



17th TechNet Conference

Panama City, Panama | October 16-19, 2023

Immunization Programmes That Leave No One Behind

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Supply Chain Integration

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October 17, 2023



Introductory Remarks

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Speakers



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Solutions to address primary health care cold chain and integration bottlenecks

Joe Little, PATH (speaker)

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Project overview

The study aimed to identify PHC cold chain needs and potential solutions for improving non-vaccine health product cold supply chains, while also providing strategies for safe PHC product integration into vaccine cold chains. PATH conducted a literature search and online survey (n=56; 17 low- and middle-income countries).

Key takeaways from the literature review and online survey

- Integration of non-vaccine products into the vaccine cold chains is one approach to address PHC cold chain shortages and limited to critical temperature sensitive products that have been thoughtfully authorized for cold chain storage.
- We must have **political buy-in**, which requires coordinated, comprehensive, and transparent planning with **clarity of roles and responsibilities**, and **risk mitigation** across the system.
- There is no one-size-fits-all integration approach; you must **define and align on objectives** for integration.
- Most funding, policies, guidelines, training, supervision checklists, and reporting forms **do not currently support integration**.
- There is growing interest in leveraging resources and potential cost savings from integration, although this approach increases the perception of the (1) **risks of mishandling** and (2) **considerable level of effort to implement**.
- Accurate and up-to-date cold chain equipment inventories and PHC cold chain stock records are essential to effectively analyze the storage capacity.

PATH ongoing studies are confirming these findings

- Ghana has developed guidelines and standard operating procedures for integration in partnership with the ministry of health (SSDM—Supplies, Stores, Drugs Management) and stakeholders like UNICEF. A pilot is underway now to test integration in the Ga West district. Results are showing that trainings and supervision is needed as well as needs such as careful labeling of integrated items.
- In Uganda, PATH performed a baseline assessment and found issues with temperature monitoring, misconceptions and fears about integration, and the need for training.

Priority PHC products for cold chain integration

Currently or previously integrated.

Product	Responses (N=)
Oxytocin*	21
Insulin*	10
Rabies immunoglobulin*	9
Laboratory reagents and kits	8
Tetanus immunoglobulin*	6
COVID-19 test kit samples	3

* = injectable

Ranked highest priority for integration.

Product	Relative frequency	Mean importance score
Insulin*	0.52	4.0
Oxytocin*	0.46	4.8
Lab reagents and kits	0.30	2.4
HIV test kits (CD4, viral load, diagnostic)	0.18	2.6
Immunoglobulins*	0.16	3.8

Solutions framework for improving PHC cold chain and safe integration

Evidence: Strengthen the evidence to improve policies for investing in PHC cold chain

Governance and policy

Provide clearer guidance on which PHC products require cold chain

PHC cold chain capacity

Assess cold chain equipment availability and capacity needs for non-vaccine products

Financing and program funding

Demonstrate value of cold chain investment to governments and donors

Practice: Assess and deploy practical and operational solutions to improve proper storage and handling of cold chain PHC products

Adverse events

Support proven solutions for avoiding product mix-ups

Maintaining temperature

Provide adequate training and tools for staff

Skills and performance

Standardize operational metrics across programs

Technology: Advance and support access to basic essential utilities for quality and equitable delivery

Transportation

Advance inclusive distribution options and approaches

Infrastructure, equipment, and regulatory

Advance and ensure availability of necessary technology



Identifying Enablers and Barriers to integrated storage of Oxytocin in Kenya & Uganda

Raj Sachdev, CHAI



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Why should Oxytocin storage be integrated into EPI cold chain?



1. Oxytocin is not stored at optimum temperatures

~808

Women die of Post Partum Hemorrhage every year

2-8°C

Ideal WHO recommended temperature for storage of Oxytocin

>33%

of samples tested in 8 studies contained less than 90% oxytocin, indicating substandard medicine

2. Surplus EPI dedicated cold storage is available in LMICs

~57

countries have upgraded/expanded their CCI, since 2017

~75,000

CCE have been deployed in these countries since 2017

>75%

of the CCE at health facilities in four African countries use less than 10% of their storage capacity

3. Integrated storage can increase potency of Oxytocin

- Integrating oxytocin into the EPI fridge can **help ensure its effective and efficient application** for PPH prevention and treatment.
- Integrated storage will also **help improve CCE capacity utilization** and rationalize equipment procurement at lower-level health facilities, thus preventing the need for additional expenditure on fridges for non-vaccine commodities

In the coming weeks, CHAI will conduct assessments in Kenya & Uganda to identify cold chain integration bottlenecks



Assessment Objective: *Identify the primary barriers to integrated storage of Oxytocin in Kenya and Uganda, as well as the enablers that could support the expansion of such integration*



Kenya

Country Context:

The Kenyan government issued a Memo to all counties/facilities around the integration of oxytocin into EPI supply chain, but integration remains haphazard with very few facilities practicing it

Country Leads:

- Jeniffer Adungosi, CHAI
- Anthony Ngatia, CHAI
- National Vaccines and Immunization Program (NVIP), Kenya

85%

**of CC
capacity
remains
unutilized for
antigens**

*based on CHANJO
data for 30
facilities across 3
counties in 2021*



Uganda

Country Context:

The Ugandan government issued a directive followed by a structured policy around integration of oxytocin into EPI supply chain but integration hasn't been adopted widely at the last mile

Country Leads:

- Emmanuel Okurut, CHAI
- Fredrick Luwaga, CHAI
- Jimmy Ameny, MoH Uganda
- Christine Layero, MoH Uganda

27%

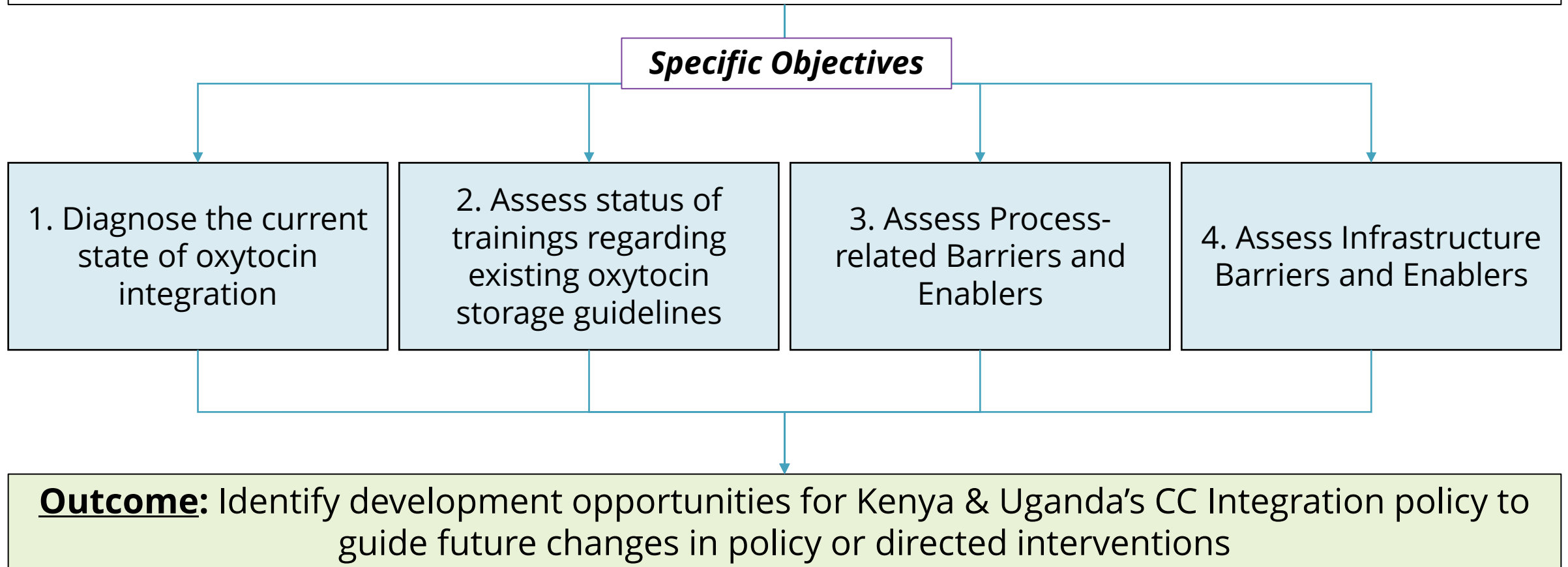
**of facilities
integrated
oxytocin
storage into
EPI cold chain**

*based on an
assessment
across 14 districts
in 2022*

CHAI's assessments will look to identify bottlenecks to implementation of CC Integration through analyzing 4 variables



Primary Research Question: What are the key barriers and enablers to scaling up effective integration of oxytocin into the EPI facility-level CCE in Uganda and Kenya?



Integrating Transport in Supply Chain

Kim Couri, VillageReach



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Moving Toward an Integrated Supply Chain

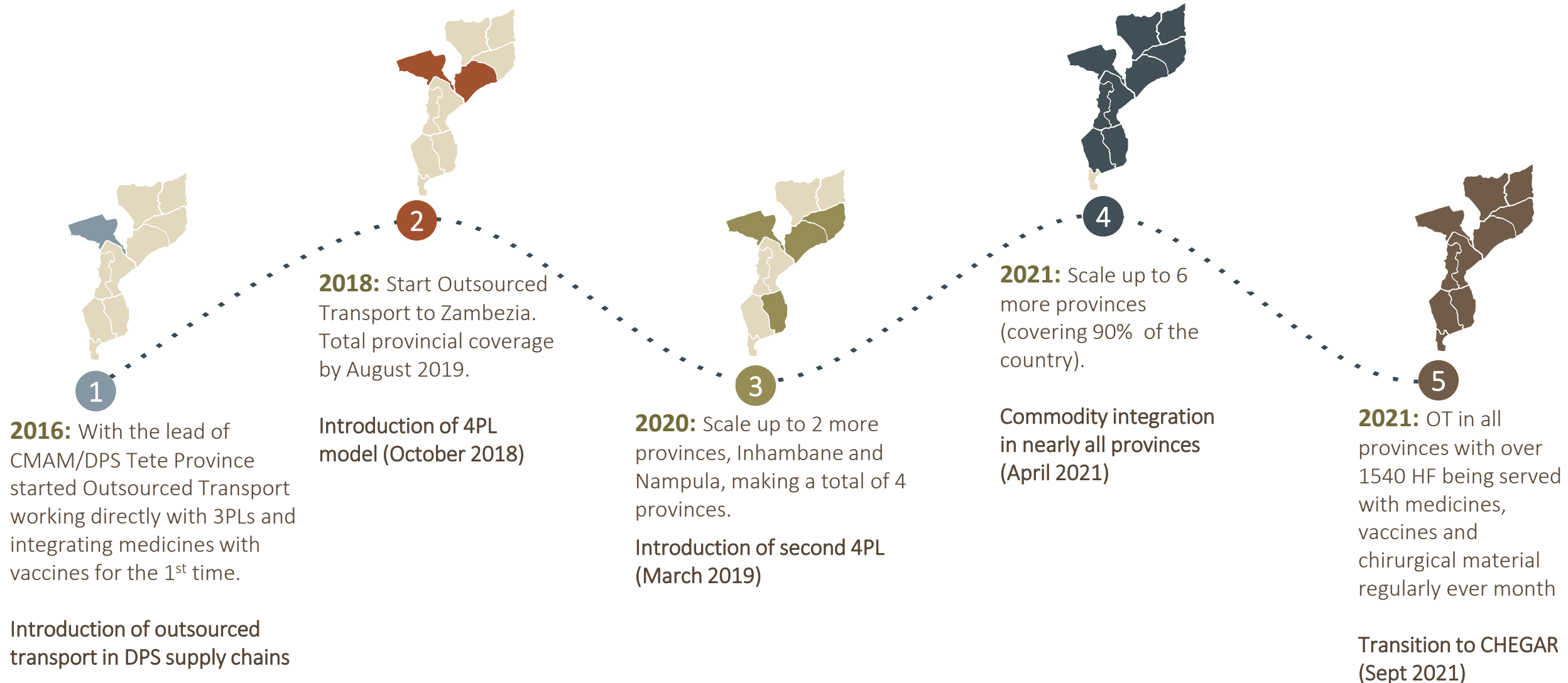
*A holistic supply chain strategy covers **five components**, which are enabled by robust stewardship.*

Component	Traditional Approach	Integrated Supply Chain
Supply Chain Strategy & Stewardship	Programs independently managed	Government coordinates and prioritizes programs
Segment and Consolidate Product Flow	Plans, schedules and deliveries dependent on product	Single delivery (as possible) is coordinated on a regular schedule
Supply Beyond Health Facilities	Interventions limited beyond provincial levels	Supplies are transported to point of use
Leveraging Private Sector Capacity	Private sector only used as a stop-gap or emergency solution	Private sector effectively integrated into the supply chain, which benefits from its expertise



Learn more and download VillageReach's Supply Chain Integration Framework at: productstopeople.org

Transport Integration: Last Mile Supply Chain (LMSC) in Mozambique



SC Integration Framework Applied



Supply Chain Strategy & Stewardship



Consolidated product delivery among partners and enhanced government coordination



Segment and Consolidate Product Flow



Improved transportation capacity (e.g., cold chain, RTM) and streamlined transport



Supply Beyond Health Facilities



Still building this capacity.



Leveraging Private Sector Capacity



Recruited 4PL and local transportation companies to enhance capacity, engaged technical providers (e.g., cold boxes) and professionalized transport (e.g., fleet management, vehicle tracking)

Visit our website to learn more about [LMSC](#) and our [Health Product Integration](#) in action.

Panel Discussion



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Thank You!

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