



REPUBLIC OF BOTSWANA

Health Data Collaborative Global Partners Meeting (15-16 December 2021)

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Data & Digital Governance: Country Good Practices

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15TH DECEMBER 2021



HIS/M&E ASSESSMENT (2019)



Poor alignment of indicators between the IHSP (60) , the MOHW M&E Plan (34) and the MoHW Strategy (46)

Multiple reports (23 – 30 monthly reports)

Multiple Data collection tools (43 registers)

Multiple electronic systems in use (37 in 2013 -- Rationalised to 9) NOT INTERFACED



Botswana Health Data Collaborative

Parallel reporting (programs own reports)

Inadequate information sharing
Research is undertaken but ineffectively disseminated

Lack of Multi sectoral platform for M&E

Inadequate Health Data Governance

No functional Governance structures for M&E



THIS RESULTS IN



- **FRAGMENTED, UNCOORDINATED DATA SYSTEMS**
- **DUPLICATED INVESTMENTS**
- **TAKING HEALTH WORKERS' TIME AWAY FROM PATIENT CARE**

Botswana Health Data Collaborative (BHDC)

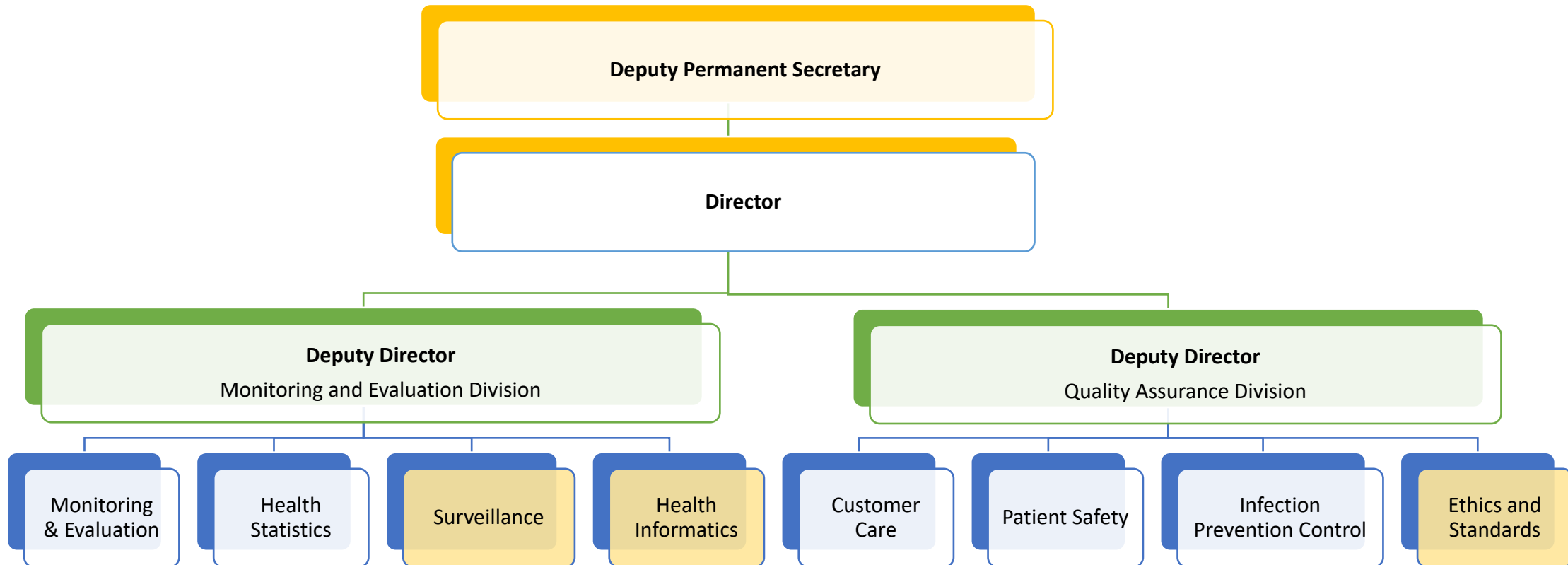


A joint effort by stakeholders working in the health sector and other sectors of the economy to:

- Strengthen national health information and M&E systems*
- Improve the quality of health data*
- Build capacity to track progress made by the country towards Sustainable Development Goals and national health priority goals*

Department of Health Services Monitoring Evaluation and Quality Assurance (DHSMEQA)

- Established in 2015 as part of the MoHW organisational re-structuring
- Has authority and control over data assets and how those data assets may be used



Data and Digital Priorities

- Improve data governance in the health sector (Harmonization of health information Indicators, data collection tools and M&E plans)
- Institutionalise health sector performance reviews
- Build adequate capacity on data analysis
- Resuscitation of the E-Health cluster to oversee the implementation of the e-Health strategy
- Establish Standards and interoperability framework for Botswana
- Establish electronic unique identifier (UID) and electronic Master Patient Index (MPI) for use in the health system of Botswana
- Development of the Centralised Electronic Medical Record for all clinics in Botswana
- Development of the National Tele-medicine Programme
- Establish DHIS2 as the default reporting system for the entire health sector
- Upgrade ICT infrastructure (LAN/WAN, Computers, Tablets, Wi-Fi Connection, Hosting Server Environment)

PILLAR 1: Leadership and Governance

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OBJECTIVES

1. Resuscitate the eHealth Cluster to oversee the implementation of the eHealth Strategy by 2021

- The eHealth Cluster comprises representatives from the following organisations: MOHW; MYSC; MLG; National Immigration; eGov; NAHPA, Tertiary Education; BDF; and Botswana Prisons Service.

2. Strengthen the M&E and the Health Informatics units in the Ministry of Health and Wellness by 2024.

- Strengthening data governance
- Enhancing Data quality and integrity
 - Ministry currently conducting Data Quality Assessments (DQAs) quarterly.
- Improving Data protection and privacy
- Increasing Data resources and capacity
- Developing the Repository/ knowledge sharing platform.

3. Develop eHealth structures to manage and coordinate eHealth activities at various levels of implementation by 2021.

- Through the Botswana Health Data Collaborative (BHDC), a Digital Health TWG has been formed as part of the BHDC roadmap that was launched with the eHealth Strategy (2020 – 2024) in March 2020.
- In addition, a Ministerial Digitalisation Project Team was formed in December 2020 to provide the necessary project management of digitalisation of health services from April 2021 until September 2022.

PILLAR 3: Standards and Interoperability

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OBJECTIVE

- 1. Establish a standards and interoperability framework by 2021.**
 - The Standards and Interoperability task group of the BHDC Digital Health TWG is currently working on the development of the Health Information Exchange (HIE) platform to interface data systems.

PILLAR 4: Services and Applications

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OBJECTIVES

1. Identify data needs in partnership with users and stakeholders BY 2021.

2. Develop a National Data Warehouse by 2022.

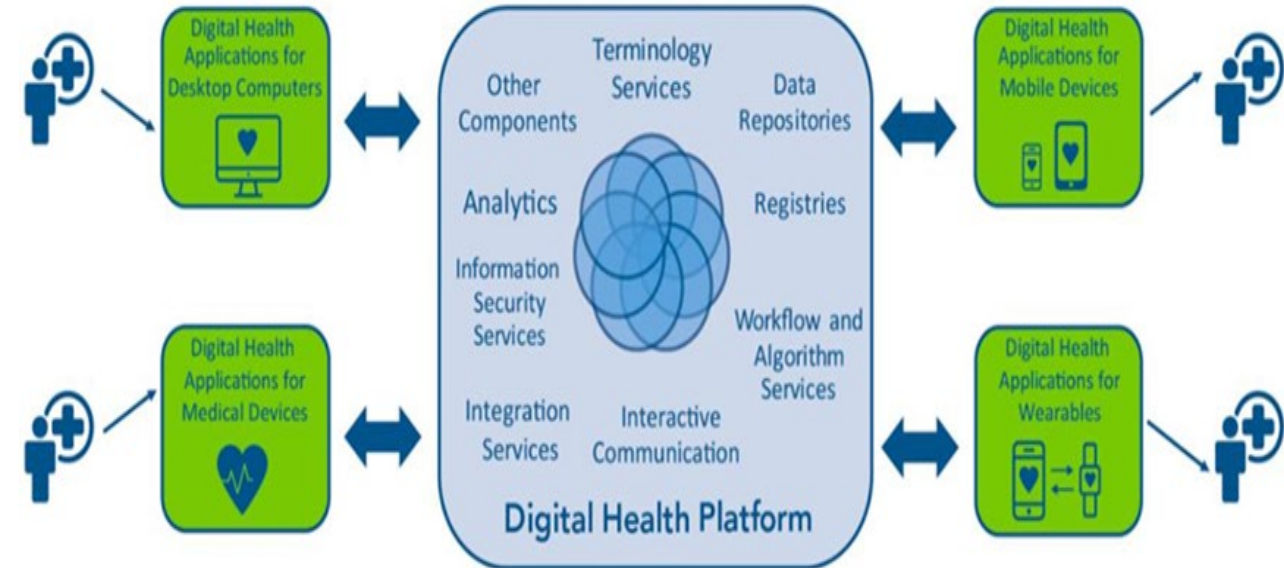
- Data storage and operations
- Data security
- Data integration and interoperability
- Business Intelligence (BI)

2. Establish a home-grown Electronic Health Record for Botswana by 2022

- The MoHW developed an electronic national facility register (one of the components of the HIE) by December 2020.
- Currently, through donor funding, the MoHW is working with an implementing partner to develop the other HIE components such as the electronic national data dictionary, the electronic national health workforce register and the Master Patient Index
- Through the development budget and donor funding, the MoHW is developing a centralised electronic medical record (EMR) to replace the current standalone Patient Information Management System running at > 400 clinics.

3. Establish a web-based engagement tool to support implementation of the eHealth Strategy by 2022.

- Patients' access and experience with the health facilities is being improved through implementation of the web-based District Health Information System (DHIS2) which is accessible outside the GDN. Example, COVID-19 Vaccination app.
- Use Open Standards, Open Data, Open Source, and Open Innovation – OpenHIE, DHIS2 and OpenMRS



PILLAR 6: Legislation and Compliance

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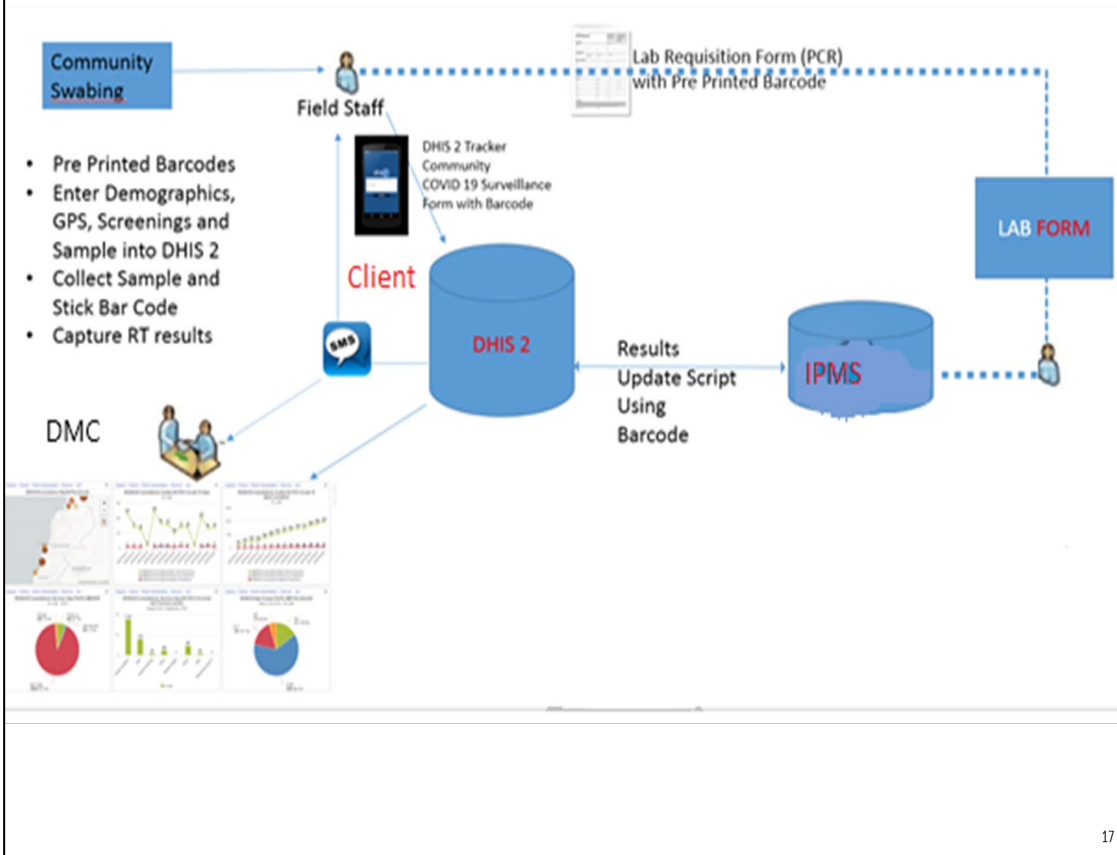
OBJECTIVES

- 1. Review and update policies and laws that govern eHealth in the country by 2022.**
 - The eHealth Strategy (2020 – 2024) is based on the Maitlamo National ICT Policy, Data Management Policy 2018 and the eGOV strategy.

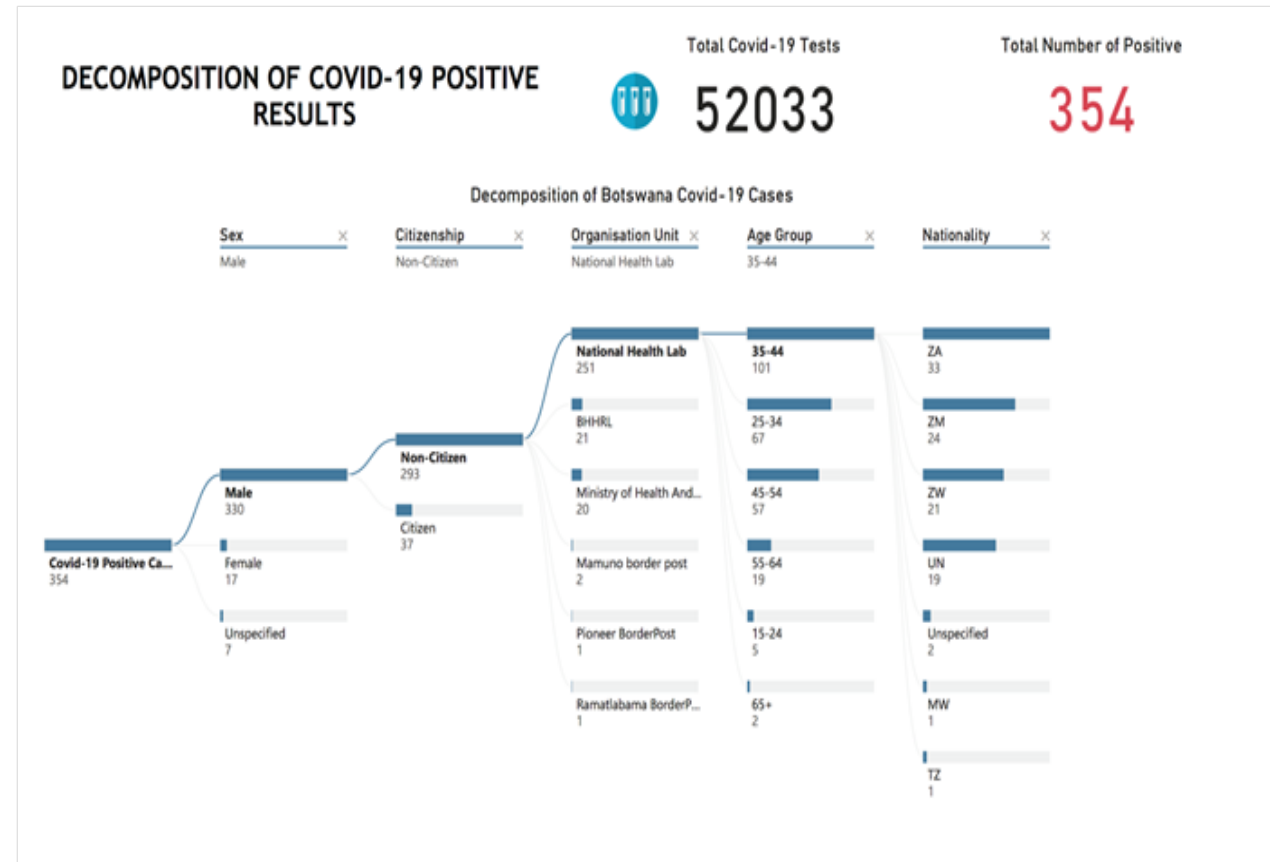
DATA & INFORMATION USE IN THE CONTEXT OF COVID-19 PANDEMIC

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DHIS2 EXPANSION



DATA WAREHOUSE OPTIMISATION



GoB POLICY: DIGITALISATION OF HEALTH SERVICES

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#	Milestone / Activity	Start Date	End Date
1	Review Data Management Policy; Develop SOPs	01/Jul/2020	31/Mar/2022
2	Revamp the ICT Infrastructure	01/Jul/2020	31/Mar/2022
3	Upgrade of Master Health Facility	02/Oct/2019	31/Dec/2021
4	DHIS2 Expansion to facilities and all Health programs	02/Oct/2019	31/Mar/2022
5	Establish a war room (Data Warehouse and Business Intelligence)	02/Oct/2019	31/Mar/2022
6	Centralise Electronic Medical Record (EMR) @ >400 clinics		
	(Phase 1 – SOUR Document)	02/Oct/2019	18/Dec/2020
	(Phase 2 – Most Valuable Product)	02/Apr/2021	31/Mar/2022
	(Phase 3 – Full Development)	02/Apr/2023	31/Mar/2024
7	Develop Statement of User Requirements (SOUR) for CMS and Labs	06/Apr/2021	31/Mar/2022
8	Interface IPMS to CMS systems, OMANG system, Birth/Death Register	02/Oct/2019	31/Dec/2021
9	Resuscitate Telemedicine	02/Apr/2020	31/Dec/2021
10	Upgrade Health workers Licensing System	02/Apr/2020	31/Dec/2021
11	Automate Revenue collection; and medicine visibility	02/Apr/2020	31/Dec/2021

Acknowledgements

- WHO Country Office
- Implementing Partners: BTECH, BUMMHI
- BHDC TWGs – Data and Information Use TWG; Digital Health TWG



Thank You