Vaccination Campaigns
DIGITAL HEALTH INFORMATION PRIORITIES

21 March 2022

Outline

- ➤ Gavi's Digital Health Information Priorities

- ➤ Real Time Monitoring of Immunisation Campaigns

6 Digital Health Information Priority Areas

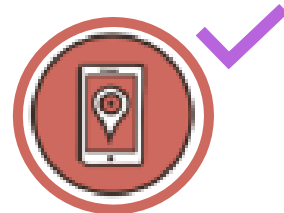**1.** Identification and reach of zero-dose and under-immunised children

2. Effective sub-national data use

3. Real-time planning and monitoring of immunisation campaigns

4. Digital supply chain information systems

5. Digital interventions supporting vaccine confidence and demand for immunisation

6. Electronic VPD surveillance data exchange for targeted vaccination & outbreak response

1 Identification and reach of zero-dose & under-immunised children

What is it? Using geospatial data, applications and technologies (e.g. GIS) to find communities missed by immunisation services

Examples:

- ✓ Subnational triangulation dashboard with high-resolution population estimates
- ✓ Linkages with authoritative master facility lists that need to display immunisation services
- ✓ Intelligent sub-national map displaying immunization services, catchment area boundaries and estimated population (from different sources)
- ❖ Digital microplanning with spatially accurate maps
- ❖ Satellite identification of settlements and communities
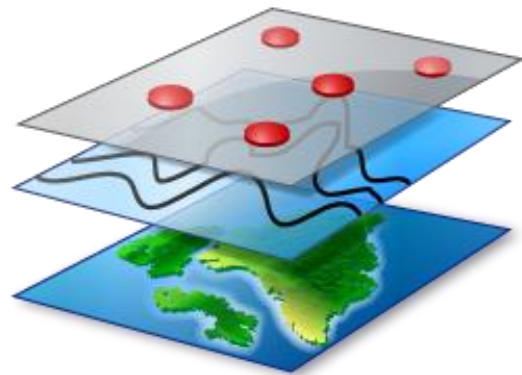
2 Effective sub-national data use

What is it? Making data available for local decision-making, programme planning, implementation and coordination of immunisation programme activities at the district and sub-district level.

Examples:

- ✓ Create integrated dashboard (coverage/VPD/Stock data) for enhanced data visualisation
- ✓ Use of dashboard for microplanning and monitoring
- ✓ Use of locally-relevant data on coverage but also including operational data at sub-national levels
- ❖ Strengthen local capacity and mechanisms for decision-making

4 Digital supply chain information systems

What is it? Digital systems that collect and report timely data along vaccine supply chain (eLMIS)

Examples:

- ✓ Health facility stock visibility: at least use of end-of-month (and gradually near real-time) facility stock level information to make decisions and reduce health facility stock-outs and missed-opportunities for vaccination
- ❖ Digital systems that collect and report timely data along vaccine supply chain / "full eLMIS"
- ❖ Strengthen capacity for the use of supply chain data for local decision-making

5 Digital interventions supporting vaccine confidence and demand for immunisation

What is it? Applying digital technologies and mobile communications to help build trust and enhance engagement for immunisation demand and vaccine confidence while reducing loss to follow-up.

Examples:

- ✓ Digital aggregate AEFI surveillance
- ✓ Mobile messages, reminders and risk communication messages direct to caregivers and community members
- ❖ Digital identification and solutions to track and follow-up defaulters

3 Real-time planning and monitoring of immunisation campaigns

What is it? Using mobile and digital technologies during immunisation campaign activities to improve timely reporting, coordination and communication

Examples:
- RTM for the planning and assessment of campaign readiness
- RTM data collection tools during campaigns for coverage, stock and AEFI (adverse effects following immunisation) data to enable rapid course correction
- RTM solution for post campaign surveys

Benefits and uses of RTM approaches for vaccination campaigns

Released in 2021

Four country case studies + literature review

The Use of Digital Technologies and Approaches for Real-Time Monitoring of Supplementary Immunization Activities

Good practices and lessons learned

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No.	Country	Immunization campaign	Phase	RTM tool	Year	Data sources
1	Pakistan	Measles Typhoid	Pre Intra Post	KOBO TOOLBOX RapidPro Surveyor WhatsApp	2018 2019	Field visit Interview Reports
2	Indonesia	Measles and Rubella (MR)	Pre Intra Post	RapidPro	2017-2018	Interview Reports
3	Uganda	Measles and Rubella (MR) Polio	Intra	ODK DHIS2	2016~	Interview Reports
4	Zambia	Cholera Measles and Rubella (MR) Polio	Pre Intra Post	OnaData Power BI	2019	Interview Reports

Internal

✓ Improved planning
✓ Better data quality
✓ Opportunity for course correction and corrective actions
✓ Improved service delivery
✓ Reduced vaccine hesitancy, increased trust and demand
✓ Safety improved with more timely AEFI detection and investigation
✓ Reduced misuse of funds and improve timely distribution of incentives to health workers
✓ Better collaboration, partnership and communication among all levels
✓ Achievement of campaign targets

Bangladesh case study: real-time digital monitoring of measles-rubella vaccination

What is it? The experience of Bangladesh in immunizing 35 million children during the 2020 MR Campaign

Innovations:
- ✓ Online microplanning of vaccination campaign
- ✓ Daily vaccine & logistics requirement, distribution plan
- ✓ Daily reporting
- ✓ Through Android app: session supervision, household visits, rapid convenience monitoring (RCM)

Challenges
- ✓ Commitment from partners for successful implementation
- ✓ Capacity of some workers to use new technology
- ✓ Shortage of dedicated data entry staff at sub-national level
- ✓ Sub-national capacity to provide software, server-related support

Successes
- ✓ Strong national leadership, commitment
- ✓ Multi-stakeholder involvement (e.g. UiO*, DHIS2* community, MIS-DGHS*)
- ✓ Innovations introduced; completed campaign maintaining quality and coverage (100%) during C-19
- ✓ Additional missed children reached with vaccination
- ✓ Building confidence to introduce technology-based innovations

Rwanda case study: Scaling RTM approaches and digital solutions for C-19 vaccination & response

What is it? The experience of Rwanda in immunizing > 66% with C19 Vax

C19 vaccination Tracker
- ✓ More 9 millions TEI
- ✓ More 15 millions vaccination events
- ✓ More than 500 vaccination sites + Mobile sites

C19 Surveillance and case management
- ✓ More than 2,500 C19 testing sites (Fixed and mobile)
- ✓ More than 9.5 millions of lab test events (PCR and RDT)
- ✓ More than 3 millions TEIs

The roll out is at national coverage
- ✓ All health facilities (HC,DH,PH&RH and Private clinics & Hospitals)
- ✓ Special sites (Schools, Markets, Bus stations, Military &Police barracks , etc)
- ✓ Online training , onsite physical trainings , supporting supervisions
- ✓ Tablets and Laptops to all sites

Site organization
- ✓ Team(Data manager, vaccinators, Supervisor)

Country Technical Brief

RWANDA'S EXPERIENCE SCALING REAL-TIME MONITORING (RTM) APPROACHES EMPLOYING DIGITAL SOLUTIONS TO SUPPORT COVID-19 VACCINATION, REAL-TIME COVID-19 SURVEILLANCE AND CASE MANAGEMENT

INTRODUCTION

Rwanda registered its first case of COVID-19 on 14 March 2020. By the end of 2021, over 110,000 people tested positive for COVID-19 in Rwanda.[1] The sharpest peak in cases was seen in late 2020 and early 2021, prompting stringent restrictions on movement and daily life.[2] The pandemic response is managed by the national Joint COVID-19 Task Force, comprised of multi-sectoral advisors from relevant ministries and external institutions, and was responsible for issuing strategic and operational guidance in relation to public health, the economy, education, international and domestic travel, and social restrictions.

1. WHO. (2021). Rwanda WHO Coronavirus Disease (COVID-19) Dashboard With Vaccination Data. [online]. Available from https://covid19.who.int/region/afro/country/rw. Accessed: January 2022.
2. Use of Digital Tools to Strengthen COVID-19 Management: Rwanda Case Study 2021 [online]. Available from https://www.findx.org/wp-content/uploads/2021/03/FIND_Digital-Health-Report_RWANDA_v2.pdf. Accessed January 2022.

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The Vaccine Alliance

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Strengthening vaccination campaigns through RTM approaches: New guidance !

New !

- ✓ **How to plan and implement** a real time monitoring system to strengthen vaccination campaign delivery

- ✓ **Key considerations in the selection and use of digital technologies** to support real time monitoring of vaccination campaigns

Gavi and Alliance partners are tool agnostic, and countries decide to use the solution that best meets their needs

Planning and Implementing Real-time Monitoring Approaches to Strengthen Vaccination Campaigns
Guidance for country partners

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The Vaccine Alliance

Digital Health Information Enablers

Gavi DHI Strategy is designed to facilitate the prioritisation and strengthening of digital health and data ecosystem enablers alongside DHI priority interventions

Country landscapes and maturity assessments to understand the context and prioritise digital health interventions and enablers

Standards for interoperability, data governance, integrated data management

Dedicated and sustained resources to support scale up and institutionalisation of digital health interventions

Private sector engagement

Flexibility to respond to changes in technology & needs/ maturity of the country

Infrastructure- connectivity, standards, access. Increase access to data to enable use of the connectivity and hardware

Capacity building

Governance structure for decision-making

Community & CSO engagement

THANK YOU

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Some useful resources 1/2

Priority area		Learning		Tools and guidance
Identification and reach of zero-dose and under-immunised children	☑	Improving Immunisation Coverage and Equity through the Effective Use of Geospatial Technologies: A Landscape Analysis and Theory of Change (Sept 2020) EN & FR	☑	Leveraging Geospatial Technologies and Data to Strengthen Immunisation Programming: Rapid guidance for investment planning (March 2021) EN & FR
	☑	Every Child on the Map: A Theory of Change Framework for Improving Childhood Immunization Coverage and Equity Using Geospatial Data and Technologies (Aug 2021)		
	☐	Large-scale effectiveness study on Mapping for Health in DRC	☐	Digital Microplanning Guidance and Playbook
Effective sub-national data use	☑	A Gavi, the Vaccine Alliance Look Back and Forward: DHIS2 for Immunisation	☐	Guide to Effective Sub-national Data Triangulation, Integration, Use and Quality
	☑	DHIS2 Country Case Studies (Ghana, Mali)		
	☑	DHIS2 & Immunisation Resource Guide & Evidence Review (June 2020)	☐	Updated Subnational DHIS2 Data Use Guidance and Playbook
Real-time planning and monitoring of immunisation campaigns	☑	Digital health for real-time monitoring of a national immunisation campaign in Indonesia: a large-scale effectiveness evaluation (Dec 2020)	☑	Planning and Implementing Real-time Monitoring (RTM) Approaches to Strengthen Vaccination Campaigns: Guidance for country partners
	☑	The Use of Digital Technologies and Approaches for Real-Time Monitoring of Supplementary Immunization Activities: Good practices and lessons learned (Jan 2021)		
	☑	Rwanda technical briefing: use of RTM for COVID19 surveillance and vaccination	☐	RTM Planning Playbook
Digital supply chain information systems	☐	Evaluation of cost effectiveness of 3 Electronic Logistic Management Information Systems (eLMIS)	☐	eLMIS Investment Guidance

Some useful resources 2/2

	Priority area	Learning		Tools and guidance	
	Digital interventions supporting vaccine confidence and demand for immunisation	☑	Finding the Signal through the Noise: A landscape review and framework to enhance the effective use of digital social listening for immunisation demand generation (June 2021) EN & FR		
		☑	Large-scale effectiveness study of Zindagi Mehfooz- a suite of digital health tools to improve immunisation demand and completion		
		☑	Evaluation of cost effectiveness of 3 Electronic Immunisation Registries (EIR)		
		☐	Vaccine Confidence and Demand Review of Promising Digital Interventions		
	Electronic VPD surveillance	☑	Timely detection of vaccine-preventable disease for targeted vaccination and outbreak response Briefing Document		
	Cross-Cutting	☑	Gavi Digital Health Information Prioritisation Document	☑	Guidance on the use of digital solutions to support the COVID-19 national deployment and vaccination plans
		☑	Country Segmented Approach to Digital Health Interventions & Enablers Briefing Document	☐	DHI Gender Analysis, Planning and Monitoring Tool
		☑	Gender Digital Divide & Digital Health Information for Immunisation Briefing Document	☐	DHI Country Assessment and Costed Roadmap Toolkit
		☑	Covid-19 Innovations Briefing Document		

Digital Health Information (DHI)

Gavi DHI strategic vision: Digitally transformed, integrated, equitable, gender-intentional information systems that identify & reach Zero-Dose & under-immunised children through improved access, quality and efficiency to accelerate country's achievement of immunisation objectives in line with Gavi's mission to leave no child behind with immunisation.

The rationale

- Early evidences show that DHI contributes to increased immunisation coverage, equity and efficiency.
- The effective use of DHI improves:
  - ✓ planning & forecasting
  - ✓ Community engagement & social accountability,
  - ✓ service delivery
  - ✓ monitoring
  - ✓ advocacy and action.

6 priority interventions

- Identification and reach of zero-dose and under-immunised children
- Effective sub-national data use
- Real-time planning and monitoring of immunisation campaigns
- Digital supply chain information systems
- Digital interventions supporting vaccine confidence and demand for immunisation
- Electronic VPD surveillance data exchange for targeted vaccination and outbreak response

How to Engage

- Identification of country needs along IRMMA framework and the 6 DHI priorities
- Review of in-country existing DHI that can be used for immunisation
- Assessment of DHI ecosystem and cross-cutting ICT systems to prioritise DHI enablers
- Active engagement between EPI and digital health and data coordinating bodies

➔ DHI investment roadmap that is gender-intentional (interventions & enablers) to inform the FPP

17

THE COUNTRY JOURNEY FOR DIGITAL HEALTH INFORMATION INVESTMENT FOR IMMUNISATION

EPI PROGRAMMES WITH INCREASED DATA AVAILABILITY, QUALITY, TRIANGULATION & EFFECTIVE USE

EPI PROGRAMMES HAVE THE FOUNDATIONAL PACKAGE OF DHI PRIORITY INTERVENTIONS IMPLEMENTED

EPI PROGRAMMES WITH GENDER-INTENTIONAL DHI COSTED ROADMAP (INTERVENTIONS & ENABLERS)

IMPLEMENTATION

EPI STAKEHOLDERS ACTIVELY PARTICIPATING IN DHI COORDINATING BODIES, CONTRIBUTING TO AND BENEFITING FROM EXISTING DHI INVESTMENTS

DHI INVESTMENT ROADMAP THAT IS GENDER-INTENTIONAL

- FULL PORTFOLIO PLANNING PROCESS WITH GAVI, OTHER DONORS AND GOVERNMENT FUNDING PLAN

- PRIORITISED DHI INTERVENTIONS AND ENABLERS

- NATIONAL & SUB-NATIONAL EPI PROGRAMME

- NATIONAL DIGITAL & DATA COORDINATING BODIES

- COORDINATED COUNTRY APPROACH

- IMMUNISATION / PROGRAMME PRIORITISATION USING IRMMA
  - I - IDENTIFY
  - R - REACH
  - M - MONITOR
  - M - MEASURE
  - A - ADVOCATE

- MAP & ASSESS EXISTING DHI INTERVENTIONS FOR IMMUNISATION

- ASSESS DIGITAL HEALTH & DATA ECOSYSTEM

DHI PRIORITY INTERVENTIONS

- IDENTIFICATION AND REACH OF ZERO-DOSE UNDER-IMMUNISED CHILDREN
- EFFECTIVE SUB-NATIONAL DATA USE
- REAL-TIME PLANNING & MONITORING OF IMMUNISATION CAMPAIGNS
- DIGITAL SUPPLY-CHAIN INFORMATION SYSTEMS
- DIGITAL INTERVENTIONS SUPPORTING VACCINE CONFIDENCE AND DEMAND FOR IMMUNISATION
- ELECTRONIC VPD SURVEILLANCE DATA EXCHANGES FOR TARGETED VACCINATION AND OUTBREAK RESPONSE

PRIORITY DIGITAL HEALTH INFORMATION

INTERVENTIONS & ENABLERS

FOUNDATIONAL AND ADVANCED PACKAGES