

UNICEF'S DIGITAL HEALTH & INFORMATION SYSTEM ANNUAL REPORT 2022



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ACKNOWLEDGEMENTS

Celebrating the first-year anniversary of UNICEF's Digital Health & Information Systems (DH&IS) unit and the Digital Health Centre of Excellence (DICE), we would like to thank all partners and individuals who made our work possible.

Special thanks are owed to our funders and partners: the World Health Organization (WHO), the Global Alliance for Vaccines and Immunization (Gavi), PATH, Digital Square, the United States Agency for International Development (USAID), the Global Fund for HIV, TB and Malaria, the World Bank, Johnson & Johnson, the Bill & Melinda Gates Foundation, the Center for Disease Control and Prevention (CDC), Twilio, the European Commission, the Government of Japan and the German Development Cooperation through the Gesellschaft für Internationale Zusammenarbeit (GIZ). We would also like to extend our gratitude to national governments and ministries of health that have supported our work.

Further thanks are due to the hundreds of individuals, colleagues, researchers, policymakers, representatives from non-governmental organizations, bilateral and multilateral cooperation agencies and partner institutions that continuously and generously contribute to the development and improvement of DH&IS and DICE.

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01

Introduction

UNICEF's Digital Health Journey

In response to growing global demand for technology-enabled health programmes, UNICEF's Digital Health & Information Systems (DH&IS) was established as its own unit to support digital health strategies, guidelines, interventions, and data across UNICEF's health programme group. The Digital Health Centre of Excellence (DICE), a multi-agency consortium co-led by UNICEF and WHO, was further established in 2021 to extend this technical assistance to governments, UN agencies, and our field partners. As part of our [mission](#) to improve the health and wellbeing of children and their families, UNICEF is increasingly utilizing digital technology to improve access to health services and information, including reintegrating many siloed pandemic investments back into routine systems. Some examples of how we supported governments and national partners include:

- Supporting the planning, testing and scaling of digital health solutions, anchoring them within national architectures and standards, and extending their availability and usage in remote and hard-to-reach communities
- Using data and analytics to track and improve health outcomes, including strengthening sub-national and point-of-care data use
- Building capacity and supporting local partners to effectively use digital technology in health programs

Overall, we aim to empower governments, communities and individuals with the information and tools they need to make informed decisions about their health and well-being, and to improve access to health services and information for all, especially the most vulnerable people.



Digitalization of health services can directly enhance quality-of-care, reduce human error, improve patient outcomes, increase efficiency, lead to more equitable coverage and lower overall costs. Furthermore, timely, high-quality data exposes inequities in health access and outcomes and enables decision makers to identify unmet needs, including how and where to invest in health facilities, personnel, vaccines, and other supplies.

Yet, in many places – especially low-income countries and humanitarian settings – investments in health sector digitalization are not systematic, nor does it follow best practices, guidelines, or emerging standards. This can result in weakened and siloed systems, create new risks to child wellbeing and safety, and increase burdens on frontline health workers. Moreover, timely and accurate quality data is hard to collect, manage and use, preventing decision makers from tracking progress on existing programmes and policies or making data-informed decisions. As a result, the children most in need are often left behind.

In alignment with UNICEF's [Approach to Digital Health](#) and [Health strategy](#), the Digital Health, and Information System (DH&IS) unit was established in 2021 to support this vision¹. DH&IS sits under UNICEF Programme Group's Maternal, Newborn, Child, and Adolescent Health (MNCAH) section, and alongside other cross-cutting units including Primary Health Care and Health Systems Strengthening (PHC-HSS). DH&IS works closely with other teams in UNICEF, including Supply Division; Data, Analytics, Planning and Monitoring (DAPM); ICTD (Information and Communication Technology Division); and the Office of Innovation.

In addition, and to enable more coordinated action towards robust digital health programmes, UNICEF's DH&IS unit launched the Digital Health Centre of Excellence (DICE) in partnership with WHO. The Centre was established through a multiagency consortium to provide technical assistance on digital health and information system solutions that could support countries during the pandemic. With the wide rollout of COVID-19 vaccines across the world and the pandemic slowing down, DICE shifted its assistance beyond the pandemic, aiming to provide support on digital health solutions that would build onto investments done for COVID-19 to further strengthen primary health care and a more efficient provision of health services such as routine immunization.

¹ From 2018-2021, digital health programme leadership sat within Health's Implementation Research and Delivery Science (IRDS) unit. Prior to 2018, much of UNICEF's digital health work was led by the Office of Innovation



UNICEF's Approach to Digital Health

UNICEF's approach to digital health encompasses the use of Information and Communication Technologies (ICTs) to meet health goals through a multi-sector digital transformation lens. This can encompass a wide range of support, from policy to financing upstream, to the deployment of appropriate technologies, including mobile apps, SMS, voice response systems, health information systems, diagnostic tools, wearable devices, geospatial technology, and data analytics. These digital health interventions are aimed at improving access to information and services for communities, particularly those that are hard to reach.

Digital health is enabling a wide range of social and health programs - monitoring of patients' conditions and care, better and more accurate diagnosis, data analytics, information sharing, and capacity building are just a few examples on how it can be used to improve efficiency and decision making. When health systems and patient journeys are optimized, and health workers - as well as the communities themselves - are enabled with robust and well-designed digital tools, proven primary health care interventions can become more effective.

Maternal and newborn care, management of childhood illness, vaccine delivery, and early childhood interventions can become more systematic and less cumbersome, and health workers can more easily deliver high-quality care and respond to emergencies like disease outbreaks when harnessing the power of digital health. Likewise, the thoughtful incorporation of digital technologies into the role of community health workers (CHW) connects them to health system structures, providing them with the skills and tools to protect and care for their communities, as well as providing the communities themselves with new mechanisms to increase accountability for the services received.

To enhance the digitalization of national health systems, UNICEF prioritizes investments that will boost primary health care by strengthening national policies and coordination, boosting the capacity of community health workers to use digital solutions, and aligning digital investments to benefit marginalized communities. Additionally, UNICEF invests in Digital Public Goods, creating costings for primary health care, documenting best practices, and producing guides and toolkits to aid in the deployment of digital health tools. The unit also promotes increased domestic funding to support the digital transformation of health systems.



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Report Structure

This report presents an opportunity to reflect on the collaborative achievements reached so far with partners, members, colleagues, and donors. UNICEF's achievements throughout 2022 will be described across four major categories, outlining support for (a) advancing national digital health strategies and policies, (b) the discovery, development and use of data and digital platforms for Primary Health Care (PHC), (c) knowledge management and capacity building for digital health and information systems, and (d) the shaping of the global agenda for the use of digital health and information system technologies.

The report begins by presenting an overview of UNICEF's areas of work, followed by a chapter with key achievements in 2022. The third part of this report will provide further details on activities and accomplishments across the abovementioned categories. This is followed by knowledge management and communications efforts, as well as the engagement activities that the team participated in or contributed to as part of the Centre's knowledge sharing and outreach strategy. The report concludes with challenges faced, lessons learned and next steps.

Since the report is primarily reporting on the activities and achievements led by the Digital Health & Information Systems unit, digital health activities led by other colleagues in the organisation may not be captured here.



02

Highlights

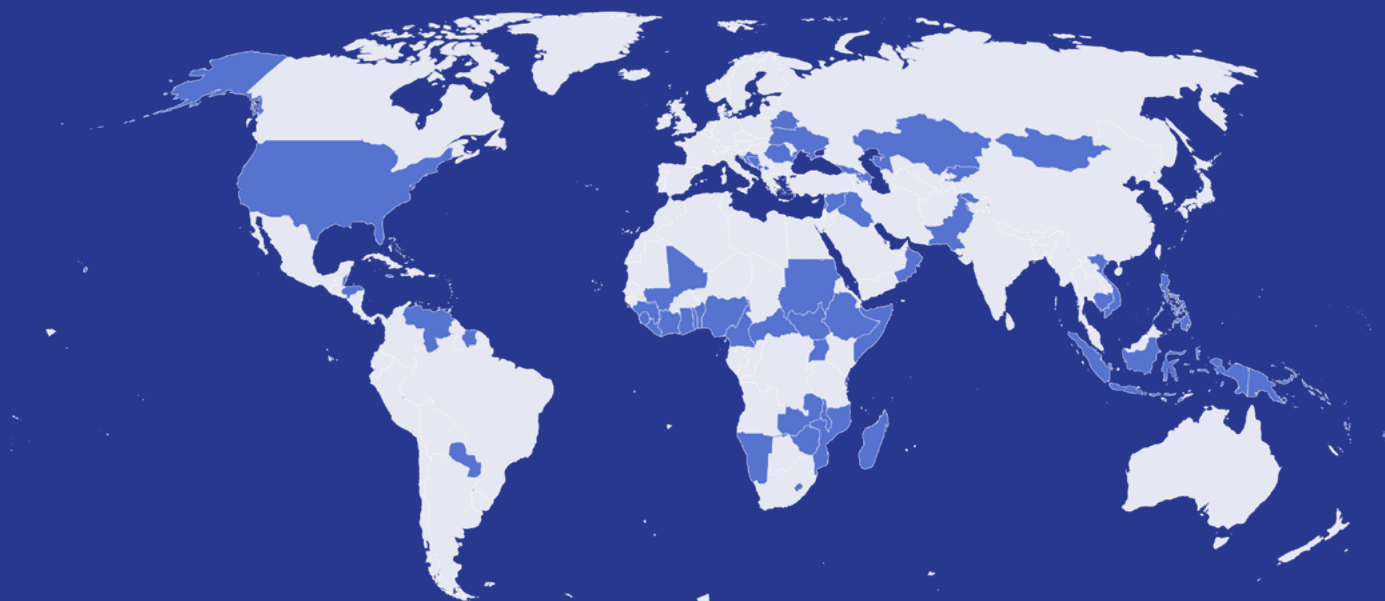
Overview

42 Digital health assessments completed

58 Countries supported

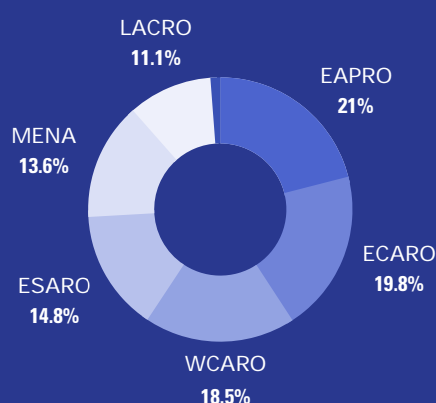
74 Activities ongoing or completed

Countries Supported

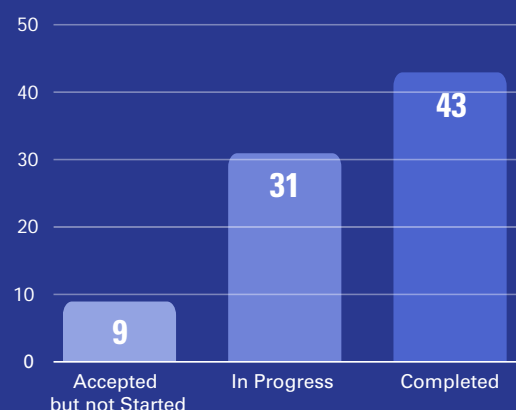


Azerbaijan | Belarus | Belize | Benin | Bosnia and Herzegovina | Cambodia | Cameroon | Central African Republic | Cote d'Ivoire | Croatia | Ethiopia | Fiji | Georgia | Ghana | Guinea | Honduras | Indonesia | Iraq | Jamaica | Kazakhstan | Kiribati | Kosovo | Kyrgyzstan | Lebanon | Lesotho | Liberia | Madagascar | Malawi | Mali | Mongolia | Montenegro | Mozambique | Namibia | Nigeria | Oman | Pakistan | Palestine | Papua New Guinea | Paraguay | Philippines | Romania | Sao Tome and Principe | Sierra Leone | Solomon Islands | Somalia | South Sudan | Sudan | Suriname | Syria | Togo | Uganda | Ukraine | United States | Vanuatu | Venezuela | Viet Nam | Zambia | Zimbabwe

Support by region



Support by status



Digital health across the continuum of care



PREGNANT WOMEN

Family registry, Antenatal care follow up, Prevention of Mother to Child Transmissions (PMTCT), Maternal Nutrition and Counseling.

Examples:

- Enroll people for health services
- Provide job aides and alerts according to clinical guidelines for health workers
- Screen people by risk or other health status
- Transmit targeted alerts and reminders
- Coordinate emergency response and transport

MOTHERS, NEWBORNS AND CHILDREN

Immunization, Integrated Community Case Management (ICCM), Integrated management of newborn and childhood illness (IMNCI), Early detection and treatment of malnutrition, Vital events notification (link with CRVS), early childhood development.

Examples:

- Provide job aides and alerts according to clinical guidelines for health workers
- Screen clients by risk or other health status
- Birth notification/declaration and registration
- Transmit targeted child care and immunization related alerts and reminders



ADOLESCENTS

Adolescent pregnancy, NCD prevention and mental health.

Examples:

- Peer group support
- Counseling
- Linking clients with health services



03

Key activities

Shaping the global agenda for the use of digital health and information system technologies

Working with a range of partners including WHO, USAID, PATH and the Digital Public Goods Alliance (DPGA), UNICEF developed or significantly contributed to seven guidance documents and toolkits covering cross-cutting areas, including:

- a. [Digital Implementation Investment Guide \(DIIG\) Quick Deployment Guide](#)
- b. [Guidance on the use of digital solutions to support the COVID-19 national deployment and vaccination plans](#)
- c. [Health DPGs: Immunization Delivery Management Report](#)
- d. [Primer on Digital Solutions for COVID-19 Vaccination Service Delivery](#)
- e. [Geo-enabled Microplanning Handbook](#) and eLearning Course developed through collaboration with WHO, BMGF, CDC, and Gavi.
- f. [Rapid guidance for costing of GIS investments into Gavi COVID Vaccine Delivery Support \(CDS\) funding.](#)
- g. [A webinar series presenting the leading Electronic Immunization Registries \(EIR\) and Immunization Information Systems \(IIS\) software and service options that are currently deployed in the field.](#)



UNICEF chairs the bi-weekly Digital Health Donor Coordination meeting and the COVID-19 Vaccine Delivery Partnership (CoVDP) Working Group, and co-chairs the GIS Working Group and COVAX Geospatial Health Community of Practice. Through the GIS Working Group, multiple information and technical notes have been produced to support countries mobilize resources for geospatial investment for COVID-19. A deployment guidance for GIS-based implementations will be completed in 2022, and over 10 regional and global webinars were conducted to disseminate knowledge and best practices on the use of geospatial solutions for health programs.

A dedicated Geospatial Community of Practice (CoP) was initiated to increase knowledge exchange on innovation and best practices between country implementers, implementation partners, donors, and providers of geospatial solutions. All these partners focus on strengthening global coordination of geospatial solutions and identifying challenges related to the management and delivery of COVAX-related health programs.

Since launching the CoP in August 2022, over 325 participants from over 65 organizations have tuned into the monthly calls, which covered multiple topics around the geospatial solutions and tools that are utilized for not only microplanning but also integrating COVID-19 vaccination plans into routine immunization strategies.

Furthermore, UNICEF is supporting the continued design and implementation of WHO and ITU's *Digital Health: Planning National Systems* course. The course builds local capacity to plan, cost and implement digital health interventions with an enterprise approach. With an applied capstone project that allows participants to contextualize their learnings and skills to actual country challenges, graduates gained requisite skills to support planning and scaling sustainable digital health solutions.



Advancing national digital health strategies, policies, planning and programmes

During 2022, UNICEF provided dedicated support to the development and implementation of digital health initiatives across over 58 countries. For example, UNICEF has actively participated in the development and implementation of the national digital health strategy in Cambodia and Mongolia.

In addition, UNICEF organized the Digital Health & Interoperability priorities and costed investment roadmap that would enable the development of the national digital health strategies in Sierra Leone, the Central African Republic, Ethiopia and São Tomé and Príncipe. UNICEF has also supported the development of the GAVI digital health information strategy and co-led the prioritization process of immunization digital health interventions in Ethiopia, Nigeria, Cambodia and Central African Republic.

Additional technical assistance continues to be provided to country requests via the COVID-19 Vaccine Delivery Partnership (CoVDP) and other channels, including to 40 GAVI eligible countries and 26 of the 34 priority CoVDP countries. Support is also being provided on quality assurance to individual COVID-19 Vaccine Delivery Support country requests, and broader Implementation research to better understand how effectively these funding mechanisms are being implemented to strengthen national immunization systems.



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Landscape Mapping and Digital Health Assessments

UNICEF provided support to countries on digital health assessments, charting and reviewing the digital maturity and system strengthening opportunities. Structured Map & Match assessments were completed for 42 countries (22 by Digital Square and 20 by UNICEF). Digital Health Readiness Assessments for Immunization were completed in four countries (Cambodia, Kenya, Nigeria & Ethiopia), and Digital Pandemic Preparedness Assessments (DPPA) were supported in five countries (Togo, Sierra Leone, Nigeria, Côte d'Ivoire, and Ghana).

Some of the assessments completed by UNICEF were made public, as the ones for [Kiribati](#), [Mongolia](#), [Oman](#), [Pakistan](#), [Papua New Guinea](#), [Sudan](#), [Syria](#), [Vanuatu](#), [Lebanon](#) and [Somalia](#).

In Jamaica, UNICEF is supporting an electronic immunization registry (EIR) readiness assessment, which is intended to facilitate a discussion between stakeholders around the building blocks that need to be in place to enable the successful implementation of an EIR. The outputs from this assessment will help define next steps toward achieving the Ministry of Health and Wellness's vision for digitization of their Expanded Program on Immunization (EPI), including the selection of a best-fit EIR.

In addition, UNICEF provided important support for Kiribati and the Solomon Islands, assessing the countries' health landscape for the deployment of an Electronic Immunization Registry (EIR) and of a Master Patient Index (MPI). This is considered a first step towards introducing the Electronic Medical Record (EMR). Once MPI and EIR have been developed in each country, the same design and blueprint pattern could be used for the EMR, ensuring interoperability and data sharing among all systems.

Geographic information Systems (GIS)

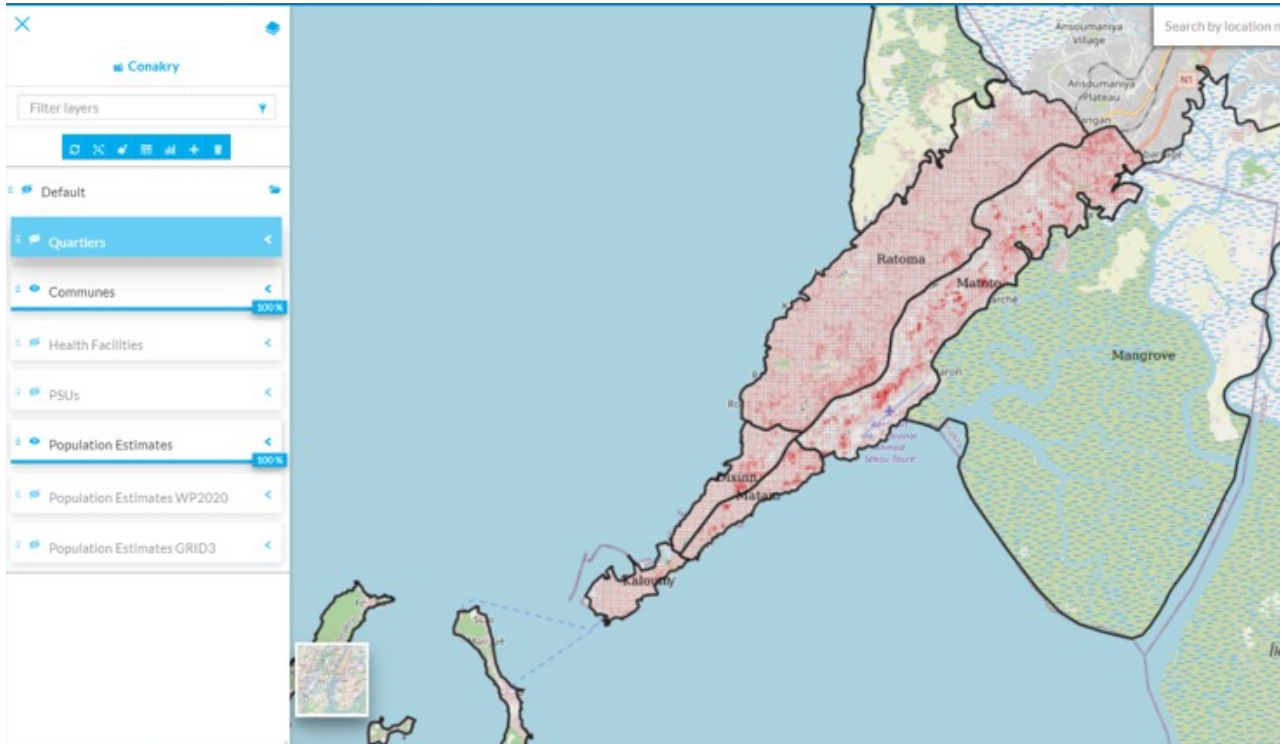
UNICEF continued providing leadership and technical support to country deployments of geospatial data and technologies, including Geographic information Systems (GIS) for COVID-19 national vaccine distribution plans. Through the mechanisms of the [GIS Working Group for COVAX Innovation](#), co-chaired with WHO and including core partners the Global Fund, the Bill & Melinda Gates Foundation, Gavi, and CDC, this included direct country Technical Assistance (TA), fundraising support for geospatial investments, and production of implementation guidelines for geo-enabled vaccine microplanning. Fundraising support resulted in over 30 countries including GIS investments in their COVAX funding requests, with direct TA provided to 10 countries.

In Mozambique, UNICEF is supporting the Ministry of Health to leverage geospatial data and analytical products for the "reach every child/district" immunization activities. UNICEF is supporting the immunization programme to produce and interpret digital maps to identify missed settlements/populations, optimize the location of vaccination sites, and reduce the travel time of community members to vaccination services.

In Guinea, UNICEF completed a population estimates exercise leveraging a bottom-up approach, which involved a micro-census (conducted by the National Statistics Office) and geospatial analysis and modeling to provide gridded target populations for immunization in the city of Conakry.



IMAGE 1: Gridded Population Geoplatform, Conakry/Guinea



Malawi, Uganda, and South Sudan secured funds from the Japanese government to deploy immunization information systems. They are currently being supported in shaping their strategies and planning for the implementation of geospatial technologies for routine immunization and COVID-19 roll-out. Kiribati and Mongolia are also supported in the use of GIS-based technologies to support the identification of zero-dose children and vaccination microplanning.

In addition, UNICEF is working with PATH to define technical GIS requirements, which will be incorporated in future Digital Square notices for the identification of the 2023 GIS-based microplanning tools as global goods for investment.

Other initiatives

In Ethiopia, Cambodia, Nigeria and other countries, UNICEF worked with the Ministries of Health to facilitate stakeholder consultations and advocate for the prioritization of digital health investments in line with GAVI's 5.0. Strategy. This assistance resulted in the development of costed roadmaps to support the immunization program in digital health investment decisions.



UNICEF has also supported the recruitment of digital health specialists in Sierra Leone and is currently working on the same process for Madagascar, Zambia, Liberia, Kosovo, and Kazakhstan, ensuring key abilities and skills are found and put in use for the digital health agenda. UNICEF is also working on the revision of documents for operationalizing health service delivery - such as terms of reference, system requirements and others – in Azerbaijan, Bosnia & Herzegovina, Croatia, Romania, and Zambia.

Overall, more than 70 countries benefited from either direct technical assistance or digital assessments in 2022.



Discovery, development and use of data and digital platforms for Primary Health Care

Digitizing vaccine tracking and vaccine certificates

UNICEF is supporting the development and deployment of Digital Vaccine Certificates in Iraq, Mali, Syria, Ukraine (to be used in neighboring countries for school enrollment) and the Solomon Islands. UNICEF also supports the Solomon Island's linkages with their national DHIS2, as well as capacity building initiatives and support to procurement and vendor selection. Support is also being provided to the Uzbekistan Country Office, which has developed and is currently piloting a vaccine Logistics Management Information Systems (LMIS) envisioned to become a component of a broader immunization information system.

Building on the successful use of CommCare for vaccine administration in Jamaica, UNICEF supported the successful deployment of DIVOC 2.0, an upgrade from the version of the DIVOC software currently used to produce digital COVID-19 vaccine certificates.

In Malawi, UNICEF supported the country deployment of RapidPro for vaccination campaigns, allowing for real-time monitoring and capturing progress of vaccination activities in the field. With a successful implementation during the polio outbreak, the system is now being deployed for the COVID-19 "my village" vaccine campaigns to support the country in expanding vaccination coverage. In Kenya, UNICEF is supporting the development of an immunization data repository, which aims to pull data from various siloed digital systems for better data use.

In Madagascar, UNICEF is supporting the assessment and digitization of the community health programme. Work is underway to support the deployment of a health worker registry and to improve digital systems for community health information management to respond more holistically to community health workers functions for immunization, maternal health, and birth registration.

UNICEF is supporting the digitization of the home nursing and Health Information Systems (HIS) training modules in Azerbaijan and Kosovo, as it was also done in Ukraine prior to the crisis. In addition, it is supporting the integration between an Integrated Disease Surveillance and Response (IDSR) system and the country's District Health Information Software 2 (DHIS2).

UNICEF also supported the development of a template for a Vaccine Monitoring Dashboard across ASEAN's ten member countries: Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Viet Nam. The goal was to later expand this prototype to cover regional data by encompassing critical vaccine baseline information, later using the dashboard's insights to inform policies and decision-making.

The goal of such technical assistances is to prepare the ground for the implementation of an initial set of proven digital health solutions that will establish the foundation for a patient-centered digital health infrastructure. Through this effort, UNICEF is addressing both immediate and longer-term national health system needs and is continuing to support both countries on the deployment of other digital health initiatives.



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Adolescent mental health

UNICEF is closely assisting the Adolescent Development & Participation team and the Belarus, Montenegro and Kazakhstan COs with the development and implementation of the regional adolescent mental health platform “USupportMe”, which provides on demand, remote access for young people to existing psychosocial support services through an Uber-like app. UNICEF’s support included code review, data protection/privacy, information security, web accessibility and vendor selection.

In Latin America, UNICEF consulted with the Inter-American Development Bank (IADB) and Ministries of Health in Chile and Uruguay on the use of RapidPro, a system for creating message workflows, to provide mental health support to adolescents using chatbots. These conversations are the result of successful UNICEF mental health projects in Brazil, Mexico, Jamaica, and Guatemala, to name a few.



Support knowledge management and capacity building for digital health and information systems

Community Health worker training

UNICEF's development of content enabling virtual training of health workers strengthened the response to the COVID-19 pandemic and continues to contribute to the improvement of health services in multiple countries. The main objective was to build robust, readily available, and contextually relevant training resources for capacity building of health workers at health facilities, equipping them with skills and information to increase vaccine uptake, as well as updated information and basic troubleshooting skills needed for effective usage of the mSupply modules and cold chain equipment (CCE) monitoring.

Along with the health training, in Papua New Guinea, UNICEF has also supported a training on digital literacy, ensuring that health workers were confident to use the technologies available to them.

In Honduras, 567 community health workers were trained virtually in protection, prevention, case tracking and promotion of vaccination services and collaborated with the country's health efforts. In Paraguay, UNICEF's training for primary health care workers addressed relevant topics, such as Risk Communication and Community Engagement (RCCE), Community-based Surveillance for COVID-19, continuity of Primary Health Care in the COVID-19 Context and COVID-19 Vaccination Training, in addition to content on Nutrition and Prevention of Obesity.

Similar support was provided in Venezuela, training primary health workers on COVID-19 content, including prevention and protection, continuity of PHC services in a pandemic context and vaccine training. In addition, other training topics are being considered, such as cold chain management, guidelines for community promoters in routine immunizations, and guidance for pregnant women and humanization of health care services.

UNICEF also facilitated the deployment of a chatbot in Indonesia to assist health workers on the use of an integrated data collection platform to monitor routine childhood immunizations. Ensuring health workers understood the platform and were prepared to effectively deliver routine immunizations was a key aspect of a nationwide vaccine rollout that was also integrated with a suite of apps to support health workers.

Digital Public Goods and Global Goods

UNICEF is working with the University of Oslo to develop a generic Integrator between DHIS2 and RapidPro. As of December 2022, an aggregate data connector has been developed and tested in Uganda and Zimbabwe, with Oslo commitment to maintain the Integrator. Requirements and country use cases for an individual, patient-level data connector are being developed and will be jointly analyzed by Oslo and UNICEF to put together a design document to inform the development of a patient level connector in 2023 .

UNICEF initiated a dedicated working group under the WHO GIS Health Facility Database to establish standardized requirements of health facility registry platforms. The requirements will provide the basis for the work on registries in 51 countries.

UNICEF supported adaptations, improvements, and usage of 12 digital global goods - AccessMod, CommCare, Community Health Toolkit, DHIS2, DIVOC, iHRIS, mSupply, ODK (Open Data Kit), OpenMRS, OpenSRP, RapidPro, and SanteSuite.

Other Global initiatives

UNICEF, in partnership with WHO, PATH, USAID, and Tech Change, sought to strengthen government and partners' digital health skills through the "[Digital Health: Planning National Systems](#)" course, which was delivered by TechChange in September 2022 for 75 participants from 17 countries. The main objectives of the course were to empower and equip government and partners with the skills necessary to support enterprise digital health planning through an applied learning approach.

UNICEF also coordinated global webinars on topical areas including: [GIS Microplanning](#) in support of COVID-19 vaccine deployments, [COVID-19 Vaccine Digital Certificates](#) and Immunization Information Systems, and [Demand-Driven Digital Solutions and Innovations in Support of COVID-19 Vaccine Deployments](#), the last of which was delivered in July 2022. The timing of this last webinar correlated with the deadline for the submission of the

GAVI COVID-19 vaccine Delivery Support (CDS) submission window and provided an opportunity for countries to secure funding for GIS-related investments, especially those that missed the [Global Fund COVID-19 Response Mechanism \(C19RM\)](#). This webinar provided information on the global technical assistance available to support GIS investments, while highlighting information products and tools available to countries. It provided an overview on the application of GIS for immunization microplanning, including the funding landscape for geospatial innovation as well as summarizing eligibility of such geospatial investments for GAVI CDS and C19RM. The presentation was delivered by the [WHO-UNICEF GIS working group](#).

WHO and UNICEF also presented a webinar on how digital health investments can support COVID-19 Digital Certificates. This webinar provided information on the ethical considerations and justifications for establishing [COVID-19 Digital Certificates](#); highlighted the necessary technologies, legislations and policies required for establishing COVID-19 Digital Certificates; gave an overview of the minimum requirements and the steps involved in the deployment of COVID-19 Digital Certificates; and created awareness on the technical resources and support available to countries. The presentation was delivered by the [DICE](#) technical team.

In addition, in collaboration with [TechNet-21](#), UNICEF co-hosted a webinar series on how to select the Best Digital Immunization Systems. This webinar series presented the leading Electronic Immunization Registries (EIR) and Immunization Information Systems (IIS) software and service options that are currently deployed in the field. It also explored how to select, procure, and implement robust EIR/IIS; as well as highlighted the different EIR/IIS functionalities to support the selection of the right solution for both COVID-19 vaccination and Routine Immunization.



04

Communications and Knowledge Management

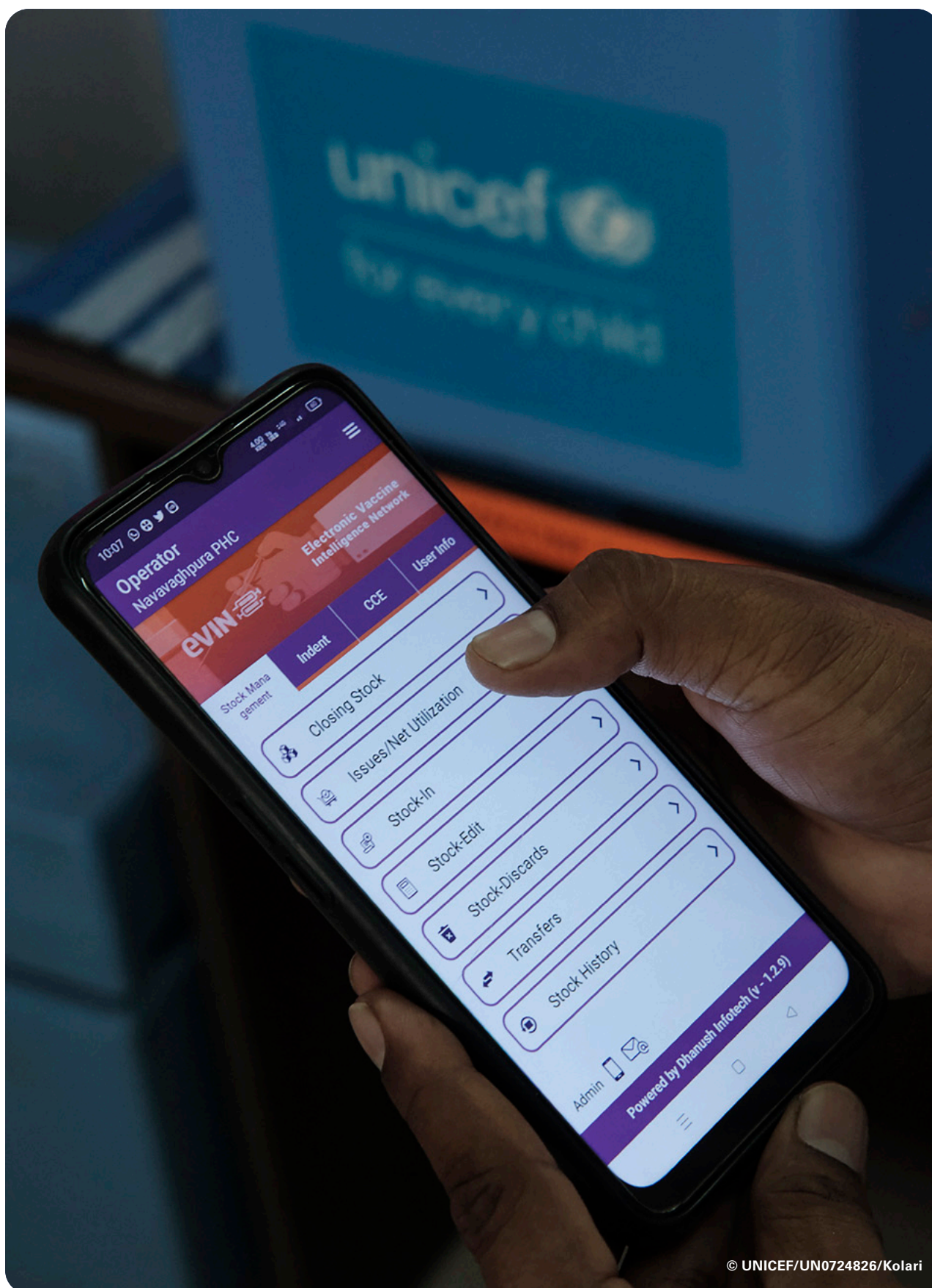
UNICEF understands the importance of communications and knowledge management not only for advocacy and knowledge sharing on digital health, but for institutional growth and capacity building. In that sense, the DH&IS unit and DICE have communication and knowledge management activities in place to document achievements and lessons learned across the diverse types of technical assistance provided.

To disseminate information, social media channels were established ([Facebook](#) and [Twitter](#)), with a main focus on LinkedIn ([UNICEF Digital Technology](#)), which has grown to close to 3,500 followers since its launch in January 2022. In addition, a website was created specifically for [DICE](#), underlining the Centre's activities, hosting key documents (including working groups and communities of practice's materials) and providing a direct path for countries to request support. While 2022 focused mainly on outreach and promoting achievements, 2023 will focus on demand generation, internal advocacy and creating evidence for new projects.

In addition, a project management-based system was established so DICE's key partners and stakeholders could easily view what types of assistance were being provided by UNICEF. This system should also facilitate future reports and data visualization.

UNICEF and the DICE Consortium also invested heavily on outreach and engagement, participating or co-organizing in several digital health events to display achievements, exchange knowledge and discuss opportunities. Events included:

- [European Health Summit](#)
- [Global Digital Health Forum](#), Washington DC, USA (United States of America)
- [Global Technology Summit](#), Delhi, India
- [Africa Health Tech Summit](#), Kigali, Rwanda
- [Asia eHealth and Informatics Network \(AeHIN\) Annual Meeting](#), Manila, Philippines
- [UNICEF-WHO Global GIS Webinar](#)
- WHO UNICEF Global Webinar on COVID 19 Vaccine Digital Certificate



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05

The way forward, challenges and lessons learned



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The COVID-19 pandemic highlighted the need for agile health systems that can respond to unanticipated health crises. UNICEF provided key assistance to countries across the pandemic response and are now focusing on providing support for long-term, sustainable activities that can increase countries' health sector efficiency, preparedness, and shock-response, shifting focus toward health sector digitalization, planning, and management.

This shift led to various challenges, including limited internal and external technical capacity, funding that was timebound or tied to disease verticals, and de-projectization of many digitally enabled interventions. To overcome these challenges, UNICEF invested in strengthening the Regional Offices' capacity with dedicated consultants, as well as prioritizing engagement and information sharing with donors, implementing partners, and other key stakeholders.

Many lessons were learned throughout the year:

- There is a need to shift the narrative – as well as investments – from individual, projectized digital health initiatives to an integrated, enterprise approach that prioritizes digital transformation and takes into consideration enterprise planning and architecture. Alongside UNICEF's programme priorities, and to be successful, these need to be situated within efforts to strengthen national digital health building blocks and the broader enabling environment, including policy, governance, coordination, standards, infrastructure, human resources and financing.
- Investments in strategic planning and training are essential for the team's short- and long-term results. Digital transformation for health needs to be contextualized within a country's broader digital transformation journey, and this should be seen as a long term and continuous effort. Costed blueprints and action plans, donor alignment, and systematic inclusion of resourcing within national health accounts and investment plans should be prioritized.

- Many of the existing Digital Public Goods have been driven by donors and organizations operating out of the global north, or by a single country. To be true digital health public goods, the use-cases need to come from a variety of countries spread across multiple regions, be tested across multiple geographies, and be financially and technically supported by a diverse set of stakeholders.

Taking these lessons into account, the team is preparing to carry out various activities in the coming year, such as:

- Revisioning DICE, donor alignment, and the priorities of key UN agencies, donors, and development partners in a post-pandemic work, and aligning coordination and support mechanisms so they are fit-for-purpose and meet Member State needs.
- Accelerating implementation research around areas with evidence gaps, further scaling up capacity building efforts including through national training institutions, strengthening costing frameworks, and enhancing engagement with regional institutions and networks.
- Implementation of communications and knowledge management strategies to strengthen relationships with the unit's partners and document the unit's results and impacts on policymaking.



06

The UNICEF Digital Health team

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