nominal terms, but in real terms as well.

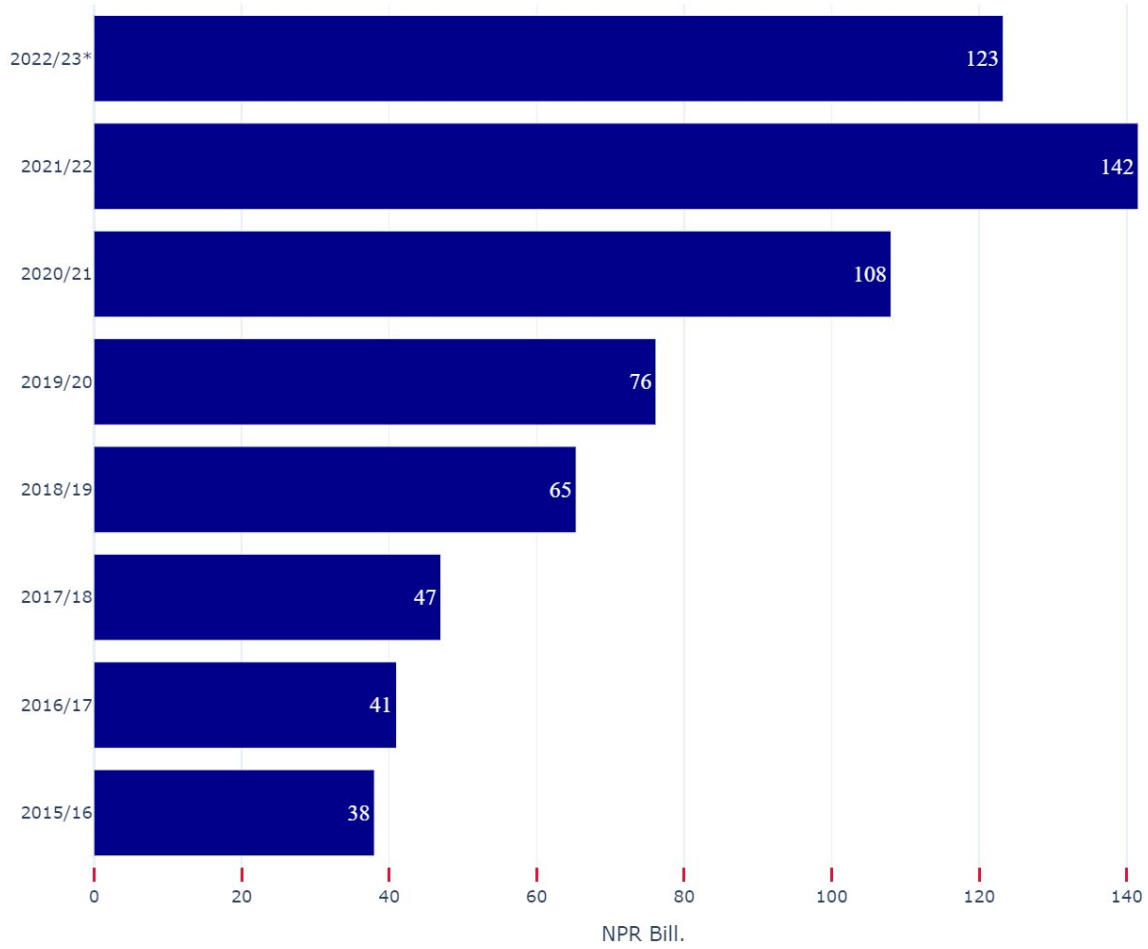

Figure 22: Health budget (2015/16-2022/23)

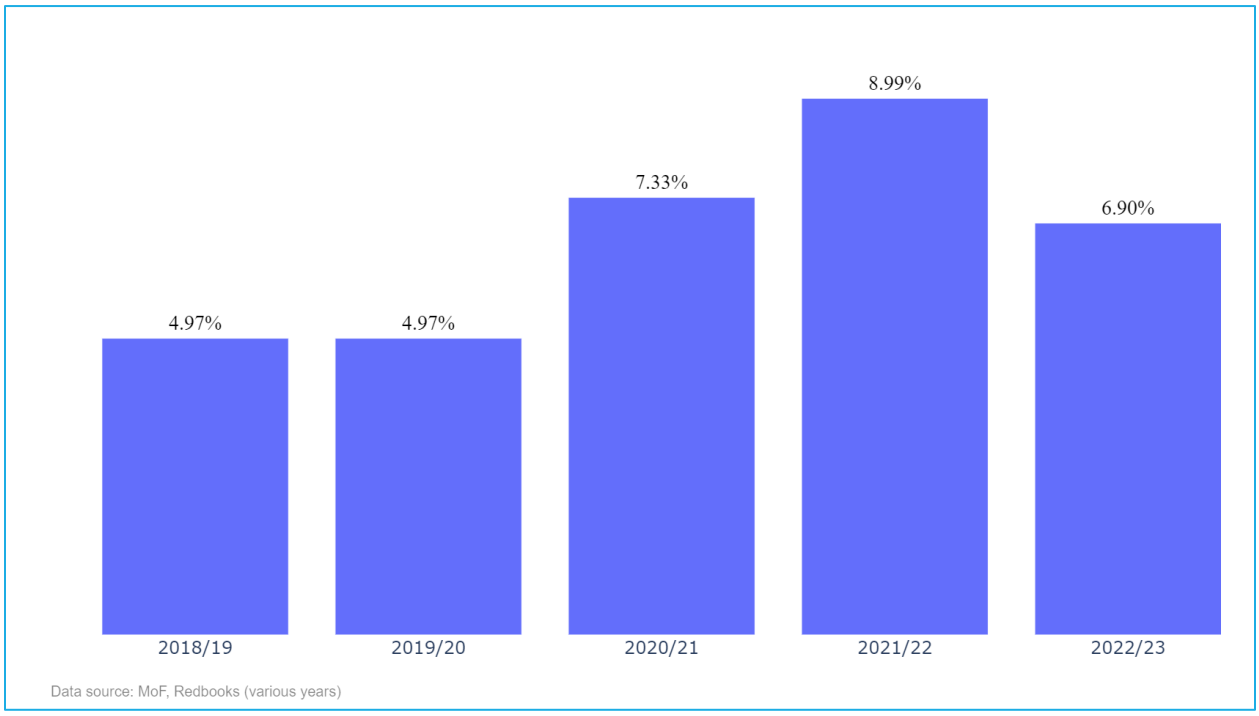

Figure 23: Health sector budget as a percent of total expenditures (2FY 018/19-FY 2022/23*)

Unpacking the total health expenditures by the classifications of the functions of government (COFOG), some interesting trends can be observed over the last few years. In addition, the data are also disaggregated by level of government (Figure 24).

The biggest share of health expenditures across the years is for the category of public health services. The federal (FG) and local governments (LGs) have the most allocations. It is not clear if the allocations towards the PGs and LGs is based on an assessment of their functional remits via the constitution, their capacity to fulfill constitutionally mandated functions, or downward financing of federal level emergency programmes that were implemented at the local level (through various types of grant and other transfers).

The second largest components have been hospital services followed by outpatient services. Both these categories grew significantly after the pandemic with provinces also being allocated increased resources for hospital services.

The increase in the health budget up until FY 2022/23, from a COFOG point of view, is attributable to increased allocations in public health services, hospital services and outpatient services. However, in FY 2022/23* the budget allocation for health dropped mainly on account of the decrease in outpatient services. The allocations for R&D in health also rose sharply in FY 2022/23 - to more than double the spending observed in FY 2018/19.

The data can also be disaggregated according to different layers of government (Figure 25). There were increases in the for R&D, Public Health Services, Hospital Services and out-patient services when comparing FY 2022/23 to FY 2018/19. The budget for LGs had increased in nominal terms from NPR 16 billion to NPR 21billion over the same time period, mainly on account of their role in the provision of public health services. It is interesting to note that the COVID-19 pandemic had its worst impact during the second half of FY 2019/20. During this time many LGs found it difficult to complete their AWPs on time, thereby making it difficult to shift resources to the LGs under existing budget regulations. Initially, development funds were diverted for the COVID-19 prevention and control program in the LGs (GoN, MoHP, 2022b).

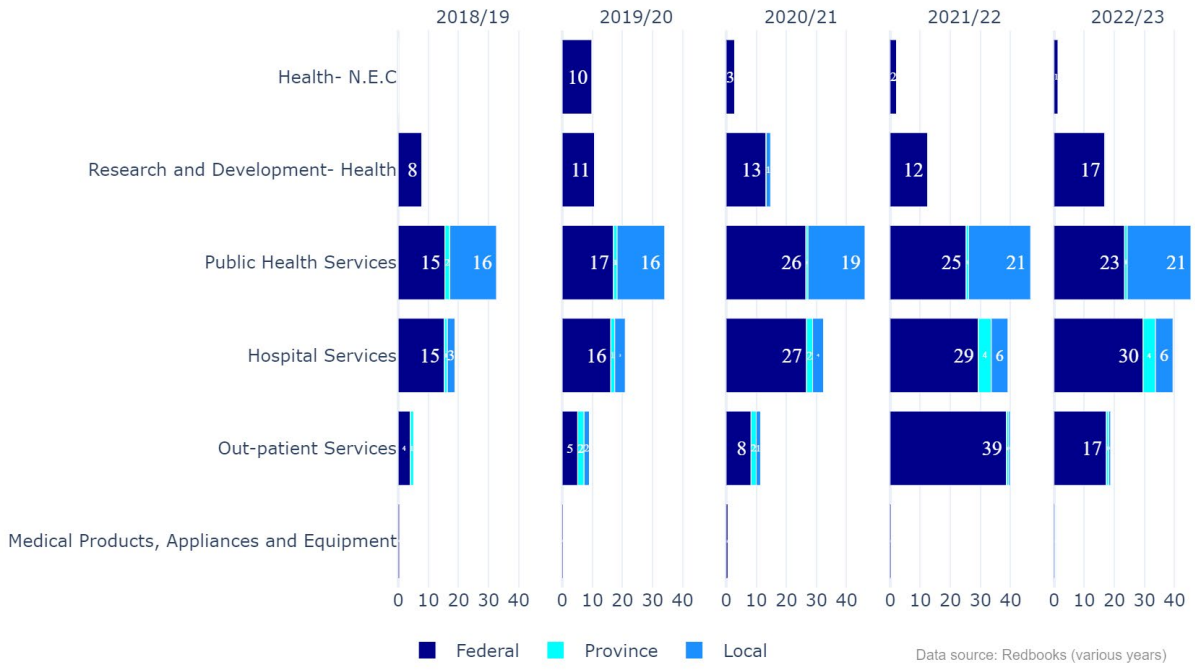

Figure 24: COFOG Classification of health sector expenditures (NPR Bill.)

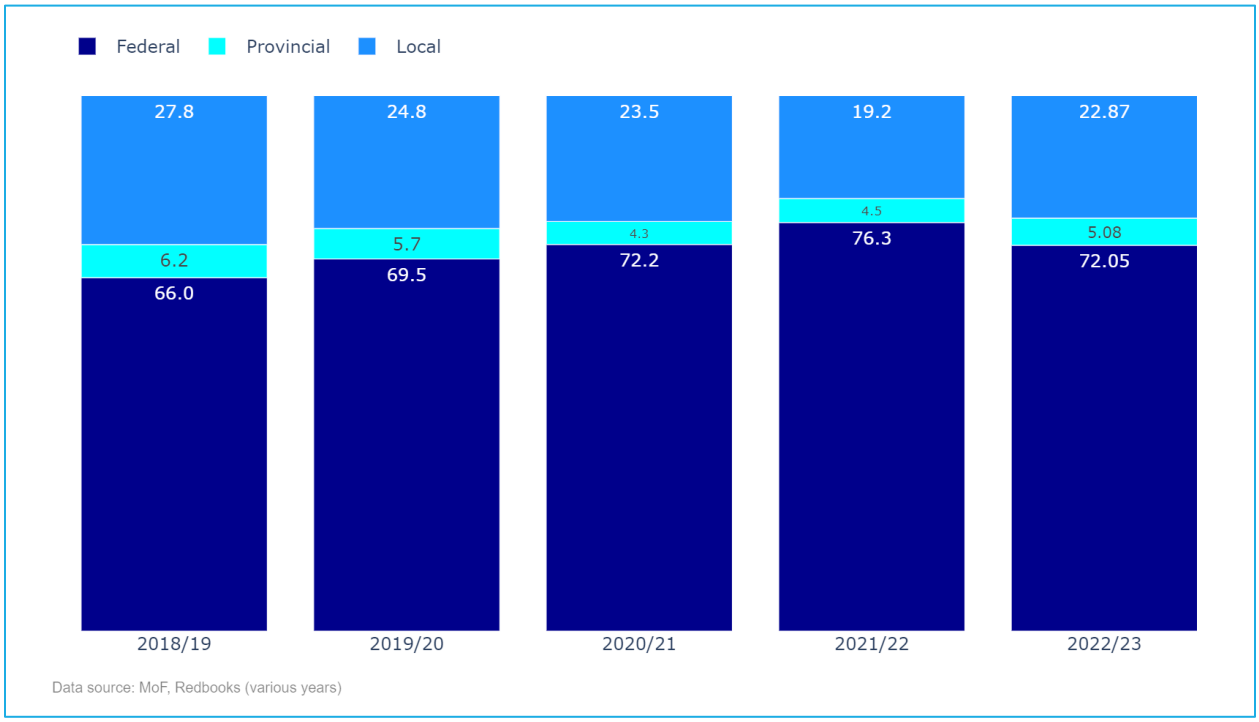

Figure 25: Federalism and the health budget: Per cent allocation (FY 2018/19-FY 2022/23)

Figure 24 shows the percent allocation of the health sector budget among the different governments in Nepal. Although allocations have increased for the LGs, in percent terms, their share has fallen when comparing FY 2018/19 with FY 2022/23. In FY 2022/23 the LG share rose from 19 percent to 23 percent while the share for the federal government declined by 4 percentage points from 76 to 72.

Up until FY 2019/20, the government financed nearly 80 percent of federal expenditures from its own revenue sources. A notable feature of the overall health budget is that over the last two fiscal years, there has been a significant increase in the share of expenditures expected to be financed through loans and grants (Figure 26). In tandem, the share of expenditures financed by the government has decreased significantly. These developments have to do with the way the National Health Sector Strategy (NHSS, 2015-2020) was financed – initially with a strong commitment from donors to be matched by increasing commitments from GoN in later years.

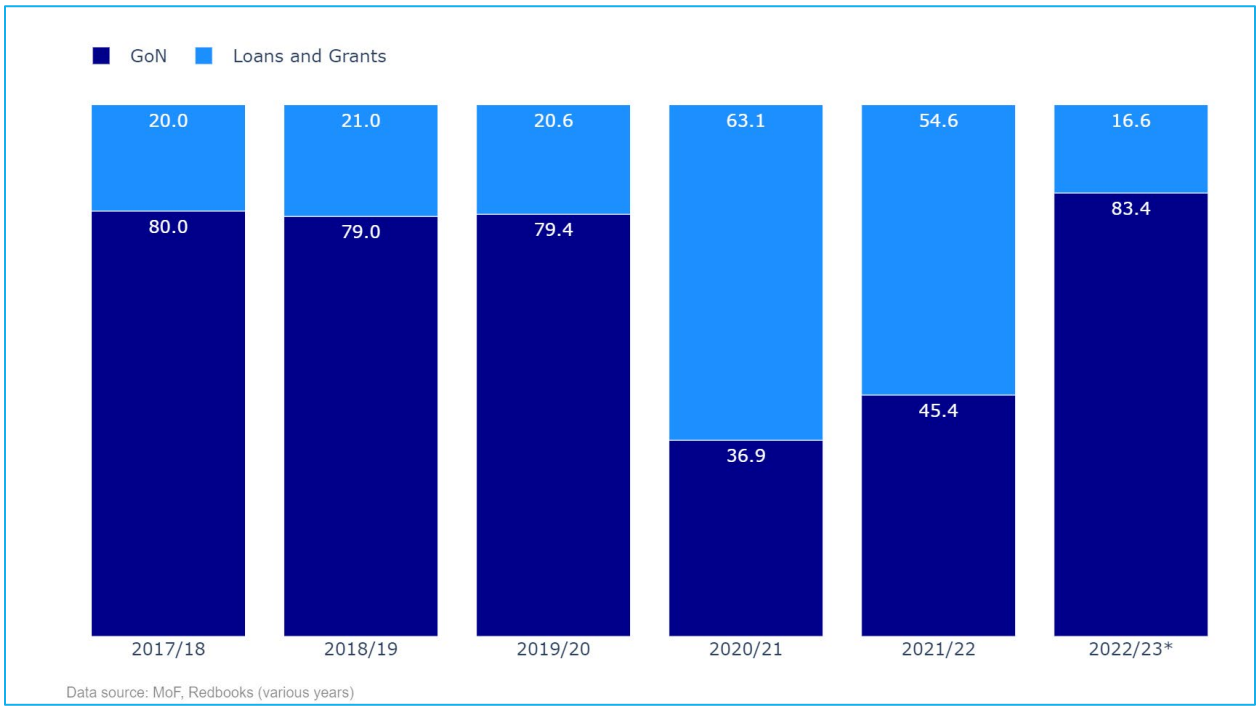

Figure 26: Financing the health sector budget (FY 2017/18-FY 2021/22)

The breakdown of health expenditures by budget headings is only accessible for the central level (Ministry of Health and Population, MoHP, only), which accounts for more than 70 per cent of total health expenditures. The data are shown in Table 4 where the highest values in each column are shaded relatively darker than those with lower values.

Table 4: MoHP (Central Govt. only) spending by budget headings (NPR Billion)

	2018/19	2019/20	2020/21	2021/22
Health Sector Reform Programme	6.40	0.32	3.17	10.49
Integrated Health Infrastructure Development Programme	4.93	3.92	6.82	14.64
Covid-19 Prevention and Control Programme	0.00	4.79	7.93	36.58
Social Health Insurance Plan	6.00	4.65	5.02	7.50
Family Welfare Programme	0.48	0.28	1.52	5.11
Nursing and Social Security Programmes	0.00	2.33	1.34	2.55
Integrated child health and nutrition programme	2.11	2.30	0.00	0.00
National Academy of Medical Sciences (incl. Bir Hospital)	1.47	2.24	2.14	1.24
MoHP	0.08	0.18	2.33	1.81
Science Academies (4)	1.09	2.03	1.49	1.27
Central Hospital & Academy	0.23	1.60	2.44	2.25
Hospitals (incl. specialist hospitals - 12)	2.27	3.55	2.69	2.62
Others	5.43	2.65	4.89	4.69
Total	30.49	30.86	41.78	90.75

Just prior to the lockdown, the health sector reform programme (HSRP), the integrated health sector infrastructure development programme (IHIDP) and social health insurance programmes formed the largest components of MoHP expenditures. These are all significant components of the National Health Sector Strategy (NHSS, 2015-2020) and fall under the SWAp for health that is financed by donors and the GoN through a joint financing agreement (JFA). However, as the pandemic struck in Jan 2020 in Nepal, it was agreed by the partners of the JFA that these three programmes be curtailed temporarily to make room for the COVID-19 Prevention and Control Programme. In FY 2021/22, these two programmes were again given an increased allocation.

The budget for the COVID-19 Prevention and Control Programme began to dominate the health budget after FY 2019/20. In fact, between FY 2020/21 and FY 2021/22, the COVID-19 Prevention and Control Programme budget increased by four and a half times. The GoN would finance 28 percent of these expenses, foreign loans financed another 68 percent while 3 percent was obtained from grants.

There was some reallocation among the budget headings after the COVID-19 Prevention and Control programme started and expanded rapidly. Social health insurance plan expenditures were curtailed during FY2019/20 and FY 2020/21 before picking up in FY 2021/22. Family welfare programmes were also curtailed in FY 2019/20 but rose thereafter, especially in FY 2021/22. It is interesting to note that the science academies expenditures were reduced after FY 2019/20 despite them playing a leading role in epidemiological studies and research. Finally, expenditures for hospitals rose in FY 2019/20, but there after fell for 2 successive fiscal years.

For the most recent year for which these breakdowns are available, FY 2021/22, the source of financing for these line items are also available and shown in Figure 27. While the GoN is responsible for financing many of central level line items, those pertaining to the SWAp as well as the COVID-19 prevention and control programmes are dominated by foreign grants and loans with important contributions from the GoN. This reflects a return to the agreed priorities under the Swap, following the temporary adjustment to allow for the COVID-19 response.

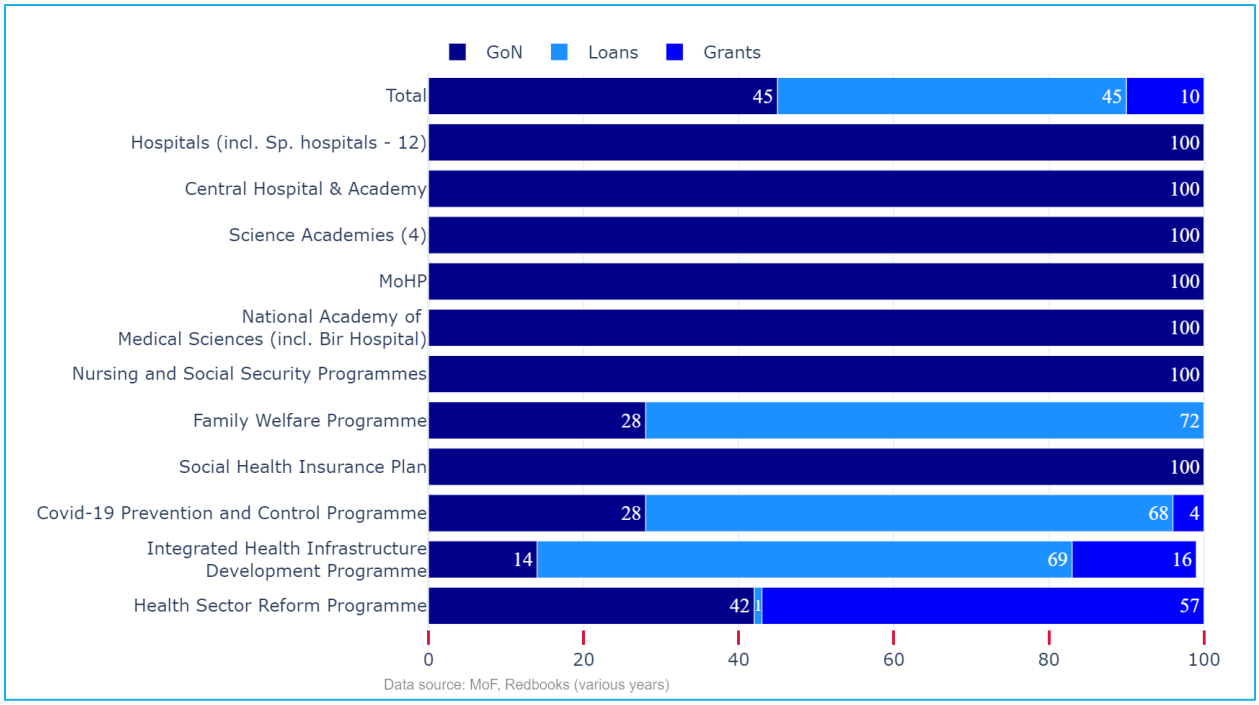

Figure 27: Major line items in the health budget (FY 2021/22) and sources of financing (in shares)

COVID-19 PREVENTION AND CONTROL PROGRAMME BUDGET

Table 5: COVID-19 Prevention and Control Budget (FY2019/20-FY2021/22)

Categories	FY 2019/20	FY 2020/21	FY 2021/22
Budget appropriation in NPR Billion			
Recurrent	**2.34**	**7.86**	**36.57**
Programme expenses	0.01	1.13	3.35
Conditional recurrent grants	0.56	2.34	4.17
Conditional capital grants	0.51	1.56	2.30
Medicine and vaccine purchases	1.14	2.69	26.75
Others	0.12	0.14	0.00
Capital	**2.45**	**0.07**	**0.02**
Total	**4.80**	**7.93**	**36.58**
Budget composition (% share)			
Recurrent	**49%**	**99%**	**100%**
Programme expenses	0%	14%	9%
Conditional recurrent grants	12%	30%	11%
Conditional capital grants	11%	20%	6%
Medicine and vaccine purchases	24%	34%	73%
Others	2%	2%	0%
Capital	**51%**	**1%**	**0%**
Financing of the programme in FY 2021/22			
	% GoN	% Foreign Grants	% Foreign Loans
Recurrent	**28%**	**3%**	**68%**
Programme expenses	100%	0%	0%
Conditional recurrent grants	75%	0%	25%
Conditional capital grants	83%	17%	0%
Medicine and vaccine purchases	7%	3%	90%
Capital	**100%**	**0%**	**0%**
Total	**28%**	**3%**	**68%**

In FY 2019/20 the government of Nepal suffered a serious growth setback which affected revenues as well as heightening risks for many households. As the budget had already been approved for the fiscal year prior to the onset of the pandemic in Nepal, the GoN was able to allocate only NPR 4.8 billion through reallocation from other programmes, using own resources and contributions from donors. The biggest allocation was for medicinal purchases (which includes vaccines). There was also a heavy dominance of capital expenditures that were necessitated by the urgency of expanding basic health infrastructure and systems as the pandemic surged in Nepal while revealing gaps in the health infrastructure.

A breakdown of the COVID-19 Prevention and Control Programme expenditures by recurrent and capital expenditures are available for the last three fiscal years (Table 5. Capital expenditures were front-loaded as investments were needed to construct the appropriate infrastructure and systems for Covid-19 prevention and containment including construction of new facilities, quarantine locations and others. These expenditures comprised

more than half the programme budget in FY 2019/20 but declined to near zero thereafter. At the same time the share of recurrent expenditures rose significantly. This increase was driven by increases in programme expenses, conditional recurrent grants, conditional capital grants as well as the purchase of medicine and vaccines.

Recurrent expenditures are broken into programmatic expenses (mostly remuneration), medicine purchases (including vaccines), and conditional recurrent and capital grants to PGs and LGs. Across the last few years for which data are available, medicine and vaccine purchases dominated programme expenses and has seen the biggest increase since FY 2019/20.

In FY 2019/20 the government of Nepal suffered a serious growth setback. In terms of financing the COVID-19 response and recovery programme, the most recent data for the last fiscal year shows that the GoN financed 28 percent of the COVID-19 response and recovery programme through its own sources (revenues and domestic grants and loans) while 68 percent of the programme expenses were financed through foreign loans – mainly to purchase medicines and medical supplies. Foreign grants filled the gap. Foreign loans also financed 25 percent of conditional recurrent grants for the programme (to other levels of government).

An alternative breakdown of the previous fiscal years data is also available in terms of budget headings for the programme. As shown in Figure 28, medicines and vaccines absorbed 73 percent. The second highest expenditure item for this programme was for salaries and remunerations at 8.2 percent of programme expenses. Programme and equipment costs absorbed nearly 13 percent of programme expenses. The data suggest a discrepancy of about 5% of the programme budget.

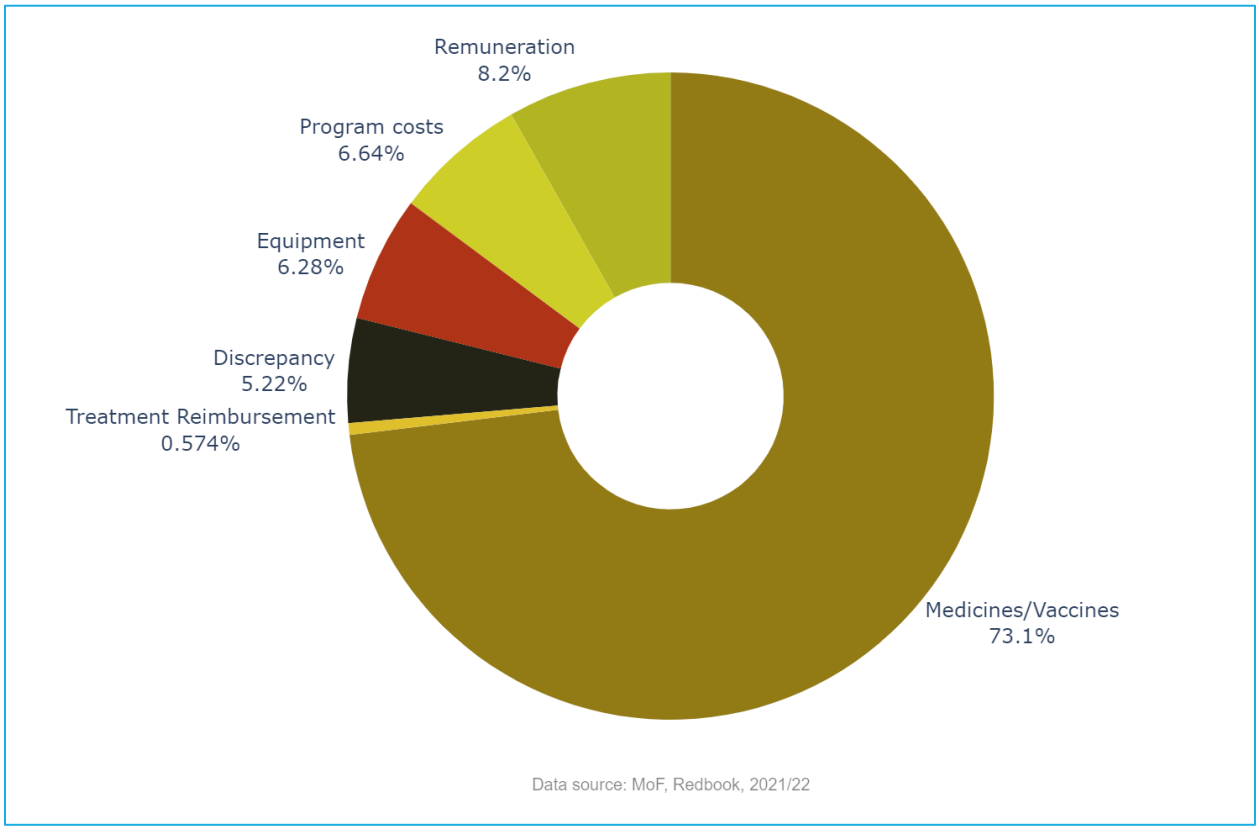

Figure 28: Breakdown of COVID-19 response and recovery budget (FY 2021/22)

CROWDING OUT OF THE NATIONAL IMMUNIZATION BUDGET

The routine immunization budget allocations in Nepal comprise of less than 5 per cent of the total budget allocated for health and was well protected during the COVID-19 pandemic. The National Immunization Programme in Nepal is a priority 1 (high priority) programme for the government of Nepal. The budget is allocated to the Health and Immunization division of the department of health services under the MOHP. The financial stability for immunizations is buttressed by the presence of a national immunization fund which receives contributions from GoN and the private sector.

Financing for routine immunization in Nepal is through a combination of own sources and foreign sources. We examine data from the GoN Budget. The data are in fiscal years for budget allocations. This data source allows a deeper probe into the budget allocations for routine vaccinations only (ignoring other essential expenditures like cold-storage facilities, training, etc.). For each of these, the sources of financing are examined. Finally, we track changes in both the budget allocations in NPR as well as for quantities purchased for each vaccine type to examine if the underlying changes in allocations are being caused by changes in procurement (quantity).

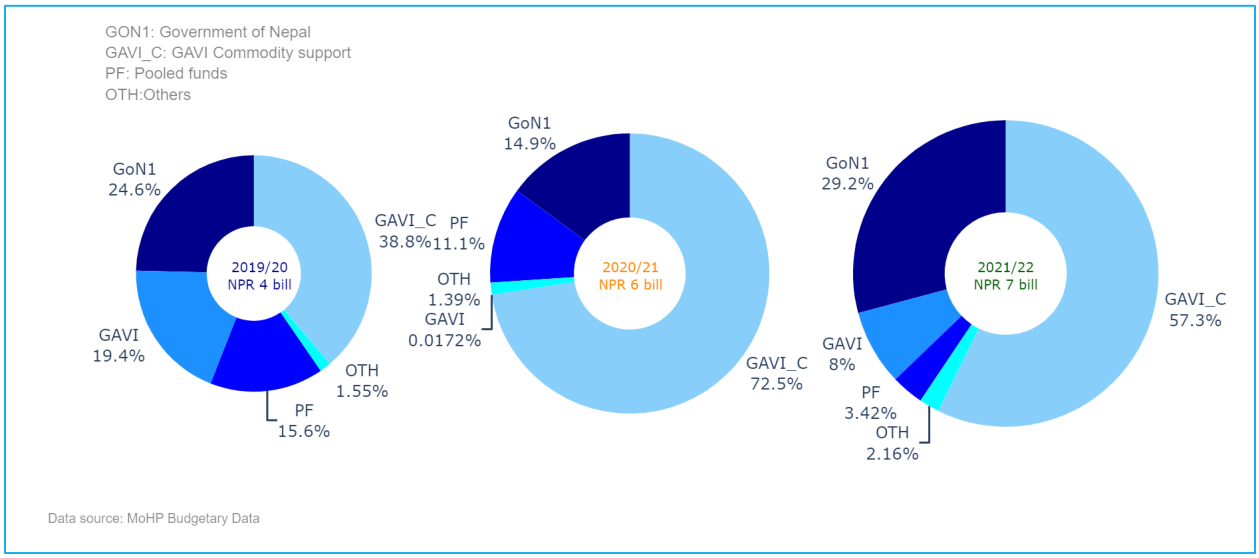

Figure 29: Financing the National Immunization Programme in Nepal (FY 2019/20-FY 2021/22)

As per the data illustrated in Figure 29, the total budget allocations for Nepal's National Immunization Programme rose from approximately 4 billion NPR to 6 billion NPR in 2020/21 and further to 7 billion NPR in 2021/22[23]. In other words, the national programme budget (excluding the COVID-19 vaccines for FY 2021/22) has risen progressively from around 3 percent of the total health budget to about 4.5 percent of the total health budget allocation. Hence there appears to be no evidence of crowding out of the national immunization budget either in nominal terms or in terms of allocation shares.

In FY 2019/20, the GoN financed nearly a quarter of the total immunization budget allocation. However, GAVI commodity support arrangements, the GAVI alliance, and pooled funds (donor contributions into a fund to support Health SWAps) also contributed substantially. In FY 2020/21, the data suggests that GoN contributions dropped to 15 percent of the total while the rest was financed by GAVI commodity support and pooled funds. In FY 2021/22, the GoN share rose substantively to just over 29 percent because of the addition of the COVID-19 vaccinations which

[23] This does not include NPR 26 billion allocated for COVID-19 vaccines and financed by GoN in order to compare with earlier years where there was no COVID-19 allocation.

were financed by GoN. In nominal terms, the GoN contributions were over 1 billion NPR in 2019/20 but dropped to 0.9 billion in 2020/21. In FY 2021/22 the GoN contributions rose significantly to NPR 2.8 billion.

It is important to note that donor support (GAVI commodity support, GAVI, Pooled Funds) has been critical in financing the national immunization budget allocations. This is most noticeable in FY 2019/20 and FY 2020/21 when donors supported 75 percent and 85 percent of the national immunization budget. In FY 2021/22, it dropped to 71 percent.

The data also permit an examination of financing for vaccinations only (excluding other items like cold storage, training, etc.). For vaccinations, the financing comes primarily from the GAVI commodity support while the Government of Nepal contributes the rest.

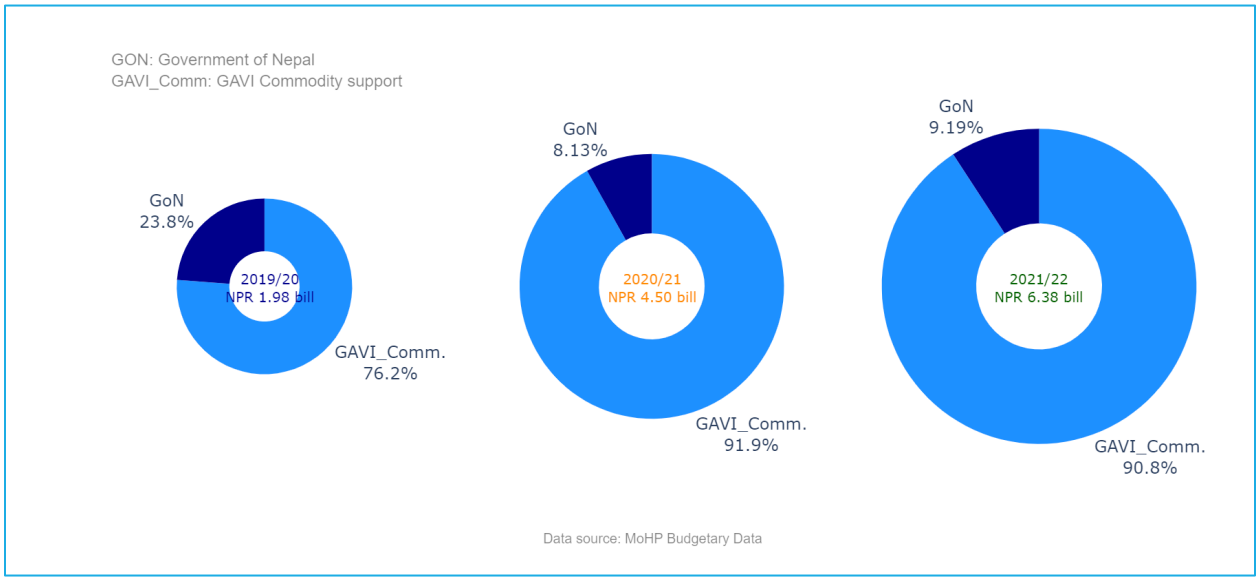

Figure 30: Financing routine vaccinations in Nepal (FY 2019/20-FY 2021/22)

There is no evidence of crowding out of vaccinations from the total immunization budget due to COVID-19 vaccinations. These were added expenses in FY 2021/22, financed from revenues borne by the GoN even as the allocations for vaccinations rose by 127 percent in FY 2020/21 and then a further 40 percent the year after. As is evident from Figure 30 the GAVI commodity support arrangements played a crucial role in financing vaccinations.

It is also informative to look at the immunization budget allocations excluding the vaccine procurement budget to get an estimate of the trend in vaccine delivery budgets. The data from GoN budget files when netted of vaccine procurement shows a rising trend, especially in FY 2021/22 to ensure support for COVID-19 vaccine delivery as well as to continue regular immunizations. This also demonstrates the lack of crowding-out the budget allocation for childhood immunizations.

Budget allocations for vaccinations rose from approximately NPR 2 billion in FY 2019/20 to NPR 4.5 billion in FY 2020/21 and further to NPR 6.38 billion in FY 2021/22. As a share of the total immunization budget, the allocation for vaccinations rose from 48 percent of the total immunization budget in FY 2019/20 to 77 percent of the budget in FY 2020/21. In FY 2021/22, vaccinations absorbed nearly 92 percent of the total budget for immunization.

The data reveal that the share of GoN financing dropped sharply from 24 percent in FY 2019/20 to 8 percent in FY 2020/21 before rising marginally to 9 percent in FY 2021/22. This was completely offset by increases in the share funded by GAVI commodity support. In terms of nominal allocations, the GoN contributed NPR 472 million, NPR 336 million, and NPR 586 million in FY 2019/20, 2020/21, and 2021/22 respectively. There was a drop in the amount

contributed by the GoN in FY 2020/21. However, this was more than offset by contributions from the GAVI commodity support arrangements.

These changes in shares are attributable to the way vaccines are procured and the amounts in terms of units procured. In FY 2020/21 there was a sharp drop in the MR vaccine budget allocation as well as in the number of units proposed for procurement. However, in that fiscal year, there was also an increase in the budget allocation and quantities procured for DPT+ although it did not compensate for the drop in the budget allocation for MR. Since these are all financed by GoN, the government share and contribution fell.

The data also permit a breakdown of financing sources for each vaccine. The data are plotted in terms of budget allocations in Figure 31 and in terms of units purchased in Figure 32. The following observations can be made:

- For those vaccines that were procured by the GoN, there were no changes in the units ordered over time for most vaccines purchased through multi-year procurement contracts. The exceptions were that for MR, the amounts procured as well as the budget allocations fell significantly in 2020/21 before rising again in FY 2021/22 while for DPT the allocations rose substantially driven by an increase in quantity purchased through the period.
- For those vaccines that were procured through GAVI commodity support, there was an increase in the quantities ordered as well as the budget allocations except for the PENTA vaccine which dropped sharply in FY 2020/21 before rising again in FY 2021/22. In particular, the increases in the Rota vaccine in FY 2020/21 and the AD syringe in FY 2021/22 are noticeable. However, these sharp increases in budget allocations are not matched by changes in the quantities ordered. The increased budget allocation for the Rota vaccine more than offset the decline for the Penta vaccine in FY 2020/21. This allowed the overall vaccination budget allocations (and hence the total immunization budget) to expand during FY 2020/21. In FY 2021/22 the quantities planned for procurement as well as the budget allocations rose, in particular for AD syringes.

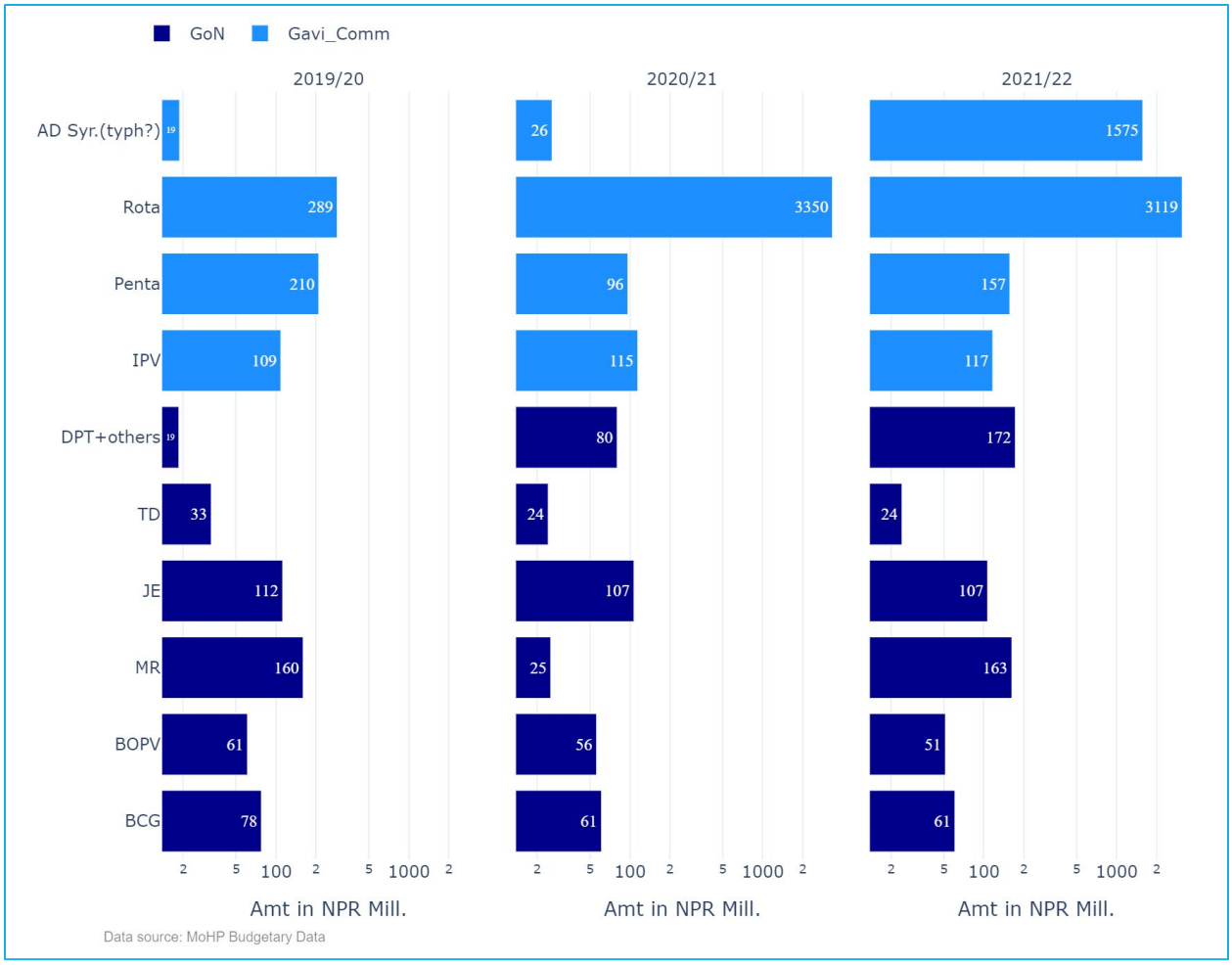

Figure 31: Expenditure on vaccines and sources o finance

The conclusion is that donors have played a significant role in financing immunizations supported by GoN contributions. This has prevented the 'crowding-out' of the routine immunization budget. Although there was a notable drop in both procurement and budget allocations for the MR vaccine and the Penta vaccine, they were more than compensated for by increases in both quantities (units purchased) as well as budget allocations of other vaccines, most notably, the Rota 1 vaccine which is supported through the GAVI commodity support arrangements.

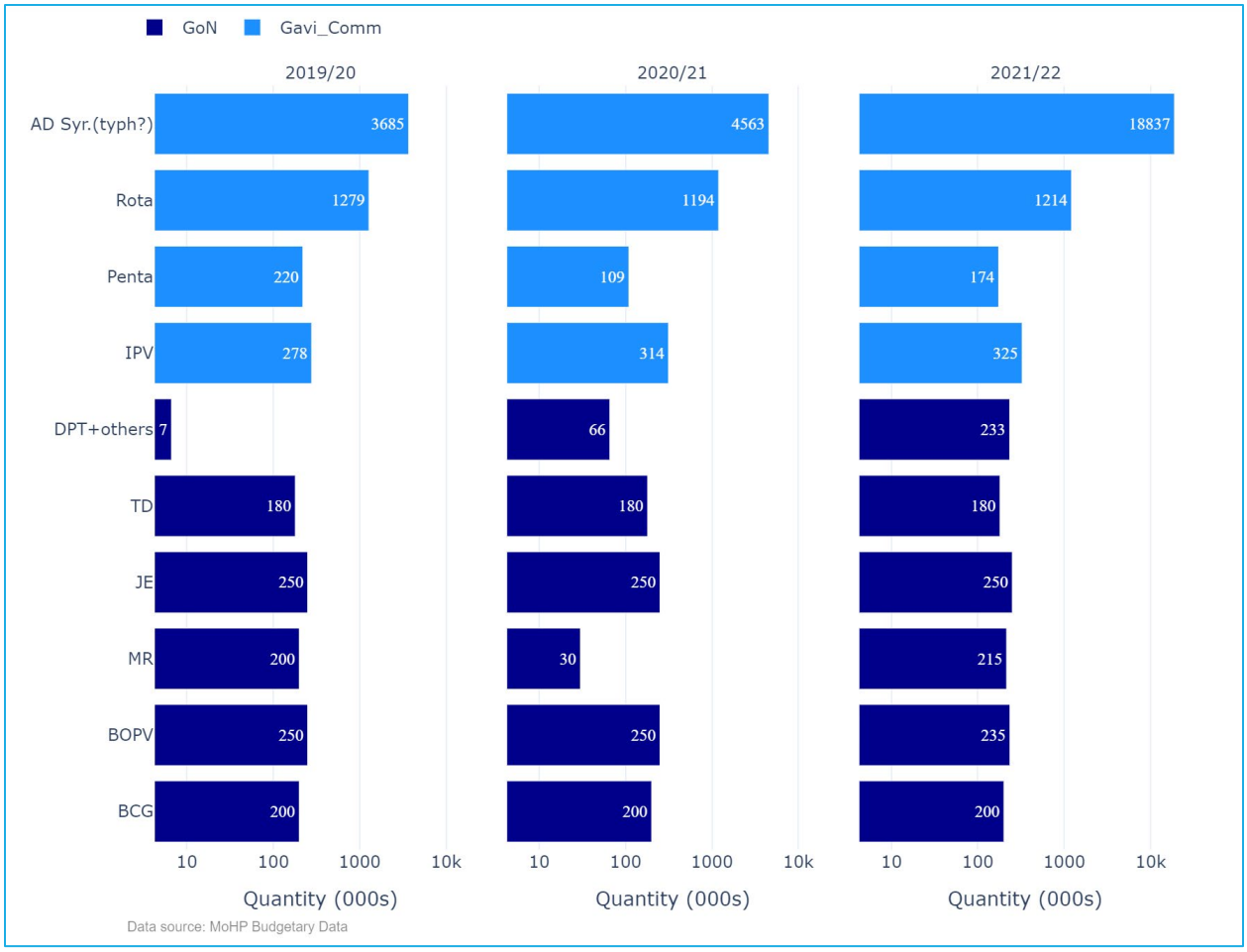

Figure 32: Budgeted procurement (quantities) by the source of finance

The government administers vaccines to avert 11 diseases in children every year under the National Immunization Programme. These diseases are tuberculosis, polio, Japanese encephalitis, diphtheria, tetanus, pertussis, hepatitis B, Hib, measles-rubella, and pneumococcal disease.

"These are alarming numbers, suggesting the pandemic is unravelling years of progress in routine immunization and exposing millions of children to deadly, preventable diseases", said ***Dr Seth Berkley, CEO of Gavi, the Vaccine Alliance****. "This is a wake-up call – we cannot allow a legacy of COVID-19 to be the resurgence of measles, polio and other killers. We all need to work together to help countries both defeat COVID-19, by ensuring global, equitable access to vaccines, and get routine immunization programmes back on track. The future health and wellbeing of millions of children and their communities across the globe depends on it."*

Concerns are not just for outbreak-prone diseases. Already at low rates, vaccinations against human papillomavirus (HPV) - which protect girls against cervical cancer later in life - have been highly affected by school closures. As a result, across countries that have introduced HPV vaccine to date, approximately 1.6 million more girls missed out in 2020. Globally only 13 per cent of girls were vaccinated against HPV, falling from 15 per cent in 2019.

Source: COVID-19 pandemic leads to major backsliding on childhood vaccinations, new WHO, UNICEF data shows

There were concerns that closures, including schools, meant that progress in routine immunization coverage may be reversed. The coverage data for immunization in Nepal unambiguously point to a drop in coverage during 2020 as the COVID-19 pandemic unfolded in Nepal (Figure 33) and a reversal of gains made earlier. This is in accordance with global trends as demonstrated by a recent Lancet study[24] that showed reduced demand, difficulty in getting vaccine supplies and limited workforce availability as the most critical underlying factors. UNICEF estimates suggest that nearly 4 million children globally missed out on basic vaccines through routine immunization coverage in 2020 compared to 2019.[25] However, by 2021, the data suggest a strong recovery with observed coverage values closer to the pre-COVID years. This was impressive considering the many political, economic and a web of other challenges Nepal faced during this period.

[24] Shet A, Carr K, Danovaro-Holliday MC, et al. Impact of the SARS-CoV-2 pandemic on routine immunisation services: evidence of disruption and recovery from 170 countries and territories. Lancet Glob Health. 2022;10(2):e186-e194. doi:10.1016/S2214-109X(21)00512-X

[25] COVID-19 pandemic leads to major backsliding on childhood vaccinations, new WHO, UNICEF data shows

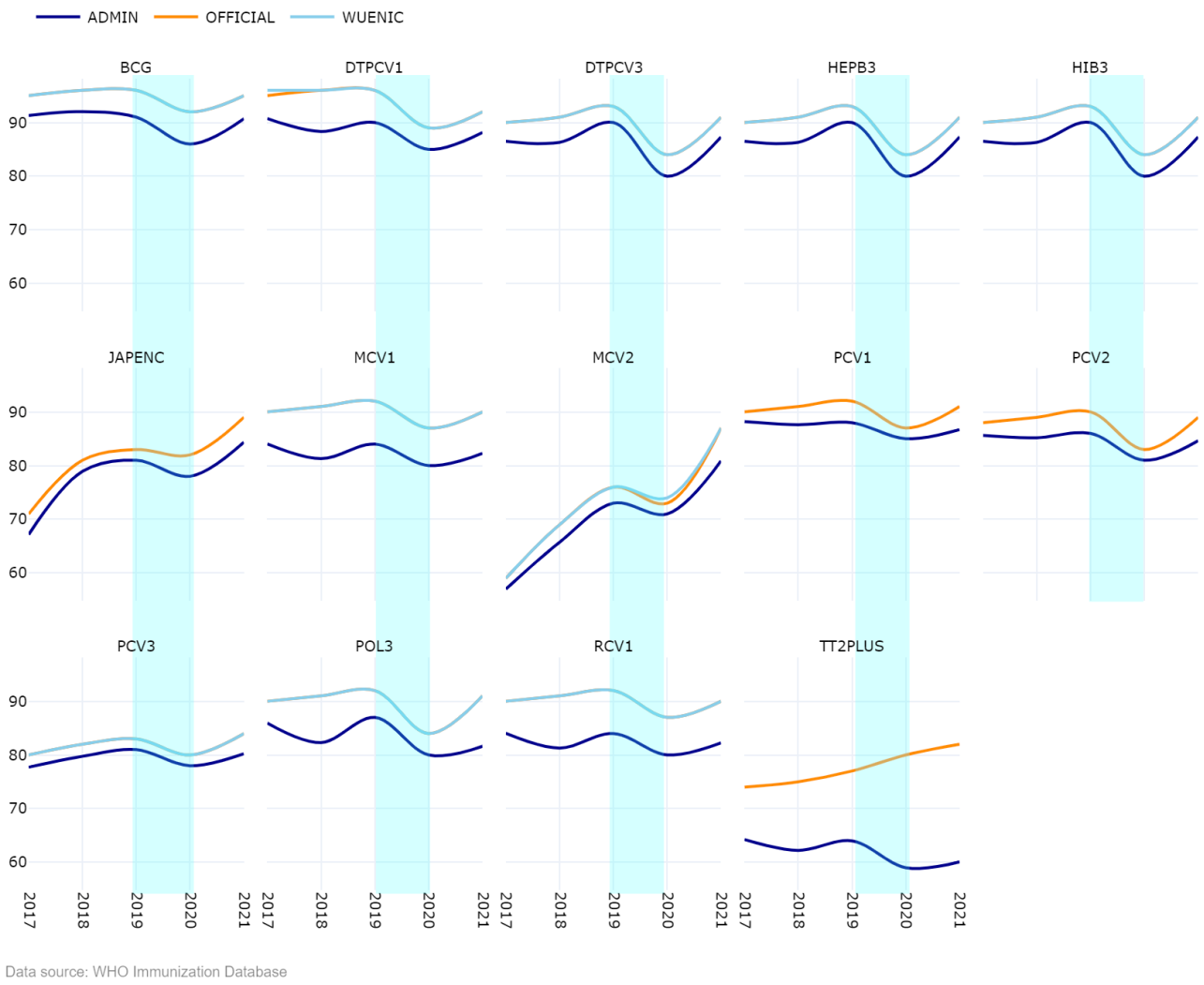

Figure 33: Routine immunization from 2017-2021

The figure shows that official (and WUENIC)[26] estimates are typically higher than the administrative data reported by the GoN through the HMIS and other information systems. This is because official & WUENIC estimates adjust for under-reporting from government systems and at the same time triangulates with major household surveys recently conducted. As per the administrative (GoN) data:

- BCG coverage dropped from 91 prior to the COVID-19 pandemic to 86 percent in 2020. However, in 2021 coverage rates reverted to 91 percent.
- DPT1 coverage dropped from a high of 90 percent in 2019 to 85 percent in 2020. Similarly, DPT2 coverage dropped from a high of 90 percent to 80 percent in 2020. In 2021 coverage rates for these two rose to 88 percent and 87 percent respectively.
- HepB3 as well as HiB3 coverage dropped from 90 percent to 80 percent between 2019 and 2020. In 2021, it had gone up to 87 percent.

[26] WHO/UNICEF Estimates of National Immunization Coverage

- Coverage rates for Japanese Encephalitis dropped from 81 per cent in 2019 to 69 percent in 2019 before rising to 84 percent in 2021.
- For MCV1 and MCV2, the coverage rates also dropped in 2020, but by 2021 had almost caught up to levels observed prior to the pandemic. Similar observations can also be made about PCV1, PCV2, and PCV3. For instance, PCV3 coverage that had been rising from 78 percent to 80 percent in 2018 and 81 percent in 2019, fell to 78 percent in 2020. In 2021, coverage rates rose to 80 percent.
- Polio3 coverage dropped from a high of 87 percent in 2019 to 80 percent in 2020 before rising to 82 percent in 2021.
- The percent of children fully immunized fell from a high of 78% in 2019 to 70 percent in 2020. The data for later years are not known, but based on the recovery seen in routine immunization, it becomes possible to suggest that there was also a recovery in the percent of children fully immunized.

Had it been unchecked, the impact of these reversals in routine immunization coverage would negatively affect the trajectory of child and maternal health indicators including mortality. International evidence confirms that delays in the administration of vaccines can very well lead to a resurgence of diseases.[27]It is admirable that Nepal averted this situation.

These numbers are further corroborated by the UNICEF CFT (op cit.), which found that between the time lockdown was imposed and September 2020 (by which time lockdowns were lifted), only 84 percent reported having received any vaccination for their children. Of this group, 92 percent reported their children receiving vaccinations in the last 3 months suggesting an improvement most visible from July to August 2020.

This average data on coverage hides considerable differences across provinces, income groups, disability status and education level of the household head that are not captured in the average. The CFT data allows a disaggregation by these factors and the data are shown in Figure 34. Further unpacking the data through an equity lens the following conclusions become evident:

- Gandaki and Karnali Provinces reported the lowest coverage rates in Nepal.
- Vaccination coverage tends to rise with income, but is paradoxically lowest for households in the high-income group.
- Households having a person living with disabilities reported lower coverage rates.
- Dalit headed households reported lower coverage rates.
- The education level of the head of household was not found to display any significant trend

[27] See, for example, Rodriguez C and Plotkin S. Impact of Vaccines; Health, Economic and Social Perspectives - PMC (nih.gov)

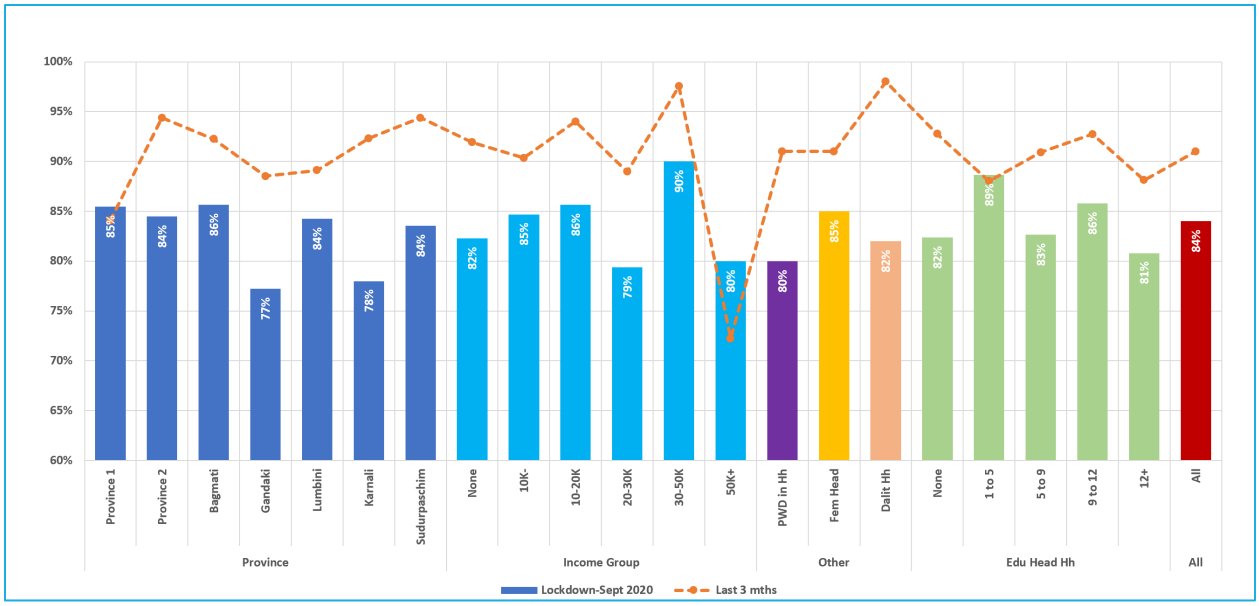

Figure 34: Equity concerns in the reported vaccination coverage rates for children (lockdown - Sept 2020)

Several factors contributed to the coverage decline that was observed in 2020. Since COVID-19 vaccines did not become available until a year since the first case was detected, safety and social-distancing protocols had to be maintained, magnifying challenges in routine immunization. In addition, a shortage of PPE, quarantine beds and facilities also resulted in fear and psychological stress among the health workers.[28]In addition, border and airport closures meant delays in receiving routine vaccines.[29]

- The first case of COVID-19 was discovered in Nepal in January 2020. Nationwide lockdowns were imposed from March till July just as the last phase of FY 2019/20 was drawing to a close. This lockdown came as an early response to the pandemic in Nepal and went through different phases, including the closure of internal and external transportation, businesses, and academic institutions. The hospitals and healthcare facilities had limited capacity to provide essential health services due to inadequate provision of personal protective equipment (PPEs) for healthcare providers, the urgency to maintain social distancing, and the fear of contracting the virus.[30] This led to a shortage of critical health workers. Also, due to the migration of families from urban to rural areas during the pandemic, service providers were unable to confirm complete immunization of many children.
- On the demand side, many households experienced severe income shocks (often multiple times) during the pandemic that also negatively affected the household demand for health services including vaccines. Furthermore, households reported not being confident to visit health facilities due to overcrowding, fear of being quarantined or catching infections. A significant number of households also reported facing difficulties in receiving treatment for their children. Data from UNICEF CFT (op cit.) suggest that psychological factors related to the fear of catching infections "worried" nearly half of all respondents, but varied considerably and was higher in metropolitan cities and among higher income groups (Figure 35). Furthermore, due to limited transport and mobility during lockdown, transport costs were high, especially in geographically remote areas (UNICEF, CFT, various rounds). Finally, the fact that vast numbers of households had to

[28] Khanal P, Paudel K, Devkota N, Dahal M, Mishra SR, Joshi D (2021) Corona virus fear among health workers during the early phase of pandemic response in Nepal: A web-based cross-sectional study. PLOS Glob Public Health 1(12): e0000083. https://doi.org/10.1371/journal.pgph.0000083

[29] Please refer to Annex figures for a timeline of government actions during Covid-19 pandemic.

[30] Shrestha R, Shrestha S, Khanal P, Kc B. Nepal's first case of COVID-19 and public health response. J Travel Med. 2020. https://doi.org/10.1093/jtm/taaa024.

quarantine infected members as the infections peaked in Nepal, may have affected their time and ability to seek care for themselves and their children.

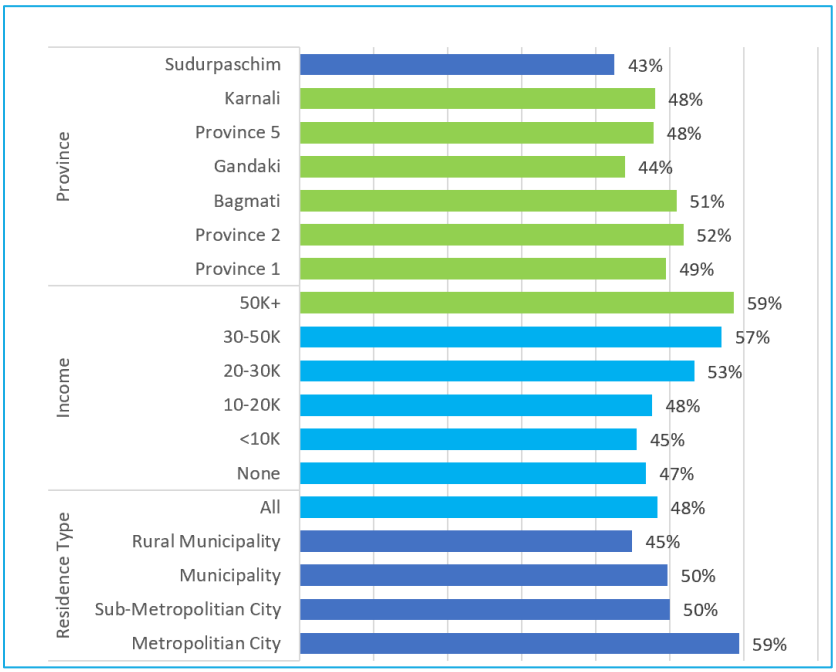

Figure 35: Percent respondents feeling at risk of getting COVID-19

- The pandemic also hit the country when Nepal was preparing to conduct its Measles Rubella (MR) campaign from mid-Feb to mid-April 2020. Although some districts were successful in carrying out the campaign, several districts had to cancel it owing to the rise in COVID-19 cases. It was not until a year later that the vaccination campaign officially began.
- In addition to routine immunization, ministry officials also suggested that critical health interventions such as Vitamin A supplementation drops and de-worming also suffered.

At least three million children aged between six months and five years were supposed to get Vitamin A drops on April 18 and 19. On the same days, around 2.35 million children aged one to five years were supposed to take de-worming tablets, which are essential to remove parasites that can cause malnutrition and reduce children's ability to grow and learn.

"These campaigns have been postponed in view of the increasing number of coronavirus cases in the country," said Jhalak Gautam, chief of Child Health and Immunisation Section at Family Welfare Division of the Department of Health Services.
(Source: COVID-19 Threatens Immunization Programme in Nepal (nepalisansar.com)

- A major cause of child illness in Nepal has been acute respiratory infection (ARI). Across all rounds of the UNICEF CFT, a major cause of child illness was reported to be on account of respiratory infections. This development occurred against a background of reduced Amoxicillin coverage during the lockdown. The HMIS data comparing the number of children treated with Amoxicillin for ARI is shown in Figure 36. The figure compares the number of children treated in the first 6 months of 2020 with the number of children treated during the first 6 months of 2019. The data for 2019 does not show any clear trend, decreasing sometimes and rising sometimes. For 2020, the data show a strong decline in the number of children treated with Amoxicillin for ARI as soon as lockdowns and closures were imposed and continued to drop through May/June during which time the country was still under lockdown, by which time there was nearly a 50 percent drop in the number of children treated with Amoxicillin for ARI.

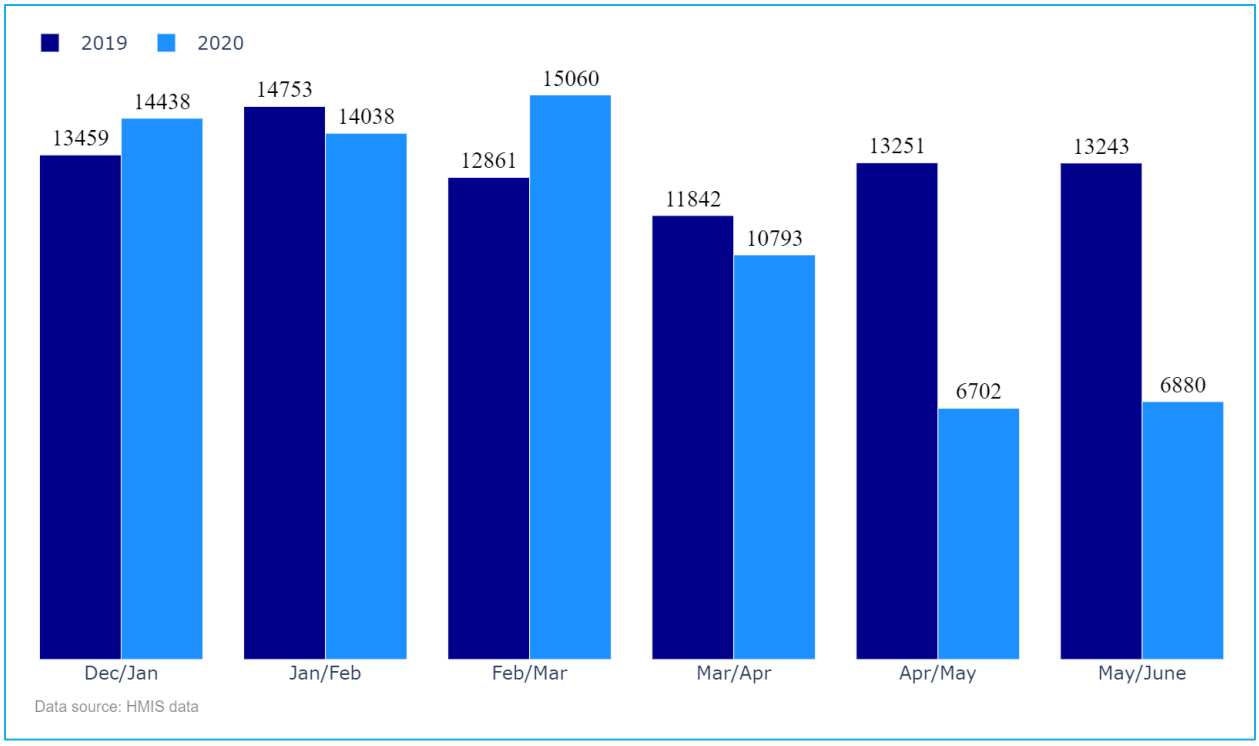

Figure 36: Number of children receiving Amoxicillin in 2019 and 2020

Finally, the CFT on Ward Mayors in Nepal in July 2021 (UNICEF, CFT, op cit.) revealed some interesting observations about difficulties in accessing health services at the Ward level. At the same time, those results showed the incredible diversity of outcomes within Nepal. The major factors identified by ward mayors were the lack of essential supplies or medicines, financial barriers, absenteeism, lockdowns and movement curbs and community fear of infections (Figure 37). Not all Wards in Nepal have a primary health care center, and these obstacles are heavily influenced by their presence or absence.

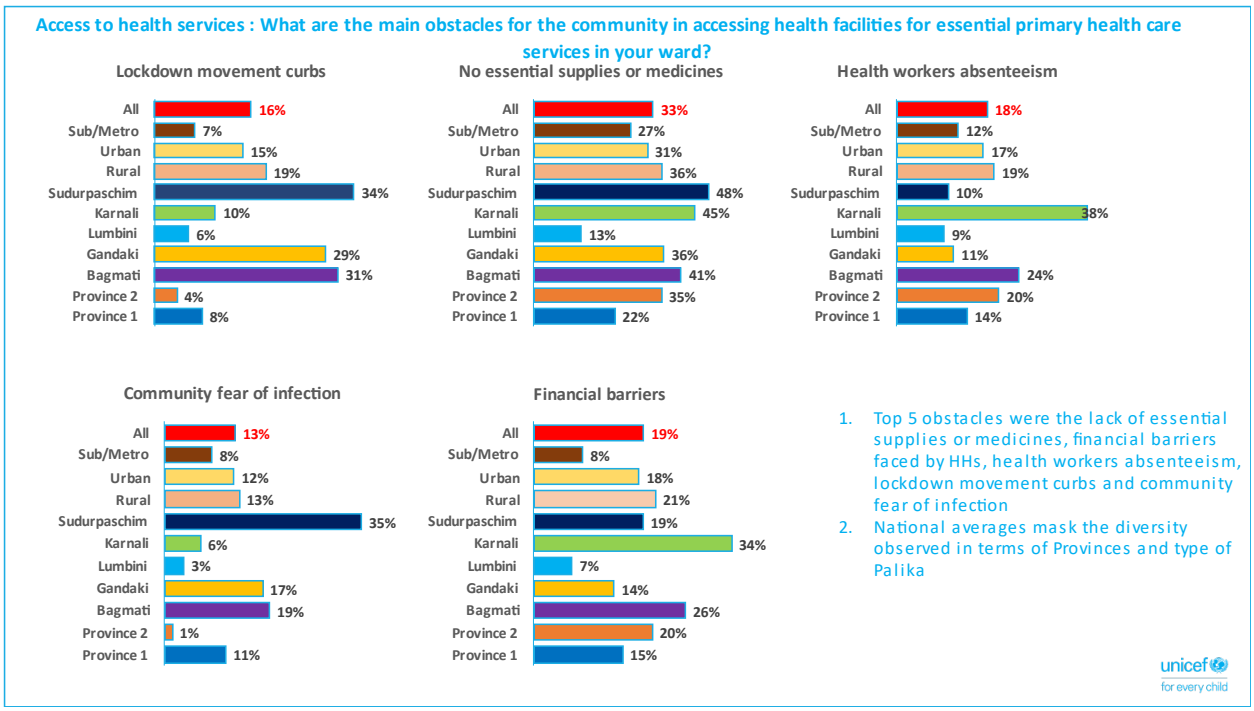

Figure 37: Main obstacles in accessing health in Wards

CROWDING OUT OF HEALTH CARE WORKERS' FUNCTIONS

A variety of sources, including the media, government officials as well as Joint Annual Reviews of the Health Sector, pointed out the challenges in the deployment of health workers as the pandemic swept through Nepal. This was corroborated through a qualitative interview with more than 500 FCHVs in May 2020 (UNICEF, FCHVs SMS interview- IVR) that confirmed that FCHVs faced considerable challenges as the pandemic swept through Nepal and attention shifted towards containment and mitigation. The situation as of May 2020 reported by the FCHVs are summarized below:

- 44 percent of respondents reported not having received any guidance for work during COVID-19
- 25 percent did not receive appropriate orientation/training/information for work during lockdown
- Nearly 1 in 5 reported not being contacted by households for information during lockdown
- 70 percent were unable to hold mothers' group meetings that are vital for many women in Nepal
- More than 1 in 3 respondents reported not being able to conduct home visits during lockdown
- Nearly 1 in 5 respondents did not participate in the monthly meetings with FCHVs at the health facility
- 17 percent reported that mothers had not delivered in public or private health facilities
- Over half the respondents reported facing difficulties in carrying out their functional responsibilities. The most common difficulties reported by FCHVs were fear of infection and travel restrictions owing to the lockdown

An interesting observation concerning Nepal is the preponderance of females in the provision of frontline services, both paid and unpaid. This imposes a double burden as many women have household responsibilities too. With the closure of schools, household responsibilities and duties may have increased this double duty burden.

CROWDING OUT OF OTHER BASIC CHILD NEEDS

The COVID-19 pandemic has not spared children in Nepal. Apart from directly affecting a number of children, emerging data suggest that the pandemic could also adversely scar children through indirect effects such as poor diet, impact on mental health as children lose access to peer and school networks while adjusting to social isolation, exposure to an environment of increased risks as caretakers and other adult relatives experienced multidimensional shocks several times.

The UNICEF Child and Family Tracker (UNICEF, CFT) Nepal data provide a pulse of how households with children were coping as the pandemic unfolded through multiple dimensions and lenses (including disability, gender, ethnicity, and disability). The data[31]suggest that at the household or micro level, households are recovering from some serious setbacks, but the recovery has been uneven and splintered along geographic, ethnic, income, disability status, gender among other dimensions.

Prior to the pandemic Nepal's human capital index stood at 0.50. This meant that a child born in 2020 would be only half as productive when he or she grows up compared to a situation if he or she had full education and health. The pandemic heightened exiting inequalities while creating new challenges in education. In Nepal, as well as globally, it would be fair to say that human capital loss was perhaps among the most serious consequences of the pandemic.[32]

- The initial lockdown in March 2020 occurred just as mid-year exams were to take place. While all exams were postponed (causing considerable anxiety among students and parents), there was a stark difference in the ability of public versus private schools to adopt digital platforms for exams and continuing education.
- In August 2020, some schools had not yet reopened. The government had started distance learning classes, but this was not accessible to all children. At that time, less than 1 in 3 respondents reported their children having access to distance learning. Some 80 percent of those that had access were using it. The data differ sharply by income group, place of residence and number of children in the household. Approximately 20 percent of respondents with school going children reported their children were not studying: most at risk were low-income households and those children living in Sudurpaschim area. The most common form of study was 'self-study'. Where children were studying and how they were studying were interlinked. Children going to private institutions were more likely to have access to online learning while other students were most often relying on current year textbooks or last year's textbooks to maintain continuity in their education. However, more than half the respondents whose households had access to distance learning reported challenges such as connectivity, lack of electricity and not being able to follow. A significant share of respondents reported their children were experiencing stress and showing signs of lack of energy and interest, fear, anger and frustration.

Other child deprivations are addressed by selecting a few indicators that are shown in Figure 38 relating to income poverty, job losses, indebtedness, struggling for food daily during the previous month, experiencing reduced dietary intake, experiencing changes in breastfeeding frequency, caretakers worrying about children becoming too thin, and, caretakers reporting their children working.[33] The endline report analyzed of the panel data over 6 rounds and was able to therefore derive the 'frequency' of shocks. The data are shown in Table 6.

[31] CFT Rounds from May 2020 to April 2022 (9 rounds) on a panel data set of 6,500+ households with children. Please refer to Annex Figure 35

[32] See, Hatfield, 2022. T. Challenges to education equity in Nepal during the COVID-19 crisis. Berkley Center, for a global perspective.

[33] There are many other dimensions of child deprivations that are discussed at length in individual CFT reports, baseline and endline reports.

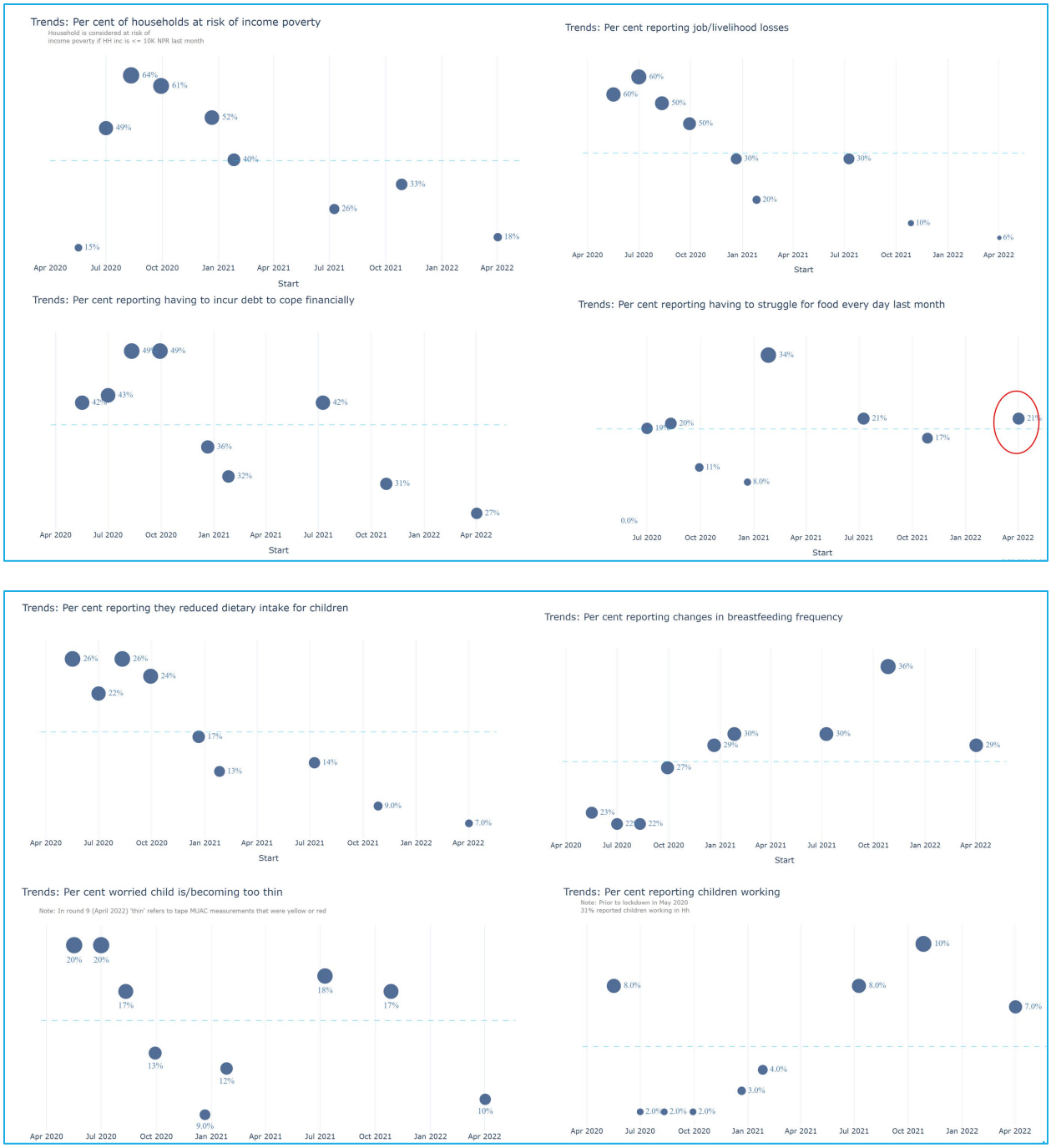

Figure 38: Overlapping challenges faced by children and their families

Table 6: Frequency of shocks (CFT, endline)

Frequency of shocks	Jobs loss	Income <10K	Reducing dietary intake for children	Struggling for food daily	Declaring food as an immediate need	Witnessing violence against women and children
0	513 (10%)	820 (16%)	2029 (39%)	3401(66%)	1790 (35%)	3963 (77%)
1	821 (16%)	683 (13%)	1386 (27%)	984 (19%)	1233 (24%)	788 (15%)
2	1117 (22%)	844 (16%)	774 (15%)	504 (10%)	898 (17%)	249 (5%)
3	1066 (21%)	934 (18%)	511 (10%)	212 (4%)	619 (12%)	107 (2%)
4	950 (18%)	913 (18%)	332 (6%)	79 (2%)	352 (7%)	47 (1%)
5	523 (10%)	769 (15%)	143 (3%)	--	191 (4%)	20 (<1%)
6	190 (4%)	217 (4%)	5 (<1%)	--	97 (2%)	6 (<1%)

N=5180. Due to rounding error the per cent totals may not be exactly 100%

- The data confirms global trends that COVID-19 pushed many people into poverty and led to significant job losses. The CFT estimates that in Nepal well over half the households could be classified as being in poverty from October 2020 to Dec 2020. In other words, as the lockdown was lifted, the data revealed sharp income shocks. Although there has been a recovery since Jan 2021, the most recent estimates for April 2022 suggest that just under 1 in 5 households are still below the poverty line, higher than the percent observed in May 2020, two years ago. Furthermore, the recovery in incomes is uneven across several dimensions: the higher income groups were able to recover faster (despite being hit harder at first) while certain groups continued to experience income shocks. The endline report reported on the frequency (over 6 rounds) of reporting household incomes below NPR 10,000 for the previous month (the poverty line as defined in the CFT). About 16 percent respondents never reported incomes being less than or equal to NPR 10,000. However, some 50 percent of households reported household incomes lower than NPR 10,000 two, three or four times over the six rounds. Just short of 1 in 5 households reported incomes less than NPR 10,000 in 5 or all rounds (Table 6).
- Lockdowns affected jobs significantly in Nepal as well as globally. As the lockdown was lifted a significant majority of households had reported job losses (60%) during the last month. The data also suggest that households faced job loss threats numerous times over the period observed. As lockdowns were lifted jobs started being restored and by April 2022 only 6 percent were reporting job losses during the last month. As with the case of income, job losses also varied widely in Nepal. For example, the data for August 2020 when the lockdowns had been lifted is shown in Figure 39. Province 2 respondents were the most likely to have reported job losses – well above the national average. Upper-income groups were much less likely to report job losses than lower-income groups. Households with more members were also most affected by job losses. More than 50 percent of households reported job losses (in the family) at least three or more times over the course of the six rounds of the CFT (Table 6).

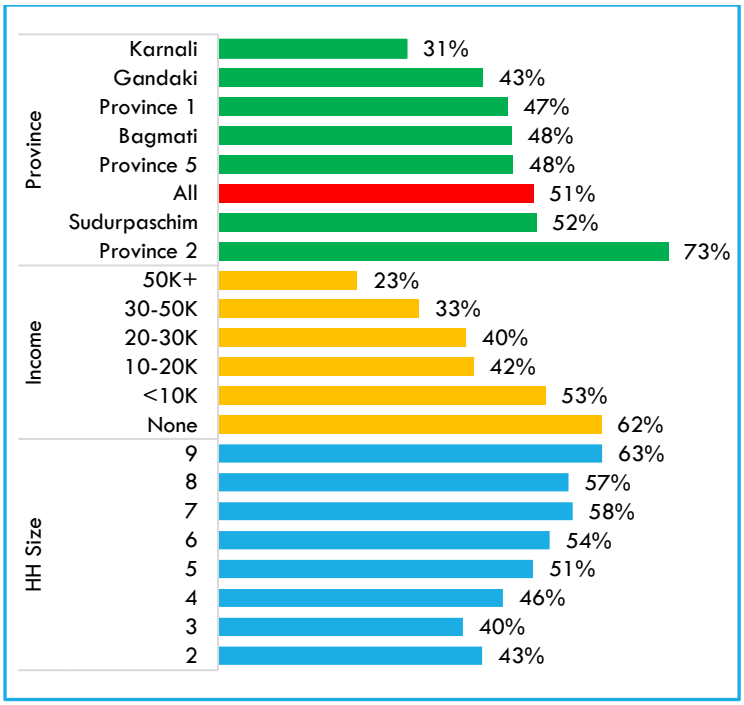

Figure 39: Households reporting job losses during COVID-19 (Aug 2020)

- Many households incurred debt to cope (along with selling assets, depleting savings, and reducing expenditures) during the pandemic and lockdown as incomes and jobs were shocked. Rising household debt is a concern on many fronts and forces households, especially the most vulnerable, to pursue even riskier coping mechanisms. Nearly half the households were incurring debt to cope. This increase in debt observed during the lockdown still affected many households as late as April 2022: more than 1 in 5 households were incurring debt to cope.
- During the period under lockdown more than 1 in 4 families reported a reduction in their child's diet (eating less). Reducing children's diets was also a coping mechanism for many households.
- The struggle for food is a dominant feature in the lives of more than 1 in 5 households with children depending on seasonal factors as well as overall access and availability. On average nearly 1 in 5 households throughout the period of observations declared having to struggle for food daily.
- Breastfeeding may have improved during the lockdown. The CFT data suggest that during lockdown nearly 1 in 5 households (with children under 2) were reporting changed breastfeeding habits. However, as lockdowns were lifted and mobility increased, percentage of households reporting breastfeeding changes rose sharply to 36% by December 2021 before reducing to 27% in April 2022.
- During lockdown in Nepal as many as 1 in 5 households reported worrying that their children were becoming too thin. The most recent observation in April 2022 suggests that 1 in 10 are still worrying that their child is becoming too thin. On average throughout this period (covid and recovery) 15 percent of households worried that their children were becoming too thin. Interestingly, the NMICS (2019/20) estimates for wasting are quite close although reflecting data before the pandemic.
- During the lockdown, some 8 percent of households reported their children were working to help supplement household income. Given the closure of most labour markets during this time, the kind of work, hours at work, and wages being earned is of serious concern. As closures lifted and schools opened, reported child labour rates dropped sharply. The labour markets in Nepal (and globally) had collapsed. With the recovery in jobs, child labour also rose to 10 percent by the end of December 2021. The most recent data suggest a drop: 7 percent of households reported their children were working to help earn income. This may be correlated to the drop in observed income poverty and job losses at the household level observed in the last round of the CFT (April 2022).

- The top immediate needs of households throughout most rounds of the survey (more than 20 percent responding yes) related to cash/financial assistance, food, and employment. The data, therefore, point to a risky environment for children. In addition, 8-10 percent of respondents reported medications as their top three immediate needs.
- Some 6 to 10 percent of households reported they were unable to buy masks due to high prices and non-availability even as late as August 2021.
- Amidst a heightened sense of fear, households reported difficulties in receiving treatment and being too stressed to go out and purchase essentials (UNICEF, CFT, op cit).

As discussed previously, outcomes are differentiated by a wide range of factors such as geography, income, disability status, education level of the head of household, ethnicity, gender of the head of household, and household composition among others. Furthermore, the data suggest that apart from these indicators discussed above that bear a correlation to each other, children in Nepal are also trapped in a vicious web of other multi-dimensional deprivations such as in social protection (during lockdown nearly 1/3 of respondents reported difficulty receiving their social security allowances even as government assistance at that time had not been forthcoming), access to food, access to health, access to WASH, increased psycho-social stress of children and adults, violence against women and children, separation from families, and, being extremely vulnerable to climate-related disasters.[34] Therefore, in addition to accelerating efforts against vaccine coverage, the inclusive service delivery of a range of supporting and essential basic services, especially towards children, their mothers, and caretakers, needs to remain a priority.

[34] Please refer to CFT Endline Report for further details (UNICEF,2020-2022, op cit.)

FINDINGS FROM STAKEHOLDER INTERVIEWS

STAKEHOLDERS' BACKGROUND CHARACTERISTICS

A total of nineteen key informant interviews were conducted for this research. The most fundamental problem was that in May 2022 there were new elections at the Municipality (Palika) government level replacing many officials who were in office during the pandemic. Qualitative interviews were conducted during September 2022-November 2022 – a period when the risks from COVID-19 had reduced considerably. Nevertheless, the responses provided some interesting findings. Of these key informants, five were from the MoHP, seven were from urban municipalities, three respondents were from Provincial governments, and four were from rural municipalities. Each interview consisted of either a telephone call or a face-to-face visit, consisted of ten questions, and lasted about twenty to thirty minutes. Upon conditionality of anonymity, the participants from a diverse set of backgrounds were able to hold frank discussions on key aspects of routine immunization for children. Although unable to give precise numbers, they were able to reveal some of the challenges they faced.

Table 7: Respondents organization and designations

Organization / Office	Designation
MoHP	Sr. Public Health Officer
DOHS/FWD	Public Health officer
DoHS/FWD	Sr. Public health administrator
HEOC/MoHP	Sr. Public health administrator
MoHP	Public Health Administrator
Mithila Urban Municipality	Chief Administrative Officer
Mithila Urban Municipality	Health Coordinator
Kanchanpur Municipality	Administrative Officer
Tilathi Koiladi Rural Municipality	Health Coordinator
Jagannathpur Rural Municipality	Health Coordinator
Birendranagar Urban Municipality	Mayor
Raskot Urban Municipality	Spoke Person
Simta Rural Municipality	Former Chair
Joyrayal Rural Municipality	Chairperson
Dasarathchand Urban Municipality	Chief Administrative Officer
Dhangadi Urban Municipality	Former Mayor
Province Health Directorate-Lumbini Province	Immunization Focal person
MoSD, Sudurpaschim Province	Public health Inspector
Health Directorate- Madhesh Province	Director

MoHP: Ministry of Health and Population; DOHS, Department of Health Services; FWD, Family Welfare Department, HeOC, Health Emergency Operations Centre; Sr, Senior.

RESULTS OF DISCUSSIONS SUMMARIZED

1. What share of the national budget has been allocated for health programmes in your level of government?

An interesting observation is made with respect to variations in the responses to this question. While those informants working at the federal level and provincial level were able to give details about the overall health budget (identifying either percent of total budget or the budget allocation itself) and programmatic areas of interest (such as expanding testing in high-risk areas and conversion of quarantine hospitals to fully functional hospitals), the palika level respondents from both rural and urban municipalities felt that the budget is transferred to them as a central government programme. They have little role to play in the budget allocation for programmes in the palikas as bottom-up planning has not yet been fully implemented in Nepal owing to the complexities of federalism.

2. To what extent did budget allocation for childhood immunization meet the total resources requirement for the program's functioning as specified in the NHSS (2015-2020) and NIS?

All the respondents were in agreement that the NIS is a priority 1 programme and the budget allocation is adequate to reflect immunization needs of children. However, some respondents at the municipality level also mentioned that although there may have been no issue with the 'sufficiency' of the budget, some other factors including remoteness/distance as well as social and economic issues prevent them from achieving the target coverage. Some municipality informants also responded that since the NIS is a central government responsibility, their budget allocations are what is given to them from the central government and hence they cannot comment on the sufficiency of allocations.

3. To what extent have vaccine procurement budgets for traditional vaccines and new and underutilized vaccines / Gavi co -financing been affected by the inclusion of vaccine procurement budget for COVID -19?

All the informants at the MoHP (central government) were able to confirm that due to a separate provision for COVID-19 vaccinations, by the GoN and donors, the procurement budgets were not affected for routine immunization. The provinces and municipalities are not authorized to procure vaccinations and hence were not able to respond to this question.

4. To what extent have childhood immunization service delivery budgets contained in program specific line - items changed over time in relation to the introduction of budgets COVID -19 vaccine procurement and delivery?

A lot of the respondents did not know in exact detail but for the most part agreed that there were no significant changes in the service delivery budgets. Province and municipal level respondents reported having to use their regular immunization monitoring services for COVID-19 monitoring. A majority of the province and municipality level respondents felt that there was a reduction in the M&E and training components in the early phases of the COVID-19, but things have changed in recent budgets.

5. To what extent have childhood immunization service delivery budgets contained in shared line items (for example - pooled delivery funding line items for primary health care services) changed over time (if feasible to track allocations as a proportion of shared line items)?

Many respondents were unable to respond to this question over a telephone or face-to-face interview as this required access to detail line-item budget data. However, a few municipality and province level respondents said that some programmatic expenses for immunization were shared by other programmes for mothers and children and for female community health volunteers (FCHVs).

6. What is the budget execution rate for the line -items identified for each area of programmatic interest?

The central government respondents felt that disbursements relative to allocations were low because of low absorptive capacity at the province and municipality level. Most responded that the budget execution rate for immunization was very high. A few respondents commented that budget execution rates were primarily driven by the previous year's expenditures and some forecasts.

7. Which programmatic areas exhibit higher execution rates than others and why?

All the respondents felt that national priority programmes like immunization, family planning and procurement (supply) of medical items (including vaccines) have high execution rates. Interestingly, at the province and

municipality level some respondents also reported high execution rates for education, logistics, training and capacity building, and, construction.

8. How timely are the disbursements of funding for childhood immunization and COVID 19 vaccine procurement and delivery? And what factors affect funding availability?

Those at the central government felt that a lack of human resources and low absorptive capacity to spend funds and implement activities affected disbursements. Those respondents from palikas and provinces felt that disbursements were on time as they are increasingly being made through internal government cash flow systems and software. The lack of capacity was cited as a major concern in budget utilization by all the respondents.

9. What is the trend in government revenues over the period of interest?

There was unanimous agreement (with the exception of two respondents who did not know) that because of COVID-19 there has been a decline in revenues available to the government because of the economic shock caused by closures and containment measures. Even the municipality and province level respondents where there are very little local source revenues, agreed that local revenues had also shrunk.

10. Through what mechanism are government revenues raised to support childhood immunization budgets?

Respondents from the central government were able to articulate that government received support from external partners (UNICEF, GAVI, USAID), loans from World Bank and others, and support from bilateral donors to protect the immunization budget as a priority 1 programme during the COVID-19 pandemic. The government also contributes to the national immunization programme and into a national immunization fund for the future financial sustainability of immunizations. They also mentioned government coordination with the private sector as having been critical because their involvement in the COVID-19 response saved the GoN from potentially high health infrastructure costs. Furthermore, especially in metropolitan and sub metropolitan urban areas private sector health care providers also provide childhood immunizations to families who seek their services. However, all the respondents at the province and municipality level mentioned that there was nothing specific at their level of government as the procurement of immunization is a central responsibility.

ADDITIONAL FINDINGS FROM THE PALIKA LEVEL UNICEF CFT

The most recent round of the Child and Family Tracker concluded in November 2022 and was fielded to more than fifty percent of Nepal's municipalities. Some three hundred and eighty Palikas were selected where the mayor or their representative answered telephonic questions about general needs and challenges of the Palika while also naming sectoral experts who could answer the sector specific questions in the survey. There were questions on whether the budget was sufficient for the Palika (municipality), whether the untimely disbursement of funds was a problem, whether utilization of allocated funds was a problem, or the lack of human resources (HR) was a problem for the Palika. These questions were answered by health sector and budget officials at the municipality level. The responses were based on a Likert scale ranging from 0 (completely disagree) to 4 (completely agree).

The findings are interesting (Figure 40). While most agreed only a little bit with the statement that the health budget was sufficient for the Palika, an overwhelming majority felt that untimely disbursements were a problem. A fair number of them also felt that utilization of the budget was a challenge, but most disagreed a little or totally. Hence there were more concerns over untimely release of funds than sufficiency or the ability to utilize the allotted funds. With respect to human resources, most agreed a little or totally that it was a problem while for a few it was not.

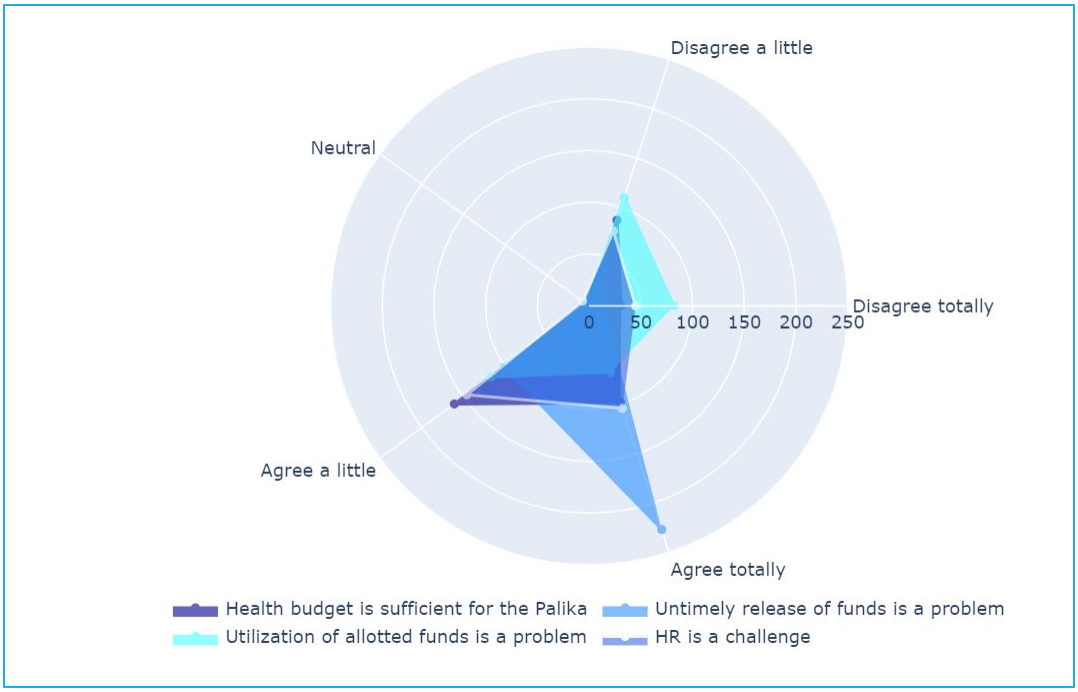

Figure 40: Some health sector concerns among Palikas

CONCLUSION

Despite a significant de-growth of GDP during COVID-19 (FY 2019/20), the available data do not point to any crowding out of the NIP budget. With critical support from donors as well as the government of Nepal the budget for NIP was not crowded out.[35]

- First, the NIP is a priority1 programme. It receives priority funding because of its programme status.
- Second, the routine immunization budget comprises less than 5% of the budget of the Ministry of Health and Population and budget allocations to the ministry rose during the pandemic.
- Third, development partners played a critical rose by adjusting expenditure streams for MoHP on SWap based health sector reforms thereby providing additional fiscal leverage for the government. Their prominence and support for immunization overall, routine vaccinations, COVID-19 prevention and control programme as well as resuming expenditure allocations for SWAps eventually contributed to the growth of the health budget at a time when resources were scarce in Nepal. Thus, although the GoN share in the overall financing of the health budget has risen, within the immunization budget, the GAVI commodity support has been critical.
- Finally, multi-year procurement plans for vaccine purchases also allowed Nepal to avoid a crowding out situation.

In line with global trends, this research was able to confirm a significant drop in vaccination coverage as coverage rates dropped below 90 percent for most vaccinations thereby showing a strong reversal in coverage. This situation began reversing itself strongly in 2021due to the easing of factors that caused this decline

This coverage decline was due to a complex interplay of demand and supply side factors related to mobility restrictions, availability of workers, fear or suspicion of getting infected and/or being quarantined, and experiencing income and livelihood shocks that force the households to eschew essential health care. These numbers are further corroborated by the UNICEF, CFT (op cit.), which found that between the time lockdown was imposed and September 2020 (by which time lockdowns were lifted), only 84 percent reported having received any vaccination for their children. Of this group, 92 percent reported their children receiving vaccinations in the last 3 months suggesting an improvement most visible during July 2020 to August 2020. However, the household level data reveal sharp variations along multiple dimensions. Therefore, in addition to accelerating efforts to boost vaccination coverage at the aggregate level, inclusive service delivery becomes critical.

- Vaccination coverage at the household level differs significantly along several dimensions such as the presence of a disabled person in the household, residing in certain provinces, income status of the household, and ethnicity of the household.
- Other critical healthcare interventions, such as Vitamin A and de-worming, were also curtailed owing to containment measures.

In addition to the coverage drop, children continue to face harsh and difficult challenges. At the micro level (and focusing on children) a variety of 'crowding out' and 'crowding in' effects are observed and when taken in conjunction with the crowding out of vaccination coverage, presents a formidable threat. Recent household data (UNICEF, CFT, op cit.) highlights the effects on children.

- The most obvious example is that of school closures crowding out human capital formation.[36] In addition, their caretakers and adult family members were crowded out of their jobs, most often numerous times. The debt levels of their households got crowded in as households resorted to increased debt to cope during lockdown. Household incomes were also crowded out due to labour market closures. Children's diets were also crowded out numerous times. Breastfeeding improved during the lockdown, but decreased as soon as

[35] See, Ekilaje, E. for a further discussion along global dimensions.

[36] See Vegas, E. 2020 for a global discussion on inequities in education during the pandemic.

lockdowns were lifted as many resumed their work. Caretaker worry about children becoming too this got crowded in as caretakers increasingly worried that their children were becoming too thin. Access to health got crowded out due to financial constraints, absenteeism oof health workers, lack of medical supplies, lack of health posts, and fear of infection or quarantine. Psychosocial wellbeing got crowded out as children (along with other household members) experienced increasing frustration, stress, fear, anxiety and anger through the pandemic.

This research has shown that children in Nepal were deeply affected by the COVID-19 pandemic. Some lost their lives. Far more lost their caretakers or other adult relatives. Child rights were adversely affected as the rights to education, health, protection, security, safety and wellbeing were all squeezed during this time. The situation was worst among the poorer income households or those living in remote areas, or belonging to certain ethnic group. The combined impact of these shocks will only unfold over time. Till then, the appropriate policy response would be to focus not only on restoring immunization coverage, but to restore all the rights of all children, including the most marginalized and crowded out. The solution is not one dimensional but would require sustained multisectoral global, regional as well as local cooperation to accelerate high quality and inclusive service delivery. The time to act is now.

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ANNEX: ADDITIONAL FIGURES AND TABLES

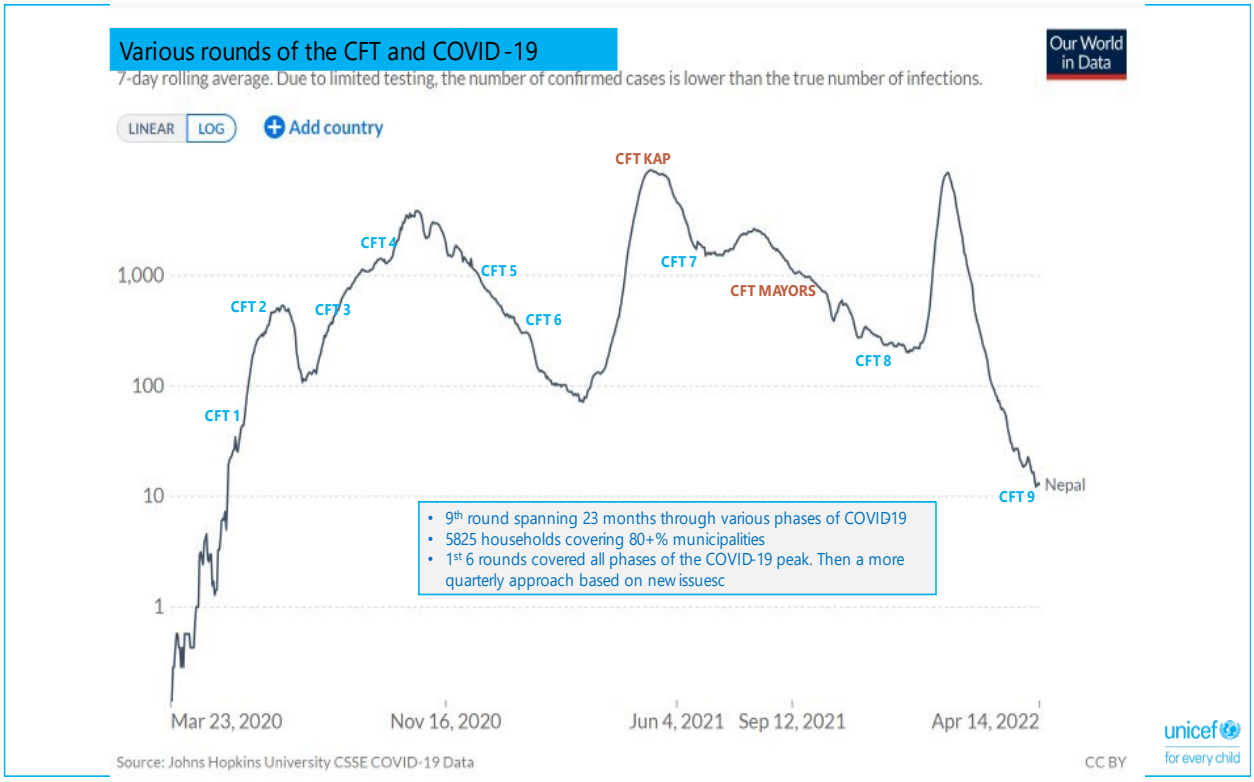

Figure 41: Various rounds of the CFT and Covid-19

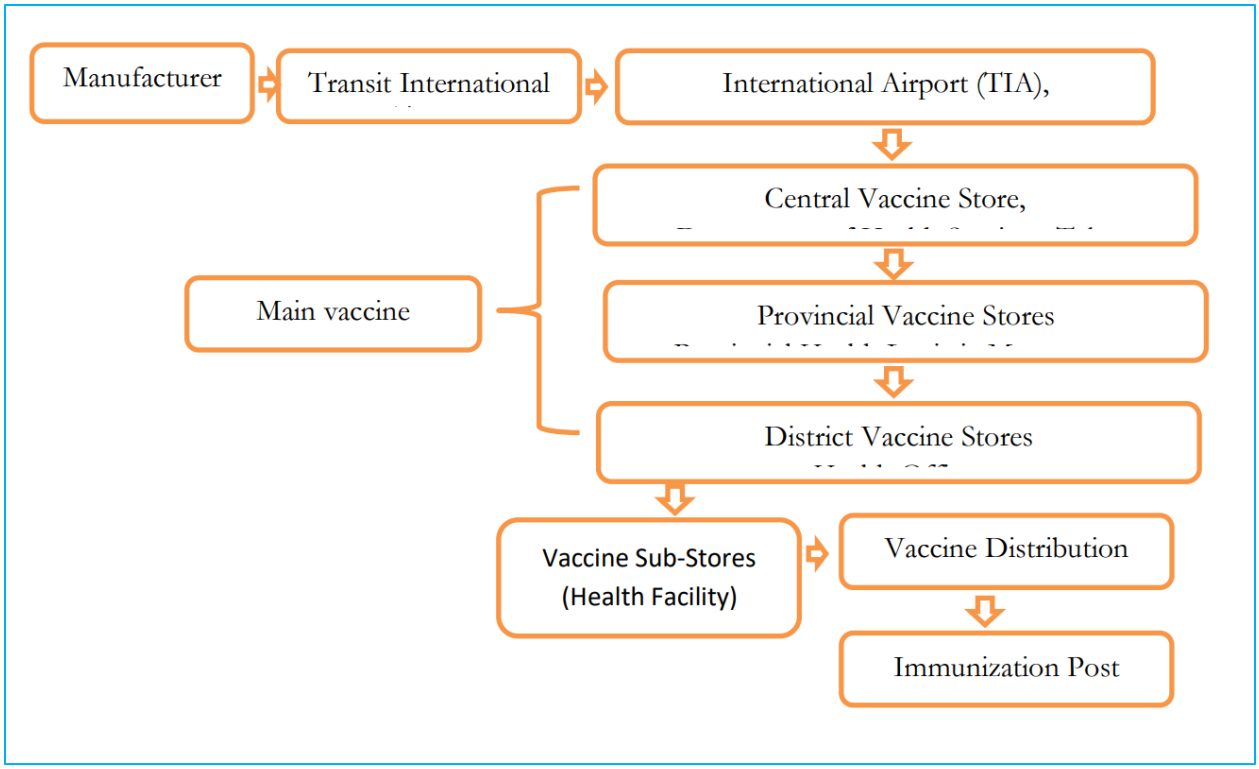

Figure 42: Vaccine delivery flow in Nepal[37]

[37] Reproduced from MoHP. 2021

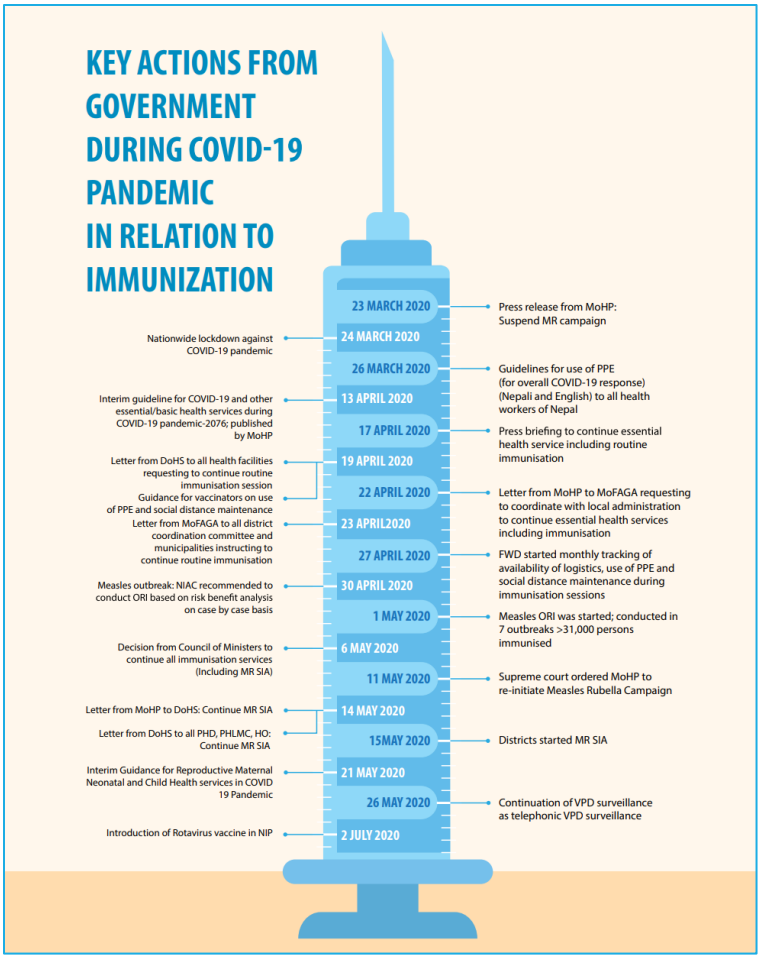

Figure 43: Key government actions related to immunization during COVID

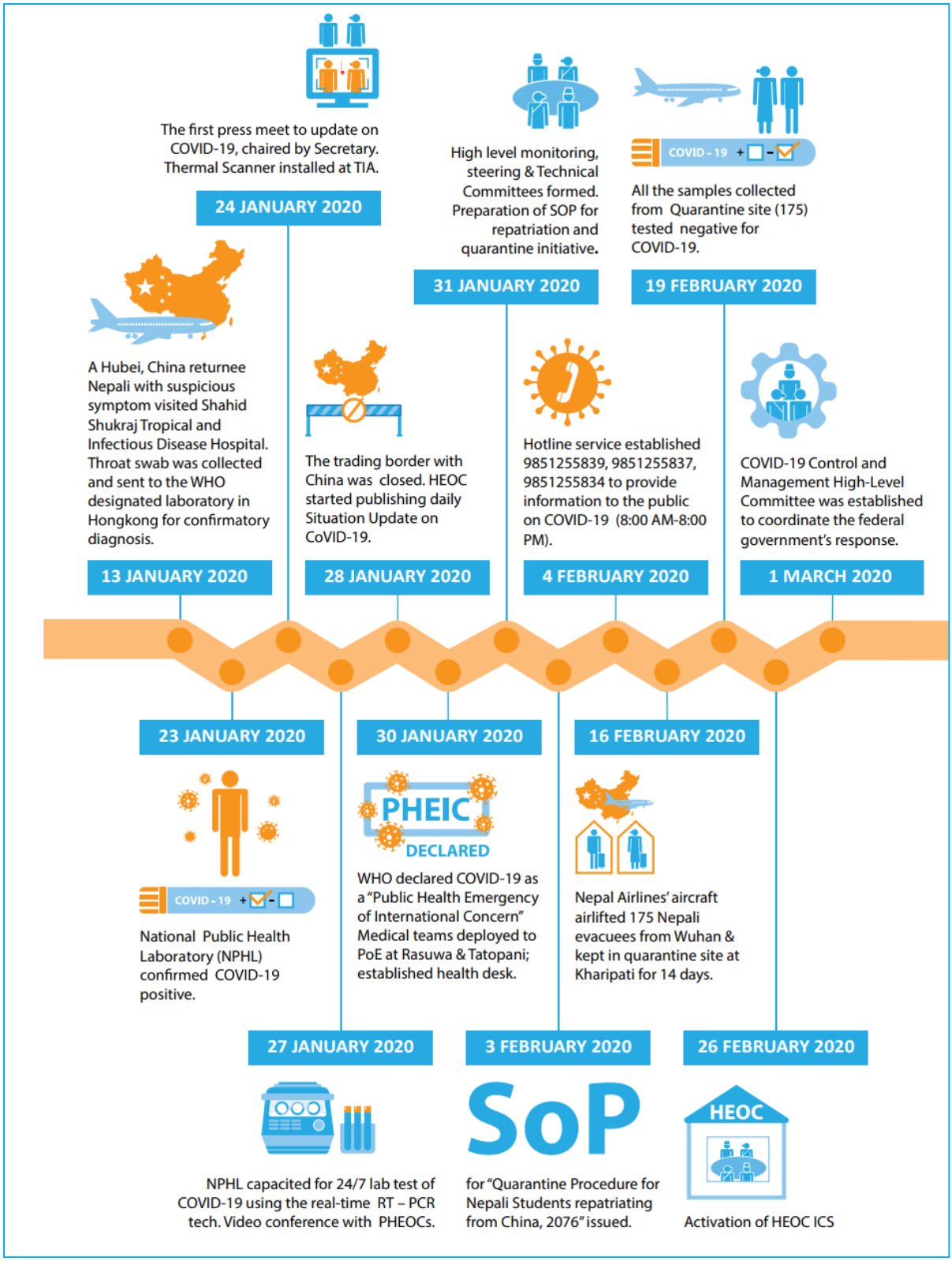

Figure 44: Timeline of initial government response (Jan 2020-Feb 2020)[38]

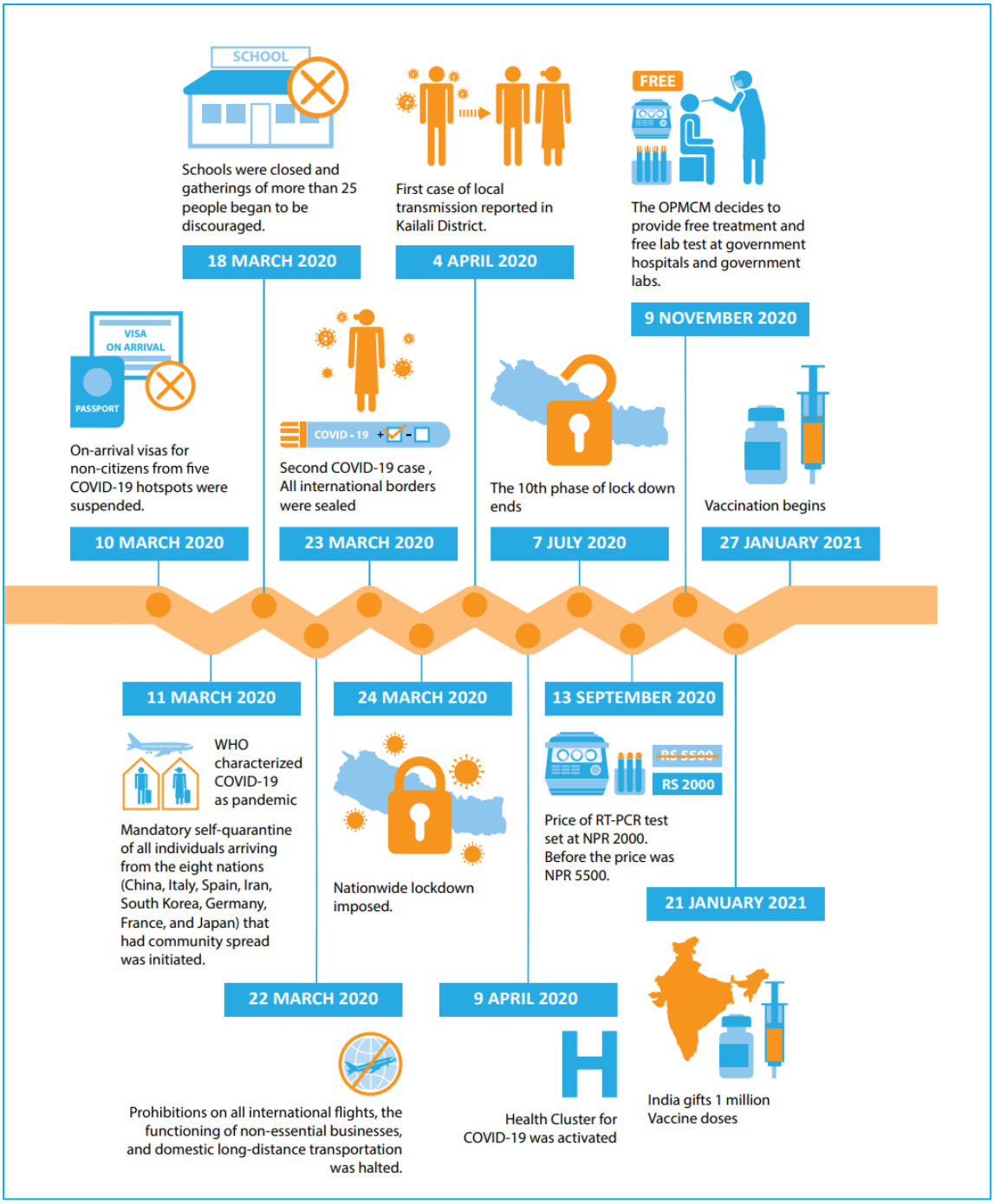

Figure 45: Timeline of government response (Mar 2020-Jan 2021)[39]

[38] Reproduced from MoHP. 2022b.

[39] Reproduced from MoHP. 2022b.