Lessons learned from developing functional standards for electronic immunization information systems in Kenya

APOPHIA NAMAGEYO-FUNA, PHD, MILLICENT AKETCH, BS, COLLINS TABU, MD, ADAM MACNEIL, PHD

AIRA NATIONAL MEETING

AUGUST 16, 2018

Disclaimer: The views, thoughts, and opinions expressed in this presentation belong solely to the presenter, and not necessarily to the organizations or individuals mentioned

Background

- Immunization services in Kenya are coordinated by the MOH* NVIP**

- The transition to electronic information systems is of interest to Kenya immunization program to facilitate an effective and efficient data management

- More than 17 electronic health information systems (EHIS) have been developed in Kenya since 2011
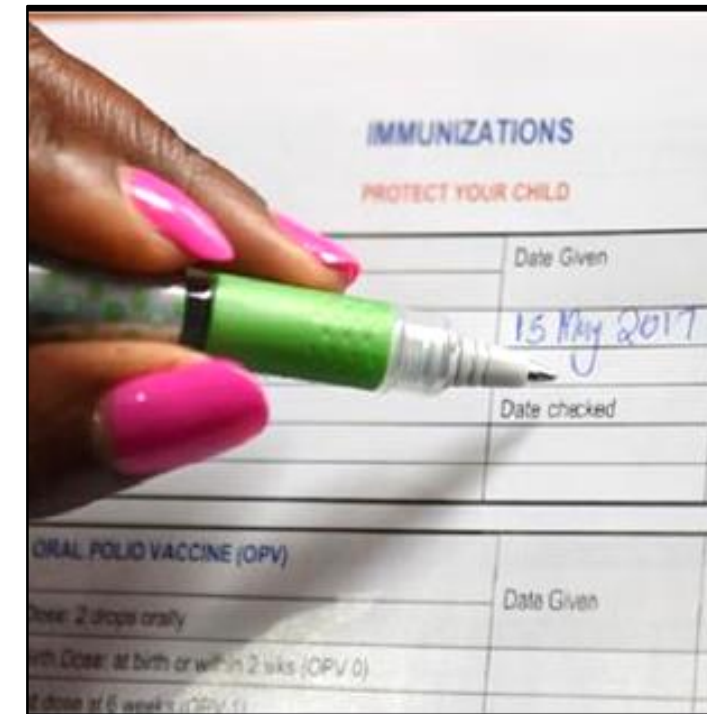
Background

- Globally, efforts are under way to promote more standardized, inter-operable and cost-efficient health information system tools

- Examples:
  - Development of standard data management tools for countries' adaptation
  - Open-source platforms and applications (e.g. DHIS2)
  - Improved information sharing among stakeholders

HEALTH DATA COLLABORATIVE
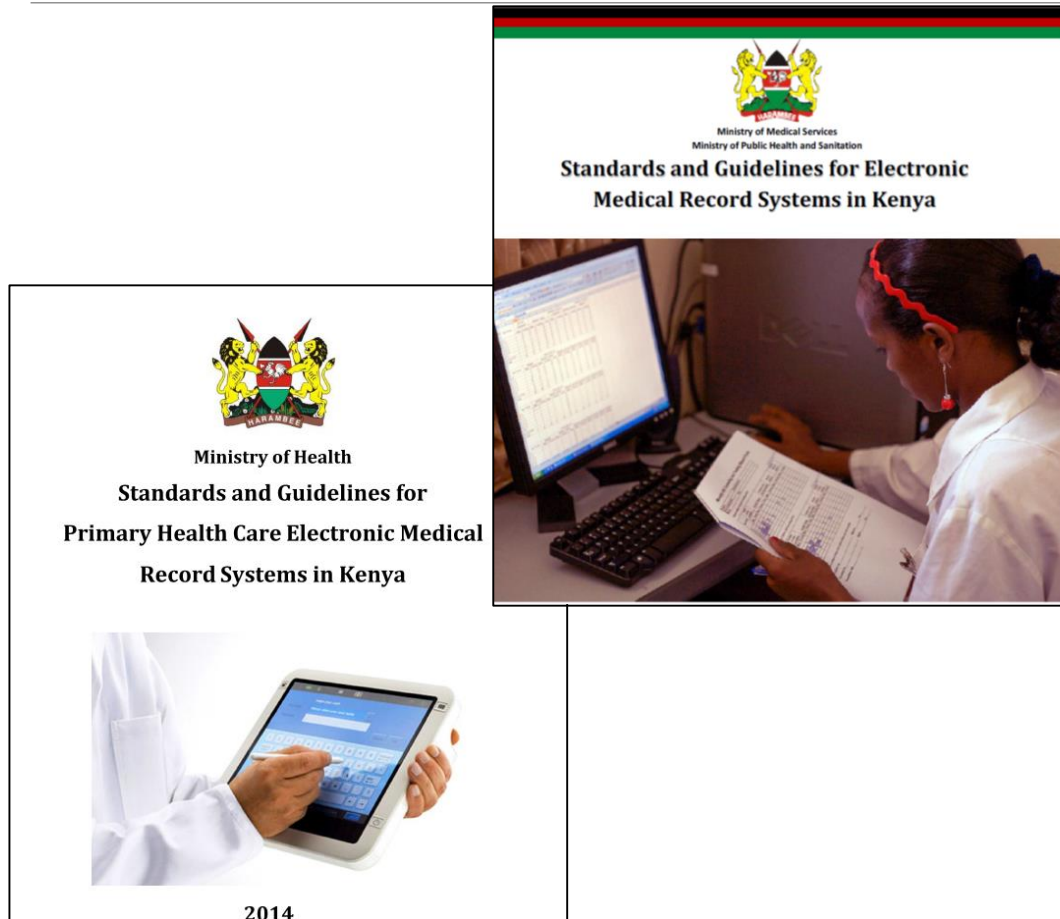DATA FOR HEALTH AND SUSTAINABLE DEVELOPMENT

dhis2   OVERVIEW   DOWNLOADS

Collect, manage, visualize and explore your data

DHIS 2 is the flexible, web-based open-source information system with awesome visualization features including GIS, charts and pivot tables.

Find out more   Get DHIS 2 now

Background

Standards and Guidelines for Electronic Medical Record Systems in Kenya

Ministry of Health
Standards and Guidelines for
Primary Health Care Electronic Medical
Record Systems in Kenya

2014

- Guidance documents for electronic information systems in Kenya
  - E-health agenda policy document for 2011-2017
  - E-health agenda - new policy document 2016-2030
  - Standards and guidelines for electronic medical record (EMR) systems in Kenya
  - Standards and guidelines for primary health care EMR systems in Kenya

Problem statement
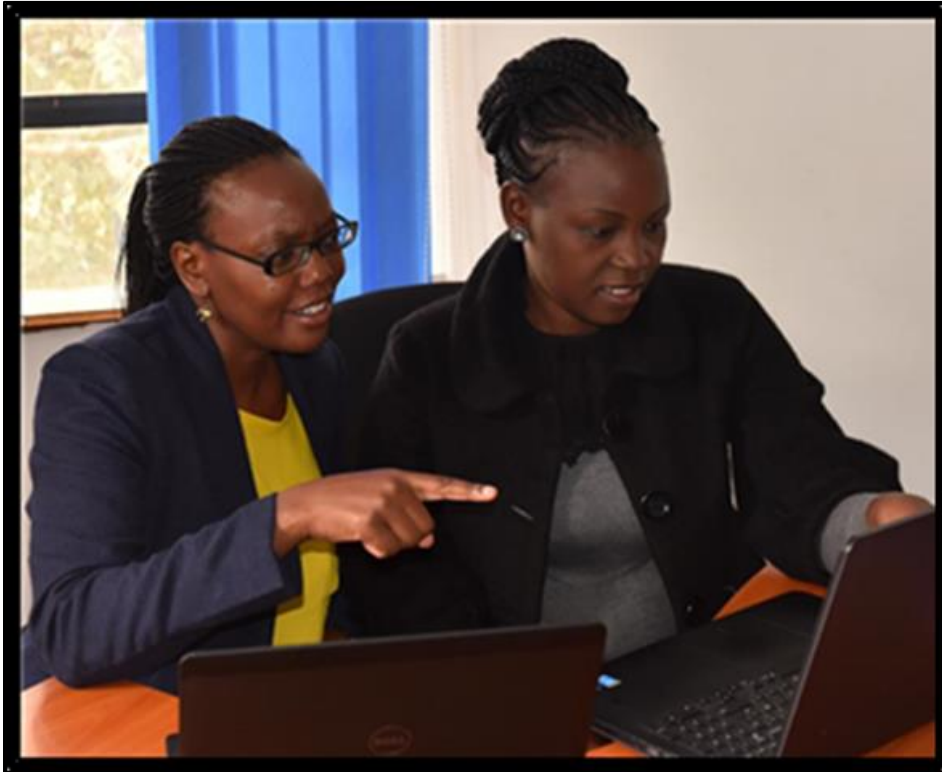
- An assessment of EHIS with immunization components in Kenya revealed substantial variability in the immunization data collected and reported

- There is a need for standardization of immunization data collection and reporting in Kenya
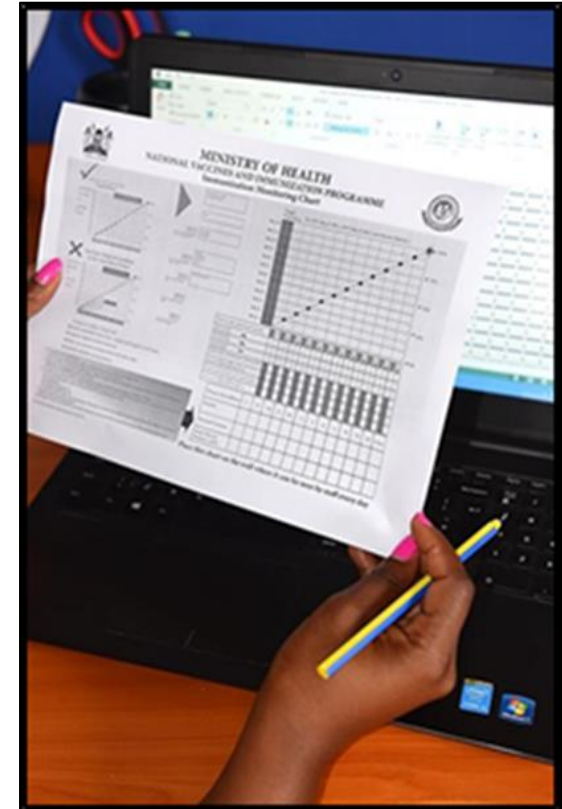
Objective

To develop functional standards and core data elements for Kenya electronic vaccination registries

Approach

- To spearhead and coordinate the process the NVIP created a:
  - Technical Workgroup (10-20 members)
  - Taskforce that included more than 20 partners from both immunization and other programs

- Expected outputs:
  - EVR objectives
  - EVR core data elements
  - EVR functional standards

Technical Work Group membership

Timeline and activities

Date	Activity
August 2016 – December 2017	Creation of Technical Workgroup (TWG) in August, and routine TWG meetings
October 2016	Stakeholders Engagement Meeting to kick start the agenda on functional standards development
January to May 2017	Assessment of electronic health information systems (EHIS) with immunization components
May 2017	Workshop to: • present findings of "Assessment of EHIS with immunization components" • identify functional standards and core data elements for Kenya
May – September, 2017	Draft of document on functional standards and core data elements
July 2017	Workshop to engage stakeholders in the review of the draft functional standards and core data elements
TBD	Launch of functional standards document

Guiting principles for the process

- Intended use of EVRs in Kenya

- Alignment with Kenyan EMR guidelines

- Alignment with MOH immunization efforts

- Use of the data by health facility or other stakeholders

- Burden on healthcare workers and health system

- Cost of collecting data
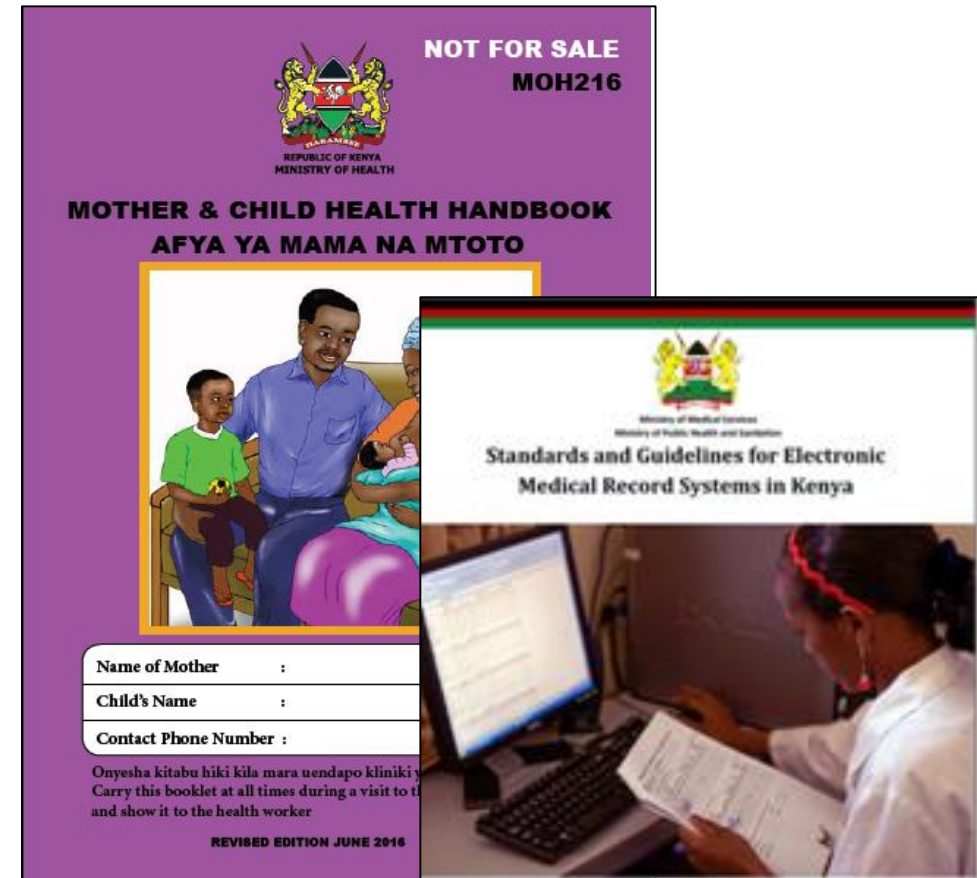
Results

TABLE 1. ELECTRONIC VACCINE REGISTRY OBJECTIVES

Objective 1. To capture longitudinal data and track vaccination events..
Objective 2. To provide timely information and records for immunization decision making at all levels of health care system.
Objective 3. To maintain accurate, complete and timely demographic and vaccination event information.

EVR objectives

OBJECTIVE 2. The EVR provides timely information and records for immunization decision making at all levels of the health care system

- The EVR should facilitate access to demographic and vaccination event information to healthcare workers and other authorized stakeholders /individuals.
- The EVR should generate reports to support clinical and programmatic decision making at all levels of the health care system.

Below are the reports the EVR should be able to generate :
- MOH 710   - Immunization coverage report
- Defaulter rates reports   - Access-utilization reports
- Wastage rates   - Stock utilization/stock status reports
- Outreach reports   - Immunization monitoring chart
- Childs growth chart   - Summary reports on all AEFIs

EVR functional standards

Results

Data Element	Definition
Data Elements for AEFI	
Type of AEFI	The type of AEFI that occurred as applicable (e.g. anaphylaxis, BCG , high fever, Lymphadenitis, convulsion, paralysis, generalized urticarial (hive), toxic shock, injection site abscess, severe local reaction, encephalopathy, encephalitis/meningitis, other, etc.)
Description of AEFI	A description of the AEFI including time of occurrence
Date of AEFI onset date	The date of onset the of AEFI
Time of AEFI onset	The time of onset of the AEFI
Suspected vaccine – name	The name of the suspected vaccine causing the AEFI
Suspected vaccine – dose given	The dose of the suspected vaccine given
Suspected vaccine – route of administration	The route of administration for the suspected vaccine

EVR core data elements

Lessons learned

- Set realistic objectives/goals considering the country context and immunization related activities

- Clarify the role of Ministry of Health and partners based on expertise and responsibilities in the process

- Determine a process for achieving consensus on the selected functional standards and data elements

- Define the terms that will be used in the discussions on functional standards and data elements

Conclusion and next steps

- The lessons learned from the Kenyan experience
  - provide insight into the process of developing functional standards for electronic immunization information systems in lower middle-income countries (LMIC)
  - could be used by other LMICs interested in developing functional standards for immunization information systems

- The next steps for Kenya include
  - Dissemination of Kenya's experience with stakeholders
  - Implementation of the functional standards
  - Evaluation of implementation of the functional standards

Thank you and questions