



# **Operational Research for Better Practice and Policy: Strengthening Regional Research Networks to Answer Questions from the Field**

**National Center for Global Health and Medicine, Japan (NCGM)  
World Health Organization Regional Office for the Western Pacific**

**ICAAP11 Satellite Session**

**20 November 2013 17:30~19:00 Hall E**



Bureau of International Medical Cooperation  
National Center for Global Health and Medicine



**World Health  
Organization**

Western Pacific Region



The 11th International Congress on AIDS in Asia and the Pacific  
Queen Sirikit National Convention Center (QSNCC)  
18-22 November 2013 Bangkok, Thailand

# Program

**17:30- 17:45**

## **Introduction**



Dr. Tamotsu Nakasa

1. The Asia HIV/AIDS Research Network  
Dr. Tamotsu Nakasa

Director, Technical Cooperation Center  
Bureau of International Cooperation  
National Center for Global Health and Medicine  
(NCGM), Tokyo, Japan



Dr. Ying-Ru Lo

2. Operational Research in WPRO  
Dr. Ying-Ru Lo

Team Leader HIV&STI  
World Health Organization Regional Office for  
the Western Pacific, Manila, The Philippines

**17:45-18:45**

## **Operational Research in each country**



Dr. Sergelen

1. Mongolia  
**Application of respondent-driven sampling for assessing HIV risks and prevention needs among men who have sex with men (MSM) in Mongolia**

Dr. Sergelen Munkhbaatar

M&E officer, Global Fund supported project,  
Ministry of Health



Mr. Myagmardorj

Mr. Myagmardorj Dorjgotov

Executive Director of Youth Health NGO



Dr. Khin Yi Oo

2. Myanmar  
**Ensuring the Quality of HIV testing in Myanmar; Establishing the National External Quality Assurance System for HIV testing**

Dr. Khin Yi Oo

Deputy Director, National Health Laboratory



Dr. Tuon Sovanna

3. Cambodia  
**The risk of unintended pregnancy among women on ART in Phnom Penh, Cambodia**

Dr. Tuon Sovanna

PMTCT Program Manager, National Maternal  
and Child Health Center, Ministry of Health



Dr. Panom Phongmany

4. Lao PDR  
**Genetic analysis of HIV-1 subtypes and drug resistance mutations in Savannakhet Province, Lao PDR**

Dr. Panom Phongmany

Director, Savannakhet Provincial Health  
Department

**18:45- 18:55**

## **Discussion**



Dr. Mike Martin

- Comments  
Dr. Mike Martin

Chief of Care and Treatment, Bangkok office,  
US-CDC

**18:55-19:00**

## **Conclusion & Way forward**

# Application of respondent-driven sampling for assessing HIV risks and prevention needs among men who have sex with men (MSM) in Mongolia

S. Munkhbaatar<sup>1</sup>, M. Dorjgotov<sup>2</sup>, Y. Lai<sup>3</sup>, A. Delegchoimbol<sup>4</sup>, S. Baral<sup>3</sup>, N. Jadambaa<sup>5</sup>

<sup>1</sup>Global Fund Supported Projects on HIV/AIDS and TB, Ulaanbaatar, Mongolia; <sup>2</sup>“Together Center” NGO, Ulaanbaatar, Mongolia; <sup>3</sup>Johns Hopkins Bloomberg School of Public Health, Baltimore, United States; <sup>4</sup>UNAIDS Mongolia, Mongolia; <sup>5</sup>HIV/AIDS Focal Point, WHO, Mongolia

## Background

Mongolia is considered to have a concentrated HIV epidemic among MSM. With 75% of reported HIV cases in 2013 being MSM, this population remains hard to reach secondary to widespread stigma and discrimination.

## Objectives

To assess the utility of respondent-driven-sampling (RDS) to accrue sufficient MSM to characterize the prevalence of HIV and describe associations of prevalent infections while informing novel HIV prevention, treatment, and care approaches

## Methods

Two studies were conducted consecutively. The first – CHAIN – was a cross-sectional assessment of HIV risk, access to services and human rights contexts among MSM. 313 MSM were recruited from Ulaanbaatar between January-April, 2011 through RDS. The 2011 Second-Generation-Surveillance (SGS) included 200 MSM recruited using RDS from Ulaanbaatar between January-February, 2012. Surveys were administered during both studies to obtain sociodemographic and risk behavior information in addition to HIV status that was self-reported (CHAIN) or tested from collected blood samples (SGS 2011).

## Results

The mean age of participants in both studies were similar (CHAIN: mean 29, median 26, range 16-62; SGS 2011: mean 30, median 29, range 17-50). About half of participants had greater than secondary-level education (CHAIN: 46.8%, 95% CI: 39.4-54.5; SGS 2011: 54.4%, 95% CI: 47.2-61.4). 6.3% (95% CI: 1.3-10.8) of CHAIN participants self-reported positive HIV status, which was well corroborated by the 7.5% (95% CI: 4.9-11.4) tested HIV-positive in SGS 2011. Consistent condom use was less than 50% (CHAIN: 46.4%, 95% CI: 39.5-54.5; SGS 2011: 47.4%, 95% CI: 40.5-54.4), and HIV-related knowledge was found to be modest among MSMs (CHAIN: 46.9%, 95% CI: 35.9-52.7; SGS 2011: 58.9%, 95% CI: 51.4-66.0).

## Discussion

The RDS approach proved to be successful in recruiting an adequate sample size compared to previous rounds of second generation HIV/STI surveillance (SGS) studies, which employed mostly convenience sampling. Results consistently demonstrated an underserved population of MSM with multiple levels of HIV risk including ranging from limited HIV-related knowledge to significant structural barriers to care.

## Conclusion

RDS could be used to accrue MSM into a cohort to evaluate HIV prevention treatment and care approaches that address the needs of MSM at risk for HIV acquisition but also MSM already living with HIV.

# Ensuring the Quality of HIV testing in Myanmar; Establishing the National External Quality Assurance System for HIV testing

Khin Yi Oo<sup>1</sup>, Ikuma Nozaki<sup>2,3</sup>, Namiko Yoshihara<sup>3</sup>, Htay Htay Tin<sup>1</sup>

<sup>1</sup>National Health Laboratory, Ministry of Health, Yangon, Myanmar; <sup>2</sup> National Center for Global Health and Medicine (NCGM), Japan ; <sup>3</sup> Japan International Cooperation Agency (JICA), Major Infectious Disease Control Project II, Yangon, Myanmar

## Background

Early diagnosis of HIV/AIDS has been found to be the best effective strategy for facilitating behavioral changes as well as preventing HIV transmission and allows early access to treatment. However, laboratory services in resource-limited settings are generally inadequate to meet the needs of targeted population. Therefore, Myanmar Ministry of Health decided to establish the National External Quality Assurance System for HIV testing.

## Methods

Myanmar Ministry of Health adopted proficiency panel method for external quality assurance (EQA) for HIV testing. National Health Laboratory (NHL) organized all process of EQA including the training about the EQA process to the selected laboratory for the program, preparation and distribution of the panel samples, compiling and analyzing the data, publishing the report, and supervisory visit to the poor performance laboratories. After the training, each laboratory received 5 serum blood panel samples, and sends back the report after retesting those panel samples according to the guidelines. Based on the assessment of the results, NHL conducted on-site training to improve the performance by supervisory visit. NHL has been implementing full course of this process twice per year since 2005.

## Findings

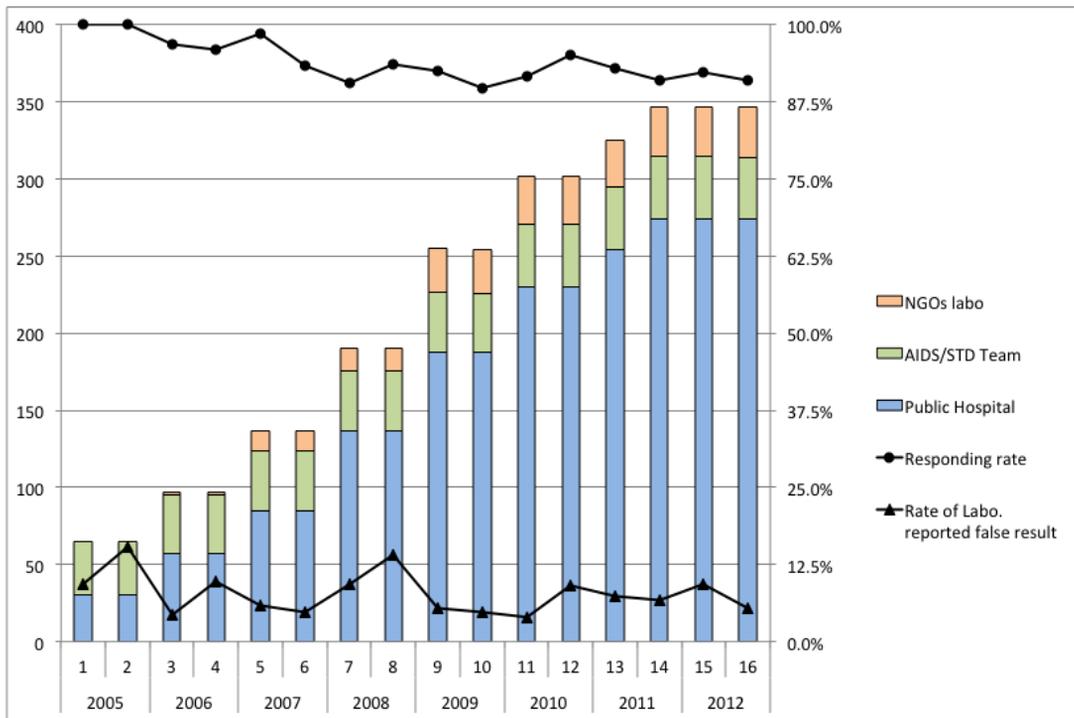
The number of Laboratories participating in NEQS has been gradually increased from 65 in 2005 to 347 in 2012. Responding rate of laboratories slightly dropped from 100% in 2005 to 91.1% in 2012 as expanding the program into remote laboratories, but still keeping the high level responding rate by the laboratories. In addition, the program also involved private laboratories supported by NGOs since 2006 with the participation cost. The rate of laboratories reporting the false result was slightly improved from 9.2% in 2005 to 5.4% in 2012 with fluctuation. Supervisory visit to the poor performance laboratories found out some misunderstanding about HIV testing procedures, such as wrong incubation time, too much amount of the samples using for the testing, and it probably due to the working environment including lack of necessary equipment such as timers and micro pipettes. However, the most of the laboratories shows good performance despite the hard situation. And on-site training has been provided to those poor performance laboratories.

## Conclusion

External Quality Assurance System for testing has been widely recognized as important component of HIV program but it is difficult to implement. We reported successful implementation and expansion in Myanmar, facilitated by strong commitment of National Reference Laboratory and laboratories participating to the program. Currently National AIDS Program tried to decentralize the HIV testing for primary level to improve the access for the services. There is a increasing needs for quality assurance as expanding the services to primary level.

## Ensuring the Quality of HIV testing in Myanmar; Establishing the National External Quality Assurance System for HIV testing

Fig. Number of Laboratory participating to NEQAS, reporting rate, and rate of laboratories reporting false result



# The risk of unintended pregnancy among women on ART in Phnom Penh, Cambodia

Tuon Sovanna<sup>1</sup>, Naomi Nakaie<sup>2,3</sup>, Fuzuki Yamaguchi<sup>4</sup>, Yuri Sasaki<sup>5,6</sup>, Ikuma Nozaki<sup>7</sup>, Tung Rathavy<sup>8</sup>, Kazuhiro Kakimoto<sup>6</sup>

<sup>1</sup> National PMTCT programme, National Maternal and Child Health Center, Cambodia; <sup>2</sup> AIDS Clinical Center, National Center for Global Health and Medicine (NCGM), Japan ; <sup>3</sup> Graduate School of Nursing, Osaka Prefecture University, Japan; <sup>4</sup> Graduate School of Nursing, Osaka City University, Japan; <sup>5</sup> Graduate School of Nursing, Nagoya City University, Japan; <sup>6</sup> College of Health and human sciences, Osaka Prefecture University, Japan; <sup>7</sup> National Center for Global Health and Medicine (NCGM), Japan; <sup>8</sup> Director, National Maternal and Child Health Center, Cambodia

## Background

In Cambodia, ART services have been being scaled up to rural areas, and covered 94% of the adults who needed ART in 2010, while unmet needs for family planning (FP) among general population are higher compared to other Southeast Asian countries. According to the report by Cambodian PMTCT programme, 56.9% of HIV positive women at a labor room were receiving ART instead of chemoprophylaxis for the prevention of mother-to-child HIV transmission. Therefore, it is concerned that many HIV positive women on ART might be exposed to the potential risk of unintended pregnancy. And, it is needed to explore issues on family planning practice among HIV positive postpartum mothers and women on ART in Cambodia, and to determine their backgrounds and social environment that may be associated with unintended pregnancy.

## Methods

1. In a qualitative study, 15 HIV positive postpartum mothers at a maternity ward of the tertiary hospital in Phnom Penh were recruited to the study and were asked about FP and barriers to use modern contraceptive methods by face to face in-depth interview
2. A cross-sectional quantitative study with a structured questionnaire was conducted at five health centers in Phnom Penh. Multiple logistic regression analysis was performed to identify predictors to the women on ART that were using modern contraceptive methods at every sexual intercourse.

## Results

1. The qualitative study revealed that some mothers had different ideas about fertility desire from their partners, and that the reasons for not using any contraceptives were categorized into “lack of knowledge”, “side effects”, “difficulties of obtaining cooperation from their partners” and “access to the FP services”.
2. In the quantitative study, of 408 respondents, the women who were actually using pills, IUD and injection in practice were, respectively, 40 (14.2%), 17 (6.0%) and 10 (3.6%) while 193 (68.7%) used condoms. Among 238 women, who were not planning to have a child, 59 (24.5%) respondents were exposed to the risk of unintended pregnancy. Multivariate logistic regression analysis showed that “being able to ask a partner to use condom” was the best predictor to the consistent use of modern contraceptive methods (AOR: 23.67, 95% CI: 5.74-97.57).

## Conclusion

In Cambodia, many women living with HIV seemed to be exposed to the risk to unintended pregnancy because of the different fertility desire and male dominant background. In order to reduce their unintended pregnancy, they could be more empowered through improving communication and negotiation skills with partners to use a condom. Otherwise, use of dual methods including the one which can be used by own decision of the woman could be more promoted.

## Genetic analysis of HIV-1 subtypes and drug resistance mutations in Savannakhet Province, Lao PDR.

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<sup>9</sup> HIV/AIDS, STI Section, Savannakhet, Lao PDR; <sup>10</sup> Bureau of International Cooperation, National Center for Global Health and Medicine (NCGM), Japan; <sup>11</sup> Department of Global Health, School of health sciences, University of the Ryukyus, Japan

### Background

Epidemiological surveillance of human immunodeficiency virus type 1 (HIV-1) subtypes is an important element for global antiviral interventions and prevention of virus diffusion. It is known that CRF01\_AE is a major subtype of HIV-1 which is dominant in Southeast Asia, including Thailand, Vietnam and Cambodia. Subtype B is the major viral strain in Europe and the United States, and also found in China, South Korea. On the other hand, the genetic information of HIV-1, especially local regions in Lao PDR, has not been researched. To evaluate subtype and drug resistance-associated mutations of HIV-1 virus that is circulating in Southern Lao PDR, we performed sequence analysis.

### Methods

Plasma samples derived from 52 HIV-1 infected patients, with whom informed consent was obtained, in Savannakhet provincial hospital were used for analysis of genotype and drug-resistance mutations. Extracted Viral RNA samples were subjected to RT-nested PCR, and analyzed sequences coding Protease (PR) and Reverse Transcriptase (RT) by direct sequencing. These were analyzed using Stanford University HIV drug resistance database.

### Results

Genotyping analysis found that 47/52 patients were infected with HIV-1 CRF01\_AE. Subtype B was also found from 2/52 patients. In 3 other patient samples, Subtype B was found in PR and CRF01\_AE in RT. It indicates that HIV-1 co-infection or heterogeneous recombination of both subtypes have been occurred. Major resistance mutation for PR inhibitor was not found, however minor mutation, such as L10V/I, were found in 11 patients. Major resistance mutations for RT inhibitor (V75L: multiple NRTIs, G190A: multiple NNRTIs) were found from 2 patients. Of those patients, one person had both major RTI resistance mutations.

### Conclusion

Continuation of monitoring HIV-1 genotype and drug resistance are essential for the appropriate antiretroviral therapy (ART) and better clinical interventions in southern regions of Lao PDR. Further study on genotype is needed in relation to socio-demographic study, to investigate virus diffusion route.



## **Bureau of International Medical Cooperation National Center for Global Health and Medicine (NCGM)**

Aiming to realize the world where all the people can equally lead healthy lives, the Bureau of International Medical Cooperation, National Center for Global Health and Medicine supports developing countries to improve their health care using our expertise and contributes to healthier lives of Japanese people by bringing these experiences back to Japan.

As a core institution of Japan's international health cooperation, we aim to live in a society where people of all countries without disparities live healthy lives and to promote the improvement of health and health care. We aim the reduction of child mortality, improving maternal health, achieving the prevention of the spread of diseases such as HIV/AIDS and malaria, which are listed in the Millennium Development Goals (MDGs) of the United Nations. Furthermore, we work closely to resolve infectious disease control as a global challenge in coordination with other developing countries, various international organizations and aid agencies.

We will expand high-quality international health cooperation by effectively mobilizing our rich knowledge in areas such as human resource development and know-how for creating mechanisms, developing and deploying technical capabilities for solution of international issues and adjustment power for micro and macro level coordination.

NCGM has joined the WHO Network for HIV and Health in the Western Pacific Region as a technical partner in 2009, and has been collaborating in the area of operational research on HIV and Health.

### **The WHO Network for HIV and Health in the Western Pacific Region**

Established in 2008, its foundation was based on the increasing availability of resources to support the scale-up of health sector programmes on HIV/AIDS, a large proportion of funds have been provided through the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM).

These resources have generated an unprecedented demand from Member States for specialized technical assistance on a wide range of global health issues within the WHO mandate.

World Health Organization Regional Office for the Western Pacific recognized the potential to develop a network of WHO Collaborating Centers and other key technical partners that are well positioned to provide technical cooperation to Member States. In December 2008, after conducting preliminary research, WHO gathered together institutions that supported the establishment of a network that could internally access different disciplinary perspectives to provide high quality technical advice to Member States in support of health sector responses to HIV.

Today, the Network consists of 20 member institutions from nine countries and areas in the Western Pacific Region –Australia, China, Hong Kong (China), Japan, Malaysia, New Zealand, the Philippines, Singapore and Viet Nam. A range of disciplines and fields of expertise are represented, including HIV, sexually transmitted infections (STI), laboratory, gender and women's health, child and maternal health, drug and alcohol, nursing, health promotion and disease prevention, blood safety and products, tuberculosis (TB), training, research, health technology, occupational health, population health, virology and immunology.

As a network, these institutions offer collaborative multidisciplinary technical support to countries that is timely, sustainable, predictable, of high quality and able to address cross-cutting health matters. On a broader level, the vision of the Network is to strengthen health systems and to contribute to the achievement of the Millennium Development Goals.