Report of the Webinar on Use of digital health interventions for maintaining RMNCAH services during COVID-19 pandemic

28 April 2022
11:30-14:30 IST
Report of the Webinar on Use of Digital Health Interventions for Maintaining RMNCAH services during COVID 19 pandemic

April 28, 2022
## Contents

**Background** ...................................................................................................................... 1  
**Objectives** ........................................................................................................................ 1  
  
  General................................................................................................................................... 1  
  Specific ................................................................................................................................... 1  
**Technical sessions** ............................................................................................................ 1  
  Inaugural session ................................................................................................................... 1  
  Session 1: Overview of the use of digital health interventions during the COVID-19 pandemic ................................................................................................................................. 2  
  Session 2: Assessment of use of digital health interventions for maintaining RMNCAH services during the COVID-19 pandemic ........................................................................... 4  
  Panel discussion on use of DHIs during the pandemic and way forward ......................... 5  
  Closing session ....................................................................................................................... 6  
**Annexes** ........................................................................................................................... 7  
  Annex-1: Agenda .................................................................................................................... 7  
  Annex-2: Meeting’s proceedings ......................................................................................... 9
Background

A webinar on ‘Use of digital health interventions for maintaining RMNNCAH services during the COVID-19 pandemic’ was organized by SEARO on April 28, 2022. The agenda for the webinar is in Annex 1. Approximately 117 participants joined online. The participants included programme managers responsible for reproductive, newborn, child and adolescent health from the Ministries of Health of Bangladesh, India, Indonesia, Maldives, Nepal, Sri Lanka, Thailand and Timor Leste, relevant staff from UN agencies at regional and country level, staff of WHO Country Offices, DHI and MCA units of WHO headquarters and Delivery and Data Analytics unit and UHC/ Family Health (FGL) of SEARO. Since the webinar was open to all interested, other interested participants also participated.

Objectives

The objectives of the webinar were:

General
To disseminate the findings of the assessment of digital health interventions (DHIs) used to deliver RMNCAH services during the COVID 19 pandemic in the three investment project countries (Bangladesh, Nepal and Timor-Leste)

Specific
To share key findings, methodology and framework of landscape analysis on digital health interventions in the three investment project countries
To plan for future RMNCAH related digital health assessments in the Member States

Technical sessions

Inaugural session

The webinar was inaugurated by Dr Neena Raina, Director a.i, Department of UHC/ Family Health (FGL), SEARO. After a warm welcome to the participants, the objectives of the webinar were shared. The speech highlighted WHO’s advocacy since 2005 about the use of DHIs for strengthening health systems through various World Health Assemblies (WHA) and their resolutions. At the request of 71st WHA in 2018, a Global Strategy on Digital Health 2020-2024 was developed. Harnessing the potential of digital health interventions to achieve the ‘2030 Agenda for Sustainable Development’ as well as the enabling role of DHIs in achieving universal health coverage (UHC) and advancing primary health care were highlighted. The potential of digital health in addressing population health, equity and gender equality was mentioned. Digital health is considered as an essential element in achieving SEAR’s Flagship Priority Programmes as well as ‘triple billion’ targets of the thirteenth General Programme of Work (GPW) (2019-2023). It was pointed out that WHO’s South-East Asia Region (SEAR) is a hub of innovations and implementation of digital health and have demonstrated considerable expertise in rapidly adopting, piloting and implementing a range of DHIs, despite significant financial and human resources constraints. The Member States have effectively used DHIs prior to the pandemic such as mobile health technologies to deliver health education messages, sending
reminders for clinic attendance, indenting supplies, etc. The existing skills in DHIs helped Member States to rapidly deploy mechanisms to implement DHIs for mitigating the disruption of health services MNCA and ageing populations due to the COVID-19 pandemic. SEARO MCA unit has successfully utilized DHIs in building capacity in cervical cancer screening and in MDSR. Under WHO’s investment project, a rapid assessment of DHIs in the three project countries – Bangladesh, Nepal and Timor Leste – had been done - details of which is expected to be shared during the course of the webinar. The way forward included documentation of the current experiences with DHIs, evaluation of the current interventions and expansion of the effective DHIs to improve health service delivery.

Session 1: Overview of the use of digital health interventions during the COVID-19 pandemic

The first presentation from WHO headquarters focused on WHO’s initiatives to promote digital health as a way to augment and optimize routine health system objective and to mitigate the challenges. The four objectives of the global strategy were shared that includes global collaboration and transfer of knowledge, implementation of national digital health strategies, governance and people-centered health systems. The presentation also made a reference to a statement from WHO Bellagio eHealth Evaluation Call to action, ‘if used improperly, eHealth may divert valuable resources and even cause harm—implementation must be guided by evidence—’. DHIs can help to achieve improved quality and coverage of health interventions of known efficacy. DHIs help to achieve UHC by meeting the objectives of quality, affordable and accessible health services and this was demonstrated using the modified Tanahashi model. The presentation also covered the WHO classification of DHIs – for clients, for providers, for health system managers and for data services linking to specific health system challenges and DHIs. List of WHO guidelines were shared as well as the website http://bit.ly/digiguide谁o。The three components within an enabling ecosystem – health content + DHI + Digital applications and its linkages with relevant WHO guidelines were shared. The presentation also defined SMART guidelines (standards-based, machine readable, adaptive, requirements-based, testable) and shared the various WHO smart guidelines – ANC, FP, etc. Details of WHO’s digital implementation guide was shared. The key points made at the end of the presentation were: DHIs have modest benefits but there are limitations in what they may address, the need for a clear vision of need and investments linked to health goals, ensuring an enabling environment, documentation and coordination of digital investments and responsible use of digital health while understanding the challenges for which the DHIs used and ensuring added value to the user.

The second presentation from headquarters focused on use of DHIs during COVID 19 pandemic to mitigate the indirect impact on services for reproductive, maternal, newborn, child and adolescent health services and older people. The presentation briefly described WHO’s investment project being implemented through WHO’s regional and country offices. Documentation of lessons learned was shared. The project countries reported the use of DHIs for continuation of services or management and monitoring of data, communications, on-line training and for strengthening infection prevention control measures. Similar findings were found from a rapid survey done in WHO’s Africa Region. The other findings related to the ecosystem are poor functioning of governance structure, poor functioning of department of Digital Health in MOH, lack of legal, policy and compliance systems, etc. Findings from use of DHIs in high income countries from the scoping review was shared. The participants were informed of an interesting WHO publication on how to plan and conduct telehealth consultations with children and adolescents and their families. Information on a draft tool for assessing quality of digital interactions between health workers and clients was shared.

The presentation on the status of digital health in SEAR underscored the importance of DHIs for health system strengthening. The presentation shared the status of digital health in different Member States.
Bhutan, India, Indonesia, Nepal, Sri Lanka, Thailand and Timor Leste have developed a DHI and national action plan; Bangladesh is developing a strategy/plan; and Myanmar and Maldives need to develop plans. Despite the status of the availability of strategy/plan, the countries have adopted some form of digital technology/innovation during the pandemic. The types of DHIs used in the Region include tracking patients'/clients’ health status, tracking use of health services, use of telemedicine client to provider and provider to provider, training of health workers, support to health workers for decision making, communications, birth/death registration, birth defect reporting, etc. Some examples from Member States were shared. The benefits and challenges of use of DHIs were shared. The main challenges were uncoordinated investments in ICT in health, low degree of collaboration across sectors, limited capacity of public sector, health system information systems in silos and segmented across programmes, etc. The recommendations to strengthen DHIs beyond the pandemic included strengthening of health information systems (supply and service), documentation of digital health innovations in SRMNCAH during the pandemic, identification of scalable, quality and accountable practices that prevented service disruption, review of on-line training for creating hybrid systems for future training (beyond the pandemic), review telemedicine/tele-counselling practices that can be scaled up to reach everyone.

The presentation on development and use of DHIs for RMNCAH services in SEAR highlighted WHO’s initiatives in promoting DHIs, the global strategy for DHIs, pre-COVID DHI interventions in SEAR and the use of DHIs for overcoming access, use and demand issues during the pandemic. Some examples included improving access to health services through telemedicine and health workers’ training and support especially in remote areas, interventions for data sources to monitor coverage through health information system, logistics management information system, vital registration system, etc., creating demand through mobile messaging, improving the quality of care through use of algorithms and improved financial coverage through digital cash transfers. There are 10 key actions recommended in the interim guidance for maintaining essential services and several of the actions are linked to DHIs. These are governance, optimizing service delivery settings and platforms, re-distribution of health workforce, strengthening communication strategies, monitoring essential services and using DHIs for service delivery. Recommendations of SEAR-TAG for RMNCAH were shared that included optimal use of digital/telehealth for RMNCAH service delivery, training, monitoring clinical /health conditions, digital health records. A brief mention about DHIs initiatives under the investment project was made. SEARO’s initiatives during the pandemic were shared. SEARO developed the first facilitator based virtual training package on MDSR and capacity building programmes completed successfully in partnership with an agency -MCGL. The training was done in 10 Member States and 24 trainers and 75 trainees have been trained. The trainers have started training in their countries. Another initiative was on-line evidence-based FP training organized by WHO and Geneva Foundation for Medical Education and Research through which 80 FP programme managers from Member States were trained. On-line webinars for promoting South- South collaboration were also hosted by SEARO. Another important initiative was the colposcopy course in collaboration with IFCPC-IARC through which 100 were trained from Member States in 2020-21. It is a hybrid course with theory teaching on-line and clinical training with a master trainer in respective countries. The presentation ended listing lessons learned - benefits of virtual capacity building and recommendations to include in the training a package of minimal information about virtual platform operation. It was recommended that the training should continue with modifications based on the experiences of conducting such trainings. An important intervention was made by Mr. Manoj Jhalani, Director of health systems to evaluate the various interventions for their effectiveness and potential for scaling up and the need for developing a roadmap for expanding DHIs.

MOH representatives of India and Thailand shared the use of DHIs during the pandemic. The MOH representative from India mentioned that the pandemic provided an opportunity to consolidate the existing DHIs. The MOH has successfully used DHIs for capacity building, operationalization of sick
newborn ICUs, e-learning platforms such as I-Got and for adolescents (mental health, DIKSHA platform for schools to share information on RMNCAH). A very successful intervention is digitalized data on COVID vaccination and certificates for COVID-19. In addition, the RMNCAH platform was connected to the COVID platform for getting information on pregnant women and children infected with COVID. Telemedicine was successfully used for client-provider interaction – an example is e-Sanjeevini (digital OPD service). National Medical Council has issued guidelines on Telemedicine. During the pandemic, e-governance and e-health records and other existing digital health information systems have got a boost. The most significant contribution was sharing information with communities about taking care of their own health during the pandemic. There are many challenges despite the achievements and these include stratification of DHIs to determine which has the maximum effectiveness and the system needs to be further developed for building capacity of health providers. DHIs should be complementary to health system functions. The presentation from Thailand mentioned that DHIs were used prior to the pandemic and that during the pandemic these interventions could be harnessed to ensure continuation of essential services. During the pandemic, three important DHI related actions taken were development of guidelines for telehealth, guidelines on telemedicine by Medical Council of Thailand and guidelines for Pharmacy. These guidelines enabled patients to contact doctor and get treatment and the pharmacy could issue medicines without prescription. Under RMNCAH programme, three projects were being implemented. The first one was a digital app for tracking vaccination of pregnant women, the second one was for enabling women to access safe abortion services as allowed by the abortion law and the third was for distribution of contraceptives. The digital app for seeking abortion services facilitates patient’s access to a nearby hospital for care and access medical abortion pills. It also ensures confidentiality and privacy. The MoPH plans to further develop this services after the pandemic for improving access. For accessing contraceptives, clients could apply on the app and get a condom or pill while for other contraceptives where provider intervention is needed, appointments need to be made with a provider.

**Session 2: Assessment of use of digital health interventions for maintaining RMNCAH services during the COVID-19 pandemic**

The presentations in this session covered the methodology of the rapid assessment of use of digital health interventions for maintaining RMNCAH services during the pandemic, findings of literature search and general findings from the assessment. The country presentations provided specific findings from the rapid assessment. The methodology of the rapid assessment of the use of digital health interventions was shared that includes rapid landscape analysis through literature review, whether the DHIs implemented are fit-for-purpose (appropriate) for the health system role for which it was used and its effect on selected areas (training, HMIS, tele-consultation, etc.), analysis of the digital ecosystem in countries and analysis of the perception of providers. Key findings from literature review were that digital health technologies had been harnessed to support the public-health response to the pandemic mainly for surveillance and contact tracing. Use of hotlines for accessing information, tele-consultation and scheduling appointments were common. However, their effectiveness has not been evaluated. Significant number of apps were introduced without due consideration for digital ecosystems. The literature also clearly states that introduction of teleconsultation does not strengthen existing weak PHC systems. The digital divide was raised as a matter of concern due to disparities in digital literacy and access to equipment, broadband and internet. The digital divide has become more prominent due to the exponential rise in use of technology to maintain essential health services. Studies, specific to use of digital health for RMNCAH services, were limited. One of the studies on use of telemedicine for maternal care during COVID-19 pandemic, highlighted the pitfalls in use of tele-health care provision: exacerbated inequalities in access to care, problems with provider-client communication, financial burden (extra use of personal mobile time for providing services). The summary of the findings from the three countries is given below.
• Use of DHIs prior to COVID pandemic: (i) Clients: All the three countries used DHIs to improve coverage of services, especially ANC. Web platforms were used for RMNCAH services (Bangladesh-Swasthya Batayon (DGHS), Shukhi Poriber (DGFP) and Timor Leste Liga Inan for ANC, PNC, newborn care and advice on intrapartum care). (ii) Providers: Safe delivery mobile app to guide midwives for intrapartum care (Bangladesh), e-learning platforms training on MNCH and FP (Bangladesh). (iii) Managers: Monitoring of services and supplies through dashboards or other systems (Bangladesh: MNCAH dashboard live monitoring of services, DHIS-2 CHCP tracker, DHIS-2 e-registry for immunization, DHIS-2 Maternal and perinatal death screening, e-LMIS tracking for supplies and medicines, e-MIS dashboard, training information system NIPORT, Timor Leste- e-registry for immunization). (iv) Data sources: Bangladesh: DHIS-2 by DGHS, e-MIS by DGFP, e-Human resources Inf. SystemDHIS-2 (three countries), e-MIS, routine vaccine reporting and vaccine logistics (Bangladesh, Timor Leste), medical records system, NBBD (Timor Leste)

• Use of DHIs during COVID pandemic to maintain essential services: (i) Clients: Existing platforms were expanded to include COVID-19 information on prevention and advice if suspected of COVID infection (Bangladesh: Swasthya Batayon, Shukhi Poriber, call centers at health facilities, Ma-telehealth, Help lines initiated, mainly for antenatal care, information on medical abortion, adolescent health, etc., Nepal: Medic mobile were used by female community health volunteers to send reminders to mothers about ANC visits and due date for delivery, Aamako Maya to registered pregnant mothers (NGO managed), Timor Leste: Lina foin sae (youth hotline), Liga Inan). (ii) Providers: Tele-counselling/consultation for ANC, FP, training in interim guidelines, use of PPE, infection prevention, COVID-19 vaccination, FP and in addition other interventions were used (Bangladesh: Ma-telehealth, Nepal: Amako Maya, KOBO tool to conduct rapid assessments of RMNCAH services, mobile phones for teleconsultation with peers or supervisors and clients, Timor Leste- expanded Lina Igan with improved training and connectivity). (iii) Managers: Digital monitoring done in Bangladesh and Nepal (use of web platforms). In addition, existing systems of DGHS, DGFP and NIPOR continued and new apps/systems were developed (Bangladesh: An app for e-registry for vaccination (COVID-EPI), NO specific dashboard for COVID 19 infected pregnant, newborn and children). (iv) Data sources: Digital reporting o MPDSR in Nepal, in the three countries e-LMIS strengthened and DHIS-2 continued.

• Digital eco-systems: Information was not complete as the information from departments responsible for DHIs in MOH was not easy to obtain. Information on inter-operability, infrastructure, etc. was not easily accessible. Some investments in DHIs have been made especially in Bangladesh; however, the extent of collaboration between MOH and Ministry dealing with digital technology is not clear. Policy readiness is at various stages—most developed in Bangladesh. Timor Leste has a policy. Guidelines/SOP for teleconsultation-Limited availability (Nepal and Timor Leste has guidelines).

• Perceptions of providers:

Panel discussion on use of DHIs during the pandemic and way forward

The last session was a panel discussion on use of DHIs by Indonesia, Maldives and Sri Lanka and the way forward. Indonesia shared the use of DHIs during the pandemic for education and services-MRNCAH education and services were delivered through WhatsApp groups of mothers which were created by the village midwife with membership of 3300. The other DHI interventions were digitalizing of MCH handbook, digital platforms by managers and decision makers to track provision of services, recording and reporting to MNCH as per the Minimum Service Standards. Another app used is the maternal and neonatal death notification app. Indonesia also has a web-based recording and reporting
system. After the pandemic, the MOH plans to add maternal health education in the citizen’s app for wider access and to integrate various apps and applications into one health system. In Maldives, DHIs were extensively used prior to the pandemic such as hotlines and WhatsApp to relay messages to pregnant mothers. The messages were conveyed from the central level to RH focal points in each atoll who in turn conveyed the messages through various digital platforms. DHIs have also been used for training, data collection and supportive supervision. For Maldives, DHIs are critical due to the scattered populations in islands and the high quality of connectivity enables wider and efficient access to DHI. The country plans to continue the use of DHI for training, monitoring and supervision, reporting, tracking vaccinated populations and for birth and death registration. In Sri Lanka there were many innovations in DHI. The notable ones were the DHIS2 based data system for follow up of pregnant mothers with COVID-19 (following through pregnancy, intrapartum and postnatal period up to 6m) and DHIS-2 based system follow up of pregnant mothers who were given COVID-19 vaccine with customized dashboards for both the activities (13374 pregnant mothers with COVID and 15409 pregnant mothers vaccinated were followed up through the above systems). Logistics management information system was digitalized and incorporated with existing e-RHMIS system. Another DHI intervention during the pandemic was the on-line platform for training for which three e-modules have been developed. Trainees were provided e-certificates. Another innovation was cluster training – clusters were formed according to geographical location and training was conducted in the cluster, especially skills-based training. Programmes were monitored through a special zoom account paid by the Family Health Bureau. In addition, hotlines and WhatsApp messages were developed to respond to queries and requests especially for GBV and child abuse and trained medical officers provided support through on-line counselling and referrals as needed. A website was created during the pandemic to post the interim guidelines for maintaining RMNCAH services, circulars and other guidelines which were extensively used.

**Closing session**

Before the final closing, Dr Annie Portela from MCA unit of WHO HQ thanked the Ministries of Health, national consultants and SEARO for their contribution to the investment project, jointly implemented by headquarters, SEARO and WHO country offices. Dr Anoma closed the session by thanking all the participants, especially Ministries of Health and WHO headquarter and country office staff.
# Annexes

## Annex-1: Agenda

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Speaker</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Opening session</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:30 -11:40</td>
<td>Welcome remarks and objectives of the webinar</td>
<td>Dr Neena Raina. Director a.i., Department of FGL WHO SEARO</td>
</tr>
<tr>
<td><strong>Session 1: Overview of the use of digital health interventions during the COVID-19 pandemic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:40 - 12:00</td>
<td>WHO global strategy for digital health interventions and implementation during COVID-19 pandemic to maintain RMNCAH services</td>
<td>Dr Garrett Livingston Mehl, Unit Head, HQ/SCI/DHI/PHD &amp; Dr Anayda Gerarda Portela, Scientist, HQ/UHL/MCA/MAH WHO HQ</td>
</tr>
<tr>
<td>12:00 - 12:10</td>
<td>Current status on digital health in SEAR and its implication on RMNCAH services</td>
<td>Dr Ruchita Rajbhandari, Technical Officer-Delivery and Data Analytics WHO SEARO</td>
</tr>
<tr>
<td>12:10 - 12:20</td>
<td>Development and use of digital health tools/technology for RMNCAH implementation during COVID</td>
<td>Dr Anoma Jayathilaka WHO SEARO</td>
</tr>
<tr>
<td>12:20 - 12:35</td>
<td>Lessons learned and way forward from use of digital health interventions for maintaining RMNCAH services</td>
<td>Dr Sumita Ghosh, Additional Commissioner CH, AH, CAC, GoI MoHFW India &amp; Dr Bunyarit Sukrat, Director, Bureau of Reproductive Health MoPH, Thailand</td>
</tr>
<tr>
<td><strong>Break (10 mins)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Session 2: Assessment of use of digital health interventions for maintaining RMNCAH services during the COVID-19 pandemic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12:45 –13:00</td>
<td>Assessment of use of digital health interventions to maintain RMNCAH services during COVID-19 pandemic in three Investment Project Countries</td>
<td>Dr Saramma Thomas Mathai, Regional Consultant</td>
</tr>
<tr>
<td>13:00 - 13:35</td>
<td>Use of digital health interventions for maintaining RMNCAH services during COVID-19 pandemic and way forward <strong>(11-12 mins each)</strong>&lt;br&gt;• Bangladesh&lt;br&gt;• Nepal&lt;br&gt;• Timor Leste</td>
<td>Dr Wahida Siraj, BMGF Sr Consultant WCO, Bangladesh &amp; Ms Kabita Aryal, Chief, FP and RH Section, Family Welfare Division, DoHS</td>
</tr>
<tr>
<td>Time</td>
<td>Activity</td>
<td>Participants</td>
</tr>
<tr>
<td>--------------</td>
<td>---------------------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| 13:35 - 13:45| Q/A and discussion                                                                          | Ms Madalena Fatima Gomes  
Program officer Safe  
Motherhood, MCH Department  
MoH, Timor-Leste                                                               |

**Session 3: Way forward**

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Participants</th>
</tr>
</thead>
</table>
| 13:45 - 14:25| Moderated panel discussion on use of digital health interventions for maintaining RMNCAH services during the pandemic and beyond *(7 mins each- No slides)* | WCO/MoH of respective Member States:  
Mr Abdhullah Muaz  
Senior Public Health Programme Officer, Health Protection Agency  
MoH, Maldives  
Dr Kaushalya Kasturiaratchi  
Consultant Community Physician Monitoring and Evaluation Unit  
Family Health Bureau  
MoH, Sri Lanka  
Dr Muhammad Yusuf, MKM  
Maternal and Newborn Health Program-Officer  
MoH, Indonesia |
| 14:25 - 14:30| Closure                                                                                       |                                                                                               |
Annex-2: Meeting’s proceedings

1. COVID-19: Mitigating indirect impacts on services for maternal, newborn, child and adolescent health and older people
2. Status of Digital Health in SEA Region
3. Development and use of digital health tools/technology for RMNCAH implementation during COVID
4. RAPID Assessment of use of digital health interventions to maintain RMNCAH services during COVID-19 pandemic in three Investment Project Countries
5. Use of digital health interventions for maintaining RMNCAH services during COVID-19 pandemic and way forward
   a. Bangladesh
   b. Nepal
   c. Timor-Leste
COVID-19: Mitigating indirect impacts on services for maternal, newborn, child and adolescent health and older people

Use of digital health interventions
28 April 2022
On behalf of WHO/Department of Maternal, Newborn, Child and Adolescent Health and Ageing

**Scope of the WHO initiative**

**Overall aim:**
To support country efforts to prevent additional increases in mortality, morbidity, malnutrition, mental and physical ill health for women, mothers, children, adolescents and older people, maintaining levels of service delivery as close as possible to those prior to the pandemic, in 20 countries in 6 WHO regions.

**Specific objectives:**
1. Ensure continued access and coverage of essential services for MNCAH
2. Adopt strategies to prevent decreases in the utilization of essential services for MNCAH

**Actions taken to maintain the provision and use of essential MNCAH services**

- **Most common actions cited to maintain MNCAH services in 17 countries***
  - Use of digital health interventions
  - Rapid survey in selected countries of the WHO Africa region – select findings
  - Documentation of responses and lessons learnt

- **Actions deemed most important to maintain MNCAH services in 17 countries***
  - Virtual meetings and access issues

*Bangladesh, the Plurinational State of Bolivia, Cameroon, Democratic Republic of the Congo, Ethiopia, India, Kyrgyzstan, Nepal, Nigeria, Pakistan, Romania, South Africa, Sudan, Tajikistan, Timor-Leste, Uganda, Yemen

**Rapid survey in selected countries of the WHO Africa region – select findings**

- All surveyed countries replied that a national digital health governance structure and framework in place, often plagued by lack of political will and inadequate financial & human resources.
- In all countries there is a separate department or unit for digital health placed within the Ministry of Health, challenged by unavailability of infrastructure & equipment, limitations in human resource capacity, absence of similar units at subnational levels.
- Generally the legal, policy and compliance system is not yet in place. Mechanisms for ensuring privacy and security of information, policies for identity management for digital health implementation, procedures and infrastructure for data storage, and HIS policies for adherence to legislation are all absent.

**Documented responses and lessons learnt**

- Maintenance the provision and use of services for maternal, newborn, child and adolescent health and older people during the COVID-19 pandemic:
  - Lessons learned about what types of training and consultations can be done well online, fatigue with virtual meetings and access issues.

**Actions: Telehealth and digital technology across RMNCAH**

**Table: Summary of use/availability**

<table>
<thead>
<tr>
<th>Country</th>
<th>Activity/Health Care Provided</th>
<th>Cameroon</th>
<th>CAR</th>
<th>Ethiopia</th>
<th>Kenya</th>
<th>Nigeria</th>
<th>South Africa</th>
<th>Uganda</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Health care provider consultation (e.g. telephone calls)</td>
<td>✔️</td>
<td></td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>2</td>
<td>Health care provider training (online)</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>3</td>
<td>Health Worker Activity Planning and Tracking</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>4</td>
<td>Health care provider management, decision support and point of care services for others (Telehealth)</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>5</td>
<td>Health supply</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>6</td>
<td>Communication with clients and population (patients, telecomators, healthcare providers, family members)</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>7</td>
<td>De-identified information services to clients and population (e.g. virtual health records)</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>8</td>
<td>Population based reporting (e.g. paving, mapping of services)</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>9</td>
<td>Information collection, data gathering</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>10</td>
<td>Health Resource Management (Billing, performance management, certification)</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>11</td>
<td>Health Care Management</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>12</td>
<td>Data collection, Management architecture</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>13</td>
<td>Population Management (telemedicine, population, population, prevention)</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>14</td>
<td>Contact tracing for COVID-19</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>15</td>
<td>Others (e.g. delivery of services)</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
</tbody>
</table>

**Sharon Chitima**

**Funds for national consultants to complement WHO support to MOHs in target countries, regional consultants to support projects coordination and linkages; and HQ support to activities, documentation, data and modeling**

**Methods:** Structured and semi-structured interviews of key informants (ICT or Digital Health focal points at the Ministry of Health), telephone interviews (MOHs, stakeholders, project partners at the Ministry of Health [MOHs], Ethiopia, Nigeria and Uganda)
Digital infrastructure

<table>
<thead>
<tr>
<th>Digital infrastructure</th>
<th>GAPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to reliable electricity in all health care facilities is poor, particularly in rural areas.</td>
<td></td>
</tr>
<tr>
<td>There is varying level of ownership of end user devices such as mobile phones and computers (41%-75%). Breakdown by gender is not available.</td>
<td></td>
</tr>
<tr>
<td>Despite the high coverage of mobile network (G3 &amp; G4), the proportion of mobile subscribers is low across the countries.</td>
<td></td>
</tr>
<tr>
<td>Internet network connectivity is poor and not stable in almost all countries, with access to broadband particularly scarce.</td>
<td></td>
</tr>
</tbody>
</table>

In four countries, workforce and training requirements are not yet in place, and HR for digital health is below standard.

Special considerations for children and adolescents

- Rapid clinical deterioration: Infants and young children with serious illness can deteriorate rapidly. Early warning signs can be subtle in a remote setting.
- Ability to communicate: Often, young children and families rely on adults to translate information or provide care. Communication can be challenging.
- Ability to engage: Pediatric patients may require assistance or guidance to engage in teleconsultations.
- Early diagnosis: Clinical symptoms in infants and young children can be subtle, making early diagnosis critical.

How to plan and conduct telehealth consultations with children and adolescents and their families

- The document provides practical guidance to health workers in planning, setting up and conducting teleconsultations (occurring in real-time by videoconference, telephone or platforms such as WhatsApp and Facetime) with infants, children, adolescents and their families or caregivers.
- It outlines a range of clinical and non-clinical factors for deciding when a teleconsultation is appropriate.
- It is based on two scoping reviews of peer-reviewed and grey literature on teleconsultations with a) adolescents and b) children.

Findings were largely from HIC. The digital interventions described as:

- Clinical – such as teleconsultations. Image follow-up.
- Practice-related – virtual processes to ensure continuity of electronic health records and billing, and to address the needs of health workers (managing stress, providing training/adaptations of a provider network).
- The connectors within a health system – such as communicating updated medical prescriptions to pharmacies, ensuring successful referrals to other providers, and making connections with social care agencies.

Barriers and facilitating factors

- Whether care provision without face-to-face contact was legally permissible.
- Many countries required the platform(s) used for patient-provider contact to be approved by national authorities, and to fulfill safety, confidentiality and privacy requirements. Early approval of platforms in some settings was attributed to the overall success in transitioning care away from face-to-face interactions.
- Providers of virtual care should be paid for these services, for example, by health insurance companies, in order to make such care sustainable.
- The provision of cost-free wireless networking technology to households for educational purposes being beneficial for remote provision of health care.
- The critical role of access to and general support for ICT, including software.

Rapid survey in selected countries of the WHO Africa region – select findings

Country digital health use and investment during COVID-19 – Pulse Surveys

While disruptions to RMNCAH services have decreased since 2020, the 3rd round of the WHO survey on continuity of essential health services during COVID-19 found that >85% of countries still reported disruptions in various RMNCAH services at the end of 2021.

In the same survey, 51% of countries reported that they deployed telemedicine as a mitigation or recovery action and 79% of countries reported investments in digital health technologies and infrastructure for longer-term health system recovery and/or health service resilience and preparedness.

Despite many resources to assist with the implementation of digital health technologies, decision makers do not have a way to assess impact and use.

FACILITATORS GAPS

Special considerations for children and adolescents

- Assessing the Quality of Interactions in Digital MNCH between Providers & Clients

- The digital interventions described:
- Clinical – such as teleconsultations. Image follow-up.
- Practice-related – virtual processes to ensure continuity of electronic health records and billing, and to address the needs of health workers (managing stress, providing training/adaptations of a provider network).
- The connectors within a health system – such as communicating updated medical prescriptions to pharmacies, ensuring successful referrals to other providers, and making connections with social care agencies.

Barriers and facilitating factors

- Whether care provision without face-to-face contact was legally permissible.
- Many countries required the platform(s) used for patient-provider contact to be approved by national authorities, and to fulfill safety, confidentiality and privacy requirements. Early approval of platforms in some settings was attributed to the overall success in transitioning care away from face-to-face interactions.
- Providers of virtual care should be paid for these services, for example, by health insurance companies, in order to make such care sustainable.
- The provision of cost-free wireless networking technology to households for educational purposes being beneficial for remote provision of health care.
- The critical role of access to and general support for ICT, including software.

How to plan and conduct telehealth consultations with children and adolescents and their families

- The document provides practical guidance to health workers in planning, setting up and conducting teleconsultations (occurring in real-time by videoconference, telephone or platforms such as WhatsApp and Facetime) with infants, children, adolescents and their families or caregivers.
- It outlines a range of clinical and non-clinical factors for deciding when a teleconsultation is appropriate.
- It is based on two scoping reviews of peer-reviewed and grey literature on teleconsultations with a) adolescents and b) children.

Findings on digital interventions during COVID-19

Country digital health use and investment during COVID-19 – Pulse Surveys

While disruptions to RMNCAH services have decreased since 2020, the 3rd round of the WHO survey on continuity of essential health services during COVID-19 found that >85% of countries still reported disruptions in various RMNCAH services at the end of 2021.

In the same survey, 51% of countries reported that they deployed telemedicine as a mitigation or recovery action and 79% of countries reported investments in digital health technologies and infrastructure for longer-term health system recovery and/or health service resilience and preparedness.

Despite many resources to assist with the implementation of digital health technologies, decision makers do not have a way to assess impact and use.

FACILITATORS GAPS

Special considerations for children and adolescents

- Assessing the Quality of Interactions in Digital MNCH between Providers & Clients

- The digital interventions described:
- Clinical – such as teleconsultations. Image follow-up.
- Practice-related – virtual processes to ensure continuity of electronic health records and billing, and to address the needs of health workers (managing stress, providing training/adaptations of a provider network).
- The connectors within a health system – such as communicating updated medical prescriptions to pharmacies, ensuring successful referrals to other providers, and making connections with social care agencies.

Barriers and facilitating factors

- Whether care provision without face-to-face contact was legally permissible.
- Many countries required the platform(s) used for patient-provider contact to be approved by national authorities, and to fulfill safety, confidentiality and privacy requirements. Early approval of platforms in some settings was attributed to the overall success in transitioning care away from face-to-face interactions.
- Providers of virtual care should be paid for these services, for example, by health insurance companies, in order to make such care sustainable.
- The provision of cost-free wireless networking technology to households for educational purposes being beneficial for remote provision of health care.
- The critical role of access to and general support for ICT, including software.

How to plan and conduct telehealth consultations with children and adolescents and their families

- The document provides practical guidance to health workers in planning, setting up and conducting teleconsultations (occurring in real-time by videoconference, telephone or platforms such as WhatsApp and Facetime) with infants, children, adolescents and their families or caregivers.
- It outlines a range of clinical and non-clinical factors for deciding when a teleconsultation is appropriate.
- It is based on two scoping reviews of peer-reviewed and grey literature on teleconsultations with a) adolescents and b) children.
Status of Digital Health in SEA Region

Ruchita Rajbhandary
Technical officer, Data Analytics and Delivery WHO Southeast Asia Region

Pandemic Has Accelerated Digital Innovation

- SEA Region countries are in different states of digital health maturity
- Status on digital health strategy and national action plan
- Every country in SEA Region can leverage on digital health initiatives and solutions to improve service delivery and improve population health outcome

Types of Digital Health Interventions in SEAR

- Tracking of patients'/clients' health status
- Tracking of patients'/clients' health services
- Use of Telemedicine: Client to provider
- Use of Telemedicine: Provider to provider
- Targeted client communication
- Provision of training to health workers
- Health worker decision support/SoPs
- Birth/Death or Defect Registration

Note: COVID-19 forced us to innovate - All countries adopted some form of digital technological innovation even if there was no dedicated strategy in place

Some Examples from SEAR (Region/Countries)

- Nepal National Telemedicine Services
- Bangladesh DHIS2 for Essential Health Services
- Sri Lanka National COVID Dashboard
- India CoWIN for Vaccine Registrations and Certification
- Facebook
- SEAR SRMNCAH Webinar Series
- Bhutan Social Media and RCCE

Opportunities & Challenges For Digital Health

- Benefits/Opportunities/Strengths:
  - Multiple digital health initiatives on-going
  - Effective tool for achieving UHC
  - Telemedicine provides an opportunity for hard-to-reach population
  - Strength national HIS though improving monitoring and surveillance system for timely action
  - Accelerate progress towards complete CRVS systems to ensure unreached populations are registered

- Challenges:
  - Uncoordinated investment in ICT in health
  - Low degree of cooperation, collaboration across all sector resulting in duplicated effort
  - Limited capacity within public sector
  - Different levels of e-health maturity across/within countries
  - HIS exists in silos and are segmented by disease specific control or health program

Digital Health Interventions beyond COVID-19

1. Strengthen existing HIS – both supply and service-side (like supply-chain or commodity distribution and HMIS/ CVRS)
2. Document digital health innovation in SRMNCAH during COVID - what worked and what didn’t work
3. Identify scalable, quality, accountable practices that prevented service disruption and can be leveraged beyond the pandemic
4. Review training efforts made via online systems for creating hybrid capacity building platforms for future HRH
5. Explore telemedicine/tele-counselling/tele-health services that can be scaled up to ‘leave no one behind’

Thank you
WHO has been promoting digital health even prior to the COVID 19 pandemic

- WHO has been promoting digital health since 2005 through various WHA resolutions till the Global Strategy on Digital Health 2020-2024.
- The strategy recognizes the potential of Digital Health Interventions (DHI) technologies to achieve 2030 agenda and the innovative use of DHI enables progress towards UHC.
- The strategy clearly stated that while DHI can enhance health service capabilities, yet human interaction is pivotal in patients' wellbeing.
- Digital health, M health, E health are vast areas
- WHO’s South East Asia Region (SEAR) is a hub of innovation and implementation of digital health.
- Digital health is considered as an essential element in achieving SEAR’s Flagship Priority of UHC.
- Digital health became further prominent during the pandemic and digital technologies are being harnessed for public health response to COVID-19 pandemic control and maintaining essential health services.

What we know so far on service disruption

- The COVID19 pandemic is posing unprecedented challenges to governments and health systems.
- The direct impact of the pandemic is significant; however, evidence suggests that the most important effects are indirect.
- In multiple settings, access and utilization of essential health services have been compromised; some recovered fast, some not yet reached the Pre COVID (2019) level.
- Modified service delivery platforms using digital health options can minimize the adverse impact into some extent.

Factors Affecting the use of Essential Health Interventions during the COVID-19 Pandemic (Service disruption)

- Medical Officer
- Maternal and Reproductive Health
- WHO-SEAR

Some examples of use of digital health during the pandemic to improve the demand and supply of service

- Improve access to health services through the use of telemedicine and health workers’ training and support
- Increasing coverage - HMIS, LMIS, CRVS, MPDSR- interventions for data sources; timely available data
- Increased uptake – mobile messaging for demand creation- interventions for clients
- Improved quality of care – effective use of technology for decision making (use of algorithms)- interventions for HSP
- Increased financial coverage - use of digital technology for cash transfers interventions for HS managers
- Increased equity in access and quality of health services- effective delivery of health services to those in remote areas as in the case in Bangladesh in remote areas- interventions for HS managers

Maintaining essential health care services digital health is a recommendation

- There are 10 key actions recommended in the interim guidance for maintaining essential services. Several of those have a link to digital health
- Establish simplified purpose-designed governance and coordination mechanisms. (establish TAG)
- Optimize service delivery settings and platforms, including in alternative locations and models, community services, targeted outreach, and teleconsultation.
- Rapidly re-distribute health workforce capacity, including by re-assignment and task sharing, remote training.
- Strengthen communication strategies to support the appropriate use of essential services
- Strengthen the monitoring of essential health services (timely data)
- Use digital platforms to support essential health service delivery

WHO’s classification of DHI

Categorizes the different ways in which digital and mobile technologies are being used to support health system needs.

- Interventions for clients: Clients are members of the public who are potential or current users of health services, including health promotion activities. Caregivers of clients receiving health services are also included in this group.
- Interventions for healthcare providers: Healthcare providers are members of the health workforce who deliver health services.
- Interventions for health system or resource managers: Health system and resource managers are involved in the administration and oversight of public health systems. Interventions within this category reflect managerial functions related to supply chain management, health financing, human resource management.
- Interventions for data services: This consists of crosscutting functionality to support a wide range of activities related to data collection, management, use, and exchange.

Source: WHO. Classification of digital health interventions

Examples of applications:
- Tele-consultations and telehealth care options for field-based services
- Creation of informational materials on digital platforms like films, audio-visual materials for community awareness and create demand for services and adoption of health promotion practices.
- Adoption of digital devices for diagnosis, self-care, and monitoring clinical / health conditions
- Development and use of remote training.
Use of DHI in SEAR during COVID 19

- During COVID, in SEAR Member States, built on the existing digital technologies:
- for disease prevention and containment strategies and for providing care at home for less symptomatic cases and in remote areas through teleconsultation.
- in maintenance of essential health services (Pillar 9 of the strategic preparedness and response plan) especially health services for Maternal, Newborn, Child, Adolescent and Ageing (MNCAA) populations
- The phase 2 of the global investment project, jointly implemented by MOH, WHO HQ, SEARO and COs to mitigate the indirect effects of disruption of services on maternal, newborn, child and adolescent, health and ageing (MNCAA) has a focus on digital technologies used for continuation of services.
- Under the project, of SEARO completed rapid assessment of the DHI used during COVID 19 in the three project countries—Bangladesh, Nepal and Timor Leste.
- The project hopes to incorporate lessons learned from use of digital technologies in the Emergency Preparedness and Response plans to minimize disruption in future pandemics/disasters.

On line Capacity building courses in SEARO

- IFCPC-IARC online training course on colposcopy trained 100 trainees from 10 Member States. 2020-2021
- Hybrid course Theory online combined with clinical training with master trainer

Lessons learnt

- Virtual capacity building programmes are very cost-effective in many ways and gaining the popularity among clients.
- Excellent for Knowledge transfer. Yet need to combine with skilled transfer methods.
- Training package should include minimal about virtual platform operation.
- Facilitator/trainee interaction not easy as face to face training yet can do.
- Need extensive preparation prior to training, during training with various methods (Home assignments, WhatsApp group, mentee mentor group etc.
- Internet connectivity/electricity is a factor to be consider.
- Post COVID era should continue with modifications.

We are slowly progressing in DHI yet long way to go
Use of digital health interventions for maintaining RMNCAH services during COVID-19 pandemic

Rapid Assessment of use of digital health interventions to maintain RMNCAH services during COVID-19 pandemic in three Investment Project Countries

Dr. Sarmaya Thomas Mathai
Consultant
WHO SEARO

Assessment used WHO’s classification of DHI

Categorizes the different ways in which digital and mobile technologies are being used to support health system needs.

Interventions for clients: Clients are members of the public who are potential or current users of health services, including health promotion activities. Caregivers of clients receiving health services are also included in this group.

Interventions for healthcare providers: Healthcare providers are members of the health workforce who deliver health services.

Interventions for health system or resource managers: Health system and resource managers are involved in the administration and oversight of public health systems. Interventions within this category reflect managerial functions related to supply chain management, health financing, human resource management.

Interventions for data services: This consists of crosscutting functionality to support a wide range of activities related to data collection, management, use, and exchange.


Methodology of assessment (Contd…)

Analysis of various types of DHI used during COVID pandemic (tool 2)

The different tools are based on the classification of Digital Health Interventions (DHI) developed by WHO*.

▶ Interventions for clients
▶ Interventions for health care providers
▶ Interventions for health system or resource managers and
▶ Interventions for data resources

Analysis of the perception of providers and receivers (including ability to understand the messages or care provided (digital literacy)(target groups, individuals). (tool 4)

▶ Only provider interviews done as client interviews would take longer and needed additional support

The rationale for this tool is to highlight the importance of human interaction as a key element in clients’ wellbeing. Digital health is only complimentary to existing service delivery models, but has the capability to enhance the access to information and services and has contributed to maintaining essential MNCAH services.


Methodology of assessment

Literature analysis on

▶ use of DHI for MNCAH services in the project countries prior to the COVID-19 pandemic and during the pandemic for maintaining MNCAH services by MOH and various stakeholders, supplemented by regional and global level search (gathering of information using tools 1, 2)

▶ Collection of information use of DHI for MNCAH services in the project countries during the COVID-19 pandemic (tool 2)

Analysis of the perception of providers and clients (tool 4)

▶ Analysis and documentation

Framework for assessment of digital health interventions used in the delivery of MNCAH services during COVID-19 pandemic

Each Intervention is further analyzed using five dimensions

Tool 2 – Interventions used by category of users

2.1 Interventions for clients

Service area:

Health system need

Example: Adherence to COVID-19 protocols while providing MNCAH care

ICT System category:

Example: Client communication system

Content of intervention:

Type of Technology and instrument:

Example: text message, voice call, special apps

Importance of DHI:

Examples:

Basic phone

Tool 3 – Interventions used by category of users

2.1 Interventions for data sources

Health system need:

Example: need to collect data on COVID-19

ICT system category:

Example: client communication system

Content of intervention:

Type of technology and instrument:

Example: text message, voice call, special apps

Importance of DHI:
**Tool 3- Analysis of digital ecosystem**

<table>
<thead>
<tr>
<th>Leadership and governance provided by MOH in digital health technologies</th>
<th>ICT capability (technological readiness)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policy readiness</td>
<td>Infrastructure (connectivity in various parts of the country)</td>
</tr>
<tr>
<td>By MOH on digital health technology</td>
<td>Electricity availability, Back up available in health facilities</td>
</tr>
<tr>
<td>Guidelines for teleconsultation ensuring privacy and confidentiality</td>
<td>Mechanisms for executing DHI</td>
</tr>
<tr>
<td>Standards of inter-operability</td>
<td>Prescribed hardware applications and their availability</td>
</tr>
<tr>
<td>Capacity building of users in the system (learning readiness)</td>
<td>USE OF DHI during COVID-19 pandemic</td>
</tr>
<tr>
<td>Socio-cultural considerations (example: interventions for digital divide)</td>
<td>Decision making to use DHI</td>
</tr>
</tbody>
</table>

**Limitations**

- The major part of this assessment is based on literature review and use of secondary data.
- The scope of the assessment is limited in terms of the digital health ecosystem.
- Perceptions of providers:
  - The provider perception data is not representative of all the providers.
  - The provider perception data is not representative of all the providers.
  - The response to the satisfaction of providers with regard to use of DHI may not be accurate as there was no opportunity for follow up queries.
  - Client perceptions not included due to limitations of resources (human resources, funding) as well as the short project period.
- Quality of the care provided through DHI could not be assessed.
- Lack of expertise in consultants.

In spite of the above limitations and assessment limited to three Member States, it lays the foundation for similar assessments in other Member States.

**Summary and recommendations**

- It is evident that digital health interventions have been extensively used during COVID-19 pandemic and digital health is likely to become an integral part of the delivery of health services. However, the effectiveness of interventions is not known.
- The COVID-19 pandemic has created opportunities to invest in improving the ecosystems for digital health including legal, ethical and privacy aspects.

**Recommendations**

- Conduct a detailed assessment of the use of digital health interventions during the pandemic.
- Conduct an in-depth assessment to understand gaps in health worker capacity to provide services through digital health interventions, ensure quality and improve coverage.
- Assist member countries to review the current ecosystems for digital health, specifically legal, ethical and privacy aspects. All the above efforts will help to strengthen the future pandemic preparedness and response.
Use of digital health interventions for maintaining RMNCAH services during COVID-19 pandemic and way forward

WHO Country Office- Bangladesh
28 April 2022

Background

- In 1998- Bangladesh initiated eHealth under the umbrella of Ministry of Health and Family Welfare (MOHFW).
- In 2020 - Global Strategy on Digital Health was launched at the World Health Assembly.
- In 2021- Developed Digital health strategy in the country level (on going)
- In 2021- The Maternal Child Adolescent (MCA) unit of WHO SEARO plans to do an initial assessment of the “fit for purpose” of DHI deployed from the perspectives of providers, health system managers and clients within the context of stage of health system development and maturity of the digital ecosystem.

Objectives of the assessment

- Document the current use of DHI in countries during and prior to the COVID-19
- Assess whether the DHI implemented is fit-for-purpose (appropriate) for the health system role for which it is used and its effect on selected areas (training, HMIS, teleconsultation, etc.)
- Assess whether the introduction of the DHI was supported by enabling factors such as adequate training of providers and whether adequate equipment was provided to carry out the function and sensitization on ethical concerns.
- Assess the perception of providers and receivers (including ability to understand the messages or care provided (digital literacy), (target groups, individuals).
- Document lessons learned.

Assessment of effectiveness of digital health interventions (DHI)

Methodology used

A. Literature review
B. Collection of information by :
1. Tool 1- Use of DHI prior to COVID (interventions for clients, providers, managers, data systems)
2. Tool 2- Use of DHI during COVID (interventions for clients, providers, managers, data systems)
3. Tool 3- Status of Digital Health Ecosystems
4. Tool 4- Perceptions of health service providers towards the effectiveness of DHI and perception about clients’ satisfaction

Literature review- Key findings

- Several apps were rolled out during the COVID-19 pandemic to provide information and guide the suspected cases to health facilities in the public and private sector.
- Use of hotlines for accessing information, tele-consultation and scheduling appointments were common
- The digital divide has become more prominent due to the rise in use of technology to maintain essential health services.
- Studies, specific to use of digital health for RMNCAH services, were limited.

<p>| Use of DHI prior to COVID-19 pandemic for MNCAH information and services- interventions for clients (client information) |</p>
<table>
<thead>
<tr>
<th>Service area/health system challenge</th>
<th>Type of DHI</th>
<th>Content</th>
<th>Technology used</th>
</tr>
</thead>
<tbody>
<tr>
<td>MNCH – coverage not adequate</td>
<td>Non-targeted communication</td>
<td>Benefits of using various services</td>
<td>National health service Call centre- Swasthya Batayen 16263 (DGHS) Web-platform</td>
</tr>
<tr>
<td>FP and maternal, reproductive, child health</td>
<td>Non-targeted communication</td>
<td>??Benefits of using various services</td>
<td>Call centre- Shukhi Poriber Call centre 16767 (Host- DGFP* with private sector Synesys IT and international NGO IPAS)</td>
</tr>
</tbody>
</table>

<p>| Use of DHI prior to COVID-19 pandemic for MNCAH information and services- interventions for providers |</p>
<table>
<thead>
<tr>
<th>Service area/health system challenge</th>
<th>Type of DHI</th>
<th>Content</th>
<th>Technology used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Providers skill- not adequate</td>
<td>Targeted communication</td>
<td>Training on MNH-FP</td>
<td>E-learning platform</td>
</tr>
<tr>
<td>Intrapartum Care</td>
<td>Targeted communication</td>
<td>Safe delivery app to guide midwives on normal delivery and management of complications (health care decision support)</td>
<td>Mobile App (needs smartphone)</td>
</tr>
</tbody>
</table>

<p>| Use of DHI prior to COVID-19 pandemic for MNCAH information and services- interventions for health system managers |</p>
<table>
<thead>
<tr>
<th>Service area/health system challenge</th>
<th>Type of DHI</th>
<th>Content</th>
<th>Technology used</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIS</td>
<td>Targeted communication</td>
<td>-MNCAH Dush board for live monitoring of services -DHIS 2-CHOP Tracker- Patient tracker at community level, users are CHOP, host- DGHS, supported by UNICEF -DHIS 2- a registry of immunization (piloted in 2019), host -DGHS, this is tracker application of immunization program -DHIS 2- Maternal and perinatal death screening and review, users at community clinics, host –DGHS</td>
<td>Mobile app, web-based, desktop based applications</td>
</tr>
</tbody>
</table>
### Use of DHI prior to COVID-19 pandemic for MNCAH information and services - interventions for health system managers

<table>
<thead>
<tr>
<th>Service area/system challenge</th>
<th>Type of DHI</th>
<th>Content</th>
<th>Technology used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monitoring tools Dashboard</td>
<td>Targeted communication</td>
<td>e-MIS –Facility Dashboard for supervisors and managers under e-MIS, host- DGSP, users: all level managers, supported by Mahoni/ SCI</td>
<td>Mobile app, web-based, desktop based applications</td>
</tr>
</tbody>
</table>

### Use of DHI prior to COVID-19 pandemic for MNCAH information and services - interventions for data systems

<table>
<thead>
<tr>
<th>Service area/system challenge</th>
<th>Type of DHI</th>
<th>Content</th>
<th>Technology used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monitoring tools Dashboard</td>
<td>Targeted communication</td>
<td>DHIS 2-DGHS- Aggregated reporting system for all DHIS program and services including RMNCAH services, user: upazila and above level providers and managers, started from 2009, (MNCH started from 2012, EmOC, EPI, IMCI, SCANU, KMC etc.) supported by GIZ and UNICEF. DHIS 2-DGSP- Aggregated reporting system for MNCAH-FP service, web based, host- DGSP, funded by USAID, UNFPA, initiate from 2019, users: service providers from upazila and above</td>
<td>Mobile app, web-based, desktop based applications</td>
</tr>
</tbody>
</table>

### Use of DHI during COVID-19 pandemic for MNCAH information and services - interventions for data systems

<table>
<thead>
<tr>
<th>Service area/system challenge</th>
<th>Type of DHI</th>
<th>Content</th>
<th>Technology used</th>
</tr>
</thead>
<tbody>
<tr>
<td>General health including MCH</td>
<td>Targeted communication</td>
<td>Benefits of using various services</td>
<td>National health service Call centre -Swasthya Batayon 16263 (Host- DGHS with private sector Synera IT)- started in 2015</td>
</tr>
<tr>
<td>Maternal Health</td>
<td>Targeted communication</td>
<td>Benefits of maternal health services</td>
<td>Call centre- Shakti Porband call center 16767</td>
</tr>
<tr>
<td>General health information including maternal health, IMCI and FP, ASRH, ageing</td>
<td>Non-targeted communication</td>
<td>Patient need and benefits of the services</td>
<td>Call centres at health facilities</td>
</tr>
</tbody>
</table>

### Use of DHI during COVID-19 pandemic for MNCAH information and services - interventions for clients (client information)

<table>
<thead>
<tr>
<th>Service area/system challenge</th>
<th>Type of DHI</th>
<th>Content</th>
<th>Technology used</th>
</tr>
</thead>
<tbody>
<tr>
<td>General health including MCH</td>
<td>Non-targeted communication</td>
<td>Benefits of using various services</td>
<td>National health service Call centre -Swasthya Batayon 16263 (Host- DGHS with private sector Synera IT)- started in 2015</td>
</tr>
<tr>
<td>Maternal Health</td>
<td>Non-targeted communication</td>
<td>Benefits of using various services</td>
<td>Call centre- Shakti Porband call center 16767</td>
</tr>
<tr>
<td>General health information including maternal health, IMCI and FP, ASRH, ageing</td>
<td>Non-targeted communication</td>
<td>Patient need and benefits of the services</td>
<td>Call centres at health facilities</td>
</tr>
</tbody>
</table>

### Use of DHI during COVID-19 pandemic for MNCAH information and services - interventions for providers

<table>
<thead>
<tr>
<th>Service area/system challenge</th>
<th>Type of DHI</th>
<th>Content</th>
<th>Technology used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monitoring tools Dashboard</td>
<td>Targeted communication</td>
<td>- DHIS 2 –Routine vaccine reporting and vaccine logistics, web based system from upazila and above, host- DGHS, initiated at 2014 - Open MRS- Medical records system for selected hospitals of DGHS and DGSP - MIS –FP - e-MIS for human resources</td>
<td>Mobile app, web-based, desktop based applications</td>
</tr>
</tbody>
</table>

### Use of DHI during COVID-19 pandemic for MNCAH services - interventions for managers

<table>
<thead>
<tr>
<th>Service area/system challenge</th>
<th>Type of DHI</th>
<th>Content</th>
<th>Technology used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional inmates</td>
<td>e-LMIS DHIS e-LMIS DGSP</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Use of DHI during COVID-19 pandemic for MNCAH services - interventions for providers

In Bangladesh -
- DHIS 2-DGHS- 2009, (MNCH started from 2012, EmOC, EPI, IMCI, SCANU, KMC etc.) supported by GIZ and UNICEF
- DHIS 2-DGSP- Aggregated reporting system for MNCAH-FP service, web based, host- DGSP, funded by USAID, LIMSP, initiate from 2019, users: service providers from upazila and above
- DHIS 2- Routine vaccine reporting and vaccine logistics, web based system from upazila and above, host- DGHS, initiated at 2014
- Open MRS- Medical records system for selected hospitals of DGHS and DGSP
- MIS –FP
- e-MIS for human resources
- - MDGSR reporting
- - Orientation in reporting of HMS through digital media

### Use of DHI during COVID-19 pandemic for MNCAH services - interventions for data systems

In Bangladesh -
- During pandemic-Dashboard developed
- COVID 19
- Apps developed for a registry of vaccination (COVID EPI)
- Hospital information
- However, MNCH info is missing
Digital ecosystem

- Leadership and governance: Even prior to the COVID-19 pandemic, the Bangladesh Ministry of Health and Family Welfare (MOHFW) has been taking steps to achieve the Digital Bangladesh vision of the Government. The MOHFW is also trying to improve the interoperability of the various software tools currently in use.
- Policy readiness: In Bangladesh, a draft digital health strategy has been developed.
- National strategy on ICT
- Regulation: Not known.
- Standards of interoperability is recommended in the national strategies and attempts are being made to achieve interoperability of the different systems. Its implementation is not known.
- Capacity building of users of the system: There is no evidence of capacity building of providers which is a major gap.
- Infrastructure issues: Access to electricity and internet connectivity are major issues both in Bangladesh and Nepal.

Perceptions of providers

<table>
<thead>
<tr>
<th>Used Basic phone for providing MNCAH services (Voice call)</th>
<th>Number of provider</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of services provided using Basic Phone</td>
<td></td>
</tr>
<tr>
<td>ANC</td>
<td>76</td>
</tr>
<tr>
<td>PNC</td>
<td>76</td>
</tr>
<tr>
<td>Intrapartum</td>
<td>76</td>
</tr>
<tr>
<td>EmONC</td>
<td>76</td>
</tr>
<tr>
<td>IMCI/Newborn/Child health</td>
<td>64</td>
</tr>
<tr>
<td>ASRH</td>
<td>00</td>
</tr>
<tr>
<td>Aging</td>
<td>00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Used Smart phone for providing MNCAH services (Text/Tele Consultation/Video consultation)</th>
<th>Number of provider</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of services provided using Basic Phone</td>
<td></td>
</tr>
<tr>
<td>ANC</td>
<td>10</td>
</tr>
<tr>
<td>PNC</td>
<td>10</td>
</tr>
<tr>
<td>Intrapartum</td>
<td>10</td>
</tr>
<tr>
<td>EmONC</td>
<td>10</td>
</tr>
<tr>
<td>IMCI/Newborn/Child health</td>
<td>10</td>
</tr>
<tr>
<td>ASRH</td>
<td>00</td>
</tr>
<tr>
<td>Aging</td>
<td>00</td>
</tr>
</tbody>
</table>

Perceptions of providers – Satisfaction with using DHI for delivering services

<table>
<thead>
<tr>
<th>Are the you (service provider) satisfied to receive MNCAH service digitally?</th>
<th>Very unsatisfied</th>
<th>Unsatisfied</th>
<th>Satisfied</th>
<th>Very Satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANC</td>
<td>71</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PNC</td>
<td>69</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intrapartum</td>
<td>74</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EmONC</td>
<td>77</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IMCI/Newborn/Child health</td>
<td>64</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ASRH</td>
<td>00</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aging</td>
<td>00</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FP</td>
<td>74</td>
<td>0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Perceptions of providers – Satisfaction with using DHI for delivering services

<table>
<thead>
<tr>
<th>Health service/challenge</th>
<th>DHI</th>
<th>Number using basic phone</th>
<th>No using Smart phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANC</td>
<td>TelCounselling/ams/teleconsultation/video consultation</td>
<td>76</td>
<td>10</td>
</tr>
</tbody>
</table>

Challenges

- During assessment:
  - Availability of fewer studies on DHI on MNCAH, less availability of inventory
  - Short duration of the project to enable an in-depth study
  - Limitation of respondent to use the DH platform during interview

- Country level Challenges on DHI:
  - Inadequate infrastructure (Gadget, internet connectivity, maintenance etc.)
  - Shortage of skilled HR
  - High cost for using DH services (logistics, HR, maintenance, big data management etc.)
  - Limitation of financial resource

Way forward

- Plans to continue technologies developed during COVID-19 pandemic
  - Continue Swasthya Bataon & Shukhi Poribar etc.
  - Plans for continuation of DHI Training of providers (all providers or those in remote areas, what about skill training), evaluation
  - Training in use of the DHI for various service delivery and management purposes,
  - Consideration for remuneration for use of personal mobiles by providers
  - E-logistics- scale up
  - E-HMIS-scale up
  - Supervision/monitoring- will be incorporated with regular OP level activity

- Plans for continuation of DHI Training of providers (all providers or those in remote areas, what about skill training), evaluation
- Sustaining the coordination of health partners and programs towards an integrated DHI system.
- Plans for continuation of DHI Training of providers (all providers or those in remote areas, what about skill training), evaluation
- Consideration for remuneration for use of personal mobiles
- Encourage research on impact of DHI in delivering MNCAH services for future use
- Scale up of e-LMIS
Use of digital health interventions (DHI) for maintaining RMNCAH services during COVID-19 pandemic

Date: 28 April 2022

Ms Kabita Aryal
Chief, FP and RH Section
Family Welfare Division
Department of Health Services
Ministry of Health and Population, Nepal

Policy environment on digital health

- National Development Plans
- Nepal Health Sector Strategy 2015-2022
- eHealth Strategy 2017
- Commission on Information and Accountability (CoIA)
- National ICT Policy
- Digital Nepal Framework 2018
- M and E Guideline in federal context 2018
- WHA71.7 (2018) on digital health
- eHealth Roadmap 2019
- National Health Policy 2017
- CRVS strategy 2019
- Global Digital Health Strategy 2020

Digital Health Interventions (DHI) for RMNCAH: Pre-COVID 19

- DHIs were used to improve the coverage and quality of services, especially ANC, FP and child health services
- **Medic Mobile** initiation has been used in some districts for FCHV to send reminders to mothers about ANC visits and due date for delivery (targeted communication)
- **Amako Maya** an NGO intervention to provide information to pregnant mothers, who are enrolled in the system (non-targeted communication)
- **HMIS in DHIS 2 platform**: Online reporting of services, almost one third information is related to RMNCAH
- Information dissemination for public health campaigns (immunization, RH morbidity screening, FP etc)
- **eLMIS at health facility levels to track the commodities stock**

Technology used:
- Public Information through Radio, TV, social media
- Text messages, audio/video messages
- Electronic health records

Digital Health Intervention timeline: Nepal

Penetration of ICT in the population and HFs

- Current availability of communication equipment in the health facilities for health service purpose is 26 percent (2021) which was 20.2 in 2015
- Around 55 percent of health facilities have computers with internet facilities (NHFS 2021) which was 11.4 percent in 2015 (NHFS 2015).
- Similarly, at the population level 15.4 percent households have computer and 51.1 percent households have internet access at home (NMICS 2019).
- There are 21 network service operators
- 135 providers are providing internet services.
- It is evident that the use and expansion of Information Communication technology is rapidly going up.

Use of the DHI during the COVID-19 pandemic for RMNCAH services

- Targeted DHI used to improve services coverage, especially ANC, FP, safe abortion services and Child health
- Teleconsultation with health workers for ANC and PNC services
- **Helplines** expanded to provide information on RMNCAH and COVID-19 related information
- **HMIS and e-LMIS** for monitoring purpose and obtaining data
- **Apps such as Amako Maya and medic mobile** enhanced to track and provide information to pregnant women
- **KOBO tool** to conduct rapid assessment of RMNCAH services*
- Use of **personal mobile phones** (including video call) to communicate with fellow health workers/supervisors as well as to provide services to clients*

Use of the DHI during the COVID-19 pandemic for RMNCAH services

- Social mobilization and awareness through various media such as Radio, TV and Social Media
- **Virtual platform** (MoHP websites, zoom, social media) used for:
  - Orientation on interim guidelines for maintaining RMNCAH services
  - Orientation on Infection prevention and use of PPE
  - On-line training on FP
  - Webinar series for Sensitization of sub-national government for continuation of RMNCAH services
  - On-line training for COVID-19 vaccination
  - Dissemination of guidelines

Findings from Assessment of the Effectiveness of the DHI during the COVID-19 Pandemic for RMNCAH Services

- Almost all health workers exposed to DHI during COVID-19 pandemic
- Health workers working in RMNCAH oriented on Interim guidelines
- Data transmission and use was enhanced during pandemic
- Challenges of digital infrastructure (equipment and accessories) and uninterrupted availability of internet
- Limited capacity of health workers to use the digital technology and platforms
- Cost of communication for DHI, paid by some local governments
### Perception of providers towards use of DHI

- Health Workers are positive in the use of DHI*- improved healthcare due to advanced technology
- The COVID-19 pandemic has given lessons and opportunity towards using digital health interventions
- Digital health interventions allowed service providers to communicate and provide service through various media
- Limited availability of digital infrastructure (equipment, electricity and internet), are the major issues as mentioned by health workers *
- Gap in accessibility to digital platform
- Capacity development for use of DHI is essential
- There is a demand for more availability of the DHI.

* Rapid Assessment of Digital Health Services provided by Public Health Facilities in Nepal during COVID-19 pandemic

### Challenges

- Under-development of Infrastructure (equipment and devices) and unequal distribution
- Poor coverage and quality of the internet services
- Low investment in DHI and Out of pocket expenditure from Program or health workers for using DHI
- Authenticity and reliability of the messages delivered through social media
- Skillful use of devices (smartphone, tablets, laptops etc)
- Lack of standardization and inter-operability of the digital solutions; mainly delivered through non-public sector
- Diverse and limited Infrastructure (equipment and devices)

### Continuation plans / Recommendations to improve use of DHI

- Digital Health is the highway of future
- Need strong governance and institutional set up at all levels
- Highly important in the federal context
- Need to develop Digital Health Foundation with standard and inter-operability
- MOHP in collaboration with development partners should invest more on digital health

### Continuation plans / Recommendations to improve use of DHI

- DHIs produce multiple advantages; from service delivery to information management and improvement in governance
- DHIs increases the efficiency of the RMNCAH services
- DH supports to produce disaggregated data with quality for monitoring the equity
- DHI improves the managerial competency and make system faster and accountable
- Move towards Electronic Health Record (EHR) system for advancing health system

**THANK YOU**
DIGITAL HEALTH INTERVENTIONS IN TIMOR-LESTE PRIOR TO COVID 19

2012 Liga Inan program
2012 Youth hotline for SRH information sharing
2013 DHIS 2 platform
2015 RSETL/Saude na Familia
2017 NBBDS platform
2015 e-LMIS and m-supply

Status of digital health ecosystems

Enabling environment:
- Leadership and governance provided by MCH in digital health technologies. MCH has not established a separate unit for Digital Health as yet.
- Ministerial Directive of Saude na Familia, RSETL and Liga Inan, Department of Pharmacy and Saude na Familia is leading and managing the DHIS2, and Department of Pharmacy and
SAMES is leading and managing the e-LMIS & m-supply.
- Policy: Ministerial Diploma no. 51/2017, of December 20th: Saude na Familia
- Guidelines: The program has guidelines and SoP delivered to all health care providers to supplement the program implementation including the phone usage limited to regular health messages and chats, sometimes phone calls with the clients when the internet connectivity permits. It ensures privacy and confidentiality aspects of the digital health interventions.

Leadership and governance provided by MOH in Digital health technologies: MOH has not established a separate unit for Digital Health as yet.
- Standards of interoperability: Available
- Learning readiness: Training provision for data management and analysis, program details, and use of mobile app for the relevant health care providers.
- Regulations: None thus far but the government has thought to initiate the digital government for this year which could facilitate the implementation of the digital usage in-country including digital health.
- Consequences associated with any aspect of adopting digital technologies to improve health service, from inception to operation.

Status of Liga Inan program in all municipalities

Connecting parents with health system in the time of COVID pandemic

28 April, 2022

WHO Global Strategy on Digital Health 2020-2024

“Digital health is the field of knowledge and practice associated with any aspect of adopting digital technologies to improve health service, from inception to operation.”

WHO SEARO under the Investment Project to mitigate the indirect impact of COVID19 service disruption on MNCAG services has conducted a rapid assessment of Digital Health Interventions in the 3 project countries, one of which is Timor Leste.

The assessment covered information on pre-COVID use of DHI and use of DHI during COVID.

The DHI use during the pandemic has been further grouped into interventions for clients, providers, managers, and data sources.

Two additional areas covered are the digital ecosystem and perception of providers towards the use of DHI.

Some of the information gathered is covered in this presentation.

Recognizing that Liga Inan is the most successful DHI and is implemented nationwide, the focus of the presentation is on Liga Inan.

Health service area / health system

Type of digital health intervention

Type of technology and instrument used

Interventions for clients:
ANC, PNC: Targeted communication: Liga Inan- to pregnant mothers and post-delivery up to 6 m (targeted communication)
Automated text messages (basic phone)

Interventions for providers:
ANC, PNC: Targeted communication: Liga Inan- Health providers register pregnant mothers, track their progress, track labour and support to mothers and newborns (first 6 m after delivery client identification and registration and teleconsultation).
The app sent an automatic reminder to the midwives on the task; mothers planning for delivery within the results.

Interventions for clients:
ANC, PNC: Targeted communication: Liga Inan- to pregnant mothers and post-delivery up to 6 m (targeted communication)
Automated text messages (basic phone)

Interventions for data sources:
HMS: NBBDS (the Newborn Birth Defect Database System) RSETL

Interventions for clients:
ANC, PNC: Targeted communication: Liga Inan- to pregnant mothers and post-delivery up to 6 m (targeted communication)
Automated text messages (basic phone)

Interventions for health system

Enabling environment
- Leadership and governance provided by MCH in digital health technologies: MCH has not established a separate unit for Digital Health as yet.
- Ministerial Directive of Saude na Familia, RSETL and Liga Inan, Department of Pharmacy and Saude na Familia is leading and managing the DHIS2, and Department of Pharmacy and
SAMES is leading and managing the e-LMIS & m-supply.
- Policy: Ministerial Diploma no. 51/2017, of December 20th: Saude na Familia
- Guidelines: The program has guidelines and SoP delivered to all health care providers to supplement the program implementation including the phone usage limited to regular health messages and chats, sometimes phone calls with the clients when the internet connectivity permits. It ensures privacy and confidentiality aspects of the digital health interventions.

Leadership and governance provided by MOH in Digital health technologies: MOH has not established a separate unit for Digital Health as yet.
- Standards of interoperability: Available
- Learning readiness: Training provision for data management and analysis, program details, and use of mobile app for the relevant health care providers.
- Regulations: None thus far but the government has thought to initiate the digital government for this year which could facilitate the implementation of the digital usage in-country including digital health.
- Consequences associated with any aspect of adopting digital technologies to improve health service, from inception to operation.

Leadership and governance provided by MOH in Digital health technologies: MOH has not established a separate unit for Digital Health as yet.
- Standards of interoperability: Available
- Learning readiness: Training provision for data management and analysis, program details, and use of mobile app for the relevant health care providers.
- Regulations: None thus far but the government has thought to initiate the digital government for this year which could facilitate the implementation of the digital usage in-country including digital health.
- Consequences associated with any aspect of adopting digital technologies to improve health service, from inception to operation.
Liga Inan is a mobile health program that works to strengthen engagement between expectant parents and health professionals.

Building relationships to make child birth safer in Timor-Leste

More than 100,000 Timorese mothers have now been enrolled. The number of deliveries supported by skilled birth attendants has doubled.

Let’s think beyond information management to technology that persuades.

Key results

- Over 100,000 mothers enrolled.
- Over 2.7 million scheduled messages delivered to pregnant women and new mothers.
- A Liga Inan mother is nearly twice the odds of delivering with a skilled-birth attendant and five times more likely to attend follow-up care.
- Nearly 60% of enrolled women identified Liga Inan as the best source of information on maternal and child health.
- 64% enrolled mothers reported receiving maternal and children’s health information from Liga Inan in comparison to other information sources.

Working during the COVID-19 Pandemic

Using Liga Inan to combat misinformation around COVID-19

- Liga Inan sent SMS to expectant parents that it is safe to come for ANC and continue making a plan to deliver with skilled birth attendants.
- Liga Inan also sent SMS on importance of COVID-vaccine for pregnant moms and lactating mothers.
- Health professionals reported using Liga Inan to collaborate with their peers during the pandemic.
- Health professionals also reported Liga Inan helps them to stay engaged with expectant moms.
### Focus on socialization and delivery of COVID-19 Vaccine

- Essential services are disrupted as a result of shifting priorities to COVID-19 work

### Interruptions of services

- Misinformation led to fear among patients to come to health facilities
- Moreover, monitoring visits for other programs became challenging with travel restrictions

### What we have learned

- The role of SMS to deliver credible health messages from health authority becomes heightened in the time of crisis
- Messages that are empathetic with factual information help to counter misinformation
- Data from our Liga Inan dashboard on service delivery ie. Enrollment and skilled birth attendants are useful to identify impacts of the pandemic. The data is helpful for programs in decision-making and allocation of resources.

### Providers Perceptions

- This is a very comprehensive program
- Easy health education and message medium
- Reaching the targeted group
- Adequate tools to register and track the progress

### Challenges

- Weak Internet connection and internet providers in each municipality
- Unclear Budget allocation for program implementation
- Lack of Human resources at the national level to facilitate (technical & ICT)
- Lack of awareness/ coordination with the local authority on the importance of the program implementation

### Way Forward

- The Ministry of Health as the owner of the program, through the National Directorate for Saúde na Família would like to ensure the sustainability of the program with the support from the development partners.
- The MCH department will ensure continued implementation and program needs through monitoring and supervision from the national level.
- Municipal health directors will ensure continued implementation of the program at CHCs and health posts.
- The National directorate of Saúde na Família will work collaboratively with the relevant stakeholders during the transition phase; technical support as well as financial support
- Provision of Refresher orientation training for health care providers
- An in-depth survey on the perception of providers as well as clients, evaluate the outcome and identify the gaps

### Obrigado  Thank you!