



# Identifying Opportunities and Challenges ITN Continuous Distribution Systems

Burkina Faso, Cameroon, Niger

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# The PMI VectorLink Project

The U.S. President's Malaria Initiative (PMI) VectorLink Project builds the capacity of country governments to use epidemiological, entomological, and coverage data to support the optimal deployment of vector control tools, including IRS and ITNs within each country.



# The PMI VectorLink Project

## Where We Work:



## Partners

- Abt Associates (Prime)
- Population Services International (ITN Lead) and PATH;
- With support from Liverpool School of Tropical Medicine, Malaria Consortium, Innovative Vector Control Consortium, McKinsey & Company, Inc., EnCompass LLC, BAO Systems LLC, and Dimagi, Inc.



# Context: Universal coverage

- Achieving and maintaining Universal Coverage (UC) of ITNs (Pillar 1, WHO Global Technical Strategy) requires a combination of mass free distribution through campaigns and continuous distribution (CD) through multiple channels [Ref 1]:
  - Antenatal care (ANC) clinics and expanded program on immunization (EPI) - *High priority*
  - Other channels: schools, faith- and community-based networks, agriculture and food-security initiatives
  - Occupation-related (Asia)
  - Private or commercial sector to supplement free distribution

[1] WHO/GMP, *Achieving and maintaining universal coverage with LLINs for malaria control*, December 2017



# Context: Why Continuous Distribution?

Evidence shows:

- ITN coverage gaps emerge post-campaign (i.e., due to deterioration, population growth) [Ref 1]
- ITN coverage before the next campaign can diminish to 40%, potentially reducing the ‘community effect’. [Ref 2]
- ANC and EPI distribution are more cost effective than any type of distribution however 45% of women attending ANC and 66% of infants attending EPI do not receive a net [Ref 3]

[1] WHO/GMP Recommendations 2017

[2] Kilian et al. Malar J (2017) 16:363 Evaluation of a continuous community-based ITN distribution pilot in Lainya County, South Sudan 2012-2013

[3] VectorWorks Insight Series, Issue #2: is switching to continuous distribution worth it? April 2019



# Assessment Design

## **Purpose**

Identify, describe and prioritize improvements for strengthening continuous distribution systems.



## **Scope**

Existing ANC and EPI routine ITN distribution systems  
Niger, Cameroon and Burkina Faso in 2018  
Potential new channels also reviewed



# Assessment Design

## **Evaluation questions**

- To what extent is continuous ITN distribution implemented according to existing international best practice and national guidelines?
- What improvements could deliver immediate, mid-term and long-term efficiencies?

## **Methods**

- Desk review to inform development of discussion guide
- Country document review
- Teamwork approach for data collection and analysis
- Key informant interviews across functions and levels



# Analysis Framework

## ITN Continuous Distribution Assessment Framework

	Central	Region / District	Health facility
Exploration of all potential continuous distribution channels			
Planning and coordination			
Beneficiary identification		... and health system level	
Quantification and ITN supply			
Storage, transport and stock management			
ITN Distribution			
Personnel and capacity strengthening			
Supervision			
Data management			
Communication			

Learnings organized according to distribution function...



# Cameroon Teamwork Approach

<b>Sites</b>	<p><i>Yaoundé</i></p> <p><i>North and Extreme North Regions</i></p> <p><i>Lagdo et Yagoua Health Districts</i></p>	
<b>Teams</b>	<p><b>North:</b> <i>Salomon Patchoke/NMCP, Mary Kante/PMI VectorLink, Laure Moukam, ACMS</i></p> <p><b>Exteme North:</b> <i>Raymond Tabue/NMCP, Eloi Oboussou, VectorLink (and AMP) Consultant, Albertine Lele/ACMS</i></p>	
<b>Interviews</b>	<b>Central</b>	<p><i>Interviews with: NMCP, DSF, PLMI, WHO, UNICEF, PSM, Malaria No More</i></p>
	<b>Region / District</b>	<p><i>Interviews with:</i></p> <ul style="list-style-type: none"> <li>- <i>Governor, Regional Technical Coordinator, and FPSP in Garoua ; Representative of the Governor, Regional Health Director and Regional Technical Coordinator in Maroua</i></li> <li>- <i>District health team, Sous-Préfet and Mayor in Lagdo</i></li> <li>- <i>District health team, Malaria Focal Point, Surveillant Général, ANC lead in Yagoua</i></li> </ul>
	<b>Health facilities</b>	<p><i>Interviews with Health center directors and CHWs in Djippordé, Mayo Bocki, and Badankali (Lagdo) and in Dana, Yagoua, Gabaraye-Widigue (Yagoua)</i></p>

Observations

Recommendations

All three countries

In some cases

In one region of one country



Innovative ideas, Key themes



## Observations

### All three countries

- Coordination mechanisms are in place, with high-level MOH support

### In some cases

- Some coordination gaps exist across MOH departments (e.g., NMCP, EPI, Reproductive Health)
- ITNs and other free commodities are generally managed separately to other health commodities

### In one region of one country

- Due to disagreement on ITN stock management, one regional team has stopped ITN resupply to health centers

## Recommendations

### Innovative idea

Leverage regional and district health coordination meetings to identify ITN stock-outs or overages



Develop or finalize ITN distribution guidelines, instructions

Reinforce coordination across MOH departments



## Observations

### All three countries

- National guidance designates pregnant women and children under one as beneficiaries
- However, few or no children receive ITNs due to lack of instructions
- ITNs seen more as a « prize »
- Mother and child health cards do not systematically include malaria prevention messages

### In one region of one country

- ITNs are often withheld until ANC4 to achieve targets

#### Reinforcing national targets

In one country, only 25-31% of pregnant women expected for ANC1 are receiving an ITN through current systems

## Recommendations



### Innovative idea

MOH/NMCP Cameroon provides a modest stipend to health personnel to transport ITNs during rural outreach services

- Clarify eligibility instructions
- Add messages/images to mother & child health cards
- Leverage CHW initiatives



## Observations

### All three countries

- Quantification by MOH/NMCP based on estimated beneficiary and recent service delivery data
- ITNs supplied via « Push » systems
- Dispatch plans based on expected health center clients

### In one country

- Health center directors noted longer stock-outs (nearly one year) in ITN campaign years.

Health facilities noting periods of stock-out often indicated ITN were in stock at the district warehouse.

## Recommendations



### Innovative idea

In Burkina Faso, the MOH has developed a national integrated health commodity information management system and is moving to a « pull » system for all public health commodities.

- Recognize that pull systems require significant investments
- Incorporate monthly health/DHIS2 data into quantification and ITN decision-making.



## Observations

### All three countries

- Lack of ITN transport from district to health facilities identified as leading cause of stock-outs
- Stock management tools are used inconsistently
- ITN data are included in monthly health reports, but not reviewed

#### Container storage

In one district, more than 24 months of stocks are in containers under the sun

**In some cases:** ITNs delivered directly to districts, without notification at regional level. With limited storage capacity, some districts dispatch immediately to health facilities (even at night).

## Recommendations



### Innovative idea

Cameroon NMCP is leveraging annual and periodic ITN inventories to identify trends in ITN stock availability and improve dispatching plans.

- Ensure last-mile ITN transport
- Establish stock alert systems, minimum stock level indicators
- Where municipalities ensure ITN storage and transport, provide recognition and support
- Reinforce capacity and inventories



Observations

**All three countries**

- Written instructions for ITN distribution not found at health facility, district, or regional levels
- Where available at central level, instructions were incomplete and/or not validated
- ITN free distribution is respected
- ITNs are generally not distributed at health posts or through CHWs providing malaria case management or social mobilization

**In one country**

- Pregnant women must present an ID card to obtain their ITN

Recommendations



**Innovative idea**

NMCP Niger has developed updated national ITN Continuous Distribution Strategy and Directives

- Reduce administrative burdens impeding receipt of ITNs (e.g., ID Card requirements)
- Explore other distribution channels to increase ITN access

**Increasing ITN Access**

One partner stated that they cannot achieve their targets because of ITN stock-outs, low levels of health seeking behaviors, and lack of written instructions allowing ITN delivery to children under one.



## Observations

### All three countries

- In general, staff are trained for ITN mass campaigns but not continuous facility-based distribution
- High staff turnover leads to ongoing needs for information and instructions
- Capacity strengthening needs: improved use of data and stock management tools; supervision; communication and social mobilization for ITN use

### In some cases

- Insufficiencies were noted in the number of qualified staff (below WHO staffing norms)

## Recommendations



### Innovative idea

A health center in-charge in one Burkina Faso health center conducts periodic refresher trainings for CHWs who in turn work at the health facility each week to support health staff for ANC, EPI services and ITN distribution activities.

- Include roles and responsibilities for effective ITN management in national ITN directives
- Integrate on-the-job ITN training and modules with other health service delivery training (e.g., IPTp, case management)



## Observations

### All three countries

- Malaria supervision is often integrated with overall health services supervision
- Where integrated, ITNs are often not a prominent component of the supervision visit

### In some cases

- Global Fund partners provide funds for and/or conduct malaria-specific supervision visits
- Financial limitations reduce supervision visits

### Room for improvement

One example of supervision visits leading to concrete action was shared in Burkina Faso - with supervision reports leading the NMCP to send updated instructions to clarify beneficiary eligibility

## Recommendations

- As part of supervision visits, include staff skills building and practice in correctly filling out ITN stock and data management forms
- Review and update supervision checklists to ensure consistent inclusion of ITN distribution, stock and data management
- Include data verification checks during supervision visits to review and compare the number of ITNs received, the number distributed, the number in stock, and the numbers of beneficiaries seen



## Observations

### All three countries

- Several ITN stock and data management tools are in place, but not written instructions on how to use them
- Some tools are developed by each health center separately and lack harmonization
- Data inconsistencies noted across tracking tools, which reduces stakeholder confidence in ITN data quality and accuracy

### In some cases

- Data validation meetings reconcile malaria data, including ITN stock, and distribution data; are widely appreciated
- ITN data reported in monthly reports is not being used to inform ITN resupply

### In one country

- DHIS2 consistency checks can detect some of these data incoherence issues

## Recommendations



### Innovative idea

Niger plans to leverage a successful rapid results indicator process and include two indicators to track ITN uptake and motivate providers.

- Undertake a data audit of available ITN data collection tools
- Streamline the number of tools to track ITN stock and distribution
- Ensure availability of standard ITN data collection tools
- Foster data use

## Observations

**All three countries**

- Communication tools not available in health centers or for CHWs to promote ITN use
- Traditional and religious leaders identified as important influencers of health behavior, including ITN use. Several health facility directors indicated, for example, that they hold meetings with leaders and/or contact them when cases of severe malaria present at the health facility

**In some cases**

- Few health facilities had posters promoting ITN use

## Recommendations

**Evidence**

ITN use: access ratio is 0.8 (good) or above in Burkina Faso; 0.7 (slightly below target) in Cameroon's Far North and 0.84 (good) in the North; and low in Niger (0.26-0.66). *Perceptions*, however, are that there are significant ITN use problems everywhere.

- Reinforce coordination and develop strategic ITN use messages and plans for ANC and EPI providers and CHWs
- Update, produce, and distribute malaria communication tools and job aides
- Include community influencers in communication planning and message development

- ITN Distribution Guide Development
- Disseminate instructions at each level of health system
- Review of and extension to other CD channels

A number of **opportunities** were identified by key informants to **expand continuous ITN distribution across the three countries. Additional channels suggested include distribution to:**

- Pregnant women at time of assisted delivery;
- Children under one years of age at their EPI visit (Penta 1, VAR1);
- Women seeking family planning services at health centers;
- Beneficiaries reached by health center staff during outreach strategies already conducted to provide ANC and EPI services to beneficiaries who are in remote areas or otherwise unable to reach health centers;
- Beneficiaries through school-based distribution; and
- Beneficiaries through other child health clinics, national health days, seasonal malaria chemoprevention campaigns, or programs for the management of malnutrition.

**To leverage the full potential of continuous distribution channels** to maintain universal ITN coverage, VectorLink will work with NMCPs and PMI to examine available data and evaluate the optimal mix of channels in selected countries.



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***THANK YOU***