

Measles containing vaccine (MCV) presentation switches - impact, experiences, cost-effectiveness, and lessons learned...the unfolding story

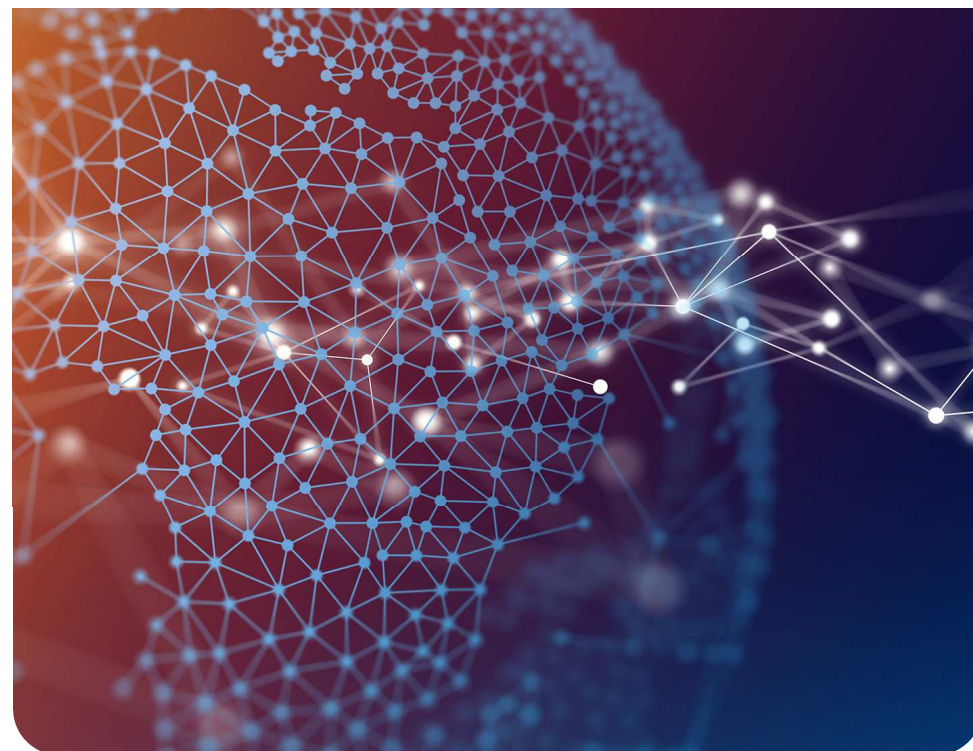
20th Annual African Vaccinology Course 2025

Details of Speaker

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Date: 3rd -7th November 2025



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Presentation overview



Background &
introduction



The ongoing MCV study
in a nutshell



Journey map: our novel
value-add



Background and Introduction



Background

The past: A killer almost “killed”

- Prior to 1974...
- Continuous concerted vaccination efforts yielded great dividends –reduction in mortality and morbidity
- Measles incidence controlled and eliminated in some regions and many developed countries

The present: A defiant problem?

- Persistent low MCV coverage: MOVs, wastages, stockouts, and healthcare workers' and caregivers' behaviors, among other factors
- Intermittent global outbreaks and disease resurgence, often in low-and middle-income countries
- The effect of Covid-19 pandemic -interruption of NIPs globally
- Antivaxxers in power? Fake news!!!

Problem statement

- Global estimated measles cases increased by 18% (from 7,8m to 9,2m) in the years 2021-2022 and estimated measles deaths by 43% from (95,000 to 136,200) in the same period due to the impact of the COVID-19 pandemic [1].
- In 2022, 37 countries in four WHO regions were affected by large or disruptive measles outbreaks (≥ 20 cases per 1 million population), an increase of 68% compared with 22 countries in two regions the preceding year. Among these 2022 outbreaks, 28 of 37 (76%) occurred in countries in the African Region [2].
- In LMICs, a significant factor that may contribute to low MCV coverage and subsequent outbreaks is the reluctance of health care workers (HCWs) to vaccinate when a small number of eligible children presents for measles vaccination [3].
- It has been estimated that if all Gavi-eligible countries switched to using MCV 5-dose vials for routine immunization, at least 2 million additional children could be reached with MCV1 each year [3].

1. Minta, A.A., Progress toward measles elimination—worldwide, 2000–2022. MMWR. Morbidity and Mortality Weekly Report, 2023. 72.

2. Nchasi, G., et al., Measles outbreak in sub-Saharan Africa amidst COVID-19: a rising concern, efforts, challenges, and future recommendations. Annals of medicine and surgery, 2022. 81.

3. Wallace, A.S., et al., Vaccine wastage in Nigeria: an assessment of wastage rates and related vaccinator knowledge, attitudes and practices. Vaccine, 2017. 35(48): p. 6751-6758.

Potential solution under exploration

- Research conducted in Zambia found that switching to a 5-dose vial increased first dose of measles containing vaccine (MCV1) coverage by 4.9% and second dose (MCV2) coverage by 3.5% [3]
- Wastage was 47% lower in facilities using 5-dose vs. those using 10-dose vials. Wastage-adjusted vaccine price per Measles Rubella (MR) dose was only US\$ 0.03 higher for 5-dose vials than for 10-dose vials.
- Moreover, HCW's reported less hesitancy to open 5-dose vials and were more likely to vaccinate children for measles outside of scheduled vaccination days when using 5-dose vials [3].
- However, more data and technical information is still required to convince, guide and support countries yet to decide or still contemplating the switch.
- This necessitates that high-quality, '**real-world**' evidence be made available to countries on the impacts, enablers and barriers associated with such a switch.

3. Wallace, A.S., et al., Vaccine wastage in Nigeria: an assessment of wastage rates and related vaccinator knowledge, attitudes and practices. Vaccine, 2017. 35(48): p. 6751-6758.

The call

Request for proposal (RFP)

Switch Assessments for Gavi Hexavalent and
MCV programs

003-2024-GAVI-RFP

ISSUE DATE: 22.01.2024

CLOSING DATE AND TIME: 01 March 2024 24:00 (CET)

Elizabeth O. Oduwole, Ph.D. | 7th Nov 2025

The respondent - the MISC Consortium



VACFA/NISH South Africa

- ✓ Extensive experience in vaccinology training on the African continent.
- ✓ Ongoing collaborations with NITAGs and academic institutions in Africa.
- ✓ Supported South African NITAG/MoH with vaccine switches in the past.



Linksbridge USA

- ✓ Expertise in vaccine program optimization.
- ✓ Proven track record in supporting countries undertaking the MCV DPC switch.
- ✓ Strong collaborative ties with multilateral stakeholders, including WHO and UNICEF.

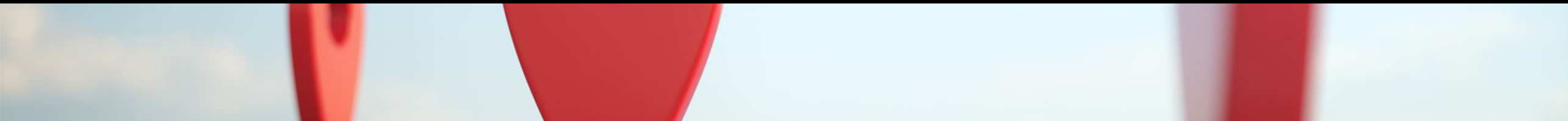


NCIRS Australia

- ✓ Demonstrated impact in the twinning of NITAGs.
- ✓ Experienced in providing technical support and training of NITAGs at a national and regional level
- ✓ Excellence in monitoring of vaccination coverage, safety, and related matters.



The ongoing MCV study in a
nutshell...



...And emerging insights...

Aim of our study



The aim of this study is to conduct a comprehensive impact assessment on the switch from MCV ten-dose vial to the five-dose vial presentation **prospectively** in Ethiopia and **retrospectively** in Zambia.



We seek to provide insights that will inform Evidence-Informed Decision-Making (EIDM) on MCV vial presentation switching, address gaps on the topic, and foster collaborations between NITAGs and academic institutions.



We anticipate observing a 10% increase in coverage for MCV1 and MCV2 to be associated with the MCV vial presentation switch in the poorest performing districts and a 5% increase nationally, where applicable.

Objective 1

Primary objective

To measure **the impact of the MCV 10-dose to 5-dose vial switch on MCV 1 and MCV 2 coverage** at the national and subnational levels.

Research questions

Primary:

i. What % **change in MCV1 and MCV2 coverage rate** is associated with switching to a 5-dose vial?

Secondary:

ii. What % **change in vaccination timeliness for MCV1 and MCV2** is associated with switching to a 5-dose vial?

iii. What % **change in the number of healthcare facilities offering MCV** during each immunization session and is the frequency of such sessions at the national and subnational level associated to switching to a 5-dose vial?

iv. What % **change in missed opportunities to vaccinate for MCV1 and MCV2** is associated with switching to a 5-dose vial?

v. What % **change in measles vaccine wastage** is associated with switching to a 5-dose vial?

vi. What % **change in proportions of zero-dose and under-immunized children** is associated with switching to a 5-dose vial?

vii. What % **change in coverage rates of routine childhood vaccines** is associated with switching to a 5-dose vial?

Objective 2



To evaluate the **impact of the MCV 10-dose to 5-dose vial switch on HCW and caregiver perceptions and behavior.**



i. What is the **knowledge, attitudes, and practices among healthcare workers** before and after switching to 5-dose vials?



ii. What is the **knowledge, attitudes, and practices among the caregivers of children** vaccinated with MCV before and after switching to 5-dose vials?



Objective 3

To obtain **real-world implementation data** on the **practicalities, cost assessments, equity analysis and cost-evaluations** pertinent to the **effectiveness of the MCV switch**.

Research questions

- i. What are the **actual costs and timelines of implementing** the MCV 10-dose to 5-dose vial switch compared to the pre-switch estimates?
- ii. Is the switch **cost-saving and cost effective**?
- iii. What is the **economic implication of switching** from MCV 10-dose to 5-dose vial in different country contexts?
- iv. What are the **equity implications** to be considered?
- v. What are the **enablers and barriers** of the MCV 10-dose to 5-dose vial switch implementation process?
- vi. What are the **tools and processes** used during MCV 10-dose to 5-dose vial switch implementation process?
- vii. What are the **lessons learned** and **best practices** for the MCV 10-dose to 5-dose switch in different country contexts?
- viii. How might **learnings** from the MCV 10-dose to 5-dose switch inform other similar presentation switches such as yellow fever vaccines (YFV).

Objective 4

To document the **lessons learned** and identify the short-, mid- and possible long-term **benefits of leveraging local academia to support evidence compilation for NITAGs for decision-making**.

Research questions

- i. What are the characteristics of **existing models** (examples, ways) of **linking local academia with NITAGs** for evidence gathering, impact evaluation and decision making for vaccine optimization and prioritization?
- ii. What **adaptations** are necessary for the existing models to be piloted in MCV 10-dose to 5-dose switch study countries?
- iii. What are the main **enabling factors and barriers** for this model of linking local academia and NITAGs in the study countries?
- iv. What are the **key questions** that **NITAGs** in the study countries should consider to inform recommendations on the MCV10-dose to 5-dose vial switch (e.g. cost comparison, product comparison, others e.g., context-specific issues)?
- v. What **kind of support** is **local academia** able to provide and not able to provide on the key questions?
- vi. What are the short-, mid- and possible long-term direct and **benefits and impact** seen on the joint **academic-NITAG** collaboration on NITAG functioning and maturity level?
- vii. What are the **lessons learned and best practices** for the adapted model in the study countries?

Overview of study methodology

To address **objectives 1& 3**, an **integrated mixed methodology approach** was employed using items pooled from various tools loaded as questionnaires onto RedCap database on electronic tablets.

To address **objective 2**, **in-dept interviews** were conducted with healthcare workers and caregivers of age-appropriate children.

Objective 4 is a 'light-touch' landscape analysis. It employed a **combination of literature review and primary study** which consisted of in-depth interviews with relevant key stakeholders (NITAG Chairs, secretariat, immunization support partners, and the academia)

Examples of tools adapted for the study

Interview tool for the impact of Measles-Containing Vaccine (MCV) switch from 10 vials to 5 vials on caregivers of children age 12 to 36 months

INTERVIEW TOOL FOR THE IMPACT OF MEASLES-CONTAINING VACCINE (MCV) SWITCH FROM 10 VIALS TO 5 VIALS ON CAREGIVERS OF CHILDREN AGE 12 TO 36 MONTHS

INTRODUCTION

My name is [NAME]. The organisation I am working for, [NAME OF ORGANISATION], is interested in the costs and experience that caregivers face when they take their children for immunization, specifically MCV.

Permission has been received to access this health facility and to view your Vaccination history.

Partaking in the study involves an interview designed to allow us to collect details and data about medical and non-medical costs of MCV vaccination for your child(ren).. We will ask about any difficulties you have had in accessing Vaccination care. At some point I will ask you about your personal income and the income of your household. We will not provide this information to any tax or welfare authorities, even after the study has been completed.

Other than completing the interview you will not be asked to do anything different after today from what you would already do if you were not in the study. All the information you provide will be kept confidential and only used for research purposes.

There are no risks or direct benefits associated with partaking in the study.

Taking part in this study is voluntary. You can choose not to take part and if you join, you may quit at any time. If you decide not to participate, there will be no negative consequences.

Please take your time to read through this information sheet (*ENUMERATOR TO GIVE CAREGIVER THE INFORMATION SHEET AND CONSENT FORM*) and ask any questions that you may have. If you agree to participate, please sign the consent form and we can begin the interview.

IMMUNIZATION SUPPLY CHAIN AND SERVICE DELIVERY

BASELINE HEALTH FACILITY COSTING QUESTIONNAIRE¹

Note: This is costing questionnaire will need to be modified to align with the country context. Most of the information below can be obtained by interviewing the medical staff person in charge of the facility, with some data obtained from the accounting office (if applicable). In the human resource section, each staff person present should be interviewed separately. The questionnaire will be modified to be relevant to the activities at the district.

I. FACILITY BASIC INFORMATION

INTERVIEW INFORMATION			
Number	Question	Answer	Interviewer guide
	Health facility name		
	District located in		
	Title / designation of person being interviewed		
	Name of interviewer		
	Date of interview		
HEALTH FACILITY GENERAL INFORMATION			
Number	Question	Answer	Interviewer guide
	What is the location of this health facility?	<input type="checkbox"/> Urban <input type="checkbox"/> Peri urban <input type="checkbox"/> Rural	
	What is the main power source for lights for this facility?	<input type="checkbox"/> Electricity	

5: On Accessibility: Investigate

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Examples of tools adapted for the study

B5

In many African countries, healthcare workers (HCWs) can be hesitant to open measles and measles-rubella (MR) 10-dose vaccine vials due to

Example Child Register Form:	Example Tally Sheet:
<p>Column E Inputs</p> <p>Adding up # of vaccines given on these dates = Column H*</p> <p>*The same can be done to calculate columns F-J</p>	<p>Column E Input</p> <p>Column E Input = 20*</p> <p>*Columns F-J numbers can be found the same way</p>

Outputs		
The Outputs tabs uses data inputs to calculate outputs of interest, including total children vaccinated, frequency of vaccination sessions, and wastage rate.		
Category	Description	Calculations
Total children vaccinated	Absolute number of children vaccinated with antigens of interest	Sum of number of DTP, YF, BCG, MCV1, and MCV2 vaccinations, respectively
Frequency of vaccination sessions where measles is provided	Number of vaccination sessions offering measles vaccine	Number of vaccination sessions offering measles vaccine/Total number of vaccination sessions
MCV wastage rate	Number of doses used/Number of doses procured	Total number of doses used per session/Total number of doses prepared per session

Assumptions	
Assumptions on:	Description

READ ME FIRST | Data Inputs | Children Vaccinated (All) | Frequency of MCV Sessions | MCV Wastage Rate

Ready Accessibility: Investigate

MCV 5 dose M&E tool

R7

Questionnaire (health facilities)	Answers, observations, calculations
Roll out and service delivery:	
Did the facility/HCWs receive an official communication to announce the switch? What guidance was provided in this communication? Was the announcement made alongside other changes in immunization program or in conjunction with other trainings? Did HCWs find it adequate enough?	
Ask healthcare workers (HCWs) if they received training on switch to 5 dose vials? What did it involve? Did HCWs find it to be sufficient?	
Was any new cold chain equipment added or were there any changes to cold chain related to 5 dose vial switch?	
<p>Observe: Review the health facility (HF) vaccine register/ tally sheets and look at the measles vaccine doses provided in the 30 most recent fixed and 30 most recent outreach vaccination sessions.</p> <p>Calculate: The number and % of fixed and the number and % of outreach sessions with measles doses provided. Calculate the average number and range of measles doses provided per session.</p>	
<p>Observe: Review the vaccination tally sheets and summary sheets for the years since the shift, and for at least 2 years before the shift. Document the monthly number of measles vaccine doses provided for this period.</p> <p>Calculate: Has the monthly number of children vaccinated</p>	

Pre-Review Activities | Document Management | Central level Questionnaire | Field Visit Questionnaire

Ready Accessibility: Investigate

MCV 5 dose implementation review template

Screenshot of survey instrument– examples from Zambia

Record ID	Caregiver Eligibility Screening & Informed Consent	Caregivers Of Children Age 9 To 24 Months
1 Caregiver ID: 41043321 Katangwe Rural Health Centre - (Mansa, Luapula Province)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2 Caregiver ID: 41042322 Mwana Chama - (Mansa, Luapula Province)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3 Caregiver ID: 41042233 Mwana Chama - (Mansa, Luapula Province)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4 Caregiver ID: 41042184 Mwana Chama - (Mansa, Luapula Province)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
5 Caregiver ID: 41042195 Mwana Chama - (Mansa, Luapula Province)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
6 Caregiver ID: 41042196 Mwana Chama - (Mansa, Luapula Province)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
7 Caregiver ID: 41042197 Mwana Chama - (Mansa, Luapula Province)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
8 Caregiver ID: 41042278 Mwana Chama - (Mansa, Luapula Province)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
9 Caregiver ID: 41042199 Mwana Chama - (Mansa, Luapula Province)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
10 Caregiver ID: 410423310 Mwana Chama - (Mansa, Luapula Province)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
11 Caregiver ID: 410423011 Mwana Chama - (Mansa, Luapula Province)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
12 Caregiver ID: 410393512 Chikonshi Mini Hospital - (Mansa, Luapula Province)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
13 Caregiver ID: 410392113 Chikonshi Mini Hospital - (Mansa, Luapula Province)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
14 Caregiver ID: 410393214 Chikonshi Mini Hospital - (Mansa, Luapula Province)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
15 Caregiver ID: 410393215 Chikonshi Mini Hospital - (Mansa, Luapula Province)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
16 Caregiver ID: 410392316 Chikonshi Mini Hospital - (Mansa, Luapula Province)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
17 Caregiver ID: 410392717 Chikonshi Mini Hospital - (Mansa, Luapula Province)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
42 Caregiver ID: 410422442 Mwana Chama - (Mansa, Luapula Province)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
43 Caregiver ID: 410422843 Mwana Chama - (Mansa, Luapula Province)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
44 Caregiver ID: 410423344 Mwana Chama - (Mansa, Luapula Province)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
45 Caregiver ID: 410422045 Mwana Chama - (Mansa, Luapula Province)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
46 Caregiver ID: 410425246 Mwana Chama - (Mansa, Luapula Province)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
47 Caregiver ID: 410423747 Mwana Chama - (Mansa, Luapula Province)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
48 Caregiver ID: 410422848 Mwana Chama - (Mansa, Luapula Province)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
49 Caregiver ID: 410422849 Mwana Chama - (Mansa, Luapula Province)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
50 Caregiver ID: 410424350 Mwana Chama - (Mansa, Luapula Province)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
51 Caregiver ID: 410423251 Mwana Chama - (Mansa, Luapula Province)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
72 Caregiver ID: 410434072 Katangwe Rural Health Centre - (Mansa, Luapula Province)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
73 Caregiver ID: 410433273 Katangwe Rural Health Centre - (Mansa, Luapula Province)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
74 Caregiver ID: 410431874 Katangwe Rural Health Centre - (Mansa, Luapula Province)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
75 Caregiver ID: 410432375 Katangwe Rural Health Centre - (Mansa, Luapula Province)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
76 Caregiver ID: 410432276 Katangwe Rural Health Centre - (Mansa, Luapula Province)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
77 Caregiver ID: 410432777 Katangwe Rural Health Centre - (Mansa, Luapula Province)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
78 Caregiver ID: 410432178 Katangwe Rural Health Centre - (Mansa, Luapula Province)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
79 Caregiver ID: 410433279 Katangwe Rural Health Centre - (Mansa, Luapula Province)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
80 Caregiver ID: 410433080 Katangwe Rural Health Centre - (Mansa, Luapula Province)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
81 Caregiver ID: 410433981 Katangwe Rural Health Centre - (Mansa, Luapula Province)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Figure1: Screen shot of the list of records in the caregiver tool in the RedCap® instrument

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Some captured data – examples from Zambia

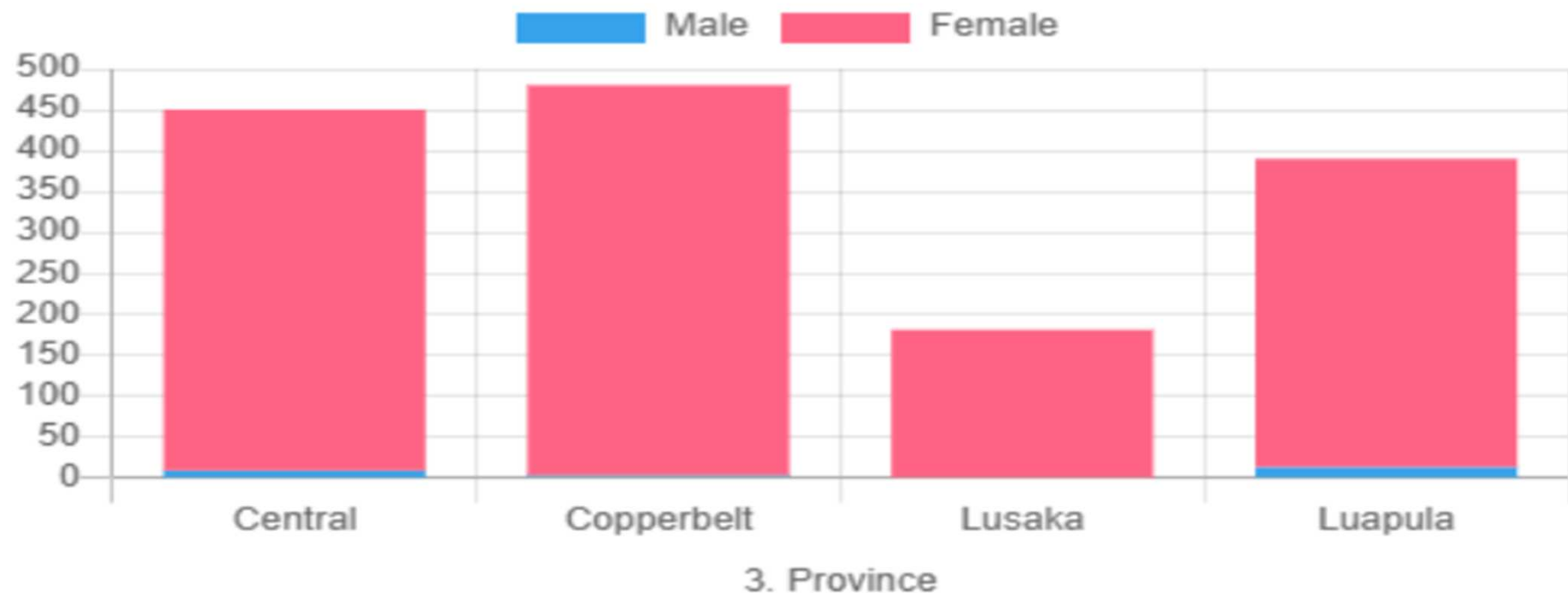


Figure2:Gender distribution of caregivers across the Central, Copperbelt, Lusaka and Luapula provinces

Screenshot of survey instrument– examples from Zambia

Record ID	Facility Basic Information	Cold Chain & Dry Goods	Cold Chain - Refrigerators	Cold Chain - Freezers	Cold Chain - Cold Boxes	Cold Chain - Vaccine Carriers	Transport - Distribution	Transport - Health Center Vehicles	Outreach Immunization - Locations	Per Diem Costs for Child Health Week	Outreach Immunization - Per Diem Costs	Waste Disposal & Stockouts of Vaccines and Syringes	Human Resources
1 Facility ID: 41042 Mwana Chama - (Mansa, Luapula Province)	●	●	● +	● +	● +	● +	●	●	● +	●	● +	●	● +
2 Facility ID: 41039 Chikonshi Mini Hospital - (Mansa, Luapula Province)	●	●	● +	● +	● +	● +	●	●	● +	●	● +	●	● +
3 Facility ID: 41043 Katangwe Rural Health Centre - (Mansa, Luapula Province)	●	●	● +	● +	● +	● +	●	● +	● +	●	● +	●	● +
7 Facility ID: 41038 Chisunka Rural Health Centre - (Mansa, Luapula Province)	●	●	● +	● +	● +	● +	●	●	● +	●	● +	●	● +
8 Facility ID: 41040 Mikula Health Post - (Mansa, Luapula Province)	●	●	●	● +	●	● +	●	●	● +	●	● +	●	● +
9 Facility ID: 41145 Mulwe Health Post - (Nchelenge, Luapula Province)	●	●	● +	●	● +	● +	●	●	● +	●	● +	●	● +
10 Facility ID: 41144 Kasumpa Health Post - (Nchelenge, Luapula Province)	●	●	● +	●	●	● +	●	● +	● +	●	● +	●	● +
11 Facility ID: 41249 Chinweshiba Health Post - (Samfya, Luapula Province)	●	●	●	● +	●	● +	●	●	● +	●	● +	●	● +
12 Facility ID: 41041 Luamfumu Rural Health Centre - (Mansa, Luapula Province)	●	●	● +	● +	●	● +	●	● +	● +	●	● +	●	● +
13 Facility ID: 41147 Ntoto Health Post - (Nchelenge, Luapula Province)	●	●	● +	● +	● +	● +	●	●	● +	●	● +	●	● +
14 Facility ID: 41248 Chikunyu Health Post - (Samfya, Luapula Province)	●	●	●	● +	● +	● +	●	●	● +	●	● +	●	● +
19 Facility ID: 41250 Samfya Stage II Rural Health Centre - (Samfya, Luapula Province)	●	●	● +	●	●	● +	●	●	● +	●	● +	●	● +
20 Facility ID: 2623 Ndeke Urban Health Centre - (Ndola, Copperbelt Province)	●	●	● +	● +	●	● +	●	●	● +	●	● +	●	● +
24 Facility ID: 2622 Hillcrest Urban Health Centre - (Ndola, Copperbelt Province)	●	●	●	● +	●	● +	●	●	● +	●	● +	●	● +
25 Facility ID: 2628 Masala Main Urban Health Centre - (Ndola, Copperbelt Province)	●	●	● +	● +	●	● +	●	●	● +	●	● +	●	● +
29 Facility ID: 41146 Shimpundu Health Post - (Nchelenge, Luapula Province)	●	●	● +	● +	● +	● +	●	● +	● +	●	● +	●	● +
30 Facility ID: 2626 Kamensopanshi Health Post - (Ndola, Copperbelt Province)	●	●	● +	●	●	● +	●	●	● +	●	● +	●	● +
31 Facility ID: 2629 Roma Health Post - (Ndola, Copperbelt Province)	●	●	●	● +	● +	● +	●	● +	● +	●	● +	●	● +
32 Facility ID: 2627 Commando Urban Health Centre - (Ndola, Copperbelt Province)	●	●	● +	● +	●	●	●	● +	● +	●	● +	●	● +
33 Facility ID: 2520 Lulamba Health Post - (Kalulushi, Copperbelt Province)	●	●	● +	● +	●	● +	●	●	● +	●	● +	●	● +
34 Facility ID: 2624 21 Miles Health Post - (Ndola, Copperbelt Province)	●	●	● +	● +	● +	● +	●	● +	● +	●	● +	●	● +
35 Facility ID: 2419 Luano Kapisha Mini Hospital - (Chingola, Copperbelt Province)	●	●	●	● +	●	● +	●	●	● +	●	● +	●	● +
36 Facility ID: 2521 Nangongwe OPD/Maternity Health Centre - (Kalulushi, Copperbelt Province)	●	●	● +	● +	● +	● +	●	●	● +	●	● +	●	● +
37 Facility ID: 2418 Muchinshi Rural Health Centre - (Chingola, Copperbelt Province)	●	●	● +	● +	● +	● +	●	● +	● +	●	● +	●	● +
38 Facility ID: 2417 Chingola Correctional Health Post - (Chingola, Copperbelt Province)	●	●	● +	●	●	● +	●	●	● +	●	● +	●	● +
39 Facility ID: 2416 Ipafu Rural Health Centre - (Chingola, Copperbelt Province)	●	●	● +	● +	●	●	●	●	● +	●	● +	●	● +
40 Facility ID: 2625 Tug-Argan Urban Health Centre - (Ndola, Copperbelt Province)	●	●	● +	● +	● +	● +	●	● +	● +	●	● +	●	● +
41 Facility ID: 2730 Lubengele Urban Health Centre - (Chililabombwe, Copperbelt Province)	●	●	●	● +	● +	● +	●	●	● +	●	● +	●	● +
42 Facility ID: 1312 Kalwelwe Health Centre - (Kabwe, Central Province)	●	●	● +	●	●	● +	●	●	● +	●	● +	●	● +
43 Facility ID: 2751 Kawama Health Post - (Chililabombwe, Copperbelt Province)	●	●	● +	● +	●	● +	●	● +	● +	●	● +	●	● +
44 Facility ID: 1313 Natuseko Urban Health Centre - (Kabwe, Central Province)	●	●	● +	●	●	●	●	●	● +	●	● +	●	● +
45 Facility ID: 1311 Bruneli Health Post - (Kabwe, Central Province)	●	●	● +	●	●	● +	●	●	● +	●	● +	●	● +
46 Facility ID: 1315 Medium Prison Health Post - (Kabwe, Central Province)	●	●	●	● +	●	● +	●	●	● +	●	● +	●	● +

Figure 3: Screen shot of costing data capture at facility level for cold chain equipment and related matters

Elizabeth O. Oduwole, Ph.D. | 7th Nov 2025

Some captured data – examples from Zambia

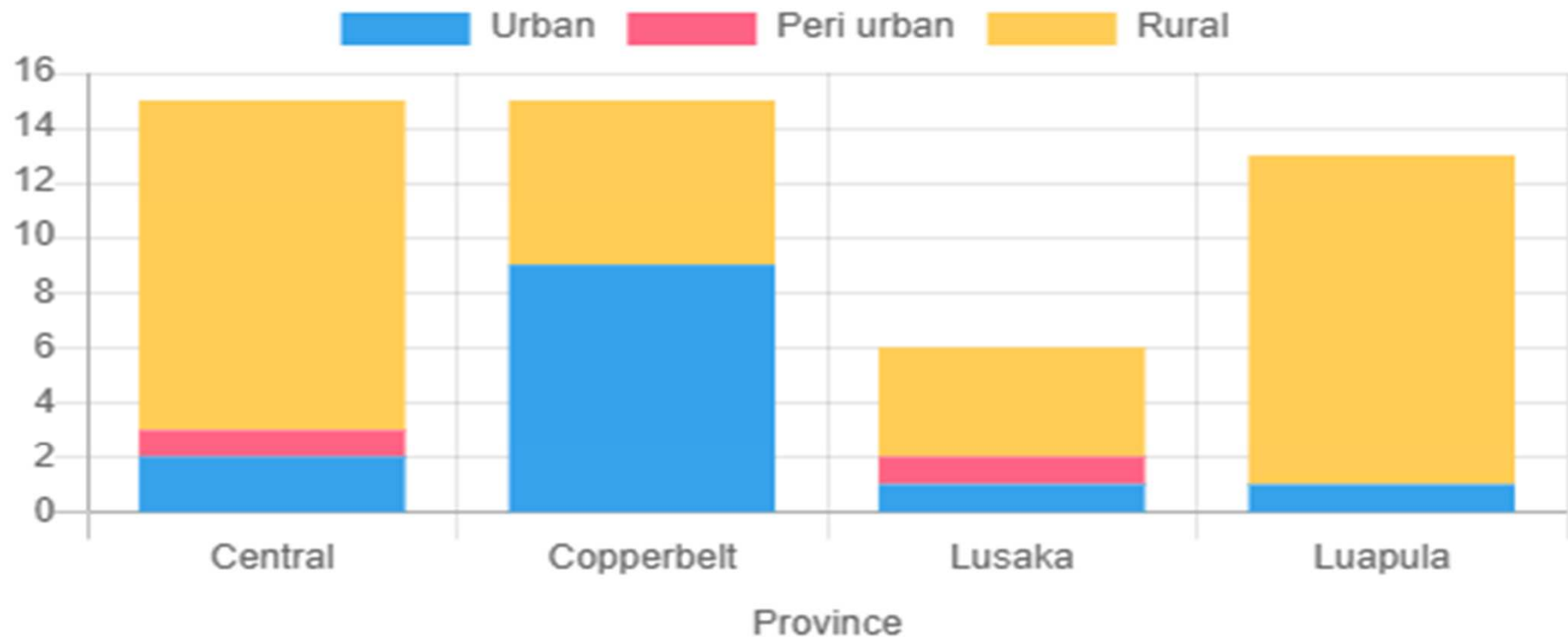


Figure 4 : Distribution of facility type; Urban, Peri Urban and Rural facilities across the Central, Copperbelt, Lusaka and Luapula provinces

Screenshot of survey instrument– examples from Ethiopia

Record ID	1.1. Household identification & location /የቤተሰብ መለያ እና አካባቢ/ Meeshaa Odeeffannoo Walitti Qabuu/ AQOONSIGA & GOOBTA	1.2. Sociodemographic Characteristics Of The Child And	1.3. MCV1 Vaccine Coverage Household data before switch	1.4. MCV2 Vaccine Coverage household data before switch	1.5. Cost-effectiveness/costing assessment tool from care givers before the switch
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Screenshot of survey instrument– examples from Ethiopia

Record ID	2.1. Health Facility characteristics and Identification	2.2. MCV Vaccine related facility data before switch	3.1. General cost before switch	3.2. Health Facility Cold chain and dry goods before switch	3.3. Vaccine Supply Logistics before switch	3.4. MCV vaccine distribution logistics before switch	3.5. Costing of outreach MCV immunization activities before switch	3.6 Costing of mobile MCV immunization activities before switch	3.7. Waste disposal costing for MCV immunization before switch	3.8. Human resource costing for MCV vaccination before switch
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Some captured data – examples from Ethiopia

Administrative Coverage (Using HF report)

	MCV 1	MCV2
Target number of children for MCV vaccination for the study catchment in the 3 Months before switch	11,180	10,948
Number of Children vaccinated for MCV for the study catchment in the 3 Months before switch	8428	7897
Coverage	75.4%	72.1%

Household (survey) Coverage

	MCV 1	MCV2
Number of Children Eligible for MCV before switch in the 3 Months before switch	1045	1135
Number of children who received the vaccine in the 3 Months before switch	775	775
Coverage	74.2%	68.3%



Emerging qualitative insights – examples from Zambia

Knowledge – Caregivers

- Although most caregivers could not identify the vaccine their child received as the measles containing vaccine, they could, however, articulate where on the body it was injected and when it was given.
- Due to the switch happening various times at facility level over the last 2 years, most caregivers had no conscious awareness of the switch, they did however notice that they were no longer asked to wait till a desired number of children were available for vaccination (usually 6-7) or turned away and told to come at a later date.



Emerging qualitative insights – examples from Zambia

Attitudes – Caregivers

No considerable change in attitudes were expressed by the caregivers, however, when it is hypothesized that the change might motivate those caregivers that were reluctant to take their children for vaccination because of the possibility of being turned away if the desired number of vaccinees is not attained, they opined that the change would have a positive effect on vaccination uptake.



Emerging qualitative insights – examples from Zambia

Knowledge - Healthcare Workers (HCWs)

- HCWs are aware of the switch, although not always certain exactly when it occurred at their respective facilities
- Efforts to communicate the switch to HCWs were done differentially across districts and facilities but were mostly poorly done – most HCWs just saw the 5-dose at their facility and had to figure out how to use it on their own.
- Some facility Heads were called by the district pharmacy to inform them of the change; they then passed on the information during weekly or monthly clinical meetings with no infographics
- Little to no time was given for the HCWs to process the change before they had to start using the 5-dose vials

Emerging qualitative insights – examples from Zambia

Attitudes - Healthcare Workers (HCWs)

- The switch was received with enthusiasm
- Before the switch, HCWs feared wasting doses, despite being told that wastage wasn't a priority
- HCWs don't think that there was a considerable change in preparation, reconstitution, or maintaining the cold chain with the change
- With regards to caregivers' awareness of the switch, most HCWs initially said 'no'. But after some reflection, or probing, most felt that it could be leverage to encourage caregivers to bring their children for vaccination



Emerging qualitative insights – examples from Zambia

Practices - Healthcare Workers

- Eagerly used the 5-dose
- Despite believing that it is important to share information with caregivers about the switch, in practice, most did not share the information

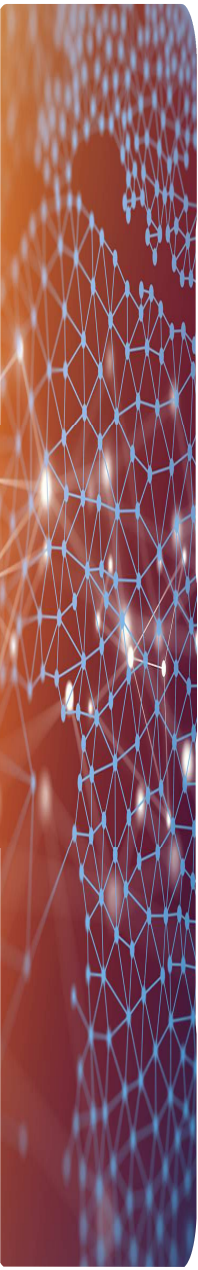


Some insights from the landscape analysis

- There is no documented evidence of the process of a formalized linkage between a National Immunization Technical Advisory Group (NITAG) and an academic institution.
- Some matured NITAGs in high income countries have their secretariat housed in academic institutions.
- The current relationship between the NITAGs of the study countries can be described as informal or 'ad-hoc'.
- The need to have a formal relationship between NITAGs and academic institutions was identified as critical to the effective and efficient operations of NITAGs, and beneficial to the individual academics and the academic institutions at large.
- The suggested mode of formalization was contextual; however, the general concession was the need to engage **all relevant** stakeholders.



Journey map-
our novel
value-add



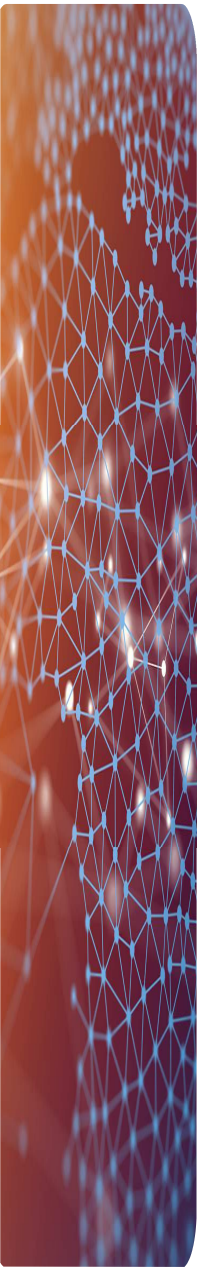
What is a journey map?

It is a research-based storytelling tool that communicates the journey from decision to service provision and acquisition.

A journey map can be described as a tool used to visualize and understand the steps and interactions involved in a particular process from the perspective of those involved, giving a clear understanding of their actions towards achieving their final goal. It allows for the translation of their insights into intelligible visual formats for decision making in various scenarios.

A journey map helps simplify complex experiences and create a shared understanding

It provides a 360-degree view of the people involved, the step-by-step actions, processes involved, channels and touchpoints involved in a journey



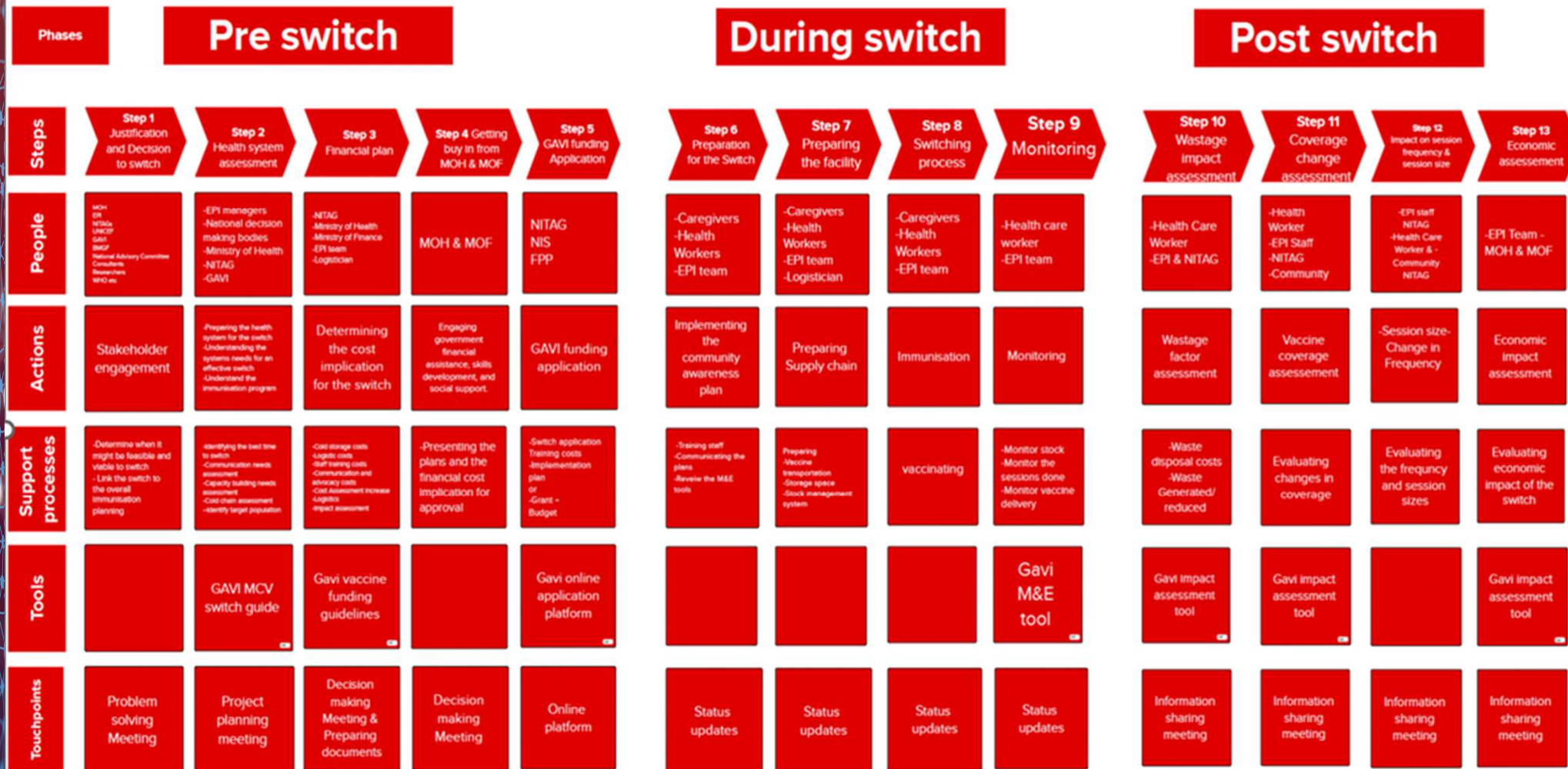
What is the Journey map in the MCV switch study?

It is an end-to-end visualization of the entire switching journey of the 10-dose vials to 5-dose vials, from the decision-making process through to the implementation and impact assessment.

It will include the people involved in each phase of the switching journey, expectations, actions, processes and needs, in the execution of the switch.

The journey map will be used throughout the different phases of the MCV switch study to visually document the switch process allowing for the identification of the process gaps, breakdown of silos, depiction of complicated relationships, and visualization of key touchpoints at every stage of the MCV switch process, from diverse viewpoints.

Assumption based journey map

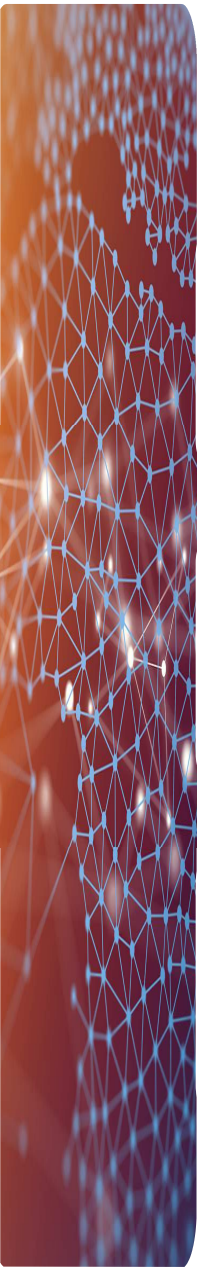


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MCV journey map template

Phases	PRE SWITCH					DURING THE SWITCH				POST SWITCH			
Steps	Decision to switch	Health System Assessment	Developing a financial plan	Getting buy in from MOF by MOH	GAVI Funding Application	Preparing people for the switch	Preparing the Health Facilities	Switch implementaton	Monitoring	Waste Impact assessment	Coverage Change assesement	Impact on frequency of sessions and the size	Economic Evaluation
People													
Main activities													
Tasks													
Tools & Technologies													
Touchpoints													

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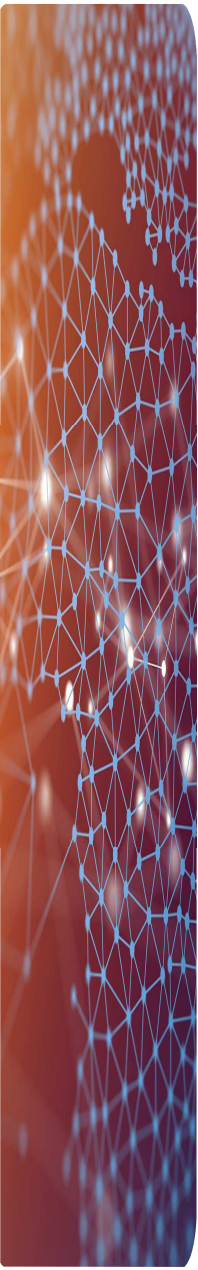


Some anticipated use-case of the journey map in this study

To ensure that every actor within the health system is aligned to assist in making the journey happen

To understand what happens along the way, at all touchpoints and across health system

To help countries optimize their strategies and create a seamless switching processes/strategies.



Emerging notables...

- The switch is highly recommended to countries considering it and those yet to do so.
- Emerging evidence indicates minimal impact of the switch on existing structures of health systems including cold chain capacity
- There is a need to formalize the relationship between NITAGs and academic institutions for optimal functioning of the formal, and impactful effect of the latter
- The journey map in progress will be of immense benefit to all countries.
- The study is still ongoing; the story is yet to be told...

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HEALTH SCIENCES



Thank you for Your Attention

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Questions?

Thank you!