



**REGIONAL WORKSHOP ON
INFORMATION AND COMMUNICATION TECHNOLOGY
FOR SURVEILLANCE SYSTEM
ADB/GMS-HEALTH SECURITY PROJECT
CAMBODIA, LAO PDR, MYANMAR AND VIETNAM**

CONCEPT NOTE

Title of Event

Regional Workshop on Information and Communication Technology for Surveillance System

Rationale:

Over the past decade of rapid growth of Information and Communication Technology (ICT) in the modern society, more than three billion people are having access to the internet. Approximately 8 out of 10 internet users own a smartphone. Internet use continues to grow steadily, at 6.6% globally in 2014 (3.3% in developed countries, 8.7% in the developing world); the number of internet users in developing countries has doubled in five years (2009- 2014), with two thirds of all people online now living in developing world¹.

The gap between access to the internet and mobile coverage has decreased substantially in the last fifteen years, in which "2015 was the deadline for achievements of the UN Millennium Development Goals (MDGs), which global leaders agreed upon in the year 2000. ICT continues to take on new form with the arrival of industry revolution that brings together digital, physical, and biological systems.

The countries in the Greater Mekong Subregion (GMS) recognize the importance of investing in ICT to improve productivity and efficiency, build knowledge-based economies, and reduce poverty. ICT supports governments, businesses and citizens through: faster access to relevant information, an efficient communication, improve ab decision making ability, and voice to unheard people.

¹ http://www.itu.int/net/pressoffice/press_releases/2014/68.aspx#.XPd0xo9S9PZ

ICT also has revolutionized healthcare in region by more efficiently disseminating public health information and facilitating consultation in health issues. Through telemedicine, patients can avoid long and expensive journeys to seek help by receiving remote consultation, diagnosis, and treatment from specialists in far off hospitals. The used of ICT have facilitated the role of surveillance team in reporting diseases during the outbreaks. ICT also means better collaboration and sharing of learning and training among health workers. The use of ICT in administrative systems of health care facilities brings huge gains in efficiency and cost savings. Thousands of lives have been saved through the monitoring of public health threats using ICT which also allows a faster and more effective response.

The ADB/GMS-Health Security Project is supporting Cambodia, Lao PDR, Myanmar and Vietnam to enhance the International Health Regulation (2005), including health service network expanded to support for marginalized groups, mobile population, ethnic minorities, and other vulnerable groups (MEV), who have limited access to health services. The project also supports the strengthening of national diseases surveillance and outbreak response systems by improving syndromic reporting from community level, web-based reporting, linking of diseases surveillance system between clinical and laboratory surveillance which require the involvement from ICT supports.

The total estimated population in Cambodia is 15.2 million (2016). The health system is facing problems of communicable diseases (CDs) and non-communicable diseases (NCDs). Hence, the current health system needs to be strengthened, updated and expanded to meet with client certifications. The Cambodia health system is classified into three levels: Central, Provincial and Operational District level (OD) with clearly defined roles and responsibilities in each level. Cambodia's Health Management Information System (HMIS) was officially established in 1993 and completed nationwide coverage in February 1995. The HMIS has undergone a number of modifications and system was upgraded and migrated to web-based in 2010. Subsequently, web-based HMIS

application has developed and modified many times to the current HIS 3.0 version which is in use since 2015. Health Equity Fund (HEF) patient level database was developed in 2004 at individual referral hospital. By July 2012, all HEF operators had successfully transitioned their activities into Patients Medical Registration System (PMRS) as the core HEF patient management tool.

ICT plays an important role to support CDC Department mainly for surveillance systems such as (1). Case-based surveillance system using CamEwarn web-based application to capture weekly diseases information, (2). Event-based surveillance system using Verboice Application, hotline, mobile application, social network and feed alert to public record and share the information, (3). Sentinel surveillance is currently using web-based application to receive data on influenza like illness (ILI) and Severe Acute Respiratory Illness (SARI) from sentinel sites, (4). Emergency Operation Center (EOC) as a part of Public Health Preparedness in IHR is using video conference for reporting the information to the other countries, and (5). Sharing knowledge on CDC infection and prevention through website.

Case-Based Surveillance (CBS) or Indicator-Based Surveillance (IBS) ICBS is the routine collection of data on an agreed list of diseases/syndromes, where the data are regularly analyzed and thresholds are used to determine if there is an outbreak. Data generally comes from Health Center (HC), Provincial Hospital (PH) and/or laboratories and are sent weekly using structured forms. Cambodia Early Warning (CamEwarn) web-based application is being used to support this reporting activities. This application was developed under technical support from WHO, the system captures the information of new cases and death of 7 conditions (1). Acute water diarrhea, (2). Fever with rash, (3). Acute flaccid paralysis, (4). Severe respiratory infection, (5). Suspect dengue fever, (6). Meningitis/Encephalitis, and (7). Acute Jaundice.

For Event-based surveillance (EBS), There are 3 hotlines (115, 012 488-981, 086 669 567) used to receive data from public as well as community for responding with diseases outbreak activities. 115 uses Verboice

technology which provides an access 24h/7days for reporting suspected cases, asking questions, recording information of emerging diseases. With supports from government through Ministry of Posts and Telecommunications (MPTC), The CDC department received this special number (115) which allows users to call free of charge from any available phone service providers in Cambodia. If a caller received no response from hotline 115, the Verboice system will divert the call to the other hotline numbers and if the other 2 numbers are busy then it will redirect the call to focal persons. In case no body pick up all the telephone lines Verboice will ask the caller to record or leave their message. These message data are stored on the server at Telecom Cambodia (TC) that allows staff at CDC to listen the voice message whenever they need it. A recent update of 115 with a linkage to Verboice has provided two different options for public users and health staff at community (1) people can report disease to EBS, and (2) Community Health staff can use it to report diseases data to CBS and then it will be verified by district level staff.

ICT has a tremendous potential as a tool to support the improvement of health system in Cambodia, while creating some challenges such as (i) improvement of integrated and/or interoperability for health management information system including alerting system for diseases outbreak response, (ii) improvement of ICT at health facility levels (National Hospitals, Provincial Hospitals, District Hospitals and Health Centers, and (iii) ICT to support the marginalized group such as migrant people to access the proper health services.

Objectives and Desired Outputs

Overall Objective:

The objective of the regional workshop is to share current status, challenges and solutions in applying ICT for improving health system in each individual CLMV and in the region.

Specific Objectives:

1. Preliminary assessment of current ICT support for Health System in CLMV countries;

2. Future of ICT for supporting health cooperation (identified regional health and health cooperation).

Expected output:

1. Lesson learnt from current ICT and country future plan to support on Health System in CLMV countries and the region;
2. ICT regional plan for supporting health cooperation is developed.

Deliverable

Workshop report, including presentations, list of ICT contact persons, and collaborative regional activities plan for ICT.

Topics for Discussion

1. ICT to support on country health system;
2. Country outbreak Investigation and response surveillance system;
3. Hospital Management Information system including laboratory Information System.

Presentations

1. Using ICT to the Health System in CLMV countries;
2. How countries use ICT in their surveillance system to support diseases outbreak investigation and response;
3. How country use ICT to improve hospital management, including laboratory services;
4. Presentation of group works; and
5. Summary of the workshop.

Venue and Dates

5-6 September 2019, Siem Reap Province, Cambodia

Main Participants

Total participants: 55 participants

Cambodia	34
Lao	5

Vietnam	5
Myanmar	5
ADB	1
WHO	1
ADB ICT consultant	1
Secretariat	3

Participation of profile:

Project Manager, ICT Focal Point, RRT/FETP, and Project Management Unit

Organizers and Partners

Department of Planning and Health Information, Ministry of Health, Cambodia with support from Project Management Unit (PMU) of GMS Health Security Project.

Contact Persons

Department of Planning and Health Information, Ministry of Health, Cambodia

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Resources and Partnership

CLMV Countries

WHO

ADB

PRELIMINARY PROGRAM

4 September, Wednesday

ARRIVAL OF COUNTRIES DELEGATES (Cambodia, Lao PDR, Myanmar, Thailand, Vietnam) / PROJECT DIRECTORS / ADB TEAM AND OTHER PARTICIPANTS

Arrival and meeting at Siem Reap International airport. Transfer to hotel.

5 September, Thursday

08:30 – 09:00 Registration of participants

MORNING SESSION

09:00 – 10:00 **OPENING SESSION**

Master of Ceremony: Mr. Mom Vortana, Project Management Unit, Ministry of Health

Welcome Remarks:

- **DR. SOUTHANOU NANTHANONTRY**, Deputy Director Department of Planning and Cooperation and GMS Health Security Project, Lao PDR
- **Dr. CHAW NANDE**, Deputy Director Department of Medical Services, Myanmar
- **DR. TRAN VAN TIEN**, Project officer GMS Health Security Project, Vietnam
- **Dr. KYI Thar**, Public Health Expert, ADB

Opening Address: Prof. ENG Huot, Secretary of State for Health, MOH Cambodia

10:00 – 10:30 **Group Photo/Coffee break**

10:30 – 12:00

PLENARY SESSION 1

The Current Health Management Information System (HMIS) and ICT supports in CLMV countries

CHAIR:

Dr. Lo Veasnakiry, Cambodia

CO-CHAIR:

Dr. Southanou Nanthanonty, Lao PDR

- Presentation of Cambodia – **TBC** (20 minutes)
- Presentation of Lao PDR – **TBC** (20 minutes)
- Presentation of Myanmar – **TBC** (20 minutes)
- Presentation of Vietnam – **TBC** (20 minutes)
- Question and answer (10 minutes)

12:00 – 13:30 *Lunch*

AFTERNOON SESSION

13:30 – 15:10 **PLENARY SESSION 2** **The Current Status of Surveillance Systems in CLMV Countries and their interoperability.**

CHAIR: **Dr. Ly Sovann**, Cambodia
CO-CHAIR: **TBC**, Vietnam

- Presentation on introduction to digital health– **Dr. Vladimar Choi** (15 minutes)
- Presentation of ADB – **Dr. Kyi Thar** (15 minutes)
- Presentation of Cambodia – **Mr. Sok Samnang** (15 minutes)
- Presentation of Lao PDR – **TBC** (15 minutes)
- Presentation of Myanmar – **TBC** (15 minutes)
- Presentation of Vietnam – **TBC** (15 minutes)
- Question and answer (10 minutes)

15:10 – 15:30 *Coffee break*

15:30 – 17:30 **GROUP DISCUSSION 1** **4 Group Works to discuss on using ICT to support Health Cooperation in the GMS countries**

FACILITAORS: **CDCD, DPFI, ADB and WHO**

Group 1 & 2

- Identify what are regional health concerns that need to cooperate among GMS countries and challenges
- Identify role of Hotline and ICT (including mobile app.) to support regional health cooperation among GMS population

Group 3 & 4

- Identify challenges of existing **health** management information system
- Identify challenges of current **hospital** management information system in context of supporting real-time diseases outbreak alert and response

18:30 – 20:00 *Welcome Dinner*

6 September, Friday

MORNING SESSION

08:30 – 09:00 **RECAP DAY 1, Rapporteur**

09:00 – 10:20

**GROUP WORK
PRESENTATION**

4 Group work presentations on using ICT to support Health Cooperation in GMS countries

- Group 1 – (15 minutes)
- Group 2 – (15 minutes)
- Group 3 – (15 minutes)
- Group 4 – (15 minutes)
- Question and answer (20 minutes)

10:20 – 10:35

Coffee break

10:35 – 12:00

**GROUP
DISCUSSION 2**

4 Group works to discuss on development of ICT in Health:

- (1). PRIORITY**
- (2). RECOMMENDATION**
- (3). NEXT STEP**

FACILITATORS: CDCD, DPHI, ADB, and

WHO 12:00 – 13:30 *Lunch*

AFTERNOON SESSION

13:30 – 15:00 **PLENARY SESSION 4** **Summary of the Workshop and Ways Forwards**

15:00 – 16:15 *Coffee break*

16:15 – 16:45 *Wrap up session (Rapporteur)*

16:45 – 17:00 **CLOSING SESSION**

Master of Ceremony: **Mr. Mom Vortana, Project Management Unit, Ministry of Health**

Conclusive report of the workshop

- Closing remarks – **Dr. Southanou Nanthanonty**, Lao PDR
- Closing remarks – **Dr. Chaw Nande**, Myanmar
- Closing remarks – **Dr. Tran Van Tien**, Vietnam
- Closing remarks – **Dr. Kyi Thar**, ADB
- Closing remarks – **Dr. Lo Veasnakiry**, Cambodia