Promoting Equitable Health Product Access through Supply Chain Design

3 June 2020

VILLAGE REACH Rx

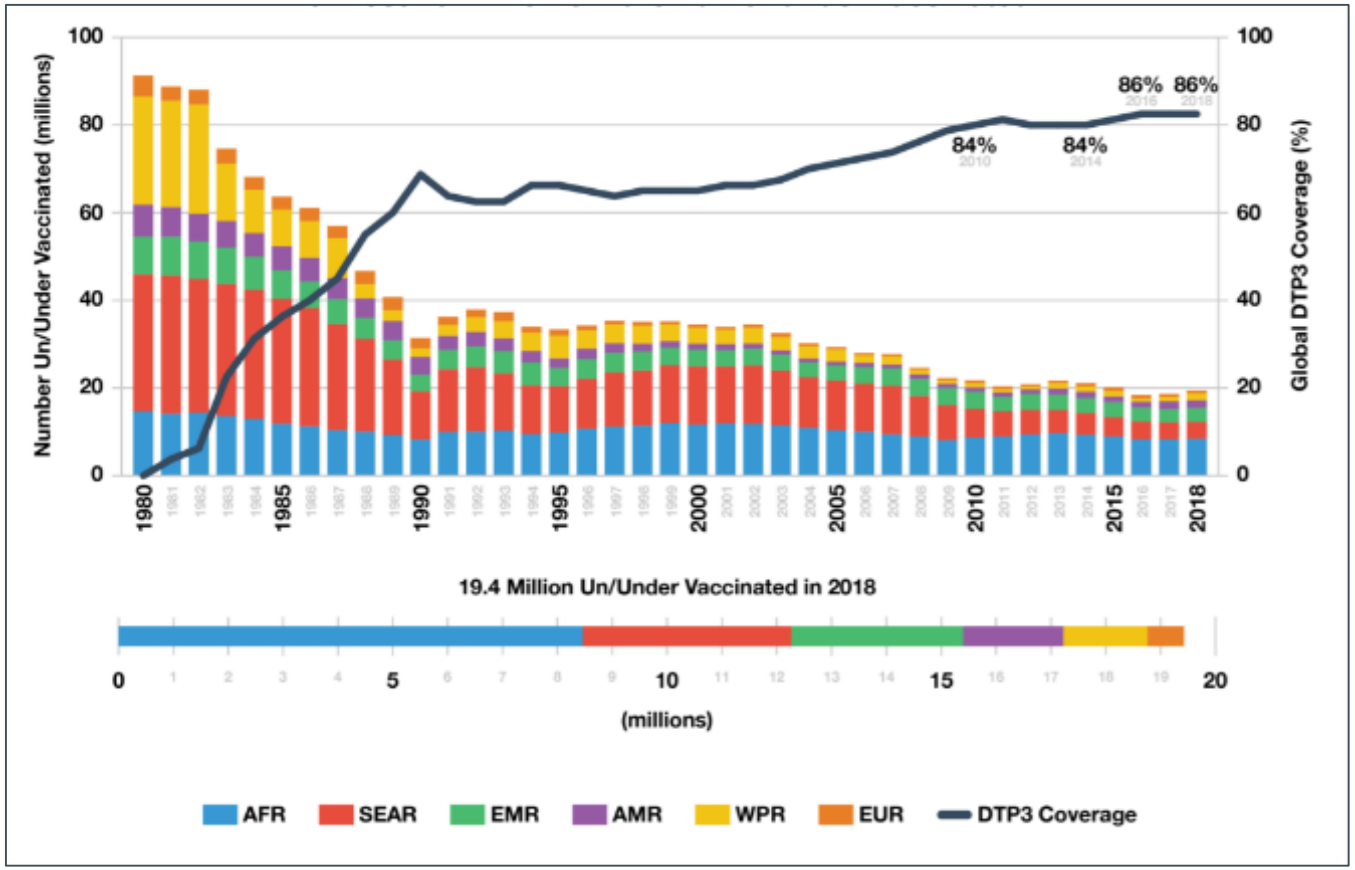
Ensuring health products are available and accessible for everyone is a critical part of primary health care

- High quality health products are not always available when needed, particularly in under-served populations
- Product supply chains can be adapted to reach people currently at risk of being left behind

Increasing access to vaccines

As of last year:

- **19.4** million children were under-immunized
- **10.4** million children received ZERO doses of DTP
- Many of these children are clustered in communities without any basic health services



Source: WHO/UNICEF 2019. "Progress and Challenges with Achieving Universal Immunization Coverage"

Our Vision

A world where everyone has the health care needed to thrive.

Our Mission

To transform health care delivery to reach everyone.

Pathways to primary health care

VillageReach builds pathways to PHC services increasing access for the under-reached.

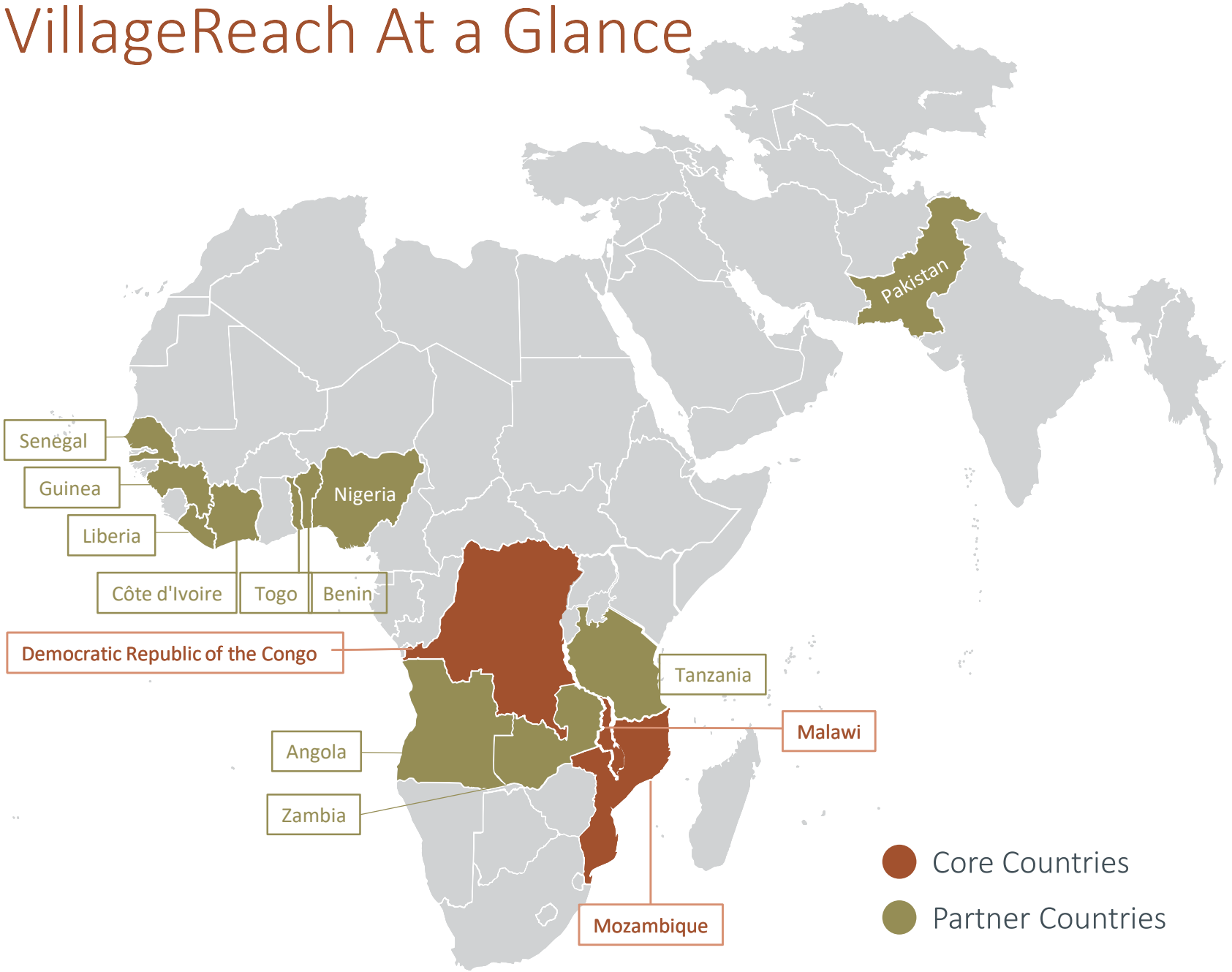
Products to people

VillageReach makes health products available when and where they are needed.

Drive sustained impact

VillageReach works with governments and private sector to drive sustained impact at scale.

VillageReach At a Glance



Promoting Equitable Health Product Access through Supply Chain Design

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Theory of change: Supply chain factors impacting equity

PROBLEM
Health supply chains, including immunization supply chains (iSC), were designed using a one-size-fits-all approach and have **not been responsive to the needs of under-served communities** that are consistently under-immunized.

Strategies	Outputs	Outcomes	Impact
Identify supply chain barriers that contribute to zero-dose kids and under-immunization	Supply chain barriers to ACCESS immunization and health services are addressed	**ACCESS**: Immunization services are conveniently and affordably **accessible for all** through public or private services	*Combined with other interventions,* **COVERAGE INCREASES for under-served populations**
Adapt supply chains to be more responsive to population needs	Infrastructure strengthened and demand variation quantified to improve AVAILABILITY	**AVAILABILITY: Sufficient stock available** and supply chain responsive to demand variations at public and private facilities	
Implement supply chain practices that **promote vaccine potency**	Vaccine and health product POTENCY maintained	**POTENCY**: Vaccine and health **product potency is maintained** up to the point of administration at public and private services	

Supply chain factors impacting equity in immunization: decision-making guide

A four-step guide to applying an equity lens:

1

Identify population:

What are the country's under-served populations and their characteristics?

2

Consider supply chain-related challenges:

Which challenges might be resulting in low coverage for this population?

3

Determine mitigation strategies:

What are appropriate strategies for addressing this challenge within the identified population?

4

Measure progress:

Which metrics are relevant to evaluate progress in reducing supply chain-related inequities?

Identify under-served population

Identify specific populations or communities in your country that are known or suspected to have low coverage rates

Each community faces unique challenges and, hence, strategies need to be tailored to promote equity.

This guide focuses on four under-served groups:

- Urban poor (“slums”)
- Remote, rural communities
- Populations in conflict or security-compromised areas
- Internal or cross-country migrant communities

Explore and click supply chain challenges for low coverage relevant to the under-served population

After clicking on a challenge you will see possible strategies to address that challenge and potential indicators for measuring progress

"Click" on challenges in Reading or Slide Show mode on PowerPoint or PDF

Lack of accurate population and/or consumption data, resulting in inaccurate demand forecasting

Lack of functional or sufficient cold chain equipment (CCE) for storage and transport

Lack of transport and poor road infrastructure which limit, (1) resupplying stock and (2) accessing services

Lack of physical infrastructure at service delivery points, such as electricity or equipment

Weak procurement and distribution processes at national level, leading to stockouts

Delayed disbursement of and lack of transparency of use of funds resulting in delayed immunization activities

Siloed health programs result in (1) Missed Opportunity for Vaccination and (2) multiple trips by service delivery staff for resupply

High actual and opportunity costs (long travel times/distance, long wait times, missed work) for people to access immunization services

Weak regulation of and lack of integration of private service delivery points into EPI resulting in (1) limited oversight on procurement and (2) coverage data

Insufficient health workforce

Weak health worker motivation

Health workers at service delivery points are not regularly trained in immunization supply chain (iSC) & logistics

Insufficient funds for operating fixed, mobile and outreach service delivery, resulting in high costs for populations in accessing services

Compromised security area, resulting in lack of medical supplies and shortage of health workers

See complete list indicators

Challenge: Weak regulation and lack of integration of private service delivery into EPI resulting in:

- limited oversight of vaccines procured and delivered in private sector for quality and potency
- limited insight of coverage by private sector for under-immunized populations

Strategies to help mitigate this challenge

- Understand characteristics of under-immunized populations as related to care-seeking at public and/or private facilities (location of public and private service delivery points, community health workers, location of communities, location of resupply points, and mobile/outreach posts)
  - Quantitative strategies: micro-census, satellite imagery
  - Qualitative strategies: Focus group discussions, key informant interviews
  - Develop master facility list with unique identifiers for each public and private facility
- Include private providers in iSC to provide consistent, WHO pre-qualified vaccines at more locations and ensure safe vaccine handling during transport
- Improve end-to-end data visibility for accurate forecasting of demand by integrating private providers into LMIS
- Strengthen leadership and governance by building capacity to assess and respond to inequities
  - Establish VAN or IMPACT teams to collaboratively respond to inequities
- Contract with and provide vaccines to private service delivery points

Outcomes

- **Access:** Private providers are supported to augment the reach of the iSC
- **Potency:** Immunization potency is maintained up to the point of administration at all public and private health service delivery points

Indicators to measure progress

(click indicator for more information)

- Reliable sourcing of products for private service delivery points (priority for urban areas, only relevant where private service delivery is commonly used by under-immunized groups)
- Percentage of private service delivery points reporting data to EPI (priority for urban areas)

Return to Challenges

Indicator: Reliable sourcing of products for private service delivery points

Definition or Formula	Percentage of private service delivery points contracting with government for supplies	*Numerator:* (number of private service delivery points that contract with the government for supplies) x 100% *Denominator:* total number of private service delivery points
Rationale	Private health facilities may not receive the same level of regulation, oversight, and support from the MoH as public facilities, and so may not meet the same standards and expectations to procure and administer quality vaccines. This indicator is used to provide insight into the extent to which private service delivery points have a reliable source of immunization commodities. It does this by quantifying the % of private service delivery points that have contracts with and receive their immunization commodities from governmental entities. Note: this indicator may not be relevant in countries or regions where under-immunized communities do not go to private providers for routine immunization.	
How to Measure	LMIS used by EPI to issue products to public and private service delivery points	
Target	This should be a country-defined target that reflects what percentage of private service delivery points you would like to be sourcing from the government.	
Notes		
Sources for more information	Balabanova D, Oliveira-Cruz V, Hanson K. , Health sector governance and implications for the private sector, 2008 Technical Partner Paper 9. Washington, DC: Results for Development Institute and the Rockefeller Foundation	

Return to Challenges

Explore and click supply chain challenges for low coverage relevant to the under-served population

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Compromised security area, resulting in lack of medical supplies and shortage of health workers

See complete list indicators

Indicators

Outcomes	Indicators	Priority populations
Access	Estimated out-of-pocket cost for routine immunization services	
Access	Average wait times at service delivery points	Rural and Urban areas
Access	Percentage of outreach & mobile services conducted according to plan	
Access	Percentage of public service delivery points offering flexible hours of service	Urban poor
Access	Travel time for population to access routine immunization services	Rural areas
Access	Number of health workers by population	
Access	Number of transit posts set up at high risk areas of the country	Migrants, Security-compromised areas
Access, Availability	Percentage of service delivery points with adequate frequency of immunization sessions	
Access, Availability	Percentage of private service delivery points reporting data to EPI	Urban poor
Access, Availability, Potency	Health facilities in district receiving disbursed operation funds for immunization activities on time	
Availability	Stockout rate	
Availability	Demand forecast ratio	
Availability	Reliable sourcing of products for private service delivery points	Urban poor, only where people access services by private providers
Availability	Percentage of procurements completed within time	
Availability, Potency	Percentage of days in the year when a vehicle was available to transport products	
Availability, Potency	Percentage of facilities that received supervision visits according to schedule	
Availability, Potency	Percentage of health workers with job description	
Availability, Potency	Percentage of service delivery points unreachable at some point in a year	
Availability, Potency	Percentage of service delivery points with an active, trained vaccinator	
Availability, Potency	Resupply time (or distance) for service delivery points	Rural areas
Availability, Potency	Resupply time (or distance) from district to its resupply store	Rural areas
Availability, Potency	Resupply time for community health workers	Only where CHWs administer vaccine
Potency	Temperature controlled transportation capacity	
Potency	Percentage of functional cold chain equipment	

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Challenge: Delayed disbursement of and lack of transparency of use of funds resulting in delayed immunization activities

Strategies to help mitigate this challenge

- Assess financial flows to understand bottlenecks in flow of funds
- Distribute decision-making authority on use of funds to staff at downstream tiers of the system for immunization sessions and supervision
- Assess timeline for disbursement of funds at national and state/provincial level, to ensure timely release of funds from time of approval
- Streamline financial reporting process, by providing clear templates, timelines, and requirements
- Train staff at downstream levels to produce timely and accurate financial information based on government and donor requirements
- Assess and evaluate how well facilities comply with and adhere to relevant policies, laws, directions, plans, and procedures, usually carried by financial controllers at the Ministry of Finance

Outcomes

- **Access:** Vaccination services (fixed, mobile, outreach) are provided at accessible places, times, and languages for under-immunized communities

Indicators to measure progress

(click indicator for more information)

- Percentage of facilities that received supervision visits according to schedule
- Percentage of outreach & mobile services conducted according to plan
- Health facilities in district receiving disbursed operation funds for immunization activities on time

Return to Challenges

Indicator: Health facilities in a district receiving disbursed operation funds for immunization activities on time

Definition or Formula	Percentage of health facilities in a district that received funds for immunization activities on time	*Numerator:* Number of health facilities in the district who received funds on time x 100%
		Denominator: Total number of health facilities in the district who are supposed to receive funds for immunization activities
Rationale	It is important that health facilities receive necessary funds on time so they are able to hold the necessary immunization activities on time. Delays can results from budgeting, disbursement, reporting, or other financial process.	
How to Measure	Consult MOH records or ask health facility staff to understand whether disbursement occurred on time for each facility	
Target	Country-defined target	
Notes	WHO Reaching Every District guidance recommends assessing on a quarterly basis	
Sources for more information	Reaching Every District (RED), 2017 revision. Brazzaville: World Health Organization; 2017.Licence: CC BY-NC-SA 3.0 IGO https://www.afro.who.int/sites/default/files/2018-02/Feb%202018_Reaching%20Every%20District%20%28RED%29%20English%20F%20web%20v3.pdf	

Return to Challenges

Resources related to Equity in Immunization

- Equity Reference Group: https://sites.google.com/view/erg4immunisation/home
- Urban Immunization toolkit: http://gotlife.gavi.org/wp-content/uploads/2018/12/Urban-immunization-toolkit.pdf
- Promoting equity in immunization coverage through supply chain design in Pakistan: https://doi.org/10.12688/gatesopenres.13121.1

Guide for Promoting Equitable Health Product Access Through Supply Chain Design:

- Guide: https://www.technet-21.org/en/library/main/6400-guide-for-promoting-equitable-health-product-access-through-supply-chain-design
- Overview: https://www.technet-21.org/en/library/main/6401-overview:-promoting-equitable-health-product-access-through-supply-chain-design

VillageReach
Starting at the Last Mile

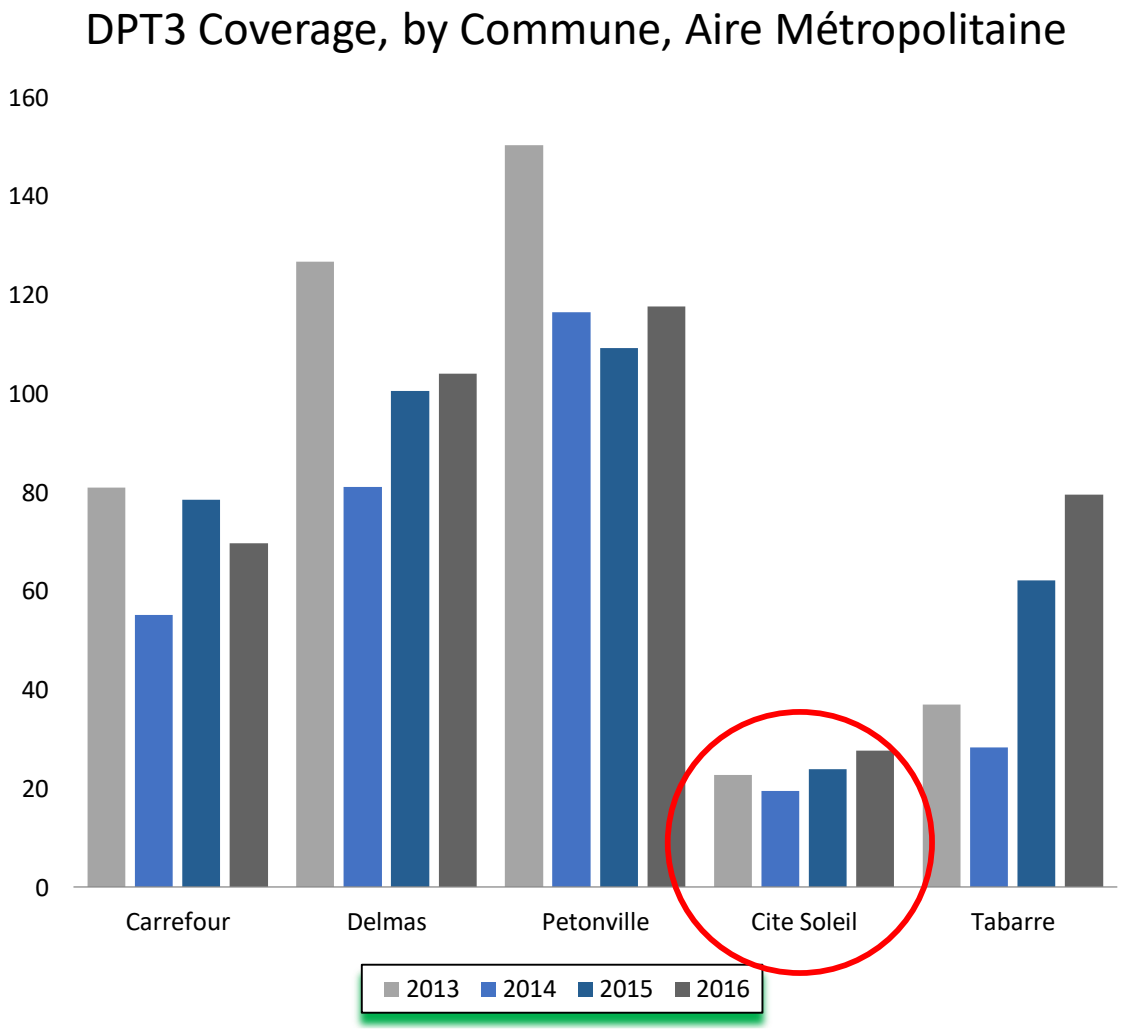
Supply Chain and Equity: Community Involvement to Improve the Vaccine Supply Chain to Insecure Areas

Experience in the Context of Cité Soliel, Haiti

JSI

One of the most notorious slums in the world

- Poor urban commune within Port au Prince
- Suffers from lack of infrastructure, floods, open sewers, and insecurity due to political protests and street gangs.
- Home to over 300,000 people
- Weak health system and lowest vaccination coverage in all communes in Haiti



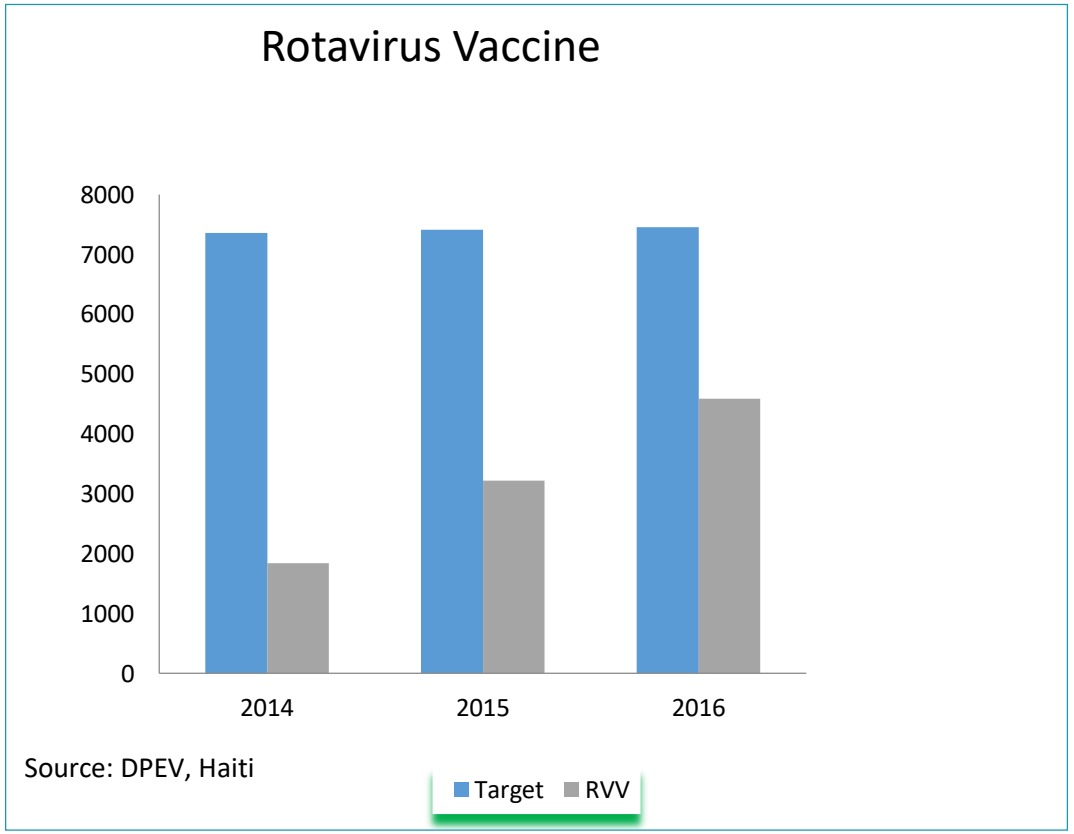
Strengthening immunization services in Cité Soleil

In 2017, service and community assessments identified several underlying reasons for low immunization coverage:

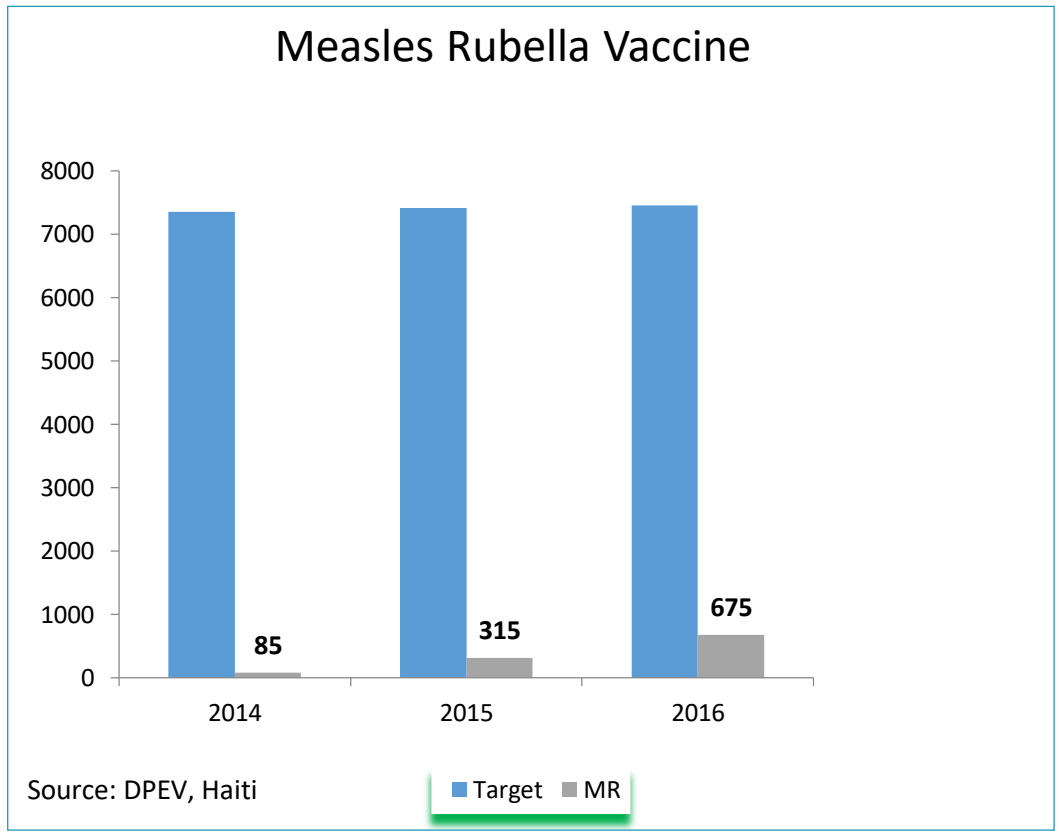
1. **Unreliable vaccine supply: inadequate stock amounts, frequent stock out and insufficient cold store capacity**
2. Long wait times
3. Poor interpersonal /client relations
4. Poor data quality and reporting
5. Gaps in knowledge about the target population
6. Insecurity

Not enough stock, no place to keep it

Vaccine doses delivered compared with target population, 2014 - 2016



Source: DPEV, Haiti

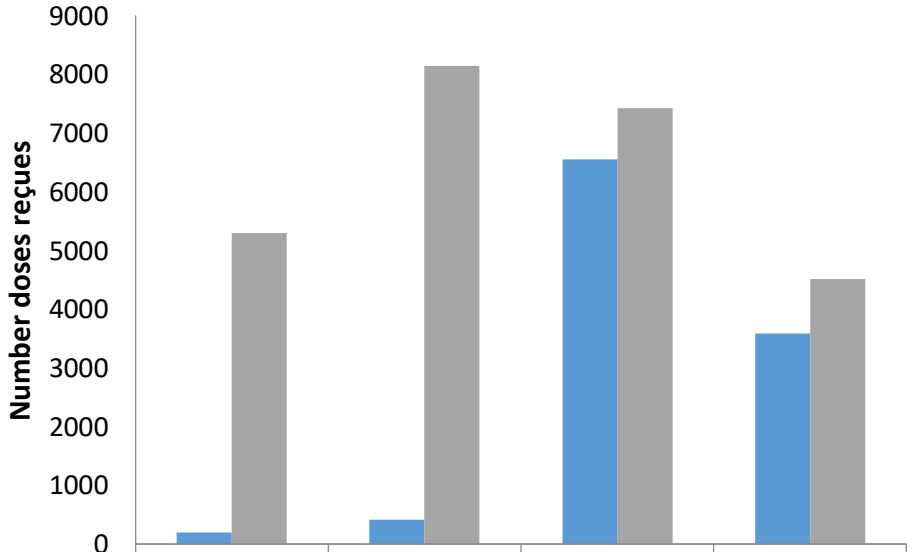


Source: DPEV, Haiti

Interventions dramatically improved the supply chain situation…..

- Reviewed and updated bottom up microplans
- Changed from target-based forecasting to consumption-based
- Instituted weekly text message and phone calls between cold store and health centers to check on stocks/request additional if needed
- Improved capacity on stock management and cold chain maintenance through coaching and mentoring
- Installed one solar refrigerator (UNICEF) with careful consideration for location to ensure safety; four additional CCE installed two years later based on increased demand
- Continuous engagement with community to ensure street gangs were positive promotors of health so as not to vandalize the facilities

Vaccine Distribution, Cité Soleil,



	BCG	OPV	PENTA	ROTA
2016	195	418	6550	3588
2017	5300	8140	7425	4510

And improvements in vaccine coverage