

Malaria surveillance strengthening in Myanmar

Implementation plan

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ABBREVIATIONS

BHS	Basic health staff
INGO	International non-governmental organization
MARC	Myanmar Artemisinin Resistance Containment
MC	Malaria Consortium
NGO	Non-governmental organization
NMCP	National Malaria Control Programme
SOP	Standard operating procedures
TA	Technical assistance
VHV	Village health volunteer
WHO	World Health Organization

1. Background

This implementation plan sets out a series of programmatic objectives, activities and outcomes for malaria surveillance strengthening in Myanmar over the next two years. This period represents a key phase as the National Malaria Control Programme (NMCP) strives to build on recent achievements in strengthening core surveillance operations.

In May 2013 the Malaria Consortium (MC), with assistance from the World Health Organization (WHO) and NMCP, carried out an assessment of current approaches to malaria surveillance in Myanmar and provided recommendations for further strengthening of surveillance activities¹. The assessment report noted that significant progress in strengthening malaria surveillance in Myanmar had already been made, including the development of vertical reporting systems for both basic health staff (BHS) and Village Malaria Volunteers (VHVs) and the use of both paper-based and electronic methods for compiling and submitting data reports. Under the Myanmar Artemisinin Resistance Containment (MARC) framework, a project is ongoing to test the feasibility of village-specific case-based reporting.

2. Key areas for surveillance strengthening

In terms of areas for further strengthening of malaria surveillance, two major themes emerged from the 2013 assessment: (a) the need to strengthen core malaria data management systems at all levels in the health system; and (b) the need to capture volunteer data more effectively. In addition, a third emerging theme – perhaps underexplored in the assessment report but an important topic in subsequent discussions with NMCP – is the need to develop and test new surveillance methods to facilitate timely response to reported cases. As NMCP considers a new strategic plan aimed at subnational malaria elimination (and as, in parallel, mobile phone coverage in Myanmar is expanding rapidly) the potential utility of reporting systems based on mobile technologies should be explored. These issues are further explored below.

The need to strengthen data management systems

The progress being made towards case based reporting in Myanmar is encouraging given existing resource and technical constraints. The case reporting system works well at lower levels of the health system and the volume, detail and quality of data being reported by VHVs, midwives and other government health staff is impressive. Overall, the paper-based data collection element of the system is well designed and appropriate for the capacity of the health staff.

Currently, however, appropriate systems are not in place to manage and disseminate the large amounts of data being generated by case-based reporting. The current system of Excel spreadsheets at the state/region or township level is not suitable or sustainable as a platform for entering and analyzing data, examining patterns of reporting or providing appropriate feedback. Sending the spreadsheets up the chain of supervision is also challenging given the size of the associated files

¹ Cox J. and Mellor S. (2013). Assessment of Malaria Surveillance in Myanmar. May 2013. Malaria Consortium/PMI/USAID

and combining and manipulating the data at national level represents a major challenge for staff at WHO and NMCP. In addition, because the system does not capture village information for malaria cases, it is not currently possible to generate spatially specific malaria data below township level. There is an urgent need, therefore, to develop, implement and evaluate a new database system that is capable of supporting core data entry, management, analysis and reporting functions. As detailed later in this document, this system should be modular and specifications for the database (e.g. inclusion of zero-reporting; separate input screens for data from BHS, VHVs, mobile teams, screening points etc.) should be determined by NMCP before development starts.

The need to capture volunteer data more effectively

VHVs are responsible for detecting an increasing proportion of malaria cases in Myanmar. Analysis of surveillance data for 2012 indicated that at the national level more than 20% of individuals tested for malaria were seen by VHVs. The proportion of tests carried out by VHVs increased over the course of the year (from 9% in January 2012 to 30% in December 2012) and was particularly high in certain individual states/regions (e.g. in Mon, Thanitharyi and Kayin, where the proportion of malaria tests carried out by VHVs was 65%, 55% and 43% respectively). At the same time, however, the 2013 assessment concluded that a substantial proportion of VHV data was not being captured at central level, primarily because of issues around data reporting and dissemination of data (both from NMCP volunteers and those operating under NGOs and INGOs). In addition, VHV data are not always available to all relevant stakeholders (notably township health offices) and the completeness and timeliness of reporting is difficult to gauge because no formal monitoring system is in place. Also, because individual partners manage their VHV networks differently, the characteristics of data from different townships (e.g. the proportion of the population tested and the test positivity rate) are highly variable - making the interpretation of core malariometric indicators at national level more difficult.

It is clear that the VHV network represents an important opportunity to effectively increase the coverage of the surveillance system. A short-term priority is to improve the completeness of VHV data at central level and to develop system for tracking reporting rates. In the medium term the surveillance assessment recommended that a certain degree of standardization in the management of VHV networks across partners be introduced.

The need for new surveillance methods to facilitate timely response to reported cases

As efforts to strengthen surveillance in Myanmar continue NMCP has also noted a marked decline in overall case numbers in recent years and is now developing a strategy for subnational malaria elimination. This will require the phased introduction of systems that facilitate timely case investigation and reactive case detection (plus, where necessary, vector control) in response to individual cases reported through the passive case detection system. This involves transforming a surveillance system that is currently centered on generating data for routine reporting purposes into an action-oriented system through which surveillance is used to guide specific response interventions.

As noted in the 2013 surveillance assessment, other countries within the Greater Mekong Sub-region (notably Cambodia and Thailand) have extensive experience in

developing mHealth systems to support real-time case reporting, in addition to other systems to support monitoring and evaluation (e.g. detecting and responding to stock outs of key commodities). Given the rapidly increasing coverage of mobile phone networks in Myanmar it is now feasible to pilot similar systems in Myanmar, taking on board lessons learned in neighbouring countries.

3. Pathway to surveillance strengthening in Myanmar

Given the main findings of the 2013 surveillance assessment, summarized above, this implementation plan has a dual focus on (a) strengthening reporting and management of malaria data through a new database platform and appropriate mHealth tools, and (b) better integration and harmonization of data from volunteers. Many of the data management issues identified above can be addressed relatively easily through the introduction of a database to replace the Excel spreadsheets at central, state/region and township levels. A priority, therefore, is the development and testing of a database system that can be deployed at various levels in the health system and which can support efficient and effective data entry, management, analysis and reporting. In parallel there is a need to address key communications constraints which to date have hampered the timely dissemination of data and feedback between township health offices, state/region health offices and NMCP.

The 2013 assessment included a number of recommendations aimed at ensuring the development of an effective, well-designed system using appropriate and sustainable technology. Specific activities based on these recommendations are developed further within this implementation plan (see Annex 1), but a number of general considerations raised during the 2013 assessment exercise are worth highlighting:

- Township health offices represent the natural focus for decentralized data management, analysis and decision-making. There is also a wider need to empower township medical officers to manage malaria control.
- In terms of sustainability, consideration should be given to ensuring that, at least in the long term, data assistant positions are fully integrated into the health system and not considered temporary "project" staff whose position is contingent on external funding.
- Capacity development of government staff at all levels is a priority, but there is a particular need to empower township level staff to analyze and interpret surveillance data.
- Deployment of the database system should be phased. In the short term, any scaling up of village-based reporting is probably only feasible in MARC areas where data assistants are already deployed in each township. Development of a modular database will allow incorporation of a "village-reporting module" which can be activated at township level as part of a systematic rollout of the system.
- Although introducing a new database platform in townships will greatly increase efficiency of reporting to central level, it is likely that there will continue to be substantial delays in reporting data from the peripheral health units (and particularly from VHVs) to the township office. It is important,

therefore that appropriate mHealth tools for rapid reporting from peripheral health units be developed, tested and evaluated.

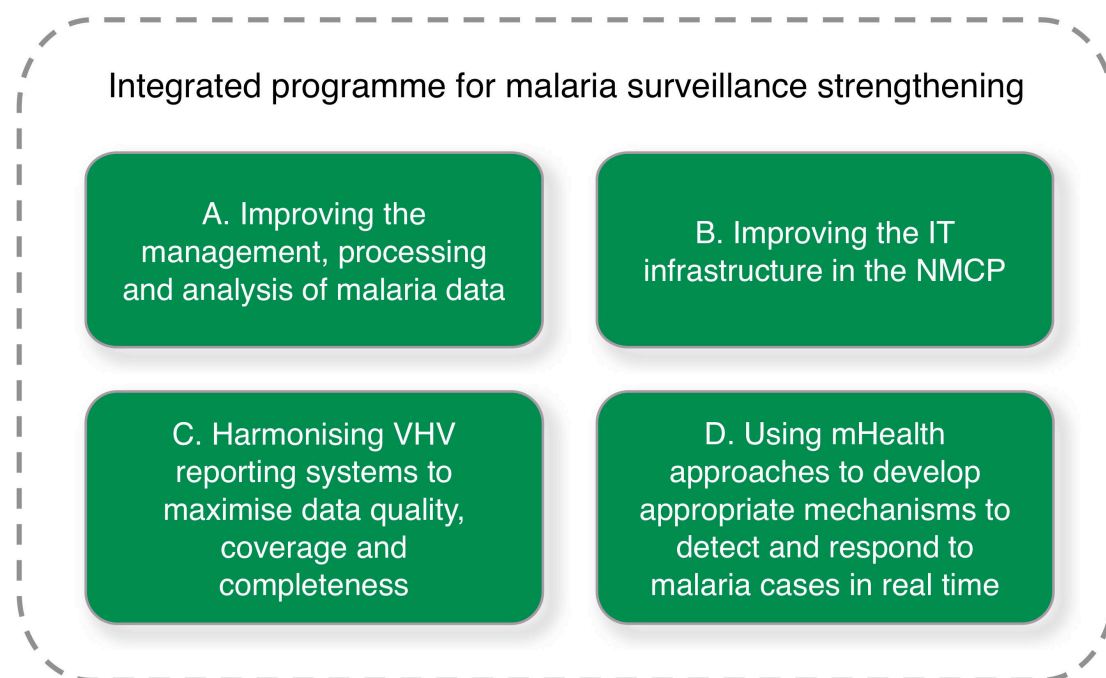
For the new database platform to be effective it is important that all surveillance data are captured routinely. As noted above, analysis of raw surveillance data, carried out as part of the 2013 surveillance assessment, revealed significant gaps in the data available for VHVs in 2012. These represent missing data from both NMCP and NGO/INGO-supported VHVs. There is an urgent need, therefore, to develop standardized approaches for the reporting and sharing of VHV data from all partners (including NMCP) in order to ensure that all VHV data are available at the central level. From a disease control perspective it is also important that township health offices are routinely provided with VHV data from NGOs and INGOs operating within their townships. A formal system for logging reports in and out (at all levels in the system) is also required so that BHS can monitor the status of VHV reporting on a village-by-village basis. This will also enable NMCP to maintain an accurate register of active VHVs nationally; within its own networks NMCP assumes that 70-80% of trained VHVs are active but without a means of routinely tracking VHV submissions there is no way of knowing whether this is actually the case).

Currently a wide variety of approaches are used to coordinate, motivate and manage volunteers among different partners. As a first step to improving harmonization between different systems for VHV data collection and reporting an evaluation of VHV network organization and performance across a range of partners operating in Myanmar will be carried out. This exercise will include an assessment of various motivational factors and will also seek to document examples of best practice in VHV management and coordination. Outputs from this process will be used to help NMCP develop suitable guidelines, SOPs and forms for future VHV monitoring and management.

4. Work programme components

The proposed work programme includes four overarching objectives or work streams (Box 1), each underpinned by a series of activities, which together form an integrated programme for malaria surveillance strengthening. A detailed list of outcomes and activities under each work stream, as well as preliminary timelines, is included in Annex 1.

Box 1. Work streams to support malaria surveillance strengthening in Myanmar



A. Improving the management, processing and analysis of malaria data

Outcomes

- Implementation of an Access database to replace the current system of Excel spreadsheets
- National systems for monitoring reporting completeness/timeliness of BHS and VHV reports

Activities

The first step under this objective is identifying a suitable sampling framework for piloting the database system. In developing this implementation plan a number of options were discussed with NMCP staff, including either limiting the pilot to a subset of MARC townships (where township-level data assistants have already been deployed) or including a mixture of MARC and non-MARC townships. The second option would involve using existing township-level staff for data entry and data management and would therefore serve as a guide to the feasibility of introducing the system under current staffing arrangements. The final decision on the scale and scope of the pilot phase will be made by NMCP. With external technical assistance

(TA), the NMCP will also take a lead on developing a detailed blueprint for staffing arrangements, roles and responsibilities, reporting and feedback mechanisms. TA will also be required to assist the NMCP in the development of detailed specifications for the database application.

The database will be designed and developed using a modular approach. Modules include village lists for township installations as well as modules to capture coverage indicators (LLIN distribution, VHV villages etc.) and to monitor the completeness and timeliness of data reporting. Implementing the system will involve installing the database in the pilot townships, carrying out all associated training and developing relevant guidelines and SOPs. A post-pilot evaluation will be carried out prior to subsequent scaling up of the database system. All pilot activities will be completed within the first year of this implementation plan; the scaled-up system will be further evaluated at the end of the second year (one year following scale-up).

B. Improving the IT infrastructure in the NMCP

Outcome

- Appropriate network at NMCP and associated IT infrastructure and staff capacity at all levels to manage, secure and share data

Activities

An external IT professional will work with NMCP staff to prepare a detailed network diagram for NMCP and to determine equipment requirements for central, states/region and township levels and develop a tender document on this basis. Under the tender agreement a contractor will procure and deploy servers, computers, peripherals and software within NMCP. They will also procure and deploy desktop computers and peripherals in pilot townships and state/region offices and introduce email/internet access where this does not already exist. Staff training needs will be assessed by NMCP and it is likely that TA will be required to train a network administrator, IT support staff and users at central and TS level. Appropriate procedures for data backup at township and central level will also be developed.

C. Harmonizing VHV reporting systems to maximize data quality, coverage and completeness

Outcome

- Standardized volunteer reporting systems, SOPs and accurate list of all volunteers within the NMCP

Activities

An assessment of current VHV management and data reporting procedures will be carried out and will cover all implementing partners (including NMCP). At the same time a detailed evaluation of VHV performance will be conducted in a subset of townships. The evaluation will use a mixed-methods approach incorporating stakeholder interviews and quantitative analysis of VHV reports. The findings of

these assessment activities will be used to develop guidelines and instruments to further harmonize data reporting from VHVs managed by NMCP, NGOs and INGOs.

D. Using mHealth approaches to develop appropriate mechanisms to detect and respond to malaria cases in real time

Outcome

- Suite of mHealth tools that can be deployed to detect and respond to malaria cases in real time and respond to emergency stock outs of key commodities

Activities

A range of activities will be carried out to develop, test and evaluate appropriate mHealth tools based on established best practice within the region. Within the time frame of this implementation plan the focus will be on carrying out small-scale, proof of concept activities in a limited number of sites where there is existing mobile phone coverage. NMCP will determine the scope and purpose of mHealth activities and work closely with a suitably experienced external partner to develop, trial and evaluate appropriate solutions.

5. Annex 1: programme plan

The following spreadsheet represents a framework for implementation of surveillance strengthening activities over a two-year period. It was developed jointly by the report authors and senior staff within NMCP. This is a dynamic document: current details concerning timelines, partners etc. should be seen as indicative. Where specific TA inputs are required for specific activities these are defined in the main table; in addition a separate table is included with details of overarching TA needs.

Key to abbreviations used (where not used in main text):

Rec no	Maps activities to specific recommendations in the 2013 surveillance assessment report
DA	Data assistant
DB	Database
IT	Information technology
TBD	To be determined
TS	Township

Level	Rec No*	Objective / Activity	Method	Year 1				Year 2					
				Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
Obj 1		Improving the management, processing and analysis of malaria data											
Outcome 1.1		Implementation of an Access DB to replace the current system of Excel spreadsheets											
Act 1.1.1		Identify target pilot areas for village-level reporting	Select sample TS in MARC area and states/regions targeted for subnational elimination	X									
Act 1.1.2	5	Develop detailed blueprint for staffing arrangements, roles and responsibilities, reporting and feedback mechanisms	TA, workshops and meetings	X									
Act 1.1.3	10	Develop detailed specifications for the DB application	TA, contractor works with NMCP to create DB design document	X									
Act 1.1.4	5	Design and develop DB using modular approach	TA, contractor to develop platform in accordance with specifications defined in 1.1.3	X									
Act 1.1.6	5	Install DB in pre-determined sample of TS and state/region health offices	1 day in each TS to install DB		X								
Act 1.1.7	5	Training and SOP development	Workshop to train DAs		X								
Act 1.1.8	5	Post-pilot evaluation	Ongoing monitoring of the DB to identify bugs to be fixed, and any additions to the DB required; evaluation of user experience, data quality etc from different pilot arms		X	X							
Act 1.1.9	5	Scale up to all MARC TS	Regional training sessions for the DAs								X		

Level	Rec No*	Objective / Activity	Method	Year 1				Year 2						
				Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
Act 1.1.10	5	Scale up to all states/regions								X				
Act 1.1.11	5	Post-scale up evaluation	Evaluation of system in cross-section of TS, states/regions and central level											X
Outcome 1.2		National systems for monitoring reporting completeness/timeliness of BHS and VHV reports												
Act 1.2.1	6,7	Develop village lists with core baseline data (e.g. population)	Existing MIMU lists to be updated. Regional workshops to bring TS staff together to agree lists	X	X	X	X			X				
Act 1.2.2	12	Establish and maintain an accurate register of trained VHVs with case management responsibilities	To be included as a module in the DB		X	X	X							
Act 1.2.3	11	Develop and introduce system for TS, state/region health offices and NMCP to track data reports received and submitted	To be included as a module in the DB		X	X	X							
Obj 2		Improving the IT infrastructure in the NMCP												
Outcome 1.2		Appropriate network at NMCP and associated IT infrastructure and staff capacity at all levels to manage, secure and share data.												
Act 1.2.1	9	Prepare detailed network diagram for NMCP in NPT and equipment requirements for central level, states/regions and TS and develop tender document	Outside IT professional to work with NMCP staff to design network and draw up tender document					X						
Act 1.2.2	8,9	Procure and deploy server, computers, peripherals and software. Installation of NMCP NPT network	Competitive bidding process based on tender document						X					

Level	Rec No*	Objective / Activity	Method	Year 1				Year 2					
				Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
Act 1.2.3	8,9	Procure and deploy desktop computers and peripherals in pilot TS and state/region offices; introduce email/internet access where this does not already exist	Competitive bidding process based on tender document.		X		X		X				
Act 1.2.4	9	IT and data management training needs assessment and plan	Inventory of a current staff, their current skills and skill level required		X								
Act 1.2.5	9	Training of network administrator, IT support staff and users at central and TS level	Mixture of in-house, contractor, online and formal classwork		X								
Act 1.2.6	8,9	Develop appropriate procedures for data back-up at TS and central level	Backup software and procedures to ensure regular backups and data sharing		X								
Obj 3		Harmonizing VHV reporting systems to maximize data quality, coverage and completeness											
Outcome 1.3		Standardized volunteer reporting systems, SOPs and accurate list of all volunteers within the NMCP											
Act 1.3.1	14	Detailed assessment of current VHV management and data reporting procedures across all implementing partners, linked to analysis of VHV data	TA; field observation, interviews with stakeholders, quantitative analysis of VHV data	X									
Act 1.3.2	15	Evaluation of VHV performance across the full range of partners operating in Myanmar. To include an assessment of various motivational factors and documentation of examples of best-practice in VHV management and coordination	TA; field observation, interviews with stakeholders, quantitative analysis of VHV data	X									
Act 1.3.3	1,3	Development of guidelines and instruments to standardize data reporting from VHVs managed by NMCP, NGOs and INGOs	Workshops and meetings using deliverables from activities 1.3.1 and 1.3.2 as inputs		X								
Act 1.3.4	1	Universal format for VHV carbonless case registers to be agreed and implemented	Workshops and meetings using deliverables from activities 1.3.1 and 1.3.2 as inputs		X								

Level	Rec No*	Objective / Activity	Method	Year 1				Year 2					
				Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
Act 1.3.5		Data sharing protocols agreed with partners not able to adopt standard carbonless case registers for their volunteers	Partners will need to develop procedures to provide data extracts that can be imported into NMCP DB		X			X					
Act 1.3.6	1,2	Standard formats and reporting procedures for periodic data summary reports to be agreed, documented and implemented	Workshops and meetings		X			X					
Obj 4		Using mHealth approaches to develop appropriate mechanisms to detect and respond to malaria cases in real time											
Outcome 1.4		Suite of mHealth tools that can be deployed to detect and respond to malaria cases in real time and respond to emergency stock outs of key commodities											
Act 1.4.1	9	Develop, test and evaluate appropriate mHealth tools based on established best practice within the region	Limited field trials using mHealth systems already established in GMS					X		X			X

Level	Rec No*	Objective / Activity	Partners	Supplementary Info	Est cost	Assumptions
Obj 1		Improving the management, processing and analysis of malaria data				
Outcome 1.1		Implementation of an Access DB to replace the current system of Excel spreadsheets				
Act 1.1.1		Identify target pilot areas for village-level reporting	NMCP	One arm in MARC area (DAs in TS offices); one arm in non-MARC area (DB managed by existing staff); post pilot evaluation to compare system in two arms (1.1.8)	N/A	
Act 1.1.2	5	Develop detailed blueprint for staffing arrangements, roles and responsibilities, reporting and feedback mechanisms	NMCP + dev partner	Key considerations include capacity development in data management and analysis in TS offices	TBD	
Act 1.1.3	10	Develop detailed specifications for the DB application	NMCP + dev partner	Key functionality (e.g. zero reporting, required queries and reports) to be stipulated in advance	(included in Act1.1.4)	
Act 1.1.4	5	Design and develop DB using modular approach	NMCP + dev partner	Modules include village lists for TS installations, also coverage indicators including LLIN distribution, VHV villages etc	50,000	
Act 1.1.6	5	Install DB in pre-determined sample of TS and state/region health offices	NMCP + dev partner	If possible populate DB with existing data from TS EXCEL spreadsheets	TBD	
Act 1.1.7	5	Training and SOP development	NMCP + dev partner	Training of existing DA should be relatively easy as they are already familiar with the EXCEL system	TBD	
Act 1.1.8	5	Post-pilot evaluation	NMCP + dev partner	TA, contractor will need to be responsible for bug fixes in the DB.	TBD	
Act 1.1.9	5	Scale up to all MARC TS	NMCP		TBD	

Level	Rec No*	Objective / Activity	Partners	Supplementary Info	Est cost	Assumptions
Act 1.1.10	5	Scale up to all states/regions	NMCP	TBD if it is appropriate (necessary and the TS staff have the capacity) to have TS installations (with village module) or State / region installations (non village module).	TBD	
Act 1.1.11	5	Post-scale up evaluation	NMCP + dev partner		TBD	
Outcome 1.2		National systems for monitoring reporting completeness/timeliness of BHS and VHV reports				
Act 1.2.1	6,7	Develop village lists with core baseline data (e.g. population)	NMCP + dev partner	Exercise to incorporate standardized coding using MIMU system. Major workplace sites with volunteer malaria workers to be included in lists.	TBD	
Act 1.2.2	12	Establish and maintain an accurate register of trained VHVs with case management responsibilities	NMCP + dev partner	Partners will have to supply and maintain (send updates to the TS staff to include in the DB) the location data where they support village volunteers	TBD	
Act 1.2.3	11	Develop and introduce system for TS, state/region health offices and NMCP to track data reports received and submitted	NMCP + dev partner	Requires zero reporting and activity Act 1.2.2 to be completed	TBD	
Obj 2		Improving the IT infrastructure in the NMCP				
Outcome 1.2		Appropriate network at NMCP and associated IT infrastructure and staff capacity at all levels to manage, secure and share data.				
Act 1.2.1	9	Prepare detailed network diagram for NMCP in NPT and equipment requirements for central level, states/regions and TS and develop tender document	NMCP + dev partner		3,000	
Act 1.2.2	8,9	Procure and deploy server, computers, peripherals and software. Installation of NMCP NPT network	Contractor		70,000	Est cost includes generator (20k), NMCP network and peripherals (50k)

Level	Rec No*	Objective / Activity	Partners	Supplementary Info	Est cost	Assumptions
Act 1.2.3	8,9	Procure and deploy desktop computers and peripherals in pilot TS and state/region offices; introduce email/internet access where this does not already exist	NMCP staff	Installation part of the roll out of the DB across the country	65,000	Computers and peripherals for all MARC TS and non MARC states (65k).. Assumes all new computers... using some existing computers will reduce the costs significantly
Act 1.2.4	9	IT and data management training needs assessment and plan	NMCP staff		2,000	
Act 1.2.5	9	Training of network administrator, IT support staff and users at central and TS level	Various		10,000	
Act 1.2.6	8,9	Develop appropriate procedures for data back-up at TS and central level	Contractor + NMCP		Inc in tender	
Obj 3		Harmonizing VHV reporting systems to maximize data quality, coverage and completeness				
Outcome 1.3		Standardized volunteer reporting systems, SOPs and accurate list of all volunteers within the NMCP				
Act 1.3.1	14	Detailed assessment of current VHV management and data reporting procedures across all implementing partners, linked to analysis of VHV data	NMCP + dev partner	Independent TA required to coordinate assessment but all field activities and stakeholder engagement carried out in collaboration with NMCP and WHO	60,000	
Act 1.3.2	15	Evaluation of VHV performance across the full range of partners operating in Myanmar. To include an assessment of various motivational factors and documentation of examples of best-practice in VHV management and coordination	NMCP + dev partner	Field activities for activities 1.3.1 and 1.3.2 will overlap. Deliverables (reports and recommendations) may be merged or presented as separate outputs.	(included in 1.3.1)	
Act 1.3.3	1,3	Development of guidelines and instruments to standardize data reporting from VHV's managed by NMCP, NGOs and INGOs	NMCP + dev partner		10,000	
Act 1.3.4	1	Universal format for VHV carbonless case registers to be agreed and implemented	NMCP + dev partners	Depending on the outcome of activities 1.3.1 and 1.3.2 changes to current VHV forms may or may not be required	10,000	

Level	Rec No*	Objective / Activity	Partners	Supplementary Info	Est cost	Assumptions
Act 1.3.5		Data sharing protocols agreed with partners not able to adopt standard carbonless case registers for their volunteers	Relevant dev partners		N/A	
Act 1.3.6	1,2	Standard formats and reporting procedures for periodic data summary reports to be agreed, documented and implemented	NMCP + dev partner		TBD	
Obj 4		Using mHealth approaches to develop appropriate mechanisms to detect and respond to malaria cases in real time				
Outcome 1.4		Suite of mHealth tools that can be deployed to detect and respond to malaria cases in real time and respond to emergency stock outs of key commodities				
Act 1.4.1	9	Develop, test and evaluate appropriate mHealth tools based on established best practice within the region	NMCP + dev partners	Proof of concept project in a limited number of sites with phone coverage	50,000	Cost assumes adapting existing regional systems to Myanmar context and costs of trials in limited areas

Level	Rec No*	Objective / Activity	Method
External resources and TA required (not mentioned in the plan)			
Type of TA		Expertise and Timing required	Cost
Long Term	Experienced with developing malaria surveillance systems	TBD	
Long Term	Experienced with IT and data management	TBD	