

Year 3 Semiannual Report



VECTORWORKS PROJECT

October 1, 2016 – March 31, 2017



U.S. President's Malaria Initiative

VECTOR)WORKS

Scaling Up Vector Control for Malaria Prevention



VECTORWORKS PROJECT

Recommended Citation: The VectorWorks Project Year 3 Semiannual Report:
October 1, 2016 – March 31, 2017. Baltimore, MD. VectorWorks Project,
Johns Hopkins Center for Communication Programs.

Cooperative Agreement: AID-OAA-A-14-00057

Submitted to: United States Agency for International Development/PMI

May 15, 2017

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Abbreviations

AMP	Alliance for Malaria Prevention
AIS	accountability information system
ANC	antenatal care
AOR	Agreement Officer's Representative
ASTMH	American Society of Tropical Medicine and Hygiene
BEMIS	basic education management information system
CCP	Johns Hopkins Center for Communication Programs
CD	Continuous Distribution
C4H	Communicate for Health project
CRS	Catholic Relief Services
CRSPC	Country/Regional Support Partner Committee
CHMT	County Health Management Team
DFID	U.K. Department for International Development
DHIS 2	District Health Information System 2
DHMT	district health management team
DHS	Demographic and Health Survey
DPS	Deputy Permanent Secretary
DRC	Democratic Republic of the Congo
EIWG	Emerging Issues Working Group
eLMIS	electronic logistic management information system
EMIS	Education Management Information System
EPI	Expanded Programme on Immunization
FHD	Family Health Unit
FHU	Family Health Division
GES	Ghana Education Service
GHS	Ghana Health Service
GHSC	Global Health Supply Chain
GMP	Global Malaria Programme
HC3	Health Communication Capacity Collaborative
HMIS	Health Management Information System
HWG	Harmonization Working Group
ID	institutional delivery
IHI	Ifakara Health Institute
INS	Instituto Nacional de Saúde
IRB	institutional review board
IRIS	Institut de Recherches et d'Investigations par Sondage
IRS	indoor residual spraying
ITN	insecticide-treated mosquito net
IVM	integrated vector management
LLIN	long-lasting insecticidal net
LSHC	Leadership in Strategic Health Communication
LSTMH	London School of Tropical Medicine and Hygiene
MaVCOC	Malaria Vector Control Oversight Committee
MCH	maternal and child health
M&E	monitoring and evaluation
MERG	Monitoring and Evaluation Reference Group
MIP	malaria in pregnancy
MIS	Malaria Indicator Survey
MOE	Ministry of Education

MoEVT	Ministry of Education and Vocational Training
MOH	Ministry of Health
MOP	Malaria Operational Plan
MPAC	Malaria Policy Advisory Committee
MSD	Medical Stores Department
NATNETS	National Insecticide-Treated Nets Programme (Tanzania)
NHMT	National Health Management Team
NMCP	national malaria control program
NMEP	National Malaria Elimination Programme
NMT	national monitoring team
pHI	proportional hole index
PLWHA	people living with HIV/AIDS
PMI	U.S. President's Malaria Initiative
PMP	project monitoring plan
PNC	postnatal care
PO-RALG	President's Office–Regional Administration and Local Government
PSM	Procurement and Supply Management project
PSMP	Private Sector Malaria Prevention
PSI	Population Services International
RBM	Roll Back Malaria
RCH	reproductive and child health
RH	Reproductive Health
RHMT	regional health management teams
SBCC WG	Social and Behavior Change Communication Working Group
SBCC	social and behavior change communication
S4H	Systems for Health project
SHEP	School Health Education Program
SME TEG	Surveillance, Monitoring and Evaluation Technical Expert Group
SNP	School Net Program
Swiss TPH	Swiss Tropical and Public Health Institute
TICC	Talemwa Investment Consulting Company
TIME	Tanzanian Institute of Monitoring and Evaluation
TMEMS	Tanzania Monitoring and Evaluation Management System
ToT	training of trainer
TRAMS	Johns Hopkins University training management system
TRP	Technical Review Panel of the Global Fund to fight AIDS, TB and Malaria
TWG	Technical Working Group
UNICEF	United Nations Children's Fund
USAID	U.S. Agency for International Development
VCTEG	Vector Control Technical Expert Group
VCWG	Vector Control Working Group
WARN	West Africa Roll Back Malaria Network
WEC	ward education coordinators
WHO	World Health Organization
ZAMEP	Zanzibar Malaria Elimination Program
ZAPIM	Zimbabwe Assistance Program in Malaria

Background

VectorWorks is a five-year global malaria prevention project funded by the U.S. President's Malaria Initiative (PMI) through the U.S. Agency for International Development (USAID). The purpose of the VectorWorks project is to support countries to achieve and maintain high levels of coverage and use of long-lasting insecticide-treated mosquito nets (ITNs) as well as to facilitate the adoption of proven alternative vector management interventions, including those targeting specific sites or populations. VectorWorks activities focus on three main areas: policy, monitoring and evaluation (M&E), and implementation support.

Project Objectives

Objective 1: Policy. Develop and promote policies at both the international and national levels to encourage sustained, high levels of coverage and use of long-lasting ITNs and/or alternative vector management interventions.

Objective 2: Monitoring and evaluation. Design, conduct, and analyze results from monitoring, evaluation, and operational research activities to improve current best practices of long-lasting ITNs and/or alternative vector management interventions.

Objective 3: Implementation. Promote and support country-level implementation of malaria prevention activities to ensure sustained high-level coverage and use of long-lasting ITNs and, as needed, targeted coverage and appropriate use of alternative vector management interventions.

Executive Summary

VectorWorks Year Three has seen a rapid expansion in demand for country implementation support, with activities in 12 PMI countries. The most frequent requests are for technical assistance in implementing ITN continuous distribution (CD) and durability monitoring. The expanded CD portfolio has added new depth to our understanding of how different country contexts affect CD planning and implementation. Our focus in the Policy and M&E components continues to be on strengthening the evidence base for continuous distribution. VectorWorks is doing innovative work in exploring the interactions between human behaviors and entomological risk in Zanzibar, a pre-elimination setting where residual transmission poses both an implementation challenge and an operational research opportunity to increase our understanding of transmission dynamics. Finally, our team has re-organized our management structure with the promotion of Dr. Hannah Koenker to Project Director, scaled up our technical and operational capacity with new hires, and is addressing the opportunities of the second half of VectorWorks with new energy, enthusiasm and focus.

Policy

VectorWorks' policy component in Year Three has focused on filling evidence gaps in ITN distribution. This has included examining the unique features of mass campaign distribution in urban settings as well as the rationale for using CD channels, ensuring that the experience and evidence from continuous distribution pilots has been translated into technically-sound country strategies. A key gap in the evidence base for continuous ITN distribution is the relative cost-effectiveness of CD channels compared to mass campaigns and to other CD options. Over the past two years we have been collecting data to produce programmatically useful comparisons of cost, and cost-effectiveness of different ITN distribution channels. We now have costing data collected for school-based distribution in Tanzania and Ghana, community

distribution in Zanzibar, and health facility distribution in Tanzania, Ghana and Mali. VectorWorks partner Tulane University will be working with Swiss Tropical Public Health Institute to model the cost-effectiveness of CD and campaign channels by the end of Year Three.

In addition, VectorWorks has ramped up finalization of outstanding manuscripts documenting results from CD pilots under NetWorks. We now have four articles which will be ready for submission to journals in the next few weeks.

A policy priority for VectorWorks is working to increase the efficiency of ITN distribution. We are actively developing accountability plans to monitor more closely the numbers of ITNs issued from each distribution point compared to the expected numbers. We finalized guidelines for accountability mechanisms for ITN distribution during the first half of Year Three. In Tanzania and Ghana, we are using data from DHIS2 and logistics databases to identify problems with routine ITN delivery, and take appropriate action. Problems the system could catch would include stockouts and mismatches between attendance of eligible beneficiaries and distribution of ITNs at specific health facilities. VectorWorks is also investigating the problem of misuse of ITNs for fishing. We have developed tools to document and quantify the problem, methods for identifying underlying drivers of these misuse behaviors, and finally, we are building a multi-sectoral partnership to effectively address those underlying issues. In the first half of Year Three we fielded a data collection survey in Malawi, and began mapping the partners at regional and global level with interest in this issue. In the second half of Year Three we plan to begin the process of coalescing stakeholder organizations into an effective partnership.

Monitoring & Evaluation

VectorWorks continues to press forward with key issues in M&E. We are monitoring ITN durability in Democratic Republic of Congo (DRC), Mozambique, Myanmar, Nigeria, and Zanzibar and our comprehensive online toolkit, www.durabilitymonitoring.org, allows all other partners to implementing monitoring in a standard fashion. Data from the durability monitoring are being used to develop follow-up actions when results fall below various thresholds. We are leading global conversations to promote increased use of population access to ITNs as a programmatically useful, technically sound and comparable indicator for measuring and reporting ITN distribution, and expanding understanding of ITN use patterns with the use:access indicator. Furthermore, the project is conducting in-depth analyses on ITN use in Angola, Ghana, and Nigeria in the next quarter, to better understand when and why populations do not use ITNs they have available.

In Quarter 1 VectorWorks began operations research to characterize the roles of mosquito and human behavior in residual transmission in Zanzibar with Ifakara Health Institute (IHI). This research offers opportunities for new insights into transmission dynamics in pre-elimination settings where coverage of ITNs is high.

Implementation

After wrapping up many ITN distribution documents in Year Two, we launched our online toolkit for continuous distribution in Quarter 2. The toolkit, cdtoolkit.org, provides step by step guidelines for planning and implementing health facility, school, and community channels. The tools and guidelines are drawn from our active country programs and previous pilots. Guidelines for private sector CD channels will be developed based on our Tanzania work through Year Three.

VectorWorks Tanzania, our largest program, has now commenced distribution of ITNs at health facilities in Lindi, Ruvuma, Geita, Kagera, and Mara regions, training over 6,000 health workers and delivering 528,200

ITNs as of March 30th, 2017. Through the school net programme, VectorWorks will deliver over 3,000,000 ITNs later this year in 14 regions, guided by an ITN strategy document developed with National Malaria Control Program (NMCP), where large-scale continuous distribution of ITNs will replace mass campaigns; coverage levels will be carefully monitored in these regions. Streamlining training and delivery processes has enabled the project to make significant savings. Finally, VectorWorks Tanzania is working to finalize and share findings of a landscape analysis of ITN distribution through the commercial sector, and to develop market shaping strategies to improve the proportion of purchased nets that are ITNs, as opposed to untreated nets.

In Ghana, VectorWorks has funded supportive supervision for health workers in 2,815 facilities to improve antenatal care (ANC) and Expanded Programme on Immunization (EPI) ITN delivery, and facilitated regional review meetings where district health team members learn from each other's challenges and innovations. VectorWorks trained over 22,000 Ghana Education Service (GES) officers in malaria prevention for primary school students, and has supported NMCP to validate enrolment data for the nearly 1.3 million ITNs to be distributed in class 2 and 6 in 9 regions in May 2017.

The project has assessed and designed new CD pilots in Guinea and Mozambique, and is providing ongoing support to health facility distribution in Liberia, national CD planning in Kenya, and school distribution in DRC. This work will strengthen global understanding of how to most effectively implement health facility, school and community-based channels under a variety of conditions, offering a rich source of lessons learned. We have provided technical assistance for mass campaigns in Senegal, Mozambique, and Angola, and social and behavior change communication (SBCC) for ITN use in Zimbabwe.

Challenges:

The rapid increase in field support buy-ins was identified in Year Two as a challenge, as the management of work plans and activities was often disproportional to the funding involved. In late Year Two we hired additional staff, who are now on-board, trained, and independently managing country portfolios. This has significantly improved our capacity for activity management.

As a result of a gap in leadership at World Health Organization (WHO) Vector Control, several of our policy issues (net preferences; ITN repurposing; continuous distribution evaluation; durability monitoring) were stalled for nearly a year. Now that the gap is filled and Vector Control Technical Expert Group (VCTEG) is meeting again, we are optimistic about moving forward on key issues. At the same time, however, disagreements at the global-level about the best ways to move forward with next-generation nets, pathways for their approval, and monitoring and evaluation requirements are further delaying development and distribution of promising new products and stalling any work the project might be able to do on operational aspects of these new products.

VectorWorks is now half-way through its 5-year period, and this is a natural time point for re-assessment. One key challenge for project management is to balance the team's time and energy between completing our existing deliverables with high-quality work, and ensuring that we are looking to the future to keep PMI at the forefront of emerging tools and issues. The first two years of the project were not able to address new tools, as once the durable wall-liners being evaluated were shown to be ineffective, no other new tools were ready for scaling-up at that time. VectorWorks and our PMI team instead decided to focus on solidifying the evidence base needed for establishing continuous ITN distribution. As we enter the second half of the project we have a short window of time to initiate new, innovative work. VectorWorks and PMI need to carefully assess the Year Four work plan in terms of the management balance between

opportunity and consolidation. This will be a primary focus for discussion during the planning meetings for Year Four.

At the country level, changes in our scope of work in Tanzania have been constant since December. Due to the ceiling limits, the project is finding innovative ways to increase efficiency in ITN distribution, so that we can expand our activities while staying within the existing budget. Strong communication between PMI Tanzania and our country team has been essential in facilitating this. However, continuous budget realignments have delayed submission of modifications.

Opportunities:

The experiences of the first half of Project Year Three have been strongly positive. The increased staff we added in Year Two has enabled us to meet increased demand for technical support from countries and PMI country missions. Our relationships and communication with PMI HQ and PMI country teams are strong. We provide solid technical advice with frankness and pragmatism. Management procedures continue to improve communication and tracking, and the appointment of Dr. Hannah Koenker as Project Director has given new energy and focus to the project leadership.

Increased interaction with the Global Fund by Dr. Koenker and Dr. Ato Selby has expanded potential scope for building broader support for CD programs at country level, leveraging PMI's investment to a potentially much larger set of countries. It has also improved coordination in several countries on specific ITN activities. Project staff at all levels are seen as key resources by Roll Back Malaria (RBM), WHO, Global Fund, and implementing partners for continuous distribution, mass campaigns, durability monitoring, human behaviors related to residual transmission, ITN use, ITN misuse, and SBCC. Recognizing that mass campaigns are a critical base upon which to build CD channels, and that there continue to be opportunities for improving the planning for execution of campaigns, the project sees an opportunity to apply the skills and tools developed to date to improving the effectiveness and efficiency of all ITN distribution channels.

The remaining half of Year Three is a crucial time to lay out our agenda for the last two years of VectorWorks.

Objective 1: Develop and Promote Policies at International and National Levels (PC)

PC.1 Roll Back Malaria Support

PC.1.A Vector Control Working Group Secretariat Support

Brief activity description: The RBM Vector Control Working Group (VCWG) is a prime dissemination forum for the project. Our partner Swiss Tropical and Public Health Institute serves as the Secretariat for the VCWG, and we provide a small amount of funding for logistic and administrative support. We also sponsor project team members from endemic countries to attend, which maintains a key function of the VCWG, which is to support interaction and exchange of ideas among countries and institutions.

Status: Swiss TPH has completed their work on the twelfth annual VCWG meeting, and is beginning the early steps of planning for the 2018 meeting.

Deliverables	Audience	Timing	Dissemination Plan	Status
Completed in Year 1: PC.1.A.1, VCWG meeting organized. Completed in Year 2: PC.1.A.2, VCWG meeting organized.				
3. VCWG meeting organized and conducted; proceedings posted.	Implementing partners and malaria technical community, RBM partners	Completed in Quarter 2	VCWG and greater RBM electronic mailing lists	Completed

[PC.1.B RBM Board Participation – completed Year 2]

PC.1.C Vector Control Working Group Annual Meeting Support

Brief activity description: The annual meeting of the RBM VCWG was held in Geneva on February 8–10, 2017. VectorWorks provided travel funding for the VCWG secretariat. VectorWorks also actively participated in the meeting, presented lessons learned from our research and pilot activities, and exchanged insights with other implementers. VectorWorks used the opportunity to work with PMI and partner representatives from VectorWorks-supported countries to develop priority activities for the long-lasting insecticidal net (LLIN) Priorities and the New Challenges, New Tools work streams, and focused our presentations on strengthening the evidence base for continuous distribution.

Status: VectorWorks co-chaired the LLIN Priorities work stream and participated in the other VCWG work stream meetings, including the Indoor Residual Spraying Insecticide Resistance Management Priorities; Larval Source Management; Integrated Vector Management, Evidence and Capacity; New Challenges, New

Tools in Vector Control; and Housing and Malaria to see if and how to collaborate. VectorWorks made the following two presentations:

1. Everything you need to know about residual malaria transmission in 10 minutes (New Challenges, New Tools)
2. Costs of continuous LLIN distribution strategies in sub-Saharan Africa (LLIN Priorities)

Work plans for the LLIN Priorities and New Challenges, New Tools work streams are under way but have not yet been finalized or circulated, due to time constraints by the work stream leadership.

Deliverables	Audience	Timing	Dissemination Plan	Status
Completed in Year 1: PC.1.C.1 and PC.1.C.2, Presentations and trip report; PC.1.C.3, Priority issues for work streams; PC.1.C.4, VCWG meeting report. Completed in Year 2: PC.1.C.3 and PC.1.C.4, Trip report and presentations; PC.1.C.5, Work stream priority issues.				
6. Presentations and trip report	PMI	Completed in Quarter 2	Share with PMI by email and VCWG electronic mailing list	Approved by PMI on 3/31/2017
7. LLIN Priorities work stream work plan for 2017	VCWG members; WHO/GMP; USAID malaria implementing partners	Quarter 3	Share with PMI by email and VCWG electronic mailing list	Delayed from Quarter 2 to Quarter 3
8. New Challenges New Tools work stream work plan for 2017	VCWG members; WHO/GMP; USAID malaria implementing partners	Quarter 4	Share with PMI by email and VCWG electronic mailing list	Delayed from Quarter 2 to Quarter 4

PC.1.D Alliance for Malaria Prevention Participation

Brief activity description: VectorWorks participated in the Alliance for Malaria Prevention's (AMP's) Annual Partners' Meeting to facilitate information sharing and lessons learned from mass campaigns with field implementers and global policy makers, and to share research evidence on topics of importance to ITN distribution implementers, including operational considerations for continuous distribution and next-generation nets, mosquito net fishing, and urban distribution lessons learned. VectorWorks continues to participate in weekly AMP coordination calls, on the revision of the AMP Toolkit (where we have already rewritten the communication and continuous distribution chapters during Year One), and on potential trainings for technical assistance providers if organized. Participation at the AMP annual meeting in February was combined with travel to the VCWG to minimize costs.

Status: VectorWorks met with PMI resident advisors and research colleagues, and attended all sessions of the 2017 AMP Annual Partners Meeting. We participated in the Emerging Issues Working Group and, the

Monitoring, Operations Research and Evaluation lunchtime sessions. VectorWorks presented the following five oral presentations:

1. Why is it so difficult to reach and sustain universal coverage?
2. Urban distribution: Experiences to date and work ongoing
3. Ghana—Use of DHIS2 for tracking LLINs distributed through the routine system
4. Using data to define communication messaging: LLIN durability, net repurposing, and managing existing nets
5. Lessons learned on mobile money—Factors contribution to success in Tanzania

VectorWorks held additional discussions and side meetings on how to establish a coordination mechanism for those working on residual transmission; planning for American Society of Tropical Medicine and Hygiene (ASTMH) symposia on outdoor transmission; next steps and implications of continuous distribution costing for LLIN distribution; quantification for Tanzania’s School Net Program Round 5 (SNP5); and status of durability monitoring activities across countries. VectorWorks also met with LLIN manufacturers to discuss preliminary market analysis data from Tanzania and Ghana.

Deliverables	Audience	Timing	Dissemination Plan	Status
Completed in Year 1: PC.1.D.1, Presentations; PC.1.D.2, Trip report. Completed in Year 2: PC.1.D.3–5, Toolkit updates, AMP presentations, and trip report.				
6. Presentations	PMI and AMP	Completed in Quarter 2	Share by email and AMP electronic mailing list	Approved by PMI on 3/31/2017
7. Joint trip report	PMI	Completed in Quarter 2		Approved by PMI on 3/31/2017

PC.2 Input into Global Policy

[PC.2.A.2 Building the Evidence Base for Geographic Targeting of Vector Control Interventions – completed in Year Two]

PC.2.B Articulating the Process of Moving from Campaign to Continuous Distribution

Brief activity description: VectorWorks planned to publish an article (drafted in late Year One), highlighting the key points made and supporting data from the presentation on the pilot studies, and providing recommendations for how countries should consider the distribution options available to them, including campaigns and continuous distribution options.

Status: PC.2.B.1: At the 2016 VCWG, Dr. Albert Kilian summarized key points on transitioning from campaigns to continuous distribution, and Dr. Koenker drafted an outline for a manuscript in late Year Two. However, delays in publishing pilot results as well as pending cost-effectiveness analysis make it difficult to write a full research paper on this topic at this time. Dr. Matt Lynch is continuing to work on the paper as new findings become available, and we do intend to complete this paper in the final months of Year Three. VectorWorks collaborated closely with the RBM Country/Regional Support Partner Committee (CRSPC)

(formerly the Harmonization Working Group), the Global Fund, and NMCPs, providing input into the continuous distribution section of the Global Fund’s guidance note (issued in October 2016), developing simplified quantification tools for school distribution, and a set of core continuous distribution documents, featured on the CDtoolkit.org website.

PC.2.B.4: Meetings with the Global Malaria Programme (GMP) in Quarter One and Quarter Two focused on reviewing the current knowledge base for continuous distribution and the outstanding questions (see costing activities in ME.3). Dr. Ato Selby and Ms. Charlotte Eddis participated in the CRSPC meeting in December in Tanzania and we have provided direct technical assistance through field support funding for DRC, Ghana, Guinea, Kenya, and DRC. In DRC Sara Berthe provided TA on the UNICEF-implemented school distribution. In Ghana our team provided input through regular meetings and reports to the NMCP. In Guinea, we offered support, either in-person or remote. This offer was acknowledged but not taken up by PMI Guinea. In Kenya Dr. Selby was ready to participate in a planning meeting with the NMCP, but due to confusion around the USG sanctions on the Kenya MOH did not receive clearance in time to participate. For support to Tanzania please see PC.2.B.6 immediately below.

PC.2.B.6: We responded to specific requests, helping the Tanzania NMCP ensure that Tanzania’s keep-up strategy is written into the Global Fund concept note. Drs. Koenker and Kilian worked with the NMCP on their national net strategy in a workshop in Dar es Salaam, and our in-country office followed up with support to the concept note workshop held in Bagamoyo. In Ghana we offered assistance to the GFATM Concept Note process, but our offer was not taken up by the NMCP.

Deliverables	Audience	Timing	Dissemination Plan	Status
Completed in Year 2: PC.2.B.2–3, Coordination meetings with GMP, Global Fund, sub-regional networks, and HWG.				
1. Publishable-quality manuscript on transitioning to continuous distribution submitted	NMCP and national decision makers, CRSPC members and consultants, GMP, Global Fund portfolio managers, TRP members	Quarter 1	Publication, disseminated through VCWG electronic mailing list as well as to specific contacts within Global Fund, CRSPC, GMP, and PMI	Delayed; draft to be ready for review late Q4
4. Coordination meetings on transitioning to continuous distribution held	GMP, CRSPC, Global Fund, NMCP and national decision makers, CRSPC members and consultants, Global Fund portfolio managers, TRP members	Quarters 1–4	Updated CRSPC guidance note developed, input on gap analysis tool, core continuous distribution documents	On schedule
5. Presentations to sub-regional networks and CRSPC meetings	NMCP leaders, CRSPC consultants	Quarters 1–4	Consultants and NMCP participants in workshops take	On schedule

and/or technical assistance on how to transition to continuous distribution			away key points to use in their concept notes; presentations may include specific input to concept notes	
6. Support for Global Fund concept note development, end 2017	Tanzania NMCP	Quarters 1–4	n/a	On schedule

PC.2.C Policy Statement on Repurposing ITNs

Brief activity description: With no clear guidance from WHO on what households should do with old nets that the household no longer wishes to sleep under, VectorWorks developed draft recommendations for SBCC messaging and a concept note for a policy memo on ITN repurposing for review by the VCTEG.

Status: Following discussions on two Emerging Issues Working Group (EIWG) calls, and following recommendations from stakeholders, VectorWorks drafted a policy memo for WHO review at the VCTEG meeting in March 2017. The memo was presented via PowerPoint and in draft form as an emerging issue at the meeting. While WHO provides guidance on using ITNs as well as for disposing of ITNs, there is no guidance currently for the stage between use and disposal, and with more and more ITNs being delivered to maintain universal coverage, more and more old nets are accumulating within households. VectorWorks identified three categories of repurposing designed to facilitate SBCC messaging: (1) Beneficial repurposing includes using ITN material as curtains, screens, net patches, or other methods of preventing mosquito entry or mosquito bites. (2) Neutral repurposing includes general household uses such as screening latrines, protecting seedlings or chicken coops, etc.—these do not contribute toward mosquito bite prevention, but neither are they dangerous for human health or the environment. (3) Misuse includes using ITNs for fishing (old or new), or using a new net for an alternative purpose. VCTEG declined to take up the issue for further review, and WHO recommended that the AMP’s EIWG, along with the RBM SBCC Working Group, develop SBCC messages on these points. The EIWG has scheduled a call on this topic for Quarter Three, and the RBM SBCC WG will also discuss this at their July meeting. The content of the memo may be worked into a draft manuscript about observations of repurposing of ITNs in Malawi in the second half of Year Three.

Deliverables	Audience	Timing	Dissemination Plan	Status
1. Draft concept note from VCWG LLIN work stream for GMP review via VCTEG	PMI, GMP	Completed in Quarter 2	Share by email	Approved by PMI on 3/31/2017
2. Draft policy statement for GMP review	PMI, GMP, AMP, VCWG	Completed in Quarter 2	Share by email lists	Approved by PMI on 3/31/2017

PC.2.D Maintaining Communication with Global Policy Stakeholders

Brief activity description: VectorWorks collaborates closely with key stakeholders in global malaria policy to ensure that activities are complementary and findings are effectively disseminated at the country level. GMP is the primary institutional partner for ensuring policy uptake of project results, but VectorWorks also stays in close communication with representatives of the Global Fund and the RBM CRSPC mechanism, which is tasked to assist countries in accessing and maintaining access to funds from the Global Fund.

Status: Dr. Ato Selby and Ms. Charlotte Eddis attended the December CRSPC meeting in Tanzania, providing assistance on continuous distribution planning to nine countries. No sub-regional network meetings were scheduled in Quarter One or Quarter Two; the project will keep abreast of developments as the new RBM structure gains shape. WHO Malaria Policy Advisory Committee (MPAC) meeting invitations were restricted, but VectorWorks participated at the March VCTEG and met with the WHO M&E team afterward about technical questions on ITN indicators and continuous distribution. VectorWorks has a strong relationship with the new coordinator of the Vector Control and Entomology group at WHO, and we expect to maintain this going forward.

Deliverables	Audience	Timing	Dissemination Plan	Status
1. Trip reports from CRSPC and sub-regional network meetings	PMI	Quarters 1–4	Share by email	Approved by PMI on January 31, 2017
2. Trip report from MPAC meetings (twice per year)	PMI, GMP, AMP, VCWG	Quarter 2, Quarter 4	Share by email lists	Did not receive an invite to the MPAC meeting in Quarter 2.

PC.3 Promoting Key Indicators

PC.3.A Improving Use of the ITN Population Access Indicator at the Country Level

Brief activity description: The RBM Monitoring and Evaluation Reference Group (MERG) has reviewed data and recommended elevating the use of the indicator for population access to ITNs to serve as the key universal coverage indicator in countries. Dr. Kilian developed an updated calculation algorithm for this indicator under VectorWorks, but the MERG has not yet recommended disseminating this new calculation.

Status: At the January MERG, Dr. Kilian presented data on the indicators of universal coverage, noting that the proportion of households who own at least one ITN for every two people only rarely reaches 60%,

whereas population access to ITN is consistently higher. Larger households consistently do not qualify as owning one ITN for two people, even though they may have 60% or 80% of household members with access to an ITN. Because population ITN access is a better reflection of both personal protection and community coverage, the MERG agreed that it should serve as the primary indicator of universal coverage, and this recommendation was taken then to a WHO Surveillance, Monitoring and Evaluation Technical Expert Group (SME TEG) meeting for review. At the AMP Annual Partners Meeting in February 2017, Dr. Koenker presented the data again, noting that countries who fail to reach targets for household universal coverage are frustrated, when in fact their ITN population access levels are reasonably high, and that this is exacerbated in countries with large average household size, such as Mali and Senegal. Drs. Kilian and Koenker completed data analysis for a publishable paper, and drafted an outline in Quarter Two. MERG members (including PMI staff) are interested in signing on as co-authors for the paper, which will be completed in Quarter Four. VectorWorks also submitted an ASTMH abstract on this topic.

The updated calculation of population ITN access, after much review and discussion, is acknowledged as a better way to assess the indicator, because it takes into account those who actually used an ITN the previous night, and allows for additional analysis (confidence intervals; etc.). However, the process of changing the calculation was deemed too burdensome and confusing at the January MERG meeting. The calculation of the standard indicator will not change. We will request to cancel deliverables PC.3.A.4 and 5 in a forthcoming modification.

Deliverables	Audience	Timing	Dissemination Plan	Status
Completed in Year 1: PC.3.A.1, Training materials for MIS; PC.3.A.2, Updated HWG guidance. Completed in Year 2: PC.3.A.3, Presentation to MERG.				
4. Tools for M&E program staff on the RBM and/or VectorWorks websites	PMI, NMCPs, malaria community	Quarter 3	RBM and VectorWorks websites	Will request to cancel
5. Publishable-quality paper on the new calculation and its application	PMI, NMCPs, malaria community	Quarter 4	Submit to <i>Malaria Journal</i>	Will request to cancel
6. Publishable-quality paper making the case for the population access indicator as the key universal coverage indicator for ITNs	PMI, NMCPs, malaria community	Quarter 4	Submit to <i>Malaria Journal</i>	In process

PC.3.B Source of Nets Analysis Plan

Brief activity description: VectorWorks drafted a report that used the analysis plan to describe the sources of nets in Burkina Faso, Ghana, Kenya, Malawi, Rwanda, Senegal, Uganda, and other countries where data are released. This report provides examples of how the data can be used to answer questions about the performance of a country's ITN distribution strategy. Like the [ITN Access and Use Report](#), the Source of Nets Report is intended to be updated as additional data sets are released. The malaria core module for

household surveys now includes questions asking where nets found in the interviewed households were obtained. These data are intended to inform the project’s impact in terms of the proportion of ITNs found in households that are procured through continuous distribution channels, as well as other channels.

Status: The analysis is complete, and the report has undergone extensive internal review. The report will be submitted to PMI in Quarter Three.

Deliverables	Audience	Timing	Dissemination Plan	Status
Completed in Year 2: PC.3.B.1, Source of nets analysis plan.				
2. Report on PMI countries utilizing the analysis plan	PMI officers, NMCPs	Quarter 3	PMI, VCWG Continuous Distribution work stream, AMP	Delayed from Quarter 1 to Quarter 3

PC.4 ITN Misuse for Fishing and Local Solutions

Use of ITNs for fishing may pose serious environmental and livelihood issues. ITN misuse for fishing also poses substantial problems for USAID programs in terms of risk to reputation and investment. Instances of ITN misuse as illegal fishing gears has not been adequately described or quantified to date, which increases the impact of speculation around this issue. VectorWorks is conducting a rapid assessment of the problem, proposing tools and gathering stakeholders to look at this problem in Year Three.

PC.4.5 Set of Survey Instruments

Status: Draft survey instruments were shared for input with PMI and stakeholders in October, prior to finalization during the institutional review board (IRB) process. PMI provided feedback on October 19th, 2017. These instruments were then used for fieldwork in February and March (see PC.4.7). Minor revisions were made during the first days of fieldwork to improve usability. Final versions of the tools will be submitted with the fieldwork report in Quarter Three.

PC.4.6 Summary Process Manual

Status: This activity will be reassessed following submission of the rapid assessment findings to PMI.

PC.4.7 Rapid Assessment in Malawi

Brief activity description: To better understand the drivers behind the misuse of mosquito nets for fishing in Malawi and to gauge the magnitude of the problem, VectorWorks conducted a rapid assessment in February and March 2017. This assessment included focus group discussions with community leaders, men and women, observations at fishing beaches and in markets, and key informant interviews. The results of this assessment will allow the team to work with local stakeholders to determine if and what tools and solutions should be put into place.

Status: VectorWorks contracted the College of Medicine Malaria Alert Centre in Blantyre, Malawi, to conduct the misuse data collection in Malawi. The fieldwork began on February 27 and ended on March 22, 2017. Dr. Steve Harvey of Johns Hopkins Bloomberg School of Public Health serves as principal investigator

for the misuse research. Dr. Harvey traveled to Malawi to train the data collectors and begin the fieldwork with the local data collection team. Field sites included Zomba, Liwonde, Mangochi (Nkope), Mangochi (Malindi), Nkhata Bay, and Karonga; each site completed three focus group discussions. In total, there are 15 focus group discussions and 395 documented observations of nets being used for something other than sleeping. Next steps include Ms. Sara Berthe traveling to Blantyre to work with the College of Medicine Malaria Alert Centre team to ensure that data is complete, all focus group discussions have been transcribed and translated, and translations are ready for analysis. VectorWorks will clean and analyze the data to produce a preliminary/topline report by the end of May 2017. The field team will also produce a field report.

PC.4.8 Final Decision Tree

Status: This activity will be reassessed following submission of the rapid assessment findings to PMI.

PC.4.9 Complete Net Misuse Toolkit

Status: This activity will be reassessed following submission of the rapid assessment findings to PMI.

PC.4.10 Malawi Planning Visit

Brief activity description: As part of the Year Three work plan, VectorWorks conducted a planning visit in late September 2016 in Malawi to inform the research plan for misuse of ITNs for fishing. Dr. Harvey, Ms. Berthe, and Ms. Emily Ricotta met with stakeholders in Malawi.

Status: The trip report was submitted at the end of September. Findings from the visit informed revisions to the research tools, inputs on SBCC materials, and issuance of the research firm RFP.

PC.4.11 International Mosquito Net Fishing Stakeholders' Meeting

Brief activity description: While the issues of net misuse for fishing have come up for the last several years, to date there has not been any subnational or international meeting bringing together stakeholders from all relevant sectors to discuss the issue. VectorWorks plans to facilitate an international meeting/workshop to bring together stakeholders from a wide variety of disciplines—including biology, fisheries, malaria, and environment—to discuss their observations and research findings related to fishing with ITNs and to collectively assess options for mitigation of mosquito net fishing.

Status: This workshop has been delayed to Quarter Four (August 2017). While it is clear that a multi-sectoral approach will be needed to address the underlying issues which drive misuse of ITNs for fishing, more groundwork needs to be done to identify the appropriate and interested institutions and people.

Deliverables	Audience	Timing	Dissemination	Status
Completed in Year 2: PC.4.1, Literature review; PC.4.2, GIS population estimate; PC.4.3, Pesticide toxicity report; PC.4.4, Small-mesh fishing gear report.				
5. Set of survey instruments	AOR	Quarter 3	Share by email with AOR	Delayed from Quarter 1 to Quarter 3
6. Summary process manual	PMI resident advisors, NMCPs, relevant stakeholders	TBD	Share by email with AOR	Activity to be reviewed with AOR
7. Pilot test of qualitative instruments in Malawi (to be determined), with report	PMI	Quarters 3–4	Share by email with AOR	Delayed from Quarter 2–3 to Quarters 3–4
8. Final decision tree	PMI resident advisors	TBD	Share by email with PMI	Activity to be reviewed with AOR
9. Complete Net Misuse Toolkit	PMI	TBD	Share by email with PMI	Activity to be reviewed with AOR
10. Planning visit trip report	PMI	Completed in Quarter 1	Share by email with PMI	Acknowledged by PMI on September 29, 2016
11. International workshop report	PMI and other relevant stakeholders	Quarter 4	Share by email with PMI	Planning in process; delayed from Quarter 3 to Quarter 4

PC.5 Malaria in Pregnancy

Brief Activity Description: In Year One, VectorWorks identified the need for an advocacy strategy for malaria in pregnancy (PC.5.3). The RBM Malaria in Pregnancy Working Group (MIP WG) with coordination from the VectorWorks project wrote and finalized a strategy and MIP Advocacy Toolkit in Year Two. At the July 2016 MIP WG meeting in Nairobi (PC.5.4) several members requested the guide translated into French and paper copies for use at the subnational level.

PC.5.6 Tracking ANC Attendance in Tanzania Before and After ITN Distribution

[Canceled: Modification 1, Year Three; Approved on April 3, 2017]

PC.5.7 Translate MIP Advocacy Tool in French

Status: VectorWorks pretested the MIP Advocacy Guide for National Stakeholders in two countries, Nigeria and Sierra Leone.¹ Pretest participants included Wani Lahai, a program officer with the NMCP in Sierra Leone, and Anna McCartney Melstad, chief of party of the Health Communication Capacity Collaborative (HC3) in Nigeria. In Sierra Leone, Johns Hopkins Center for Communication Program (CCP) staff worked with the NMCP in a face-to-face meeting to get feedback on the application and content of the guide. We received feedback from Nigeria by email. Both pretest participants provided useful feedback that included additional or modified indicators, content, and graphics, which we incorporated into the guide. The VectorWorks team sent the guide to be translated by a translation company and expects it to be returned by mid-May. HC3 also included the guide in its implementation kit, SBCC for Malaria in Pregnancy: Strategy Development Guidance I-Kit, in both the web-based and print versions:

<https://healthcommcapacity.org/hc3resources/sbcc-malaria-pregnancy-strategy-development-guidance-kit/>

Deliverables	Audience	Timing	Dissemination Plan	Status
Canceled in Year 1: PC.5.1, US-MIP trip report. Completed in Year 1: PC.5.2, Trip report and presentation. Completed in Year 2: PC.5.3, Advocacy strategy; PC.5.4, MIP trip report. Canceled in Year 2: PC.5.5, Follow-up MIP advocacy case studies				
6. Track ANC attendance in Tanzania before and after ITN distribution in clinics, submit report	MIP Working Group, AMP, PMI	Quarters 3–4	AMP and MIP Working Group electronic mailing lists	Canceled, Modification 1, approved on April 3, 2017
7. Translate MIP Advocacy Toolkit into French	MIP Working Group, AMP, PMI	Quarter 3	MIP Working Group electronic	Delayed from Quarter 1. As of April 19, 2017, guide is with the

¹ A pretest planned in Tanzania was canceled due to staff time constraints in the VectorWorks Tanzania office.

			mailing lists	translation team.
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PC.6 Identifying Alternative Distribution Strategies in Urban Areas

Brief activity description: In collaboration with the AMP EIWG, VectorWorks is updating a series of case studies describing approaches to urban ITN distribution during mass campaigns. In 2016 a large number of mass campaigns were planned and implemented in urban areas, with some innovative planning for targeting specific neighborhoods and adjusting distribution strategies.

Status: VectorWorks has conducted interviews with master consultants, implementing partner staff, and NMCP members in 12 countries where urban distribution has been planned or implemented since 2016. Information from all completed interviews has been organized and report writing is in process; findings were shared during the AMP Partners Meeting in February. A first draft will be complete and circulated internally, and then with interviewees and AMP staff in May. After the review process, the report will be ready to share with PMI. VectorWorks submitted an ASTMH abstract on urban distribution and plans to share results on an EIWG teleconference.

Deliverables	Audience	Timing	Dissemination Plan	Status
Working paper on alternative distribution strategies in urban areas	PMI, GMP, AMP, VCWG	Quarter 3	Share by email lists	Delayed from Quarter 1 to Quarter 3; in process

Objective 2: Design, Conduct, and Analyze Results from Monitoring, Evaluation, and Operational Research Activities to Improve Current Best Practices

ME.1 ITN Durability Monitoring

Brief activity description: VectorWorks has produced a complete package of durability monitoring tools and resources available at www.durabilitymonitoring.org. Tools are available in English, French, and Portuguese, and more tools will be added as they are finalized. VectorWorks also provides technical assistance in planning durability monitoring activities, including long-distance email support on specific questions.

Status: In the first half of Year Three, VectorWorks updated monitoring protocols to add short questionnaires for the nets sampled for bioassay testing from neighboring households, in paper and Open Data Kit format. We also updated workshop training agendas, translated them into French, and added an additional training presentation on finding cohort households at 12, 24, and 36 months using GPS. We added a “shopping list” of materials needed for training and fieldwork, and added an updated French translation of baseline report templates. VectorWorks is currently drafting a complete study manual, 12-

month and 24-month report templates, and draft documents for discussion with PMI on actions to take when monitoring results indicate a potential problem. Using historical data, we are identifying thresholds for action for bioassay results, ITN attrition, proportional hole index (pHI), retention, use, and net care attitudes with associated next steps, which may involve further investigation, discussion with PMI, and/or SBCC activities. Dr. Kilian has developed a 'risk index' for ITN durability based on baseline data, but preliminary testing of it with 12-month data indicate that the index needs further refinement.

At the ASTMH annual meeting in November 2016, VectorWorks led a discussion on durability monitoring for 60 people, and later hosted a webinar with the same format, reaching 64 people. The consultant working on cleaning and analyzing PMI's pooled durability study data completed work in February, and we presented the preliminary results at the VCWG annual meeting in February 2017. Modeling work using this data is moving forward at Swiss TPH. VectorWorks submitted an ASTMH symposium proposal on behalf of PMI, to include pooled results and the modeling work.

Detailed Status Update of the Durability Monitoring Toolkit as of March 30, 2017

Component	Status
<p>Part 1: Develop standardized guidelines/procedures on how to conduct ITN durability monitoring, to include the following components:</p> <ul style="list-style-type: none"> a. Detailed research protocols including study design, sampling, and timing b. Standard minimum questionnaires, sample consent forms, random number sheets for household selection during fieldwork, and hole index tools c. Standard training manual and materials for fieldworkers d. Sample data entry screen e. Sample budget for each phase of fieldwork f. Frequently asked questions and/or overall explanation of the methodological approach including a decision tree diagram g. Planning timeline and budgeting guidance 	Completed
<p>Part 2: Develop standardized tools for data analysis and reporting/dissemination, to include the following components:</p> <ul style="list-style-type: none"> a. Analysis plan, data cleaning, and preparation do-files b. Final analysis do-files, including for production of charts and graphs c. Templates for reports to be easily filled in with outputs from the analysis (dummy tables) 	Completed
<p>Part 2 (continued)</p> <ul style="list-style-type: none"> d. Template agreement or memorandum of agreement language for countries to include to ensure that key indicators will be reported and shared with PMI headquarters for overall tracking and monitoring e. Publication guidance, including clearance 	Drafted
<p>Part 3: Prepare a data repository for durability monitoring by completing the following tasks:</p> <ul style="list-style-type: none"> a. Establishing minimal data requirements, standards for coding of key variables, etc. 	<ul style="list-style-type: none"> a) Complete b) Drafted c) To be modified –

<ul style="list-style-type: none"> b. Establishing rules and mechanisms for data submission, data requests, and data distribution c. Registering and setting up a dedicated website where users can register, request data, and download data; the website will also provide brief summaries of available data, tools and instructions, and resources (e.g., the materials listed above and examples of existing reports and protocols) 	data will not be made public
<p>Part 3 (continued)</p> <ul style="list-style-type: none"> d. Completing data cleaning and analysis for the PMI pooled durability data set (in Year 2, PMI requested assistance with data cleaning and analysis for the eight-country pooled durability studies, with an initial target of an ASTMH symposium in 2016, and this activity was added as part of Modification 1 and then extended in Modification 2) 	Completed in Quarter 2
<p>Part 3 (continued)</p> <ul style="list-style-type: none"> e. Completing OpenMalaria modeling on the PMI pooled durability data set: For each survey in each country for which data are available on holes, insecticide content, and net use coverage, with guesstimates of insecticide resistance, anthropophily, and outdoor biting, provide an estimate of the proportion of malaria transmission prevented (as compared with no nets)—includes no human-to-mosquito transmission feedback, no decay modeling (interpolation and extrapolation for surveys with missing data or times other than surveys) f. Include decay modeling to make predictions over the whole timeline of a single mass distributed net cohort 	Ongoing; expected completion in Year 3, Quarter 4

Deliverables	Audience	Timing	Dissemination Plan	Status
Completed in Year 2: ME.1.1, Guidelines for data collection; ME.1.2, Standardized tools for data analysis and reporting. Canceled in Year 2: ME.1.4, Resistance to damage score validation.				
3a-c. Prepare data repository	Principal investigators and resident advisors involved in durability monitoring in PMI countries and in countries undergoing mass campaigns that are likely to require durability monitoring in 2015 and going forward	3a-c Quarter 3	Share by email	3a. To be modified – data will not be public
3d–e. Prepare PMI eight-country pooled data: cleaning and analysis		3d-e. Completed in Quarter 2		3d. Approved by PMI on March 28 2017
3e-g. Modeling pooled data		3e-g. Quarter 4		3e-g. In Process
5. Develop an index	As above	Quarter 3-4	Share	In process;

for environmental and behavioral risk			PowerPoint summary by email	delayed from Quarter 1 to Quarter 3-4
6. Develop thresholds for action based on key results at each monitoring assessment	As above	Quarter 3	Share by email	In process; delayed from Quarter 2 to Quarter 3
7. Webinar on use of toolkit to analyze data and interpret those data	As above	Completed in Quarter 1	Webinar	Approved by PMI on December 5 2016

ME.2 Alternative Vector Control Tools

[ME.2.A Landscape Report on Alternative Vector Control Tools – completed Year One]

ME.2.B Quarterly Updates on Alternative Tools

Brief activity description: Since July 2015 VectorWorks has disseminated a quarterly newsletter that summarizes findings from relevant studies and highlights possible interpretations and implications, including gender considerations for new tools when applicable. To develop the newsletter, we use a systematic search in key databases for literature from the last three months on alternative tools and paradigms identified in [Landscape of New Vector Control Products](#). We present the summary of findings in a user-friendly newsletter format that enables readers to quickly scan for key new developments and study in detail the referenced literature. We share each quarterly update to the general VCWG mailing list, PMI field and HQ staff, and via the VectorWorks and PMI websites.

Status: The quarterly newsletter is ongoing; every three months we review, summarize, format, and disseminate new articles. VectorWorks released the first report of Year Three in November 2016, covering the period from July to September 2016, and the second report in February 2017, covering the period from October to December 2016. We will release the third report in May 2017, covering the period from January to March 2017. The final report of Year 3 will be released early August 2017, covering the period from April to June.

Deliverables	Audience	Timing	Dissemination Plan	Status
Completed in Year 1: ME.2.B.1, Two newsletters. Completed in Year 2: ME.2.B.2, Four newsletters.				
3. Quarterly newsletter summarizing recent literature on	International Vector Control Consortium, VCWG, PMI technical	Oct, Jan, April, July	VCWG electronic mailing list, potentially also to PMI field and core electronic	Ongoing

alternative tools (electronic format)	and resident advisors, implementing partners		mailing list; post to VectorWorks websites	
Internal report on user survey results	PMI AOR	Quarter 3	Share by internal email	Not started

ME.3 Issues in Costing ITN Distribution

ME.3.A Continuous Distribution Costing Analysis

Brief activity description: Building on the work in Ghana, VectorWorks conducted cost analyses of school-based, health-facility-based, and community-based distribution programs—either as a stand-alone strategy (e.g., school-based distribution in Tanzania and health-facility-based distribution in Mali) or in combination with other strategies (e.g., in Ghana and Zanzibar).

Status: VectorWorks has completed and submitted the reports for Tanzania SNP3 and Zanzibar. The Mali report is back with VectorWorks for final revision. We have drafted the Ghana report and we are revising the analysis per internal review. We expect to submit it to PMI in the second half of Year Three. The Tanzania ANC/EPI analysis and data collection trip is scheduled for late May/June 2017. We also submitted a memo summarizing what we currently know about continuous distribution and mass campaign costs, and the next steps in understanding the cost-effectiveness of continuous distribution. VectorWorks drafted an experimental design for the cost-effectiveness modeling and the analysis will be completed by the end of Year Three. The memo and the analyses will feed into the planned manuscripts.

Deliverables	Audience	Timing	Dissemination Plan	Status
Canceled in Year 2: ME.3.A.1, Madagascar costing report Completed in Year 2: ME.3.A.2, Tanzania School Net Program costing report; ME.3.A.5, Zanzibar costing report.				
3. Ghana health facility costing update	VectorWorks project team, PMI AOR	Quarter 3	Internal report to be shared by email with PMI	In draft, currently under internal review. Delayed from Quarter 1 to Quarter 3.
4. Mali health facility costing and output data report	VectorWorks project team, PMI AOR	Quarter 3	Internal report to be shared by email with PMI	Submitted to PMI. Back with VectorWorks for edits. Delayed from Quarter 1 to Quarter 3.
6. Mainland Tanzania health facility costing	VectorWorks project team, PMI AOR	Quarter 4	Internal report to be shared by email with PMI	Not started. Scheduled for May/June 2017.
7. Summary manuscript for continuous	HWG consultants, PMI resident	Quarter 4	Manuscript	In process. Delayed from Quarter 2 to Quarter 4.

distribution costs based on deliverables 1–6	advisors			
8. Manuscript of meta-analysis comparing continuous distribution and mass campaign costs	Donors and implementers	Quarter 4	Manuscript	In process
9. Manuscript connecting continuous distribution costs to transmission modeling	Donors and implementers	Quarter 4	Manuscript	In process

ME.3.B Experimental Auctions

Brief activity description: VectorWorks conducted discrete choice experiments in urban and rural sites in two regions (Southern Zone and Lake Zone) of Tanzania to obtain data to establish price elasticity curves for ITNs, and determine how price and net attributes affect purchase decisions. Fieldwork occurred in late May and June 2016. In the discrete choice experiment, participants chose between two different net types (or neither net), repeated over seven alternative scenarios with varying prices and net products. Participants received 10,000 TSH (approximately US\$4.50) before starting the discrete choice experiment, with net prices ranging between 2,000 and 8,000 TSH. At the end of the procedure, one randomly selected scenario became “binding,” in which participants actually purchased their chosen net (if any).

Status: PMI approved the study report on November 29, 2016. VectorWorks conducted the analysis in July and August 2016 and finalized the report in late September and early October. The key findings were that only 8% of participants opted not to buy for any scenario, and 40% opted to buy for all seven scenarios, indicating a strong desire to purchase nets among the study population. Rural populations in both sites were more likely to buy nets, driven primarily by their lower access to ITNs within the household. Mean willingness-to-pay estimates for an untreated, conical, small net ranged from 2,400 TSH (less poor households) to 3,800 TSH (poorer households). The demand estimates also confirmed that participants were willing to pay for various net attributes, including a rectangular net (vs. conical shaped), a large 6 feet x 6 feet net (vs. a smaller 3.5–4 feet x 6 feet), and for a long-lasting, polyethylene net pretreated with insecticide (vs. an untreated polyester net). The mean willingness to pay for these individual attributes ranged from 1,200 to 3,000 TSH.

We have integrated these results into the Tanzania private-sector market analysis and in the overall manufacturer landscape analysis (IM.9.1), to provide manufacturers with information necessary to make investment decisions in retail sales of ITNs. We are also applying the methodology in Ghana, with funding from U.K. Department for International Development (DFID), and it is proving useful in other willingness-to-pay studies. Despite the common assumption that there is not a viable market for ITNs, these results

indicate that there is a strong demand for ITNs at both rural and urban levels. For some populations it is likely that a subsidy mechanism to provide some assistance to reduce liquidity constraints would further increase demand and sales.

PMI cleared the first manuscript in December 2016 and VectorWorks submitted it to *Health Policy and Planning* journal shortly thereafter. However, the journal declined to review, citing too many other studies using the discrete choice experiment methodology. We reformatted the paper and submitted it to *Malaria Journal* on April 15. Dr. Chris Gingrich has plans for the second paper from this data to be written during 2017–2018 (Year Four).

Deliverables	Audience	Timing	Dissemination Plan	Status
2. Study report	PMI	Completed in Quarter 1	Share with PMI by email	Approved by PMI on November 29, 2016
3. Discrete choice experiment paper #1	Donors and implementers	Quarter 3	Manuscript	Submitted to <i>Health Policy & Planning</i> in Quarter 1. Submitted to <i>Malaria Journal</i> in Quarter 3.
4. Discrete choice experiment paper #2	Donors and implementers	Year 4	Manuscript	Delayed due to Dr. Gingrich's schedule.

[ME.4 External Review of a Durable Wall Lining Study in Tanzania – completed Year Two]

ME.5 Continuous Distribution Evidence Base

[ME.5.A NetCALC 3.0 – completed Year Two]

ME.5.B Dissemination of NetWorks Continuous Distribution Findings: Papers on Continuous Distribution Pilots in Madagascar, Ghana, South Sudan, and Nigeria

Brief activity description: VectorWorks is drafting manuscripts on the Madagascar, Ghana, and South Sudan continuous distribution pilots. The manuscripts describe the interventions and results from the pilots.

Status: VectorWorks made significant progress on the continuous distribution papers, with milestones completed just after the six-month timepoint. We submitted the South Sudan and Cross River papers to PMI for review and completed the Madagascar and Ghana drafts in April 2017. Next steps include: references and alignment with journal requirements and tone, internal team review, co-author review, submission to PMI, and revisions in response to PMI comments.

Deliverables	Audience	Timing	Dissemination Plan	Status
Completed in Year 1: ME.5.B.3, Nasarawa continuous distribution report.				

1. Publishable-quality manuscript on community continuous distribution pilot in Madagascar	NMCPs, HWG and HWG consultants, VCWG, PMI	Quarter 3	Peer-reviewed journal, VCWG	In process; delayed from Quarter 1 to Quarter 3
2. Publishable-quality manuscript on school-based distribution in Eastern Region of Ghana	NMCPs, HWG and HWG consultants, VCWG, PMI	Quarter 3	Peer-reviewed journal, VCWG	In process; delayed from Quarter 1 to Quarter 3
4. Publishable-quality manuscript on community continuous distribution pilot in South Sudan	NMCPs, HWG and HWG consultants, VCWG, PMI	Quarter 3	Peer-reviewed journal, VCWG	In process; delayed from Quarter 2 to Quarter 3. Submitted to PMI

ME.6 Publication Fees for NetWorks Articles

Brief activity description: Several articles planned under NetWorks funding are still being completed.

Status: The paper describing the piloting of school distribution in Cross River State, Nigeria, was not accepted for publication by *Malaria Journal*. VectorWorks is preparing it for submission to the *Global Health: Science and Practice* journal before the end of April; as with ME.5, a surge of staff time is being dedicated to complete this paper. The Hole Index Methods first draft was completed in Year 1.

Deliverables	Audience	Timing	Dissemination Plan	Status
Completed in Year 1: ME.6.2, Hang up; ME.6.3, Ghana outdoor sleeping; ME.6.4, Nigeria durability; ME.6.5, Uganda care repair. Completed in Year 2: ME.6.1, Campaign strategies paper.				
6. Nigeria Cross River schools	Malaria technical community, PMI	Quarter 3	Peer-reviewed journal, VCWG	Delayed from Quarter 1 to Quarter 3
7. Hole Index Methods	Malaria technical community, PMI	Quarter 4	Peer-reviewed journal, VCWG	Delayed from Quarter 2 to 4

ME.7 Subnational Analysis of Use-to-Access Ratio

Brief activity description: VectorWorks used Demographic and Health Survey (DHS) and Malaria Indicator Survey (MIS) data for PMI countries in the last five years (where data are available) to more closely examine

rates of ITN use and access based on subnational time frames for dry season, early rains, and late rains. We continue to update the ITN Access and Use Report and its maps with new data as it becomes available.

Status: VectorWorks updated the ITN Access and Use Report five times in the first half of Year Three, adding data from Mali, Nigeria, Rwanda, Zimbabwe, Tanzania, Senegal, Madagascar, and Malawi. The departure of the project’s Research Data Analyst in December delayed the updating of the maps; this is nearing completion now that a new Data Analyst has joined the team. The maps will be posted prior to World Malaria Day.

The paper analyzing use-to-access ratio by rainy season 2010–2015, had data analyzed in late 2015, but suffered from extensive delays in write-up. Late in Quarter One of Year Three, our former Research Data Analyst shared her draft, and it became clear that the modeling approach used, involving remotely sensed data (rainfall, temperature, humidity), did not predict ITN use among households with universal coverage in a programmatically relevant way. We are therefore restarting the analysis from the original hypothesis, clearly observed in Senegal’s continuous DHS data sets—that ITN use given access follows seasonal patterns, being very low during dry season months, increasing during the early rainy period, and reaching target levels during the late rainy period. We completed analysis on three countries (Senegal, Tanzania, and Ghana) in late Quarter Two to prepare an ASTMH abstract and confirm the pattern in other countries. We will conduct additional analysis on other countries and will develop the paper in the second half of Year Three.

Deliverables	Audience	Timing	Dissemination Plan	Status
Completed in Year 1: ME.7.1, Year 1’s ITN Access and Use Report. Completed in Year 2: ME.7.3, Year 2’s ITN Access and Use Report; ME.7.4, Annex with maps.				
2. Publishable-quality paper analyzing use-to-access ratio by rainy season 2010–2015 (draft completed in Year 1, to be submitted for peer review in early Year 3)	Malaria technical community	Quarter 4	VCWG, <i>Malaria Journal</i>	Delayed from Quarter 1 to Quarter 4. Revised analysis plan drafted.
5. Updated PMI report on access indicator showing stratification by region, season, and risk group, with updated maps	PMI resident advisors, AMP, VCWG, SBCC WG	Completed in Quarter 2 before MOP season; ongoing updates will be made as new data sets are released	AOR to circulate to wider PMI team and resident advisors; in-country presentations during technical advisor visits	Ongoing. Monthly updates made. Most recent update 4/20/2017.

ME.8 Operations Research

ME.8.A Expert Committee Meeting

Brief activity description: The Expert Committee serves to discuss and review research priorities and plans for developing operational research concept notes. At this stage in the project, there is limited time to conduct OR.

Status: The Expert Committee has not formally met in Year Three, although informal discussions have taken place by email, phone, and at VCWG and ASTMH meetings. The priority of the project is to complete the studies, deliverables, and papers currently in the work plan. Specific requests from PMI countries are managed through field support.

Deliverables	Audience	Timing	Dissemination Plan	Status
Completed in Year 1: ME.8.A.1, Research agenda. Completed in Year 2: ME.8.A.2, Updated research agenda.				
3. Updated research agenda	PMI	Quarter 2	Internal	Informal discussions held in Quarter 2

[ME.8.B Concept Notes and IRB Preparation for Identified Study Topics – completed Year Two]

ME.9 Net Preference Literature Review

Brief activity description: In June 2016, VectorWorks submitted a report to the VCTEG on findings from a literature review and data analysis of the effect of preferences for nets on net use. The VCTEG met to discuss the findings in March 2017. These findings have already informed procurement decisions for various donors, in combination with Activity ME.10.

Status: WHO convened the VCTEG in March 2017, and Dr. Koenker presented the findings from the net preferences study—namely, that while households do have some preferences about shape and color, these preferences do not have a programmatic impact on ITN use. Furthermore, given various price differentials and the use differentials, we can calculate whether (given a fixed budget) it makes sense to procure more expensive ITNs, or whether this would result in an overall loss in ITN coverage due to being able to buy fewer of the more expensive ITNs. The VCTEG recommended updating the WHO Recommendations for Achieving Universal Coverage with ITNs with a short paragraph on these findings, which will be done by GMP in Quarter Three. They also recommended submitting the paper for publication; this was done on March 21. We will plan to address reviewer comments once received.

Deliverables	Audience	Timing	Dissemination Plan	Status
2. Publishable-quality manuscript on net preferences, submitted to journal	PMI, VCWG, Global Fund	Completed in Quarter 2	Peer-reviewed publication	In peer review

[ME.10 Break-Even Analysis for Procurement of Conical Nets – completed Year Two]

ME.11 Characterizing Risk of Outdoor Malaria Transmission

Brief activity description: VectorWorks carried out a review of published literature on outdoor malaria transmission to document existing evidence on human behavioral determinants of residual malaria transmission. This review is intended to consolidate research findings from a behavioral perspective, identify gaps in research, categorize types of exposure behaviors, and align them with potential vector control or behavioral interventions.

Status: VectorWorks has completed the review literature and is drafting the findings. VectorWorks will then share the document for review by PMI, before finalizing it for publication in a peer-reviewed journal.

The review included searches through PubMed and through cited references in articles identified. Studies were selected for the review if they included a malaria endemic setting in sub-Saharan Africa and a description of specific human behaviors occurring during times when malaria transmission can occur.

Deliverables	Audience	Timing	Dissemination Plan	Status
1. Publishable-quality review of literature on outdoor malaria transmission, characterizing outdoor activities that may present risks for malaria transmission, via Outdoor Transmission work stream	PMI, VCWG	Quarter 4	Peer-reviewed publication	In process; delayed from Quarter 3 to Quarter 4

ME.12 Revisions to the Malaria SBCC Indicator Guide

Brief activity description: VectorWorks is updating the guide based on feedback from members of the RBM SBCC Working Group. Key changes include the addition of data sources other than large national surveys, addressing the contribution of health care provider behaviors, updating knowledge indicators to reflect diagnostics, and guidance on how to select and prioritize indicators. The guide also contains mini-case studies/examples of how various countries and programs have used and adapted the content in the guide.

Status: The guide has undergone several drafts and we have completed the third version. The consultant has submitted it back to VectorWorks for final review. Prior to this, VectorWorks shared and discussed questions from the first and second versions with M&E Task Force members at the August and September 2016 meetings held in Baltimore and Dakar, Senegal.

Deliverables	Audience	Timing	Dissemination Plan	Status
1. Revised Malaria SBCC Indicator Guide	PMI, SBCC WG, AMP	Quarter 4	SBCC WG, Springboard, AMP, RBM	In process; delayed from Quarter 2 to Quarter 4

[ME.13 Indoor Residual Spraying and ITNs Technical Assistance – completed Year Two]

ME.14 Residual Transmission Meeting Planning

Brief activity description: VectorWorks is working with the VCWG New Challenges, New Tools work stream to coordinate sharing of information on methods and best practices for residual malaria transmission research. This includes exploring the need for establishing an Africa Subregion Outdoor Transmission Network, and planning for a potential workshop in Year Four. This workshop would bring together a range of stakeholders and provide an opportunity for them to review and exchange information, discuss methods, and identify best practices for residual malaria transmission research. Prior to the workshop, the VectorWorks project will conduct a review of published literature on human behavioral drivers of residual malaria transmission, described under ME.11 in the Year Three Core work plan. The VectorWorks project will also complete data collection and preliminary analysis for the Zanzibar residual malaria transmission study, described under ME.12 in Year Three Tanzania work plan.

Status: VectorWorks presented an overview of current and planned research studies on residual malaria transmission at the New Challenges, New Tools work stream at the VCWG meeting in February 2017, met with VCWG members working on the topic, and discussed opportunities for sharing across organizations and countries. This includes researchers from Noguchi Memorial Institute for Medical Research in Ghana, PMI Ethiopia, University of California San Francisco Malaria Elimination Initiative, Walter Reed Army Institute of Research, and others. There is strong interest across groups for a formal opportunity to share research findings and discuss methods. During the VCWG meeting, the New Challenges, New Tools work stream included a residual malaria transmission meeting as a proposed activity for 2017. VectorWorks will draft a planning memo for the meeting, soliciting input from other VCWG partners working on residual malaria transmission. We will complete the memo in project Year Three and will propose holding the workshop in Year Four.

Deliverables	Audience	Timing	Dissemination Plan	Status
1. Planning memo for expected attendees and outputs of an African Outdoor Transmission Network workshop	PMI, VCWG	Quarter 4	Share by email to PMI and network members	Delayed from Quarter 2 to Quarter 4
2. VCWG work stream presentation on outdoor transmission summarizing the state of research outlining key actors and activities	VCWG	Completed in Quarter 2	Presentation at meeting	Completed

ME.15 Counterfeit Nets

Brief activity description: VectorWorks is conducting an exploratory study to gauge severity and magnitude of counterfeit and mislabeled nets, in order to assess whether the issue requires greater attention from VectorWorks, PMI, or the malaria community in general. We will implement the study, a retail audit, in Nigeria, Tanzania, and Ghana. For each identified potentially counterfeit brand, one sample

will be procured and the field staff will compile some basic information on the frequency with which this particular brand has been found in the market.

Status: VectorWorks drafted a protocol in Quarter Two, circulated it for review by partners, and gathered PMI input on the interview tools. We have finalized the protocol and will submit it for JHU IRB approval in Quarter Three, and will submit it to country IRBs as needed in Nigeria, Ghana, and Tanzania. Fieldwork is scheduled for Quarter Three and Quarter Four, pending local IRB processes. As the CCP Private Sector Malaria Prevention (PSMP) Project in Ghana is conducting a similar retail audit, we will assess data collected by the PSMP retail audit team in May to see if it provides sufficiently relevant information before moving forward with planning the VectorWorks activity in Ghana.

Deliverables	Audience	Timing	Dissemination Plan	Status
1. Summary report from three countries; recommendations for next steps	PMI, VCWG	Quarter 4	Share by email	In process

ME.16 Secondary Analysis of Net Use in Key Countries

Brief activity description: VectorWorks will analyze data from two countries with relatively large gaps in use given access from recent household survey data, the 2014 Ghana DHS and the 2015 Nigeria MIS, to identify patterns of ITN use by season and other driving factors behind low use rates of accessible nets.

Status: Due to the departure of VectorWorks' senior research data analyst in December 2016, this activity has been delayed. A new research analyst is on board half-time as of March 1, and these analyses are prioritized for completion.

Deliverables	Audience	Timing	Dissemination Plan	Status
1. Ghana 2014 DHS report on ITN use	PMI, NMCP	Quarter 3	Share by email	In process; delayed from Q1 to Q3
2. Nigeria 2015 MIS report on ITN use	PMI, NMCP	Quarter 3	Share by email	Delayed from Q1 to Q4

ME.17 Who Buys Nets: A Multi-Country Analysis

Brief activity description: To better understand the current role and extent of ITN and untreated net purchases, VectorWorks will conduct a multi-country analysis of who buys nets—by socioeconomic status, urban/rural status, level of education, and other key demographic factors identified.

Status: This activity was also delayed by the departure of VectorWorks' senior research data analyst in December 2016. A new research analyst is on board half-time as of March 1, and these analyses will be prioritized for completion. We have already developed an analysis plan, completed initial data analysis for Tanzania, and submitted an abstract for the ASTMH annual meeting in November 2017. In Quarter Three and Quarter Four we will continue to look at additional countries and produce the paper.

Deliverables	Audience	Timing	Dissemination Plan	Status
1. Publishable-quality paper on who buys nets, a multi-country analysis	PMI, Global Fund, DFID, NMCPs	Quarter 4	Share by email	In process; delayed from Q2 to Q4

Objective 3: Promote and Support Country-Level Implementation of Malaria Prevention Activities (IM)

[IM.1 Revise the ANC-EPI Guide (“Keep Up Guide”) – canceled in Year Two]

[IM.2 Community Distribution Guide – completed in Year Two]

[IM.3 Usability Testing for Online Continuous Distribution Toolkit – completed in Year Two]

[IM.4 Integrating Care SBCC into Implementation – completed in Year Two]

IM.5 Designing Accountability Mechanisms for ITN Distribution

Brief activity description: Continuous distribution program planners need better methods for fraud prevention and documenting the susceptibility of specific continuous distribution channels to fraud losses. In Year Two, VectorWorks hired a team of consultants to draft a guide to fraud prevention and risk mitigation, which was submitted to PMI late in Year Three, after a delay due to a long review process.

Status: The draft has undergone two rounds of review and resubmission to PMI. A few final typographical edits are currently under way, with final approval and dissemination expected by May 2017.

Deliverables	Audience	Timing	Dissemination Plan	Status
Report on fraud prevention and risk mitigation measures for ITN distribution programs	VectorWorks project team, AOR, PMI; potentially other donors, implementing partners, NMCPs	Quarter 3	Review by VectorWorks and AOR, PMI	In process

[IM.6 Updating School Distribution Guide - canceled in Year Two]

IM.7 Assessing the Utility of Validation Exercises for School Distribution

Brief activity description: At the end of Year Two, PMI approved the report on validation processes used to verify school enrollment figures in Ghana and Tanzania. In Year Three, we disseminated the report.

Status: The validation report was disseminated through the VectorWorks and PMI websites, newsletter, social media, and in the online CD toolkit. There is no formal deliverable for this activity.

IM.8 Online Continuous Distribution Toolkit

Brief activity description: In Year Three, VectorWorks developed a toolkit containing best practices and tools for planners and managers of continuous ITN distribution programs. The toolkit includes guidance on conducting feasibility assessments, developing timelines and budgets, quantifying ITN needs, and planning logistics, trainings, distribution, supervision, and monitoring.

Status: In Quarter 1, VectorWorks conducted internal beta testing of the toolkit. On February 2, 2017, VectorWorks launched the Continuous Distribution Toolkit in beta form to get feedback before and during the AMP and VCWG meetings. The feedback collected from colleagues at the meetings and through a Google Form was strongly positive. After a few tweaks to the toolkit, VectorWorks created a comprehensive dissemination plan. The toolkit was officially launched on April 6, 2017. To disseminate it, the team is planning two webinars in May 2017—one will focus on the toolkit and the other will feature lessons on Tanzania’s school distribution.

Website Statistics, October 1, 2016–March 31, 2017

Site	Page Views ^a	Bounce Rate ^b	Average Session Duration
Continuousdistribution.org	1,018	30.66%	4:48

^a Page views: the total number of pages viewed. Repeated views of a single page are counted.

^b Bounce rate: the percentage of single-page visits (i.e., visits in which the person left the site from the entrance page without interacting with the page).

Deliverables	Audience	Timing	Dissemination Plan	Status
Completed in Year 1: IM.8.1, Continuous Distribution Toolkit outline.				
2. Continuous Distribution Toolkit	Implementing partners	Quarter 2	AMP, VCWG, PMI resident advisors, webinars, electronic mailing lists	Beta launched in Quarter 2, hard launch based on initial feedback Quarter 3.

IM.9 Private-Sector Approaches and Considerations

IM.9.1 Private-Sector Model Design

Brief activity description: In Year Two, VectorWorks aimed to design a pilot to expand the commercial-sector presence in ITN retail markets in Tanzania. Based on initial results from the landscaping process, the best way forward was found to be not a pilot, but a series of market-shaping efforts to encourage manufacturer and distributor participation in the current market, together with consumer education to build informed demand. The goal is to shift purchase behavior from untreated nets to ITNs. These approaches should be based upon a broad stakeholder consultation and informed through market analysis data. Based on the Springfield “making markets work for the poor” model, and working with Population Services International (PSI) in Tanzania, VectorWorks developed a report describing ITN markets in Tanzania. The report combined results from an omnibus survey conducted by PSI, the discrete choice

experiments study (Activity ME.3.B), a retail audit for ITNs conducted by PSI Tanzania in November/December 2016, data from the DHS 2015–2016, and the interviews with manufacturers completed under Objective IM.9.2. CCP has compiled the results into a report now in the final editing process. The report and its next steps are funded through the Tanzania budget in Year Three, and will be submitted with the Core and Tanzania activity codes.

Status: Tanzania market analysis report is in final editing and will be shared with PMI prior to presentation to Stakeholders’ Workshop in Tanzania scheduled for May 29, 2017. We are optimistic that the opportunities highlighted in the report will prove attractive to further commercial-sector investment in Tanzania.

IM.9.3 Operational Issues for Introduction of Next-Generation Nets

Brief activity description: A consultant was recruited in Year Two and wrote a report based on interviews and document reviews. We shared the report with PMI Washington and the deliverable was approved by PMI on January 10, 2017.

Status: Complete. No next steps. No dissemination of the report is planned, per discussion with AOR.

IM.9.4 Manufacturer Follow-Up

Brief activity description: VectorWorks assembled the evidence base in Tanzania to justify increased private-sector investment and to present the case to manufacturers and distributors to obtain a “go/no-go” decision from them.

Status: The evidence base to justify increased private-sector investment in Tanzania has been assembled, and is in the final editing process (see IM.9.1). The PowerPoint presentation and supporting report to present the case to manufacturers and distributors is in final internal project review and will be forwarded to PMI for review prior to the Stakeholders Workshop in Dar es Salaam at the end of May. We expect manufacturers and their distributors in Tanzania to make a “go/no-go” decision in the weeks following that workshop. If a “go” decision can be obtained, the process will inform development of a template for future public private partnerships in other countries involving commercial-sector distribution channels. The component pieces of the analysis are complete, as described above. The discussions around the Stakeholder Workshop will provide the basis for convincing the manufacturers and their Tanzania distributors.

Deliverables	Audience	Timing	Dissemination Plan	Status
Completed in Year 2: IM.9.2, Interviews with manufacturers.				
IM.9.1 Landscape market analysis	AMP EIWG Task Force members (PMI, implementing partners, NMCPs, other market players)	Quarter 3	Share by email	In process; delayed from Quarter 2 to Quarter 3

IM.9.3 Input into draft recommendations for introducing next-generation nets	PMI	Completed in Quarter 2	No dissemination of the report is planned, per discussion with AOR.	Approved by PMI on January 10, 2017
IM.9.4 Go/no-go decision from manufacturers and next steps (memo or report)	PMI	Quarter 3	Share by email	In process

Project Management

[PM.1 Project Startup – completed in Year One]

PM.2 Knowledge Management and External Communications

PM.2.A Website Enhancements and Maintenance

Brief activity description: VectorWorks keeps the VectorWorks website (www.vector-works.org) up to date with new resources, blog posts, and country information when available. VectorWorks also hosts M&E Malaria SBCC and NetCALC online training modules through the Johns Hopkins University training management system (TRAMS) site. VectorWorks continues to add new followers and “likes” to Facebook and Twitter on a regular basis through continued posting and promoted postings on Facebook.

Status: VectorWorks adds new items to the website when blogs and deliverables are approved. Our online courses produced under NetWorks were transferred to a new platform (CoursePlus) on February 15, 2017. VectorWorks notified all users of the online training modules for SBCC M&E and NetCALC both in English and French to the switch. The new links are updated on the website. The courses are available on CoursePlus through [On-Demand Courses](#).

Website Statistics, October 1, 2016–March 31, 2017

Site	Page Views ^a	Bounce Rate ^b	Average Session Duration
DurabilityMonitoring.org	1,861	24.69%	3:21
Vector-Works.org	7,784	59.77%	2:26

^a Page views: the total number of pages viewed. Repeated views of a single page are counted.

^b Bounce rate: the percentage of single-page visits (i.e., visits in which the person left the site from the entrance page without interacting with the page).

	Audience	Timing	Dissemination Plan	Status
VectorWorks website	PMI, implementing partners, NMCPs, malaria technical	Ongoing	Including website address in correspondence and project documents;	On schedule

	community		maintaining an electronic mailing list	
Online training modules for SBCC M&E and NetCALC	PMI, implementing partners, NMCPs, malaria technical community	Yearly	Share by electronic mailing lists, social media	On schedule

PM.2.B Knowledge Management Dissemination and Improved Communication

Brief activity description: The VectorWorks project employs digital media to support dissemination and promotional efforts via email announcements, regular blog posts, success stories, electronic mailing lists, communities of practice, newsletters, social media, and new tools.

Status: We are posting new content daily to the Facebook and Twitter accounts. The VectorWorks Twitter account (@vectormalaria) had 424 followers by the end of Quarter Two, and the VectorWorks Facebook page had 712 likes. Facebook and Twitter continue to bring visibility to VectorWorks. We gain new followers daily and create innovative content to bring in new followers/likes. PhotoShare is up to date with our photographs of Year Two activities. Currently we have several blogs and success stories in the works and have published four in the first half of Year Three.

Twitter Monthly Statistics, October 2016–March 2017, Total Followers = 424

Monthly	New Followers	Impressions	Profile Visits
October	14	6,474	224
November	14	10,100	440
December	11	9,356	402
January	13	7,175	348
February	19	8,537	321
March	22	12,400	375

Deliverables	Audience	Timing	Dissemination Plan	Status
Completed in Year 1: PM.2.B.1, Internal procedures manual; PM.2.B.2, Dissemination strategy; PM.2.4, Contact list. Completed in Year 2: PM.2.B.3–6, Newsletter, contact list, social media, Photoshare update.				
3. Newsletter	RBM partners and working groups, other vector control actors	Ongoing, quarterly	Share by electronic mailing lists	On schedule
5. VectorWorks Twitter and	RBM partners and working groups,	Ongoing, monthly	Social media	On schedule

Facebook accounts	other vector control actors, PMI			
6. Photoshare	PMI, implementing partners	Ongoing	Photoshare.org	On schedule
7. Blog posts	PMI, implementing partners	Ongoing	Social media, electronic mailing lists	On schedule?
8. Success stories for PMI	PMI	Ongoing	Share by email	On schedule?

PM.2.C American Society of Tropical Medicine and Hygiene

Brief activity description: The ASTMH meetings provide a valuable opportunity for VectorWorks to interact with malaria technical experts and researchers, providing both opportunities for dissemination of technical work/products and learning about new approaches. The project leverages the meeting to discuss and finalize work plan activities with PMI country teams, and planned a side meeting on durability meeting.

Status: At the 2016 meeting in Atlanta, VectorWorks met with PMI resident advisors, research colleagues, and attended sessions on ITNs and other vector control tools. The project met with several PMI resident advisors to finalize work plans, work plan modifications, and plan activities (Ghana, Guinea, Kenya, Liberia, Mozambique, Nigeria, Senegal, Tanzania, and Zimbabwe). We organized a discussion on durability monitoring for 60 people, introducing the Durability Monitoring Online Toolkit, the standard protocol, and discussing the importance of the potential risk factors for net durability. VectorWorks presented four posters:

1. Discrete Cost Experiment Poster Presentation
2. School Net Distribution in Tanzania Round 3 and 4 Poster Presentation
3. Zanzibar Continuous Distribution Process Evaluation Poster Presentation
4. Costing of School Net Distribution in Tanzania Poster Presentation

Jessica Lawson gave an oral presentation on the modeling toxicity of LLINs in water for various forms of aquatic life.

In preparation for ASTMH 2017 meeting in Baltimore, VectorWorks submitted three symposia proposals and prepared seven abstracts. Additional abstract topics are under development for ITN durability risk index, ITN misuse and repurposing in Malawi, and other research topics slated for second half of Year Three (counterfeit nets; Ghana ITN use; etc.):

Symposia:

1. LLIN Durability Assessments: What have we learned and what's next?
2. Monitoring efficacy of vector control tools: "Does this thing still work?"
3. Entomological and human behavioral drivers of residual malaria transmission in sub-Saharan Africa: implications for malaria control and elimination"

Abstracts:

1. Quantifying seasonal patterns of ITN use across sub-Saharan Africa
2. Population access to ITN is a better indicator of universal coverage than household ownership of one ITN for two people
3. Streamlining operations and reducing costs in school ITN distribution in Tanzania: 2013–2017
4. Costs of continuous ITN distribution channels: a multi-country case series
5. Characteristics of households that have purchased nets in six countries in sub-Saharan Africa
6. Challenges and recommendations for urban ITN distribution via mass campaigns
7. Feasibility assessments for continuous ITN distribution in Kenya and Guinea

Deliverables	Audience	Timing	Dissemination Plan	Status
Completed in Year 2: PM.2.C.1, Trip report.				
2. Trip report, including outcomes from durability monitoring investigator's meeting and LLIN Priorities meeting	AOR	Completed in Quarter 1	Share by email	Acknowledged by PMI on December 7, 2016

PM.3 Gender Aspects of ITN Distribution and Use

PM.3.E Gender Reporting

Brief activity description: In order to translate the gender strategy (PM.3.B) into implementation, the VectorWorks gender team met with VectorWorks team members individually to think through ways to examine and incorporate gender concerns into their Year Three deliverables and activities. The gender team is responsible for checking that gender has been considered in identified deliverables before they are submitted to PMI.

Status: VectorWorks shared the list of deliverables identified with PMI. The VectorWorks gender team has begun reviewing identified deliverables, the first being ME.3.B3, the Discrete choice experiment paper #1, and ME.9, which both found that while women slightly preferred conical nets, there were not any significant differences found between men and women.

A challenge has been finding time for additional review to ensure gender has been addressed. An additional challenge is that the activities were identified after the work plan was written, so extra effort is required to incorporate gender considerations. To address this challenge, gender will be considered when writing next year's work plan. The gender team will continue to review deliverables before submission and report on the findings in the annual report.

Deliverables	Audience	Timing	Dissemination Plan	Status
Completed in Year 1: PM.3.A, Gender analysis; PM.3.B, Gender strategy. Completed in Year 2: PM.3.D, Gender training and country addendums.				
Gender report section in semiannual reports;	PMI	Quarter 2, Quarter 4	Semiannual reports	Semiannual herein

completion rate and description of activities				
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PM.4 Project Communications, Coordination, and Reporting

Brief activity description: The VectorWorks project implements robust systems to coordinate among its own staff, assess its performance, and document progress.

Status: VectorWorks continues to meet on a weekly basis to review pertinent administrative, technical, and operational aspects of the project. We submit financial reports quarterly, and we submit narrative progress reports, such as this one, twice a year. Oversight, planning, and management of collaborative activities in many of our country programs benefit from supervisory visits by either the project director, senior technical advisor or program officer leads. Generally supervisory visits are incorporated into technical assistance trips. Such trips took place during this reporting period to Angola, DRC, Ghana, Guinea, Mozambique, and Tanzania. No supervision-specific trips were required. The senior management team meets weekly to discuss all issues around oversight, planning, and management of the project.

Deliverables	Audience	Timing	Dissemination Plan	Status
Completed in Year 1: PM.4.5, CCP worldwide meeting, PM 4.6, Finance orientation for subaward monitoring Completed in Year 2: PM.4.10, Project supervision Ghana trip report				
1. Weekly internal conference call (annotated agendas)	VectorWorks team	Weekly	Share by email	On schedule
2. Weekly coordination call with PMI project director/deputy director (minutes)	AOR, PD, DD	Weekly	Share by email	On schedule
3. Annual project work plan planning meeting	Partners, PMI project team	Quarter 3	PMI project team	In process
4. Internal planning meeting	CCP VectorWorks team	Quarter 3	n/a	In process
7. Bimonthly PMI update meetings	PMI	Bimonthly	PowerPoint	On schedule
8. Narrative progress reports	PMI	Due from partners end October and end	Share by email	On schedule

		April; due to USAID on November 15, May 15		
9. Financial reports	PMI	Quarterly	Share by email	On schedule
11. Financial training workshop for field officers on compliance and new Office of Management and Budget regulations	CCP field officers	Completed in Quarter 1 of Year 2	In person	Completed

[PM.5 Leadership in Strategic Health Communication Workshop – completed Year Two]

PM.6 Production Schedule for Success Stories

Brief activity description: VectorWorks has produced a number of success stories and blog posts over the first two years of the project. VectorWorks production of success stories and blog posts is now organized and planned for increased timeliness and greater project visibility.

Status: In January and February, KM Officer, Ms. Rebecca Shore and Agreement Officer’s Representative (AOR), Lilia Gerberg worked together to complete a proposed plan for success stories and technical briefs for Year Three. Some of the topics include durability monitoring, continuous distribution assessments, and residual transmission. PMI approved the schedule on March 14, 2017.

Deliverable	Audience	Timing	Dissemination Plan	Status
Year 3 production schedule for success stories, etc.	VectorWorks team, AOR	Completed in Quarter 3	Share by email	Delayed from Quarter 1. Approved by PMI on March 14, 2017

PM.7 Writing Retreats

Brief activity description: VectorWorks continues to have key deliverables each year that require focused writing time—away from the daily flood of emails, meetings, phone calls, and urgent requests. While we have increased staff to relieve some of this pressure, we believe that scheduling protected writing time is the only way to effectively move forward on the many written manuscripts and analyses that we need to complete to move ITN policy forward.

Status: Since the beginning of Year Three, VectorWorks has held five writing retreats, totaling eight days of intense writing and deliverable completion. See exact dates below:

- November 28, 2016

- December 19–20, 2016
- January 5–6, 2017
- February 20–21, 2017
- March 23, 2017

Cost-Share Update

As of September 20th 2016, we calculate the cost-share contributions for VectorWorks as described in the table below. With the signature of the DFID grant for PSMP (Private Sector Marketing Project) in Ghana on July 4th, we anticipate being able to meet 100% of VectorWorks cost-share requirements with those funds (approximately 5 million GBP) in the coming years.

Category	Description	Doc Number	Type	Valuation Method	Value	Date Added
Funded Project Cost	Entire DFID grant 116667- Oct 2014- Jun 2015 less items from prior periods	Entire grant Oct14-Jun15 less prior period amts	Other Expenses	Actual Cost	\$ 549,739.13	7/27/2015
Funded Project Cost	Entire DFID grant 116667- Jul 2015- Sept 2015	Entire grant Jul15-Sep15	Other Expenses	Actual Cost	\$ 328,006.44	11/2/2015
Funded Project Cost	Severance Expenses for DFID grant (116667) which were funded from discretionary	115158674	Salary	Actual Cost	\$ 45,000.00	11/2/2015
Funded Project Cost	Trailing Severance Expenses for DFID grant (116667) which were funded from discretionary	115163231	Salary	Actual Cost	\$ 367.76	11/2/2015
Funded Project Cost	Entire Agreement 123843 DFID PSMP - Jul 2016 - Sep 2016 Inception period invoice - fixed amount per budget		Other Expenses	Exchange rate of contractual cost	\$ 382,152.00	10/31/2016
Funded Project Cost	PSI contributed Cost Share (October 2014-September 2015)		Subaward Contribution	PSI Letter	\$ 44,595.00	2/3/2017
Funded Project Cost	Entire Agreement 123843 DFID PSMP- Oct - Dec 2016 (Omitted Exchange Loss)		Other Expenses	Actual Cost	\$ 248,711.93	2/3/2017
Total					\$ 1,598,572.26	
Potential Required Cost Share per VectorWorks Obligations through December 31, 2016:					1,699,747.50	

Percent of Required Cost Share achieved as of December 31, 2016 94%

*Note: Required cost share is 10% of obligated costs, therefore it will change as obligation is added

Environmental Monitoring and Mitigation Report (EMMR)

While the majority of the EMMR is reported annually, as per EMMR Part 2 of 3, VectorWorks is required to report semiannually on the following:

Category of Activity from Section 5 of VectorWorks IEE	Describe specific environmental threats of your organization's activities	Description of mitigation measures for these activities	Who is responsible for monitoring	Monitoring Indicator
Distribution of Public Health Commodities	Reduced efficacy of LLINs and environmental/human health impacts if LLINs are misused	Applies only in countries where VectorWorks distributes LLINs and is responsible for BCC messaging	VectorWorks Project Director and AOR	Project Indicators (GHANA): 25,858 total reached through SBCC messages on ITN use and care, particularly washing of nets. This was through training and workshops of regional focal persons, health promotion officers, and school teachers.

Core Deliverables Table

Active deliverables in Year Three are included. Deliverables completed in Years One and Two are not.

Code	Deliverable	Status	Year Started	Date Completed (Submitted)	Date Approved
	VCWG meeting conducted	Completed	3	2/10/2017	3/31/2017
	VCWG Presentations and trip report	Completed	3	3/3/2017	3/31/2017
PC.1.C.7	LLIN Priorities work stream work plan for 2017	In Process	3		
PC.1.C.8	New Challenges New Tools work stream work plan for 2017	In Process	3		
	AMP Presentations 2017	Completed	3	3/3/2017	3/31/2017
	AMP trip report 2017	Completed	3	3/3/2017	3/31/2017
PC.2.B.1	Manuscript on transitioning from campaigns to CD	In Process	1		
PC.2.B.4	Coordination meetings on transitioning from campaigns to CD	Ongoing	3		
	Presentations to SRN and CRSPC mtgs and/or technical assistance on how to transition to CD	Completed	3	1/31/2017	1/31/2017
PC.2.B.6	Support for GFATM concept note development, end 2017	Submitted	3	3/23/2017	
	Draft repurposing ITN concept note from VCWG LLIN work stream for GMP review via VCTEG	Completed	3	3/23/2017	3/31/2017
	Draft policy statement for GMP on repurposing ITNs	Completed	3	3/23/2017	3/31/2017
	Trip reports from CRSPC and SRN meetings	Completed	3	1/31/2017	1/31/2017
	Trip report MPAC meeting #1	Cancelled Mod 1	3		3/6/2017
	Trip report MPAC meeting #2	Cancelled Mod 1	3		3/6/2017
PC.3.A.4	Tools for M&E program staff on the RBM and/or VW websites	Will request to cancel	2		
PC.3.A.5	Publishable quality paper on the new calculation and its application	Will request to cancel	2		

Code	Deliverable	Status	Year Started	Date Completed (Submitted)	Date Approved
PC.3.A.6	Publishable-quality paper making the case for the population access indicator as the key universal coverage indicator for ITNs	In Process	3		
PC.3.B.2	Report on PMI countries utilizing the analysis plan	In Process	3		
PC.4.2	GIS report on population estimates	Completed	1	5/24/2016	11/11/16
PC.4.5	Set of survey instruments	In Process	2		
PC.4.6	Summary process manual	Not Started	2		
PC.4.7	Pilot test survey instruments in two sites (TBD) report	In Process	2		
PC.4.8	Final decision tree	Not Started	2		
PC.4.9	Complete net misuse toolkit	Not Started	2		
PC.4.10	Malawi Planning visit trip report	Completed	3	9/28/2016	9/29/2016
PC.4.11	International workshop report	In Process	3		
PC.5.6	Tracking ANC attendance in TZ before and after ITN distribution report	Cancelled Mod 1	2		3/6/2017
PC.5.7	Translated MiP Advocacy Toolkit into French	In Process	3		
PC.6	Working paper on alternative distribution strategies in urban areas	In Process	2		
ME.1.1	Develop standardized guidelines/procedures on how to conduct ITN durability monitoring	Completed	1	9/22/2016	10/17/2016
ME.1.2	Develop standardized tools for data analysis and reporting/dissemination	Completed	1	8/3/2016	8/3/2016
ME.1.3.A-C	Durability monitoring data repository	In Process	1		
ME.1.3.D	Prepare PMI eight country pooled data and cleaning and analysis	Completed	3	2/8/2017	3/28/17
ME.1.3.E-G	Modelling work using pooled DM data	In Process	3		
ME.1.5	Develop an index for environmental and behavioral risk	In Process	3		

Code	Deliverable	Status	Year Started	Date Completed (Submitted)	Date Approved
ME.1.6	Develop thresholds for action based on key results at each monitoring assessment	In Process	3		
ME.1.7	Webinar on use of toolkit to analyze data and interpret those data	Completed	3	11/30/2016	12/5/2016
ME.2.B.3	Quarterly newsletter alternative vector control tools	Ongoing	3		
ME.2.B.4	Internal report on user survey results	Not Started	3		
ME.3.A.2	Tanzania SNP3 costing and output data report	Completed	1	6/23/2016	3/20/2017
ME.3.A.3	Ghana health facility costing update	In Process	1		
ME.3.A.4	Mali health facility costing and output data report	Submitted	2	12/21/2016	
ME.3.A.5	Zanzibar CD costing	Submitted	2	8/15/2016	Acknowledged 8/23/2016
ME.3.A.6	Mainland Tanzania Health Facility Costing	Not Started	3		
ME.3.A.7	Summary manuscript for continuous distribution costs based on deliverables 1 - 6	Not Started	3		
ME.3.A.8	Manuscript of meta-analysis comparing continuous distribution and mass campaign costs	In Process	3		
ME.3.A.9	Manuscript connecting continuous distribution costs to transmission modeling	In Process	3		
ME.3.B.2	Experimental Auctions Study report	Completed	2	10/18/2016	11/29/2016
ME.3.B.3	Discrete choice experiment (DCE) paper #1	Submitted	3	12/7/2016	12/27/2016
ME.3.B.4	Discrete choice experiment (DCE) paper #2	Postponed	3		
ME.5.B.1	Manuscript Madagascar community distribution pilot	In Process	1	5/8/2017	
ME.5.B.2	Manuscript on Ghana school distribution pilot	In Process	1		
ME.5.B.4	Publishable quality manuscript on community CD pilot in South Sudan	In Process	2	4/12/2017	
ME.6.6	Nigeria Cross River schools	In Process	1	4/20/2017	

Code	Deliverable	Status	Year Started	Date Completed (Submitted)	Date Approved
	published				
ME.6.7	Hole Index Methods paper published	In Process	1		
ME.7.2	Sub-national use of use:access ratio published	In Process	1		
ME.7.4	Annex to use:access report containing country maps	Completed	2	8/5/2016	1/4/2017
ME.7.5	Updated PMI report on access indicator showing stratification by region, season, and risk group, with updated maps	Completed	3	4/20/2017	Acknowledged 4/20/2017
ME.8.A.3	Updated research agenda	Not started	3		
ME.9.2	Publishable-quality manuscript on net preferences, submitted to journal	Completed	3	3/21/2017	4/3/2017
ME.11	Publishable review of lit on outdoor malaria transmission	In Process	2		
ME.12	Revised malaria SBCC indicator guide	In Process	2		
ME.14.1	Planning memo for expected attendees and outputs of an African Outdoor Transmission Network workshop	In Process	3		
ME.14.2	VCWG work stream presentation on outdoor transmission summarizing the state of research outlining key actors and activities	Completed	3	2/8/2017	3/31/2017
ME.15	Counterfeit Nets: Summary report from three countries; recommendations for next steps	In Process	3		
ME.16.1	Ghana 2014 DHS report on ITN use	In Process	3		
ME.16.2	Nigeria 2015 MIS report on ITN use	Delayed	3		
ME.17	Publishable-quality paper on who buys nets, a multicountry analysis	In Process	3		
IM.5	CD accountability recommendations report	Completed	1	4/6/2017	4/24/2017
IM.8.2	Online Continuous Distribution Toolkit V2	Submitted	2	4/12/2017	

Code	Deliverable	Status	Year Started	Date Completed (Submitted)	Date Approved
IM.9.1	Landscape Market Analysis desk analysis	In Process	2		
IM.9.2	Landscape Market Analysis interviews	Completed	2	5/24/2016	1/18/2017
IM.9.3	Net Generation Nets	Completed	2	12/1/2016	1/18/2017
IM.9.4	Go/no-go decision from manufacturers and next steps (memo or report)	In Process	3		
PM.2.A.1	Website	Ongoing	1		
PM.2.B.3	Newsletter	Ongoing	2		
PM.2.B.5	VectorWorks Twitter and Facebook Account	Ongoing	2		
PM.2.B.6	Photoshare	Ongoing	2		
PM.2.B.7	Blog Posts	In Process	3		
PM.2.B.8	Success stories for PMI	In Process	3		
PM.2.C.2	Trip report, including outcomes from durability monitoring investigator's meeting and LLIN Priorities meeting	Completed	3	11/30/2017	12/7/16
PM.3.D.1	Training Curriculum	Completed	2	8/17/2016	11/29/16
PM.3.D.2	Country specific addendums to VectorWorks Gender Strategy for TZ and Ghana	Completed	2	8/17/2016	11/29/16
PM.3.E	Gender report section in semi-annual reports; completion rate and description of activities	In Process	3		
PM.4.1	Weekly internal conference call agendas	Ongoing	1		
PM.4.2	Weekly PMI/VectorWorks coordination call	Ongoing	1		
PM.4.3	Annual work plan meeting	Ongoing	1		
PM.4.4	Internal planning meeting	Ongoing	1		
PM.4.7	Bi-monthly PMI update meetings	Ongoing	1		
PM.4.8	Narrative progress reports	Ongoing	1		
PM.4.9	Financial reports	Ongoing	1		
PM.6	Year 3 Production Schedule for Success Stories, etc.	Completed	3	2/1/2017	3/14/2017
PM.7	Writing Retreats	Ongoing	3		

ANGOLA

AN.IM.1 ITN Strategy Support

Brief activity description: The NMCP in Angola is planning to implement a mass campaign to distribute ITNs in May 2017. In preparation for the campaign, VectorWorks, through its implementing partner Tropical Health, initiated a review of the ITN strategy in Angola, in Year Two work plan activities. The process continued into the Year Three work plan.

Status: VectorWorks sent the initial trip report and draft ITN strategy to PMI and later to the key stakeholders involved in the development, including the NMCP, for review and comments (November 22, 2016). VectorWorks addressed comments made by PMI Angola regarding the trip report, such as adding more key documents and making the report more actionable. VectorWorks received the AOR acknowledgement of receipt for the trip report and the draft ITN strategy review (*Strategic and Implementation Approach and Next Steps*) on November 30, 2016.

VectorWorks made a second trip to Angola in Year Three to facilitate the development of a management plan and handover of the ITN strategy review to the NMCP. A long onboarding process and a delay in the process of obtaining visas for VectorWorks' consultants required increased support in the planning for the macroplanning workshop. PMI Angola and VectorWorks adjusted the scope of work for the second phase to include assistance in the preparation of the macroplanning workshop. VectorWorks sent an updated version of the ITN strategy review (*Strategic and Implementation Approach*) to PMI on April 11, 2017.

Deliverable	Audience	Timing	Status
Trip report	PMI	Completed in Quarter 1	Submitted to PMI on November 30, 2016

AN.IM.2 Technical Assistance for ITN Distribution

[VectorWorks recoded AN.IM.2 technical assistance for ITN distribution as activity AN.IM.3 in Year Three. PMI approved this modification on January 30, 2017.]

AN.IM.3 Technical Assistance for Mass LLIN Campaign

Brief activity description: VectorWorks supports the NMCP and implementing partners to plan and implement a mass ITN distribution campaign scheduled to begin in May 2017. The campaign plans to use a coordinated national approach, rather than the province-by-province approach previously used. VectorWorks works with a team of international and in-country consultants to ensure that necessary technical support is readily available.

VectorWorks consultants provide support in key areas of the mass ITN campaign, including creation of a well-coordinated timeline; revision and development of training and data collection tools; development of microplans and mapping of key assets; and strengthening coordinating mechanisms, such as subcommittees.

Status: VectorWorks has provided weekly reports and trip reports to PMI Angola and PSI to ensure that stakeholders are aware of VectorWorks project activities.

VectorWorks agreed to share initial drafts of key campaign documents with PMI Angola and formally submit them as deliverables in a later quarter when finalized.

VectorWorks supported the NMCP primarily through an in-country consultant, Mr. Israel Chauke, who facilitated the macroplanning, microplanning, and development of coordinating committees for the NMCP. Macroplanning took place in mid-December 2016, led by the NMCP, Mr. Chauke, and VectorWorks international logistics consultant, Mr. Jerónimo Zandamela. Provincial representatives were also present to learn about the macroplanning process. The following documents resulted from macroplanning: quantification of nets (submitted on December 21, 2016); macroplanning workshop report (approved by PMI on April 11, 2017); and a draft detailed timeline (submitted on January 5, 2017). VectorWorks sent an updated quantification document to the NMCP, PSM, and PSI on February 13–14 2017.

VectorWorks, in collaboration with the NMCP, facilitated microplanning through Mr. Chauke and Mr. Zandamela, as well as international communication consultant, Mr. Greg Pirio. The microplanning workshop included NMCP and three provincial representatives from each province as well as some key stakeholders, including PSI. Provinces began to draft their individual microplans during the workshop. In the lead-up to the workshop, VectorWorks consultants developed workshop materials, including microplanning training of trainers' (ToT) guide (submitted on December 29, 2016), microplanning budget guidelines (submitted on December 29, 2016), and microplanning template (submitted on January 5, 2017). VectorWorks submitted the microplanning workshop agenda, warehouse stock form, guide for evaluation and inspection of warehouses, and the microplanning ToT guide to PMI on February 6, 2017. The project also shared these documents with PSI, PMI's implementation partner, on February 14, 2017.

Mr. Chauke worked with the NMCP in the development of campaign subcommittees: setting up initial meetings for subcommittees and working groups, identifying and engaging key stakeholders and drafting and assisting in the formal approval of terms of references for subcommittees (submitted on February 16, 2017). Mr. Chauke created and disseminated a group contact list shared with PMI, PSI, and the NMCP on February 14, 2017, as well as worked on the formal request for reallocation of Global Fund nets.

Mr. Chauke and Mr. Zandamela, in collaboration with the NMCP, developed other overarching campaign documents, including a draft plan of action (submitted with comments on February 16, 2017), a draft logistics plan of action (submitted on February 19, 2017), and a draft risk mitigation plan (submitted on January 5, 2017).

The commitment to and leadership of the campaign by the NMCP has been a major challenge toward timely progress. The NMCP's lack of commitment difficult situation for partners who need to create a balance between waiting for the NMCP to take the lead in activities and moving forward with activities with minimal involvement from the NMCP to ensure timely completion of activities. To address this, VectorWorks worked to increase communication between all stakeholders in the campaign, motivating the NMCP to take ownership of the campaign and working closely with the NMCP to ensure an effective campaign.

A second challenge has been the recruitment and retention of in-country consultants. VectorWorks initially only had one in-country consultant in the work plan. After VectorWorks began its direct support, VectorWorks and PMI understood the need for more than one in-country consultant. VectorWorks conducted recruitment for a second in-country logistics/technical consultant, but did not find any suitable and available candidates. Mr. Chauke resigned from his position at the end of February 2017, soon after the unsuccessful recruitment of a second consultant. To alleviate the lack of an in-country consultant, VectorWorks increased the support of international consultants.

VectorWorks will continue to provide support to the NMCP and partners through September 2017. A logistics plan of action and plan of action will be completed to guide the second phase of distribution. VectorWorks will also provide support during the delivery of the first round of USAID-PMI nets.

Deliverable	Audience	Timing	Status
Weekly progress Reports	AMP, NMCP, PMI	Quarters 1–4	Ongoing
Trip reports	PMI	Quarters 1–4	Submitted to PMI 2/23/2017, 3/3/2017, 4/18/2017
Macroplanning workshop report	AMP, NMCP, PMI	Completed in Quarter 1	Submitted January 24, 2017
Campaign strategy documents (campaign plan of action and logistics plan of action, timeline, macro budget, list of supporting documents required, and macro quantification)	PMI, NMCP	Quarters 1–3	Ongoing
Tools, guidelines, and templates (including microplanning template)	PMI, NMCP	Quarters 2–4	Ongoing

AN.IM.4 Communications Strategy and SBCC Materials

Brief activity description: VectorWorks works with the NMCP’s SBCC focal person and communication subcommittee to develop an SBCC strategy and materials for the mass ITN distribution campaign scheduled for May 2017. Messaging will promote continued use and care for ITNs as well as disseminate campaign details, such as when registration will occur, how and where to obtain ITNs, and other procedure-related details to help households obtain nets.

Status: VectorWorks agreed to share key campaign documents in their initial drafts with PMI Angola and formally submit them in a later quarter when finalized.

The SBCC review workshop was delayed to the end of Quarter Two. The delay related to the late formation of the communication subcommittee, due to delayed formal approval of the subcommittee. When VectorWorks’ international consultant, Mr. Pirio, arrived in country, he was unable to complete much of his proposed scope of work because of lack of a formal communication subcommittee. The workshop was held in an abbreviated form at the end of March, including a one-day workshop as well as two technical meetings to draft and review key messages. VectorWorks shared the results of the workshop with PMI in a weekly update on March 29, 2017, and a full workshop report will be shared in Quarter Three.

VectorWorks shared a draft communication plan with PMI on March 13, 2017. Mr. Pirio presented the communication plan to the communication subcommittee on March 21, 2017, for comments and approval.

Mr. Pirio developed a municipal planning document with the communication subcommittee on February 9, 2017, and shared it with PMI on March 3, 2017.

The NMCP's lack of ownership and delays due to government processes have posed challenges throughout the process for VectorWorks. Mr. Pirio has worked closely with the NMCP communication focal person to improve her leadership skills, and throughout the last few months, the focal person has demonstrated increased leadership and involvement in communication activities for the campaign.

Deliverable	Audience	Timing	Status
SBCC review workshop report	PMI, NMCP	Quarter 2	Delayed to Quarter 3
Communication plan	PMI, NMCP, MOH	Quarter 2	Draft submitted March 3, 2017
SBCC and related training materials	PMI, NMCP, MOH	Quarter 2	Ongoing

AN.IM.5 Process Evaluation for Mass LLIN Campaign

Brief activity description: VectorWorks will conduct a process evaluation of the first phase of the mass ITN campaign. The process evaluation will analyze how well implementation plans were followed and inform further phases of the implementation.

Status: VectorWorks had a preliminary planning meeting to outline the key ideas of the process evaluation. VectorWorks are currently gathering information to support the development of a draft scope of work for the process evaluation. VectorWorks will meet with PMI to discuss further steps after sharing a draft scope of work. A strong collaboration with PSI will be needed to assure access to key personnel, and the results of the implementation are used in subsequent phases.

Deliverable	Audience	Timing	Status
Process evaluation protocol and data collection tools	PMI, NMCP, implementing partners	Quarter 2	In progress
Trip report	AMP, PMI	Quarter 3	Not started
Final process evaluation report	PMI, NMCP	Quarter 3	Not started

AN.PM.1 Work Plan and Reporting

Brief activity description: VectorWorks is working with PMI-approved work plans and will adhere to reporting guidelines within the work plans.

Status: PMI approved VectorWorks Angola's work plan on November 3, 2016. PMI approved modification 1 of the work plan on January 30, 2017. VectorWorks delivered the Quarter One financial report to PMI, and this current document serves as the semiannual report.

Deliverable	Audience	Timing	Dissemination Plan	Status
Year 3 work plan	PMI	Completed in Quarter 1	Share by email	Approved by PMI on November 3, 2016
Quarterly financial	PMI	Quarters 1–4	Share by email	Ongoing

reports				
Semiannual progress reports	PMI	Quarter 2, Quarter 4	Share by email	Quarter 2 report submitted (herein)

BURMA/MYANMAR

MM.1 ITN Durability Monitoring

Brief activity description: VectorWorks oversees durability monitoring of two brands of ITNs at one site in Myanmar to provide the NMCP, RBM partners, and PMI with information on performance and estimated “useful life” of ITNs distributed during the second round of the mass campaign and to strengthen in-country capacity to undertake future durability monitoring. Based on campaign distribution timing, high malaria-transmission potential, and logistic accessibility, NMCP and PMI selected Tamu Township in Sagaing Region as the site for durability monitoring. The Myanmar NMCP organized mass distribution of ITNs in November and December 2015, evenly split between two brands: DawaPlus 2.0 and PermaNet 2.0. The primary objectives of the ITN durability monitoring are as follows:

- Monitor the physical durability of two brands of ITNs and estimate the median ITN survival during a three-year period;
- Monitor insecticidal activity of the two brands of ITNs through bioassays;
- Strengthen the capacity of the NMCP and in-country partners to conduct future durability monitoring independently in the future;
- Assess major behavioral aspects of net care and repair, and their impact on physical durability.

Status: Fieldwork for the 12-month data collection occurred between December 5, 2016, and January 1, 2017, in Tamu Township, Sagaing. Of the baseline cohort of households, VectorWorks’ implementing partner, PSI Myanmar, interviewed 285 of 290 households during data collection, and inspected 521 nets from 582 at baseline. Net attrition for both brands combined at 12 months was 29.5%, but only 1.1% of both brands combined were discarded due to wear and tear, and 24.9% were simply given away to family or friends. Among surviving nets, 97% were still serviceable at 12 months. PSI Myanmar collected 60 nets and sent them to the NMCP for bioassay, and identified a further 120 for bioassay at 24 months. Early results from the bioassay showed an overall mean mortality of 80% after 24 hours for both brands, with no statistical difference between brands.

During the data collection, many cohort households were away at their farms for harvest. Data collectors were able to locate heads of household at their farms and administer the follow-up survey for all but five households. PSI Myanmar and VectorWorks will consider the timing of harvest season during planning for the next round of data collection, scheduled to occur around December 2017.

MM.2 Data Analysis and Dissemination Workshop

Brief activity description: Capacity strengthening is a key component of the ITN durability monitoring activity. VectorWorks through implementing partner PSI Myanmar conducted a data analysis workshop for one week and used data collected from the six-month baseline fieldwork. Training was done with PSI Myanmar staff to ensure they can function as trainers in the future with NMCP/Vector-borne Disease Control Programme (VBDC) staff.

Status: PSI Myanmar plans to conduct a dissemination workshop with NMCP/VBDC staff in July/August 2017, where findings from both baseline and 12-month assessments will be discussed. Initially this workshop was to be included with the previously conducted data analysis workshop, but had to be pushed forward due to lack of partner availability during August 2016.

Deliverable	Audience	Timing	Dissemination Plan	Status
Workshop agenda	PMI, NMCP, IVM, and co-investigators	Completed in Quarter 1	Share by email with PMI	Submitted to PMI April 28, 2017
Report	PMI, NMCP, and co-investigators	Completed in Quarter 1	Share by email with PMI	Submitted to PMI April 28, 2017

MM.3 ASTMH Attendance

Brief activity description: VectorWorks proposed to send the PSI principal investigator, Dr. Si Thu Thein, to the 2016 American Society of Tropical Medicine and Hygiene (ASTMH) annual meeting in Atlanta, Georgia. At ASTMH, the principal investigator had the opportunity to participate in durability monitoring meetings scheduled for the week.

Status: Dr. Thein traveled to ASTMH from November 13-17, 2016 but did not require funding from VectorWorks. He was still able to attend all durability monitoring meetings and discuss the activity with key stakeholders at the conference.

Deliverable	Audience	Timing	Dissemination Plan	Status
Trip report	PMI	Quarter 1	Not Applicable	Canceled

MM.PM.1 Work Plan and Reporting

Brief activity description: VectorWorks will provide PMI with an annual work plan, quarterly financial reports, and semiannual progress reports for approval. VectorWorks understands that USAID may request information as needed for the purposes of the PMI annual report, such as strategic planning, VIP visits, and congressional reports.

Status: VectorWorks Year 3 work plan was approved by PMI on September 21, 2017, and all quarterly financial reports are up to date and have been provided to PMI through the first half of year 3. This report serves as the semiannual progress report.

Deliverable	Audience	Timing	Dissemination Plan	Status
Work plan	PMI	Completed in Quarter 1	Send by email to PMI	Approved on September 21, 2016
Quarterly financial reports	PMI	Quarters 1–4	Send by email to PMI	On schedule
Semiannual progress reports	PMI	Quarter 2, Quarter 4	Send by email to PMI	Quarter 2 report submitted (herein)

DEMOCRATIC REPUBLIC OF CONGO

DRC.1 ITN Durability Monitoring

Brief activity description: The ITN durability activity in the Democratic Republic of the Congo (DRC) follows the general guidance of PMI: in each of the selected sites, one administrative unit (*health zone*) is selected, and—following the mass distribution of ITNs—a representative sample of households is selected for a baseline survey within six months of the mass distribution. All campaign nets in these households have a label with a unique identification number for follow-up. Tropical Health, VectorWorks' primary monitoring and evaluation partner, conducts an assessment of attrition and physical condition of these nets at 12, 24, and 36 months following the mass campaign. At each round of follow-up, Tropical Health collects a sample of 30 additional campaign nets at each site for laboratory assessment of insecticidal effectiveness (bioassay). These additional nets are from outside the study net cohort at 12 and 24 months of follow-up and directly sampled from the cohort at 36 months. At all follow-up points, data collectors monitor various environmental and behavioral risk factors for durability. The ITN brands being monitored are the polyester-based DawaPlus 2.0 and the polyethylene-based DuraNet. The sites are directly bordering each other so the project can make a comparison between the brands.

Status: The NMCP and two implementing partners led mass ITN distributions in Mongala and Sud-Ubangi districts in July and August 2016. The two sites, Ndege and Binga health zones are located in the equatorial northeast of DRC and have hyperendemic and holoendemic malaria. Tropical Health completed baseline fieldwork in October 2016. Prior to the fieldwork, VectorWorks field partners organized a five-day training to familiarize field teams with the study design, ethics of fieldwork, and tools and methods for use in the field. Data collection took place on October 19–24 in Sud-Ubangi and October 27–31 in Mongala.

At baseline, field teams registered 240 households and 754 campaign nets, sufficient to reach target enrollment for the study. Nine field workers and one team supervisor at each site conducted household surveys to gather information on potential net damage factors, including sleeping-space environment, net handling, exposure to ITN messaging, and general attitude toward ITN use and care. Household characteristics indicated a rural environment with simple housing, livestock as the most common household asset, and very low mobile-phone ownership (18%).

Baseline results indicate that across both sites, only 40% of ITNs were hanging in the household, while the vast majority were still in the package. However, the proportion of non-campaign nets hanging in the household was more than 80%, indicating that households would likely continue using those nets before switching to campaign nets. Overall, campaign net attrition was between 6% and 8%, but nearly all attrition was due to giving nets away, and only four nets were unserviceable at baseline, resulting in a net survival estimate of 99.5% at baseline.

The first round of follow-up data collection will occur in August 2017. Fieldworker training will take place during the first week of August, and data collection, including bioassay sampling, will occur immediately following at both sites.

Deliverable	Audience	Timing	Dissemination Plan	Status
Baseline training and fieldwork	PMI, NMCP, field partners	Completed in Quarter 1	Send an email to PMI	Complete
Baseline assessment report	PMI, NMCP, field partners	Completed in Quarter 1	Send an email to PMI	Submitted to PMI DRC March 21, 2017
12-month training and fieldwork	PMI, NMCP, field partners	Quarter 4	Send an email to PMI	In preparation
12-month assessment report	PMI, NMCP, field partners	Quarter 4	Send an email to PMI	Not started
Data analysis workshop	PMI, NMCP, field partners	Quarter 4	Send an email to PMI	Not started

DRC.2 School ITN Distribution Technical Assistance

Brief activity description: VectorWorks is providing technical support to PMI DRC, the United Nations Children’s Fund (UNICEF), and the NMCP in the early planning stages for school-based continuous distribution of ITNs. Following a pilot implemented by PSI, the NMCP and PMI will extend school-based distribution to three provinces in 2017: Tanganyika, Lualaba, and Lomami. VectorWorks is helping the DRC team think through what steps need to be in place for planning, implementation, and evaluation of the distribution.

Status: In March 2017, Ms. Sara Berthe traveled to Kinshasa to work with the mission, UNICEF, and NMCP to provide general guidance on school-based continuous distribution, using the Continuous Distribution Toolkit as a guide, and to start working with the team to develop an implementation plan. Ms. Berthe created a general orientation guide to school-based continuous distribution for use across the country, which includes examples and tools that VectorWorks has used successfully in other PMI countries. Given that the DRC is a decentralized country and provincial-level officials were not able to travel to Kinshasa to participate in meetings during this visit, it was challenging to put together specific provincial-level implementation guides. The next steps include Ms. Berthe continuing to work with UNICEF and the NMCP to provide guidance on conducting provincial assessments, the results of which will guide provincial-level implementation plans and microplanning meetings.

Deliverable	Audience	Timing	Dissemination Plan	Status
CD implementation plan for DRC, including annexes for a timeline, budget,	PMI, UNICEF, NMCP	Quarter 3	Send an email to PMI	In process

communication plan, evaluation, logistics and implementation support				
Provision of sample documents for use in the planning, implementation, and evaluation of ITN school based distributions, including training guides, transport plans, distribution forms, and quantification tools	PMI, UNICEF, NMCP	Quarter 3	Send an email to PMI	In process
Comments on revised tools, if requested by UNICEF	PMI, UNICEF, NMCP	Quarter 3	Send an email to PMI	In process

DRC.PM.1 Work Plan and Reporting

Brief activity description: VectorWorks will provide an annual work plan to be approved by PMI DRC, quarterly financial and semi-annual progress reports. VectorWorks understands that they may be asked to provide information as needed by USAID for the purposes of the PMI annual report, strategic planning, VIP visits, congressional reports, etc.

Status: PMI approved VectorWorks Year 3 work plan October 14, 2016, and all quarterly financial reports have been submitted.

Deliverable	Audience	Timing	Dissemination Plan	Status
Work plan	PMI	Quarter 1	Send an email to PMI	Approved on October 14, 2016
Quarterly financial reports	PMI	Quarterly	Send an email to PMI	On schedule
Semiannual progress reports	PMI	Quarter 2, Quarter 4	Send an email to PMI	Herein (Quarter 2)
Trip report(s)	PMI	Within two weeks of travel	Send an email to PMI	Submitted to PMI

Summary of Year Three Activities

Building on the efforts of Year One and Year Two to expand and improve health-facility-based ITN distribution in Ghana, in Year Three, VectorWorks expanded health-facility-based ITN distribution to the Upper West Region. Health facilities in all 10 regions are now distributing ITNs through ANC and EPI. To improve the performance of health workers in the ITN distribution program and to strengthen the continuous distribution program at the health facility level overall, VectorWorks funded regional and district teams in 5 regions to offer on-the-job training and supportive supervision to 95,119 health workers in 2,815 health facilities. VectorWorks also organized a workshop that brought together key stakeholders to develop health-facility-based malaria SBCC messages and materials. The goal of this workshop was to create messages, develop a guide to serve as a reference for health workers, and create posters to facilitate informal education for clients and stakeholders on the importance of ITNs and how to properly use and care for them. VectorWorks held regional review meetings in 5 regions to review the performance of district teams and to provide a platform for district team members to share experience and lessons learned about health facility net distribution.

VectorWorks supported Ghana's school-based continuous distribution channel by training 22,644 officers of the Ghana Education Service (GES)—35 at the national/regional level, 876 district officers, and 21,733 school officers—on the primary school malaria prevention SBCC program. School health teams in 7,567 schools in 72 districts are now trained for health promotion with an emphasis on malaria SBCC activities. With regards to the ITN distribution campaign planned for primary schools in Week Four and Week Five of May 2017, VectorWorks collected, validated and is in the process of finalizing enrollment data. VectorWorks expects about 1.3 million ITNs to be distributed to students in primary classes 2 and 6 in up to 22,000 primary schools in 9 regions of Ghana (Volta, Eastern, Western, Greater Accra, Central, Ashanti, Brong Ahafo, Northern, and Upper East).

Policy Activities (PC)

GH.PC.1 Coordination

GH.PC.1.A ITN Subcommittee Meetings

Brief activity description: The ITN subcommittee meetings provide opportunities for stakeholders involved in ITN distribution activities in Ghana to discuss issues around ITNs, including planning for net distribution activities, promotion of net use and care, and review of the implementation of the various net distribution strategies. VectorWorks planned to support the organization of four such meetings, on a quarterly basis, by way of venue and snack provisions.

Status: VectorWorks funded and participated in two ITN subcommittee meetings. The first meeting was held from October 5–6, 2016, in Koforidua, Eastern Region, to review Ghana's ITN distribution channels. Key participants included the PMI resident advisor, the program manager and deputy program manager of the NMCP, implementing partners, regional coordinators of the GES's School Health Education Program (SHEP), and Ghana Health Service (GHS) malaria focal persons. The overall key recommendations made are listed

below, and VectorWorks will be focusing on the recommendations related to health-facility-based and school-based ITN distributions.

Mass campaigns:

- Shorten the duration of mass campaigns to a maximum of one year nationwide; six months is best.
- An efficient urban distribution strategy is required to address the unique characteristics and complexities of urban populations.
- Districts and regions should take control of net distribution campaigns as they do with National Immunization Days.
- Emphasize quality registration, data validation, and community mobilization.

Health-facility-based distributions:

- Enhanced routine distribution hinges on a strong supply chain and strong stock management.
- Improve documentation and accountability of ITNs received and distributed.
- Commitment on the part of district teams is needed to ensure improved supply of ITNs and improved documentation (i.e., service delivery records and monthly reporting in the DHIMS2).

School-based distributions:

- Address data quality issues by ensuring data is properly validated at the district level.
- Collect enrollment data during the second term (January–March) to reduce data variability during ITN distribution in May.
- The distribution mechanism should address any data differences between the time of enrollment data collection/data validation and the time of ITN distribution, and should ensure that every child in the targeted classes receives an ITN.

The second ITN subcommittee meeting was held on March 2, 2017 at the VectorWorks office in Accra. It was attended by VectorWorks, the Private Sector Malaria Prevention (PSMP) project, NMCP, USAID’s Procurement and Supply Management (PSM) project, GES -SHEP, and the Anglican Diocesan Development and Relief Organization. The meeting focused on school distribution timelines and the corresponding roles of all stakeholders, as well providing an update on health-facility-based distribution. The subcommittee also discussed the process and strategy to shorten the duration of mass campaigns, emphasizing the need to conduct campaigns in multiple regions concurrently.

Deliverable	Audience	Timing	Dissemination Plan	Status
Quarterly reports	PMI, GHS, NMCP, ITN subcommittee members	Quarters 1–4	Share by email	Reports from all meetings to be compiled and shared in Quarter 4

GH.PC.1.B Malaria Vector Control Oversight Committee (MaVCOC) Meetings

Brief activity description: The MaVCOC meetings serve as a forum for all institutions, public and private, that are engaged in malaria vector control activities to report on the status of implementation of their programs, share experiences, and, when necessary, seek technical support from other implementing partners. VectorWorks continued to actively participate in these meetings in Year Three, and as the main ITN distribution project in Ghana, reported on the status of continuous distribution of ITNs in the country.

The MaVCOC meetings are held on a quarterly basis, and VectorWorks will participate in all four meetings in Year Three.

Status: Two MaVCOC meetings have been held in Year Three, during December 2016 and March 2017. In these meetings, VectorWorks updated the committee on our continuous distribution activities in health facilities, the ITN distribution program in primary schools, and the health-facility-based and school-based SBCC programs. Updates were also provided by Abt Associates and AngloGold Ashanti Malaria Control Ltd (AGAMal) on the implementation of the indoor residual spraying program in four districts in the Northern Region and the Upper West Region. The Noguchi Memorial Institute for Medical Research presented a report on entomological studies they are conducting. VectorWorks also sponsored a MaVCOC co-chairperson to attend the February 2017 Alliance for Malaria Prevention and VCWG meetings in Geneva. Dr. Dadzie, the MAVCOC Co-chair, will report on his participation in the VCWG at the next MACOC meeting in June.

Two more MaVCOC meetings are scheduled for the second half of the year, and these will be held in the last weeks of June and September 2017 respectively.

Deliverable	Audience	Timing	Dissemination Plan	Status
Quarterly reports	PMI, GHS, NMCP, MaVCOC members	Quarters 1–4	Share by email	Report to be presented in Quarter 4

GH.PC.1.C Vector Control Working Group Meeting in Geneva

Brief activity description: The annual VCWG meeting of the Roll Back Malaria partnership is an important event that provides opportunities for various institutions, scientists, program managers, and implementers to showcase their work, share ideas and practices, and learn from each other. VectorWorks planned to specifically seek out opportunities to share lessons learned from the successful 2016 school-based distribution campaign and its accompanying SBCC activities, and to learn from the experiences of other countries such as Tanzania and Cross River State of Nigeria where school-based distributions have taken place in the past.

Status: The VectorWorks chief of party, the senior technical advisor, the monitoring and evaluation officer of the NMCP, and a co-chairperson of MaVCOC all participated in the VCWG and Alliance for Malaria Prevention meetings in February 2017. The team presented at the Alliance for Malaria Prevention meeting on the topic “Usefulness of DHIMS2 for tracking ITNs.” The following benefits of the DHIMS2 health information management system were stressed:

- Routine net distribution data is easily available and accessible through the DHIMS2 platform for all stakeholders registered and granted access by the GHS including VectorWorks
- ITN distribution data from DHIMS2 provides room for constructive critiques on what the typical trends are with regards to those who register for services and those who actually receive ITNs.
- Data from DHIMS2 also reveals the effects of ITN stock outs on distribution trends, which serves as a signal for officials to take action to fill the supply gaps.

The presentation also noted the following as DHIMS2 challenges:

- Completeness of data and timeliness of entry at all levels: health facility, subdistrict, and district health management team (DHMT)
- Data entry errors at all levels; opportunity exists for correction within three months after data entry
- Poor Internet connectivity in remote communities and power outages that could interrupt smooth data entry and data transmission

The VectorWorks chief of party also participated in side meetings during which the process and challenges of applying the Mobile Money payment system to manage disbursement of funds to program participants was discussed. In view of the large number of health workers and teachers involved in VectorWorks Ghana's field training activities, we hope that adopting the Mobile Money payment system will help save time and ensure the security of staff and project funds. On Wednesday, February 8th, the VectorWorks Ghana field and headquarters teams held a meeting to discuss plans for PMI's Malaria Operational Plan visit to Ghana in 2017.

Deliverable	Audience	Timing	Dissemination Plan	Status
Trip report	PMI, GHS, GES	Quarter 2	Share by email	Acknowledged by PMI on March 31, 2017

GH.PC.1.D Malaria SBCC Subcommittee Meeting Participation

Brief activity description: The malaria SBCC subcommittee coordinates SBCC activities related to ITN distribution, use, and care. With the expansion of VectorWorks' social and behavior change communication (SBCC) activities in health facilities and schools, the malaria SBCC subcommittee meetings provide an important forum for disseminating VectorWorks SBCC programs among the malaria communication programs community. The NMCP is responsible for organizing the SBCC subcommittee meetings.

Status: No specific malaria SBCC subcommittee meeting took place during the first half of Year Three. Instead, subcommittee members were engaged in the messages and materials development activities for the health-facility-based SBCC activities. See full report under GH.IM.1.E: Promotion of Health-Facility-Based SBCC for Malaria Prevention.

Deliverable	Audience	Timing	Dissemination Plan	Status
Quarterly meeting reports	PMI, GHS, NMCP, SBCC subcommittee members	Quarters 1–4	Share by email	Canceled for Quarters 1–2: no meetings held in the first half of Year 3

GH.PC.1.E West African Regional Network Meeting Participation

Brief activity description: The West Africa Roll Back Malaria Network (WARN) coordinates partner support on technical and operational issues for bringing effective malaria control interventions to scale in 16 West African countries including Ghana. The network is facilitated by a Roll Back Malaria focal point funded by the Roll Back Malaria Partnership and hosted by UNICEF West and Central Africa Regional Office in Dakar.

The WARN meeting provides an opportunity for VectorWorks to discuss net distribution and use within the West African subregion with other implementing partners. Since Ghana is among the early countries to apply continuous distribution, VectorWorks will support the NMCP by sharing the country’s experiences as well as learn from other malaria-endemic countries’ experiences with continuous distribution.

Status: VectorWorks Ghana has yet to learn from the RBM focal point or the UNICEF West and Central Africa Regional Office when and where the WARN meeting will be held. We will prepare for participation in the meeting once details are obtained.

Deliverable	Audience	Timing	Dissemination Plan	Status
Trip report	PMI, GHS, GES	Quarter 4	Share by email	Not started

Implementation and Capacity-Building Activities (IM)

GH.IM.1 Support for Health-Facility-Based ITN Distribution

GH.IM.1.B Reorientation of Regional and District Health Management Teams for Health-Facility-Based ITN Distribution

Brief activity description: In Year One and Year Two, the VectorWorks project implemented a program to form and/or improve the NHMT, RHMTs, and DHMTs in nine regions (Greater Accra, Volta, Eastern, Central, Western, Ashanti, Brong Ahafo, Northern, and Upper East). This program aimed to address challenges in the management of ITN stocks and the supply chain, in documentation of ITNs received and distributed, and in education of recipients in health facilities. Our approach led to improved management of ITN stocks, which helped reduce stock outs at health facilities; improved documentation of ITNs received and distributed; improved reporting in DHIMS2; and education of beneficiaries on ITN use and care. We did not include the Upper West Region in this work during the first two project years because there had been implementation of multiple malaria prevention interventions—including indoor residual spraying and seasonal malaria chemoprevention—and health-facility-based ITN distribution had not yet begun. At the beginning of Year Three, the NMCP approved the extension of the health-facility-based distribution to the Upper West Region, thus completing coverage of all 10 regions of the country.

Status: In November 2016, VectorWorks led the training of 295 members of RHMTs and DHMTs in how to manage health-facility-based ITN distribution activities in the Upper West Region. The trainings focused on the role of ITNs in malaria prevention, roles and responsibilities of key players, management of ITN logistics and the supply chain, record keeping and accountability, reporting and monitoring, and communication and social mobilization. VectorWorks and the NMCP tasked the DHMTs with the responsibility of training health facility staff and monitoring the ITN distribution as part of the DHMTs’ routine supportive supervision and monitoring activities. DHMT members were also tasked to ensure improved supply of ITNs from the district and subdistrict level to the health facilities as well as improved data reporting. While this activity was planned for Quarter 1, its implementation was delayed until Quarter 2 due to unavailability of ITNs.

Deliverable	Audience	Timing	Dissemination Plan	Status
Report on reorientation of regional and district personnel	PMI, RHMT, NMCP, MCH, EPI	Delayed from Quarter 1 to Quarter 3	Share by email	In process

GH.IM.1.C On-the-Job Training and Monitoring of Health-Facility-Based Distribution

Brief activity description: In Year Three, the Upper West Region became the last of the 10 regions to benefit from VectorWorks’ on-the-job trainings and monitoring of health-facility-based distribution.

Status: After the Upper West Region’s RHMT and DHMTs were trained, VectorWorks provided funding for four teams to conduct on-the-job training for 987 health facility staff in 295 health facilities in the Upper West Region. VectorWorks additionally provided funding and support for training and monitoring of 9,519 health facility staff in 3,110 health facilities in Brong Ahafo, Eastern, Greater Accra, Western, and Volta regions. A total of 3,714 were new staff not reached in previous trainings. VectorWorks, through health facility trainings, continued to ensure accountability of all ITNs received by health facilities by confirming accurate documentation and inventory management; monthly trend analysis of ANC registrants and two-dose measles vaccination recipients against ITNs distributed; minimum and maximum stock assessment; and reorder requirements. VectorWorks used a revised monitoring checklist for health facilities, which included questions that would confirm (through exit interviews) whether beneficiaries had indeed received ITNs as documented by health facility staff. In the Upper West region, the activity was planned for Quarter 1, but its implementation was delayed until Quarter 2 due to unavailability of ITNs.

Deliverable	Audience	Timing	Dissemination Plan	Status
Report on health-facility-level on-the-job trainings in the Upper West Region	PMI, RHMT, NMCP, MCH, EPI	Delayed from Quarter 1 to Quarter 3	Share by email	In process
Report on monitoring of health-facility-level ITN distribution in 10 regions	PMI, RHMT, NMCP, MCH, EPI	Quarter 4	Share by email	In process

GH.IM.1.D Regional Review Meetings

Brief activity description: VectorWorks held regional review meetings that provided opportunities for regional and district teams to discuss ITN distribution activities, challenges, and opportunities for improvement in five regions (Brong Ahafo, Eastern, Greater Accra, Western, and Volta). Unlike in the

previous year, these meetings occurred in district clusters instead of with all districts in the region together at one time. The district cluster approach reduced the number of participants in each meeting and increased active and in-depth participation by all. This approach also saved cost on transportation and accommodation for participants, as meetings were held in locations/districts closer to most participants rather than in regional capital towns. This new approach also ensured review of activities among five to eight districts in a cluster and allowed for better review of district activities and better sharing of experiences among the districts. All district representatives had more time to present their reports for discussion.

Through analysis of ITN distribution trends and updates regarding on-the-job trainings and monitoring of health-facility-based ITN distribution, district teams discussed issues relating to management of the ITN supply chain to avoid stock outs at health facilities, ITN record keeping and documentation challenges and improvement, and data reporting gaps.

Status: Review meetings for the remaining five regions (Northern, Upper East, Upper West, Ashanti, and Central) will be conducted in the second half of Year Three.

Deliverable	Audience	Timing	Dissemination Plan	Status
Summary report of review meetings in 10 regions	PMI, RHMT, NMCP, MCH, EPI	Quarter 4	Share by email	In process

GH.IM.1.E Promotion of Health-Facility-Based SBCC for Malaria Prevention

Brief activity description: As Ghana’s health-facility-based continuous distribution program matured and expanded to cover all 10 regions of the country, it became necessary to develop a SBCC program and materials. These materials are needed to guide the ongoing operations of health workers and other stakeholders to improve the continuous distribution process and promote efficiency in use and care of nets. Key issues to be dealt with by the SBCC program and materials are accountability for net stocks, attracting and managing client demands, continuous education of health workers, and health workers communication with clients as well as with community members. VectorWorks brought together 41 participants on January 17 and 18, 2017, for a messages and materials development workshop at Koforidua in the Eastern Region. Participants included members of the NMCP malaria SBCC subcommittee, regional malaria focal persons, regional health promotion officers, and representatives of the USAID-funded Communicate for Health (C4H) project, Systems for Health (S4H) project, and PSM projects.

Status: VectorWorks’ materials development workshop on January 17 and 18, 2017, resulted in the creation of key messages that target DHMT stores officers for ITNs and, at the various health facilities, midwives and community health nurses, pregnant women, and child caregivers and family members. The key message areas include malaria prevention, ITN use and care, and managing ITNs with due consideration to protecting the environment. The following SBCC materials are to be produced:

- A handbook for health workers at ANC and child welfare clinics to serve as a job aid
- A poster to promote the safety and security of ITNs in storage at district and health facility stores and while being transported from one location to the other
- A chart depicting six key facts about use and management of ITNs

Drafts of the handbook and the poster were presented to PMI for review and approval. The key fact chart is currently being produced for distribution to health facilities.

Deliverable	Audience	Timing	Dissemination Plan	Status
Messages and materials design report	USAID, PMI, NMCP, C4H S4H	Quarter 1, but delayed until Quarter 3	Share by email	To be shared in Quarter 3
Report on production and distribution of materials	USAID, PMI, NMCP, C4H S4H	Quarter 1, but delayed until Quarter 4	Share by email	Not started

GH.IM.4 Support for School-Based ITN Distribution

Brief activity description: For the 2017 school-based ITN distribution, the USAID’s PSM project will transport ITNs from the central level to district stores in all nine targeted regions (Volta, Eastern, Greater Accra, Central, Western, Ashanti, Brong Ahafo, Northern, and Upper East). Circuit supervisors or a third-party private vendor will further transport ITNs to the schools, with numbers of ITNs based on validated and approved class enrollment data. The ITNs will be distributed to children in the target classes, and school-based SHEP coordinators, head teachers, and circuit supervisors will supervise distribution. District-, regional-, and national-level personnel from SHEP and other implementing partners will provide additional supervision.

The VectorWorks project will support effective implementation of the school-based ITN distribution through the following activities:

- Orientation of key stakeholders, including GES officials and other stakeholders at the district level
- Validation of class enrollment data for ITN quantification and supply to districts
- Facilitation of supervision and monitoring of the school-based ITN distribution program
- Promotion of school-based SBCC for ITN use and care and malaria prevention.

We anticipate that the PSM project will facilitate the movement of ITNs from the central level to district stores and schools, as was done in previous distributions.

Status: These activities are scheduled for May 2017 (Quarter Three).

GH.IM.4.A Orientation of Key Stakeholders

Brief activity description: The VectorWorks project will expand stakeholder orientation activities to cover key stakeholders across all nine regions of school-based distribution. VectorWorks will train up to 2,000 officers of the GES, especially district officials such as directors of education, assistant directors in charge of supervision, and SHEP coordinators, in the implementation of the school-based ITN distribution campaign. Regional and district malaria focal persons will also be trained to plan, implement, monitor and supervise school distributions.

Status: This activity is scheduled for May 2017 (Quarter Three).

Deliverable	Audience	Timing	Dissemination Plan	Status
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Report on orientation of key stakeholders	PMI, GHS, NMCP, GES, SHEP, DHMT	Quarter 3	Share by email	Not started
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GH.IM.4.B Validation of Class Enrollment Data for ITN Quantification

Brief activity description: The process of distributing free health commodities, including ITNs, faces potential abuse by implementers and other stakeholders. If school head teachers submit inflated class enrollment numbers for ITN quantification, this may lead to oversupply of ITNs to some schools and undersupply to other schools that may present data below the number of students enrolled. During its school distribution campaign in 2013 and 2014, Ghana used the Education Management Information System (EMIS) enrollment data. Ghana’s education sector uses this trusted and reliable database to plan and manage activities and programs in schools, districts, and regions. However, EMIS enrollment numbers are released only after the end of an academic year. This means that EMIS enrollment numbers usually require a buffer to meet the needs of actual students in a given academic year. ITNs will also be needed for schools that are missing from EMIS data, especially schools yet to be registered with the GES. In view of these issues, in Year Three VectorWorks collected enrollment data for the 2015–2016 school distribution and the class enrollment data for the 2016–2017 academic year to use as baseline information for the validation exercise.

Status: For schools in the regions that did not participate in the 2016 school distribution (Upper East, Northern, and Greater Accra), VectorWorks compared enrollment data collected in January and February 2017 with the EMIS data. For the six regions that participated in the 2016 distribution exercise (Ashanti, Brong Ahafo, Central, Eastern, Western, and Volta), we compared current enrollment data with the 2016 distribution data and set a variance threshold of plus or minus 5% for follow-up. Teams from VectorWorks, SHEP, and the NMCP undertook data validation by visiting schools and comparing available enrollment data in the schools with data the schools had earlier submitted to VectorWorks for desk validation (in late March and early April 2017). The data is being finalized, and the full report will be submitted in Quarter Three.

Deliverable	Audience	Timing	Dissemination Plan	Status
Data validation report, which will include approved validated ITN quantifications	PMI, GHS, NMCP, GES, SHEP, DHMT	Quarter 3	Share by email	In process

GH.IM.4.C Facilitation of Supervision and Monitoring of School-Based ITN Distribution

Brief activity description: Vector Works will provide funding for the supervision and monitoring of training, data collection, and validation and orientation activities. On the days of school distributions, VectorWorks will contribute to funding for transportation and incidental allowances for GES staff, including regional and district directors, to visit schools in all districts in the nine regions of school-based distribution. GES staff will use a monitoring checklist to ensure the following tasks are properly carried out:

- Inventory and reporting procedures
- Coverage of ITN distribution among targeted classes
- Education of students on malaria prevention and ITN use and care

Since the GES has a well-laid-out supervision and monitoring system through its regional and district inspectorate divisions, the regional SHEP coordinators, district SHEP coordinators, circuit supervisors, and class teachers will play active roles in supervising and monitoring the ITN distribution process. Relevant forms will be printed by VectorWorks and distributed to SHEP coordinators and school supervisors for use in carrying out monitoring and supervision activities.

Status: This activity is scheduled for May 2017 (Quarter Three).

Deliverable	Audience	Timing	Dissemination Plan	Status
School-based ITN distribution monitoring report	PMI, GHS, NMCP, GES, SHEP, RHMT, DHMT	Quarter 3	Share by email	Not started

GH.IM.4.D Promotion of School-Based BCC for Malaria Prevention

Brief activity description: VectorWorks began a systematic implementation of the SBCC program for the primary schools in 72 districts in the six regions in which the school-based ITN distribution was introduced at the end of Year Two (Volta, Eastern, Central, Western, Ashanti, and Brong Ahafo).

Status: In January 2017, VectorWorks organized a national ToT in Ada, Greater Accra Region. The 35 participants who attended this workshop included national SHEP officers, regional SHEP coordinators, regional malaria focal persons, national and regional health promotion officers, regional GES cultural officers, and vector control and SBCC officers from the NMCP. The outcome of this TOT was the creation of teams who will train district- and circuit-level training teams who will then undertake downstream training for the teachers and head teachers who will form and operate school health teams. These head teachers and teachers (mainly school health coordinators and cultural coordinators) will lead the development and implementation of termly school health programs in which malaria prevention will be given due consideration. The TOT also provided an opportunity for participants to rehearse and master the activities in the Malaria Prevention Teachers Guide before carrying out the malaria prevention activities in their schools.

Through implementing this cascaded primary school SBCC program, we trained 21,773 primary school teachers from 7,567 schools in the 72 districts. GES circuit supervisors and SHEP coordinators were tasked to include monitoring and supervision of the SBCC program in their normal monthly supervision and monitoring schedules. Key indicators to be observed include the following:

- Number of school health teams formed and functioning
- Number of approved health programs that have integrated malaria prevention
- Number of times malaria prevention activities are undertaken each week
- Level of involvement of teachers in guiding students
- Number of children reporting sleeping under ITNs each week

Following suggestions arising from the national TOT, VectorWorks revised the Malaria Prevention Teachers Guide to include a template of the School Health Team Program, and 6,000 copies were produced and

distributed to schools. The School Health Team Program template is a tool to guide teams in developing their individual programs.

Deliverable	Audience	Timing	Dissemination Plan	Status
Summary report on training activities	USAID, PMI, GES, SHEP, NMCP	Quarters 1–3	Share by email	To be shared in Quarter 3
Quarterly monitoring report on school-based SBCC activities	USAID, PMI, GES, SHEP, NMCP	Quarters 1–4	Share by email	In process
Report on production and distribution of SBCC materials for schools	USAID, PMI, GES, SHEP, NMCP	Quarters 2–3	Share by email	To be shared in Quarter 3

GH.IM.5 Technical Assistance to Ghana NMCP

GH.IM.5.1 Technical Assistance for Development of Global Fund to Fight AIDS, Tuberculosis and Malaria Concept Note

Brief activity description: VectorWorks sought and was granted permission by PMI to provide technical assistance to the NMCP to develop their Global Fund concept note. The plan was for Dr. Ato Selby to provide this assistance during his existing technical assistance trips.

Status: VectorWorks was available to support the NMCP should the latter seek technical assistance in developing Ghana’s Global Fund request for funds. VectorWorks has consulted with the NMCP leadership and expressed willingness to provide any needed technical support, particularly in the area of improving mechanisms for distributing ITNs in urban population settings in the Greater Accra, Ashanti, and Western regions. The NMCP has not presented any requests for assistance and thus VectorWorks could not offer any support.

Deliverable	Audience	Timing	Dissemination Plan	Status
Trip report	USAID, PMI, NMCP	Quarters 1–2	Share by email	No activity requested

GH.IM.5.2 Analysis Plan to Evaluate Ghana’s Continuous Distribution System

Brief activity description: Ghana’s NMCP is in the process of updating its Strategic Plan for Malaria Control: 2014–2020, to better respond to current malaria control needs and challenges. In support of this effort, VectorWorks set out to evaluate the ITN coverage achieved through existing channels. VectorWorks used secondary analysis of existing survey data to obtain information on the country’s continuous distribution system and identify opportunities for improvement.

Status: We used information from three national-level surveys (DHS 2014, MIS 2016, and MICS 2017) for the analysis. Some of the key recommendations from the report are as follows: VectorWorks used data from the 2014 DHS and the 2011 MICS to postulate whether the data generated through current national surveys is sufficient to evaluate the performance of continuous distribution and to evaluate the contribution of the different channels to household ITN ownership.

- High-quality, accurate, and timely data is essential to evaluate how well distribution channels are performing in terms of sustaining ITN ownership and access. Three national-level surveys can provide important information on the distribution performance: the Demographic and Health Survey 2014, Malaria Indicator Survey 2016, and Multiple Indicator Cluster Survey 2017.
- Questions regarding source of ITNs need to be updated to reduce the risk of misclassifying the source of a net and to provide a better evaluation of the effectiveness of continuous distribution channels. Questions used in the Tanzania Demographic and Health Survey 2015–2016 provide useful examples.

Note: Deliverables for activities GH.IM.5.2 and GH.IM.5.3 were combined in a report titled “Options for sustaining ITN access targets in Ghana,” which was produced and presented to PMI for review in Quarter Two. Our follow-up on comments from PMI will be submitted in Quarter Three.

Deliverable	Audience	Timing	Dissemination Plan	Status
Memo outlining analysis plan	USAID, PMI, NMCP, ITN subcommittee	Delayed from Quarter 2 to Quarter 3	Shared by email	Submitted to PMI March 21, 2017 and returned to VectorWorks on April 20, 2017 with comments; updates in process

GH.IM.5.3 Evaluation of Ghana’s Mixed School and Mass Distributions and Implications for Coverage and Value-for-Money

Brief activity description: To provide information for updates to Ghana’s Strategic Plan for Malaria Control 2014-2020, it became important to study the supply of ITNs distributed through existing channels and to determine whether any adjustments were needed to the mix of channels to ensure adequate supply, without oversupplying ITNs.

Status: VectorWorks used NetCALC to quantify the number of ITNs that would be needed to sustain 80% population access from 2017 through 2021 under three unique distribution scenarios, each consistent with Ghana’s national ITN strategy:

- **Scenario One:** Includes mass campaigns every four years and a continuation of near-current levels of school-based, ANC, and EPI distribution.
- **Scenario Two:** Relies exclusively on continuous distribution (with current levels of ANC and EPI and a scale-up of school-based distribution), without mass distribution.
- **Scenario Three:** Eliminates school-based distribution and restores the pre-2013 distribution strategy of exclusively mass and health-facility-based distribution.

Some of the key findings are as follows:

- Median ITN life span is a significant factor in determining the quantity of ITNs that need to be distributed annually, and this highlights the importance of durability monitoring. A difference of one year—2.5 versus 3.5 years—in median survival would require 20% more nets to be distributed, per year, by 2021. If median ITN survival is less than three years, then Scenario 2 (ANC, EPI, and school-based distribution) would not be feasible: under this scenario, selected primary school classes, currently grades two and six, are already receiving ITNs each year to maintain coverage. Durability monitoring is thus critical to determining which combination of channels should be employed.
- Different channel combinations perform noticeably differently in different regions, possibly indicating that a detailed national strategy may be less effective than a more flexible regional approach.
- Distribution data provided by the NMCP was significantly higher than Net Mapping Project data on the number of ITNs delivered to Ghana. NetCALC estimates run with poor data cannot accurately predict coverage or assess combinations of channels. It is important to critically compare coverage modeling in NetCALC to estimates from household survey data, as well as to critically review ITN distribution data when estimates are mismatched.

Note: Deliverables for activities GH.IM.5.2 and GH.IM.5.3 were combined in a report titled “Options for sustaining ITN access targets in Ghana,” which was produced and presented to PMI for review in Quarter Two. Our follow-up on comments from PMI will be submitted in Quarter Three.

Deliverable	Audience	Timing	Dissemination Plan	Status
Memo outlining implications of mixed school and mass distributions in Ghana	USAID, PMI, NMCP, ITN subcommittee	Quarter 2 and Quarter 3	Share by email	Submitted to PMI March 21, 2017 and returned to VectorWorks on April 20, 2017 with comments; in process

Project Management (PM)

GH.PM.1 Operations

GH.PM.1.A Headquarters Staff

Status: Technical, administrative, and high-level management support from VectorWorks headquarters in Baltimore focused on responding to field office project implementation and administrative needs. Ms. Danielle Piccinini and Ms. April Monroe provided administrative and technical backstopping. Mr. Chris Matroniano provide financial administration and Mr. Matthew Lynch and Ms. Andrea Brown provided higher-level management support.

GH.PM.1.B Field Operations

Status: Dr. Selby, field operations director for the VectorWorks project and based in Nairobi, provided technical assistance and field operations support, specifically on the technical application of the continuous distribution program, to the Ghana project. In addition to two trips made to Accra to provide technical support, Dr. Selby also instituted a monthly technical review phone conference with the Ghana team during which specific project implementation technical issues were discussed. Key among the issues discussed during these calls were mapping of urban communities for improved distribution of ITNs, validation of class enrollment data for the school-based distribution, and improving the monitoring of health-facility-based distribution.

Weekly conference calls between the VectorWorks Baltimore and Ghana teams to discuss project activities and updates were very helpful and will continue throughout the second half of Year Three.

Staff in the Accra office performed their duties with supervision from Mr. Emmanuel Fiagbey and the Senior Technical Advisor, Mr. Prince Owusu.

GH.PM.2 Technical Assistance and Travel

Summary of international travel:

Trip Purpose	Traveler	Number of Trips	Remark
VCWG (budgeted under code GH.PC.1.C)	NMCP representative, MaVCOG representative, VectorWorks chief of party, and VectorWorks senior technical advisor	4	4 trips made Feb 6-12, 2017
WARN meeting	TBD	3	Not scheduled
Supervision and technical assistance	Field operations director	3	2 trips made Oct 5-9, 2016 March 26- April 6, 2017
Supervision and technical assistance	Program officer	2	1 trip made March 25-April 8, 2017
Chief of party to headquarters	Chief of party	2	Yet to be undertaken
Senior technical advisor to headquarters	Senior technical advisor	2	Yet to be undertaken
Total trips		16	

GH.PM.3 Work Plan and Reporting

Status: In the rest of Year Three, VectorWorks will continue to apply the approved Year Three work plan and performance monitoring plan and will report to PMI Ghana as required:

- Work plan and performance monitoring plan for Year Three
- Quarterly financial reports
- Monthly activity plans with dates
- Meeting and training notes, as applicable

GUINEA

GN.1 Initial Stakeholders Meeting

Brief activity description: Dr. Koenker traveled to Guinea on September 20–25, 2017, to meet with PMI, the NMCP, and implementing partners. From these meetings, she gathered the details needed to complete VectorWorks’ Year Three work plan in Guinea, which includes areas of collaboration with other implementing partners.

Deliverable	Audience	Timing	Dissemination Plan	Status
Trip report	NMCP, PMI	Completed in Quarter 1	Shared by email with PMI	Approved on September 29, 2016

GN.2 Detailed Continuous Distribution Assessment

Brief activity description: VectorWorks conducted a national continuous distribution assessment in Guinea, consisting of a health facility assessment to assess current distribution channels and a continuous distribution assessment to assess other potential channels for an ITN distribution pilot. This activity was done in close collaboration with the NMCP, RTI International’s StopPalu project, and Catholic Relief Services (CRS).

Status: Ms. Sara Berthe and Mr. Sean Blaufuss traveled to Guinea from January 14–28, 2017, and conducted the national continuous distribution assessment. They debriefed with PMI and the NMCP on January 28. The health facility assessment report was completed and approved on March 30, 2017. Key findings were:

- Health Facility Distribution
 - The StopPalu and CRS focal points in the districts are providing strong support to the districts. They are conducting at least monthly supervisory and are moving from facility to facility to help implement the new requisition system.
 - Many health facilities still had stocks of ITNs that were left-over from the recent mass campaign, but some were running low. PCG is supposed to pre-position ITNs at regional offices, but storage is extremely limited at these locations.
 - Health facilities were struggling with the new requisition system in which they must request ITNs, although overall the new system is seen as the right way forward.
- Continuous Distribution
 - School-based distribution is recommended over community-based distribution for national implementation, due to strong cross-sectoral collaboration and partnership between the health and education sectors.
 - Community distribution has potential, given community health agent networks, but these are inconsistently supervised, and agents are said to already be overburdened/undercompensated.
 - Community-based distribution should not be considered a viable channel until the new requisition system is consistently delivering health facility ITNs on time.

The continuous distribution assessment report was submitted on March 31, 2017, and is currently awaiting feedback. The continuous distribution assessment led to the development of a school-based budget and budget notes, to be submitted in Quarter 3.

Deliverable	Audience	Timing	Dissemination Plan	Status
Health facility assessment report	NMCP, PMI	Completed in Quarter 2	Share by email with PMI, NMCP, StopPalu, CRS	Submitted to PMI March 13, 2017, awaiting mission approval
Continuous distribution assessment report	NMCP, PMI, implementing partners	Completed in Quarter 3	Share by email with PMI, NMCP, StopPalu, CRS	Submitted on March 31, 2017; awaiting mission approval
Continuous distribution pilot budget and budget notes	NMCP, PMI, implementing partners	Quarter 3	Share by email with PMI, NMCP	Submitted on April 20, 2017; awaiting mission approval

GN.3 Support to Malaria Strategy Review

Brief activity description: The NMCP is conducting a review of the national malaria strategy while preparing for a new request to the Global Fund. After planning and data collection, a malaria strategy document was being drafted prior to submission of a funding request.

Status: During the initial visit and the continuous distribution assessment, VectorWorks offered to review the national malaria strategy document and provide comments, if desired. VectorWorks and the NMCP agreed that this technical support could be done remotely. The NMCP and other Guinea malaria stakeholders are developing a malaria strategic plan, and as of March 30, 2017, we were awaiting the first draft of the document from them. VectorWorks is available to review the draft and is in communication with PMI regarding this activity. If there is time before the NMCP submits the malaria strategic plan to the Global Fund, VectorWorks will provide input and comments.

Deliverable	Audience	Timing	Dissemination Plan	Status
Annotated version of National Malaria Strategic Plan, if requested	NMCP, PMI	Quarter 2	Share by email with PMI, NMCP	No request received as yet; support will be remote if requested

GN.4 School-Based BCC Message Development Workshop

Brief activity description: VectorWorks will lead a two-day message development workshop for the NMCP, Ministry of Education, and implementing partners. The focus will be on harmonization of messages for dissemination among primary and secondary school students. During this workshop, sample teaching materials will be developed, which the implementing partners can later distribute across Guinea.

Status: VectorWorks is in the process of proposing dates for the workshop in June or July 2017. After dates are finalized, VectorWorks will work with PMI and the NMCP to create a list of participants who will benefit from the workshop. CRS, one of the implementing partners, is developing a school SBCC pilot in Mamou, and VectorWorks is coordinating with stakeholders to determine how best to integrate the message development workshop with the SBCC pilot.

Deliverable	Audience	Timing	Dissemination Plan	Status
Workshop report	NMCP, PMI	Quarter 3	Share by email with PMI, NMCP	Not started
Teaching and BCC materials	Ministry of Education, PMI, NMCP, implementing partners	Quarter 3	Share by email with PMI, NMCP, CRS, StopPalu	Not started

GN.5 Continuous Distribution Pilot (2017–2018)

Brief activity description: Guinea revived routine ITN distribution through health facilities in December 2014, and is now considering other continuous distribution channels as part of its national ITN distribution strategy. VectorWorks will manage a continuous distribution pilot in Year Four (2017–2018). Through discussions with PMI and the NMCP, VectorWorks has identified Boke and Boffa as feasible prefectures for implementation of the pilot, based on population, school enrollment, and routine distribution performance.

Status: The continuous distribution assessment conducted by VectorWorks in January 2017 indicated that in the Guinean context, school-based distribution is more feasible than community-based distribution. VectorWorks has prepared and shared a budget with PMI for school distribution and is awaiting comment. After the review phase, VectorWorks will collaborate with the NMCP and PMI to develop a planning committee to prepare for the pilot. As a result of the continuous distribution assessment, VectorWorks identified February or March 2018 as the ideal time to distribute nets to schools after school enrollment stabilizes.

GN.PM.1 Work plan and Reporting

Brief activity description: VectorWorks will provide PMI with an annual work plan (to be approved by PMI Guinea), quarterly financial reports, and semiannual progress reports. VectorWorks understands that PMI may ask for further information as needed by USAID for the purposes of the PMI annual report, strategic planning, VIP visits, and congressional reports.

Status: VectorWorks' Year Three work plan for Guinea was approved by PMI on November 15, 2016, and quarterly financial reports are up to date through Quarter Two. This document serves as the semiannual report.

Deliverable	Audience	Timing	Dissemination Plan	Status
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Annual work plan	PMI	Completed in Quarter 1	Share by email with PMI	Approved on November 15, 2016
Quarterly financial reports	PMI	Quarters 1–4	Share by email with PMI	On schedule
Semiannual progress reports	NMCP, PMI, implementing partners	Quarter 2, Quarter 4	Share by email with PMI	Quarter 2 report submitted (herein)

KENYA

Note: Some activity codes were switched between the Year 2 and Year 3 work plans. We are submitting a work plan modification to bring activity codes back into alignment.

[KY.1 Initial Meeting to Review Existing and Draft ITN Strategies, Guidelines, and Plans and to Determine Technical Assistance Needs – completed Year Two, but formally approved 1/19/2017]

KY.2 Desk Review of Documents Related to ITN Distribution Since 2010

Brief activity description: Kenya requested assistance from VectorWorks to review existing documentation to inform further discussions on Kenya’s ITN strategy and comprehensive approach to sustaining ITN coverage. Kenya has piloted and also fully implemented a number of channels for distributing ITNs. Most of the pilot activities and implementation processes have been documented by the NMCP and its implementing partners in the form of project reports and updates. VectorWorks project and the NMCP worked with a consultant to conduct a web search on ITN distribution channels in Kenya, collect reports, and interview implementing partners at all levels.

Status: The reports and information collected have been reviewed and a draft report on implementation, challenges, best practices, and recommendations for all channels used for ITN distribution has been developed. The draft report has been reviewed by VectorWorks and PMI. It has also been shared with the NMCP and implementing partners for further review. VectorWorks will finalize the desk review report in the second half of Year Three based on any feedback and input received from the NMCP.

Deliverable	Audience	Timing	Dissemination Plan	Status
Final desk review report of channels used for ITN distribution in Kenya	PMI, NMCP, implementing partners	Delayed to Quarter 3	Share by email and in TWG meetings	Submitted 2/21/2017 to PMI. Report reviewed by PMI. Awaiting feedback from the NMCP. Report to be finalized in Quarter 3

KY.3 Field Assessment to Determine Operational Parameters of Current and Potential Channels for ITN Continuous Distribution at County and Subcounty Levels

Brief activity description: Health-facility-based ITN distribution in Kenya is ongoing through antenatal clinics and immunization programs. Community-based ITN distribution and social marketing programs for ITN have also been piloted in Kenya. The NMCP and implementing partners are also considering school-based ITN distribution for the future. These channels have been proposed for ITN continuous distribution. In Year Two, the NMCP and implementing partners determined at a stakeholder’s meeting that there was need for a feasibility assessment of these ITN distribution channels to help provide information on their viability at scale and to inform the revised ITN distribution strategy. This exercise assessed the field realities, existing systems, and tools of the proposed channels and made recommendations for effective field implementation. The mass ITN distribution channel was not assessed as part of this exercise.

Status: VectorWorks finalized a guide questionnaire for the field assessment in October 2016. Using this questionnaire, NCMP and VectorWorks personnel conducted interviews in November and December 2016 with relevant personnel at the national level and also at county, subcounty, and community levels in Busia and Kwale counties. The assessment showed that the antenatal care, Expanded Programme on Immunization, community-based and school-based channels (in the right mix) should be considered for ITN continuous distribution in Kenya. The health-facility-based distribution channel is working well, but certain aspects, including reporting and supervision, need to be improved. The community-based channel shows promise but will be beneficial in predominantly rural areas. The school-based channel is viable in both rural and urban settings and is a good channel to consider, especially with the relatively high attendance rates in primary schools in Kenya. Currently, the social marketing channel has been discontinued. The field assessment showed that it may not be viable to continue to run this channel in the future unless the subsidy from the donor is further increased. VectorWorks shared the trip report, with comprehensive recommendations for all proposed channels, with PMI and the NMCP in February.

Deliverable	Audience	Timing	Dissemination Plan	Status
Final tool for field assessment to verify feasibility of proposed channels for ITN distribution	PMI, NMCP, MOH, MOE, implementing partners	Completed in Quarter 1	Share by email	Completed; shared with NMCP in person in October 2017
Trip report for field assessment to verify feasibility of proposed channels for ITN distribution	PMI, NMCP, MOH, MOE, implementing partners	Submitted in Quarter 2	Share by email	Trip report submitted 2/3/2017; approved by PMI Kenya 4/10/2017

KY.4 Meeting to Consolidate Findings from Desk Reviews, Field Assessments, and Other Studies

Brief activity description: Based on findings from desk review of ITN distribution in Kenya (see KY.1), field assessment of potential channels for ITN continuous distribution (see KY.3), and other studies (including the cost-effectiveness study of ITN distribution channels), there is a need to further review Kenya’s draft ITN strategy to ensure that it reflects the country and field context and to determine the preferred ITN distribution channels for Kenya. The VectorWorks project and the NMCP plan to convene a meeting for all implementing partners and also representatives from malaria-endemic counties to further discuss Kenya’s ITN draft strategy for sustaining ITN coverage. The meeting’s output will be an ITN strategy for Kenya that specifies the preferred channels to be used for ITN distribution in target counties and a consensus on the next steps for implementing the strategy to improve and sustain ITN coverage in the target counties.

Status: Once the desk review of ITN distribution in Kenya, field assessment of potential channels for ITN continuous distribution, and cost-effectiveness study of ITN distribution channels have been finalized, the meeting described above will be organized and convened. The NMCP has proposed that the findings of these studies be disseminated in a Technical Working Group (TWG) meeting, since the TWG has the expertise to make relevant and firm decisions on an ITN strategy for Kenya.

Deliverable	Audience	Timing	Dissemination Plan	Status
Meeting report describing the selected channels for sustaining ITN coverage and recommendations for effective implementation	PMI, NMCP, MOH, MOE, implementing partners	Quarter 4	Share by email	Not started; meeting to be convened after all studies have been finalized

KY.5 Develop a Guidelines Document for ITN Distribution in Kenya

Brief activity description: Guidelines need to be developed to ensure standardized implementation of ITN distribution activities for each of the agreed distribution channels in Kenya and to support effective implementation at all levels. Based on information collected from the Ministry of Health, implementing partners, other stakeholders, and during the field assessment of channels, the VectorWorks project has developed a draft guidelines document for the implementation of ITN distribution in Kenya through all agreed viable channels. This guidelines document describes activities and steps for effective implementation of ITN distribution. It expands on planning and coordination; ITN quantification and logistics; trainings; ITN distribution, documentation, and reporting; education of beneficiaries on malaria messages; and monitoring and supervision of ITN distribution activities. Tools for ITN distribution, documentation, and reporting also form part of the guidelines document. This draft document includes guidance on the implementation of both mass and continuous distribution channels.

Status: Based on advice from PMI, the draft guidelines document for the implementation of ITN distribution in Kenya also includes guidance on an LLIN distribution strategy and describes how implementing partners should target channels to specific epidemiological zones and includes scenarios for combining mass campaigns and continuous distribution channels to sustain ITN coverage. The draft document is currently being reviewed internally by the VectorWorks project. VectorWorks will share the document with PMI Kenya for review before sharing it with the NMCP and other stakeholders for further review and finalization.

Deliverable	Audience	Timing	Dissemination Plan	Status
Draft and final ITN distribution guidelines	PMI, NMCP, MOH, MOE, implementing partners	Quarter 4	Share by email and in TWG meetings	Draft guidelines document completed; submitted to PMI 4/12/2017. To be submitted to the NMCP and other stakeholders for review and finalization in Quarter 3

KY.6 Technical Assistance for Pilot Implementation of Selected Channel(s) for ITN Distribution

Brief activity description: Based on outcomes from the desk review (KY.1), field assessments (KY.3), and stakeholder engagements (KY.4), channels for achieving and sustaining ITN coverage in Kenya will be selected. When additional viable distribution channels are proposed to augment Kenya’s health-facility-based distribution channels, there may be a need to test the newly introduced channel or channels in small-scale pilots to achieve country-specific learning. The decision of which ITN distribution channels to pilot will be guided by discussions with PMI, the NMCP, and other stakeholders. This decision will be made after all planned activities, as described in the preceding sections of this report, have been conducted. The VectorWorks project has extensive experience in setting up, implementing, monitoring, and evaluating ITN continuous distribution systems, and VectorWorks will provide technical assistance to selected implementing partners in Kenya to pilot the selected channel(s) once agreed.

Status: Discussions are yet to take place with PMI, NMCP and other stakeholders on piloting any proposed new channel(s). The NMCP and other stakeholders are involved in mass ITN distribution planning and implementation this year, and discussions regarding possible implementation of pilot studies may take place after 2017.

Deliverable	Audience	Timing	Dissemination Plan	Status
Progress report(s) on technical assistance for implementation of pilot of selected channel(s) for ITN distribution (if requested by PMI)	PMI, NMCP, MOH, MOE, implementing partners	To be determined	Share by email and in TWG meetings	Not completed; discussions and pilots may occur after 2017

KY.PM.1 Work Plan and Reporting

Brief activity description: VectorWorks will provide PMI with an annual work plan, quarterly financial reports, and semiannual progress reports for approval.

Status: VectorWorks has submitted all reports on time.

Deliverable	Audience	Timing	Dissemination Plan	Status
Annual work plan approved by PMI Kenya	PMI	Quarter 1	Share by email	Completed. Approved 1/10/17.
Quarterly financial reports	PMI	Quarters 1–4	Share by email	On schedule
Semiannual and annual progress reports	PMI	Quarter 2, Quarter 4	Share by email	Semiannual report submitted (herein)

LIBERIA

L.IM.1 County and Health-Facility-Level Orientations

Brief activity description: VectorWorks provided orientations to train county health personnel to conduct on-the-job trainings for health facility personnel on the processes for distributing ITNs through antenatal care and institutional delivery (ANC/ID) services and on proper documentation and reporting of distribution in all counties in Liberia. Of the 15 counties, 13 counties completed the activity in Year Two.

Status: In January 2017, VectorWorks completed the county-level training orientations for the remaining two counties: Margibi and Montserrado. Orientations were conducted for 42 health facilities in Margibi and 211 health facilities in Montserrado.

This work plan activity is complete. The next steps include supporting the community health trainers in monitoring and distributing nets to health facilities, and identifying partners to transport nets from county depots to the health facilities. Getting nets to health facilities from the county depots has been a major challenge. VectorWorks, together with the NMCP, is working with the community health trainers to identify in-country implementing partners that can assist with distribution from depot to the health facilities.

Deliverable	Audience	Timing	Dissemination Plan	Status
Training-of-trainers report (for Margibi and Montserrado counties)	NMCP, FHU, PMI	Completed in Quarter 1 - report will be submitted in Q4	Email to NMCP and PMI	Training is complete – report in process
Summary update of status of Year 2 trainings in 13 counties (e.g., trip reports to include status of county, action plan for follow-up, confirmation of supervision being carried out according to trainings, and corrective measures undertaken)	PMI	Report to be submitted Q4	Email to NMCP and PMI	Trainings are complete – the report is in process

L.IM.2 Monitoring of ANC/ID LLIN Distribution

Brief activity description: VectorWorks provided county health personnel with orientations on conducting on-the-job training on LLIN distribution for health workers in health facilities. The goal is to ensure quality of service delivery and reporting. Though VectorWorks expects that the health workers will conduct distribution processes properly after they are trained, monitoring and supervision of LLIN distribution activities in health facilities is essential. The NMCP, with support from VectorWorks, will support the CHMTs to do quarterly monitoring of health-facility-based LLIN distribution at each health facility in

their county. In addition, the NHMT will conduct semiannual monitoring of the health-facility-based LLIN distribution at county, subcounty, and health facility levels.

Status: The CHMTs' quarterly monitoring took place on November 14–23, 2016, in five counties (Grand Cape Mount, Bomi, Gbarpolu, Bong, and Grand Bassa). The CHMTs monitored 30 health facilities. From January 26 to February 8, 2017, quarterly monitoring took place in five hospitals including the St. Joseph's Catholic Hospital, Redemption Hospital, ELWA Hospital, SD Cooper, and JFK. For the NHMT's semiannual monitoring, VectorWorks and the NMCP plan to visit the southeast on April 15–23, 2017, to monitor four counties: River Gee, Grand Gede, Maryland, and Grand Kru. From the monitoring visits and reports that have been completed, VectorWorks found that some facilities had no ledgers to record nets distributed and some health facilities did not have nets in stock. The monitoring visits found nets at the county depot level, but only a few health facilities had received nets. We are supporting the NMCP to develop a mapping of partners so the other implementing partners can assist with delivery of nets to the health facility level from the county depot. The M&E unit at MOH has the HMIS forms and the PNC ledgers to distribute to the health facilities, but plan on waiting to distribute them until all of the trainings on these forms and ledgers are complete. We have notified the NMCP and PMI that health facilities need these ledgers and have urged them to disseminate them as soon as possible.

Deliverable	Audience	Timing	Dissemination Plan	Status
2A. Quarterly monitoring reports (submitted by CHMTs)	NMCP, FHU, PMI	Quarters 1–4	Emailed to NMCP and PMI	Monitoring visits have taken place in 30 health facilities in 5 counties. Additional monitoring visits are planned for an additional 5 counties in April. VectorWorks with NMCP will submit the latest monitoring report by May 15, 2017.
2B. Semiannual NHMT monitoring report	NMCP, FHU, PMI	Quarter 1, Quarter 4	Emailed to NMCP and PMI	Five hospitals were monitored by the NMT in Montserrat. Reports are pending.

L.IM.3 County Review Meetings on ANC/ID LLIN Distribution

Brief activity description: VectorWorks will work with the NMCP, Family Health Unit (FHU), and the CHMTs to conduct review meetings and comprehensive assessments of the trainings conducted, health workers' knowledge of the health-facility-based ITN distribution process, and logistics management and reporting of ITN distribution in each of the 15 counties.

Status: Four counties—Maryland, River Gee, Grand Gedeh, and Grand Kru—will have their review meetings during the week of April 17, 2017, in southeast Liberia. In the second half of the year there are plans to conduct review meetings for Bong, Monsterrado, Nimba, Lofa, and Margibi counties. Considering financial restraints, review meetings for the remaining counties will be conducted in year 4.

Deliverable	Audience	Timing	Dissemination Plan	Status
County review meeting reports	NMCP, FHU, PMI	Quarter 3, Quarter 4	Email to NMCP and PMI	On track. Due to financial constraints the remaining 6 counties review meetings will be conducted in year 4

[L.IM.4 – Post-Net-Process - completed in Year Two]

L.IM.5 Revision of LLIN Continuous Distribution Documentation Job Aid

Brief activity description: VectorWorks will review the existing LLIN job aid, draft a revised continuous distribution version, and share it with the NMCP and FHU for further review and finalization.

Status: VectorWorks and the NMCP have redesigned the continuous distribution job aid. The pretesting is complete. VectorWorks and the NMCP are currently taking the results of the pretesting into consideration to inform the next version. The continuous distribution job aid is expected to be finalized in May 2017, after which the job aid will be printed and distributed to all health facilities.

Deliverable	Audience	Timing	Dissemination Plan	Status
Revised continuous distribution documentation job aid	NMCP, NHMT, CHMT, implementing partners	Quarter 4	Job aids will be sent to the NMCP and the CHT's for dissemination to health facilities.	On schedule: The graphic work and pretesting has been completed. Printing and distribution is planned for May 2017 (under HC3 funds).

L.IM.6 Print Big Belly Cards and Postnatal Care Ledgers

Brief activity description: As requested by the NMCP and the HMIS Unit, VectorWorks agreed to print the required numbers of Big Belly cards and, through HC3, print the postnatal care (PNC) ledgers for distribution by the relevant authorities. (PMI approved this activity in Year Two, Modification One. The activity was completed in Quarter One of Year Three.)

Status: After a competitive selection process, VectorWorks funded printing of 45,000 Big Belly cards. The printing job was completed in February 2017. The Family Health Division (FHD) is currently distributing these Big Belly cards to counties who will distribute them to health facilities. For Year Three, funds from

HC3 covered the printing of 600 PNC ledgers, and VectorWorks printed them in March 2017. The ledgers are with the HMIS Unit for dissemination. Ministry of Health is waiting for funding to complete the trainings for health workers on using the new ledger before disseminating any of the ledgers.

Deliverable	Audience	Timing	Dissemination Plan	Status
Printing of 45,000 Big Belly cards	NMCP, RH, PMI	Completed in Quarter 1	VectorWorks with NMCP and FHD, developed a dissemination plan. FHD is distributing the big belly cards to counties. Implementing partners working with each county are being asked to help get the cards to the last mile.	Completed
Printing of PNC ledgers	NMCP, RH, PMI	Completed in Quarter 2	Distribution to begin after health workers are trained on the revised forms.	Completed in March 2017. (600 PNC ledgers printed)

L.IM.7 Capture Data on the ID Nets Distributed

Brief activity description: As requested by the NMCP, VectorWorks will work with the Ministry of Health (MOH) to redesign and reformat the monthly health management information system (HMIS) form used to aggregate LLIN distribution data. The form is intended to be filled out using data from the newly revised PNC ledgers.

Status: VectorWorks with the MOH and NMCP have redesigned the HMIS monthly aggregation form. This deliverable is complete. In addition, the MOH has oriented the master trainers on the newly redesigned forms. A cascade training for the counties for both form and ledger still needs to take place. Once trainings on the new PNC ledger are complete, the revised HMIS monthly aggregation form will be sent to the county level to print and disseminate to the health facilities. VectorWorks, MOH, and the NMCP are aware that delays in providing this training at the county level and in getting forms to the health facilities will result in inadequate data on numbers of nets distributed, as the current form does not include a place to record this data. VectorWorks suggests that a dissemination plan be developed for the new HMIS form and include use of all implementing partners to distribute the ledgers to the counties.

Deliverable	Audience	Timing	Dissemination Plan	Status

Redesigned monthly aggregation HMIS forms	NMCP, RH, PMI	Completed in Quarter 1	Share the revised form with NMCP, MOH and PMI	Complete
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L.MA.1 Technical Assistance for Mass LLIN Distribution Campaign

Brief activity description: VectorWorks will collaborate with the International Federation of the Red Cross and AMP, under the coordination of the NMCP, to provide complementary technical assistance and quality control to the NMCP and Plan International in facilitating the planning, training, transportation, and distribution efforts related to the mass distribution campaign in 2018.

Status: Planning for the 2018 mass campaign was expected to start in January 2017 but was delayed to March 2017. In March 2017, VectorWorks participated in the LLIN campaign strategy development process. In this meeting, LLIN committees were formed. VectorWorks will be a part of the SBCC and LLIN other sub-committees and will continue to provide AMP and the NMCP with support including reviewing technical documents, provide input on the SBCC materials and attend coordinating meetings both in-country and remotely.

Deliverable	Audience	Timing	Dissemination Plan	Status
Review the AMP technical assistance report; provide support for mass campaign planning (e.g., attend planning meetings, review and provide feedback on campaign documents); document activities in the semiannual reports with meeting notes and list of documents reviewed	PMI, NMCP, MOH, MOE, implementing partners	Quarter 4	Share by email with NMCP, PMI	In process

L.MA.2 Support for LLIN Distribution to Identified Institutions

Brief activity description: VectorWorks drafted guidelines on distribution to institutions (boarding schools, Army barracks) to incorporate into the planning of the 2018 mass LLIN distribution.

Status: VectorWorks has developed the guidelines for distributing nets to institutions and shared these guidelines with the NMCP to incorporate into the 2018 national mass campaign planning. To date, a one-off distribution of 467 bales of nets have been distributed by the NMCP to 10 institutions, and the NMCP is tracking this distribution.

Deliverable	Audience	Timing	Dissemination Plan	Status
Guidelines on LLIN distribution to institutions	PMI, NMCP, MOH, institutions (boarding schools, Army barracks, etc., implementing partners)	Completed in Quarter 1	Share by email with NMCP and MOH	Guidelines developed. PSM has delivered nets to 10 institutions.

MOZAMBIQUE

[MZ.1 Technical Assistance for ITN Strategy Update - completed Year 1]

MZ.2 ITN Durability Monitoring (Tropical Health)

Brief activity description: VectorWorks is monitoring the durability of insecticide-treated nets (ITNs) in three sites across Mozambique (Nampula, Inhambane, and Tete) in collaboration with its primary monitoring and evaluation partner, Tropical Health, and the Instituto Nacional de Saúde (INS). Sites were selected to maximize potential differences in environment and net use practices.

The first wave of durability monitoring took place in November 2015 in all three sites, six months after the distribution in Tete Province and one month after the distributions in Inhambane and Nampula Provinces. The second wave of durability monitoring, one year after distribution, took place in Tete Province in June 2016, and in Inhambane and Nampula Provinces in August 2016.

Status: VectorWorks included the fieldwork schedule in the Year Three Mozambique work plan approved by PMI on November 25, 2017. VectorWorks completed the baseline report and PMI approved it on December 12, 2016.

VectorWorks completed data preparation and analysis for the 12-month survey report and has started the narrative. VectorWorks will submit the 12-month survey report by the beginning of May 2017. One of the challenges in completing the 12-month report relates to delays in bioassay processes. Although VectorWorks completed fieldwork for the 12-month assessment in June and September 2016, bioassays were not yet complete in Quarter Two of 2017. The Zambézia Province lab suffered a fire, and INS needed to resupply them with mosquitoes, delaying mosquito production for the ITN durability bioassays. VectorWorks staff communicated to the local investigator at the INS completing the bioassays that VectorWorks expects INS to complete the bioassays within 90 days of the completion of fieldwork or 180 days under extenuating circumstances. VectorWorks is planning an exchange of processes and challenges with other durability monitoring investigators to increase the capacity of the local INS investigator in Year Four.

Tropical Health’s large workload across many countries has also been a challenge to timely completion of the 12-month report. VectorWorks and Tropical Health have discussed and developed strategies to improve the timeliness of the completion of reports and expect to provide future reports within 90 days of the completion of fieldwork.

VectorWorks and INS have begun planning for the 24-month assessment, which will take place in May 2017 in Tete Province and September 2017 in Nampula and Inhambane Provinces.

Deliverable	Audience	Timing	Status
Schedule of fieldwork	PMI, INS, NMCP	Completed in Quarter 1	Approved by PMI on November 15, 2016

Baseline survey report (3 sites)	PMI, INS, NMCP	Completed in Quarter 1	Approved by PMI on December 12, 2016
12-month survey report	PMI, INS, NMCP	Quarter 3	In process
24-month assessment report	PMI, INS, NMCP	Year 4	In planning

[MZ.3 Data Dissemination and Translation - completed Year 2]

[MZ.4 Mass Campaign Technical Assistance - completed Year 2]

[MZ.5 Mass and Continuous Distribution Capacity Building - completed Year 2]

[MZ.5.B Study Tour for Tanzania School Net Distribution Round 4 - completed Year 2]

MZ.6 Nampula Process Evaluation

Brief activity description: Mozambique is currently implementing a mass ITN distribution throughout the country. The first round of distribution occurred in Nampula Province at the end of November 2016.

VectorWorks completed a process evaluation in Nampula of the first round of the distribution. VectorWorks reviewed the different stages of the distribution mechanism and provided recommendations on the additional technical and logistical support needed to improve future campaign distribution.

Status: VectorWorks' consultant, Mr. Kamel Maina, completed the process evaluation of the Nampula campaign in two stages. The first mission took place on September 12–23, 2016, and included a review of the volunteers' training and household registration. The objective of the second mission, on November 21–December 7, 2016, was to observe the distribution of ITNs and participate in a wrap-up meeting organized by the NMCP.

Mr. Maina presented his findings to PMI and NMCP on December 6 and 7, 2016. VectorWorks shared Mr. Maina's presentation with PMI via email on December 7, 2016. VectorWorks and PMI verbally agreed that Mr. Maina's presentation and preliminary process evaluation report would serve as his trip report.

PMI approved the final process evaluation report on February 2, 2017. VectorWorks completed and submitted a Portuguese version of the final process evaluation report to PMI on April 10, 2017, and shared the report with the Mozambican NMCP and Alliance for Malaria Prevention on April 12, 2017. VectorWorks worked with the Health Communication Capacity Collaborative to utilize the findings of the process evaluation to advocate for stronger social and behavioral communication change for the following stages of the mass campaign.

Deliverable	Audience	Timing	Status
Trip report	PMI, NMCP	Completed in Quarter 1	Completed through submission of presentation and process evaluation

			report
Presentations from the meetings	PMI, NMCP, implementing partners	Completed in Quarter 1	Submitted to PMI on December 7, 2016
Final process evaluation report	PMI, NMCP, implementing partners	Completed in Quarter 1	Approved by PMI on February 2, 2017

[MZ.PM.1 Year 1 Work plan and reporting completed]

[MZ.PM.2 Year 2 Work plan and reporting completed]

MZ.PM.3 CCP Supervision and Technical Assistance

Brief activity description: VectorWorks project director, Dr. Koenker, made a seven-day visit to Mozambique to discuss school distribution planning processes with NMCP and partners and to facilitate discussion on the next steps for the mass ITN campaign social and behavior change communication (SBCC) activities.

Status: Dr. Koenker completed a technical assistance visit from February 12–18, 2017.

Dr. Koenker’s primary activity in Mozambique related to school distribution planning meetings. These meetings included PMI, NMCP, Global Fund, and other partner organizations. VectorWorks presented NetCALC data and information addressing how school distribution could help maintain ITN coverage within the country. After the trip, VectorWorks, with the support of Tropical Health, created a planning note and budget for the implementation of a school distribution pilot in Zambezia Province.

Dr. Koenker submitted a trip report, a continuous distribution presentation, and a draft pilot planning note for a proposed school distribution to PMI on February 19, 2017, and an updated version on March 3, 2017. VectorWorks will send a budget for the proposed school distribution at the beginning of April 2017.

Dr. Koenker also participated in discussions related to the SBCC activities of the NMCP, including the mass ITN campaign SBCC activities. Dr. Koenker worked with the NMCP staff and Mozambique CCP staff to review SBCC activities developed for the Niassa campaign, specifically in Lichinga.

Deliverables	Audience	Timing	Status
Supervision trip report	PMI, NMCP	Completed in Quarter 2	Submitted to PMI on February 21, 2017
Presentation	PMI, NMCP	Completed in Quarter 2	Submitted to PMI on February 21, 2017

MZ.PM.4 Work Plan and Reporting

Brief activity description: VectorWorks is working with PMI-approved work plans and will adhere to reporting guidelines within the work plans.

Status: PMI approved the VectorWorks Mozambique work plan on November 15, 2016. Quarterly financial reports have been delivered, and this document serves as the semiannual report.

Deliverable	Audience	Timing	Status
Annual work plan	PMI	Completed in Quarter 1	Approved by PMI on November 15, 2016
Quarterly financial reports	PMI	Quarters 1–4	Ongoing
Semiannual and annual progress reports	PMI	Quarter 2, Quarter 4	Herein (Quarter 2)

NIGERIA

NG.1 ITN Durability Monitoring

Brief activity description: VectorWorks is monitoring the durability of DawaPlus 2.0 ITNs in three sites across Nigeria (Zamfara, Oyo, and Ebonyi States) in collaboration with its primary monitoring and evaluation partner, Tropical Health, and the National Malaria Elimination Program (NMEP). Sites were selected to maximize potential differences in environment and net use practices and to build on previous durability studies.

Baseline durability monitoring took place in March 2016 in Zamfara and Ebonyi. The second wave of durability monitoring in these sites took place in September/October 2016. The mass campaign was delayed in Oyo State until November 2016.

Status: In December 2016, VectorWorks conducted baseline fieldwork in Oyo State. Results were similar to the other two sites—very low ITN attrition (9.2%), mainly due to giving away the ITN to a relative or friend. With the completion of Oyo baseline fieldwork, a baseline cohort of households and ITNs has been established, with 98.8% of ITNs in serviceable condition. Given baseline risk factors, VectorWorks predicts that Zamfara is likely to have the longest average ITN life span. The key characteristics leading to this prediction are a very high behavior change communication message recall and attitude toward ITN care and repair, and 40% of household still having campaign nets from a campaign five years prior.

Data collection in Zamfara and Ebonyi for 12-month follow-up occurred in late September and early October 2016. Results will soon be available from this round of data collection and will be presented during the MOP visit. Bioassay results indicate that insecticide durability was at a less than optimal level, and follow-ups with the ITN manufacturer as well as the lab conducting the bioassays is currently ongoing, to rule out potential manufacturing or laboratory problems.

Fieldwork for 24-month data collection will occur in September 2017 in Zamfara and Ebonyi states, followed by 12-month data collection in Oyo in November 2017. In early conversations with PMI Nigeria, VectorWorks has discussed how to ensure that 36-month Oyo field collection occurs under PMI guidance after the VectorWorks project ends.

Deliverable	Audience	Timing	Dissemination Plan	Status
Baseline Summary	PMI, NMCP, Implementing Partners	Quarter 2	Shared by email with stated audiences	Approved: March 22, 2017
12-month Zamfara and Ebonyi summary	PMI, NMCP, Implementing Partners	Delayed to Quarter 3	Shared by email with stated audiences	In process
12-month Oyo result summary	PMI, NMCP, Implementing Partners	Year 4, Quarter 2	Share by email with all stated audiences	Field Work November 2017
24-month Zamfara and Ebonyi summary	PMI, NMCP, Implementing Partners	Year 4, Quarter 1	Share by email with all stated audiences	Field Work September 2017

NG.2 Data Analysis and Dissemination Workshop

Brief activity description: VectorWorks conducted a data analysis workshop with NMEP staff and implementing partners in a hands-on analysis workshop. The workshop focused on methods of analysis for the durability monitoring study, and data preparation for producing succinct reports from durability monitoring data.

Status: Dr. Kilian led the training on September 22–23, 2016 with participants from the state and national malaria elimination programs, and the primary investigator from the relevant entomological sites. The workshop focused on the steps necessary to proceed from raw data to interpretation, including data cleaning and preparation. On the first day, participants practiced extracting data from the phone/tablet, and by the end of the day, all participants were comfortable with this process. Day Two focused on graphical presentation and interpretation of key variables that demonstrate the physical durability of nets. Based on the results from this workshop, the facilitators decided to hold a second workshop focused on training a few NMEP staff on further data processing. The second workshop took place in December 2016 (see NG.3 below).

Deliverable	Audience	Timing	Dissemination Plan	Status
Workshop agenda	PMI, NMEP, IVM subcommittee, and co-investigators	Completed in Year 2, Quarter 4	Share by email with PMI	Approved: December 1, 2016
Workshop report	PMI, NMEP, IVM subcommittee, and co-investigators	Completed in Year 3, Quarter 1	Share by email with PMI	Approved: December 1, 2016

NG.3 Data Processing Workshop

Brief activity description: VectorWorks, through Tropical Health, facilitated a three-day workshop for NMEP members on data processing, using the 12-month assessment results from Ebonyi and Zamfara states. This workshop served as a follow-up to the data analysis and dissemination workshop conducted under work plan activity NG.2 (Data Analysis and Dissemination Workshop). The primary topics covered included cleaning and processing field data in Stata (a statistical software package), which the previous workshop was not able to cover. Dr. Kilian led this second workshop to provide continuity.

Status: Dr. Kilian traveled to Abuja on December 11 and 12, 2016, to conduct the data processing workshop. The activities included variable renaming and labeling, data preparation, and running analyses and extracting data for report templates. Participants showed a high level of motivation and came away from the workshop with skills that will enable them to manage and analyze durability monitoring data sets in the future. Based on this new capacity, the NMEP monitoring and evaluation unit will take over increasing responsibility in data management for future rounds of data collection in Nigeria.

Deliverable	Audience	Timing	Dissemination Plan	Status
Workshop agenda	PMI, NMEP, IVM subcommittee, and co-	Completed in Quarter 2	Share by email with PMI	Submitted to PMI on March 1, 2017

	investigators			
Workshop report	PMI, NMEP, IVM subcommittee, and co-investigators	Completed in Quarter 2	Share by email with PMI	Submitted to PMI on March 1, 2017

NG.PM.1 Work Plan and Reporting

Brief activity description: VectorWorks will provide an annual work plan to be approved by PMI Nigeria, quarterly financial and semi-annual progress reports. VectorWorks understands that they may be asked to provide information as needed by the United States Agency for International Development for the purposes of the PMI annual report, strategic planning, VIP visits, congressional reports, etc.

Status: VectorWorks year 3 work plan was approved on October 14, 2016, and quarterly financial reports have been submitted through quarter two.

Deliverable	Audience	Timing	Dissemination Plan	Status
Work plan	PMI	Year 3		Approved: October 14, 2017
Quarterly financial reports	PMI	Year 3		On Schedule
Semiannual progress reports	PMI	Year 3		Herein
Trip reports	PMI	Year 3		Submitted to PMI: March 1, 2017; awaiting comment

SENEGAL

SN.1 Mass Distribution Campaign Technical Assistance

Brief activity description: VectorWorks provided technical assistance to the NMCP and the implementing partner, IntraHealth, for the remaining phases of the national mass campaign. IntraHealth implemented in the campaign in three phases. In Year Two, an in-country consultant and an international consultant collaborated with the NMCP to develop macroplanning and microplanning tools and technical expertise during planning and implementation. In Year Three, Mr. Moussa N’dour, the in-country consultant, continued working to wrap up campaign activities.

Status: All three phases of the campaign have concluded, distributing more than 8 million ITNs nationwide. Mr. N’dour worked with the NMCP and IntraHealth to complete distribution in phase three of the campaign, including the Matam and Saint Louis medical regions. After distribution was complete in these regions, he shifted his efforts to assisting in the internal evaluation, which included household visits to determine the efficacy of distribution in phase-three distribution sites. The consultant participated in data-review workshops in both medical regions with key stakeholders to assess the completeness of distribution and to probe for successes and challenges in the distribution process.

The campaign is now complete, and an external organization will conduct an evaluation of the mass campaign to validate the internal evaluation. Mr. N’dour identified the key challenge in phase three of distribution as slow payment to a few districts, which resulted in delayed distribution. He recommended assessing the speed of payments between the agency-level and implementing level to prevent future delays. VectorWorks has submitted all deliverables from this activity to PMI in Senegal, and three are awaiting approval from the mission.

Deliverable	Audience	Timing	Dissemination Plan	Status
Support distribution, and coordination, monitoring, and evaluation of the campaign	PMI, NMCP, Intrahealth, AMP	Year 2 Quarters 2,3,4	Share by email with PMI	Completed
Macroplans and microplans	PMI, NMCP, Intrahealth, AMP	Year 2 Quarter 2	Share by email with PMI	Submitted to PMI March 27, 2017
Trip reports (3)	PMI, NMCP, Intrahealth, AMP	Year 2 Quarters 2 and 3	Share by email with PMI	Approved: January 10, 2017
Tools, guidelines, and templates: data collection tools, monitoring tools, end-process tools, training manual, monitors, reporting templates, updated timeline,	PMI, NMCP, Intrahealth, AMP	Year 2 Quarters 2 and 3	Share by email with PMI	Submitted to PMI March 27, 2017

and logistics templates				
Weekly updates	PMI, NMCP, Intrahealth, AMP	Year 2 Quarters 2,3,4	Share by email with PMI	Approved: January 10, 2017
Documentation of SBCC around environmental protocols	PMI	Year 3, Quarter 2	Share by email with PMI	Submitted to PMI March 31, 2017
Final report	PMI, NMCP, Intrahealth, AMP	Completed in Quarter 2	Share by email with PMI and NMCP	Approved: March 14, 2017

SN.2 Rapid Assessment of ITN Social Marketing Channel

Brief activity description: The NMCP and PMI would like to evaluate the impact of the social marketing distribution channel on ITN coverage in the Dakar Region. ADEMAs has sold ITNs in the region since 2014 through social marketing. In total, it has sold more than 700,000 nets through pharmacies, gas stations, and supermarkets in the region. VectorWorks recruited an in-country research firm to determine which gaps social marketing can fill, whether adjustments to the social marketing strategy are needed, and whether this channel is viable and cost-effective for ITN distribution in the future. A household survey will be administered in Dakar to learn more about the demographic information of buyers of socially marketed nets and to give stakeholders a better perspective on the impact of this channel on net access.

Status: VectorWorks contracted a Senegalese research firm, Institut de Recherches et d'Investigations par Sondage (IRIS), and has begun preparations for training and fieldwork. Training will occur in late June 2017, in Dakar, with fieldwork immediately to follow. IRIS has identified field teams and supervisors, and will submit the final training schedule and agenda after obtaining approval from the in-country Senegal IRB. VectorWorks already received approval from the Johns Hopkins University IRB for this research.

In-country, Mr. N'dour contacted wholesalers of socially marketed ITNs to determine the location of sales and to verify that initial sample size calculations would be sufficient to detect statistical significance. Initially, data from wholesalers indicated that a greater portion of nets were sold outside of Dakar, possibly affecting the sample size calculation; however, further research indicated that enough ITNs were present in Dakar for the research to proceed without adjusting the sample size calculation.

Deliverable	Audience	Timing	Dissemination Plan	Status
Draft protocol	PMI, PNLP, ADEMAs	Completed in Quarter 1	Share by email with PMI, PNLP	Submitted to PMI on December 19, 2016
Final protocol	PMI, PNLP, ADEMAs	Quarter 1	Share by email with PMI, PNLP	Submitted to Senegal IRB March 9 2017; comments received April 25, 2017

Fieldwork report	PMI, PNLP, ADEMAs	Delayed to Quarter 4	Share by email with PMI, PNLP	Fieldwork in early July 2017
Final report	PMI, PNLP, ADEMAs	Quarter 4	Share by email with PMI, PNLP	Fieldwork in early July 2017
Trip reports (supervision)	PMI, PNLP, ADEMAs	Delayed to Quarter 4	Share by email with PMI, PNLP	Fieldwork in early July 2017

SN.PM.1 Work Plan and Reporting

Brief activity description: VectorWorks provides an annual work plan for approval by PMI Senegal, quarterly financial reports, and semiannual progress reports to track activities. VectorWorks understands that USAID may request information for the purposes of the PMI annual report, strategic planning, VIP visits, congressional reports, and similar purposes.

Status: PMI approved the Year Three work plan on November 7, 2016, and financial reports are up to date as of Quarter Two.

Deliverable	Audience	Timing	Dissemination Plan	Status
Work plan	PMI	Quarter 1	Share by email with PMI	Approved by PMI on November 7, 2016
Quarterly financial reports	PMI	Quarters 1–4	Share by email with PMI	On schedule
Semiannual progress reports	PMI	Quarter 2, Quarter 4	Share by email with PMI	Herein
Trip reports	PMI	Following travel	Share by email with PMI	July 2017

TANZANIA

Summary of Year Three Activities

In Tanzania, malaria continues to contribute considerably to morbidity and mortality, despite recent declines. The role of VectorWorks in Tanzania is to support continuous and equitable access to ITNs, and to support PMI and the Tanzania NMCP in developing vector control interventions that are appropriate to the specific challenges in Tanzania. The expected boost in ITN coverage from its recent mass campaign will need to be sustained over time by appropriate, effective, and reliable ITN continuous distribution systems.

In Year One (2014–2015), VectorWorks Tanzania supported the implementation of the third annual round of the school-based ITN distribution, locally referred to as the School Net Programme (SNP) Round 3. SNP3 distributed more than 490,000 ITNs in the Lindi, Mtwara, and Ruvuma regions, where school-based ITN distribution is the primary source of ITN access. The experience of SNP3 resulted in greater involvement by the national government, primarily through the President’s Office—Regional Administration and Local Government (PO-RALG) structures. In addition, new methods of ITN quantification and validation were employed. Lessons learned from this experience are feeding into program improvements for SNP4 and future scale-up.

In Year Two, (2015-2016), VectorWorks Tanzania developed a strategy to distribute ITNs through antenatal care (ANC) and Expanded Programme on Immunization (EPI) services. VectorWorks Tanzania also continued to support school-based distribution, with SNP4, which expanded distribution to seven regions (Geita, Kagera, Lindi, Mara, Mtwara, Mwanza, and Ruvuma). VectorWorks Tanzania took initial steps to assess the potential and appropriateness of retail sales of ITNs and the engagement of the private sector in continuous distribution of ITNs in Tanzania.

In Year Three (2016-2017) VectorWorks Tanzania is continuing to scale up health facility based and school-based ITN distribution. Additionally, VectorWorks Tanzania submitted an ITN strategy to NMCP for continuous distribution of ITNs to replace mass campaigns. As part of the continuous distribution strategy, VectorWorks Tanzania is working to finalize and share findings of a landscape analysis of ITN distribution through the private sector. To work towards elimination of malaria, VectorWorks Tanzania is also conducting research on residual transmission of malaria in Zanzibar.

Policy (PC)

[PC.1 Advocacy, engagement and macro-planning with all stakeholders – completed Year 1]

PC.2 Technical Coordination Meetings for Malaria Vector Control

Brief activity description: VectorWorks continued to interact with key stakeholders in malaria vector control at the national level through LLIN Task Force meetings and at the regional level through regional engagement meetings. The VectorWorks program team met with officials from functional units within the MOH, NMCP, President’s Office–Regional Administration and Local Government (PO-RALG), Medical Stores Department (MSD), and Regional Administrative Secretaries. VectorWorks policy interactions increase ownership by the Tanzanian government of the ITN continuous distribution programs in health facilities and schools.

Status: The first LLIN Task Force meeting was conducted on March 15, 2017. The meeting, funded by VectorWorks and hosted by the NMCP, brought together key partners in malaria control activities. On April 7, VectorWorks submitted project-update presentations to PMI for both SNP and health facility distribution mechanisms. PMI provided approval and acknowledgement of receipt on April 8. The significant achievement for the meeting was a consensus and agreement on the School Net Program Round 5 (SNP5) processes, which were introduced to increase project efficiencies. Next-step policy and coordination activities will include meeting with senior management of the PO-RALG in Dodoma in Quarter Three to discuss progress made in malaria control activities and the role VectorWorks plays; hosting a stakeholders meeting in May to discuss the role of the private sector in the commercial sales of ITNs in Tanzania (described in activity IM.14.B below); continued engagement with the NMCP and MSD to discuss technical issues arising from implementation of continuous distribution strategies through schools and health facilities; and working with the National Insecticide-Treated Nets Programme in Tanzania (NATNETS) to stage the National Steering Committee meeting to discuss and endorse Tanzania’s ITN plan.

Deliverable	Audience	Timing	Dissemination Plan	Status
Presentations given by VectorWorks at technical coordination meetings during Year 3	PMI	Throughout Year 3	Share by email	In process. First meeting held March 15, with presentations submitted April 7 and approved by PMI April 8.

[PC.3 Development of Comprehensive ITN Strategy – completed Year 2]

PC.4 Finalize the ITN Strategy and Work Plan for Tanzania

Brief activity description: In Year Two, VectorWorks drafted an ITN plan describing Tanzania’s overall approach to ITN distribution to be used in developing the next concept note for The Global Fund to Fight AIDS, Tuberculosis and Malaria. The approach outlined the scale-up with mass campaigns and then a shift to a fully continuous system, with reproductive and child health (RCH) clinics and SNP, along with contributions from the private sector, maintaining the population’s access to ITNs.

Status: VectorWorks updated the ITN plan as planned in Quarter One of Year Three, with data from the 2015–2016 Demographic and Health Survey (DHS) and the SNP3 evaluation survey, and shared the draft with PMI and stakeholders. In Quarter Two, we organized a multilevel stakeholders meeting on March 9 with the NMCP, PO-RALG, and the National Institute for Medical Research. Unfortunately, the Deputy Permanent Secretary (DPS) was not able to attend. Participants discussed the draft ITN plan, and although the intent was to generate consensus and count the plan as final, there was enough discussion and desire for additional input that the outcome of the meeting was for the NMCP to circulate the ITN plan to stakeholders for further input. The group outlined these next steps: hold a NATNETS Steering Committee meeting to formally endorse the plan, then present the plan with its endorsements to the DPS and senior government officials. VectorWorks developed a PowerPoint for the NMCP to use with DPS and management, and VectorWorks shared it immediately following the stakeholder’s meeting. Additional next steps are to hold a stakeholders meeting on the commercial sector component of the ITN plan (part of

IM.14.B) to further develop the private sector’s role. The stakeholders group also called for a dedicated feasibility assessment to evaluate options for reaching untargeted households, potentially as an activity in Year Four. While the Tanzanian government has not formally finalized the ITN plan, it nonetheless serves as the backbone of Tanzania’s Global Fund concept note.

Deliverable	Audience	Timing	Dissemination Plan	Status
National ITN strategy for Tanzania	NMCP, PMI	Draft finalized Quarter 2	Share by email	Awaiting formal approval from NATNETS

Implementation (IM)

[IM.1 – IM.11 Activities completed in Years One and Two]

IM.12 Health-Facility Distribution

Brief activity description: VectorWorks directly supports and oversees the distribution of ITNs through the RCH channels, which target women at their first ANC visit and children at their first measles vaccination. VectorWorks and the Tanzanian government launched this program in Mtwara Region in May 2016, as the *Chandarua Kliniki* program, and in Mwanza Region in July 2016. VectorWorks intends to scale up RCH distribution to an additional seven regions (Geita, Kagera, Kigoma, Lindi, Mara, Ruvuma, and Simiyu) by May 2017 for a total of nine regions.

Status: We have supported scale-up of RCH-based ITN distribution in five regions (Lindi, Ruvuma, Geita, Kagera, and Mara) between October 2016 and March 2017. A total of 6,188 health care workers and regional and district health management teams have been trained through in-class and on-the-job training. These five regions received their initial supplies of ITNs; resupplies are now being conducted on quarterly basis to a total of seven regions (Mtwara, Mwanza, Lindi, Ruvuma, Geita, Kagera, and Mara). The project has distributed a total 528,200 ITNs as of March 2017. Scale-up will continue to the two additional regions (Kigoma and Simiyu) in Quarter Three.

The dashboard to generate quarterly accountability reports has been delayed due to delays in contracting (see activity ME.4 below), but VectorWorks is manually analyzing databases for accountability. The dashboard should be operational by the end of Year Three.

Deliverable	Audience	Timing	Dissemination Plan	Status
Quarterly accountability reports (regional level)	NMCP, PMI	Quarters 1–4	Share by email	Dashboard has not gone live; however, VectorWorks does the comparison analysis manually

IM.13 School-Based Distribution

Brief activity description: In Year Two, VectorWorks supported the distribution of ITNs through schools through SNP4 in seven regions (Geita, Kagera, Lindi, Mara, Mtwara, Mwanza, and Ruvuma). In Year Three, VectorWorks originally planned to distribute to schools in nine regions (adding Kigoma and Smiyu) through SNP5, but this has increased to 14 regions and more than 3 million ITNs, at PMI's request. This is reflected in pending Modification 1.

Status: Planning and coordination for implementing SNP5 at national and subnational levels and among implementers is in progress. The VectorWorks team presented the distribution outlook and SNP5 processes to the LLIN Task Force on March 15, 2017. The team also met with representatives from PO-RALG, MoH, and the NMCP on February 2-3 to review implementation of SNP4 and discuss evaluation and process evaluation reports.

From lessons learned, the VectorWorks team made and suggested improvements in some of the SNP processes, which will increase efficiency and cost-effectiveness. For instance, VectorWorks suggested no longer training ward education coordinators (WECs), due to their reduced scope and role within SNP. The role of WECs has diminished as a result of improved student quantification data, which is now being obtained from the central government rather than collected and managed by the WECs. By cutting the WEC training expense in 14 regions, VectorWorks will save funds and make the project more sustainable. The refined processes have been used as terms of reference and now provide a scope of work for the consultant whom VectorWorks has engaged to develop SNP implementation guidelines as well as training and reference manuals that will be used to train implementers at national, regional, and district levels.

The LLIN Task Force meeting in the first quarter was delayed to March 15, and so development of SNP5 implementation guidelines and training manuals did not happen in the first quarter as planned; the delay was necessary to ensure that task force members concurred on the suggestions made by small groups that reviewed SNP4 implementation and ultimately endorsed the suggested SNP5 process changes. At the meeting on March 15, 2017, LLIN Task Force members presented and agreed upon the improved SNP plan.

VectorWorks, PO-RALG, and the NMCP technical team met for four days (October 17-20, 2016) to design the architecture of the SNP5 online data portal. The portal, which is now embedded in the basic education management information system (BEMIS) of the PO-RALG, provides an opportunity to report post-distribution data from SNP. The platform is currently undergoing final development. When it is completed, it will facilitate faster reporting of ITN-issuing data; increase transparency, especially for those with access; and provide a trusted SNP data source for any interested party. The platform can be accessed openly at <http://tamisemi.go.tz/dashboard>.

Deliverable	Audience	Timing	Dissemination Plan	Status
SNP5 training manual(s)	NMCP, PMI	Delayed to Quarter 3	Share by email	Consultant engaged to develop the SNP5 tools

SNP5 implementation report and supervision findings	PMI, LLIN Task Force	Quarter 4	Share by email	Not started
SNP5 online data portal	NMCP, PMI	Quarter 4	Share by email	In process

IM.14.A Conduct a Market Dynamics Landscape Assessment to Explore Retail Channels for ITNs in Tanzania

Brief activity description: In Year Two, VectorWorks explored the issue of developing a holistic private-sector approach to ITN sales in Tanzania with NMCP, PMI, and other partners, as part of the overall ITN Plan. This activity is complementary and synergistic with the VectorWorks Core Activity IM.9 Private-Sector Approaches and Considerations. In Year Two, VectorWorks met with various manufacturers to assess their interest in investing in retail markets; all manufacturers were interested, but wanted additional consumer and market information before investing.

Status: Towards the end of Year Two, the international data gathered by PSI was complemented with a Tanzanian market dynamics landscape assessment (i.e., desk review and interviews with the remaining market players in Tanzania). Retail audit data on ITNs in Tanzania was also collected in late 2016 as part of a separate PSI Tanzania activity. After extensive synthesis and editing, the landscape analysis is being finalized for use at the stakeholder workshop (IM.14B) planned for May 2017.

IM.14.B Hold a Stakeholder Workshop to Discuss Findings of the Market Dynamics Assessment

Brief activity description: This workshop is intended to use the findings of the market dynamics landscape assessment conducted in Year Two and analyzed in Year Three to determine with the key stakeholders what, if any, follow-up actions will be taken to move retail ITN sales forward in Tanzania.

Status: VectorWorks is currently finalizing the market dynamics landscape assessment report, as well as a presentation for use at the workshop. Key participants and stakeholders have been identified, and the VectorWorks Tanzania team is working closely with the NMCP to set a meeting date in May so that we can organize logistics and send save-the-date emails to the key participants. We are aware of at least three ITN manufacturers with strong interest in the issue and expect to have good participation once the NMCP finishes their Global Fund planning and has time to focus on other issues. This workshop will also confirm the basic approach to Tanzania's commercial sector ITN strategy, described in the overall ITN Plan document.

Deliverable	Audience	Timing	Dissemination Plan	Status
Presentations used at the stakeholder workshop	PMI	Quarter 3	Share by email	In process
Meeting notes	PMI	Quarter 3	Share by email	Meeting currently planned for late May 2017

Market dynamics landscape assessment report that includes a draft model for private sector design	PMI	Quarter 3	Share by email	In process
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IM.15 Implementation Support and Technical Assistance for Zanzibar Continuous Distribution

Brief activity description: In Year Two, VectorWorks conducted a process evaluation of the continuous distribution strategy for Zanzibar and ran NetCALC analyses for Zanzibar using available data. Based on the process evaluation findings, VectorWorks will work with the Zanzibar Malaria Elimination Programme (ZAMEP) to incorporate the results into the design and implementation of the existing continuous distribution strategy. VectorWorks will support ZAMEP to update the existing implementation guidelines during these meetings. During the rest of Year Three, VectorWorks will meet with ZAMEP to provide follow-up technical assistance to fine-tune the strategy and the continuous distribution tools during implementation. This exercise will update previous NetCALC analyses using the latest population and ITN data.

In addition to technical assistance, VectorWorks will support the implementation of the health-facility-based distribution on Unguja and Pemba islands by developing a barcode system for shipping and receiving ITNs. This system will be part of a contract with a transport company that will deliver the ITNs to health facilities on both islands. To provide additional storage for health-facility-based and community distribution (once restarted), ZAMEP will purchase six containers to store ITNs at the ZAMEP office in Stone Town. These six containers can store up to 36,900 ITNs each, for a total storage area of roughly 220,000 ITNs (these numbers are for polyester ITNs; polyethylene ITNs can be bulkier, with 16,800 ITNs per 40-foot container).

Status: Continuous distribution strategy review meetings will take place in May 2017 after the Zanzibaris have reviewed and incorporated ITNs in the health management information system and report-and-request tools. VectorWorks has facilitated several meetings between Zanzibar Central Medical Stores and ZAMEP, and both parties have agreed that ZAMEP will transition ITN handling to Central Medical Stores. Zanzibar Central Medical Stores will enter ITNs into the electronic logistic management information system (eLMIS) so that health facilities can order ITNs along with other health commodities.

ZAMEP will procure containers with direct funding from PMI. Currently, ZAMEP is finalizing engagement with MEASURE Evaluation to procure the containers. VectorWorks is working with ZAMEP to identify space within central medical stores where the containers will be placed. The upcoming ITN shipment for Zanzibar is expected to come with a barcode, and VectorWorks will work with Zanzibar Central Medical Stores and the private distributor to ensure tracking of ITNs using the barcode system. To ensure that there is a sufficient quantity of ITNs for continuous distribution in Zanzibar, VectorWorks has run a NetCALC analysis to inform continuous distribution strategy needs for the coming year. After the continuous distribution strategy has been updated and is functional, VectorWorks will continue to provide technical support to ensure continuous distribution activities operate smoothly.

Deliverable	Audience	Timing	Dissemination Plan	Status
Updated continuous distribution strategy and implementation guidelines	PMI, ZAMEP	Quarter 3	Share by email	In process
ITN transport plan	PMI, ZAMEP	Quarter 3	Share by email	In process
Delivery of ITN storage containers	ZAMEP	Quarter 3	Physical delivery of containers	In process by MEASURE Evaluation

IM.16 Conduct ITN Quantification

Brief activity description: It is important to order ITNs in advance because of long lead times, and to do that, PMI or the Global Fund must know how many ITNs will be needed. Accurate quantification is important to ensure that there are no stock outs. VectorWorks conducted quantification for health facility ITNs in all 26 regions of Tanzania using 2016 HMIS data to forecast needs for 2018, 2019 and 2020. VectorWorks used a percentage increase of 2.9% to project through 2020 (VectorWorks arrived at this number by calculating the difference between 2015 HMIS data that was used to quantify for needs in 2016/2017 and 2016 HMIS data).

VectorWorks compared this data with NetCALC projections as well as projections using population data done for the same years 2018, 2019 and 2020. The difference between quantification using HMIS was almost the same as that of population projections, giving a ratio of 1:1 except in few regions.

VectorWorks established the pipeline for the 9 regions funded by PMI (Mwanza, Geita, Simiyu, Mara, Kagera, Kigoma, Lindi, Mtwara and Ruvuma) based on the quantification data. PMI will procure seven months' worth of ITNs from January, 2018 to July, 2018 for these nine regions. Global Fund will procure the remaining five months of stock up to December, 2018.

Status: VectorWorks shared the quantification numbers with NMCP and with PMI for their approval and to process the procurement of the LLIN needs for 2018. Data for immunizations in HMIS includes both measles 1&2, so the number of children getting measles vaccine was higher than pregnant women. Therefore it was crucial to clean the data first before using it to quantify for LLIN needs.

VectorWorks recommends not creating an Excel-based quantification tool. During quantification in Year 3, quantifications needed to be adjusted more than anticipated, in a way that a simple standardized tool cannot accomplish.

The biannual quantification review was not conducted in Quarter One as planned, because a full year of consumption data is needed. As *Chandarua Kliniki* launched in May 2016, the first quantification review will be conducted in Quarter 4 and focus on Mtwara and Mwanza regions, which were the first regions to roll out the program.

Deliverable	Audience	Timing	Dissemination Plan	Status
Excel-based quantification tool	NMCP, PMI	Quarter 3	Share by email	Recommend cancelling

Annual quantification	NMCP, PMI	Quarter 3	Share by email	In process
Biannual quantification review	NMCP, PMI	Quarter 4	Share by email	In process

IM.17 Establish Health Facility ITN Storage Space Requirement

Brief activity description: During Year Two, MSD used their warehouse management system, Epicor 9, to document all ITN transactions distributed through VectorWorks. However, the limited storage space at MSD required VectorWorks to rent and manage storage warehouses in Mtwara and Mwanza to store the ITNs for the ANC, EPI, and SNP distributions. With the goals of capacity building and sustainability, VectorWorks is working with MSD toward MSD eventually taking over storage and distribution of ITNs for the Tanzanian government. To accomplish this, VectorWorks is helping MSD to establish a health facility ITN storage requirement that will enable MSD manage ITN storage and rent private storage space for Year Three before the MSD takeover.

Status: VectorWorks provided MSD with the expected timing of ITN shipments for 2017 and the expected storage space required. MSD will start its ITN distribution in Mwanza in the districts of Sengerema and Nyamagana and will establish storage in Mwanza's MSD zone by May 1, 2017. Even though MSD has agreed to take on storage and distribution, storage space still remains a challenge- the amount of space available is not sufficient to accommodate all the ITNs now in the custody of Population Services International together with the ITNs expected to be delivered from the manufacturer. VectorWorks will continue to support MSD in storage planning.

Deliverable	Audience	Timing	Dissemination Plan	Status
List of ITN storage spaces	NMCP, MSD, PMI	Quarter 3	Share by email	Completed
Updated logistics plans for ITNs in Tanzania	NMCP, MSD, PMI	Quarter 3	Share by email	In process

IM.18 Adopt Just-in-Time Delivery Approach for School Net Program ITNs

Brief activity description: To avoid storing SNP ITNs, which is costly, VectorWorks will adopt the Just-in-Time principle, whereby the contracted private distributor will pick up ITNs from the port, conduct receiving and issuing procedures, and transport the ITNs to the respective regions. Nets will not be stored in the regions but will be dispatched to respective district councils based on a predetermined district ITN manifest and will be distributed to schools as soon as possible. The big containers that carry ITNs at the regional and district levels will be used as temporary and mobile storage facilities.

Status: As per pending Modification 1, VectorWorks will implement SNP5 in 14 regions (Mwanza, Mtwara, Mara, Lindi, Ruvuma, Simiyu, Geita, Kagera, Katavi, Kigoma, Morogoro, Pwani, Shinyanga, and Tabora). The VectorWorks team and the logistics and transport contractors have met and developed a distribution plan for the first five regions (Mtwara, Lindi, Ruvuma, Tabora and Katavi). These regions will receive the PMI-procured ITNs (966,812) arriving in June; the current plan is to distribute those ITNs through schools in August 2017.

The rest of the ITNs (2,037,700) will be procured by the government of Tanzania with financial support from the Global Fund. There is uncertainty as to when these nets will be made available by the government and if they will be made available on time to enable distribution and issuing to happen to the remaining nine regions before October 2017. To face this challenge and prepare for timely distribution, VectorWorks plans to continue liaising with the NMCP to better understand the procurement processes involved and the expected arrival dates for the nets.

Deliverable	Audience	Timing	Dissemination Plan	Status
SNP ITN timeline	NMCP, MSD, PMI	Quarter 3	Share by email	In process

IM.19 Private Sector Market Shaping

Brief activity description: This market-shaping activity refers to facilitating the sale of ITNs to Tanzanians who wish to buy ITNs. The current ITN Plan for Tanzania includes the commercial sector as one of the channels for continuous distribution; it specifically serves households without enough ITNs to cover everyone, such as large households. Findings from both the market analysis and the stakeholders' workshop (IM.14.A-B above) will provide VectorWorks with insightful feedback that will help to facilitate the emergence of a stronger retail market for quality ITNs.

Status: This activity must follow the stakeholders' workshop (IM.14.B) in order for us to identify the activities necessary to make the private market a viable distribution channel and to assess the feasibility of VectorWorks undertaking or supporting the implementation of those enabling activities. We anticipate being able to use the results of the stakeholders' workshop during the VectorWorks annual meeting in June 2017 to draft follow-up activities for discussion with the PMI Tanzania team, the NMCP, and our PMI Washington team. The two deliverables below remain as deliverables, although the first one was implemented slightly differently than originally planned. A preliminary presentation was made by VectorWorks to international manufacturers at the VCWG meeting in February, and the complete package will be shared prior to the stakeholders' workshop. The second deliverable will be a report, but the decision of whether VectorWorks will undertake an advocacy activity as described will depend on the discussion and decisions made at the workshop.

Deliverable	Audience	Timing	Dissemination Plan	Status
Full package of information (e.g., retail audit, discrete choice experiment findings, consumer research) with international manufacturers at the VCWG	International manufacturers, NMCP, PMI	Completed in Quarter 2	Presentation and accompanying materials at VCWG meeting February 2017; will share materials at stakeholders workshop (IM.14.B)	Completed
Progress report to decision makers (e.g., parliamentarians)	Tropical Pesticides	Quarter 4	Share by email	Not started; will begin after

on advocacy, removal of tax exemption on and regulation of untreated nets, enforcement of an ITN logo or quality seal, and streamlining of registration of new ITNs	Research Institute, Tanzania Bureau of Standards, tax authorities, NMCP, PMI			stakeholders' workshop
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IM.20 SBCC for Chandarua Kliniki

Brief activity description: Due to significant differences between the previous Tanzania National Voucher System and the new *Chandarua Kliniki* program, VectorWorks will conduct community mobilization activities to create awareness regarding the health-facility-based distribution of ITNs targeting pregnant women attending ANC services for the first time and infants receiving measles-rubella vaccination at nine months.

Status: VectorWorks began the process to procure service providers who will implement the SBCC mobilization early in March 2017. VectorWorks advertised for bids with a request for proposals in the *Guardian* newspaper. VectorWorks will select the winning bid and finalize a contract in Quarter Three. Implementation of community mobilization activities for *Chandarua Kliniki* is planned to start in May, after the rainy season. Activities will be conducted in Kagera, Geita, and Ruvuma regions, which are the regions that recently started the program; VectorWorks conducted similar community mobilization activities in Mtwara and Mwanza upon inception of the program in Year Two.

Deliverable	Audience	Timing	Dissemination Plan	Status
Dissemination plan, including number of documents to be printed and number of community events to be held by region	NMCP, PMI	Quarter 3	Share by email	Selection of service provider to conduct SBCC activities currently in process. On schedule to begin SBCC activities in May 2017 in Ruvuma, Geita, and Kagera regions.

Monitoring and Evaluation (ME)

[ME.1.1 and ME.1.2 Internal Project Monitoring in Year 1 and Year 2 – completed]

ME.1.3 Internal Project Monitoring

Brief activity description: In Year Three, VectorWorks Tanzania updated the existing project monitoring plan (PMP) with the targets for Year Three, and the VectorWorks monitoring manager and regional managers continue to monitor the implementation of project activities. The monitoring manager helps to monitor activities based on the approved indicators and uploads relevant data to PMI's Tanzania Monitoring and Evaluation Management System (TMEMS) database quarterly.

Status: The updated PMP is submitted together with this semiannual report. In the first two quarters of fiscal year 2017, VectorWorks Tanzania accomplished much on health-facility-based distribution activities: VectorWorks Tanzania trained a total of 6,170 people (2,486 men and 3,684 women) in five regions: Geita, Kagera, Lindi, Mara, and Ruvuma. VectorWorks Tanzania distributed a total of 528,200 ITNs. The monitoring manager successfully entered data into TMEMS. VectorWorks' SNP trainings and distribution are planned to happen in Quarters Three and Four of Year Three. The PMP will be updated and resubmitted with the Year Three annual report.

Deliverable	Audience	Timing	Dissemination Plan	Status
Updated PMP	PMI	Quarter 3, Year 3 Quarter 1, Year 4	Share by email	Submitted to PMI with this semiannual report.

[ME.2 Documentation and dissemination of SNP3 – completed Year 2]

[ME 3.1 Process Monitoring of SNP3 – completed Year 2]

ME.3.2 Process Monitoring of SNP4

Brief activity description: As part of the monitoring plan for SNP1, SNP2, and SNP3, VectorWorks conducted a procedural audit to verify how well distribution procedures were followed. For SNP4, VectorWorks monitored these processes through two activities: a process evaluation and a commodity management assessment. The process evaluation took the form of a programmatic evaluation of SNP4, whereas the commodities management assessment focused on the movement of ITNs and the paper trail throughout the activity. The assessments produced data on how to improve the program and allow for a more meticulous assessment of commodity management. Accounting for the flow of nets is for the first year of scale-up to four new regions, as well as for future scale-up.

Status: VectorWorks conducted a process evaluation in two districts in each of the seven SNP4 regions (Lindi, Mtwara, Ruvuma, Mwanza, Mara, Geita, and Kagera), as well as at the national level. We collaborated with the Tanzanian Institute of Monitoring and Evaluation (TIME) to conduct this process evaluation: TIME provided an objective, outsider perspective. The process evaluation included stakeholders from national, regional, district, ward, and school levels and used both qualitative interviews in the form of focus group discussions (at the regional, district, ward, and school level) and in-depth individual interviews (at the national level). The resulting recommendations included educating parents and community members about the rationale for school-based distribution and stressing to all actors the need to adhere to the standard operating procedures. The process evaluation is being copy-edited before submission to PMI.

Talemwa Investment Consulting Company (TICC) conducted the SNP4 commodity management assessment, with training by Mr. Alain Daudrumez, an Alliance for Malaria Prevention consultant with expertise in logistics and supply chain management. The TICC team sampled from one central warehouse, two regional warehouses, nine district offices, and 275 schools in three regions (Mtwara, Ruvuma, and Kagera). Key findings from the assessment revealed that schools do not have room to store leftover nets, schools are not storing documents correctly, and there should be clear guidance on what to do with leftover nets. TICC has completed a draft report and is working with VectorWorks to finalize it. The report

has been delayed due to Daudrumez’s availability and to the need to coordinate around school holidays in December and early January.

VectorWorks will conduct process monitoring for SNP5 in early Year Four, after distribution is completed.

Deliverable	Audience	Timing	Dissemination Plan	Status
SNP4 process evaluation report	PMI, NMCP, MoEVT, PO-RALG, LLIN Task Force	Quarter 3	Share by email	In process
SNP4 commodity management assessment report	PMI, NMCP, MoEVT, PO-RALG, LLIN Task Force	Quarter 3	Share by email	In process

ME.4 Accountability Information System for ANC/EPI Distribution and SNP

Brief activity description: During Year Two, VectorWorks worked with the University of Dar es Salaam to develop an accountability information system (AIS) dashboard for health-facility-based ITN distribution. The purpose of the *Chandarua Kliniki* dashboard is to transparently monitor and account for every ITN distributed through health facilities. The *Chandarua Kliniki* dashboard sits under the District Health Information System 2 (DHIS 2) platform and triangulates between the numbers of clients seen (children getting their first measles vaccination and pregnant women at their first ANC visits) and the number of ITNs distributed in the health facility. In Year Three, VectorWorks decided to use this experience and create a dashboard for the SNP distribution.

Status: Currently, the *Chandarua Kliniki* dashboard has not yet gone live, but processes are under way to hire the company that developed it to make improvements on the dashboard before pretest and scale up in the regions. Even though the dashboard is not live, VectorWorks is conducting manual comparison analysis of ITNs distributed and clients served. The training report is therefore delayed, given delays in finalizing the AIS.

PO-RALG is developing the BEMIS, which tracks school-based ITN distribution, in addition to other education-related indicators. VectorsWorks provided input and feedback on the development of the BEMIS and will not develop a separate AIS just for SNP, since the BEMIS provides this accountability.

Deliverables	Audience	Timing	Dissemination Plan	Status
Training report on AIS for ANC and EPI, at all levels	PMI, NMCP, PO-RALG	Quarter 4	Share by email	In process
Quarterly accountability reports for ANC and EPI	PMI, NMCP, PO-RALG	Quarters 3-4	Share by email	Dashboard not yet live; however, VectorWorks is doing the comparison analysis manually.

ME.6 Monitoring Project Engagement Across Age and Gender

Brief activity description: Apart from the targeting of ITNs to pregnant women and children under five years of age due to biological vulnerability, gender and age considerations in ITN programs have been underexplored. It is thus important to monitor gender and age in ITN distribution to expose potential areas for improvement. To this end, VectorWorks Tanzania tracks the gender of participants in trainings and the gender of beneficiaries of ITNs as best as possible and conducts other gender-related activities. In Year Two, this involved VectorWorks conducting an internal training for Tanzania-based staff on gender equity and mainstreaming.

Status: Baltimore-based VectorWorks staff met with VectorWorks Tanzania’s monitoring and evaluation officer in March 2017 to plan tracking gender-related outcomes. The Year Three annual report will incorporate the gender breakdown of trainees from data collected by VectorWorks; the age and gender of recipients of ITNs from SNPS, using the BEMIS; and possibly the gender of infants receiving ITNs from *Chandarua Kliniki*, if the government includes the gender of infants in their tracking. Having these statistics will enable VectorWorks to assess whether males and females have equitable access to ITNs through VectorWorks programs.

In addition, Baltimore-based staff in conjunction with the VectorWorks Tanzania’s gender champion (a staff member was identified for this role after internal gender training in Year Two) reviewed VectorWorks Tanzania’s SBCC materials to ensure that they do not reinforce harmful gender stereotypes (like men having no role in childcare) and that, where possible, materials promote gender equity. They found that VectorWorks Tanzania’s materials accomplish this. For example, on the *Chandarua Kliniki* logo, a pregnant woman and her male partner are depicted together, as are a mother and a father with their infant. These images promote the message that malaria prevention is the responsibility of both men and women. VectorWorks Tanzania materials depict fathers in various roles to demonstrate that caring for a family and preventing malaria are not just a woman’s responsibility.



Figure 1. Men and women are depicted as having important roles in child care and malaria prevention in the *Chandarua Kliniki* logo.

Deliverable	Audience	Timing	Dissemination Plan	Status
Short report on DHS 2015 ITN ownership, access,	PMI	Quarter 4	Share by email	Not started

and use by age and gender				
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ME.7 Care and Repair Qualitative Study

Brief activity description: VectorWorks’ qualitative study investigated net care and repair practices in households in southern Tanzania, using a mix of qualitative research methods. This information was used to identify potential motivators and existing barriers to net care and repair in the Tanzanian context. Fieldwork implementation, data analysis, and presentations were completed with collaboration from the London School of Tropical Medicine and Hygiene (LSTMH) and Ifakara Health Institute (IHI).

Status: IHI completed fieldwork in Year Two (mid-2016) and VectorWorks submitted technical reports to PMI in February 2017. Final manuscript drafts are in preparation and expected in July and August 2017 (the principal investigator for LSTMH is currently on maternity leave). Next steps for this activity include completion and submission of articles to peer-reviewed journals and presentation at the American Society of Tropical Medicine and Hygiene’s 2017 conference (conditional on acceptance of abstract submitted in April 2017). The complete list of disseminations planned or conducted is outlined below.

Oral presentations:

- “Decoding perceptions, barriers, and motivators of net care and repair in Tanzania,” by Angel Dillip. Presented at the Third Pan African Mosquito Control Association Conference, Lagos, Nigeria, on September 6–9, 2016.
- “Decoding perceptions, barriers, and motivators of net care and repair in Tanzania,” by Zawadi Mageni. Presented at the Attrition, Bioefficacy, Chemistry, Degradation, and Insecticide Resistance Annual Meeting, IHI, Bagamoyo, Tanzania, on September 5–6, 2016.
- “Decoding perceptions, barriers, and motivators of net care and repair in Tanzania,” by Zawadi Mageni. Presented at the NMCP, Dar es Salaam, Tanzania, on September 9, 2016.

Publications:

- In preparation for submission to the *Malaria Journal*:
 - “Gender roles in net care and repair in Tanzania,” by Dillip et al.
 - “Decoding net care and repair in Tanzania: A qualitative study,” by Mageni et al.

Deliverable	Audience	Timing	Dissemination Plan	Status
Summary of preliminary findings	PMI, NMCP	Completed in Quarter 2	Share by email	Completed
Presentation at one international conference	PMI, NMCP, conference attendees	Completed in Quarter 1	Share by email	Completed
Publishable-quality article	PMI, NMCP	Quarter 4	Share by email	In process

ME.8 Zanzibar Continuous Distribution Process Evaluation

Brief activity description: VectorWorks conducted a process evaluation of the continuous distribution activities in Zanzibar in Year Two to identify strengths and challenges of implementation and to make recommendations for improvements going forward. In Year Three, VectorWorks finalized analysis of the process evaluation and drafted a report of key findings and recommendations for the continuous distribution system.

Status: PMI approved the process evaluation report on November 25, 2016. The report highlighted positive perceptions of the continuous distribution system as an important component of successful malaria control efforts in Zanzibar and as having a positive impact on ANC and EPI services and community knowledge and use of ITNs. The evaluation revealed varied challenges across locations, including stock outs of coupons and ITNs, insufficient storage facilities, issues with reporting between the *shehias* and health facilities, and increased workloads for *shehia* and health facility staff. The process evaluation also identified examples of the system functioning as planned and positive innovations in some locations, such as effective communication systems, establishment of health committees, and use of community and religious leaders in sensitization campaigns. The findings from this report will inform VectorWorks' ongoing technical support to ZAMEP to improve the continuous distribution system.

Deliverable	Audience	Timing	Dissemination Plan	Status
Process evaluation report detailing results	PMI, ZAMEP	Completed in Quarter 1	Share by email	Approved

ME.9 Accountability Information System (AIS) for Zanzibar

Brief activity description: Based on experience from developing the mainland AIS, VectorWorks will establish an AIS for continuous distribution of ITNs in Zanzibar. Since health facilities report in the DHIS 2 platform and Zanzibar Central Medical Stores has a functioning eLMIS, VectorWorks will replicate the same system used by the mainland. This system will be critical to increase the visibility and triangulation of ITNs distributed versus the ANC and EPI services rendered at the health facilities. VectorWorks will work with ZAMEP to ensure that ITNs are entered in the Central Medical Stores system and that ITN distribution information is triangulated with service information.

Status: VectorWorks has been working with the Global Health Supply Chain (GHSC) project to facilitate the development of the AIS in Zanzibar. VectorWorks is currently waiting for GHSC to identify the cost for the AIS development and contracting arrangements.

Deliverable	Audience	Timing	Dissemination Plan	Status
Quarterly output reports	ZAMEP, PMI	Quarters 3-4	Share by email	In process

ME.10 Zanzibar ITN Durability Monitoring

Brief activity description: VectorWorks is providing technical support to ZAMEP in conducting durability monitoring in two sites in Zanzibar (Wete and North B), following the distribution of Olyset and PermaNet 2.0 ITNs during the 2016 mass distribution campaign. Per PMI guidelines, 15 clusters of 10 households each will be monitored in both sites, which should provide approximately 828 ITNs at baseline and 668 ITNs at the 36-month follow-up. ZAMEP is leading fieldwork, with Tropical Health providing technical oversight and training.

Status: Baseline data collection occurred in Wete on Pemba Island and North B on Unguja Island from October 17 to November 11, 2016, and 834 ITNs were tagged. As expected, the two sites were very similar in household characteristics and in knowledge and attitudes about net use, care, and repair. Only about 25% of the cohort ITNs were hanging; the rest were still in the package. However, the hanging and use rate for other nets in the households was around 80% at both sites, suggesting that families preferred to first continue using the nets they still had and that were already in place before switching to the new ones. Attrition was low; 7% of ITNs were no longer in households, and of these, 85% had been given to others to use and only 0.1% were lost due to wear and tear. Of the 834 nets tagged, 96% were in good condition and 99.2% were “serviceable” at baseline. VectorWorks submitted draft results from the baseline in Quarter Two and a final baseline report on April 13, 2017 (PMI provided approval on May 7). We will submit baseline data sets to PMI in Quarter Three. VectorWorks will conduct a data analysis workshop in Zanzibar in mid-July, followed by training and fieldwork for the 12-month follow-up fieldwork and will adhere to the 90-day time frame for report submission following fieldwork going forward.

Deliverable	Audience	Timing	Dissemination Plan	Status
Final protocols submitted to the Johns Hopkins University ethical review committee and the Zanzibar Medical Research and Ethic Committees	PMI, ZAMEP	Completed in Quarter 1	Share by email	Completed
Baseline report	PMI, ZAMEP	Quarter 3	Share by email	Approved
12-month report	PMI, ZAMEP	Quarter 1, Year 4	Share by email	Not started
Data analysis workshop agenda and report	PMI, ZAMEP	Quarter 4	Share by email	Planning

ME.11 Monitoring ITN Distribution and Issuing at Health Facilities

Brief activity description: VectorWorks regional managers and the district teams have developed monitoring and supportive supervision plans for all health facilities in their district. VectorWorks staff accompany district officials on the first supervision visit; thereafter, VectorWorks regularly conducts supervision visits. In addition, VectorWorks plans to hold a health-facility-based distribution review meeting in each region six months after distribution has begun so that district teams may present updates

on the implementation of distribution and on their supervision visits, present their accountability system data, describe and explain the trends in the data, and discuss any mitigation measures needed.

Status: In the first two quarters of Year Three, the VectorWorks regional managers have faced challenges due to conflicting government priorities at the district level. Nevertheless, they have regularly and randomly conducted spot-checks at health facilities to observe ITN issuing to target clients and have done physical counts of ITNs to verify that facilities maintain minimum stock balance. The VectorWorks Tanzania monitoring manager and program officer based in Baltimore also collaborated with regional and district teams in Tanzania (during a short-term technical assistance trip) to conduct data quality assessments in Mtwara and Mwanza to visit reach out to 16 health facilities. Recommended actions include regional managers working with regional and district teams to visit at least 25% of all health facilities in each district and holding quarterly review meetings for teams to share experiences and come up with ways to resolve issues or challenges in ITN distribution and issuing. The first semiannual meeting of Year Three is scheduled to be conducted in Mtwara in April 2017. The annual supervision plan has been delayed to incorporate findings from the data quality assessments and will be submitted in Quarter Three.

Deliverable	Audience	Timing	Dissemination Plan	Status
Annual supervision plan	NMCP, PMI	Quarter 3	Share by email	In process
Report on semiannual meetings compiled for all regions	PMI, NMCP	Quarter 3	Share by email	In process

ME.12 Zanzibar Residual Malaria Transmission Study Fieldwork

Brief activity description: VectorWorks is working with ZAMEP to carry out a residual malaria transmission study on Zanzibar. This study will span two transmission seasons in six shehias, which were selected on the basis of high malaria incidence and receipt of indoor residual spraying in 2016. IHI is leading the entomology component of the study, measuring indoor and outdoor mosquito biting and resting patterns and pyrethroid insecticide resistance. CCP is leading the human behavioral component of the study to identify and characterize common indoor and outdoor activities associated with ongoing residual malaria transmission in the selected sites.

Status: During the first two quarters of Year Two, this study received full ethical approval from Johns Hopkins University, IHI, and the Zanzibar Medical Research and Ethics Committee, and data collection began in Zanzibar.

VectorWorks collected the first season of human behavioral data in December 2016. This data included 135 all-night household observations and pre- and post-observation surveys, 48 in-depth interviews, and six nighttime community observations. VectorWorks will conduct the second season of human behavioral data collection in the rainy season in April and May 2017. VectorWorks began the entomology component of the study in December 2016 and will continue this activity on an ongoing basis throughout the study period. IHI's mosquito collections are being carried out indoors and outdoors from 6:00 p.m. to 7:00 a.m. using standardized exposure-free volunteer-baited trapping methods. Mosquito collections will continue in all 135 households, on a rotating basis, with each household completing eight nights of indoor and outdoor mosquito collection. Additional entomological work will begin in the rainy season, including

insecticide-resistance testing, collection of resting mosquitoes indoors and outdoors, and collection of mosquitoes from alternative locations (e.g., outdoor resting mosquitoes using pit traps).

During the dry season, low malaria vector catches presented challenges for the entomology component of the study. This finding is consistent with the low number of reported malaria cases by week during this time period in Unguja, compared to the previous year. However, to confirm that the low numbers are due to low vector density and not to the collection method, IHI added light traps from the Centers for Disease Control and Prevention for comparison. Key successes in this study include the effective collaboration VectorWorks has established across IHI, CCP, and ZAMEP, and positive relationships cultivated with community members and shehias in the study sites.

VectorWorks expects to complete planned publications and conference presentations in Year Four.

Deliverable	Audience	Timing	Dissemination Plan	Status
Presentation of preliminary study findings	PMI, ZAMEP	Quarter 4	In-person presentation to ZAMEP and PMI; share presentation with ZAMEP and PMI by email	In process. VectorWorks provided a preliminary presentation to PMI Tanzania at the end of season 1 and another is scheduled for ZAMEP in April 2017.

ME.13 Tanzania Malaria Forum

Brief activity description: VectorWorks is organizing the 2017 Tanzania Malaria Forum as part of World Malaria Day, which is marked on April 25 every year. The forum brings together malaria stakeholders from academia, research, government, and other venues to deliberate on progress made as well as challenges encountered in malaria control activities in Tanzania. Ultimately, VectorWorks and IHI take their lead from the NMCP to make sure this activity fits within the NMCP’s plan.

Status: VectorWorks was prepared to kick-start coordination of the 2017 malaria forum through joint meetings. The NMCP was also engaged and provided support that the coordination team needed. However, due to ongoing writing of funding requests to the Global Fund (2018–2020), which must be submitted in May, the NMCP has advised VectorWorks to postpone the malaria forum activity because most of the senior officials of the NMCP are focusing their energy on the funding request-writing process and their involvement in the forum would be minimal. The current plan is for VectorWorks to conduct a similar activity in the near future.

Deliverable	Audience	Timing	Dissemination Plan	Status
Report on event activities	PMI, NMCP	Delayed to Quarter 4	Share by email with PMI	The malaria forum has been postponed by the NMCP

ME.14 Technical Assistance to ZAMEP for Entomology Data Systems and Analysis

Brief activity description: VectorWorks is providing technical assistance to strengthen the capacity within ZAMEP for entomology data management, storage, and analysis. This work promotes quality data, improved informatics, proper storage, and strong data analysis.

Status: VectorWorks is providing technical assistance and hands-on training to ZAMEP counterparts to learn to use a new data management system. VectorWorks and ZAMEP worked on the system for mosquito sorting and data entry for the residual malaria transmission study. VectorWorks initiated tablet-based data collection to reduce the number of forms required for data collection. In Quarters Three and Four, IHI will work with ZAMEP on entomology data analysis, including training ZAMEP staff on data analysis using R statistical programming language and on manuscript writing. VectorWorks will also provide an opportunity for one ZAMEP technician to visit IHI for lab analysis of samples from the residual malaria transmission study. VectorWorks will continue to provide close support for data management from field collection team to laboratory analysis.

During the most recent malaria operational plan meeting on Zanzibar, ZAMEP requested additional technical assistance from partners around database and website development. VectorWorks, PMI, and ZAMEP will discuss opportunities for continued engagement and will propose additional technical assistance activities in Year Four, if appropriate.

Deliverable	Audience	Timing	Dissemination Plan	Status
Report on technical assistance provided and key recommendations	PMI, ZAMEP	Quarter 4	Share by email with ZAMEP and PMI	Not started

ME.15 Coordination and Support for VectorWorks Tanzania Research Agenda

Brief activity description: As a new partner in Tanzania, IHI staff will attend quarterly coordination meetings and provide technical guidance for conception and implementation of the VectorWorks Tanzania research agenda.

Status: IHI has attended coordination meetings for the residual malaria transmission study; discussed the VectorWorks Tanzania research agenda, including specific activity ideas for project Year Four; and participated in the recent malaria operational plan meetings on mainland Tanzania and Zanzibar. IHI will attend VectorWorks' partners' meeting in June 2017, where they can further contribute their local knowledge and scientific expertise to the project.

No deliverable associated with this activity.

ME.16 Assessment of ITN Access and Ownership Among People Living with HIV/AIDS

Brief activity description: In addition to children and pregnant women, people living with HIV/AIDS (PLWHA) are biologically vulnerable to malaria. While SNP and *Chandarua Kliniki* target these first two vulnerable populations, we do not know how well ITN distribution channels are serving PLWHA. To assess PLWHA's access to ITNs, VectorWorks reviewed data and is discussing access with stakeholders who work

with PLWHA in Tanzania. If PLWHA are found to be underserved by current continuous distribution channels, alternatives should be considered.

Status: VectorWorks investigated existing data sources to assess net ownership by PLWHA. The most recent data with HIV status are from the 2011–2012 Tanzania HIV/AIDS and Malaria Indicator Survey, which was conducted just after Tanzania’s 2010-2011 universal coverage campaign. We found that households with PLWHA were more likely to have any ITNs than households without PLWHA (94% vs. 91%) and were more likely to have at least one ITN for every two people (59% vs. 51%). Overall, about 8% of households included at least one PLWHA. Household size is a major variable to having enough nets, but households with PLWHA were found to be similar in size to households without PLWHA. It will be important to continue to monitor access to ITNs for PLWHA in the future to assess access through continuous distribution. VectorWorks staff are also working to get input from stakeholders who work with PLWHA to learn about channels of procuring ITNs for PLWHA. Once we have collected this input, we will submit an official report with recommendations to PMI.

Deliverable	Audience	Timing	Dissemination Plan	Status
Report on access and ownership of ITNs among PLWHA	PMI, NMCP	Quarter 3	Share by email	In process

Project Management (PM)

PM.1.3 Program Management

Brief activity description: In Year Two, VectorWorks hired regional staff to assist with continuous distribution, and worked with PMI to procure three vehicles for program activities, following U.S. government compliance guidelines. VectorWorks will continue to scale up staff in Tanzania to cover the expansion of implementation activities into new regions. Additionally, CCP will procure additional vehicles to cover these regions.

Status: VectorWorks has a staffing plan to hire regional managers in the new regions. The NMCP has requested a logistics person to help support *Chandarua Kliniki* in Dar es Salaam, so the Mtwara regional manager will come to Dar es Salaam will take on that responsibility, since his region was one of the first to launch and does not require as much attention. CCP is working to procure the new vehicles, currently collecting the bids needed from car dealerships in Tanzania.

No deliverable associated with this activity.

PM.2.3 Project Reporting

Brief activity description: VectorWorks coordinates with PMI Tanzania to ensure close communication and adequate reporting. We do this through the USAID Tanzania mission database, TMEMS; regular updates with PMI; and a quarterly joint program planning meeting with PMI. VectorWorks provides technical reports to USAID Headquarters on a semiannual basis as well as quarterly financial reports, and these reports are shared with PMI Tanzania.

Status: VectorWorks Tanzania remains in close communication with PMI Tanzania and USAID Washington. In addition to the above-mentioned required updates and semiannual reports, VectorWorks short-term technical assistance travelers met with PMI Tanzania staff for debriefings. Several representatives of VectorWorks Tanzania will be present at the partners’ meeting in Baltimore in June 2017 to meet with PMI Washington in person.

Deliverable	Audience	Timing	Dissemination Plan	Status
Year 2 annual report	PMI	Completed in Quarter 1	Share by email	Completed
Year 3 work plan	PMI	Completed in Quarter 1	Share by email	Completed
Quarterly financial reports	PMI	Quarters 1–4	Share by email	In process
Year 3 semiannual report	PMI	Completed in Quarter 2	Share by email	Herein (Quarter 2)

[PM.3 Planning for Scale-Up – completed in Year One]

PM.4 International Travel

Brief activity description: CCP Baltimore staff provide backstopping and management support through regular email communication and conference calls with the chief of party. CCP and partners’ staff provide short-term technical assistance through international travel, as listed in the work plan.

Status: Staff from CCP (Dr. Matt Lynch, Dr. Ato Selby, Ms. April Monroe, Mr. Eric Filemyr, and Dr. Koenker) have provided technical assistance throughout the reporting period. All have submitted trip reports to PMI.

VectorWorks staff and government of Tanzania staff participated in the Alliance for Malaria Prevention and VCWG annual meeting in Geneva from February 6-10 2017 and the American Society of Tropical Medicine and Health conference in Atlanta, Georgia from November 13-17, 2016. VectorWorks Tanzania staff will travel to Baltimore for the VectorWorks annual planning meeting and the biannual CCP worldwide meeting. VectorWorks staff will travel to Tanzania to provide short-term technical assistance with upcoming activities like the Zanzibar residual transmission study, private-sector stakeholder workshop, and ITN distribution. VectorWorks will continue to notify PMI in advance of all international travel to remind PMI’s Tanzania bureau and the agreement officer’s representative of the travel dates and scope and to set up any necessary meetings, and is mindful to work to send this notification with at least three weeks’ notice.

The deliverable for this activity is the submission of trip reports, which are on track to date.

PM.5 Documentation and Dissemination

Brief activity description: During the course of Year Three, VectorWorks plans to document implementation of field activities, project activities, project accomplishments, and lessons learned with the

assistance of student interns, copy editors, graphic designers, printers, translators, and photographers. This documentation can be used for case studies, web stories, blog posts, success stories, and project reports.

Status: VectorWorks prepared a blog post for World Malaria Day about its residual malaria transmission research in Zanzibar (<http://www.vector-works.org/getting-elimination-vectorworks-researches-residual-malaria-transmission-zanzibar/>). VectorWorks also plans to create a video, with PMI support, to spotlight PMI-funded VectorWorks activities in Tanzania. VectorWorks will continue to create high-resolution photographs and success stories spotlighting the project’s successes.

Deliverable	Audience	Timing	Dissemination Plan	Status
High-resolution photographs of field implementation	PMI	Quarter 4	Share by email	Not started
Success stories from field implementation (at least one from health-facility-based distribution and at least one from school distribution)	PMI	Quarter 4	Share by email	Not started
Video of Tanzania activities	PMI	Quarter 4	Share by email	In process

ZIMBABWE

[ZM.1 Technical Assistance for ITN Continuous Distribution Pilot – completed Year One]

[ZM.2 Support for Microplanning and Monitoring of School-Based ITN Distribution – completed Year One]

[ZM.3 Process Evaluation of ITN Continuous Distribution Pilot – completed Year One]

[ZM.4 Support Planning and Implementation of ITN Mass Distribution - canceled in Year Two]

[ZM.5 Provide Technical Guidance for Rationalizing the Distribution of ITN and indoor residual spraying (IRS) Interventions - canceled in Year Two]

[ZM.6 Support the Planning and Analysis of Channels Needed for ITN Continuous Distribution after Planned ITN Mass Distributions - canceled in Year Two]

ZM.7 Support Endline Survey on ITN Continuous Distribution Pilot in Mazowe District

Brief activity description: In August/September Year Two, the Zimbabwe Assistance Program in Malaria (ZAPIM) project, with assistance from VectorWorks and the National Malaria Control Program (NMCP), implemented an endline survey in three wards (13, 16, and 33) in the Mazowe District. The survey evaluated an insecticide-treated net (ITN) continuous distribution pilot (using health-facility-based, school-based, and community-based channels) and gathered information about the availability and use of ITNs at the household level in the three wards. In addition, the survey sought to establish households’ preferred distribution channel(s) and to compare outcomes with baseline study findings. Study findings were intended to inform future evaluation and rollout of continuous distribution of ITNs in Zimbabwe through preferred distribution channels.

Due to the VectorWorks project’s involvement in the baseline survey conducted before the pilot, support to the pilot’s implementation, and its experience in conducting surveys in other countries, the U.S. President’s Malaria Initiative (PMI) in Zimbabwe requested that VectorWorks provide remote assistance to the ZAPIM project and NMCP for the data analysis and report writing for the endline survey.

Status: Despite our offers to help with analysis, indicator calculation, and review reports, ZAPIM did not request remote assistance from VectorWorks in Year Three. The main finding of the report is that although net ownership increased since baseline, there are not high levels of net use. Therefore, a strong behavior change communication campaign is suggested. ZAPIM submitted the endline survey report to PMI in January 2017.

Deliverable	Audience	Timing	Dissemination Plan	Status
Trip report for technical assistance in data collection activities (completed in Year 2)				
Input on analysis and report for the endline survey	PMI, ZAPIM, NMCP, MOH, MOE, implementing partners	Completed in Quarter 1	Share by email with PMI	ZAPIM submitted and received approval on the report in January 2017.

ZM.8 Behavior Change Communication Strategy Workshop

Brief activity description: Some recent survey findings indicate that many people in Zimbabwe prefer conical ITNs to rectangular ones. However, the NMCP will be receiving and distributing rectangular ITNs in the 2017 mass ITN distributions. Given the potential for reduced use of rectangular ITNs, PMI asked VectorWorks to support the NMCP and implementing partners to develop messages to help promote use and ownership of rectangular ITNs and to rebuild and maintain trust within the target populations.

Status: On January 16–18, 2017, VectorWorks and the Health Communication Capacity Collaborative (HC3) conducted a three-day workshop on data use and malaria social and behavior change communication with the NMCP, Population Services International, ZAPIM, and PMI Zimbabwe. HC3 submitted the informal workshop report to PMI on February 7, 2017.

Following the workshop, HC3 and VectorWorks held a weeklong writing retreat. The writing retreat yielded an updated national malaria communication strategy, a focused communication plan on introducing rectangular ITNs, and the content for an illustrated guide on using rectangular ITNs. VectorWorks circulated the rectangular ITN communication plan to NMCP, PMI, and implementing partners on January 31, 2017, for review. After edits, VectorWorks submitted the final guide for AOR approval on March 28, 2017.

Deliverable	Audience	Timing	Dissemination Plan	Status
Workshop report	PMI, NMCP, MOH, MOE, implementing partners	Quarter 3	Share via email	HC3 submitted informal workshop report 2/7/17. VectorWorks submitted formal trip report and attachments to PMI on 4/14/2017.
National malaria communication strategy	PMI, NMCP, MOH, MOE, implementing partners	Completed in Quarter 2	Share via email	Approved by PMI on January 31, 2017
Key messages and materials developed	PMI, NMCP, MOH, MOE, implementing partners	Quarter 3	Share via email	In process

[ZM.PM.1 Work Plan and Reporting Year One – completed Year One]

ZM.PM.3 Work Plan and Reporting

Brief activity description: VectorWorks will provide an annual work plan to PMI Zimbabwe for approval, quarterly financial reports, and semiannual progress reports. VectorWorks understands that they may be required to provide information as needed by USAID for the purposes of the PMI annual report, strategic planning, VIP visits, congressional reports, and similar purposes.

Status: VectorWorks submitted the work plan and received approval on December 8, 2016. This report serves as the Quarter 2 semiannual report.

Deliverable	Audience	Timing	Dissemination Plan	Status
Annual work plan approved by PMI Zimbabwe	PMI	Completed in Quarter 1	Share via email	Approved by PMI on 12/8/2016.
Quarterly financial reports	PMI	Quarters 1–4	Share via email	Ongoing
Semiannual and annual progress reports	PMI	Quarter 2, Quarter 4	Share via email	Herein

APPENDIX

VECTORWORKS

CORE PERFORMANCE MONITORING PLAN

Core Results Framework

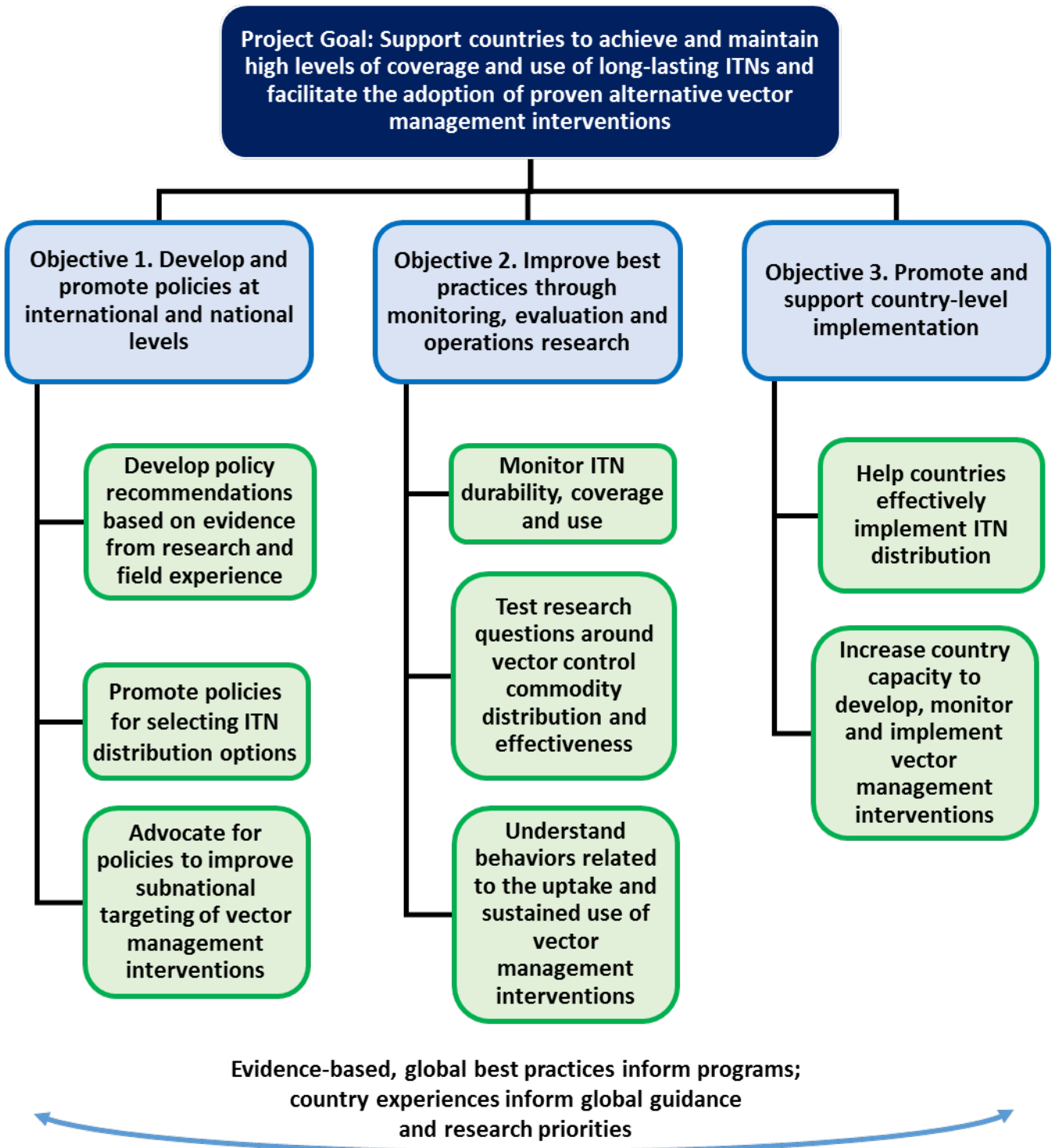
The VectorWorks results framework (see Figure 1) describes the pathways linking activities to the project goal of supporting countries to achieve and maintain high levels of coverage and use of ITNs and facilitate the adoption of proven alternative vector management interventions. In this framework, each activity contributes to the fulfillment of project objectives, which in turn contribute to the overall project goal.

The project will contribute to the goal through three objectives:

1. Develop and promote policies at international and national levels
2. Improve current best practices through monitoring, evaluation, and operations research
3. Promote and support country-level implementation

VectorWorks will develop and promote improved policy, standards, and guidance (Objective 1) via World Health Organization (WHO) and Roll Back Malaria (RBM) channels, informed by monitoring and evaluation activities undertaken under Objective 2, and issues and challenges from field implementation experience from Objective 3. Work in policy and research will bear fruit in Objective 3, when VectorWorks will strengthen country capacity to reach and sustain universal coverage with the right mix of distribution channels and approved alternative tools that are adapted to the country context, and closely coordinated with other vector control measures.

Figure 1. Results framework



Summary of Project Objectives and Related Performance Indicators

Objective 1: Develop and promote policies at both the international and national levels to encourage sustained, high levels of coverage and use of long-lasting ITNs and/or alternative vector management interventions.

Countries are now considering the use of ITN distribution channels beyond mass campaigns, and they need guidance on which channels to use, and when, where, how, and whether to use these channels alongside mass campaigns. Similarly, different contexts vary in their epidemiology, resources, and type of malaria vector, which may require adapting vector management strategies at regional and district levels. VectorWorks will use evidence-based and participatory approaches to advocate policies that provide countries with the guidance to (1) choose their mix of ITN distribution channels and (2) improve subnational targeting of vector management interventions. Using experience and evidence collected and analyzed under Objectives 2 and 3, VectorWorks will identify policy issues and engage relevant stakeholders in developing a common policy agenda. Next, VectorWorks will draft policy recommendations and circulate it among stakeholders for feedback. These two steps in particular will entail collaborating with and presenting to several working groups and target audiences. VectorWorks policy efforts will bear fruit when the Malaria Policy Advisory Committee (MPAC) at WHO, PMI, or the Harmonization Working Group (HWG) at RBM officially endorses the policy, opening the way for use of PMI and Global Fund resources for country implementation on a larger scale.

Indicator	Definition	Source, frequency, and reporting unit	Targets	Actuals
1.1 Number of VectorWorks-supported policy documents submitted to VCTEG	Number of VectorWorks-supported policy documents drafted and submitted to VCTEG. ^a Documents may be accompanied by presentations as part of the dissemination strategy or to promote them at VCTEG, but the deliverable to be counted is the number of policy documents.	<ul style="list-style-type: none"> • Source: Project reports • Frequency: Semiannual • Reporting units: Core 	Year 1: 1 Year 2: 2 Year 3: 3 Year 4: 2 Year 5: 2 LOP: 10	Year 1: 0 Year 2: 1 Year 3: 1 Year 4: – Year 5: – LOP: –
1.2 Number of VectorWorks-supported policies endorsed by VCTEG	Number of VectorWorks-supported policies endorsed by VCTEG. ^a The policy must be endorsed in the VCTEG meeting reports.	<ul style="list-style-type: none"> • Source: VCTEG meeting reports • Frequency: Semiannual • Reporting units: Core 	Year 1: 0 Year 2: 1 Year 3: 2 Year 4: 2 Year 5: 2 LOP: 7	Year 1: 0 Year 2: 0 Year 3: 1 Year 4: – Year 5: – LOP: –
1.3 Number of VectorWorks-supported policies endorsed by MPAC	Number of VectorWorks-supported policies endorsed by MPAC. ^a The policy must be endorsed in the MPAC meeting reports published in <i>Malaria Journal</i> .	<ul style="list-style-type: none"> • Source: MPAC reports • Frequency: Annual • Reporting units: Core 	Year 1: 0 Year 2: 1 Year 3: 0 Year 4: 1 Year 5: 1 LOP: 3	Year 1: 0 Year 2: 0 Year 3: 0 Year 4: – Year 5: – LOP: –

1.4 Number of VectorWorks-supported policies incorporated into HWG or PMI guidance	Number of VectorWorks-supported policies incorporated into HWG or PMI guidance. ^a The policy must have been incorporated into the HWG or MOP guidance notes or circulated as PMI guidance.	<ul style="list-style-type: none"> • Source: HWG and PMI MOP guidance notes • Frequency: Semiannual • Reporting units: Core 	Year 1: 2 Year 2: 1 Year 3: 0 Year 4: 1 Year 5: 1 LOP: 5	Year 1: 2 Year 2: 2 Year 3: 4 Year 4: – Year 5: – LOP: –
1.5 Number of PMI countries adopting at least one VectorWorks-supported policy or guideline	The number of PMI countries that have adopted VectorWorks-supported policies. ^a A country is considered to have adopted the policy if the PMI MOP states that they are following that guideline or if the USAID mission is funding its implementation.	<ul style="list-style-type: none"> • Source: Review of PMI MOPs • Frequency: Annual • Reporting units: Core 	Year 1: 0 Year 2: 2 Year 3: 4 Year 4: 4 Year 5: 4 LOP: 14	Year 1: 18 Year 2: 18 Year 3: TBD Year 4: – Year 5: – LOP: –

^a A policy document is considered to have been supported by VectorWorks if VectorWorks provided funds for its drafting and presentation or if VectorWorks provided technical input on the draft.

Objective 2: Design, conduct and analyze results from monitoring, evaluation, and operational research activities in order to improve current best practices of long-lasting ITNs and/or alternative vector management interventions.

VectorWorks research activities will center on (1) monitoring ITN durability, coverage, and use; (2) testing research questions around commodity distribution and effectiveness; and (3) understanding behaviors related to the uptake and sustained use of vector management interventions. VectorWorks will choose monitoring, evaluation, and operations research activities based on the advice of its expert committee and in consultation with PMI. Such activities are selected based on priorities identified by national malaria control programs, PMI, international stakeholders (WHO, RBM, Global Fund), and the expert committee’s assessment of their relevance to the project’s scope and feasibility. Once VectorWorks has identified research topics, it will draft research protocols, collect data, and analyze and disseminate results. The project will use the results to inform global and national guidance and implementation.

Indicator	Definition	Source, frequency, and reporting unit	Targets	Actuals
2.1 Number of research protocols completed	The number of research protocols that have been completed, disaggregated by OR and non-OR protocols. An OR protocol is defined as complete when it has been submitted and approved by the PMI OR committee and Johns Hopkins University School of Public Health (JHSPH) Institutional Review Board (IRB). A non-OR protocol is defined as completed when it has been submitted and approved by the JHSPH IRB; non-OR protocols do not go through the PMI OR committee. The JHSPH IRB officially approves protocols upon internal review and upon receiving approval from in-country IRBs.	<ul style="list-style-type: none"> Source: Research tracking spreadsheet Frequency of reporting: Semiannually Reporting units: Core and field sites 	<p>OR</p> Year 1: 1 Year 2: 1 Year 3: 1 Year 4: 0 Year 5: 0 LOP: 3	<p>OR</p> Year 1: 0 Year 2: 1 Year 3: 2 Year 4: – Year 5: – LOP: –
2.2.1 Percentage of PMI-funded durability monitoring surveys with core indicator reports available online	<p>Numerator: Number of durability monitoring surveys for which consistently defined core indicator reports have been posted on the website. Consistency is defined as a data collection or reporting method that is in line with PMI global guidance.</p> <p>Denominator: Total number of PMI-funded durability monitoring surveys.</p>	<ul style="list-style-type: none"> Source: Durability monitoring website Frequency of reporting: Semiannually Reporting units: Core 	Year 1: 90% Year 2: 90% Year 3: 90% Year 4: 90% Year 5: 90% LOP: 90%	Year 1: 0% Year 2: 0% Year 3: Cancelled Year 4: Cancelled Year 5: Cancelled LOP: –

Use/outcomes from durability monitoring data	Indicator to be finalized: VectorWorks will review the possibility of adding an indicator to measure outcomes from the durability monitoring activities. Outcomes may include uptake by other donors and institutions, secondary analyses, and, if deemed feasible, changes in policies and procurement practices.			To be reviewed in Year 3. No baseline reports were available at the time of the submission of the annual report.
2.2.2 Proportion of PMI-funded durability monitoring surveys with reports submitted	Numerator: The number of durability monitoring surveys with preliminary reports submitted within 90 days of data collection. Denominator: All PMI-funded durability monitoring surveys fielded.	<ul style="list-style-type: none"> • Source: Project reports • Frequency of reporting: Semiannually • Reporting units: Core and Field 	Year 1: 0 Year 2: 80% Year 3: 80% Year 4: 80% Year 5: 80% LOP: 100%	Year 1: 0 Year 2: 0 Year 3: 71% Year 4: Year 5: LOP:
2.3 Number of research reports produced and disseminated	The number of research reports that have been produced and disseminated. The report must have been posted on the VectorWorks website and shared through electronic mailing lists and in-person or remote presentations at least twice. The report can take the form of a full document or a presentation.	<ul style="list-style-type: none"> • Source: VectorWorks website; research tracking spreadsheet • Frequency of reporting: Semiannually • Reporting units: Core 	Year 1: 2 Year 2: 5 Year 3: 7 Year 4: 10 Year 5: 10 LOP: 34	Year 1: 2 Year 2: 5 Year 3: 2 Year 4: – Year 5: – LOP: –
2.4 Number of peer-reviewed journal articles published	The number of peer-reviewed journal articles published for which VectorWorks funded significant inputs, such as data collection, analysis, or write-up.	<ul style="list-style-type: none"> • Source: Research tracking spreadsheet • Frequency of reporting: Semiannually • Reporting units: Core 	Year 1: 5 Year 2: 4 Year 3: 4 Year 4: 4 Year 5: 6 LOP: 23	Year 1: 4 Year 2: 2 Year 3: 0 Year 4: – Year 5: – LOP: –

Objective 3: Promote and support country-level implementation of malaria prevention activities to ensure sustained high level coverage and use of long-lasting ITNs and, as needed, targeted coverage and appropriate use of alternative vector management interventions.

VectorWorks will provide assistance to national malaria control programs to develop and implement state-of-the-art practices for ITN distribution. Related activities will include technical assistance visits, development of implementation guides, documentation and sharing of country experiences, training implementers and supervisors, and direct implementation of ITN distribution programs.

Indicator	Definition	Source, frequency, and reporting unit	Targets	Actuals
3.1 Number of documents produced to improve implementation of vector management interventions	Number of documents produced by VectorWorks to improve implementation of vector management interventions. Documents can include guides, toolkits, case studies, and tools such as NetCALC. Journal articles are counted elsewhere and are not included in this indicator.	<ul style="list-style-type: none"> • Source: Semiannual report • Frequency of reporting: Semiannually • Reporting units: Core 	Year 1: 3 Year 2: 7 Year 3: 7 Year 4: 7 Year 5: 9 LOP: 33	Year 1: 0 Year 2: 1 Year 3: 1 Year 4: – Year 5: – LOP: –
3.2 Number of USAID country missions that contribute funds	Number of USAID country missions that obligate funds to VectorWorks each year. Missions may be counted multiple times in the LOP total.	<ul style="list-style-type: none"> • Source: Cooperative agreement modifications • Frequency: Semiannually • Reporting units: Core 	Year 1: 6 Year 2: 7 Year 3: 6 Year 4: 7 Year 5: 6 LOP: 32	Year 1: 6 Year 2: 13 Year 3: 10 Year 4: – Year 5: – LOP: –

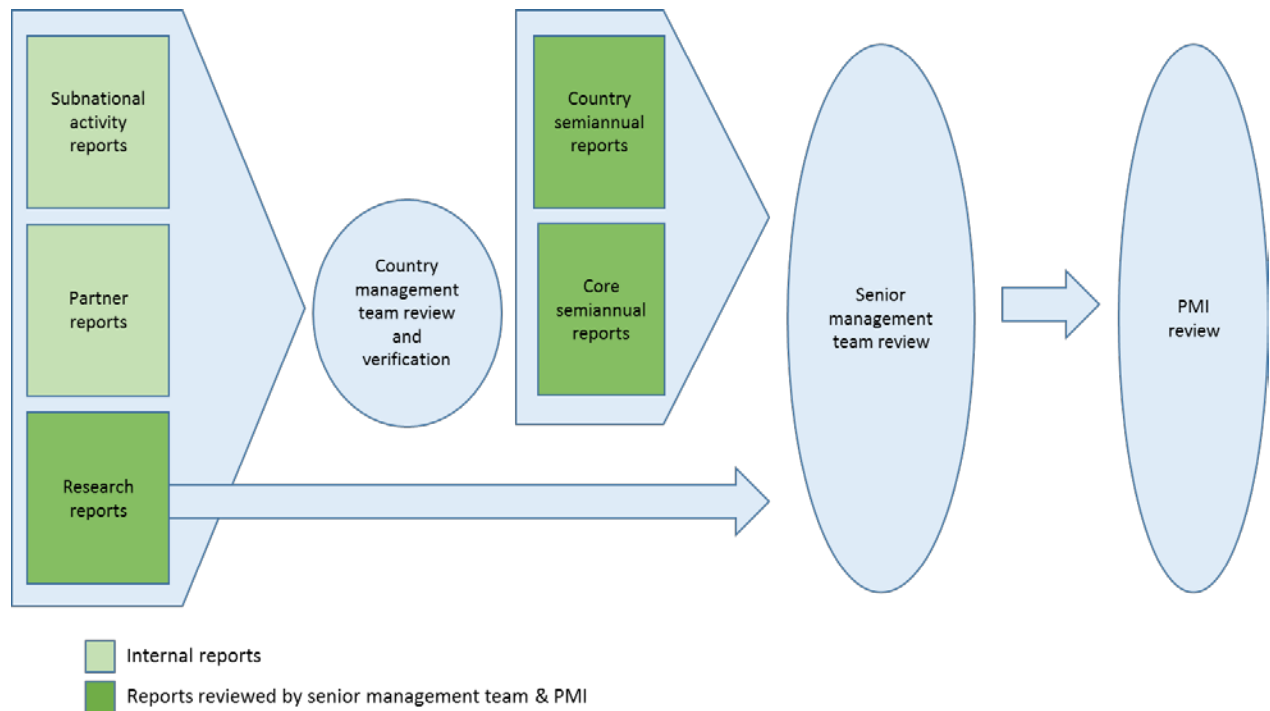
Research and Evaluation Plan

Descriptions of research and evaluation activities are found under Objective 2 of the work plan.

Reporting

The following reporting flow chart (Figure 2) illustrates the flow of data and levels of reporting, aggregation, and data quality assurance.

Figure 2. Reporting flow chart



Partners and activity managers will complete activity reports. Country management teams will be responsible for reviewing the reports and verifying the data reported by cross-checking primary data sources and summary forms. Team members on technical assistance visits will also check on data quality, reporting frequency, and completeness during their visits. Semiannual reports and accompanying PMPs drafted by country teams will summarize activity reports, partner reports, and research reports. Semiannual and research reports will receive final review by the senior management team before submission to PMI. The monitoring and evaluation officers or focal points for each program should archive supporting documents and data sets and provide them upon request to confirm the reported results.

Indicator Reference Sheets

Objective 1: Develop and promote policies at international and national levels

Indicator 1.1: Number of VectorWorks-supported policy documents submitted to VCTEG

Year	Target	Actual
1	1	0
2	2	1
3	3	1
4	2	–
5	2	–
Life of project	10	–

Unit of measure: Number

Disaggregation: None

Definition: The total number of VectorWorks-supported policy documents drafted and submitted to the Vector Control Technical Expert Group (VCTEG). A policy document is considered to have been supported by VectorWorks if VectorWorks provided funds for its drafting and presentation or if VectorWorks provided technical input on the draft. Documents may be accompanied by presentations as part of the dissemination strategy or to promote them at VCTEG but the deliverable to be counted is the number of policy documents.

Source: Project reports

Frequency of reporting: Semiannually

Reporting format: Semiannual report

Reporting units: Core

Notes:

Year One potential targets: Guidance on subnational targeting, vector control graduation document, and continuous distribution.

Year One actuals: The WHO Global Malaria Programme funded the vector control graduation document. Matt Lynch provided review comments to the draft version, but VectorWorks otherwise did not make substantive contributions. The document focused on removal of vector control interventions, but did not address scaling back, targeting, or replacing with less intensive interventions.

Year Two potential targets: School distribution, geographical targeting, mass campaigns in urban settings.

Year Two actuals: Net preferences (Note: It was submitted in Year 2 but VCTEG delayed the review to Year 3).

Year Three semi-annual actuals: Repurposing (Note: Reviewed by the VCTEG in Q2; VCTEG declined to review the issue further and has delegated it to AMP and SBCC Working Group).

Indicator 1.2: Number of VectorWorks-supported policies endorsed by VCTEG

Year	Target	Actual
1	0	0
2	1	0
3	2	1
4	2	-
5	2	-
Life of project	7	-

Unit of measure: Number

Disaggregation: n/a

Source: VCTEG meeting reports

Definition: The number of VectorWorks-supported policies endorsed by VCTEG. The policy must be endorsed in the VCTEG meeting reports. A document is considered to have been supported by VectorWorks if VectorWorks provided funds for its drafting and presentation or if VectorWorks provided technical input on the draft.

Frequency of reporting: Semiannually

Reporting format: Semiannual report

Reporting units: Core

Notes:

Year One actuals: VectorWorks did not provide any substantial technical or financial input on any documents for the VCTEG this year.

Year Two actuals: None. We anticipate a VCTEG meeting on the net preferences paper in early Year 3.

Year Three semi-annual actuals: Net preferences (Note: The study on net preferences was finally reviewed by VCTEG in Q2; universal coverage recommendations will be updated to include a paragraph on the main findings).

Indicator 1.3: Number of VectorWorks-supported policies endorsed by the Malaria Policy Advisory Committee

Year	Target	Actual
1	0	0
2	1	0
3	0	0
4	1	–
5	1	–
Life of project	3	–

Unit of measure: Number

Disaggregation: None

Source: MPAC reports

Definition: The number of VectorWorks-supported policies endorsed by MPAC. The policy must be endorsed in the MPAC reports published in *Malaria Journal*. A document is considered to have been supported by VectorWorks if VectorWorks provided funds for its drafting and presentation or if VectorWorks provided technical input on the draft.

Frequency of reporting: Annually

Reporting format: Annual report

Reporting units: Core

Notes:

MPAC endorsements, although powerful, are very high level and relatively infrequent. Hence, we do not anticipate frequent examples of such endorsements.

Year One actuals: VectorWorks did not provide any substantial technical or financial input on any documents for the MPAC this year.

Year Two: VectorWorks did not provide any substantive input on documents for the MPAC in this year. MPAC discussed the prioritization of vector control tools we provided, but it was not endorsed. Therefore, it does not meet the definition.

Year Three semi-annual actuals: None

Indicator 1.4: Number of VectorWorks-supported policies incorporated into Harmonization Working Group or PMI guidance

Year	Target	Actual
1	2	2
2	1	2
3	0	4
4	1	–
5	1	–
Life of project	5	–

Unit of measure: Number

Disaggregation: n/a

Source: HWG and PMI Malaria Operational Plan (MOP) guidance notes

Definition: Number of VectorWorks-supported policies incorporated into HWG or PMI guidance. The policy must have been incorporated into the HWG or MOP guidance notes or circulated as PMI guidance.

Frequency of reporting: Semiannually

Reporting format: Semiannual report

Reporting units: Core

Notes:

Year One target: Carry-over from the NetWorks project—net misuse guidance and use-to-access ratio.

Year One actuals: Durability monitoring (MOP guidance); use-to-access ratio (MOP and HWG guidance).

Year Two actuals: school distribution (MOP guidance); net care (MOP guidance). VectorWorks also provided input on the Global Fund guidance.

Year Three semi-annual actuals: VectorWorks provided language for the continuous distribution section of Global Fund’s Guidance Note on Malaria (formerly the HWG Guidance Note). MOP guidance reflects previous inputs on school distribution, net care, and durability monitoring.

Indicator 1.5: Number of PMI countries adopting at least one VectorWorks-supported policy

Year	Target	Actual
1	0	18
2	2	18
3	4	TBD
4	4	–
5	4	–
Life of project	14	–

Unit of measure: Number

Disaggregation: By policy

Source: Review of PMI MOPs

Definition: The number of PMI countries that have adopted policies advocated by VectorWorks. A document is considered to have been advocated by VectorWorks if VectorWorks provided funds for its drafting and presentation or if VectorWorks provided technical input on the draft. A country is considered to have adopted the policy if the PMI MOP states that they are following that guideline or if the USAID mission is funding its implementation.

Frequency of reporting: Annually

Reporting format: Annual report

Reporting units: Core

Notes:

The Year One target was set to zero because the first set of MOPs that may reflect the influence of VectorWorks would not be released until November 2015 (Year Two). However, they were released before November 15, so VectorWorks was able to review them in time for the Year Two annual report submission.

Annual results by country:

	Year 1	Year 2	Year 3 (TBD - MOP reports expected Nov 2017)	Year 4	Year 5
1. Angola	Durability monitoring is in the national strategy; PMI will fund technical assistance for continuous distribution (CD)	Shifted from a rolling campaign to a nationwide campaign.			
2. Benin	Durability (past data being reviewed)	School distribution, durability			

		monitoring			
3. Democratic Republic of the Congo	NMCP strategic plan 2016–2020 includes continuous distribution (all channels); PMI will fund continuous distribution	Not released as of Nov 12, 2016			
4. Ethiopia	Continuous distribution by health extension workers	CD with HEWs			
5. Ghana	Will continue continuous distribution	Net care SBCC			
6. Mekong	Durability monitoring	None			
7. Guinea	Durability monitoring	Durability monitoring			
8. Kenya	Continuous distribution	CD, durability monitoring			
9. Liberia	None (continuing antenatal care clinic distribution, no durability monitoring)	Durability monitoring			
10. Madagascar	Durability monitoring, expansion of CD	Durability monitoring expansion of community distribution			
11. Malawi	Durability monitoring	Durability monitoring, net care SBCC			
12. Mali	None	Durability monitoring, net care SBCC			
13. Mozambique	Durability monitoring	School distribution			
14. Nigeria	No MOP online as of November 13, 2015, but counted because	Durability monitoring, net care SBCC, CD			

	Nigeria is funding durability monitoring	mentioned but not enough nets available			
15. Rwanda	“Targeted” community-based distribution, net durability, care and repair	Net durability			
16. Senegal	Durability monitoring, CD	net care SBCC			
17. Tanzania	CD & net care	CD & durability monitoring			
18. Uganda	CD (schools), net care, durability monitoring	Net durability, school distribution (traditional and “novel”), durability monitoring			
19. Zambia	CD, durability monitoring,	CD, durability monitoring			
20. Zimbabwe	CD, durability	Durability monitoring, SBCC for net durability			

Objective 2. Improve best practices through monitoring, evaluation, and operations research

Indicator 2.1: Number of research protocols completed, disaggregated by OR and non-OR protocols

Operations research:

Year	Target	Actual
1	1	0
2	1	1
3	1	2
4	0	–
5	0	–
Life of project	3	–

Non-operations research:

Year	Target	Actual
1	3	0
2	5	6
3	7	6
4	3	–
5	2	–
Life of project	20	–

Unit of measure: Number

Disaggregation: Disaggregated by OR and non-OR protocols, and source of funds

Source: Research tracking spreadsheet

Definition: The number of research protocols that have been completed, disaggregated by OR and non-OR protocols. An OR protocol is defined as complete when it has been submitted and approved by the PMI OR committee and the Johns Hopkins University School of Public Health (JHSPH) IRB. Non-OR protocols did not go through the PMI OR committee. Non-OR protocols have been defined as completed when they have been submitted and approved by the JHU IRB. The JHU IRB officially approves protocols upon internal review and upon receiving approval from in-country IRBs.

Frequency of reporting: Semiannually

Reporting format: Semiannual report

Reporting units: Core and field sites

Notes: Targets based on previous experience under the NetWorks project

Year One actuals:

Operations research: VectorWorks submitted three concept notes, but the OR committee did not approve them.

Non-operations research: The JHSPH IRB considered only the Mozambique durability monitoring protocol to be research but had not approved it by the end of Year One.

Activities deemed non-research by the IRB (they do not count as OR or non-OR): Accountability report, Continuous Distribution Toolkit usability testing, the Zimbabwe process evaluation, and the cost analysis (provided by Tulane University).

Year Two actuals:

Operations research: Outdoor transmission in Tanzania

Non-operations research: Mozambique, Nigeria, Myanmar, DRC, and Zanzibar durability monitoring protocols and the DCE study.

Activities deemed non-research by the IRB (they do not count as OR or non-OR): Tanzania process evaluation (public health practice), and the Tanzania commodity management audit (public health practice), and the Zanzibar process evaluation (public health practice).

Year Three semi-annual actuals:

Operations research: Outdoor transmission in Tanzania; net care and repair in Tanzania

Non-operations research: Mozambique, Nigeria, Myanmar, DRC, and Zanzibar durability monitoring protocols; Malawi ITN misuse study

Activities deemed non-research by the IRB (they do not count as OR or non-OR): Counterfeit nets study; Senegal social marketing household survey in Dakar

(Canceled in Year 3 and replaced with 2.2.2)

Indicator 2.2.1: Percentage of PMI-funded durability monitoring surveys with core indicator reports available online

Year	Target	Actual
1	90%	0%
2	90%	0%
3	90%	0%
4	90%	–
5	90%	–
Life of project	90%	–

Unit of measure: Percentage

Disaggregation: None

Source: Durability monitoring website

Definition:

Numerator: The number of durability monitoring surveys for which consistently defined core indicator reports have been posted on the website. Consistency is defined as the data collection or reporting method being in line with PMI global guidance.

Denominator: All PMI-funded durability monitoring surveys.

Frequency of reporting: Semiannually

Reporting format: Semiannual report

Reporting units: Core

Notes:

Year One actuals: PMI had not yet approved the durability monitoring protocol at the end of the fiscal year and the website was not yet live.

Year Two semiannual actuals: Baseline data from Mozambique and Nigeria are expected by the end of Year Two.

Year Three semi-annual actuals: None (Note: In discussions with PMI in early Year 3, PMI determined that it is not advisable to post the durability monitoring reports online for public use. For this reason, several reports were submitted and remained internal to PMI and to VectorWorks: baseline reports Mozambique, Nigeria, and Myanmar have been submitted to PMI and approved. Baseline reports for DRC and Zanzibar have also been submitted)

Indicator 2.2.2: Proportion of PMI-funded durability monitoring surveys with reports submitted and approved

Year	Target	Actual
1	0	0
2	4 out of 5 (80%)	0
3	4 out of 5 (80%)	5 of 7 (71%)
4	4 out of 5 (80%)	TBD
5	4 out of 5 (80%)	TBD
Life of project	All (100%)	TBD

*Indicator introduced in year 3.

Unit of measure: Proportion (due to small number) and percent (for ease of comparison)

Disaggregation: None

Source: Project reports

Definition:

Numerator: The number of durability monitoring surveys with preliminary reports submitted within 90 days of data collection.

Denominator: All PMI-funded durability monitoring surveys fielded.

Frequency of reporting: Semiannually

Reporting format: Semiannual report

Reporting units: Core and Field

Notes:

This indicator replaced 2.2.1 in June 2017 (Year 3, Q3). In discussions with PMI in early Year 3, PMI determined that it is not advisable to post the durability monitoring reports online for public use.

Approval can be granted outside the 90 day window. Each data collection time point (i.e., baseline, 12-month, 24-month, and/or 36-month) counts as an individual survey report. Preliminary reports should include results on survivorship, attrition and insecticidal activity.

Year 1 target was 0 because protocols were still in development.

Year 2 results were back-calculated and first reported in Year 3.

Year 3 semi-annual actuals: Status Table (Working draft as of June 22, 2017):

Country	Baseline	12-month	24-month	36-month	# Completed Fieldwork (Cumulative Target)	# Submitted and Approved Reports (Cumulative Actual)
Burma/ Myanmar	Fieldwork completed Aug 2016. Report approved	Fieldwork completed Jan 2017. Report in draft			Year 2 - 1 Year 3 - 2	Year 2 - 0 Year 3 - 1

	Feb 2017					
DRC	Fieldwork completed Oct 2016 Report submitted March 2017	Fieldwork scheduled Aug 2017			Year 2 – 0 Year 3 - 1	Year 2 – 0 Year 3 - 1
Mozambique	Fieldwork completed Nov 2015 Report approved Dec 2016	Fieldwork completed Aug 2016. Report in draft			Year 2 – 2 Year 3 - 2	Year 2 – 0 Year 3 - 1
Nigeria	Zamfara and Ebonyi fieldwork completed March 2016 Oyo fieldwork completed Dec 2016 Report approved March 2017	Zamfara and Ebonyi fieldwork completed October 2016 Oyo fieldwork scheduled Nov 2017 Report in draft			Year 2 – 0 Year 3 - 1	Year 2 – 0 Year 3 - 1
Zanzibar	Fieldwork completed Nov 2016 Report approved May 2017	Fieldwork scheduled July 2017			Year 2 – 0 Year 3 - 1	Year 2 – 0 Year 3 - 1
Proportion of DM reports approved as of Year 2					0 of 3 (0%)	
Proportion of DM reports approved as of Year 3					5 of 7 (71%)	
Proportion of DM reports approved as of Year 4					TBD	
Proportion of DM reports approved as of Year 5					TBD	

Indicator 2.3: Number of research reports produced and disseminated

Year	Target	Actual
1	2	2
2	5	5
3	7	2
4	10	–
5	10	–
Life of project	34	–

Unit of measure: Number

Disaggregation: None

Source: VectorWorks website, research tracking spreadsheet

Definition: The number of research reports that have been produced and disseminated. The report must have been posted on the VectorWorks website and linked to from online mailing lists and in-person or remote presentations at least twice. The report can take the form of a full document or a presentation.

Frequency of reporting: Semiannually

Reporting format: Semiannual reports

Reporting units: Core

Notes:

Targets based on previous experience under the NetWorks project.

Year One targets: Nasarawa community-based distribution report; access-to-use ratio report.

Year One actuals: Nasarawa community-based distribution report; access-to-use ratio report.

Year Two actuals: Access:Use Ratio report; SNP3 costing report; Zanzibar costing report; ITN use in context of IRS report; and the net preferences report. (Note: several reports related to misuse were produced but remained internal to PMI and the project. These included: literature review summarizing evidence addressing LLIN misuse for fishing, GIS report on population estimates, potential harm from insecticide leaching report, and the potential harm from small-mesh nets report)

Year Three semi-annual actuals: Access:Use Ratio report and Experimental auctions study report

Indicator 2.4: Number of peer-reviewed journal articles published

Year	Target	Actual
1	5	4
2	4	2
3	4	0
4	4	–
5	6	–
Life of project	23	–

Unit of measure: Number

Disaggregation: None

Source: Research tracking spreadsheet

Definition: The number of peer-reviewed journal articles published for which VectorWorks funded significant inputs such as data collection, analysis, or write-up.

Frequency of reporting: Semiannually

Reporting format: Semiannual report

Reporting units: Core

Notes:

Targets based on previous experience under the NetWorks project.

Year One actuals: Uganda Care and Repair, Ghana Outdoor Sleeping, Uganda Hang Up, Nigeria Durability.

Year Two actuals: Multi-country analysis of campaign outcomes (Zegers); ANC-EPI four-country assessment (Theiss-Nyland)

Year Three semi-annual actuals: None

Objective 3. Promote and support country-level implementation

Indicator 3.1: Number of documents produced to improve implementation of vector management interventions

Year	Target	Actual
1	3	0
2	7	7
3	7	1
4	7	–
5	9	–
Life of project	33	–

Unit of measure: Number

Disaggregation: None

Source: Semiannual report

Definition: The number of documents produced to improve implementation of vector management interventions. Documents can include guides, toolkits, case studies, and tools such as NetCALC. Journal articles are counted elsewhere and are not included in this indicator.

Frequency of reporting: Semiannually

Reporting format: Semiannual report

Reporting units: Core

Notes:

Target based on previous experience under the NetWorks project and planned Year One core activities.

Year One actuals: VectorWorks drafted the community distribution guide but has not yet finalized it. The project collected tools for the ANC-EPI guide and posted them online but has not yet drafted the insert with new technical content. VectorWorks hired the accountability report consultant at the end of the fiscal year.

Year Two actuals: MIP advocacy strategy; validation report; community distribution guide; net care and repair strategy guide; durability monitoring data collection toolkit. Corrections made to this indicator in Year 3: addition of training materials on access:use indicator to MACRO and analysis plan & do-files for source of nets question.

Year Three semi-annual actuals: gender training curriculum

Indicator 3.2: Number of USAID country missions that contribute funds to the project

Year	Target	Actual
1	6	6
2	7	13
3	6	10
4	7	–
5	6	–
Life of project	32	–

Unit of measure: Number

Disaggregation: None

Source: Modifications to VectorWorks Cooperative Agreement

Definition: The number of USAID country missions that obligate funds to VectorWorks per year.

Frequency of reporting: Annually

Reporting format: Annual report

Reporting units: Core

Notes:

Missions can be counted multiple times in the life of project (LOP) total. If the mission made the decision to buy into the project, and the AOR provided forward-funding, then that country counts in that year.

Year One actuals: Ghana, Liberia, Mozambique, Nigeria, Tanzania, and Zimbabwe.

Year Two actuals: Angola, Ghana, Liberia, Mozambique, Nigeria, Tanzania, Zimbabwe, Senegal, DRC, Myanmar, Malawi, Kenya, and Uganda

Year Three semi-annual actuals: Angola, Ghana, Liberia, Mozambique, Nigeria, Tanzania, Zimbabwe, DRC, Kenya, and Guinea. (Note: At the time of the semi-annual report, we are spending down year 2 funds from Uganda, Myanmar, Malawi and Senegal.

GHANA PERFORMANCE MONITORING PLAN

Ghana Performance Monitoring Plan Purpose, Components, and Critical Assumptions

Purpose

This performance monitoring plan (PMP) report describes how we used the framework for systematically collecting and using data to monitor the activities and achievements of the VectorWorks Project in Ghana. The report describes the relationship between project activities and the overall goal to “increase country capacity to develop, monitor, and implement vector management interventions.” It also documents the key specific results that VectorWorks Ghana achieved and the progress made toward achieving its targets.

Components

This report presents the various components of the PMP. These include the results framework, which describes the pathways that link project activities to the project goal. Each activity contributes to the fulfillment of project objectives, which, in turn, contribute to the overall project goal. Documenting improvements along these pathways helps us attribute achievements in agreement with objectives to the project’s activities.

VectorWorks’ activities in each result area, with a minimum number of selected key indicators most relevant to each area, are also presented. These indicators were chosen based on several criteria: objectivity, ability to reflect outcomes and outputs that are central to the project’s work, the feasibility and cost of data collection, availability of data when needed, and usefulness for management decision making. The completed indicator reference sheets in this report provide details on the definition of each indicator and its frequency, level of disaggregation, and reporting unit. Lastly, a reporting flow chart illustrates the flow of data and levels of reporting, aggregation, and data quality assurance.

This PMP report covers key indicators specific to the VectorWorks Ghana project. In addition, it reports on two standard indicators from the global VectorWorks agreement in the Ghana work plan, where those indicators are relevant.

The indicators described in this PMP report are not intended to provide a comprehensive understanding of how an activity resulted in a change in the agreement objectives or why an activity was not as effective as expected. Rather, the indicators provide an indication that a change occurred over time; discussions in the annual narrative report provide more thorough answers on how and why VectorWorks activities achieved their results.

The VectorWorks project uses routine data collection forms and activity tracking spreadsheets to collect data and track activities. These include training summary forms, media monitoring reports, distribution summary forms, activity summary forms, and travel and research tracking spreadsheets. Indicator tracking sheets documented how targets were selected and details on progress toward annual targets. These indicator tracking sheets and supporting documents made it possible for us to document each indicator’s history and for our project managers to review the quality of the data being reported and make recommendations.

Critical Assumptions

This PMP is based on several critical assumptions. Changes to these assumptions will have major implications for the overall direction of the project and the PMP.

- Insecticide-treated net (ITN) distribution will continue to be a major focus for the Ghana National Malaria Control Program (NMCP) and the U.S. President’s Malaria Initiative (PMI) Ghana.
- The national mechanisms for malaria policy implementation through the NMCP will remain stable and largely unchanged.

The VectorWorks Ghana chief of party is expected to review the PMP and the critical assumptions internally with PMI Ghana on a semiannual basis to track trends and discuss opportunities for refining program activities and the PMP indicators.

Project Goal and Objectives

The VectorWorks project is a five-year (2014–2019) global project funded by PMI through USAID. The purpose of the project is to support countries to achieve and maintain high levels of coverage and use of long-lasting ITNs as well as to facilitate the adoption of proven alternative vector management interventions, including those targeting specific sites or populations. VectorWorks activities focus on three main areas:

Objective 1: Policy. Develop and promote policies at both the international and national levels to encourage sustained, high levels of coverage and use of long-lasting ITNs and/or alternative vector management interventions.

Objective 2: Monitoring and evaluation. Design, conduct, and analyze results from monitoring, evaluation, and operational research activities in order to improve current best practices of long-lasting ITNs and/or alternative vector management interventions.

Objective 3: Implementation. Promote and support country-level implementation of malaria prevention activities to ensure sustained high-level coverage and use of long-lasting ITNs and, as needed, targeted coverage and appropriate use of alternative vector management interventions.

The project is implemented by a consortium led by the Johns Hopkins Center for Communication Programs (CCP) under Cooperative Agreement #AID-OAA-A-14-00057. Other partners include Tropical Health LLP, Swiss Tropical and Public Health Institute, Population Services International, Mennonite Economic Development Associates, and the Tulane University Center for Applied Malaria Research and Evaluation. Key partners in Ghana include PMI resident advisors, the Ghana Health Service (GHS), the National Malaria Control Program (NMCP), the Ghana Education Service (GES) and its School Health Education Program (SHEP), and other implementing partners.

In Ghana, our project goal is to **“increase country capacity to develop, monitor, and implement vector management interventions.”** This goal incorporates three objectives, consistent with the objectives of the overall global VectorWorks cooperative agreement. These objectives are:

1. Strengthen multisectoral and stakeholder coordination
2. Support the NMCP to achieve and maintain high levels of ITN coverage and use
3. Promote the uptake and sustained use of vector management interventions

Results Framework

The VectorWorks Ghana results framework describes the pathways that link VectorWorks activities to the long-term project goal of increasing country capacity to develop, implement, and monitor vector management interventions. In this framework, each activity contributes to the fulfillment of project objectives, which in turn contribute to the overall project goal. Documenting improvements along these

pathways helps us attribute improvements related to the project goal and project objectives to the project's activities.

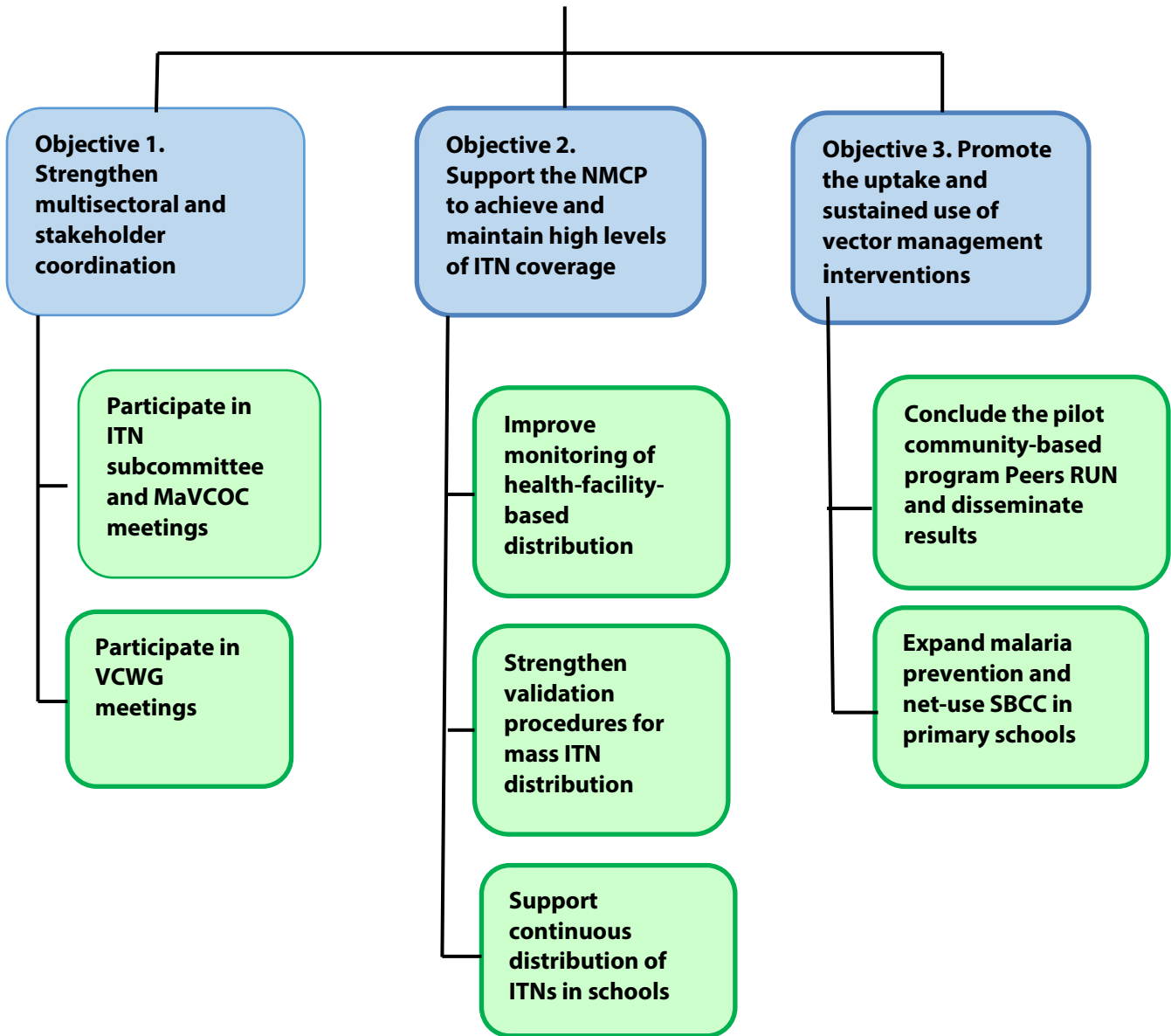
As stated above, the VectorWorks Ghana project was designed to contribute to the overall VectorWorks project goal through three objectives:

1. Strengthen multisectoral and stakeholder coordination
2. Support the NMCP to achieve and maintain high levels of ITN coverage and use
3. Promote the uptake and sustained use of vector management interventions

While the activities appear to occur in parallel, the three objectives function as an integrated and mutually supportive package. Under Objective 1, VectorWorks Ghana facilitates and promotes improved stakeholder communication and coordination on policy, standards, and guidance in line with Ghana's Strategic Plan for Malaria Control 2014-2020. Challenges emerging from the field experience under Objective 2 will, in return, inform policy discussions and future modifications. Objective 3 will ensure wide dissemination and adoption of the NMCP's policies and guidance.

VectorWorks Ghana Results Framework

Project Goal: Increase Country Capacity to Develop, Implement, and Monitor Vector Management Interventions



VectorWorks Ghana Indicator Table

Focus Area	ID #	Indicator	Data Source	Frequency
GH.1	1	Number of malaria <i>Action Alerts</i> distributed	Project activity reports	Semiannual
	2	Number of national ITN coordination meetings in which VectorWorks participated	Project activity reports	Semiannual
GH.2.1 Monitoring health-facility-based continuous distribution	1	Number of meetings of the national monitoring team	Project activity reports	Semiannual
	2	Number of ANC and EPI clinics visited by a monitoring team	Project activity reports	Semiannual
	3	Percentage of pregnant women who received a net during their first ANC visit	DHIMS2	Semiannual
	4	Percentage of children who received a net during their last EPI visit	DHIMS2	Semiannual
GH.2.2 Validating point mass distribution	1	Number of regional planning meetings held for mass ITN distribution	Project activity reports	Semiannual
	2	Number of subdistricts supported to validate community population data	Project activity reports	Semiannual
	3	Percentage of communities where variances were detected	Project activity reports	Semiannual
GH.2.3 School-based distribution	1	Number of schools implementing continuous distribution	Project activity reports	Semiannual
	2	Number of students receiving ITNs	Project activity reports	Semiannual
GH.2.CC (Cross-cutting)	1	Number of people trained in ITN distribution	Training summary forms	Semiannual
	2	Number of ITNs distributed	Transport waybills	Semiannual
GH.3	1	Number of BCC activities to promote ITN use	Project activity reports	Semiannual
	2	Number of people exposed to malaria messages	Project activity reports	Semiannual

VectorWorks Ghana Performance Indicator Reference Sheets

Objective GH.1: Strengthen Multisectoral and Stakeholder Coordination

Indicator GH.1.1: Number of Malaria *Action Alerts* Distributed

Year	Target	Actual
1	30,000	20,000
2	N/A	N/A
3	N/A	N/A
4	TBD	TBD
5	TBD	TBD
Life of project	30,000	20,000

Unit of measure: Number

Disaggregation: None

Source: Project activity reports

Definition: The Ghana malaria *Action Alert* is a two-page publication that targeted leadership of the health sector at all levels; the education sector, especially SHEP; and national and community leaders. It was also distributed as an email bulletin to various stakeholder institutions to increase coverage. Distribution refers to print and electronic distribution.

Frequency of reporting: Semiannually

Reporting format: Semiannual and annual reports

Reporting units: Communications officer

Notes: This activity was not included in the Year Two or Year Three work plan due to budget constraints.

Indicator GH.1.2: Number of National ITN Coordination Meetings in Which VectorWorks Participated

Year	Target	Actual
1	6	4
2	12	12
3	12	6
4	TBD	
5	TBD	
Life of project	TBD	

Unit of measure: Number

Disaggregation: By committee type

Committee Type	Number of Meetings Held in Year 3
ITN subcommittee meetings	2
MaVCOC meetings	2
Other ITN-related meetings	2
<i>Total</i>	6

Source: Project activity reports

Definition: National ITN coordination meetings include, but are not limited to, meetings with the ITN subcommittee and with the Malaria Vector Control Oversight Committee (MaVCOC). These two committees are the two main coordination mechanisms of interest to VectorWorks. Other potential coordination mechanisms include the malaria communication committee and the Malaria Interagency Coordinating Committee.

Frequency of reporting: Quarterly

Reporting format: Semiannual and annual reports

Reporting units: VectorWorks Ghana chief of party

Objective GH.2: Support the NMCP to Achieve and Maintain High Levels of ITN Coverage and Use

Indicator: GH.2.1.1: Number of Meetings of the National Monitoring Team

Year	Target	Actual
1	3	3
2	4	4
3	4	2
4	TBD	
5	TBD	
Life of project	TBD	

Unit of measure: Number

Disaggregation: None

Source: Project activity reports

Definition: This indicator tracks the number of times the national monitoring team meets to plan and undertake training of regional teams and also monitor continuous distribution activities. Additional results might include finalization/approval of national continuous distribution guidelines. The national monitoring team's main role is to reorient the district-level monitoring teams and to provide supervision and support for health facility monitoring. These activities are tracked by other indicators.

Frequency of reporting: Semiannually

Reporting format: Semiannual and annual reports

Reporting units: VectorWorks Ghana chief of party

Notes: Targets for Year Four and Year Five will be determined in discussion with PMI.

Indicator GH.2.1.2: Number of ANC and EPI Clinics Visited by a Monitoring Team

Year	Target	Actual
1	800	1,428
2	3,217	3,251
3	3,300	3,110
4	TBD	
5	TBD	
Life of project	TBD	

Unit of measure: Number

Disaggregation: By region and district

Region	Number of ANC and Child Welfare Clinic Visits in Year 3
Volta	474
Brong Ahafo	757
Greater Accra	373
Eastern	696
Western	515
Upper West	295
<i>Total</i>	<i>3,110</i>

Source: Monitoring forms

Definition: The number of antenatal care (ANC) and EPI (Expanded Programme on Immunization) clinics visited by monitoring and supervision teams.

Frequency of reporting: Semiannually

Reporting format: Semiannual and annual reports

Reporting units: Program officers

Indicator GH.2.1.3: Percentage of Pregnant Women Who Received an ITN During Their First ANC Visit

Year	Target	Actual
1	60%	50.7%
2	80%	37.9%
3	80%	62.4%
4	TBD	
5	TBD	
Life of project	TBD	

Unit of measure: Percentage

Disaggregation: By region, district, and facility type (e.g., hospital, health centers, Community-based Health Planning and Services (CHPS))

Region	Coverage
Ashanti	62.9%
Brong Ahafo	86.7%
Central	49.1%
Eastern	72.2%
Greater Accra	46.2%
Northern	68.1%
Upper East	84.3%
Upper West	46.5%
Volta	51.5%
Western	66.9%

Source: DHIMS2

Definition:

- Numerator: Number of pregnant women who received an ITN during their first ANC visit.
- Denominator: Number of pregnant women who had a first ANC visit for a current pregnancy during the reporting period.

Frequency of reporting: Semiannually

Reporting format: Semiannual and annual reports

Reporting units: Continuous distribution manager

Notes: The March 2017 report is not yet finalized because DHIMS2 had not yet released data at the time of reporting. The large number of districts (216) and health facilities in the country made it not feasible to disaggregate data to that level. We therefore limited disaggregation of data to the regional level.

Indicator GH.2.1.4: Percentage of Children Who Received a Net During Their Last EPI Visit

Year	Target	Actual
1	70%	73.1%
2	80%	47.7%
3	80%	69.2%
4	TBD	
5	TBD	
Life of project	TBD	

Unit of measure: Percentage

Disaggregation: By region, district, and facility type (e.g., hospital, health center, Community-Based Health Planning and Services)

Region	Coverage
Ashanti	65.6%
Brong Ahafo	88.4%
Central	62.3%
Eastern	78.5%
Greater Accra	59.9%
Northern	69.7%
Upper East	87.1%
Upper West	60.3%
Volta	58.2%
Western	73.0%

Source: DHIMS2

Definition:

- Numerator: Number of children who received an ITN during their 18-month measles vaccine visit.
- Denominator: Number of children who received their 18-month measles vaccine visit during the reporting period.

Frequency of reporting: Semiannually

Reporting format: Semiannual and annual reports

Reporting units: Senior technical advisor

Notes: The March 2017 report is not yet finalized because DHIMS2 had not yet released data at the time of reporting. The large number of districts (216) and health facilities in the country made it not feasible to disaggregate data to that level. We therefore limited disaggregation of data to the regional level.

Indicator GH.2.2.1: Number of regional planning meetings held for mass distribution

Year	Target	Actual
------	--------	--------

1	12	12
2	12	14
3	N/A	N/A
4	N/A	N/A
5	N/A	N/A
Life of Project	14	26

* Target distribution number includes meetings held under the interim work plan.

Unit of measure: Number

Disaggregation: By regions

Definition: Number of regional planning meetings for mass distribution held, by region.

Source: Activity reports

Frequency of reporting: Semiannually

Reporting format: Semiannual and annual reports

Reporting units: Program officers

Notes: Mass distribution will not be carried out in Year 3.

Indicator GH.2.2.2: Number of sub-districts supported to validate community population data

Year	Target	Actual
1	262	230
2	293	531
3	N/A	N/A
4	N/A	N/A
5	N/A	N/A
Life of Project	555	761

Unit of Measure: Number

Disaggregation: By regions and districts

Definition: Number of sub-districts supported to validate community population data. Support is defined as technical or financial input from VectorWorks.

Frequency of reporting: Semiannually

Reporting format: Semiannual and annual reports

Reporting units: Program officer

Notes: Mass distribution will not be carried out in Year 3.

Indicator GH.2.2.3: Percentage of communities where variances were detected

Year	Target	Actual
1	25%	30%
2	20%	23.6%
3	N/A	N/A
4	N/A	
5	N/A	
Life of Project	20%	

Unit of Measure: Percentage

Disaggregation: Regions/districts; Rural / urban

Definition:

Numerator: Number of rural/urban communities where variances were detected between number of nets allocated from census data and number of nets allocated from registration coupons.

Denominator: Total number of rural/urban communities checked for variance.

Source: Project activity reports

Frequency of reporting: Semiannually

Reporting format: Semiannual and annual reports

Reporting units: Program officers

Notes: Mass distribution will not be carried out in Year 3.

Indicator GH.2.3.1: Number of Schools Implementing Continuous Distribution

Year	Target	Actual
1	—	n/a
2	14,000	16,026
3	19,288	TBD*
4	TBD	
5	TBD	
Life of project	TBD	

* Numbers to be updated after the school-based distribution in May 2017.

Unit of measure: Number

Disaggregation: By region, district, and school level (e.g., lower primary, upper primary)

Schools Implementing Continuous Distribution in Year 3, by Region			
Region	Public*	Private*	Total*
Western			
Eastern			
Ashanti			
Brong Ahafo			
Central			
Volta			
<i>Total</i>			

* Numbers to be updated after the school-based distribution in May 2017.

Source: Training forms

Definition: The number of primary schools in which ITNs were distributed.

Frequency of reporting: Semiannually

Reporting format: Semiannual and annual reports

Reporting units: Program officers

Notes: Targets were set using data from the nationwide school-based distribution of 2013, in consultation with the GES. Due to the large number of districts in the country, for this report we disaggregated data only at the regional level. We provide disaggregation by school type within a region to demonstrate the number of private schools that are also benefiting from the school-based ITN distribution. Many of these private schools remain unregistered and are not accounted for in the Education Management Information System (EMIS) data.

Indicator GH.2.3.2: Number of Students Receiving ITNs

Year	Target	Actual
1	—	n/a
2	910,000	936,357
3	1,148,610	TBD*
4	TBD	
5	TBD	
Life of project	TBD	

* Numbers to be updated after the school-based distribution in May 2017.

Unit of measure: Number

Disaggregation: By region, district, and gender

Number of Students Receiving ITNs in Year 3			
Region	Boys*	Girls*	Total*
Western			
Eastern			
Ashanti			
Brong Ahafo			
Central			
Volta			
<i>Total</i>			

* Numbers to be updated after the school-based distribution in May 2017.

Source: Training forms

Definition: The number of students receiving both (1) an ITN from school-based distribution, and (2) messages on ITN use through a school program.

Frequency of reporting: Semiannually

Reporting format: Semiannual and annual reports

Reporting units: Program officers

Notes: Due to the large number of districts in the country, for this report we disaggregated data only by region and gender.

Indicator GH.2.CC.1 Number of People Trained in ITN Distribution

Year	Health-Facility-Based Distribution		School-Based Distribution		Mass Distribution		Total	
	Target	Actual	Target	Actual	Target	Actual	Target	Actual
1	3,200	6,904	n/a	n/a	230	281	3,420	7,185
2	9,984	9,882	1,761	1,939	478	814	12,223	12,635
3	1,500	9,592	9,747	22,649	N/A	N/A	11,246	32,241
4	TBD		TBD		TBD		TBD	
5	TBD		TBD		TBD		TBD	
Life of Project	TBD		TBD		TBD		TBD	

Unit of measure: Number

Disaggregation: By region, district, and type of personnel, channel, and gender

Number of regional, district, and health facility staff trained in ITN distribution, by region:

Region	District-level* staff trained in Year 3		Health facility-level staff trained in Year 3		Total
	Male	Female	Male	Female	
Greater Accra	–	–	107	1,633	1,740
Western	–	–	327	986	1,313
Volta	–	–	491	1,492	1,983
Eastern	–	–	296	1,522	1,818
Upper West	64	9	378	609	1,060
Brong Ahafo	–	–	411	1,267	1,678
Total	64	9	2,010	7,509	9,592

*Only Upper West region district-level staff were trained during this reporting period.

Number of regional, district, and school staff trained in ITN distribution, by region:

Region	District-level staff trained in Year 3		School staff trained in Year 3		Total
	Male	Female	Male	Female	
Volta	31	113	1,596	939	2,679
Brong Ahafo	34	118	1,947	1,033	3,132
Ashanti Region	36	126	2,666	2,076	4,904
Central	28	112	2,772	1,921	4,833
Eastern	24	111	1,461	1,805	3,401
Western	45	98	1,935	1,622	3,700
Total	198	678	12,377	9,396	22,649

Notes: CC stands for cross-cutting indicators.

Indicator GH.2.CC.2: Number of ITNs Distributed

Year	Health-Facility-Based Distribution		School-Based Distribution		Mass Distribution		Total	
	Target	Actual	Target	Actual	Target	Actual	Target	Actual
1	557,500	557,500	N/A	N/A	642,500	2,818,842	1.2 million	3,376,342
2	700,700	874,905	910,000	936,357	7,189,300	8,641,087	8.8 million	10,452,349
3	1,527,427	523,525	1,148,610	TBD	N/A	N/A	2,676,037	
4	TBD		TBD		TBD		TBD	
5	TBD		TBD		TBD		TBD	
Life of Project	TBD		TBD		TBD		TBD	

Differences: The differences between target and actual numbers are explained below, for each distribution channel:

- **Health-facility-based distribution:** Target numbers are based on pipeline. The difference between target and actual is the result of the ITNs remaining after mass distribution being used for health-facility-based distribution.
- **School-based distribution:** Target numbers are based on EMIS data, whereas actual ITN distribution is based on student enrollment data for the 2015–2016 academic year.
- **Mass distribution:** Target numbers are based on population estimates, whereas actual ITN distribution is based on validated household registration.

Unit of measure: Number

Disaggregation: By region, district, and channel (e.g., ANC or EPI, point mass distribution, school distribution)

Region	Health-Facility-Based Distribution	School-Based Distribution*	Mass Distribution	Total
Ashanti	92,719		N/A	
Brong Ahafo	67,677		N/A	
Central	39,503		N/A	
Eastern	58,199		N/A	
Greater Accra	70,637		N/A	
Northern	70,297		N/A	
Upper East	23,726		N/A	
Upper West	11,113		N/A	
Volta	34,650		N/A	
Western	55,004		N/A	

* Numbers to be updated after the school-based distribution in May 2017.

Source: Waybills, distribution reports, program officer reports

Definition: The number of ITNs distributed through mass, continuous, or routine distribution channels for which VectorWorks provided facilitation services.

Frequency of reporting: Semiannually

Reporting format: Semiannual and annual reports

Reporting units: Program officers

Notes: CC stands for cross-cutting indicators.

Objective GH.3: Promote the Uptake and Sustained Use of Vector Management Interventions

Indicator GH.3.1: Number of BCC Activities to Promote ITN Use

Year	Target	Actual
1	735	3,912
2	1,785	1,895
3	2,800	7,567
4	TBD	
5	TBD	
Life of project	TBD	

Unit of measure: Number

Disaggregation: By region and district; rural versus urban community; and channel (e.g., community mobilization, radio)

Region	Number of BCC Activities in Year 3
Brong Ahafo	1,217
Volta	851
Ashanti	1,375
Western	1,237
Eastern	1,245
Central	1,642
<i>Total</i>	<i>7,567</i>

Source: Project activity reports

Definition: The number of community mobilization activities and mass media airings or postings funded by VectorWorks. Community mobilization activities include community meetings, home visits, and so on.

Frequency of reporting: Semiannually

Reporting format: Semiannual and annual reports

Reporting units: Program officers

Notes: Number of BCC activities is a global PMI and VectorWorks indicator. VectorWorks has begun the process of obtaining information on the urban versus rural classification of communities involved in project activities, and we will include this level of disaggregation in future reports. In Year Three, BCC activities are focused on interpersonal communications at schools and health facilities. Because VectorWorks did not lead radio or community mobilization activities in Year Three, disaggregation by channel is not applicable.

Indicator GH.3.2: Number of People Exposed to Malaria Messages

Year	Target	Actual
1	2,040,564	3,014,800
2	2,247,690	3,104,580
3	3,321,504	523,525
4	TBD	
5	TBD	
Life of project	TBD	

Unit of measure: Number

Disaggregation: By region, district, and channel

Region	Number of People Exposed to Malaria Messages
Ashanti	92,719
Brong Ahafo	67,677
Central	39,503
Eastern	58,199
Greater Accra	70,637
Northern	70,297
Upper East	23,726
Upper West	11,113
Volta	34,650
Western	55,004
<i>Total</i>	<i>523,525</i>

Source: BCC activity reports

Definition: The number of people who were exposed to messages on ITN use through mass media or community mobilization activities. This indicator does not capture the numbers of patients and caregivers who received interpersonal counseling at health facilities. Community mobilization activities include community meetings, home visits, and so on.

Frequency of reporting: Semiannually

Reporting format: Semiannual and annual reports

Reporting units: Program officers

Health facility: 523,525

Reporting and Data Use

To implement the VectorWorks Ghana project, five program officers are responsible for working closely with the Government of Ghana's Ministry of Health and Ministry of Education counterparts at the regional, district, and subdistrict levels. The program officers submit monthly reports to the senior technical advisor, who, in consultation with the monitoring and evaluation manager checks the reports for completeness and accuracy and provides feedback to the program officers. These reports are then forwarded with indicator tally sheets to the chief of party for final review and submission to VectorWorks headquarters. VectorWorks leadership periodically reviews progress against targets to advise program officers, the monitoring and evaluation manager, the senior technical advisor, and the chief of party. VectorWorks submits PMP reports to PMI along with semiannual and annual project reports.



TANZANIA PERFORMANCE MONITORING PLAN

Tanzania Performance Monitoring Plan Purpose, Components, and Critical Assumptions

Purpose

This performance monitoring plan (PMP) provides a framework for systematically collecting and using data to monitor the activities and achievements of the VectorWorks project in Tanzania. It describes the relationship between project activities and its overall goal to “support NMCP to achieve and maintain high levels of coverage and use of long-lasting ITNs.” It also documents the key specific results that VectorWorks Tanzania intends to achieve and the progress it makes toward its targets.

Components

To accomplish these functions, the PMP consists of several components. The results framework describes the pathways linking activities to the project goal. Each activity contributes to the fulfillment of project objectives, which in turn contribute to the overall project goal. Documenting improvements along these pathways assists in the attribution of achievements in agreement with objectives to the project’s activities.

Next, the document describes VectorWorks’ activities in each result area and presents a minimum number of selected key indicators most relevant to each area. These indicators were chosen based on several criteria: (1) objectivity, (2) ability to reflect outcomes and outputs that are central to the project’s work, (3) feasibility and cost of data collection, (4) data availability when needed, and (5) usefulness for management decision making. Indicator reference sheets provide details on their definition, frequency, level of disaggregation, and reporting unit. Lastly, a reporting flow chart illustrates the flow of data and levels of reporting, aggregation, and data quality assurance.

This PMP was designed to represent key indicators specific to the VectorWorks Tanzania project. In addition, it tracks two standard indicators from the global VectorWorks agreement in the Tanzania work plan where those indicators are relevant.

The indicators in this PMP are not intended to provide a comprehensive understanding of how an activity resulted in a change in the agreement objectives or why an activity was not as effective as expected. Rather, indicators provide an indication that a change occurred over time, with discussions in semiannual narrative reports providing more thorough answers on how and why VectorWorks activities achieved their results.

The project will use routine data collection forms and activity tracking spreadsheets to collect data and track activities. These include training summary forms, media monitoring reports, distribution summary forms, activity summary forms and travel and research tracking spreadsheets. Indicator reference sheets will document how targets were selected and details on progress toward annual targets. These indicator reference sheets and supporting documents will make it possible to document each indicator’s history and for project managers to review the quality of the data being reported and make recommendations.

Critical Assumptions

The PMP is based on several critical assumptions. Changes to the following assumptions will have major implications on the overall direction of the project and the PMP:

- Insecticide-treated net (ITN) distribution will continue to be a major focus for the Tanzania National Malaria Control Program (NMCP) and the U.S. President’s Malaria Initiative (PMI) through the U.S. Agency for International Development (USAID).”;

- The national mechanisms for malaria policy implementation through the NMCP will remain stable and largely unchanged;

VectorWorks will review this PMP and these assumptions internally and with PMI Tanzania on an annual basis to track trends and discuss opportunities for refining program activities and the PMP indicators.

Project Goal and Objectives

The VectorWorks Project is a five-year (2014–2019) global project funded by the U.S. President’s Malaria Initiative (PMI) through the U.S. Agency for International Development (USAID). The purpose of the project is to support countries to achieve and maintain high levels of coverage and use of long-lasting insecticide-treated mosquito nets (ITNs) as well as to facilitate the adoption of proven alternative vector management interventions, including those targeting specific sites or populations. VectorWorks activities focus on three main areas:

Objective 1: Policy. Develop and promote policies at both the international and national levels to encourage sustained, high levels of coverage and use of long-lasting ITNs and/or alternative vector management interventions.

Objective 2: Monitoring and evaluation. Design, conduct, and analyze results from monitoring, evaluation, and operational research activities to improve current best practices of long-lasting ITNs and/or alternative vector management interventions.

Objective 3: Implementation. Promote and support country-level implementation of malaria prevention activities to ensure sustained high-level coverage and use of long-lasting ITNs and, as needed, targeted coverage and appropriate use of alternative vector management interventions.

The project is implemented by a consortium led by the Johns Hopkins Center for Communication Programs (CCP) under Cooperative Agreement # AID-OAA-A-14-00057. Other partners include Tropical Health LLP, Swiss Tropical and Public Health Institute, Population Services International (PSI), Mennonite Economic Development Associates, and the Tulane University Center for Applied Malaria Research and Evaluation (CAMRE). The project is conducted in partnership with NMCPs as well as PMI resident advisors and other malaria partners in each country.

In Tanzania, VectorWorks advances the three project objectives through several activities. VectorWorks supports the government in the implementation of the school-based ITN distribution pilot, locally referred to as the School Net Program (SNP). In the first year of the project, SNP operated in the three Southern regions (Lindi, Mtwara, and Ruvuma), and in the second year of the project, SNP expanded to the four Lake Zone regions (Geita, Kagera, Mara, and Mwanza). In the third year of the project, SNP will expand operations to two additional regions (Kigoma and Simiyu). This expanded round of SNP is expected to build on previous experiences, increase co-ownership of the program by the Ministry of Education and Vocational Training (MoEVT), President’s Office, Regional Administration and Local Government Authorities (PO-RALG), and the NMCP. Vector Works—represented by CCP and PSI within Tanzania—will work with the government and its partners at all levels to coordinate, plan, implement, and monitor the ITN distribution through schools.

Additionally, in Year Two, VectorWorks developed a strategy for routine distribution of ITNs through antenatal clinics (ANC) and Expanded Programme for Immunization (EPI) services, and began phased-in implementation starting in the regions of Mtwara and Mwanza. In Year Three, VectorWorks will expand ANC/EPI-based distribution to additional regions.

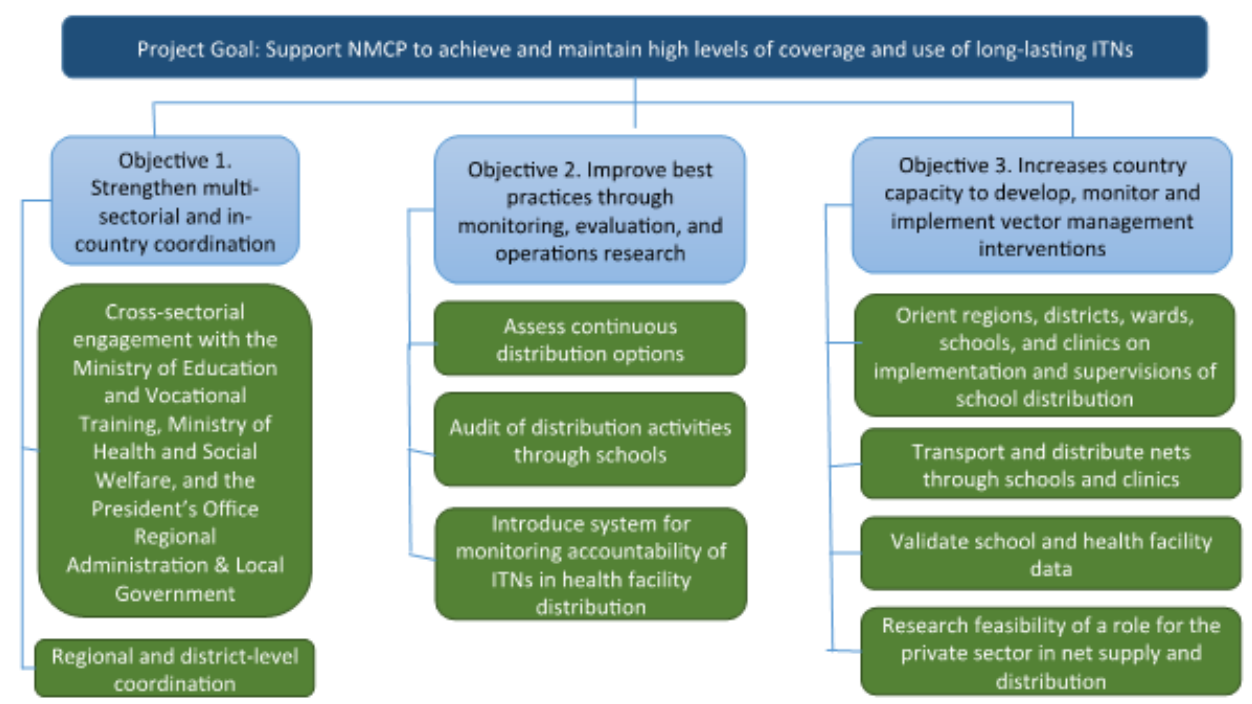
Other activities for VectorWorks in Year Three include support to the NMCP in finishing a comprehensive ITN distribution strategy, coordination with stakeholders in ITN policy, and technical assistance for continuous distribution strategies in Zanzibar.

Results Framework

The VectorWorks Tanzania results framework describes the pathways that link specific project activities to the long-term goals described by the project objectives above. In this framework, each activity contributes to the fulfillment of project objectives, which in turn contribute to the overall project goal. Documenting improvements along these pathways assists in the attribution of activities toward reaching the project goal and objectives.

While the activities appear to occur in parallel, the three VectorWorks objectives function as an integrated and mutually supportive package. Under Objective 1, VectorWorks Tanzania will facilitate and promote improved multisectoral and stakeholder communication and coordination on policy, standards, and guidance in line with the National Malaria Strategic Plan 2014–2020. Field experience under Objective 3 will increase country capacity to develop, implement, and monitor programs; the challenges and lessons learned through this will inform the policy discussions and future modifications to implementation. Research conducted under Objective 2 will inform Objectives 1 and 3 as it sheds insight on potential scale-up, identifies best practices, and points toward modifications in program design for future years.

Figure: VectorWorks Tanzania Results Framework



VectorWorks Tanzania Indicator Table and Performance Indicator Reference Sheets

Indicator Table for VectorWorks Tanzania

INDICATOR	DEFINITION	SOURCE	FREQUENCY OF REPORTING	TARGETS YEAR 1	TARGETS YEAR 2	TARGETS YEAR 3
1. Number of SNP coordination, review and/or planning meetings held by VectorWorks with Ministry of Health and Social Welfare (MoHSW), Ministry of Education and Vocational Training (MoEVT), and/or the President's Office Regional Administration and Local Government (PO-RALG) - administrative, education and health arms.	This indicator intends to measure the level of government personnel involvement in planning and reviewing SNP. Levels are national, regional, district and ward. The specific arm represented by the PO-RALG attendees (administrative, education or health) will be noted.	Meeting reports	Semiannually	25 (National 3 Regional 3 District 19)	55 (National 1 Regional 7 District 47)	80 (National 4 Regional 9 District 67)
2. Percentage of schools flagged for validation that received a validation visit for SNP	Numerator: The number of schools visited by validation teams. The validation teams will verify student quantifications against actual class lists in the schools. Denominator: The total number of schools that will distribute nets in the current SNP round with variances in student quantification beyond the predefined validation cut-off.	Validation report	Semiannually	95%	50% *See reference sheet for explanation of change in target	N/A
3. Number of districts with a complete microplan for ITN distribution through SNP	A complete microplan will be defined in the standard operating procedures/implementation guidelines.	Microplan meeting reports and actual microplans	Semiannually	19	47 Southern: 19 Lake: 28	67

INDICATOR	DEFINITION	SOURCE	FREQUENCY OF REPORTING	TARGETS YEAR 1	TARGETS YEAR 2	TARGETS YEAR 3
4. Number of districts with a complete microplans for ITN distribution through health facilities	A complete microplan will be defined in the standard operating procedures/implementation guidelines.	Microplan meeting reports and actual microplans	Semiannually	N/A	16	50
5. Percentage of SNP distribution points (schools participating in SNP) that received the correct number of nets during the reporting period	<p>Numerator: Number of SNP distribution points (schools participating in SNP) that received the correct number of nets as defined in the microplans.</p> <p>Denominator: The total number of SNP distribution points (schools participating in SNP). For Tanzania SNP, this is the number of schools that will distribute ITNs in the current round under VectorWorks.</p>	Truck drop-off data and transportation reports	Annually	100%	90%	90%

INDICATOR	DEFINITION	SOURCE	FREQUENCY OF REPORTING	TARGETS YEAR 1	TARGETS YEAR 2	TARGETS YEAR 3
6. Number of people trained in ITN distribution by VectorWorks by sex, ITN distribution channel, and location	This is a global VectorWorks and PMI indicator. This is defined as the number of people trained with VectorWorks funds in ITN distribution. For VectorWorks Tanzania, the ITN distribution channels are schools and health facilities. Locations include national, regional, district, ward and facility. Training will be defined in the implementation guidelines or standard operating procedure for each channel.	Training reports	Quarterly and semiannual	School: 528	Health facilities: National: 5 Regional: 14 District: 84 Facility: 936 Total: 1,039 Schools: National: 14 Regional: 28 District: 192 Ward: 1,069 Total: 1,303 Grand total: 2,342	Health facilities: National: 0 Regional: 56 District: 296 Facility: 7,000 Total: 7,352 Schools: National: 14 Regional: 42 District: 416 Ward: 0 Total: 472 Grand total: 7,824
7. Number of insecticide-treated nets (ITNs) purchased with U.S. government funds that were distributed by VectorWorks, by channel	This is a global VectorWorks and PMI indicator defined as the number of ITNs distributed through mass, continuous, or routine distribution channels. VectorWorks must have funded the transport of nets to storage sites or distribution points. For the Tanzania School Net Program, the channel is schools. For the Tanzania health facility distribution, the channel is health facilities that provide ANC and/or EPI services.	Distribution reports	Quarterly and semiannually	Schools: 500,000	Health facilities: 320,000 Schools: 1,310,000 Total: 1,630,000	Health facilities: 1,330,709 Schools: 966,812 Total: 2,297,521

INDICATOR	DEFINITION	SOURCE	FREQUENCY OF REPORTING	TARGETS YEAR 1	TARGETS YEAR 2	TARGETS YEAR 3
8. Percentage of schools visited by a supervision team during ITN issuing	<p>Numerator: The number of schools participating in SNP visited by a designated SNP supervision team during the issuing period.</p> <p>Denominator: The total number of schools participating in SNP. For Tanzania SNP, this is the number of schools that will distribute ITNs in the current round under VectorWorks.</p>	Supervision report	Annually	90%	25% *See reference sheet for explanation of change in target	25%
9. Percentage of health facilities with flagged variances visited by supervision teams	<p>Numerator: The number of health facilities with flagged variances that were visited by designated supervision teams during the reporting period.</p> <p>Denominator: The total number of health facilities with flagged variances during the reporting period. A flagged variance will be defined in the implementation guideline.</p>	Validation report	Quarterly	N/A	95%	95%
10. Percentage of targeted beneficiaries who received an ITN, by channel, location and sex	<p>Numerator: The number of targeted beneficiaries who received an ITN.</p> <p>Denominator: The number of targeted beneficiaries registered for each channel. Channels are schools and health facilities. For school-based distribution the targeted beneficiaries are defined in the standard operating procedure. For health-facility-based distribution the targeted beneficiaries are pregnant women who attended the health facility for their first ANC visit and children who attended the health facility for the measles vaccine.</p>	<p>Schools: Distribution reports</p> <p>Health facilities: Accountability report</p>	<p>Schools: Annually</p> <p>Health facilities: Quarterly</p>	Schools: 100%	<p>Schools: 99%</p> <p>Health facilities: ANC: 80% IVD: 80%</p>	<p>Schools: 99%</p> <p>Health facilities: ANC: 80% IVD: 80%</p>

INDICATOR	DEFINITION	SOURCE	FREQUENCY OF REPORTING	TARGETS YEAR 1	TARGETS YEAR 2	TARGETS YEAR 3
11. Percentage of health facilities that did not experience a stock-out of ITNs, by region, during the reporting period	<p>Numerator: Number of health facilities that did not experience a stock-out of ITNs during the reporting period. A stock-out will be defined in the implementation guideline.</p> <p>Denominator: Total number of health facilities participating in the health facility ITN distribution during the reporting period.</p>	eLMIS and Accountability report, or ILS Gateway	Quarterly	N/A	100%	100%

A. Performance Indicator Reference Sheets

Indicator 1: Number of SNP coordination, review, and/or planning meetings held by VectorWorks with Ministry of Health and Social Welfare (MoHSW), Ministry of Education and Vocational Training (MoEVT), and/or the President’s Office Regional Administration and Local Government (PO-RALG)—administrative, education, and health arms.

Year	Targets and Actuals			
	Total	National	Regional	District
1	Target: 25 Actual: 25	Target: 3 Actual: 3	Target: 3 Actual: 3	Target: 19 Actual: 19
2	Target: 58 Actual: 63	Target: 1 Actual: 2	Target: 7 Actual: 7	Target: 50 Actual: 54
3	Target 82 Actual 1	Target: 4 Actual 1	Target: 9 Actual 0	Target: 67 Actual 0
4				
5				
Life of project				

Unit of measure: Number

Disaggregation: Level of government (national, regional, and district)

Source: Meeting reports

Definition: This indicator intends to measure the degree of cross-ministerial involvement in reviewing and planning the performance of SNP at all levels of government. Levels are national, regional, district, and ward.

Frequency of reporting: Semiannually

Reporting format: Semiannual report

Reporting personnel: Malaria advisor

Notes: Most SNP5 meetings are scheduled to happen in the last two quarters of Year 3.

Indicator 2: Percentage of schools flagged for validation that received a validation visit for SNP

Year	Target	Actual
1	95%	94.6% Lindi: 93% Ruvuma: 95% Mtwara: 98%
2	50%	Southern regions 0% Lake Zone 95%
3	N/A	N/A
4		
5		
Life of project		

Unit of measure: Percentage

Disaggregation: Location (region, district)

Source: Validation reports

Definition:

Numerator: The number of schools visited by validation teams. The validation teams will verify student quantifications against actual class lists in the schools.

Denominator: The total number of schools that will distribute nets in the current SNP round with variances in student quantification beyond the predefined validation cut-off.

Frequency of reporting: Semiannually

Reporting format: Semiannual report

Reporting personnel: SNP officer

Notes: For SNP5, validation visits will not be conducted, due to the Tanzanian government's request the VectorWorks rely on government-provided data.

Indicator 3: Number of districts with a complete microplan for ITN distribution through SNP

Year	Target	Actual
1	19	19
2	50	54
3	67	0
4		
5		
Life of project		

Unit of measure: Number

Disaggregation: District

Source: Microplan meeting reports and actual microplans

Definition: A complete microplan will be defined in the standard operating procedures/implementation guidelines.

Frequency of reporting: Semiannually

Reporting format: Semiannual report

Reporting personnel: SNP officer and PSI

Notes: SNP5 microplans are planned for the end of Quarter Three. The target number of microplans remains 67.

Indicator 4: Number of districts with complete microplans for ITN distribution through health facilities

Year	Target	Actual
1	N/A	N/A
2	16	16
3	67	37
4		
5		
Life of project		

Unit of measure: Number

Disaggregation: District

Source: Microplan meeting reports and actual microplans

Definition: A complete microplan will be defined in the standard operating procedures/implementation guidelines.

Frequency of reporting: Semiannually

Reporting format: Semiannual report

Reporting personnel: Logistics manager and PSI

Notes: In SNP5 VectorWorks expects to expand its operations to reach out to nine regions with a total of 67 districts. In the first two quarters, a total of five regions and 37 districts (councils) have been reached.

Indicator 5: Percentage of SNP distribution points (schools participating in SNP) that received the correct number of nets during the reporting period

Year	Target	Actual
1	100%	73%
2	90%	100% (see note)
3	90%	
4		
5		
Life of project		

Unit of measure: Percentage

Disaggregation: Location (zone, region, district)

Source: Truck drop-off data and transportation reports

Definition:

Numerator: Number of SNP distribution points (schools participating in SNP) that received the correct number of nets as defined in the microplans.

Denominator: The total number of SNP distribution points (schools participating in SNP). For Tanzania SNP, this is the number of schools that will distribute ITNs in the current round under VectorWorks.

Frequency of reporting: Annually

Reporting format: Annual report

Reporting personnel: PSI

Notes: SNP5 distribution will not be conducted until the end of Year 3.

Indicator 6: Number of people trained in ITN distribution by VectorWorks, by sex, ITN distribution channel, and location

Year	Target	Actual
1	Schools: Total: 528 Regional: 10 District: 122 WEC: 396	Schools: Total: 552 Regional: 12 (66% male; 33% female) District: 68 (46% male; 54% female) WEC: 472 (85% male; 15% female)
2	Health facilities: National: 5 Regional: 14 District: 84 Facility: 936 Total: 1,039 Schools: National: 14 Regional: 28 District: 192 Ward: 1,069 Total: 1,303	Health facilities: National: 6 Regional: 22 District: 136 Facility: 1,247 Total: 1,411 Schools: National: 14 Regional: 28 District: 213 Ward: 1,182 Total: 1,437
	Grand total: 2,342	Grand total: 2,848
3	Health facilities: National: 0 Regional: 56 District: 296 Ward (Facility): 7,000 Total: 7,352 Schools: National: 14 Regional: 42 District: 416 Total: 474	Health facilities: National: 0 Regional: 41 District: 285 Ward (Facility): 5,844 Total: 6,170 Schools: National: 0 Regional: 0 District: 0 Total: 0
4		
5		
Life of project		

Unit of measure: Number

Disaggregation: Sex, ITN distribution channel, and location

Source: Training reports

Definition: This is a global VectorWorks and PMI indicator. This is defined as the number of people trained with VectorWorks funds in ITN distribution. For VectorWorks Tanzania, the ITN distribution channels are

schools and health facilities. Locations include national, regional, district, ward, and facility. Training will be defined in the implementation guidelines or standard operating procedure for each channel.

Frequency of reporting: Quarterly and semiannual

Reporting format: Tanzania Monitoring and Evaluation Management System (TMEMS) database (quarterly) and semiannual report

Reporting personnel: M&E manager and PSI

Indicator 7: Number of ITNs purchased with U.S. government funds that were distributed by VectorWorks, by channel

Year	Target	Actual
1	Schools: 500,000	Schools: Total: 494,407 Lindi: 135,820 Ruvuma: 169,849 Mtwara: 188,738
2	Health facilities: 320,000 Schools: 1,310,000	Health facilities: 237,760 Schools: 1,152,715
3	Health facilities: 1,330,709 Schools: 966,812	Health facilities: 2,297,521 Schools: 0
4		
5		
Life of project		

Unit of measure: Number

Disaggregation: ITN distribution channel and region

Source: Distribution reports

Definition: This is a global VectorWorks and PMI indicator defined as the number of ITNs distributed through mass, continuous, or routine distribution channels. VectorWorks must have funded the transport of nets to storage sites or distribution points. For the Tanzania School Net Program, the channel is schools. For the Tanzania health facility distribution, the channel is health facilities that provide ANC and/or EPI services.

Frequency of reporting: Quarterly and semiannually

Reporting format: TMEMS database (quarterly) and semiannual report

Reporting units: M&E manager

Notes: In the first two quarters of Year Three, VectorWorks distributed a total of 2,297,521 ITNS through health facilities in seven regions of Tanzania mainland.

Indicator 8: Percentage of schools visited by a supervision team during ITN issuing

Year	Target	Actual
1	90%	21% (see note)
2	25%	9.48%
3	25%	
4		

5		
Life of project		

Unit of measure: Percentage

Disaggregation: Region and district

Source: Supervision report

Definition:

Numerator: The number of schools participating in SNP visited by a designated SNP supervision team during the issuing period.

Denominator: The total number of schools participating in SNP. For Tanzania SNP, this is the number of schools that will distribute ITNs in the current round under VectorWorks.

Frequency of reporting: Annually

Reporting format: Annual report

Reporting personnel: SNP officer

Indicator 9: Percentage of health facilities with flagged variances visited by supervision teams

Year	Target	Actual
1	N/A	N/A
2	95%	0
3	95%	Analysis is under way
4		
5		
Life of project		

Unit of measure: Percentage

Disaggregation: Region and district

Source: Validation reports

Definition:

Numerator: The number of health facilities with flagged variances that were visited by designated supervision teams during the reporting period.

Denominator: The total number of health facilities with flagged variances during the reporting period. A flagged variance will be defined in the implementation guideline.

Frequency of reporting: Quarterly

Reporting format: Semiannual report

Reporting personnel: M&E manager

Notes: VectorWorks has reviewed data from the health management information system and noticed huge discrepancies in all districts. The project sampled Mtwara and Mwanza (pilot regions) for data quality assessment. In collaboration with regional and district teams in the two regions, VectorWorks managed to visit a total of 16 health facilities and noticed that many of the discrepancies are on vaccine data at the national level due to inclusion of data on children who received vaccines other than measles rubella 1 (target beneficiaries). Errors happen at the time of generating reports, not at the data-entry level. However, it is also evident that health facilities submit the wrong numbers; for example, of all the health facilities visited, only two facilities had submitted correct numbers. VectorWorks is working with local government officials to conduct further supervision visits and refresh training in these two regions.

Indicator 10: Proportion of targeted beneficiaries who received an ITN, by channel, location, and sex

Year	Target	Actual
1	Schools: 100%	Schools: Total: 99.25% (49% male, 51% female) Lindi: 97.5% Ruvuma: 99.9% Mtwara: 99.9%
2	Schools: 99% Health facilities: ANC: 80%; IVD: 80%	Schools: 98%
3	Schools: 99% Health facilities: ANC: 80%; IVD: 80%	TBD
4		
5		
Life of project		

Unit of measure: Percentage

Disaggregation: Channel, location, and sex

Source:

Schools: Distribution reports

Health facilities: Accountability report

Definition:

Numerator: The number of targeted beneficiaries who received an ITN.

Denominator: The number of targeted beneficiaries registered for each channel.

Channels are schools and health facilities. For school-based distribution, the targeted beneficiaries are defined in the standard operating procedure. For health-facility-based distribution, the targeted beneficiaries are pregnant women who attended the health facility for their first ANC visit and children who attended the health facility to receive the first measles vaccine.

Frequency of reporting:

Schools: Annually

Health facilities: Quarterly

Reporting format: Semiannual report

Reporting personnel: M&E manager, logistics manager, and SNP officer

Indicator 11: Percentage of health facilities that did not experience a stock-out of ITNs, by region, during the reporting period

Year	Target	Actual
1	N/A	N/A
2	80%	Not determined
3	80%	Not determined
4		
5		
Life of project		

Unit of measure: Percentage

Disaggregation: Region and district

Source: eLMIS and accountability report or ILS Gateway

Definition:

Numerator: Number of health facilities that did not experience a stock-out of ITNs during the reporting period. A stock-out will be defined in the implementation guideline.

Denominator: Total number of health facilities participating in the health facility ITN distribution during the reporting period.

Frequency of reporting: Quarterly

Reporting format: Semiannual report

Reporting personnel: M&E manager, logistics manager, and PSI

Notes: Because the accountability information system is not operational, this is not an available number to track. As that tool becomes operational, this tracking will be conducted.

Reporting, Data Management, and Use

VectorWorks Tanzania has several programmatic reporting requirements:

- Report on those indicators that are also global VectorWorks and PMI indicators to the TMEMS database quarterly.
- Submit semiannual and annual reports to PMI within 45 days after the reporting period has ended.
- Submit deliverables as stated in annual work plans, which report on activities conducted, including quarterly accountability reports for health facility distribution and the procedural audit for school distribution (see below).

VectorWorks will periodically review progress against targets to advise current implementation and annual work plans. Data will be presented using the types of disaggregation mentioned above to allow for comparisons over time, between regions, districts, facility types, and sex. This analysis will be part of the semiannual reporting process. A team review of the analysis will also be part of the annual work plan process. During annual work planning meetings, VectorWorks will review progress against targets and reflect on challenges faced, lessons learned, and recommendations.

Evaluation Plan

The outcomes and impact of SNP may be evaluated. This may take the form of a cross-sectional population-based survey like those used in the previous rounds. However, there is no indication from PMI at this time that VectorWorks will be asked to conduct this evaluation.

VectorWorks, however, did conduct a procedural audit of SNP3 and is conducting a similar audit of SNP4. This audit will be a combination process evaluation and commodity management assessment. The purpose of the audit is to see the extent to which the program was conducted in accordance with guidelines and to measure the level of accountability achieved in the management of the supply chain and distribution of ITNs.

VectorWorks will also conduct a financial evaluation of the school net distribution program. This activity is funded under PMI-Washington with core funds and led by VectorWorks partner, Tulane University. Tulane has set up cost tracking systems and collected cost data for SNP3 and SNP4. These analyses will provide critical information on the costs of different types of continuous distribution channels, to be used by the NMCP and for PMI. The economic analysis provides a more complete picture of the costs including volunteered or non-project time that will inform a comparative analysis that includes person-years-of-protection for different types of channels, and will help to establish the case for or against a transition from mass campaigns to continuous distribution.

The results of the VectorWorks Tanzania project monitoring and evaluation data will inform future program design, national ITN strategies, Malaria Operational Plans, and Global Fund concept notes.