Mitigating the Indirect Effects of COVID-19 on Reproductive, Maternal, Newborn, Child, Adolescent and Ageing Health (RMNCAAH) Services in Uganda

FINAL REPORT

March 2021

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LIST OF ACRONYMS

ANC	Antenatal Care
ART	Antiretroviral Therapy
CHWs	Community Health Workers
DHIS2	District Health Information System 2
DHSS	District Health System Strengthening
DHT	District Health Team
DLG	District Local Government
DLT	District League Table
DLT	District League Table
HC	Health Centre
HFA	Health Facility Assessment
HFQAP	Health Facility Quality Assurance Program
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
HRIS	Human Resource Information Software
HSD	Health Sub-District
HSS	Health System Strengthening
HUMC	Health Unit Management Committee
ITC	Inpatient Therapeutic Care
M&E	Monitoring and Evaluation
MoH	Ministry of Health
QoC	Quality of care
RDT	Rapid Diagnostic Test
SAM	Severe Acute Malnutrition
SARA	Service Availability and Readiness Assessment
SDG	Sustainable Development Goal
UNICEF	United Nations International Children's Emergency Fund
VHT	Village Health Team
WHO	World Health Organization

ACKNOWLEDGEMENT

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Special recognition is made of the efforts of all the individuals who participated in the interviews including Commissioners, Heads of Departments, Program Managers and Coordinators at the Ministry of Health and chairpersons of the Technical Working Groups for Family Planning, Adolescent Health, Maternal and Child Health, and Newborn health, among others. We wish to thank the members of the District Health Teams and the field teams for facilitating the documentation.

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EXECUTIVE SUMMARY

Background

As countries progress through the different phases of the COVID-19 pandemic, health systems are increasingly and variably challenged to effectively manage the pandemic while maintaining essential health services. The goal of this project was to contribute to prevention of increase in morbidity and mortality among vulnerable populations through preventing decrease in utilization of essential services for Reproductive, Maternal, Newborn, Child, Adolescent and Ageing Health (RMNCAAH). The specific objectives of the project were:

1. To collate evidence-informed strategies for mitigating the indirect effects of COVID-19 on the 5 vulnerable population groups
2. To use the existing models to assess the indirect effects of COVID-19 on provision and/or utilization of essential health services to the vulnerable groups which are informed by recent data or guidance, are relevant for country programming and are used for policy dialogue and planning.
3. To document strategies implemented at national level and sub national levels, including experiences of different stakeholders, and share lessons learned rapidly.
4. To document stakeholders' experiences, best practices and challenges in the implementation of strategies/innovations for maintaining core MNCAAH services.
5. To use routinely collected data on priority indicators to monitor the indirect effects of COVID-19 on essential MNCAAH services and to inform corrective action.

Project outputs

The key project activities and outputs for each objective are summarized in the Table below.

No.	Objective	Key activities/outputs
1	**To collate evidence-informed strategies for mitigating the indirect effects of COVID-19 on the 5 vulnerable population groups**	
		• Reviewed key relevant policy documents, guidelines, and reports, including the WHO guidance on the continuation of RMNCAAH, PEPFAR technical guidance in the context of COVID-19 pandemic, MoH COVID-19 preparedness and response plan, MoH guidance on CEHS and the MoH guidelines for the management of COVID-19, among others. • Integrated the key strategies for maintaining RMNCAAH service delivery and utilization into the overall synthesis report.
2	**To use the existing models to assess the indirect effects of COVID-19 on provision and/or utilization of essential health services**	
		• Attended series of trainings on the Lives Saved Tool (LiST) analysis which is a mathematical modeling tool used to estimate the impact of coverage change on mortality in LMICs. • Partnered with UNICEF to conduct a risk-benefit analysis to estimate lives saved through maintaining EHS and lives lost

		through increased risk of infection. • Comprehensive LiST analysis is still ongoing. A detailed report of the LiST analysis will be shared separately with key stakeholders including the MoH, the WHO AFRO office, and the WHO County Office.
3	**To document strategies implemented at the national level and sub-national levels, including experiences of different stakeholders, and share lessons learned rapidly**	
		• Attended several technical working group (TWG) meetings at MoH. These included Newborn TWG, MCH cluster, Family Planning (FP), Adolescent Health (ADH) and Safe motherhood TWG, among others. • Reviewed and synthesized minutes of the TWG meetings on continuity of RMNCAAH services. • Attended virtual scientific conferences to document strategies for CEHS across the country. • Advocated for the dissemination of measures for continuity of RMNCAACH services by Implementing Partners. This led to the first-ever FP webinar with a focus on measures for continuity of maternal and Child Health services. • Held series of discussions with MoH about the need to form a TWG for healthy ageing. • Generated a report on the synthesis of strategies for RMNCAAH services and shared it with the MoH, the WHO AFRO office, and the WHO County Office. • Prepared and shared monthly reports for strategies for maintaining RMNCAAH service delivery and utilization with the WHO AFRO office
4	**To document stakeholders' experiences, best practices, and challenges in the implementation of strategies/innovations for maintaining core MNCAAH services.**	
		• Developed an expert interview guide based on measures for CEHs for the 5 sub-populations, pre-tested the guide, shared with the WHO AFRO office. • Conducted expert interviews with relevant Government officials, representatives from different Health Development Partners (HDPs) and Civil Society Organizations (CSOs), and health care providers. • Integrated the stakeholder experiences and best practices into the overall synthesis report
5	**To use routinely collected data on priority indicators to monitor the indirect effects of COVID-19 on essential MNCAAH services and to inform corrective action**	
		• Abstracted data on key RMNCAAH indicators from the District Health Information Software (DHIS2) for 2 years (2019 and 2020). The comparison was made to account for seasonality. • Analyzed the data to show monthly trends in RMNCAAH service delivery and utilization.

		• Periodically presented RMNCAAH service delivery and utilization trend analyses to the MoH CEHS committee and other TWGs. • Prepared and shared monthly RMNCAAH service delivery and utilization trend analyses reports with the WHO AFRO office and the WHO County Office.

Overall, the key outputs for this project included the following:

a) A synthesis of strategies for mitigating the indirect effects of COVID-19 on RMNCAAH services in Uganda.
b) Trend analyses for Key RMNCAAH service delivery and utilization indicator data for 2019 and 2020.
c) LiST analysis for estimating the lives saved through maintaining EHS and lives lost through increased risk of infection.

a) Synthesis of strategies for maintaining essential health services:
The findings show that several strategies were implemented at the different levels of the health care system to enable continuity of RMNCAAH services. A robust national-level coordination committee to ensure continuity of essential health services was established early on in the pandemic. This comprised of the various technical programmes/departments in MoH, HDPs and IPs, among others. In addition, TWGs of the specific RMNCAAH programs were reinvigorated. At the sub national level, District Task Force sub-committees on essential health services were formed in all the districts across the country in tandem with the national level committee in order to ensure decentralization of the response efforts. The key responsibilities of the National and subnational level committees were to (i) identify and prioritize essential health services, monitor delivery of the services, (iii) guide optimization of service delivery including designing of effective patient flow, redistribution of health workforce and essential medicines and health supplies and linking with the HDPs to keep abreast with the strategic, programmatic and operational adjustments in delivery of essential services.

b) Trend analyses for Key RMNCAAH service delivery and utilization indicator data.
Overall, the national data showed a decline in utilization of key RMNCAAH services, particularly during the national lockdown period. The major factors reported to have contributed to the drop in the coverage and utilization of these services were related to accessibility and economic challenges, including but not limited transportation difficulties and suspension of some community health services. Due to the ban on both public and private means of transport, many women were unable to access the facilities. In addition, the transport restrictions hindered access and availability of healthcare providers, either by not reporting to work or reporting late. Furthermore, the transportation difficulties paralyzed key service delivery activities particularly outreaches which contribute a great deal in increasing access to and utilization of services. It is important to note that utilization of most of the essential health services was restored to the pre-lockdown levels following the phased easing on the national lockdown in June 2020.

c) Lives Saved Tool (LiST) analysis:
LiST is a mathematical modeling tool used to estimate the lives saved due to continuity of essential health services and the lives lost due to increased risk to infection. MakSPH, in

collaboration with UNICEF is undertaking a comprehensive LiST analysis that involves the following key steps (i) retrospective assessment of the impact of COVID-19 on mortality, (ii) prospective assessment of the impact of COVID-19 on mortality, (iii) highlighting intervention disruption that results in greatest mortality impact and (iv) use of the findings to inform policy and practice. A joint comprehensive report of the LiST analysis will be compiled separately and shared with all the key stakeholders.

Conclusions

- A multisectoral response to ensure continuity of RMNCAAH service delivery and utilization was adopted at all levels of the health care system in the country. Several strategies and innovations were adopted in different contexts. Although the health system response may have been compromised by the inherent infrastructure, human resource and logistical challenges, the coordination and capacity enhancement mechanisms put in place across the various levels of the health care system are commendable.
- Although there was a general drop in some key RMNCAAH services delivery and utilization during the early phases of the pandemic which was largely due to economic and accessibility challenges, there is evidence that service delivery and utilization have been restored to the pre-pandemic levels.
- There were no explicit coordination mechanisms and interventions for the ageing population.

Recommendations

- Government efforts to increase funding for response to public health emergencies are required. There is need to increase the national budget to the health sector, including funding for health workforce capacity enhancement and essential medicines, supplies and equipment, as well as improving the infrastructure for RMNCAAH service delivery.
- There is need to develop a national communication strategy for COVID-19. This should include a review of the current information, education and communication materials and development of key messages and interventions for social mobilization to increase awareness and demystify the fallacies about COVID-19.
- There is need to establish a functional technical working group for the ageing population to coordinate response for healthy ageing.

1.0 INTRODUCTION AND BACKGROUND

1.1 Introduction

The COVID-19 pandemic is posing unprecedented challenges to health systems (1). As countries progress through the different phases of the pandemic, health systems are increasingly and variably facing pressure to effectively manage the pandemic while maintaining essential health services (2, 3). Whereas efforts to mitigate the direct impact of the pandemic on population health are imperative, evidence suggests that the most important effects of the COVID-19 pandemic will be indirect. In multiple settings, access to and utilization of essential health services have been compromised, making pregnant women, mothers, newborn, children and older adults very vulnerable. In addition, the uncertainty associated with job losses, food insecurity, school closures, and social care service discontinuations are disrupting family and community relationships, hamper opportunities for children, adolescents and young adults, and negatively affect people's mental health and violence in communities (3).

Models have estimated that disruption to essential services lasting up to 12 months could lead to as many as 2.3 million additional deaths in children under the age of 5 in low- and middle-income countries. Early evidence suggests that during the pandemic, children and adolescents are at a greater risk of depression and anxiety, and sexual and reproductive health problems, such as unintended pregnancy and intimate partner violence. School closures have had dramatic impacts on adolescents' access to preventive services such as vaccination (1). The COVID-19 pandemic could disrupt access and utilization of critical Reproductive, Maternal, Neonatal, Child, Adolescent and Ageing Health (RMNCAH) services such as comprehensive Emergency Obstetric and New-born Care (cEmONC) services, antenatal care, deliveries, family planning services, immunization and management of childhood illnesses, among others. Older people, particularly those with underlying health conditions, are at higher risk of serious health outcomes and death from COVID-19 and are more vulnerable to many of the indirect consequences of the pandemic (4). Movement restrictions may disproportionately affect older people since they are more likely to have ongoing needs for medication and care (1).

1.2 Background to the COVID-19 Response in Uganda

On March 18, 2020, the Government of Uganda (GoU) instituted several measures as part of a health emergency response plan to control the COVID-19 pandemic. The measures included but were not limited to closing entry points in the country, institutional quarantine for travelers from high risk countries, restriction on liberties and suspension of both public and private social services, such as public gatherings, public transport, closure of schools and places of worship, among others. Three days later, the first case of COVID-19 was reported in the country on March 21, 2020. Additional restrictive measures which were implemented in other countries to contain the spread of the disease and constituted a national lockdown were put in place. Once the lockdown was initiated, the GoU quickly set up institutional arrangements required to adequately respond to the pandemic. The Uganda National Security Council set up a multisectoral National Task Force (NTF) which is led by the President, deputized by the Prime Minister and has representatives from the Ministry of Health, Internal Affairs, Defense, Works and Transport, Trade and Industry, Information, Communication and Technology, Kampala Capital City Authority (KCCA) and the private sector. In addition, there was a rapid pooling and allocation of funds and development of operational guidance to the health system stakeholders. Further, the

COVID-19 response included revitalization of the district emergency response structures such as the incident management teams and the district emergency task forces.

The Ministry of Health (MoH) adopted a WHO emergency health program that prepares health facilities and communities for the spread of the virus. Particularly, the program aimed to prepare health facilities for a significant increase in the number of COVID-19 cases while maintaining the provision of essential health services and included: (i) disseminating guidance to healthcare providers for COVID-19; (ii) implementing triage, early detection, administrative, environmental and engineering controls and personal protective equipment to reduce the risk of exposing other persons or patients to COVID-19; (iii) prioritizing treatment for severe and high-risk patients; managing demands on staff, facilities, and supplies; (iv) supporting comprehensive medical, nutritional, and psycho-social care for people with COVID-19; and (v) maintaining routine and emergency health service provision for the population, among others (5).

To-date, there has been commendable response to the pandemic in Uganda. The number of new COVID-19 cases have significantly reduced (Figure 1). The country has started receiving vaccines for COVID-19 which are expected to further change the dynamics of the pandemic.

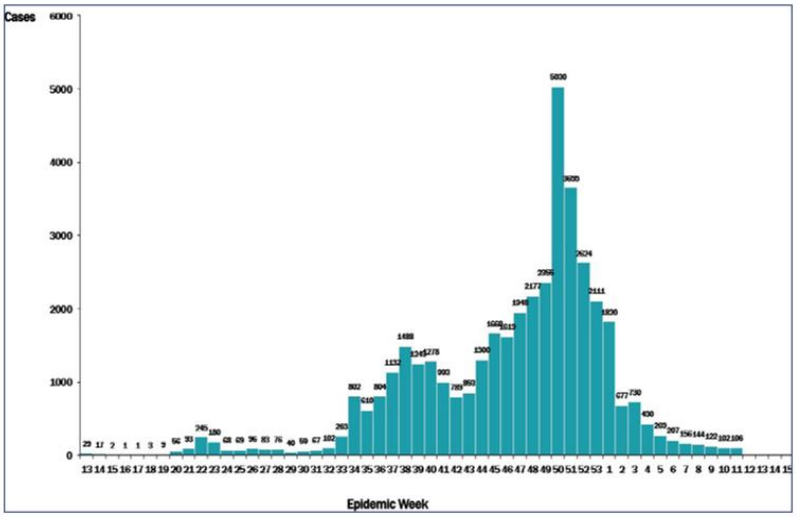

Figure 1. Weekly COVID-19 cases in Uganda

1.3 Rationale

Although the readiness of African countries for the COVID-19 pandemic has been commended in some literature including capacity enhancement and coordination mechanisms (6), the health system response to COVID-19 in Africa is compromised by recognized inherent challenges of health systems such as weak capacity especially for critical care, scarcity of key resources and high burden of other health conditions like HIV/AIDS, Tuberculosis and malnutrition (7). These challenges support the invaluable need for aggressive containment and preventive measures, which many countries have extensively focused on. The intensive focus on pandemic control measures poses a threat of overshadowing or compromising consistent delivery of other health services to maintain health in the general population. This may not only increase mortality but

may also affect quality of life and increase health-related suffering as indicated by previous pandemics (8, 9).

As cases of COVID-19 continue to rise amidst key unknowns about the diseases such as lack of a definitive management, health systems are challenged to ensure effective management of the pandemic but also continue to provide routine health services. The changes mandated in the containment strategies have not only had negative social and economic consequences but may also have had negative implications on the access and utilization of MNCAAH services.

The WHO advised countries to identify context-relevant essential health services that will be prioritized for continuation during the acute phase of the COVID-19 pandemic so as to limit the indirect morbidity and mortality and prevent acute exacerbations of chronic conditions when health services are disrupted (1). The failure to protect vulnerable population groups such as women of reproductive age, pregnant women, new born, children, adolescents and older adults puts them at a higher risk of infection and undermines the broader COVID-19 response (1). Services for sexual and reproductive health; maternal, newborn, and child and adolescent health; and the health of older people will require modifications as access to and the availability of essential services shifts during the COVID-19 outbreak (5). To minimize secondary impact of COVID-19-specific responses on essential health services, and in particular upon MNCAAH, it is essential to monitor any changes in mortality and morbidity among women and children that may result from reduced access to, or coverage of, services, and to understand what is driving such change. Should significant changes be identified, further information will be necessary to identify the causes and guide remedial actions (10). To minimize the secondary impact of COVID-19 pandemic, specific responses on essential health services, particularly RMNCAAH services should be prioritized and documented to guide future response to similar public health emergencies.

1.4 Theoretical framework

The project drew on the adaptive epidemic response (AER) framework which shows the critical steps and processes in a response to a pandemic as well as the various evaluation dimensions on which these can be assessed. The AER framework presents key elements and activities that are primarily relevant to the decision-makers in the midst of a pandemic but may also be used to guide post-response evaluations (11).

The lower horizontal logic of the framework focuses on three components of a response; design, implementation and performance while the upper horizontal logic depicts the key steps of analyses including context, intervention, process, performance and impact analysis. The context analysis includes the social, political and economic factors that may affect the course of the pandemic. The intervention analysis considers the suitability and feasibility of possible interventions. The process analysis considers if the interventions are implemented as planned. Performance analysis considers whether the response is achieving its intended outputs and outcomes. Impact analysis is undertaken to evaluate the response's impact on morbidity, mortality and re-occurrence. Other aspects of the framework include the optimization pathway in which the positive outcomes are re-inforced through scale up of interventions and improvements and the modification pathway through which the negative outcomes are managed by changing the interventions that have caused them (11) (Figure 2).

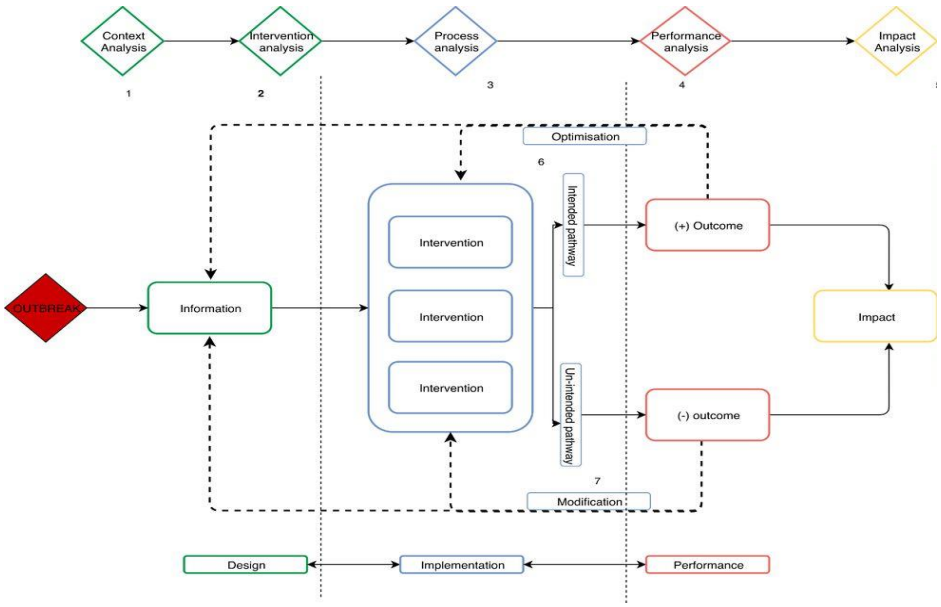

Figure 2. The adaptive epidemic response (AER) framework.

1.5 Goal and objectives

1.5.1 Goal

The goal of the project was to contribute to prevention of increase in mortality, morbidity, malnutrition, mental and physical ill health among vulnerable populations through preventing decrease in utilization of essential services for RMNCAAH. This will require ensuring continued delivery and utilization of essential health for RMNCAAH and adopting effective strategies to prevent the decrease in utilization of services.

1.5.2 Specific objectives

1. To collate evidence-informed strategies for mitigating the indirect effects of COVID-19 on the 5 vulnerable population groups
2. To use the existing models to assess the indirect effects of COVID-19 on provision and/or utilization of essential health services to the vulnerable groups which are informed by recent data or guidance, are relevant for country programming and are used for policy dialogue and planning.
3. To document strategies implemented at national level and sub national levels, including experiences of different stakeholders, and share lessons learned rapidly.
4. To document stakeholders' experiences, best practices and challenges in the implementation of strategies/innovations for maintaining core MNCAAH services.
5. To use routinely collected data on priority indicators to monitor the indirect effects of COVID-19 on essential MNCAAH services and to inform corrective action.

These objectives were pursued through five streams of work shown in Figure 3 below.

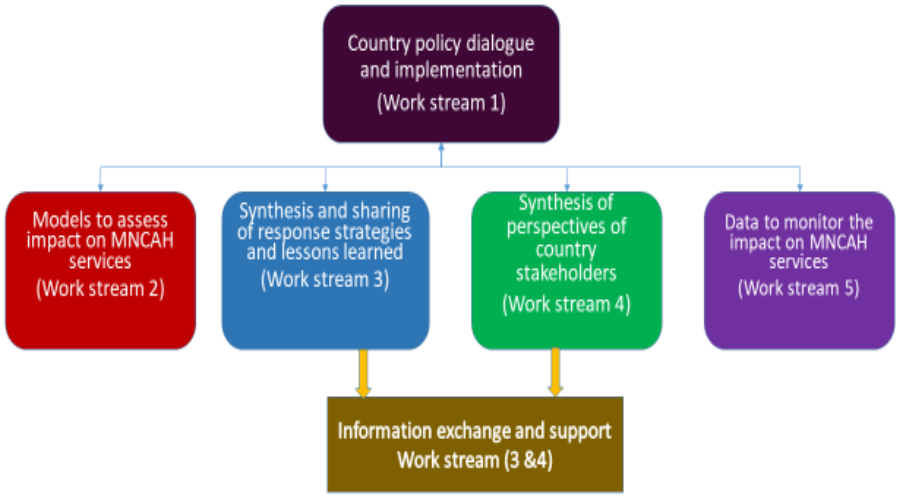

Figure 3. Streams of work

2.0 PROJECT OUTPUTS

The key project activities and outputs for each objective are summarized in Table 1 below.

Table 1. Key project activities/outputs by objective

No.	Objective	Key activities/outputs
1	**To collate evidence-informed strategies for mitigating the indirect effects of COVID-19 on the 5 vulnerable population groups**	
		• Reviewed key relevant policy documents, guidelines, and reports, including the WHO guidance on the continuation of RMNCAAH, PEPFAR technical guidance in the context of COVID-19 pandemic, MoH COVID-19 preparedness and response plan, MoH guidance on CEHS and the MoH guidelines for the management of COVID-19, among others. • Integrated the key strategies for maintaining RMNCAAH service delivery and utilization into the overall synthesis report.
2	**To use the existing models to assess the indirect effects of COVID-19 on provision and/or utilization of essential health services**	
		• Attended series of trainings on the Lives Saved Tool (LiST) analysis which is a mathematical modeling tool used to estimate the impact of coverage change on mortality in LMICs. • Partnered with UNICEF to conduct a risk-benefit analysis to estimate lives saved through maintaining EHS and lives lost through increased risk of infection. • Comprehensive LiST analysis is still ongoing. A detailed report of the LiST analysis will be shared separately with key stakeholders including the MoH, the WHO AFRO office, and the WHO County Office.
3	**To document strategies implemented at the national level and sub-national levels, including experiences of different stakeholders, and share lessons learned rapidly**	
		• Attended several technical working group (TWG) meetings at MoH. These included Newborn TWG, MCH cluster, Family Planning (FP), Adolescent Health (ADH) and Safe motherhood TWG, among others. • Reviewed and synthesized minutes of the TWG meetings on continuity of RMNCAAH services. • Attended virtual scientific conferences to document strategies for CEHS across the country. • Advocated for the dissemination of measures for continuity of RMNCAACH services by Implementing Partners. This led to the first-ever FP webinar with a focus on measures for continuity of maternal and Child Health services.

		• Held series of discussions with MoH about the need to form a TWG for healthy ageing. • Generated a report on the synthesis of strategies for RMNCAAH services and shared it with the MoH, the WHO AFRO office, and the WHO County Office. • Prepared and shared monthly reports for strategies for maintaining RMNCAAH service delivery and utilization with the WHO AFRO office
4	**To document stakeholders' experiences, best practices, and challenges in the implementation of strategies/innovations for maintaining core MNCAAH services.**	
		• Developed an expert interview guide based on measures for CEHs for the 5 sub-populations, pre-tested the guide, shared with the WHO AFRO office. • Conducted expert interviews with relevant Government officials, representatives from different Health Development Partners (HDPs) and Civil Society Organizations (CSOs), and health care providers. • Integrated the stakeholder experiences and best practices into the overall synthesis report
5	**To use routinely collected data on priority indicators to monitor the indirect effects of COVID-19 on essential MNCAAH services and to inform corrective action**	
		• Abstracted data on key RMNCAAH indicators from the District Health Information Software (DHIS2) for 2 years (2019 and 2020). The comparison was made to account for seasonality. • Analyzed the data to show monthly trends in RMNCAAH service delivery and utilization. • Periodically presented RMNCAAH service delivery and utilization trend analyses to the MoH CEHS committee and other TWGs. • Prepared and shared monthly RMNCAAH service delivery and utilization trend analyses reports with the WHO AFRO office and the WHO County Office.

Overall, the key outputs for this project are:

- A synthesis of strategies for mitigating the indirect effects of COVID-19 on RMNCAAH services in Uganda.
- Trend analyses for Key RMNCAAH service delivery and utilization indicator data for 2019 and 2020.
- LiST analysis for estimating the lives saved through maintaining EHS and lives lost through increased risk of infection.

These key outputs are detailed below:

2.1 Synthesis of strategies for maintaining RMNCAAH services.

A documentation of the various strategies and innovations implemented at the national and sub-national levels, including experiences of the different stakeholders, best practices, and challenges in maintaining RMNCAAH services in the context of COVID-19 was done. Data were collected at National and subnational levels through document review and expert interviews with Government officials, representatives of Health Development Partners (HDPs) and Civil Society Organization (CSOs), District Health Officers (DHOs) and health service providers. In addition, strategies for continuity of RMNCAAH services were documented through participation in the various Technical Working Group (TWGs) meetings, workshops and conferences on RMNCAAH.

The findings show that several strategies were implemented at the different levels of the health care system to enable continuity of RMNCAAH services. A robust national-level coordination committee to ensure continuity of essential health services was established early on in the pandemic. This comprised of the various technical programmes/departments in MoH, HDPs and IPs, among others. In addition, TWGs of the specific RMNCAAH programs were reinvigorated. At the sub national level, District Task Force sub-committees on essential health services were formed in all the districts across the country in tandem with the national level committee in order to ensure decentralization of the response efforts. The key responsibilities of the National and subnational level committees were to (i) identify and prioritize essential health services, monitor delivery of the services, (iii) guide optimization of service delivery including designing of effective patient flow, redistribution of health workforce and essential medicines and health supplies and (iii) linking with the HDPs to keep abreast with the strategic, programmatic and operational adjustments in delivery of essential services.

Below, a summary of the various strategies that have been and/or are being used to ensure continuity of RMNCAAH services are presented according to the specific RMNCAAH programs including family planning, maternal health, child health, newborn health, adolescent health, and HIV/AIDS. For each of these programs, the strategies are presented according to the levels of development and implementation, national and sub-national levels.

2.1.1 National level

- **Formation of a National COVID-19 Taskforce:** The initial response to the pandemic involved formation of a NTF as earlier highlighted. Within the NTF, eight pillars of the response, each with a committee were constituted. These included (i) leadership, stewardship and coordination; (ii) case management, (iii) surveillance and laboratory; (iv) strategic information, research and innovation; (v) risk communication and social mobilization; (vi) logistics and operations, (vii) community engagement and social protection (viii) continuity of essential health services (CEHS) (Figure 4). The MoH, in close collaboration with partners in the NTF, provides technical guidance in the COVID-19 response efforts. Accordingly, MoH developed a National COVID-19 Preparedness and Response Plan which was modeled on the guidance of WHO for country-level preparedness and response.

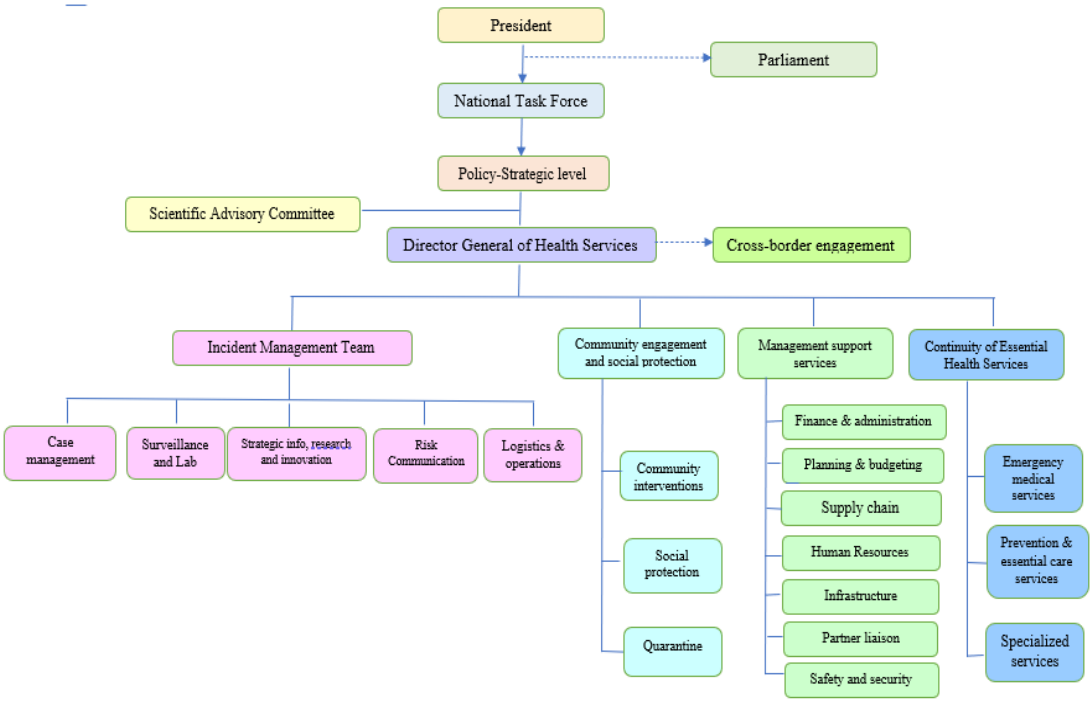

Figure 4. National COVID-19 Response Structure (Source: MoH Uganda)

The National COVID-19 Preparedness and Response Plan is structured on the eight pillars which are summarised in Table 1 below:

Table 1. Pillars of the National COVID-19 Response

No	Pillar
1	**Leadership, stewardship and coordination**
	This is responsible for providing strategic direction, mobilizing resources and providing an oversight function to ensure accountability and transparency
2	**Case management**
	This place emphasis on managing COVID-19 cases, prevention and strengthening infection prevention and control (IPC) practices including water, sanitation and hygiene at health facilities, institutions and communities.
3	**Surveillance and laboratory**
	This pillar focuses on integrating surveillance for COVID-19 in the existing surveillance systems (point of entry, community-based, facility-based, laboratory-based and sentinel surveillance). Surveillance and reporting capacities were enhanced at all points of entry and mandatory testing was introduced for all people coming in the country and for those in isolation in designated facilities. Institutional quarantine centers were established at districts. Sample analysis was conducted at the Uganda Virus Research Institute and mobile labs were deployed at border posts.

4	**Strategic information, research and innovation**
	This pillar entails performing data management and analyses and conducting research to provide strategic information for evidence-based decision making and use and adaptation of technological innovations to support timely and appropriate response to the pandemic.
5	**Risk communication and social mobilization**
	This pillar entails key messages and interventions for social mobilization to raise awareness about COVID-19 among the public
6	**Logistics and operations**
	The supplies, logistics and operations required for effective response to the pandemic are outlined in this pillar
7	**Community engagement and social protection**
	This pillar targets delivery of health services and addressing the social needs of the population
8.	**Continuity of essential health services**
	This pillar focuses on maintaining essential health service delivery and utilization while adequately responding to the pandemic

- **Development of guidelines for CEHS:** The MoH developed guidelines for CEHS during the early phases of the pandemic which were disseminated virtually across the country. Later, the MoH embarked on district-based training and dissemination of the CEHS guidelines across all the districts in the country. To ensure continued access and utilization of RMNCAAH services, key CEHS messages were integrated into the RMNCAH training at all levels. In collaboration with key stakeholders including WHO, UNICEF, UNFPA and PEPFAR, the MCH department of MoH developed specific guidelines for continuation of RMNCAH services. This was followed by development of guidelines for the specific RMNCAAH programs including Family Planning, ANC, MCH, PNC with specific recommendations for each of the programs. The key guidelines developed are summarised in Table 2 below.

Table 2. Key guidelines developed for specific RMNCAH programs.

No	Specific guideline
1.	Guidance on Continuity of Essential Health Services during the COVID-19 outbreak
2.	Guidance on care during pregnancy, delivery and postnatal care in the context of COVID-19
3.	Guidance on continuation of immunization services during the COVID-19 outbreak
4.	Guidance for a revised implementation of Integrated Community Case Management

	of childhood illnesses (ICCM) during the COVID-19 outbreak
5.	Guidance on continuity of nutrition services in the context of COVID-19
6.	Guidance for the Integrated Management of Acute Malnutrition in the context of COVID-19
7.	Guidance on Malaria prevention, diagnostic and treatment activities in the context of COVID-19
8.	Guidance on HIV prevention, diagnostic and treatment activities in the context of COVID-19
9.	Guidance on Tuberculosis prevention, diagnostic and treatment activities in the context of COVID-19
10.	Guidance for Sexual and Reproductive Health and Rights: Access to Modern Contraceptives in the context of COVID-19
11.	Guidelines on providing mental Health and Psychosocial during Covid-19 Pandemic Response
12.	Guidelines on provision of sexual reproductive health, HIV and gender based violence services in the context of COVID-19
13.	Interim Guidelines for continuity of care and wellbeing of adolescent and young people during Covid-19 Outbreak;
14.	District response and readiness checklist-COVID-19
15.	Home based care and continuity of essential health services in the face COVID-19 pandemic.

- **Strengthening the existing Technical Working Groups (TWGs):** TWGs for specific RMNCAH programs such as sexual and reproductive health (SRH), maternal and child health (MCH), family planning, newborn, and immunization TWGs, among others were strengthenedd. This included convening weekly meetings to review and discuss the status of the specific programs across the country, and to provide appropriate recommendations.
- **Prioritization of essential health services*:*** The CEHS Committee prioritized essential health services for continuity and these included RMNCAH; gender-based violence (GBV) including violence against children (VAC) and violence against women (VAW); infectious diseases including HIV, Tuberculosis, and malaria, and non-communicable diseases including diabetes mellitus, hypertension and cancers.
- **Resource mobilization:** The country's response to the pandemic was financed through domestic resources, loans, development partners and individual contributions. Budget allocations were made to the health sector, to the national and regional referral hospitals and to the districts. There was a re-allocation of funds from various sectors to the COVID-19 response.

2.1.2 Sub-national level

At the sub national level, District COVID-19 Taskforces (DTFs) were established to coordinate district-level response to the pandemic. Within the DTFs, sub committees on CEHS were formed to (i) assess and monitor ongoing delivery of EHS, (ii) identify and prioritize essential health

services, (iii) guide optimization of service delivery, (iv) guide establishment of effective patient flow, (v) develop guidance on re-distribution of health work force and essential medicines and health supplies and (vi) liaise with the district health development partners and mobilize support for the implementation of essential health services. Across all the districts, the findings showed all the DTF sub committees on CEHS had work plans and budgets for continuation of essential services. During the national lockdown, it was established that some of the key response actions to ensure CEHS undertaken by the DTFs included transportation of health workers to health facilities, facilitation of referral of pregnant women from hard to reach communities to health facilities; community sensitization on seeking of health services, including community distribution of family planning methods, antiretroviral drugs and other essential supplies. The DTFs also supported the community COVID-19 Task Force, particularly the Village Task Forces to enforce adherence to MoH guidelines at the household level and other places of public gatherings such as markets, places of worship and meetings, among others.

2.1.3 Health facility level

- **Capacity building of healthcare providers in clinical and public health response to the pandemic:** The MoH trained a pool of national multidisciplinary CEHS trainers who later cascaded the training to regional and district hospitals, and then the lower level health facilities. It was envisaged that the training of all healthcare providers in CEHS would enable continued access and utilization of RMNCAH services. The teams of trainers comprised of a physician, obstetrician, midwife, nurse and anesthesiologist/anesthetist.

- **Modification in health services delivery across health facilities:** Health service delivery points that tend to be congested such as the outpatient departments, immunization centers and ANC clinics were re-organized to allow for observance of the COVID-19 standard operating procedures including triaging of patients with symptoms, social distancing, hand washing and sanitizing and wearing of face masks. During integrated community outreaches, services were provided in an open air environment and restrictions on the number of clients to be served at a time were imposed.

Specific RMNCAAH programs

a) Family planning services

National level:

- **Adoption of e-capacity building strategy:** To ensure continued capacity building of healthcare providers in family planning service provision, there was a shift from the classroom-based to online training by some civil society organizations (CSOs), while other partners have embraced conducting mentorships in an open space within the premises of the health facility, in addition to a shift the from group-based to one-on-one mentorship model.

District level:

- **Provision of information on access to FP commodities:** At the district level, radio and television stations were used to reach women and girls with information on how and where to access FP services. Further, information on access to FP services was integrated into some of the messages delivered by the DTFs and the community health workers.

- **Training of FP service providers about FP/SRH service provision in the context of COVID-19**: FP service providers were trained and mentored about the provision of sexual

and reproductive health (SRH) services in general in the context of the COVID-19 guidelines.

- **Re-distribution of FP commodities to districts with shortfalls**: During the initial phases of the pandemic, a drop in FP commodities was observed across most districts, specifically along the Ugandan border districts. In response, the FP commodities were re-distributed to districts with short falls.

Health facility level:

- **Integration of FP services into other health services points***:* Focus was placed on optimizing opportunities for the integration of FP services into other essential health service delivery points namely, postnatal care, immunization, young child clinic, ART clinic, and community-based antiretroviral therapy (ART) delivery. For instance, at community-based ART delivery sites, ARV refills and FP appointments were matched to allow same-day services provision. In addition, FP services were integrated into key population programming through peer leaders who were trained in FP services provision, including community and household refills. Relatedly, health messages on FP services and sexual behavior change communication (SBCC) messages were integrated into COVID-19 public health preventive messages.

- **Specific to postpartum FP services provision:** Some CSOs such as Population Services International (PSI) have integrated information on postpartum FP services into routine ANC delivery and provide appointments or book mothers for postpartum FP during ANC visits. These strategies have enabled early preparation and readiness of expectant mothers for postpartum FP uptake.

- **Strict enforcement of infection prevention and control during FP service provision:** FP service delivery points enforced strict adherence to infection prevention and control (IPC) and COVID-19 standard operating procedures (SOPs). Notable measures include wearing of face masks by all mothers and healthcare providers, mandatory hand hygiene using water and soap or alcohol-based hand sanitizers, and the maintenance of social distance. Across all health facilities, hand washing facilities were installed at all points of entry and exit. These measures helped to allay fear and anxiety among potential and current FP users regarding the possibility of contracting COVID-19 at points of service delivery.

- **Multi-month dispensing of contraceptives*:*** To prevent repeated health facility visits, modifications were made in the dispensing of FP commodities, particularly oral contraceptives. Health facilities embarked on providing women and girls with more than three cycles of oral contraceptives. Women were provided with six cycles of oral contraceptives instead of the usual three cycles.

- **Enhanced use of data to monitor levels of FP commodities:** Health facilities initiated regular monitoring of FP stock levels and placement of timely orders to mitigate shortages. For most RMNCAH services, data on service utilization were routinely reviewed and analyzed across most districts and the results were used to inform context-specific actions for increased FP service utilization, including modifications in FP service delivery. Across most districts, FP supporting HDPs worked with the districts to identify hot spots for COVID-19 and to advocate for FP service provision at such spots, including lending support to monthly FP commodity orders.

- **Re-distribution of FP commodities**: FP commodities from health facilities with high stock levels were re-distributed to health facilities with stock outs to ensure continued FP service provision.

Community-level:

- **Enhanced FP information dissemination:** FP information was included in the list of essential health services during community mobilization and sensitization activities.

- **Use of FP experts and peer leaders to provide and disseminate FP information:** To reach the existing and the potential future FP users with information on FP, some health facilities engaged FP peers and expert clients to provide FP information, education, and counseling at community level. This approach enabled enrolment of new FP users and the continuation of those already using the services. Peer leaders were engaged to provide FP information to younger people at high risk of unwanted/or unintended pregnancies.

- **FP targeted community outreaches:** To bring FP services closer to the people, most health facilities conducted community and/or mobile FP outreaches. In addition to the increased frequency of FP outreaches to ensure good coverage, some health facilities leveraged on the Determined, Resilient, Empowered, AIDS-free, Mentored and Safe (DREAMS) program to provide FP services to adolescent girls and young women at safe spaces. Further, the community health workers (CHWs/VHTs) were trained to offer short term FP methods at the community level. The VHTs were re-stocked with sufficient levels of short-term FP commodities to cover at least 3 months.

- **Use of community-based condom dispensers**: To reach more men, community-based condom dispensers were increased in public places to increase access to condoms. This intervention was strengthened during the pandemic.

b) Maternal Health

National level

Within the MoH, there is a robust MCH cluster and technical area specific TWGs (such as the Adolescent health TWG, MPDSR TWG, FP TWG, Newborn TWG) which meet on a monthly basis. During these meetings, strategic decisions on maintaining MCH service are made. These TWG prioritized continuity of RMNCAAH services during the pandemic to avoid disruptions. A weekly heads of departments meeting was also established to ensure a more coordinated response from the MCH division.

District level

- **Inclusion of MCH on the District COVID-19 Task Force agenda:** MCH focal persons were adopted into the District COVID-19 task force. This strengthened leadership for MCH and ensured a more inclusive decision making, particularly in matters related to MCH service delivery. The MCH focal persons periodically reported matters of MCH services to the District COVID-19 Task Force that enabled timely decision-making regarding continuity of MCH services at the district level.

- **Transportation of pregnant women and health workers:** At the peak of the lockdown, the transportation of pregnant women from the community to the health facility was a huge challenge. The districts worked with the office of the Residence District Commissioner (RDC) who also doubled as the Chairperson of the COVID-19 DTF to provide vehicles for transportation of pregnant women with obstetric emergencies or those in labour. To ease this process, telephone numbers were provided to the different communities to call whenever there was an urgent need to transport pregnant women in labour for delivery or any other emergency services. In addition, the DTFs together with the DHOs' offices organised transportation for health workers who did not have private means of transport. Some of the districts went an extra mile to provide improvised places where the health workers could stay to ensure that service are available at all times.

- Additional measures included: i) Health workers engaged motorcycle taxis (commonly referred to as boda boda) to transport pregnant, post-partum mothers, newborns and children from communities to health facilities in the event of emergencies; ii) Motorcycle taxi riders within the catchment area of health facilities were mapped and linked to pregnant women during ANC services including delivery. In some health facilities, the list of riders was pinned up at the maternity wards so that they could easily be accessed by pregnant women.

- Further, for the hard-to-reach areas, there was a voucher system of transport before the pandemic. During the pandemic, this was strengthened with a wider inclusion criterion for beneficiary women and children. These innovations were implemented in some regions of the country such as Karamoja and West Nile with support from UNICEF.

Health facility level

- **New adjustments in health services delivery:** To effectively implement the COVID-19 SOPs and guidelines while maintaining essential health services delivery, health facilities made structural changes in the provision of health services. For example, young child clinics, special clinics for MCH and HIV services, and daily static immunization services, among others were introduced. These changes have reduced congestion across the health facilities while continuing to provide essential health services. Before the pandemic, many facilities had specific allocated days and time for particular outpatient services but this had to be adjusted.

- **Phone calls:** To ensure continuity in psychosocial support and ART adherence counseling to mothers living with HIV, phone calls were used to reach clients. This was supported by health partners to ensure that efforts for prevention of mother to child transmission of HIV do not get impacted negatively.

- **Revamping of home-based HIV care:** Home-based HIV care was re-instated to enable the continued provision of psychosocial support and ART adherence counseling along with blood sample collection for routine viral load monitoring to gauge the response to ART.

- **Modifications in group ANC (GANC) provision:** GANC standard guidelines require that for pregnant women with or without HIV, each group should consist of 6-12 mothers. During the pandemic, the number per each GANC was reduced to 2-3 members. Besides, the healthcare workers were organized into smaller groups to allow for continual ANC provision.

Women attending GANC members were provided with infection prevention and control materials particularly face masks and GANC provision entailed social distancing and handwashing measures.

- **Triaging of mothers for COVID-19 symptoms**: All patients that sought health services were triaged for symptoms of COVID-19 symptoms, enabling the rapid identification and isolation of cases if any. This measure increased confidence and trust among patients about the effectiveness of the healthcare system as well as among healthcare workers.

Community-level

- **Intensified community outreaches for ANC and PNC:** To ensure continuity of maternal health services particularly ANC and PNC for mothers/or women living with HIV, ANC and PNC services were provided remotely through community outreaches while observing IPC measures of mask-wearing, social distancing, and handwashing using water and soap. Additionally, health facilities integrated PNC services provision into immunization outreaches.

c) Newborn health

National level

- **Development of COVID-19 specific newborn health guidelines:** The Newborn Health Steering Committee developed and disseminated guidelines for continuity of maternal and newborn health services provision in the context of COVID-19.

- **Clinical mentorship to improve MPDSR**: MoH strengthened the reporting of maternal and perinatal deaths and surveillance across health facilities through clinical mentorship of health facility death review committees. This activity was undertaken because MPDSR had declined during the lockdown period.

Health facility level

- **Adherence to respiratory and hand hygiene practices during newborn care:** Adherence to standard precautions especially respiratory and hand hygiene practices were reinforced across health facilities through the development of guidelines and SOPs. Mothers practiced strict adherence to IPC measures, namely wearing face masks or shields, coughing while covering the mouth, handwashing before breastfeeding, and touching the baby among others.

- **Additional use of PPEs:** The wearing of googles was enforced among midwives during newborn care to prevent cross-transmission of COVID-19 within and between mothers, the newborn, and the midwife.

- **Continued implementation of known high impact interventions:** Midwives have continued to emphasize known high impact interventions such as use of partographs for monitoring labor progress, initiation of breastfeeding within the first hour of birth and exclusive breastfeeding, among others.

d) Gender-Based Violence (GBV)

Health facility level

- **Integrated GBV screening:** GBV screening was integrated into immunization, ANC, PNC, and outreach service delivery points. At these various service delivery points, healthcare

providers screened mothers and children for GBV, and the identified survivors were provided care whenever possible or linked to appropriate care elsewhere.

Community-level

- **Introduction of a household early child violence detection tool:** On another front, the Ministry of Education and Sports (MoES) developed a household early child violence detection tool for the screening and identification of VAC. This measure targeted districts with high reported cases of GBV across the country. With support from various partners such as UNFPA, lay counsellors were trained to deal with GBV survivors. They also support the GBV crisis centres and link survivors to the health workers for further care. Health workers were also trained in the GBV tools.

e) Child health

Health facility level

- **Reorganization of child health services:** To be able to implement the COVID-19 SOPs and guidelines effectively while maintaining essential health services, health facilities some structural changes in their provision of health services. Examples include the introduction of young child clinics and special clinics for MCH and HIV services, and the provision of daily static immunization services, among others.

Community-level

- **Increased coverage of immunization services**: Most health facilities have placed focus on improving the coverage of immunization services by increasing the frequency of immunization outreaches and increasing the number of healthcare providers to manage the outreaches. For example, instead of one outreach per week, some health facilities have increased the number of outreaches to 3-5 by created new outreach points in the communities.

- **Line listing of children for immunization**: In some districts, health workers have worked with CHWs and community leaders to identify homes with children eligible for immunization and line list those that require immunization. This approach enabled targeted immunization at the household level.

- **House to house mobilization for immunization:** CHWs have been used to conduct house to house mobilization of mothers and their children under five years for immunization.

- **Integration of COVID-19 SOPs into the iCCM implementation:** Several changes were instituted in the provision of integrated community case management (iCCM) of malaria, diarrhea and pneumonia. The changes include: (i) Sick children were treated in an open area or compound with adequate ventilation and lighting by the CHWs; (ii) CHWs wash their hands with soap and water before and after treating sick children; 3) CHWs disinfect the surfaces and equipment used during the treatment of sick children and practice respiratory hygiene by wearing face masks and covering nose and mouth while sneezing or coughing. In addition, specific guidance on the disposal of used face masks was provided to the CHWs.

f) Adolescent health

Health facility level

- **Adherence to guidelines for adolescent health:** The health facilities adopted the use of specific guidelines for conducting adolescent outreaches, including provision of adolescent-friendly services with a strong emphasis on infection prevention and control measures for COVID-19. During the lockdown, adolescent specific outreaches were initially banned and only resumed after lifting of the national lockdown.

Community-level

- **Leveraging on mHealth:** mHealth, which is the application of information technology in public health and medicine, was used to deliver adolescent health services in several settings across the country. For adolescents living with HIV, health facilities used phone calls to provide follow-up on psychosocial issues and ART adherence counseling. Health facilities sent Short Message Signal (SMS) texts to remind adolescents about clinic appointment dates. Trained youth peers were engaged to use the social media platforms such as WhatsApp to advocate for contraceptive use among adolescent girls and young women.

- **Re-introduction of home-based HIV care for adolescents living with HIV:** Home visits for adolescents living with HIV were re-instated to allow for continued provision of routine clinical and diagnostic care. For example, during home visits, healthcare providers clinically review adolescents living with HIV for new opportunistic infections or health complaints, collect blood sample for viral load testing and reinforce information on ART adherence, among others.

- **Development of context-specific text messages to improve community to health facility referral pathways:** In some settings, context-specific short message signals (SMS) were developed for CHWs to help link adolescent mothers to family planning service providers at the health facilities.

g) School health

National level

- **Development of COVID-19 SOPs for schools and inspection for adherence to SOPs:** SOPs have been developed for schools and tertiary institutions including universities. This has allowed a partial and phased re-opening of the education sector, starting with the semi- and candidate classes. All schools were inspected and assessed for their preparedness to open. The assessment focused on the following: Availability of SOPs for COVID-19, availability of screening facilities such as infrared thermometers or temperature guns, isolation rooms for suspicious cases, a clear referral and linkage pathway to a COID-19 treatment facility, training of teaching and non-teaching staff on COVID-19, space for social distancing and facilities for hand washing and sanitizing, among others. Furthermore, school health sub-committees have been formed to oversee adherence to COVID-19 school health guidelines. Despite these measures, there is still an ongoing debate regarding how best to re-open classes for all learners in the country.

h) HIV/AIDS services

National level

- **PEPFAR guidance:** In addition to the MoH guidance on continuation of HIV services, the Presidential Emergency Plan for AIDS Relief (PEPFAR) issued further guidance to HIV Implementing Partners on continuity HIV services in the context of COVID-19. Specific focus was placed on HIV prevention, HIV testing, HIV treatment, pre-exposure prophylaxis (PrEP), GBV and child protection and IPC, among others. The HIV Implementing Partners were given budget lines to support health facilities to meeting the COVID-19 SOPs and IPC requirements. An online monitoring system was established to routinely track continuity of HIV services, particularly retention on ART services. To prevent a decline in the testing of infants exposed to HIV, the MoH, UNICEF, CDC, and USAID collaborated to develop and disseminate the early infant diagnosis (EID) surge strategy which uses health facility data to identify all infants exposed to HIV who missed HIV tests. These were followed up.

- **IP coordination:** Routine **v**irtual IP coordination meetings were held to monitor the continuity of HIV services. During these meetings, IPs shared their experiences, best practices and challenges in the implementation of strategies for continuation of HIV services.

Health facility level

- **Multi-month dispensing of ARVs:** To enhance retention and adherence to ART, HIV-infected mothers and their children who are stable on ART were given ARV doses for a longer period that ranged from 3-6 months.

- **Follow up of client who miss clinic appointments:** Health facilities developed line lists for PMTCT mothers and/or mother-baby pairs, children and adolescents who missed their ART/TB medicines pick-up for follow-up through telephone calls.

- **Innovative ARV drug distribution strategies:** Several innovations were used to deliver drugs to clients. These included (i) use of the existing community differentiated service delivery models (DSDM) such as client led ART delivery (CLAD) and the community drug distribution points (CDDP) from where ARVs would be picked; (ii) use of foster (non-parent) facilities to distribute ARVs; (iii) private pharmacy partnership where clients could pick drugs from private pharmacies and (iv) delivery of ARVs to client's home through courier services and commercial motorcycle riders.

- **Leveraging mHealth:** Phone calls, WhatsApp and SMS reminders were used to reach HIV-infected adolescents and mothers with HIV services.

- **Re-mapping of locator information for women living with HIV:** To enable easy tracking of mothers living with HIV and subsequent provision of HIV care in the communities, their locator information (physical addresses) where re-mapped/ or updated. The updated locator information helped health workers and peers (mentor mothers, expert clients, and adolescent peers) to deliver drugs to client homes as well as to update health facility records with the refill information.

i) Healthy ageing

Although the guidelines for older adults and people with underlying health conditions exist and indicators for monitoring continuity of health ageing services were developed, there were no explicit interventions for healthy ageing across all levels of the health care system. A TWG for older persons health is yet to be established. MoH acknowledges that this needs to be established and plans to do are underway.

j) Cross cutting strategies

- **Strengthening supply chain for RMNCAH commodities:** Across the country, health facilities were supported to correctly quantify, forecast, and place orders for RMNCAH commodities. In addition, with support from UNFPA, MoH procured essential commodities for MCH which were distributed by the National Medical Stores (NMS) to the health facilities.

Implementation challenges

Notwithstanding the successes registered in maintaining RMNCAAH services through the several strategies at each level of the health care system, some key implementation challenges merit mention and include the following:

- **Inadequate resources:** The resource requirements for effective response to the pandemic were enormous. Finances, health workforce capacity, essential medicines and supplies, including infection prevention and control supplies were largely insufficient at all levels of the health care system.

- **Inappropriate BCC/IEC materials**: The BCC/IEC materials COVID-19 were unsuitable for some ethnic groups. It was reported that most of materials available were mainly in English and a few predominant local languages used in most districts, excluding certain ethnic groups within the same districts.

- **Fallacies about COVID-19:** Pervasive deceptive information about COVID-19 undermined the response efforts. In some areas, concerns that COVID-19 does not exist were common and the public health prevention guidelines were ignored in such areas.

2.2 Trend analyses for Key RMNCAAH service delivery and utilization indicator data.

Real-time data for key RMNCAAH indicators from DHIS2 (http://hmis.health.go.ug) was analysed and presented to key stakeholders and partners through the CEHS committee meetings. With support from WHO, a dashboard, based on key RMNCAAH indicators was developed to provide real-time data for monitoring delivery and utilization of RMNCAAH services. The key RMNCAAH indicators are summarised in Table 2 below.

Table 2. Key RMNCAAH Indicators

Program area	Indicators
Family Planning	1. Number of clients who received oral contraceptives at the facility or community
	2. Number of clients who received injectable contraceptives at the facility or community
Maternal and Newborn health	1. Number of ANC visits provided in the reporting period by any trained provider
	2. Number of pregnant women who received Iron and Folic Acid (IFA) supplementation during the pregnancy
	3. Number of pregnant women attending antenatal clinics and/or delivered in a facility who were tested for HIV during pregnancy
	4. Number of pregnant women living with HIV who received antiretroviral medicines to reduce the risk of MTCT
	5. Number of women who give birth in the health facility regardless of outcome
	6. Number of deliveries in health facilities by caesarean section
	7. Number of women receiving postnatal care (PNC) within 2 days of delivery
	8. Number of newborns receiving PNC within 2 days of delivery
Child health and Immunization	1. Number of children younger than 1 year receiving their 3rd dose of DTP3
	2. Number of children younger than 1 year receiving their first dose of measles vaccine
	3. Number of children presenting to facility with any sign of acute respiratory infection (ARI)
	4. Number or percentage of children with diarrhoea treated with ORS, ORS+zinc or zinc
	5. Number or percentage of children <5 years with malaria treated with ACT
	6. Number of consultations of children <5 years for any cause
	7. Number of children 6-59 months of age who were screened for severe wasting and other forms of severe acute malnutrition
	8. Number of children 6-59 months of age admitted [6] for severe wasting and bilateral pitting oedema
	9. Number of children aged 6-59 months discharged from severe wasting and bilateral pitting oedema treatment programmes as recovered
	10. Number and percentage of newborns put to breast feed within 1 hour of birth
	11. Number and percentage of children 6-59 months who received age-appropriate dose of Vitamin A
Older adult indicators	1. Number and percentage of older adults presenting with hypertension and diabetes mellitus
	2. Number and percentage of older women and men presenting with

	cancers (cervical, breast and prostatic cancers)
	3. Number and percentage of older adults presenting with Gender-Based Violence (GBV)
Cross-cutting HIS indicators	1. Percentage of completed reports received through either an HMIS or community health information system (CHIS)
	2. Number or percentage of health facilities (HF) and/or CHWs with stockouts of tracer RMNCAH+N essential medicines or supplies
Outcome and impact indicators	1. Number of women presenting for gynecological indications related to [complications of] abortion
	2. Stillbirth as a percentage of all births in health facilities (stillbirths/stillbirths plus live births)
	3. Number of deaths of woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from unintentional or incidental causes
	4. Number of children classified with measles at either facility or community
Additional indicators	1. Number of cases of sexual and gender-based violence against women and children reported in facility
	2. Number of women and infants consulted by community health workers (CHWs)
	3. Number of deliveries occurring outside of the health facility
	4. Percentage of newborns initiated on KMC (or admitted to KMC unit if separate unit exists)
	5. Number or percentage of live births that weighed less than 2500g

Overall, the national data showed a decline in utilization of key RMNCAAH services such as family planning, ANC, health facility deliveries, and immunisation services, among others, particularly during the national lockdown period. The major factors reported to have contributed to the drop in the coverage and utilization of these services were related to accessibility and economic challenges, including but not limited transportation difficulties and suspension of some community health services. Due to the ban on both public and private means of transport, many women were unable to access the facilities. In addition, the transport restrictions hindered access and availability of healthcare providers, either by not reporting to work or reporting late. Furthermore, the transportation difficulties paralyzed key service delivery activities particularly outreaches which contribute a great deal in increasing access to and utilization of services. It is important to note that utilization of most of the essential health services was restored to the pre-lockdown levels following the phased easing on the national lockdown in June 2020. Below, the trends in utilization of some of the key RMNCAAH services are shown in Figures 5-9.

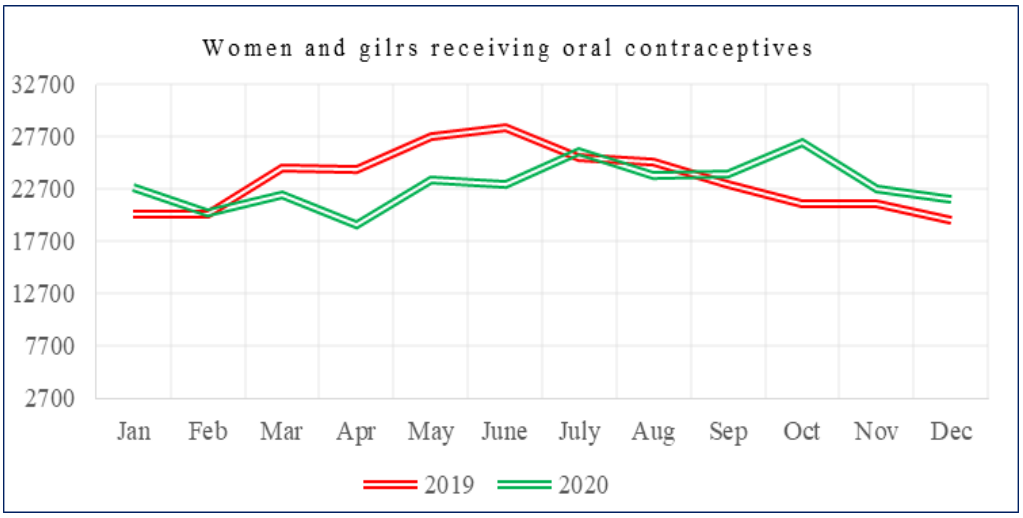

Figure 5. Number of women and girls receiving oral contraceptives.

Across the country, utilization of oral contraceptives by women and girls dropped by 22% in April 2020, compared to April in 2019 but gradually retuned to pre-lockdown levels by July 2020 (Figure 5)

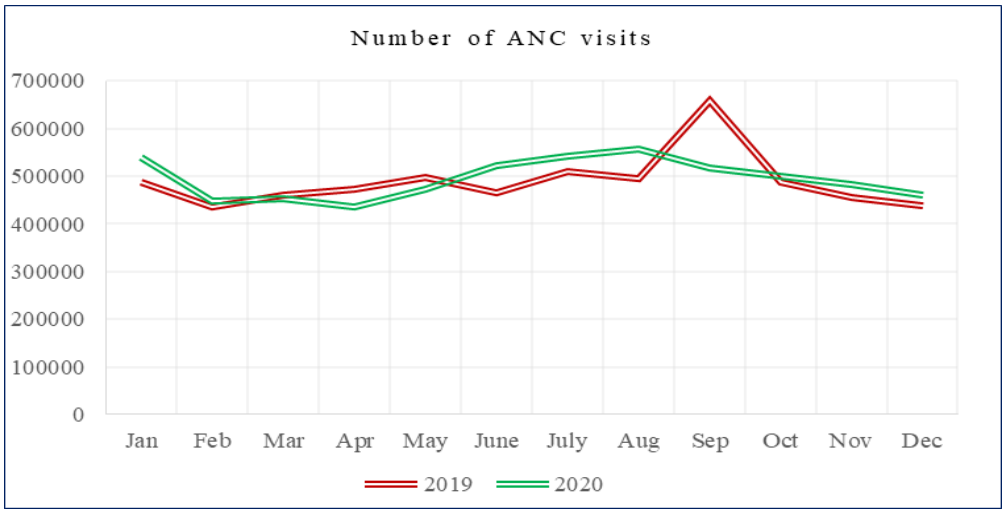

Figure 6. Number of antenatal care (ANC) visits

Across the country, the number of ANC visits declined by 8% in April 2020, compared to those registered April 2019 but gradually retuned to pre-lockdown levels by May 2020 (Figure 5) (Figure 6)

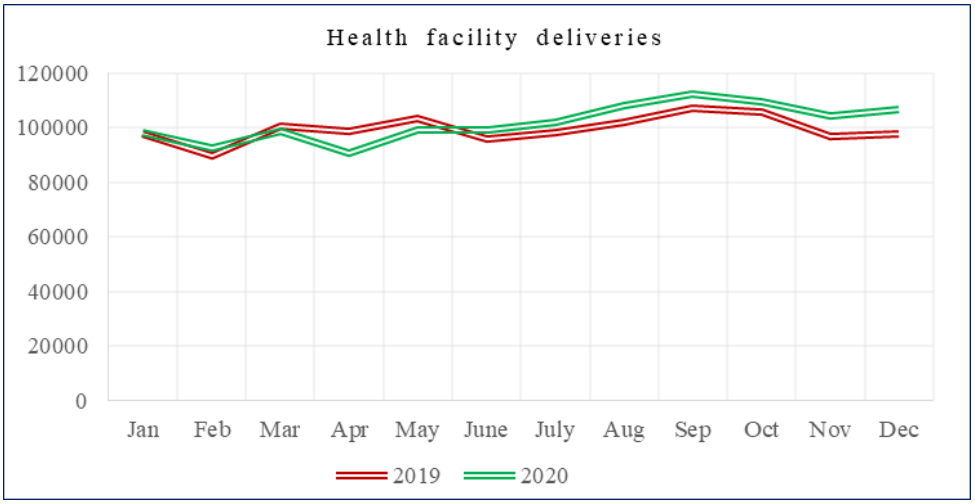

Figure 7. Number of health facility deliveries

Similarly, across the country, the number of health facility deliveries dropped by 8% in April 2020, compared to those in April 2019 but gradually retuned to pre-lockdown levels in May 2020 (Figure 7).

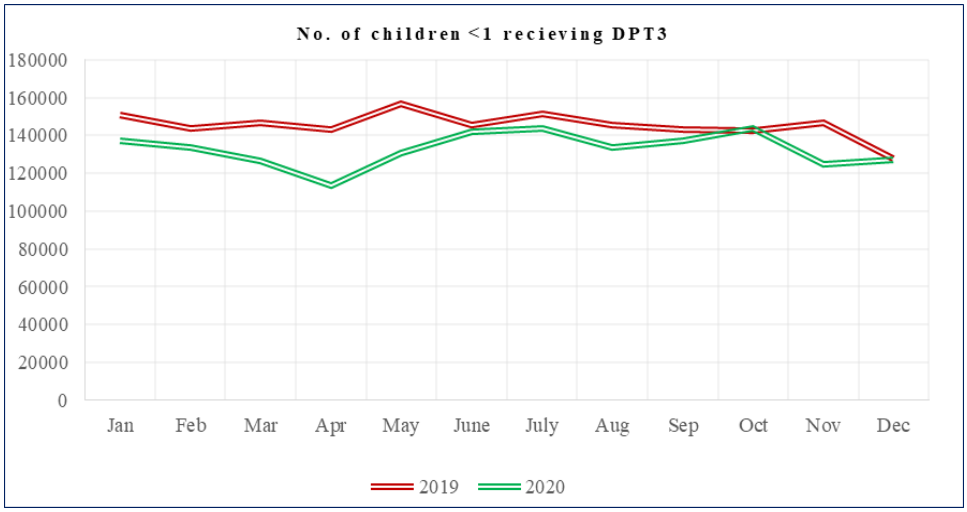

Figure 8. Number of children <1 year receiving the 3rd dose of DPT vaccine

The number of children under 1 year receiving the 3rd dose of DPT vaccine dropped by 21% in April 2020, compared to that in April 2019 but gradually retuned to pre-lockdown levels by June 2020 (Figure 8).

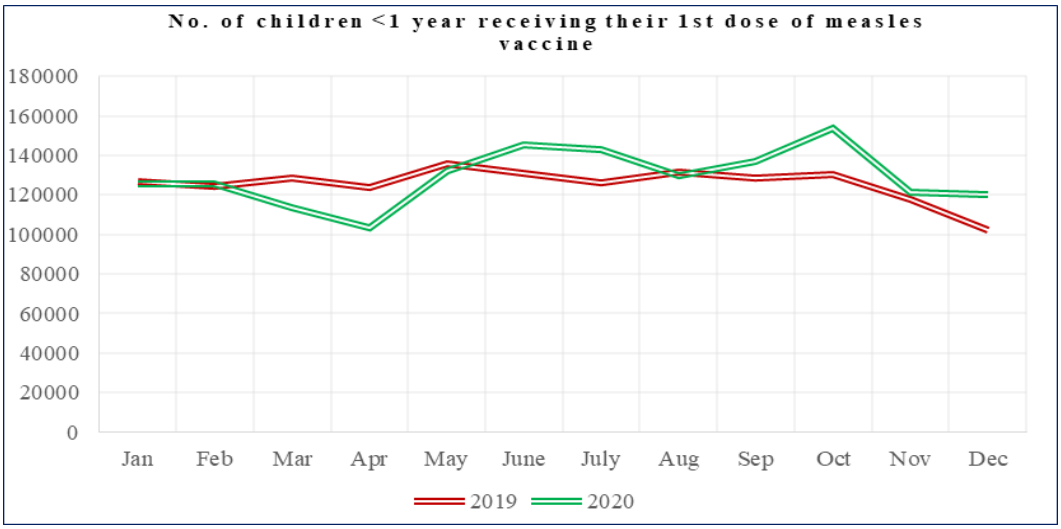

Figure 9. Number of children <1 year receiving their first dose on measles vaccine.

The number of children under 1 year receiving the 1st dose of measles vaccine dropped by 16% in April 2020, compared to April 2019 but gradually retuned to pre-lockdown levels by May 2020

The trends for all the other RMNCAAH indicators outlined in Table 2 are provided separately in an excel-based dashboard.

2.3 Lives Saved Tool (LiST) analysis

LiST is a mathematical modeling tool used to estimate the impact of coverage change on mortality in low and middle income countries. LiST analysis is important because the indirect mortality due to disruption of health services could exceed direct mortality due to COVID-19. LiST calculates changes in cause-specific mortality based on intervention coverage change, intervention effectiveness for that cause and percentage of cause-specific mortality sensitive to that intervention (Figure 10).

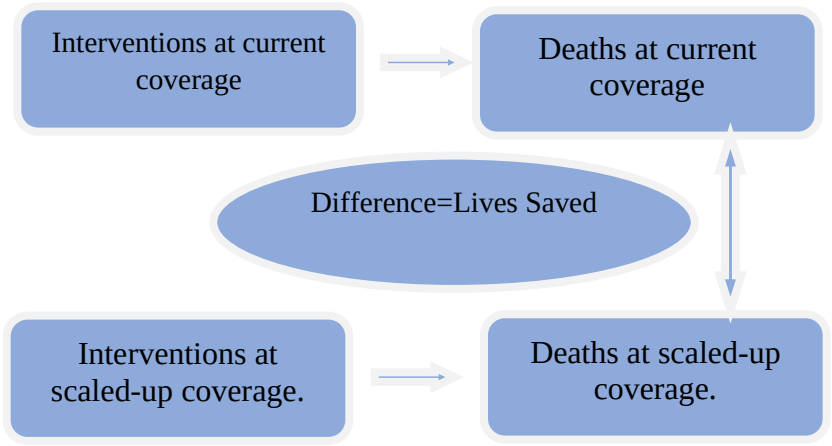

Figure 10. LiST analysis

MakSPH, in collaboration with UNICEF is undertaking a comprehensive LiST analysis that involves the following key steps (i) retrospective assessment of the impact of COVID-19 on mortality, (ii) prospective assessment of the impact of COVID-19 on mortality, (iii) highlighting intervention disruption that results in greatest mortality impact and (iv) use of the findings to inform policy and practice (Figure 11)

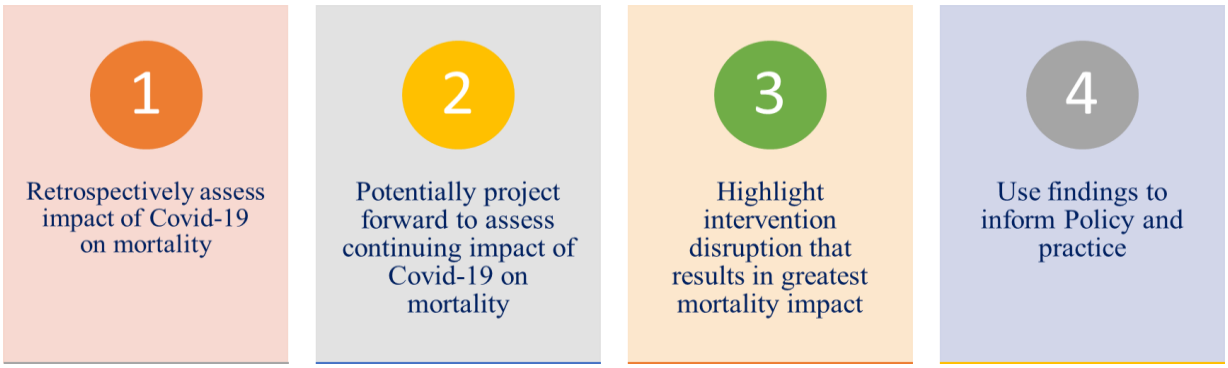

Figure 11. key steps for LiST analysis

During LiST analysis, associations between the disruptions due to COVID-19 and RMNCAAH service delivery and utilization will be explored. This will be guided by the analytical framework below (Figure 12)

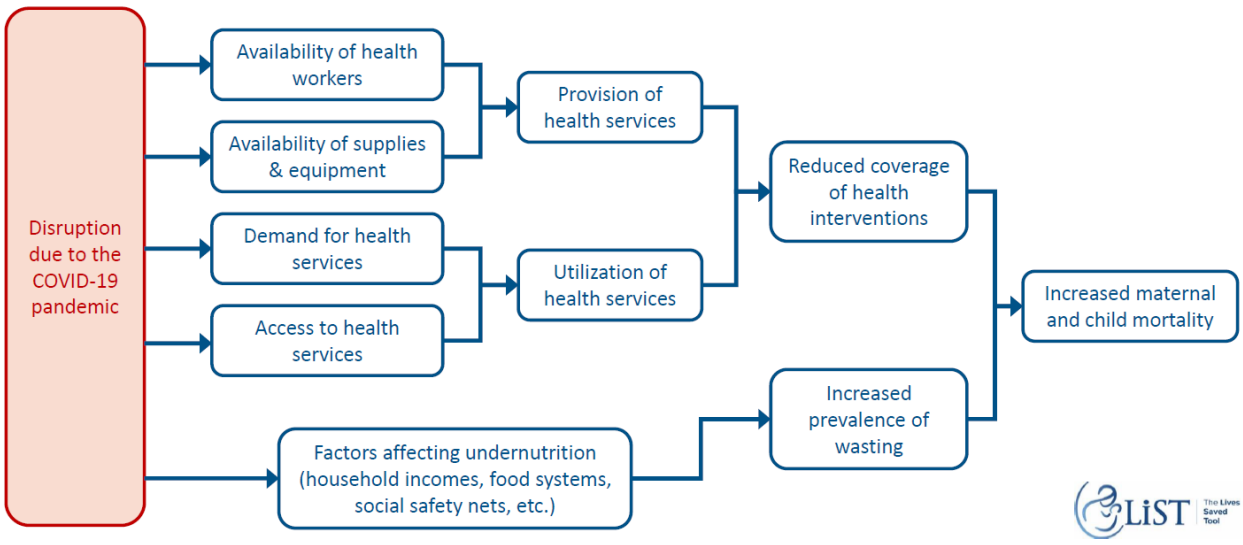

Figure 12. Framework for LiST analysis

A joint comprehensive report of the LiST analysis will be compiled separately and shared with all the key stakeholders.

3.0 CONCLUSIONS AND RECOMMENDATIONS

3.1 Conclusions

- A multisectoral response to ensure continuity of RMNCAAH service delivery and utilization was adopted at all levels of the health care system in the country. Several strategies and innovations were adopted in different contexts. Although the health system response may have been compromised by the inherent infrastructure, human resource and logistical challenges, the coordination and capacity enhancement mechanisms put in place across the various levels of the health care system are commendable.
- Although there was a general drop in some key RMNCAAH services delivery and utilization during the early phases of the pandemic which was largely due to economic and accessibility challenges, there is evidence that service delivery and utilization have been restored to the pre-pandemic levels.
- There were no explicit coordination mechanisms and interventions for the ageing population.

3.2 Recommendations

- Government efforts to increase funding for response to public health emergencies are required. There is need to increase the national budget to the health sector, including funding for health workforce capacity enhancement and essential medicines, supplies and equipment, as well as improving the infrastructure for RMNCAAH service delivery.
- There is need to develop a national communication strategy for COVID-19. This should include a review of the current information, education and communication materials and development of key messages and interventions for social mobilization to increase awareness and demystify the fallacies about COVID-19.
- There is need to establish a functional technical working group for the ageing population to coordinate response for healthy ageing.

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