ANNUAL WORK PLAN-Year III (DRAFT)

The Health Information, Policy and Advocacy (Health Information, Policy and Advocacy) Program

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ANNUAL WORK PLAN

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October 2015 – September 2016

Program Title: **The Health Information, Policy and Advocacy (Health Information, Policy and Advocacy) Program**

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ABBREVIATIONS

BHIS	Bureau of Health Information System
CDC	U.S. Centers for Disease Control and Prevention
CDHS	Cambodia Demographic and Health Survey
CENAT	National Center for TB Control
CRVS	Civil Registration and Vital Statistics
DDIU	Data Demand Information Use
DFID	U.K. Department for International Development
DPHI	Department of Planning and Health Information
DQA	Data Quality Assessment
DQI	Data Quality Index
FY	Fiscal Year
HC	Health center
HIPA	Health Information, Policy and Advocacy (Project)
HIS	Health information system
HMIS	Health management information system
HSP	Health Strategic Plan
GDI	General Department of Identification (Dept. of MOI)
GIS	Geographic information system
IPD/OPD	Inpatient/outpatient department
IT	Information technology
M&E	Monitoring and evaluation
MDR-TB	Multidrug-resistant tuberculosis
MOH	Ministry of Health
MOI	Ministry of Interior
MOP	Ministry of Planning
NCHADS	National Center for HIV/AIDs, Dermatology and STDs
NGO	Nongovernmental organization
NH	National Hospital
NIPH	National Institute of Public Health
NIS	National Institute of Statistics (MOP)
NMCHC	National Maternal and Child Health Center
NRHP	National Reproductive Health Program
NTP	National TB Program
OD	Operational district
PEPFAR	U.S. President's Emergency Plan for AIDS Relief
PH	Provincial Hospital
PHD	Provincial health department

RDQA	Routine data quality assessment
RGC	Royal Government of Cambodia
RH	Referral Hospital
TWG	Technical Working Group
UIS	Unique Identifying System
UNAIDS	Joint United Nations Program on HIV/AIDS
USAID	U.S. Agency for International Development
USG	United States Government
WHO	World Health Organization

I.   INTRODUCTION

Reliable health data are needed for both policy decision making and coordination of partner activities across the country. An empowered MOH with ownership of reliable and integrated health information is vital to ensuring the recovery and sustainability of Cambodia health system. Strong oversight and governance by the MOH is needed to manage donor activities, coordinate local and international partners, and measure progress toward national health goals. Having an effective national HMIS system supported by effective personnel will strengthen Cambodia ability to provide health data with which decision makers can set a strategic health policy direction for the country.

The Health Management Information Systems implemented in Cambodia (known as Health Information System – HIS at the early stage) was conceptualized in 1993 and was subsequently rolled-out for nationwide implementation in 1995.

After the implementation there were several upgrades of the HMIS to align with the new health coverage plan (1996), fine-tune the indicators and, in 2008, to align HMIS with the Second Health Strategic Plan (HSP2). In 2010, HMIS was further upgraded to a web-based application under USAID's presently funded Better Health Services (BHS) project, which ended in December 2013. By May 2012, 100 percent of public health facilities were reporting to the web-based HMIS in a timely manner.

MOH was facing several concerns and critical challenges pertaining to users of the HMIS at all levels especially those at the operational district (OD), DPHI office and the private sector. These concerns and challenges were highlighted during the first two fiscal years of HIPA project (March 2014 - Sep 2015) during formal meetings/ continuous engagements between DPHI officials and HIPA team and through feedback from users.

The key concerns included (1) Limited HMIS implementation support at the operational levels, (2) Limited use of HMIS in private sector, (3) No Sub-TWG for HMIS and; (4) There should be a protocol for HMIS officials who have the authorization to access to the HMIS data.

The key challenges included (1) Parallel use of two versions the HMIS application : Version 2.0 being used at some operational levels (HCs, Referral Hospitals, ODs and PHDs) and Version 1.0 being used by some other ODs and Private Sector due to lack of training of the new version, (2) The new HMIS web-based database analysis and report queries were not developed , (3) The new data entry interface was not easy to use, (4) Entered data was not saved if going to next page (5) The handover process was not fully done (just only user's manual and source codes) due to non-availability of technical documentation of the application, (5) Staff capacity building (e.g. technical capabilities, ICD-10) and; (5) Infrastructure constraints like internet access, ICT equipment, etc.

In view of the above highlighted issues, HIPA addressed the main concerns expressed by the users, hence enhancing the user experience, besides implementing below mentioned activities in line with the Work Plan for Financial Year 2 (October 2014- September 2015).

- Roadmap for strengthening HMIS submitted
- HMIS version 2.0 upgraded to a new version HIS 3.0 with indicator report feature, user friendly enhancements (e.g. data validations and controls), list of indicator definitions and various other tools to support capture of information
- HMIS version 2.0 User Manual reviewed and updated with Reporting and User Account Management protocols in line with HIS 3.0

- HMIS version 1.0 use discontinued. All the private sector reporting and information is now in the new consolidated version HIS 3.0.
- Nationwide training for all users of HMIS 2.0 at PHD, OD and hospital level were organized in FY1,
- Nationwide training for all users of HIS 3.0 at PHD, OD and hospital level organized in FY2,
- Completed transition of HMIS from URC/BPH to HIPA project
- HIS 3.0 is now hosted on separate virtual server. The new domain for HIS 3.0 is www.hismohcambodia.org
- HIPA facilitated the installation of the Technical Working Group (TWG) HMIS with representatives of various MOH departments and national programs, MOI, MOP, WHO and IT supporting organizations.
- DDIU survey conducted in 3 provinces of health and non-health sector
- Data demand and Information Use (DDIU) workshop organized with DPHI and its stakeholders
- Activities for implementation of dashboards and other information dissemination platform initiated.
- Workshop organized on interoperability between HMIS and National Programs followed by several individual meetings with each of the national programs: NMCHC, CNM and NCHADS.
- Key Performance Indicators (KPIs) identified and incorporated in HMIS for NMCHC (3 programs) blood transfusion, mental health. Awaiting upgrades to comprehensive web-based data bases for CNM and NCHADS for implementing the interoperability strategy.
- A data exchange protocol was established between HMIS and CRVS through web services, enabling CRVS access to aggregated birth and death records of all public health facilities in HIS 3.0.
- Data exchange protocols implemented with SHP and PMRS applications in collaboration with URC
- DPHI training needs assessment was completed and training is ongoing for DPHI staff in ICT and advanced Excel
- Internet access and WIFI installed at DPHI
- ICD-10 reviewed and initiated workshop in cooperation with WHO Family of International Classification (FIC) Asia Pacific Network (APN) on ICD-10, which resulted in a WHO FIC APN regional conference with 8 collaborating countries. HIPA will be part of the ICD-10/11 implementation Task Team.
- Comparative analysis of automated TB MIS application was presented to CENAT. Study visits for CENAT staff were organized to Bangladesh and the Philippines to assess the implementation of the eTB Manager and ITIS (Integrated TB Information System – a custom based solution) and its applicability for Cambodia NTP. CENAT has decided in favor of implementation of eTB Manager solution for NTP as a whole. Activities of requirement gathering and systems mapping and design have been initiated.
- Activities toward assessment of Unique Identifying Systems (UIS) initiated
- Coordination with relevant HMIS stakeholders and organizations through various formal and non-formal meetings, workshops, etc.

Our approach to the project continues to empower the MOH DPHI to:

- Effectively plan, execute, and regulate health programs
- Build sustainable human resources within the MOH to manage a national program
- Assume strong political commitment to implement national health information strategies
- Bring partners together to achieve the objectives of the Cambodia HMIS strategy
- Hold itself accountable and report all relevant information about processes and progress to stakeholders in a timely and transparent manner
- View donor's support as demand-driven, to be fully aligned with its development priorities and strategies and targeted to build and strengthen country systems for sustainability
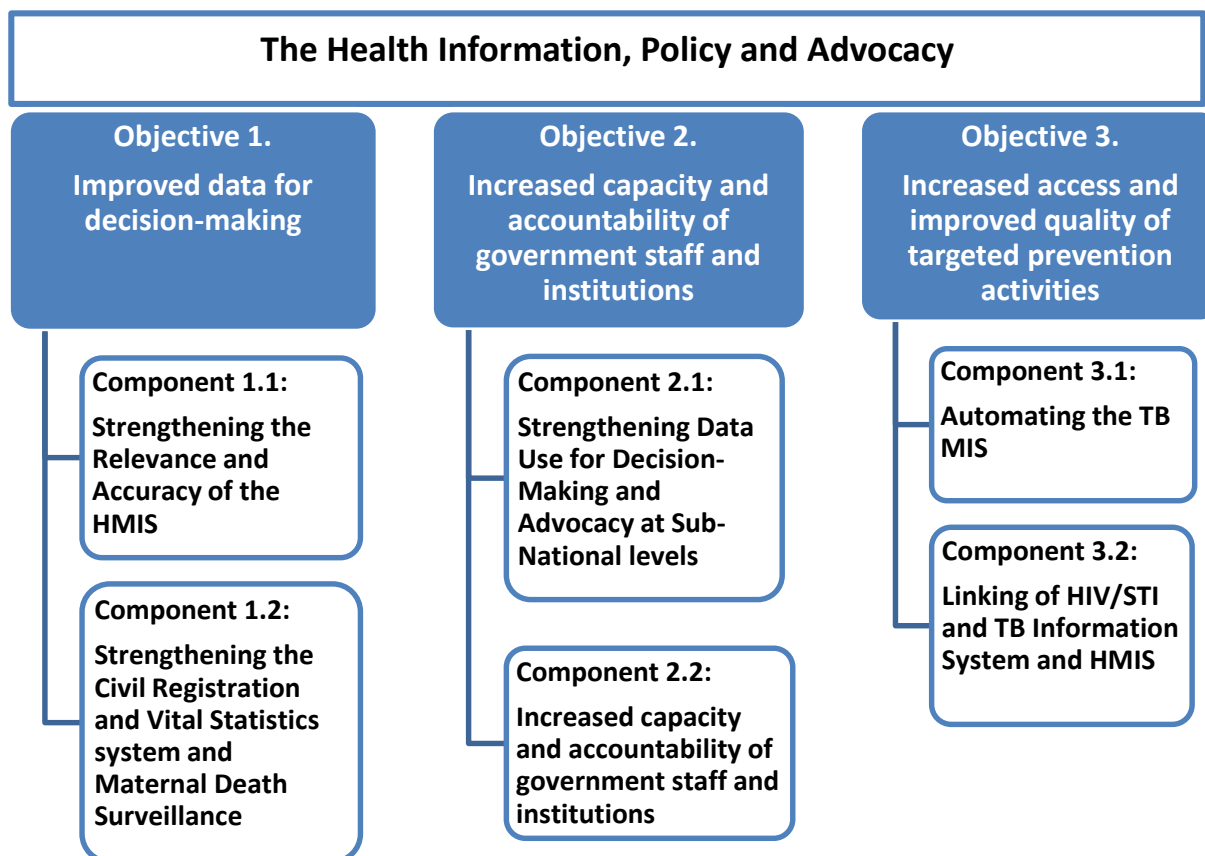
II.   HIPA PROJECT OBJECTIVES

The HIPA project is working towards achieving the following goals to contribute to the realization of the Health Information System in Cambodia:

1. Ensure high performance of the national HMIS, complying with international standards, and receiving recognition and support among policymakers and the public
2. Ensure evidence-based decision-making by M&E of health sector performance and improved data generation and information dissemination with appropriate communication and technology
3. Enable availability of quality socio-demographic, economic, morbidity, mortality, and risk factor information and improved coordination of survey planning and implementation
4. Enhance the quality of patient medical records for improved case management and the quality, completeness, and timeliness of surveillance data for efficient outbreak response and disease control
5. Ensure effective and efficient health care and public health performance through comprehensive HMIS coverage and improved database management on infrastructure, human resources, and logistics

In order to reach the above stated goals, the program has established three critical objectives with six components (two per each objective) and those six components. Details of the activities conducted under each component are presented in the subsequent section of this report.

The Health Information, Policy and Advocacy

Objective 1. Improved data for decision-making	Objective 2. Increased capacity and accountability of government staff and institutions	Objective 3. Increased access and improved quality of targeted prevention activities
Component 1.1: Strengthening the Relevance and Accuracy of the HMIS	**Component 2.1:** Strengthening Data Use for Decision-Making and Advocacy at Sub-National levels	**Component 3.1:** Automating the TB MIS
Component 1.2: Strengthening the Civil Registration and Vital Statistics system and Maternal Death Surveillance	**Component 2.2:** Increased capacity and accountability of government staff and institutions	**Component 3.2:** Linking of HIV/STI and TB Information System and HMIS

III. YEAR 3 WORK PLAN (OCTOBER 2015 – SEPTEMBER 2016)

This section presents the proposed activities proposed to be conducted in the Year 3 (October'15 to September'16) of the HIPA Project.

The Project Office is fully operational and is staffed with the key personnel taken and additional IT staff. This staff is also supported by a team of international technical experts who mostly support remotely with few in-country visits on a need basis.. Besides conducting the planned HIPA program activities, Futures Group also remains in constant touch with various stakeholders like USAID, DPHI, CENAT and other partners and donor agencies engaged in the health service delivery of the country towards developing an inclusive approach for implementation of the program activities.

Objective 1: Improved data for decision-making

As on July2015, the HIS 3.0 collects health data nationwide from 1321 public health facilities covering 1215 health centers (including 85 health posts and 90 Former District Hospitals), 72 referral hospitals, 24 provincial hospitals, 10 national hospitals and 823 private health service providers/NGOs. While the application is web-based, most HCs have no computer and/or have intermittent internet connectivity, thereby making it difficult to operate the application. About 33% of all HCs would use HMIS[1] in 2014 for reporting health statistics. The OD takes care of the data entry of those HCs without computer and/or internet. It is expected that in the coming years health centers will be provided with computers and internet access enabling them to report data online at HC level. HIPA will continue to provide the HIS 3.0 Training of Trainers (ToT) to all 25 provinces, PHD and OD levels. The OD are expected to train staff from HC level in the use of HIS 3.0. The MoH-DPHI plans to include the training in its annual budget and/or seek donor funding for training of HC staff in HIS 3.0.

After agreement on the key indicators of the national programs and Health Strategic Plan 2016 - 2020 activities will continue to implement interoperability between the HIS 3.0 and the National Program databases.

Data completeness and data quality remains an issue of concern. Under the HIPA Program, we propose to build capacity at local health facilities in Cambodia, targeting improved data quality for evidence-based decision-making. Currently, the health managers use HMIS data to align strategic health policies, standards, and guidelines. Through training, technical assistance, development of tools to facilitate access and analysis of data and a continuous quality improvement model, we will enhance the information culture at local facilities in Cambodia. The HMIS will be upgraded with a variety of data validation rules, to ensure that the data are valid, sensible, reasonable, and secure before they are processed. Current data quality assessment guidelines and tools will be reviewed and updated.

The quality and use of information on birth, death and cause-of-death was assessed by a consultancy firm supported by WHO revealed that the completeness of death registration is less than 10%. There is no reliable data with completeness of cause-of-death certification while the completeness of birth registration is 62% for children under 5 years. Following the assessment's recommendations, HIPA will identify areas of supporting the current CRVS system. HIPA will work with MOI/GDI and MOH/DPHI to

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[1] Data from DPHI assessment in 2014. It is now known as to how many HCs do their own data entry today. These data will be available from HIS 3.0 by mid-September'15.

develop capacity building plans to improve the quality of reporting (including births, deaths and causes of death) and the linkage of CRVS to HIS 3.0. The ICD-10/11 codes integration in HIS 3.0 for morbidity and mortality will improve the classification of diseases and causes of death.

Component 1.1: Strengthening the Relevance and Accuracy of the HMIS

1.1.1   *Continuation of stabilizing and enhancing HIS 3.0 application with data validation tools, GIS and mobile applications*

In the Year 3, HIPA will continue to conduct activities towards strengthening and enhancing the HIS 3.0 application. Specific reporting tools generate the indicators, making them easy to access and use. To improve data quality, several data validation rules will be built in at the data capture stage of HIS 3.0.

The system will be enhanced with GIS interfaces, a feature necessary for epidemic disease control and the dashboard. These dashboards and web portal will be accessible through mobility devices to enable ease of access and use of information.

HIPA will also initiate activities towards development of mobility solutions for HC1 and HO2 data capture hence enabling ease in data reporting.

In order to improve communication and feedback with the users the dedicated HIS helpdesk would be operational. The HIS 3.0 Application User Manual will be regularly updated alongside the enhancements.

1.1.2   *HMIS incorporates more accurate subnational population denominators, leading to more accurate subnational coverage estimates.*

In order to strengthen the system of denominator estimation HIPA facilitated the establishment of the TWG HMIS, which includes representatives of MOH, MOP and MOI. The main topic of the first meeting had been the discussion on the most reliable and acceptable denominators from the available data sources, such as censuses/intercensal surveys and/or civil registration and vital statistics (CRVS). It was decided to use the censuses/intercensal survey data and population projections from MOP. MOH is in the process of obtaining the data from MOP. Once we have the updated data source from MOP, HIPA will then map them to the HIS 3.0 application to improve the HMIS data source disaggregated by age, gender, and geography.

1.1.3   *Data integration of Maternal Death Surveillance-, PMTCT-, health coverage plan data bases and health facility quality assessment scores with HMIS*

Besides the HIS 3.0 that is currently being supported by HIPA, DPHI also has several other application databases like Maternal Death Surveillance, PMTCT- , health coverage plan data bases and the health facility quality assessment scores developed in the past under various programs which also contain critical health information. DPHI is currently responsible for managing these databases. There are plans to integrate these databases with the HIS 3.0 system and manage the entire landscape under the HIPA program.

HIPA proposes to conduct an assessment of these databases and transition these systems under HIS 3.0 wherever possible.

1.1.4 Continuation of collaboration with national programs (CNM, NCHADS) to identify key performance indicators and annual update of all program indicators

The three programs of NMCHC, blood bank and mental health have requested DPHI to revise and update the indicators in HC1 and HO2 formats. These revised formats were integrated in HIS 3.0. There will be a process of routine annual review with the various national programs to validate the applicability of the key indicators.

Collaboration will continue with CNM and NCHADS to agree about key performance indicators and assess the technical feasibility on data integration with HIS 3.0 when their respective systems and databases are available for data exchange.

1.1.5 National Program Data Exchange and Integration Strategy (if agreement on 1.1.4 and technically feasible)

Once the KPIs between the national programs and HMIS are harmonized and their respective application systems and databases are available and upgraded with the agreed KPIs, HIPA will conduct a technical assessment of the national program application systems to confirm feasibility of technical data exchange. In cases of technically feasible data exchanges, HIPA will develop integration strategies for data exchange and develop integration brides for data exchange between the national program systems and HIS 3.0.

The overall objective of this exercise to have consistent KPIs/ associated health information across systems and reduce the data capture/reporting lead to a single point of data capture.

Since HIPA is responsible for design and pilot implementation of TB MIS application, we would ensure that the KPIs between CENAT and HMIS are consistent and amenable to data exchange.

1.1.6 Key Indicators of HSP 3 HMIS

Currently the new Health Strategic Plan 2016 – 2020 in under development. HIPA will support the Monitoring and Evaluation of the HSP3 key performance indicators with integration of the indicators in HMIS.

1.1.7 Review of existing data quality assessment tools and guidelines and review of data quality index

HIPA will assist DPHI in improving the quality of data management through reviewing current data quality assessment guidelines and to develop a practical work plan for DQA. The work plan will aim to strengthen the quality of data entry, analysis, and use at the operational levels to ensure the robustness of the application.

1.1.8   Develop strategy for increasing private sector reporting to HMIS

In 2014 only 12% of the in private health service providers registered in HMIS reported regularly in HMIS. As a result the health information in HMIS is incomplete. This is a cause of concern for policy makers, planners and decision takers because they lack complete information to be able to take informed decisions. MOH plans to strengthen private sector regulations. HIPA will support DPHI in conducting a workshops with the private health service providers to gain more insights about their constraints for reporting.

1.1.9   Expand HIS 3.0 application usage

Many HCs and ODs face problems of intermittent internet connectivity. This is an issue that has been highlighted in various trainings/ feedback sessions by the HIS 3.0 users. HIPA will evaluate various possible options that can enhance usage of HIS 3.0. Possible solutions can be developing mobility solutions and/or offline version of HIS 3.0. However, for these options to be functional adequate computing infrastructure (computers, mobility devices, and internet connection) would still be a re-requisite. HIPA is supporting DPHI in exploring possible avenues for sourcing the infrastructure.

Component 1.2: Strengthening the Civil Registration and Vital Statistics system to improve the data quality and Maternal Death Surveillance

The Ministry of Interior, newly established General Department of Identification (GDI) presented the preliminary plan for leading and orientation of identification management in October 2014. This plan prioritized some activities which will lead to the development of a 10 years strategic plan (2015-2024). As per the presented plan GDI will develop ICT systems to synchronize the existing fragmented systems of identification such as Civil Registration Management System, ID Card Management System and Nationality Management System. Data and information from these systems will be compiled and integrated as a National Identity Management Database in order to establish a National Centre for Identification Management (NCIM) through universal standard of ICT. The ICT management System of Identification will require information from Health Service providers on births and death and cause of deaths which will feed their NCIM data base and will serve the basis for Civil Registration Records and Certificates.

HIPA provided technical assistance for review of the current ICD-10 coding practice in HMIS. The review revealed that current practices are not in accordance to WHO recommended ICD coding framework. The ICD-10 simplified version for PHC, currently in use by Thailand, was presented in a workshop supported by HIPA and WHO. There were deliberations on whether the same model can be adopted for Cambodia, Laos, Myanmar and Vietnam. At the regional conference of WHO Family of Classification (FIC) Asian Pacific Network (APN) in June 2015, HIPA was requested to support the implementation of this ICD10 simplified version, which would entail a review of its applicability to Cambodia, assist with the Khmer translation and technical implementation in HIS 3.0. This version however would be only applicable for PHC and with the inclusion of IPD codes could be made suitable for referral and provincial hospitals. At this APN conference the ICD-11 was introduced by WHO which is currently in a test phase. This version of ICD11 appeared to more simple and suitable for all health care levels and computerization. This ICD-11 edition is under several field trials and it is expected to get official approval around May 2018. However, it was

confirmed by WHO that ICD-11 can be used during its revision but need special permission from WHO to access to the codes. HIPA is being requested by DPHI to do an evaluation of the best suited version of ICD framework and a roadmap for implementation thereof.

1.2.1 *Provide technical assistance to the MOI/GDI-CRVS system to improve the data quality and use of birth and death records in HIS 3.0*

HIPA will support data exchange protocols between HIS 3.0 and NCIM/CRVS

1.2.2 *Provide technical assistance and training in medical and non-medical death certificates, including cause of death and ICD codes*

HIPA will provide training to hospital physicians to improve the accuracy of medical mortality certificates by improving cause of death recording and include ICD coding. HIPA would support MOI in identifying techniques/ processes for improving causes of death at commune level that could possibility include training civil registrars in cooperation with USAID funded ECH project as a pilot project and defining a process whereby HC staff is able to confirm cause of death when a person dies at home.

1.2.3 *Provide technical assistance to the review of ICD 10 and ICD 11 and its applicability to Cambodia*

HIPA is being requested by DPHI to do an evaluation of the best suited version of ICD framework and a roadmap for implementation thereof. HIPA will support DPHI in participating in the APN regional meetings to ensure that the adoption and implementation of ICD in Cambodia is in line with the recommended best practices of WHO and other countries in the region.

1.2.4 *Technical implementation of ICD-10/11 in HMIS*

Once MOH decides on the final ICD coding framework to be implemented in Cambodia, HIPA will enhance HMIS to include the agreed ICD codification framework. After the enhancement, the necessary ToT training to DPHI, hospital, PHD and OD staff in pilot areas will be given.

Objective 2: Increased capacity and accountability of government staff and institutions

With global investments in information systems, there is increasing interest in understanding correlations between health information and health outcomes. Architects of information systems stress the central role of data for decision-making. However, it is the lack of quality data in the decision-making process where this causal chain breaks down. The web-based HMIS data system set up in Cambodia has not led yet to any substantial increase in data usage at subnational level.

HIPA has initiated the activities for enhancing data use for decision making and have conducted a Data Demand and Information Use (DDIU) survey at national and subnational level among public and private health sector planners and decision makers, donors, HMIS users and commune councils to get an insight into current use, constraints and health information needs. The results of this survey and the outcome of the recently organized workshop on DDIU will be the basis of improving effective and efficient data use through the development of meaningful, user friendly dashboards and the setup of a MOH web-portal for public information.

Long-term training and capacity building plans for HMIS sustainability will continue under the HIPA project. The HMIS is managed by DPHI, with ten staff members. At the provincial and district levels, there is typically one HIS officer in the PHD and one at the OD. Capacity building through local collaborative partnerships is the strength of Futures Group's approach to successful project implementation, promotion of country ownership, and sustainable impacts, and through this approach we will contribute to DPHI's capacity building.

Over the last year HIPA assisted DPHI/Bureau of Health Information System (BHIS) in conducting two nation-wide training on the HMIS application. The purpose of the these trainings was to build the capacity of HIS officials at sub-national level covering PHD, NHs, PHs, ODs and RHs officials and sensitize them to the new features built in the system and take feedback on the issues/ challenges they may be facing in operating the HMIS application. As HIS 3.0 would continuously be enhanced to build on more features and making it more stable and new staff will be deployed, there is a need for periodic training sessions in the coming years.

HIPA finalized the DPHI training needs assessment of the DPHI HIS Bureau staff and discussed several training options with DHPI. Currently, trainings on IT and Excel based analysis are going on for selected HISB staff. In the next financial year, we propose to conduct trainings on dashboards, web portals and report writing skills.

 HIPA has also seconded one IT staff at DPHI to support HMIS implementation and management, train DPHI IT staff in HMIS management and also to setup HMIS Help Desk.

Component 2.1: Strengthening Data Use for Decision-Making and Advocacy at Sub-National levels

2.1.1   *Continuation development of user-friendly dashboards and graphic interfaces incorporated within the HIS*

The enhanced HIS 3.0 application is envisaged to become a strong central repository of good health data that can be used for evidence-based decision making.

HIPA plans to build strong reporting/analytical features that enable MOH and its stakeholders to use the HMIS data effectively. This would be done by designing dashboards and web portal to enable data utilization at the national and subnational level.

HIPA has assessed the information and data use needs of the various levels at national and subnational level via the DDIU survey, workshops and individual discussions with key stakeholders within and outside DPHI. The findings in terms of user requirement have been classified by user categories and mapped to the existing HIS 3.0 data sets to identify areas for enhancement/improvement.

In the Year 3, these enhancements will be implemented in the form of a decision support system that will comprise user-friendly reporting templates, dashboards, graphic interfaces, and web portal, to facilitate effective and efficient use of data. All specific useful variables (such as gender, age, geography) will be built into the interfaces for data analysis and use.

2.1.2   Set up of public MOH-DPHI web portal

DPHI web portal is seen as a strong data dissemination platform that would provide published health information of MOH for the health as well as non-health stakeholders of DPHI. HIPA would design, develop and implement this web portal in the Year 3 of the program.

Component 2.2: Building the Capacity of the MOH Department of Planning and Health Information

2.2.1   Continuation of capacity building to DPHI based on initial training needs assessment and further needs

HIPA finalized the DPHI training needs assessment of the DPHI HIS Bureau staff and discussed several training options with DHPI. Currently, trainings on IT and Excel based analysis are going on for selected HISB staff. In the next financial year, we propose to conduct trainings on dashboards, web portals and report writing skills.

2.2.2   Training workshop on enhanced HMIS (train-the-trainer)

Related to the enhanced HIS 3.0 application, HIPA will assist DPHI staff in organizing training workshops to HIS key officials from all 25 provincial health departments, 89 ODs and around 106 referral, provincial and national hospitals. This training workshop aims to build the capacity of key HIS officers in the data use, analysis and management of the HMIS solutions. The OD HIS officers will become local core trainers (in this train-the-trainer approach) to provide local training to the HIS staff in health centers.

2.2.3   *Set up of a Help Desk at DPHI and on the job training by of IT by seconded IT staff*

HIPA has also seconded one IT staff at DPHI to support HIS 3.0 application implementation and management, train DPHI IT staff in HMIS management and also to setup HMIS Help Desk.

Objective 3: Increased access and improved quality of targeted prevention activities

Component 3.1: Automating the TB MIS

Few TB-related indicators are included in the forms HC1 and HO2 of HMIS, and most of the detailed information with respect to TB resides within a separate vertical TB MIS. The National TB Program (NTP) under CENAT is currently operating a paper-based information system originally devised in the 1970s and updated over the years as new information needs arose. The system requires the manual tabulation of results as it moves up the primary health care chain from community watchers of directly observed therapy, HC, hospital, OD, and PHD to the national level. At the national level, information is then compiled into an Excel database. Access to the information is only at the central level. The present system, being manual, does not even support data sharing within the NTP. CENAT piloted the automation of the multidrug-resistant TB (MDR-TB) system that has been technically supported by USAID through Management Sciences for Health using a computer software program known as eTB Manager. CENAT,

however, is keen to have an end-to-end TB information system implemented.

HIPA supported CENAT in developing a concept paper for automation of TB MIS and then carried out comparative "Best Practice" analysis automated TB MIS systems in similar Asian countries. HIPA facilitated two study visits for CENAT to Bangladesh and Philippines to assess the implementation of TB systems in these countries. Based on these assessments, CENAT has decided to implement eTB Manager application in NTP, Cambodia.

HIPA team is engaged in consultations with various NTP stakeholders to understand the user expectations of the IT application. HIPA is also supporting CENAT in taking over the current eTB Manager implementation for MDR-TB.

In Year 3, HIPA would do the technical design, customization and pilot implementation of the new eTB Manager system.

The original scope of the TB component of the HIPA program was for 2 years. HIPA has submitted the request for extension of the scope of the component to USAID that is currently under consideration.

3.1.1 *System design and further development of eTB manager*

With CENAT's decision on implementation of eTB Manager Application, HIPA has now initiated the design and implementation process. We are working with CENAT to set up the project governance model (steering committee, project coordinator, core team etc.), conducting joint field visits to understand existing processes and record keeping, and stakeholder consultation to gather user requirements. The outcomes and finding of the field visits and stakeholder consultations is being documented in form "Systems Requirement Report". This report world form the basis for the customization/ new development in eTB Manager to meet CENAT requirements.

For the duration of the design and development phase, HIPA and CENAT teams will work together. This will ensure adequate capacity building at CENAT to take over the application.

3.1.2 *Pilot testing and training*

Once the software design and development phase is complete, HIPA proposes to conduct trail runs with sample data for the selected pilot location to test the results. On successful trial runs, the application will be release for pilot implementation after adequate training has been imparted to the end users and system administrator.

The end-user training will be in 3 pilot provinces ((Svay Rieng - 4 ODs, Kampong Cham - 7 ODs and Kampong Speu - 4 ODs) to Provincial TB and lab supervisors and OD TB supervisors. The pilot testing will be closely monitored.

3.1.3 *Continuation of modules enhancement based on pilot and training*

All feed-back from the pilot and training will be documented and taken as input for system improvement.

Component 3.2: Linking of HIV/STI and TB Information System and HMIS

The HMIS currently does not contain detailed information on other national disease programs but captures the KPIs that are currently being rationalized through individual discussions with each of the national programs.

The TB, HIV/STI and malaria programs are managed through CENAT, NCHADS and CNM, respectively, which are vertical institutions within the MOH. All national programs maintain their own separate systems and received considerable external resources (primarily from the Global Fund to Fight AIDS, Tuberculosis and Malaria), resulting in their operations having a high level of autonomy.

The key link between HMIS and various national program MIS can be a Unique Identifying System (UIS) that is consistently used across programs and is standardized. UIS has the potential to facilitate measurement of the effectiveness, completeness and quality of care within programs. An important issue will be to ensure a common identifier across systems that is able to uniquely identify a patient or an individual. Implementation of UIS would entail architectural changes in the HMIS and national program systems and also development of complex data-interfacing modules across systems. This implementation will involve a "hub and spoke" model, with the hub being the HMIS application and the spokes being the various national programs. Integration architecture to each of the spokes is likely to vary based on the architecture of the respective national program.

There is an ongoing discussion among the government institutions in Cambodia to either promote a national ID (Personal Identification Number) as proposed by MOI/GDI or to start with a health sector ID, proposed by WHO and other implementing partners.

HIPA will evaluate the UIS in use currently or proposed by MOI/GDI, MOP and MOH keeping into account the discussion on a national or health ID within the Government. Based on the assessment HIPA will develop recommendation and broad implementation roadmap for the best perceived identifier for Cambodia.

3.2.1   *Presentation of strategy at consultation workshop on UIS*

In the Year 2, HIPA team has started the assessment on current in use UIS by engaging with various stakeholders. The results of this assessment will form the basis for a strategy document which will be presented and discussed in a workshop with all stakeholders.

3.2.2   *Collaborate with national programs and implementing partners to assess the feasibility of technical implementation of the proposed common UIS framework*

The results of the assessment will form the basis for a strategy document which will be presented and discussed in a workshop with all stakeholders including DPHI, National programs, Health sector partners, MOI/GDI and MOP. The objective of the workshop would be to discuss and confirm feasibility of adoption of the UIS by various agencies so that it can be adopted as "National Strategy Roadmap for UIS".

Environmental Compliance

From the USAID's Initial Environmental Evaluation (IEE), HIPA project was determined as "Negative Determination with Conditions," including small-scale construction, repair, and rehabilitation activities such as offices, in addition to disposal of supplies may have minor adverse environmental impacts. The original RFA suggested renovating the governmental office space inside MOH building; however since this could not happen due to space constraints in the new MOH building, the HIPA program shall not conduct any renovation/ construction activities.

We have set up the environmental policy of recycling and disposal for IT and office supply.

IV.   PROGRAM MANAGEMENT

A. Host Country

HIPA Team continues to collaborate with the government ministries (mainly MOH, MOI, and MOP) and other implementing partners to carry out the HIPA project. Within MOH, HIPA continues to work closely with DPHI, CENAT, CNM, NCHADS, NMCHC, and other governmental institutions such as MOI/GDI and MOP NIS.

HIPA also continues to work at the decentralized level with provincial and district health departments, focusing on the USAID project provinces. Within these provinces, HIPA will with MOH and USAID ECH project at the selected community levels for HMIS system strengthening, capacity building and data use.

HIPA continues to consult and collaborate with USG and other bilateral and multilateral donors like US-CDC, WHO, UNICEF, ADB etc. in implementing program activities. HIPA also continues to collaborate with other stakeholders' national programs implementing and technical partners in implementing program activities with synergies with other programs.

B. HIPA Team

The HIPA team in Cambodia continues to lead the implementation of HIPA with technical and operational support provided by international senior HMIS and Informatics staff. Providing full-time coordination and management of all field activities, the Chief of Party for HIPA continues to ensure that implementation of activities proceeds according to the work plan. The Chief of Party continues to serve as liaison with USAID/Cambodia mission and is supported by the HMIS Advisor, TB Information Advisor, senior Technical experts, local IT staff and international ICT experts to implement the program activities as per the work plan. The HIPA team continues to work with MOH national and subnational level officers to improve data use. The Chief of Party continues to lead recruitment and hiring of additional staff. The staffing plan for the HIPA Program for this work plan is as under:

Position	Expected Duration	Status
Chief of Party	Program Duration	On board
Health Information Advisor	Program Duration	On board
Advisor for TB Information Systems	3 years	On board
Senior Technical Manager	Program Duration	On board
IT programmer	Program Duration	On board
IT programmer, seconded to DPHI	Program Duration	On board
Operations and Finance Associate	Program Duration	On board
International IT experts	Ongoing support on basis of need and skill-sets requirements. International staff also building local IT team skillsets and transitions completed work streams to local IT team	

HIPA project continues to be supervised and supported by a Senior Regional IT Advisor who continues to function as international IT Experts and Project Director. She continues to allocate approximately 50 percent level of effort to HIPA to provide overall strategic planning, management, and technical support for the project. The HIPA program would also have support of global technical and HMIS staff of the Centre

of Informatics to strengthen the HIPA strategic vision and implementation of the HMIS component of the project.

C. USAID

The HIPA team continues to collaborate closely with USAID/Cambodia team. HIPA continues to coordinate work plan implementation and engage in partner meetings and events as invited by the Mission. The project continues to collaborate and coordinate with other USAID-funded programs and activities as appropriate. Besides periodic informal updates, HIPA team continues to provide monthly bulleted updates to the Agreement Officer's Representative (AOR) team.

V. PROGRAM MONITORING AND EVALUATION

Monitoring and Evaluation (M&E) is a cross-cutting theme for HIPA. Similarly, it is a practice that is integrated across the HIPA. Many HIPA M&E activities include compiling indicators, technical reviews, needs assessments, routine indicator monitoring, and capacity building evaluations.

Futures M&E team comprises of an HMIS Advisor, TB Information System Advisor, and Chief of Party. Working collaboratively with key officers of sub-grantee organizations continues to take the lead on M&E and ensure that performance indicators are monitored and the evaluation is conducted as planned. We continues to focus on ensuring data quality and be accountable to submit reports on time. The key function of Advisor in TB Information Systems is to strengthen the demand for data and to use data for decision-making. The COP continues to have ultimate responsibility for ensuring the M&E activities are conducted as planned. The Finance Manager continues to be responsible for monitoring project expenditures and the project burn rate.

HMIS System strengthening monitoring as an advocacy and governance TA approach to strengthen governmental capacity and data quality. HIPA implements a rigorous Performance Monitoring Plan (PMP) to track the progress and achievements of all its activities, including baseline and follow-on measures of capacity building activities. The FY3's approved PMP is presented in Annex B. With regard to Evaluation, the project Learning Agenda continues to inform HIPA's contribution to the outcomes of improved health and civil registry data integrity and quality. These elements comprise a comprehensive, integrated M&E approach for HIPA.

During this third year, HIPA continues to monitor the HMIS performance and identifying areas of improvements. DPHI staff skill enhancement path will be monitored closely. HIPA continues to prepare semi-annual reports on completed activities for USAID. In addition, HIPA will provide data according the UDSAID Performance Monitoring and Evaluation Plan indicators.

The project continues to disseminate information through multiple avenues including: (1) dissemination briefs, (2) workshops, (3) semi-annual reports, (4) minutes of meetings with key stakeholders, and (4) the MOH's HMIS website. Through this multi-faceted approach, we continues to be able to target both internal and external stakeholders. Our approach continues to focus on presenting critical information in a digestible manner that enables improved data use. Key themes, trends, and challenges will be highlighted in order that we develop targeted technical assistance and strategies to address gaps and foster continued success. Project activities will be adjusted based on findings from routine monitoring and evaluation activities.

VI.   ANNEXES

A.   HIPA Activity Timeline: Year 3

B.   Performance Monitoring Plan (PMP) Year 3

C.   HIPA Year 3 Proposed International Travel

Annex A: HIPA Activity Timeline: Year 3

Components/Activities	2015			2016								
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.
Objective 1: Improved data for decision-making												
Component 1.1: Strengthening the Relevance and Accuracy of the HMIS												
Activity 1.1.1 *Continuation of stabilizing and enhancing HIS 3.0 application with data validation tools, GIS, mobile applications etc.*	x	x	x	x	x	x	x	x	x	x	x	x
Activity 1.1.2 *HMIS incorporates more accurate subnational population denominators, leading to more accurate subnational coverage estimates*	x	x	x	x	X							
Activity 1.1.3 *Data integration of Maternal Death Surveillance-, PMTCT- , health coverage plan data bases and health facility quality assessment scores with HMIS*		x	x	x	x	x	x					
Activity 1.1.4 *Continuation of the collaboration with national programs (CNM, NCHADS) to identify key performance indicators of each of programs and annual update of all program indicators*	x	X	x	x	x							X
Activity 1.1.5 *National Program Data Exchange and Integration Strategy if agreement on 1.1.4 and if technically feasible*						x	x	X	x	x	x	X

Components/Activities	2015			2016								
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.
Activity 1.1.6 *Key indicators of HSP 3 in HMIS*				x	x	x	x	X	x	x	x	X
Activity 1.1.7 *Review of existing data quality assessment tools and guidelines and review of data quality index*				x	x	x	x					
Activity 1.1.8 Develop strategy for increasing private sector reporting to HMIS		x	x	x	x	x	x					
Activity 1.1.9 *Expand HIS 3.0 application usage*										x	x	x
Component 1.2: Strengthening the Civil Registration and Vital Statistics system and Maternal Death Surveillance												
Activity 1.2.1 *Provide technical assistance to the MOI/GDI/CRVS system to improve the data quality and use of birth and death records in HIS 3.0*				x	x	x	x					
Activity 1.2.2 *Provide technical assistance and training in medical and non-medical death certificates, including cause of death and ICD-codes*					x	x	x	x				
Activity 1.2.3 *Provide technical assistance to the review of ICD-10 and ICD-11 and its applicability to Cambodia*	x	x	x	x	x	x	x	x	x	x	x	x
Activity 1.2.4 *Technical implementation of ICD-10/11 in HMIS*						x	x	x	x	x	x	x

Components/Activities	2015			2016								
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.
Objective 2: Increased capacity and accountability of government staff and institutions												
Component 2.1: Strengthening Data Use for Decision-Making and Advocacy at Sub-National levels												
Activity 2.1.1 *Continuation development of user-friendly dashboards and graphic interfaces incorporated within the HIS 3.0*	x	x	x	x	x	x	x	x	x	x	x	x
Activity 2.1.2 *Set up public MOH-DPHI web portal*				x	x	x	x	x	x			
Component 2.2: Increased capacity and accountability of government staff and institutions												
Activity 2.2.1 *Continuation of capacity building to DPHI based on training needs assessment and further needs*	x	x	x									
Activity 2.2.2 *Training workshops on enhanced HIS 3.0 (train the trainers)*										x	x	
Activity 2.2.3 *Set up of a Help Desk at DPHI and on the job training of IT by seconded IT staff*	x	x	x	x	x	x	x	x	x	x	x	x
Objective 3: Increased access and improved quality of targeted prevention activities												
Component 3.1: Automating the TB MIS												
Activity 3.1.1 *System design and development of eTB manager*	x	x	x	x	x	x						

Components/Activities	2015			2016								
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.
Activity 3.1.2 *Pilot testing and training*					x	x	x	x				
Activity 3.1.3 *Continuation of modules enhancement based on pilot and training*							x	x	x	x	x	x
Component 3.2: Linking of HIV/STI and TB Information System and HMIS												
Activity 3.2.1 *Presentation of strategy at consultation workshops on UIS*	x	x										
Activity 3.2.2 *Collaborate with national programs and implementing partners to assess the feasibility of technical implementation of the proposed common UIS framework*			x									

Annex B: Performance Monitoring Plan Year 3

All indicators are specifically for the HIPA project that have been approved as part of the Performance Monitoring and Evaluation Plan. The same are reproduced below for reference.

Indicators	Measurement
1. Number of provinces and ODs using updated population denominators based on newly developed guidelines	HMIS data analysis
2. Number of new indicators from key national data systems exchanged with HMIS	National program indicators from national programs and in HMIS
3. Percentage of national program indicators integrated in HMIS (disaggregated by national programs).	Number of provinces and ODs using updated population denominators based on newly developed guidelines
4. Number of people trained on ICD 10 classification of diseases, causes of death and death investigation	Training attendance sheets and training report
5. Percentage of HCs -reporting all community based health services in HC1	HMIS data analysis
6. Percentage of health facility quality assessment scores in cooperated in HMIS	URC& MOH quality assessment data base and HMIS data analysis
7. Percentage of private health facilities/providers reporting to HMIS	HMIS data analysis and if possible getting information from MOH health services providers license department
8. Number of DPHI, NH, PHD, PH, OD, RH- HIS officers, and HC staff trained in using enhanced HMIS in 9 provinces (will be in all 25 provinces)	Training attendance sheets and training report
9. Percentage of people level indicators in HMIS disaggregated by sex	HMIS data analysis
10. Percentage of births & deaths occurring in government health facilities which are registered in CRVS	HMIS data analysis and CRVS data
11. Percentage of death certificates which clearly differentiate between death from accident, homicide/suicide and disease (all defined according to ICD10)	Death certificates assessment, cooperation with USAID ECH program
12. Number of deaths and their circumstance at home reported in CRVS, sample from 9 provinces	Death certificates and CRVS data base, cooperation with USAID ECH program
13. Percentage of local authority (institutions) using health data for decision making in selected provinces	DDIU baseline survey, HMIS data analysis and HMIS data analysis
14. Number of health staff trained on data use for analysis and decision making	Training attendance sheets and training report

15.	Number of non-health officials trained on data use for analysis and decision making	Training attendance sheets and training report
16.	Number of health service providers trained on use of HMIS data and quality assessment for quality improvement, monitoring and management	Training attendance sheets and training report
17.	Number of AOPs/APs demonstrating use of health data for planning, managing, budgeting and quality improvements of latest HMIS data in selected 9 provinces (disaggregated between AOPs and APs)	AOP/AP data analysis
18.	Number of DPHI staff trained in analysis using Non-HMIS datasets, including CHDS and census data	Training attendance sheets and training report
19.	Number of CENAT staff and PHD/ OD staff of the selected pilot province Prey Veng trained on the use of TB automate information system (CENAT changed this to 3 pilot provinces)	Training attendance sheets and training report Training attendance sheets and training report

Annex C: HIPA Year 3 Proposed International Travel

Position	Quarter/ Year	Est. Duration	From	To	Purpose
Project Director	Oct'15 to Sep'16	45 days	Need basis		• IT Expert • TM MIS Solution Architect • Dashboards Solutions Architect • Program Management
Global HMIS Expert /	2020'14 to Sep'16	5 days	Need basis July'2014	TBD July'2014	• HMIS subject matter expertise • Data visualisation expert and recommendations on best practices
International IT Experts	Oct'15 to Sep'16	60 days	Need basis		• IT expertise for TB MIS systems, dashboards, GIS, mobility solutions and web portal

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