DHIS 2 Implementation in Action

Sharing implementation experiences from Senegal

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PATH

Global Digital Health Forum

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PATH is a leader in global health innovation

We harness our entrepreneurial insight, scientific and public health expertise, and passion for health equity…

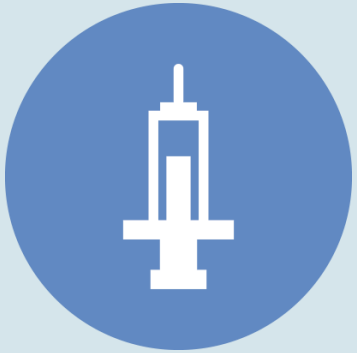
…to save the lives of women and children.

PATH/Gabe Bienczycki

PATH

Core expertise across five platforms

Innovation happens here



Vaccines

Drugs

Diagnostics

Devices

System and Service Innovations

PATH and the Global Health Security Agenda (GHSA)

- PATH implements Global Health Security Agenda in five different countries: **Senegal, Tanzania, Vietnam, the Democratic Republic of the Congo and Indi.**

- PATH works alongside each country's **Ministry of Health** as well as other ministries, in partnership with **CDC and local organizations**.

- In Senegal, PATH works to improve **surveillance and information systems, laboratory capacity, immunization, and AMR/IPC practices**. PATH began supporting GHSA activities in Senegal in 2015.

Prevent

Improved surveillance to rapidly detect and report threats, monitor trends, and produce actionable data.

Detect

Strong laboratories with rapid, high-quality diagnostics and integrated reporting.

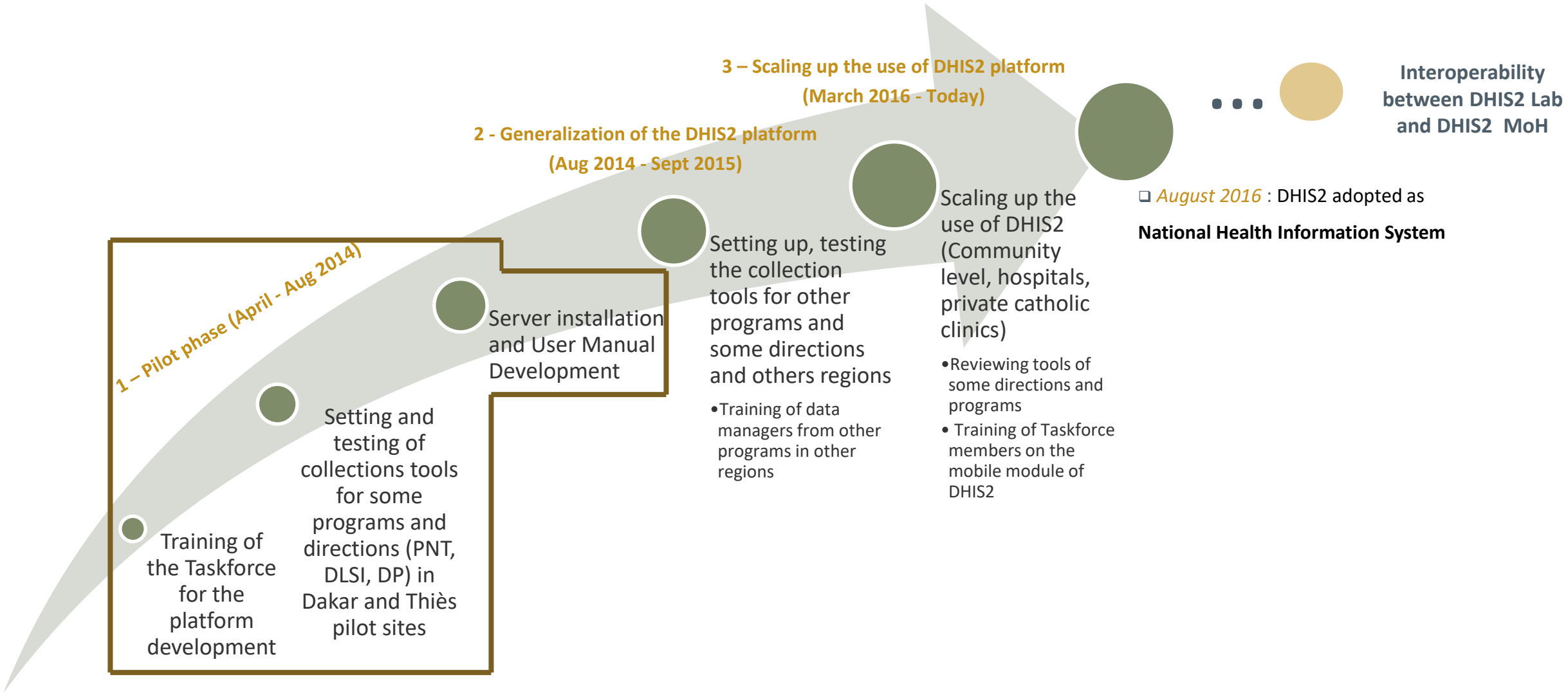
Respond

Integrated data information systems & visualization for prompt alerts, system-wide information flow, and informed decision-making.

Background on digital tools for surveillance

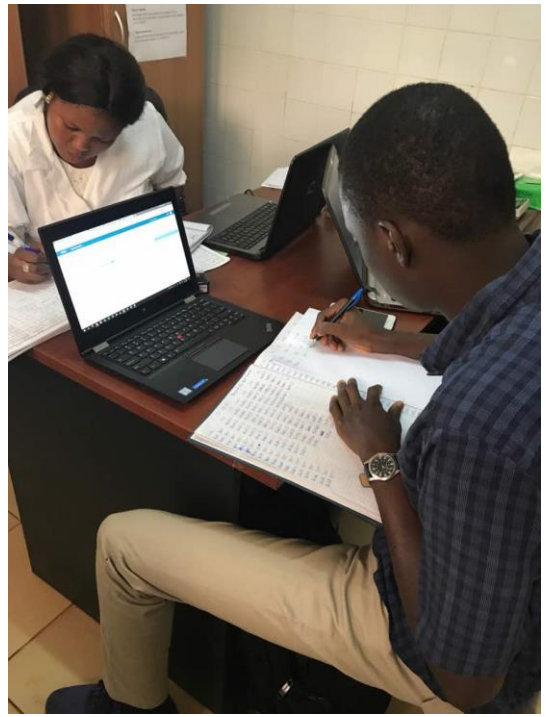
- The MOH has undertaken measures and reforms aimed at the development of health information, including the adoption of **DHIS 2 platform as the National Health Information System**
- To improve its capacity to detect and prevent priority health events, government wanted an automated system for real-time collection and **transmission of surveillance data, enabling early warning and decision-making** for a rapid and appropriate response. Began using DHIS 2 for IDSR in 2014.
- In order to reinforce the quality of epidemiological surveillance in Senegal, PATH in partnership with the Direction of Laboratories has set up a project to implement DHIS 2 platform for **the reporting of laboratory data on the 11 diseases of mandatory declaration.**

DHIS 2 Implementation phases - NHIS



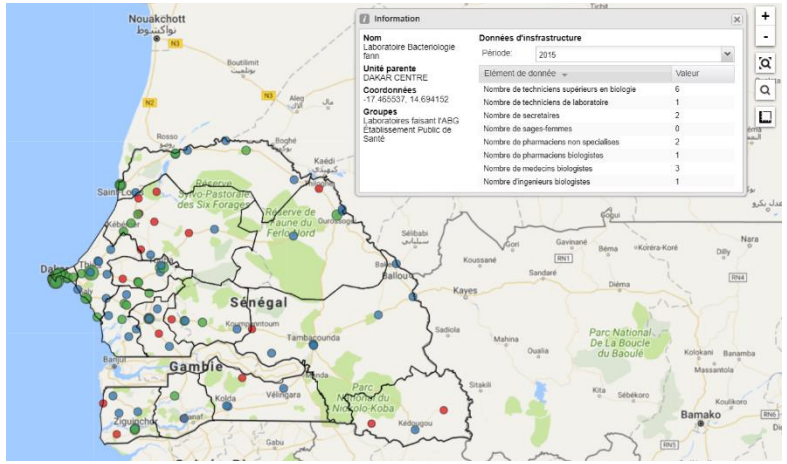
DHIS 2 Implementation – Health and Social Information System Division (HSISD)

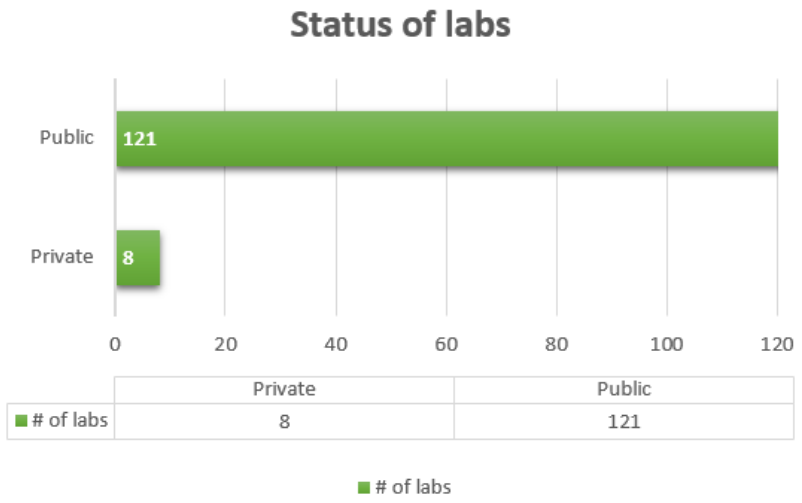
- **Expand the use of DHIS 2 to all hospitals in the country for reporting**
  - Train the DSISS taskforce on ICD10
  - Harmonize collection tools for DHIS 2 hospital instances
  - Improve capacities of surveillance focal points and DP officers to use DHIS 2 analysis modules
  - Review existing hospital reporting systems and guidelines
  - Train regional hospital staff on use of DHIS 2 at 35 hospitals (Almost 700 agents will be trained)
- **Improve platform usage and data quality**
  - Platform optimization (users, organization units, data elements, indicators, etc.)
  - Develop policy, guidelines, protocols and technical documents to ensure data quality management in the DHIS 2 platform
  - Technical support for experimenting the mobile version of DHIS 2 in areas with limited access to Internet



DHIS 2 Implementation - Laboratories

- **Reporting for 11 diseases of mandatory declaration**
  - Shorten the time between detection and response, to reduce biothreats and stop pandemics.
  - Allowing a timely evaluation of potential epidemiological threats and enables a prompt and efficient reaction.
  - Partnering with Fondation Mérieux to develop a system to capture data via mobile phone or computer and shared on a central platform for real-time epidemiological analyses, mapping, and the automatic production of reports
- **Laboratories mapping**
  - Plan optimally investments and actions to be implemented for laboratory strengthening.
  - Identify laboratory capacities in terms of personnel, sampling capacities, types of analysis, equipment and infrastructure.
  - Detailed cartography of laboratories including their geolocation, contacts, general data and technical platform.





Supporting Labs to combat Antimicrobial Resistance (AMR)

- **AMR Surveillance**
  - Using DHIS 2, PATH has established AMR surveillance in select laboratories to prevent the emergence and spread of organisms resistant to antimicrobial drugs in Senegal
  - Trained 24 of the 44 laboratories on AMR reporting
- **Supporting additional enhancements of AMR capabilities of lab staff**

DHIS 2 Implementation Challenges

- **DHIS 2 MoH**
  - Data Quality
  - Health data integration with different time periods listed
  - Poor timeliness of data in the public health sector
  - Insufficient intersectoral collaboration for data availability from other ministries

- **DHIS 2 Laboratories**
  - Infrastructure challenges such as internet and power
  - Staff Turnover and lack of consolidated contact list of laboratory managers
  - Retrieving geographic coordinates

Ecosytem Challenges

- Poor mobile connectivity limiting DHIS 2 mobile data collection
- Integration of laboratory data into the national DHIS 2 platform
- Full integration of private sector data
- Ensure health personnel at all levels of the health pyramid are trained to collect and analyze health data
- Poor data quality
- Interoperability of different platforms and patient-monitoring systems

PATH GHSA Successes to note

- Excellent collaboration / partnership with MoH especially with Direction of Planning, Research and Statistics/Health and Social Information System Division
- Mapping of laboratories to understand understand laboratory capacity across the country to support the DL to plan investments
- Establishment of an AMR surveillance system to prevent and treat infectious diseases with safe and effective medicines of guaranteed quality, used responsibly and accessible to all as needed.
- Capacity building of DP surveillance focal points on DHIS 2 analysis modules (pivot table, data visualization, GIS)
- MoH technical support in collaboration with the NMCP in integrating MACEPA database data into the national health information system for better monitoring of malaria indicators
- Several workshops and capacity building efforts to strengthen DSISS taskforce of ICD10 so they can code diseases properly for hospital record forms

Reflections

- **National policy and strategy:** Government has developed a National Strategy for Digital Health (2017 – 2023)
- **System integration for quick response:** Facilitating interoperability betwen DHIS 2 and Laboratory systems
- **Data Quality essential for surveillance:–** PATH finalizing a data quality audit manual in collaboration with the MoH.
- **Scaling at the right page:** Performing post-training supervision in health facilities on the use of DHIS 2
- **Linking data to response:** Strengthening surveillance of epidemic-prone diseases in real time and accelerate epidemic response capacity
- **Pathogen identification:** Improving the quality of pathogen identification in some microbiology laboratories and the National Public Health Laboratory

Thank you

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