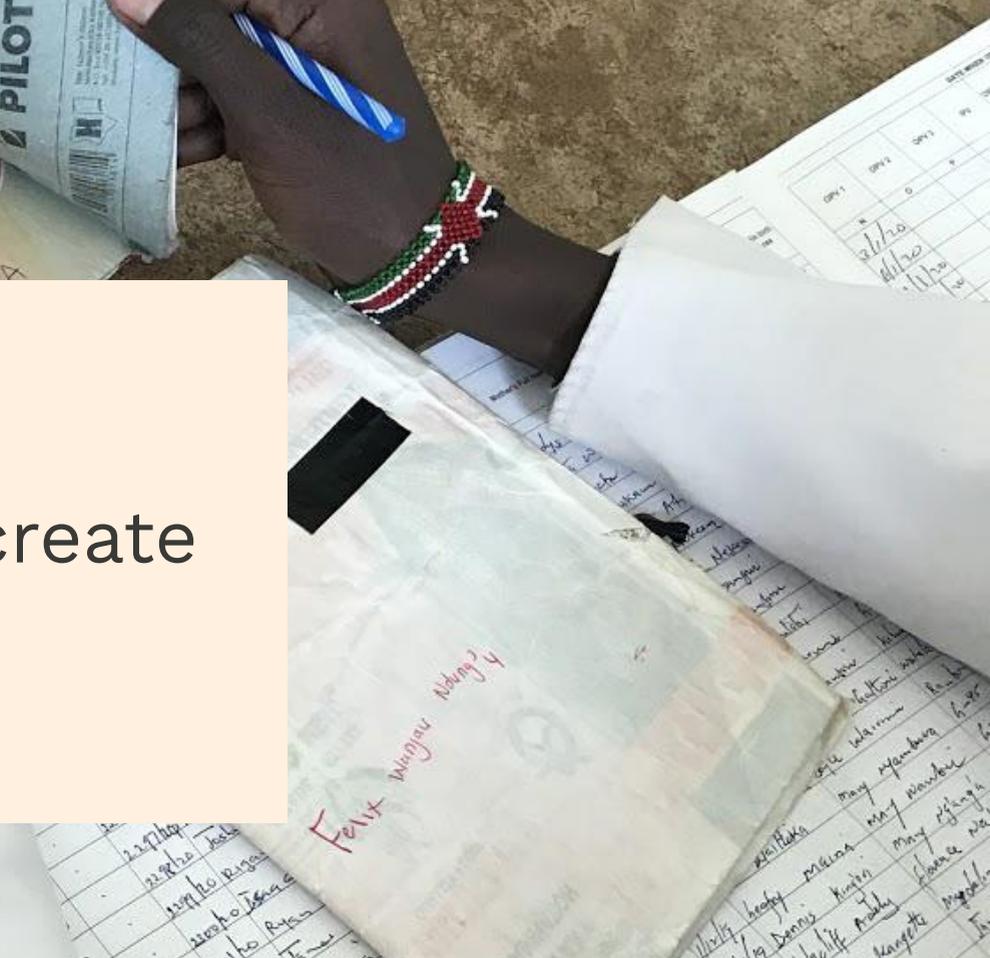


August 13, 2020

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## Ad-hoc health facility tools & workarounds: How Kenyan HCW create solutions to immunization data challenges



## Vx Data Insights Mini Webinar Series



### SPEAKERS:



#### **Isaac Mugoya**

*Senior Technical Officer, Kenya -  
Immunization Center, JSI*

Isaac has been working in immunization for more than three decades, supporting the Kenyan Ministry of Health in monitoring immunization programs, introducing new vaccines, and applying best practices.



#### **Emilia Klimiuk**

*Project Lead, Sonder Design  
Collective*

Based in Lagos, Nigeria, Emilia is a designer and researcher specializing in applying Human-Centered Design methods to the health, microfinance, and agriculture sectors in low resource settings.



#### **Natasha Kanagat**

*Research, Monitoring and Evaluation  
Advisor and Deputy Director, Center  
for Health Information Monitoring  
and Evaluation, JSI*

Natasha's primary expertise is in research design, analysis and interpretation with the ultimate goal of generating evidence to inform policy and program strategy.



#### **Sarah Hassanen**

*Kenya Lead, Sonder Design  
Collective*

Based in Nairobi, Kenya, Sarah practices Human-Centred Design with a focus on health across multiple continents including Africa, Europe and the Middle East

**Vx Data Insights**  
Mini Webinar Series



The **Vx Data Insights study** is a joint research effort between Sonder Collective and John Snow Inc. (JSI) to apply the Human-Centered Design approach in order to uncover data specific painpoints and challenges that healthcare workers and managers at all levels within a country encounter in delivering immunization services in Kenya, the Democratic Republic of the Congo, and Mozambique.

Note that today's discussion will be based on our conversations with nurses, EPI managers, and other decision-makers at all levels of the healthcare system in Kenya in early 2020. We conducted research in 3 Counties / 12 Sub Counties / 13 Facilities. We spoke to a total of 84 participants.

Faced with difficult trade-offs between providing quality services for their clients and fulfilling their data collection duties, **healthcare workers find workarounds** through the creation of informal tools, collection of alternate data points, adjustment of the vaccination workflow, and by redefining individual roles.

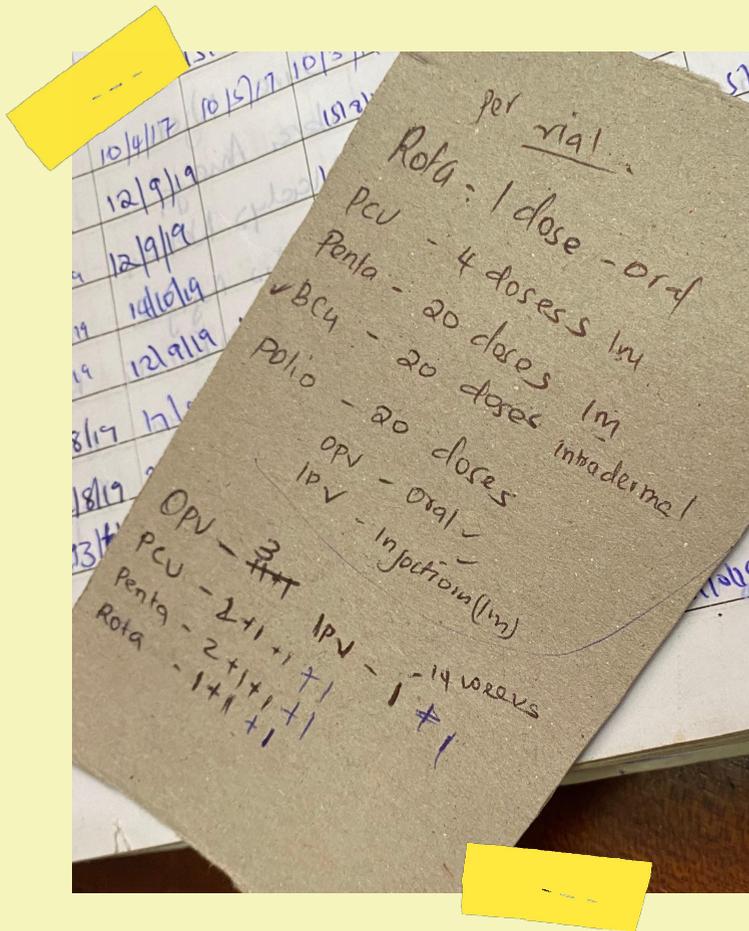
# 1

## Creating intermediate data collection tools

Client data was often recorded informally on makeshift tools optimized for speed and convenience, then transferred over to the formal register books in bulk, during a less busy time. These intermediate data collection tools, while adding extra work for the staff, helped to streamline service delivery to the clients and ensure all babies were vaccinated.

# 1

## Creating intermediate data collection tools



- Using slips of paper or the palm of their hand to write down the number of vaccine vials removed from the fridge
- Use of an informal neonatal vaccination notebook or a slip of paper and transferring it to the permanent register or a notebook later

## 2

# Recording additional data points

Most of the recording tools have been optimized for collecting data needed at the higher levels of the system without necessarily supporting decision-making and management of immunization services at the facility level. Facility staff often found themselves recording additional data points to aid their work.

## 2

# Recording additional data points



- The use of lined notebooks to trace parents and guardians of children for follow up visits called defaulter registers.
- An antigen dilution and expiry book helped some facilities track when a diluent was opened.

3

## Adjusting the timing of data collection to expedite services

During busy immunization clinics, staff often either pre-recorded or delayed the recording of data as services progressed.

# 3

## Adjusting the timing of data collection to expedite services



- Pre-recording of the vaccines in the Mother and Child booklet.
- Pre-recording immunizations on the tally sheets before a vaccination was given.

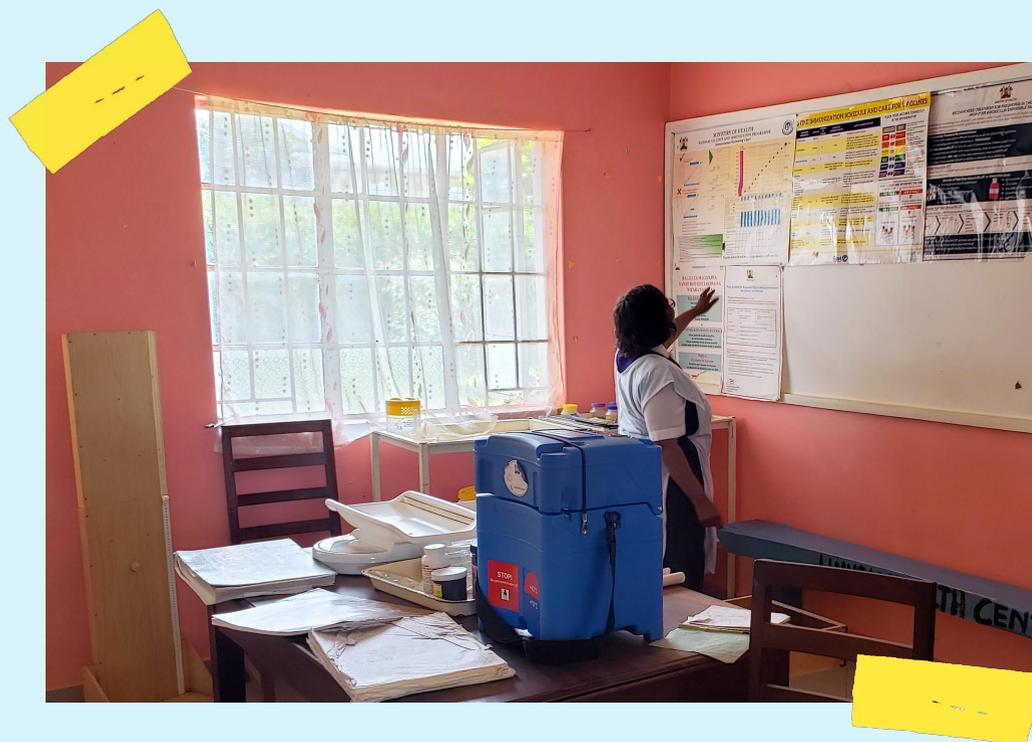
# 4

## Changing who collects data

In busy, understaffed facilities roles were very fluid and data collection often got outsourced to unsupervised students or community health volunteers.

# 4

## Changing who collects data



- Students would sometimes take on the role of recording data without supervision.
- Community Health Volunteers also stepped into this data recording role.

# Facility-level Tools

## DATA COLLECTION & MANAGEMENT



### MCH Booklet (Mother Child Booklet)

A record of all immunizations given to a child kept by the parent/guardian. Updated by facility staff during each visit.



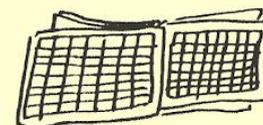
### Tally Sheet (MOH 702)

A count of daily immunizations per vaccine, to be completed by facility staff as immunizations are administered.



### Daily Register (MOH 511)

A register documenting every child served on a given day. To be filled during or immediately after the visit. Each page includes a tally at the bottom to help with reporting.



### Permanent/Immunization Register (MOH 510)

A record with details of all children immunized at a facility. To be updated with each vaccine. Page number for this entry is often noted in the MCH Booklet to make it easier to find.



### HPV Vaccine Card

It is a card given to a patient when they have started their immunizations for the HPV vaccine and is used to record their vaccines. The patient keeps it with them and presents it at the health facility when they come for their next dose.



### HPV Vaccine Register (MOH 413)

A register used specifically for the HPV vaccine program. Includes additional information about the girls' school name and class.

## DATA COLLECTION & MANAGEMENT *cont.*



### Malaria Vaccine Tally Sheet

A register used specifically for the Malaria vaccine program. Currently in pilot phase, only used in select areas.



### Monthly Summary Sheet (MOH 710)

A summation of all immunizations given at the facility in a particular month. Daily totals are meant to be filled at the close of the day. Monthly total is added up at the end of the month.



### Integrated Report (MOH 711)

A monthly report aggregating various information sources, meant to be filled out monthly at the facility. Covers ANC, PNC, Family Planning, Maternity & delivery, Child Health & Nutrition amongst others.



### Photocopies & Improved Notebooks

When data recording tools are not available, facilities are advised to make photocopies (at own expense). They may also resort to using blank notebooks (a practice that often leads to increased errors and data gaps).



### Hand Notes

When official registers are temporarily unavailable, or staff is too busy to make a formal entry, numbers might be quickly scribbled on a palm or a slip of paper (ex. number of vaccines removed from fridge) and entered into the records at the end of day.



### Slips of Paper

Slips of paper might also be used more strategically during busy times. A child's weight might be measured, recorded on a slip, and handed to the mother. Though the wait time has not been reduced, the mother feels attended to and is less likely to leave. The weight is later copied to the registers.

*(informal)*

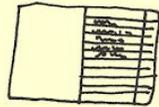
# Facility-level Tools *cont.*

## DATA COLLECTION *(informal) cont.*



### Register Margins

Busy facility staff might also resort to only filling one register at the time of vaccination, noting any additional required data in the margins. They will then use the "master register" to update all the others at the end of the day.



### PNC Immunization Book

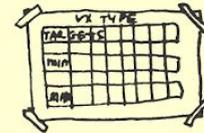
A register used to track vaccinations completed in the PNC. It is used to update the Daily Register and Tally.

## STOCK MANAGEMENT



### Vaccine Ledger

An inventory of vaccines (usually one ledger per vaccine) at the facility. Used to record any antigens removed in the morning, returned at night, and added to the fridge.



### Forecast Sheet

Shows, based on facility targets, what the minimum and maximum number of antigens the facility should have in stock to avoid stockouts and wastage. Ideally, it is compared against stock at the end of the day and used to order antigens monthly.



### Temperature Monitoring Chart

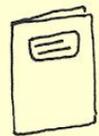
Record of temperature readings for each equipment (fridge or freezer). Meant to be completed in the morning and evening seven days a week. Also records any actions taken in the event there was heat or cold alarm.



### Ordering Sheet

Used to order antigens monthly or as needed (in case a minimum amount is reached).

## STOCK MANAGEMENT *(informal)*



### Antigen dilution and expiry time records book

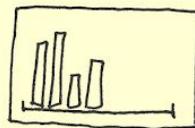
Additional records kept by some facilities to track wastage and when a vial was opened.



### Monitoring Chart

A wall chart, to be filled by the facility based on the Monthly Summary Sheet, graphing immunization trends of key vaccines (Penta 1, Penta 3 and Measles) against the set targets. Also shows the cases of vaccine preventable diseases occurring within the month.

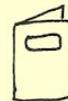
## PERFORMANCE MONITORING *(informal)*



### Charts on manila paper

A hand drawn bar chart monitoring performance at facility, used when official monitoring charts are not available.

## OUTREACH *(informal)*



### Appointment Diary

A list of children to be immunized on a particular day. The nurse can quickly know how many children to expect for immunization on any given day. Once a child is vaccinated, he/she is marked and listed on the next appointment dates. At the end of the session, the nurse identifies those who missed and using the child number, gets the child's name from the immunization register.



### Defaulter Tracking book /list

At the facility level, a Counter book is used to create a defaulter list. The list is created by going through their permanent registers and identifying which patients have not come back for their follow up vaccinations. This list is either shared with the relevant CHVs for follow up or the patient is directly called by the facility.

Tools used at other levels of the system can be found in the [Initial Kenya Insights Report](#)

## Pros & cons:



- New tools are customized to the facility needs
- Potential for innovation
- HFs take initiative to address a need - support the nurses by providing books etc to record



- Not systematized and therefore different in every facility
- Data accuracy is a challenge it is recorded many times
- Does not drive decision making at the facility level
- Does not feed into the broader systems and therefore not scalable
- Duplicating efforts for data collection

While not always ideal or appropriate, these ad-hoc tools and workarounds offer us important insights.

- Adjustments to the tools and protocols for data collection demonstrate that **busy healthcare workers need simpler, more flexible processes that minimize the attention needed to capture data during their interactions with clients.** Nurses rely on their observational skills to catch health issues, ensure appropriate treatment, and provide relevant health education. Simplifying official tools could go a long way towards improving completeness and accuracy of the data.
- Current tools don't support decision-making at the facility level, focusing instead on information needed for decisions made at higher levels of the system. **Creating tools that allow nurses to collect more qualitative data in a systemized way could improve data usage for facility-level decisions.**



#### PREVIOUS WEBINARS:

- **Re-framing how we think about decision-making: 3 lessons from healthcare workers and managers in Kenya**
- **The Health System Map and Its Actors: Introducing you to the people that make up the Kenyan Immunization Program**
- **Policy vs Practice: Two modes that reflect decision-making in the Kenyan health system**
- **How WhatsApp is transforming communications within the Kenyan healthcare system**

#### ADDITIONAL RESOURCES:

- Download the Initial Kenya Insights Report
- Read the Blog Series