

National HIV/AIDS and STI Programme Managers Meeting for Asian Countries in the Western Pacific Region



25–28 February 2013
Kunming, China

(WP)HSI/2013/DCC

English Only

Report Series Number: RS/2013/GE/06(CHN)

REPORT OF THE NATIONAL HIV/AIDS AND STI PROGRAMME MANAGERS
MEETING FOR ASIAN COUNTRIES IN THE WESTERN PACIFIC REGION

25 to 28 February 2013
Kunming, China

Convened by:

World Health Organization
Regional Office for the Western Pacific

Joint United Nations Programme on HIV/AIDS Regional Support Team
for Asia and Pacific

Not for sale

Printed and distributed by:

World Health Organization
Regional Office for the Western Pacific
Manila, Philippines

21 October 2013

NOTE

The views expressed in this report are those of the participants who attended the National HIV/AIDS and STI Programme Managers Meeting for Asian Countries in the Western Pacific Region and do not necessarily reflect the policies of the World Health Organization and the Joint United Nations Programme on HIV/AIDS.

This report has been prepared by the World Health Organization Regional Office for the Western Pacific and the Joint United Nations Programme on HIV/AIDS Regional Support Team for Asia and Pacific for governments of Member States in the Region and for those who participated in the National HIV/AIDS and STI Programme Managers Meeting for Asian Countries in the Western Pacific Region from 25 to 28 February 2013 in Kunming, China.

CONTENTS

Page

ACRONYMS

SUMMARY

1. INTRODUCTION.....	1
1.1 Objectives	1
1.2 Meeting participants.....	2
1.3 Programme.....	2
2. PROCEEDINGS	2
2.1 Opening session	2
2.2 Global and regional progress and updates on HIV/AIDS	3
2.2 Sustaining the HIV response: AIDS expenditures in selected Asian countries of the Western Pacific	4
2.3 Global and regional progress and update on HIV/TB	6
2.4 Progress in STI Surveillance and Global Priorities.....	7
2.5 Global and Regional Progress and Update on Elimination of MTCT of HIV, Syphilis, and Hepatitis B	9
2.6 Panel discussion: Getting to zero – community perspectives	11
2.7 Getting to Zero – Country progress updates	13
2.8 Experiences from high-income settings.....	21
2.9 Regional research framework to strengthen communicable disease control and elimination in the Western Pacific Region (2012-2016).....	23
2.10 Strategic use of antiretrovirals: WHO guidelines and implementation sciences	24
2.11 Treatment 2.0: Service delivery models to increase uptake of HIV testing, linkages to care and treatment.....	25
2.12 Molecular diagnosis of TB among people living with HIV.....	26
2.13 Test and treat implementation sciences in China.....	26
2.14 Modelling potential impact of expanding ART and combination treatment to inform test and treat programmes in Viet Nam.....	27
2.15 Update on WHO tools and guidelines on HIV and key populations	28
2.16 Community-based HIV testing and linkages to care and treatment in China	29
2.17 From compulsory centres to community-based interventions for people who inject drugs: The Malaysian experience	30
2.18 Global and regional progress on HIV drug resistance surveillance.....	30
2.19 Experiences implementing HIV drug resistance surveillance in China.....	32
2.20 Surveillance of TB drug resistance through laboratory network	32
2.21 New protocols for surveillance and monitoring of HIVDR.....	33
2.22 Statistical Response to the Challenges of Global HIV Drug Resistance Surveillance.....	34
2.23 Parallel sessions: achievements, gaps/challenges, and way forward for HIV, TB and MCH collaborative activities.....	35

3. CLOSING REMARKS	42
4. CONCLUSIONS AND RECOMMENDATIONS.....	42
4.1 Conclusions.....	42
4.2 Recommendations.....	43

ANNEXES:

ANNEX 1 - PROGRAMME OF ACTIVITIES

ANNEX 2 - LIST OF PARTICIPANTS

ACRONYMS

AIDS	Acquired Immunodeficiency Syndrome
ANC	ante-natal care
APTN	Asia-Pacific Transgender Network
ARV	antiretroviral drugs
CBO	community-based organization
CSO	civil society organizations
eMTCT	elimination of mother-to-child transmission
ESCAP	(United Nations) Economic and Social Commission for Asia and the Pacific
HIV	Human Immunodeficiency Virus
INH	Isoniazid
IPT	Isoniazid preventive therapy
NGO	nongovernmental organization
NNRTI	non-nucleoside reverse transcriptase inhibitors
PITC	provider-initiated testing and counselling
PLHIV	people living with HIV
PMTCT	prevention of mother-to-child transmission
STI	sexually transmitted infection
UNAIDS	Joint United Nations Programme on HIV/AIDS
WHO	World Health Organization

SUMMARY

This meeting served as a forum to update programme managers and partners on national/regional progress, latest strategies and guidelines and to identify innovative strategic and programmatic approaches towards scaling up and sustaining implementation. The meeting also demonstrated the importance of fostering and strengthening harmonization and linkages of HIV/STI with tuberculosis (TB), maternal child health (MCH), as well as hepatitis programmes, and helped to facilitate and exchange best practices and identify challenges, solutions and synergies between these programmes.

The gathering was attended by 99 participants from 13 countries and areas, including national programme managers and other representatives from HIV, TB and MCH programmes, WHO, the Joint United Nations Programme on HIV/AIDS (UNAIDS) and the United Nations Children's Fund (UNICEF), other international and civil society organizations based in the Western Pacific Region. Participants presented updates on global, regional and country progress on HIV, TB/HIV collaborative activities and prevention of mother-to-child transmission (PMTCT) of HIV and congenital syphilis in the context of maternal and child health. Updates were presented on technical guidelines and best practice in a number of areas, including approaches to improving the efficiency of the continuum of care cascade, strengthening prevention, treatment, surveillance, drug resistance monitoring and fostering meaningful community participation.

The forum provided a platform for productive, participatory discussion and experience sharing between representatives from multiple countries and sectors. This meeting was unique in the sense that it involved three crucial programmes for the HIV response (HIV/STI, TB and MCH). It was demonstrated that bringing these programmes together especially during the thematic rotational discussions (“musical chairs”) helped to cross-fertilize and exchange best practices, and synergize across those programmes. It was the first ever HIV/AIDS and STI programme managers meeting hosted by the Ministry of Health, China.

The meeting participants came to the following conclusions:

- (1) Countries have made impressive progress in the Western Pacific Region in scaling up HIV prevention, testing, care and treatment. Nevertheless, important challenges remain.
- (2) Countries have identified a number of inefficiencies in the HIV continuum of care cascade, particularly in the uptake of HIV testing, linkages from testing to care, antiretroviral treatment, retention in care and HIV viral load suppression.
- (3) Particular issues were highlighted and included the following:
 - (a) Diagnosis of HIV should be seen as a public health issue. Early testing through active HIV case finding and earlier antiretroviral treatment (ART) have benefits at both the individual and public health levels.
 - (b) The high cost for HIV testing and antiretroviral drugs remain a major bottleneck.
 - (c) There is a need for greater community participation in delivery of services including outreach and HIV testing and treatment in order to improve coverage of key affected populations.

- (4) There is an alarming rise of HIV among men who have sex with men and transgender persons across cities in Asia.
- (5) There is limited attention to key populations accessing HIV and TB screening, prevention and treatment services, not only in the community but also in closed settings.
- (6) There is a persistent lack of awareness among communities, health-care workers and policy-makers of the benefits of testing and early initiation of treatment for individuals and for public health.
- (7) Unregistered migrants do not have access to health services including HIV testing and ART in recipient countries.
- (8) With continued scale-up of treatment, prevention and monitoring of HIV drug resistance has become essential for understanding the quality of antiretroviral treatment programmes and the efficacy of currently recommended first- and second-line treatment regimens in countries.
- (9) Service delivery systems remain overly centralized and vertical with insufficient linkages. This results in small proportions of people living with HIV and pregnant women able to access screening for TB, STIs and hepatitis, isoniazid preventive therapy and other necessary treatments, and newly registered TB patients being tested for HIV and accessing both TB treatment and ART.
- (10) Global economic shifts are resulting in phasing out of external donor support (including from the Global Fund to Fight AIDS, TB and Malaria and bilateral donors) in the Region, threatening sustainability of national responses.

Based on the above conclusions, the following recommendations were identified for follow up action by Member States, WHO, UNAIDS and partners.

- (1) There is a need to sustain momentum and political commitment in scaling up HIV prevention, testing, care and treatment as the post-2015 era of the Millennium Development Goals approaches, driving further progress towards the three zeros.
- (2) Inefficiencies in the continuum of care cascade for HIV, TB/HIV and MCH/PMTCT services require attention in order to harness the individual and public health prevention benefits of treatment, including through:
 - (a) fostering coordinating mechanisms between programmes, strengthening linkages between services and promoting decentralization;
 - (b) engaging communities as equal partners in programme planning and delivery of services to key populations, including active HIV case-finding using HIV rapid testing algorithms and referral to care and ART; and
 - (c) continued collective advocacy, negotiation and strengthening of legal frameworks to ensure access to affordable and quality-assured HIV assays and first- and second-line antiretroviral drugs.
- (3) Allocate and mobilize more resources at country level and develop effective low-cost HIV testing approaches in low prevalence and concentrated epidemics in order to achieve earlier access to treatment and elimination of mother-to-child transmission of HIV, syphilis and hepatitis B. These should include community-based testing approaches.

- (4) Increase awareness among communities, health-care workers and policy-makers around benefits of HIV testing and early initiation of treatment for individual and for public health through peer outreach, community health workers and promoting the use of new information and communication technologies. In this context, actions to address stigma and discrimination are of crucial importance.
- (5) Concerted efforts by Member States to implement the WHO guidelines on prevention and treatment of HIV and other STI among men who have sex with men and transgender persons, in particular among youth, are recommended as an emergency response to contain the rapid rise of HIV and other STI.
- (6) Provide access for key populations to HIV and TB screening, prevention and treatment services, not only in the community but also in closed settings. TB screening for pregnant and postpartum women, as well as partners and close contacts of TB patients, should also be intensified.
- (7) Utilize ASEAN and other regional platforms for cross-border cooperation and South-South collaboration to promote and advocate for the recommendations from this meeting.
- (8) Continue to invest in the strengthening and harmonization of strategic information systems across HIV/AIDS, TB and MCH programmes including the surveillance of HIV and TB drug resistance.
- (9) Diversify funding sources, increase domestic funding for national programmes, further prioritize investments into evidence-informed interventions and sustainable community-led responses and ensure inclusion of HIV services into universal health care coverage programmes.
- (10) Implementation research should serve as a central tool for piloting and improving programmes and services.

WHO and UNAIDS are committed to provide continued support to countries to implement recommendations.

1. INTRODUCTION

Since the last meeting for HIV/AIDS programme managers for Asian countries in the Western Pacific Region in 2010, substantial advances have occurred in the responses to HIV, tuberculosis (TB), and in efforts to promote elimination of mother-to-child transmission of HIV and maternal child health (MCH) globally and within the Region.

In 2011, the Joint United Nations Programme on HIV/AIDS (UNAIDS) strategy towards reaching zero new HIV infections, zero discrimination and zero AIDS-related deaths was released and the Sixty-fourth World Health Assembly endorsed the *Global Health Sector Strategy on HIV/AIDS (2011–2015)*. Scientific breakthroughs which provided firm evidence that antiretroviral therapy (ART) prevents sexual transmission of HIV, as well as the release of new molecular diagnostic tests for detecting TB and TB drug resistance resulted in the development of new WHO guidelines, strategies and initiatives. These are expected to have implications on collaborative TB/HIV and MCH/HIV programme planning and management, as well as HIV and TB drug resistance surveillance, among others.

In the Western Pacific Region, significant progress has been made towards achieving universal access to HIV prevention, care and treatment and TB/HIV collaborative activities, such as the three I's¹. However, these fall short of the targets in many countries. Moreover, programme collaboration among HIV, TB and maternal and child health needs further strengthening.

This meeting was part of the joint WHO-UNAIDS operational plan.

1.1 Objectives

The objectives of the meeting were:

- (1) to review country and regional progress, discuss programmatic and strategic approaches, identify challenges and innovative approaches for achieving universal access targets for HIV and STI, including prevention of mother-to-child transmission (PMTCT) of HIV and congenital syphilis in the context of MCH and HIV/TB co-infections;
- (2) to provide updates on recent scientific developments and latest global/regional strategies and guidelines on the prevention and treatment of HIV and STI including PMTCT/MCH, HIV/TB and HIV/viral hepatitis co-infections; and
- (3) to review coordination mechanisms and develop joint activities/action plans in countries to further strengthen linkages of HIV with TB and MCH, as well as hepatitis programmes.

¹ The three I's for HIV/TB are defined as intensified case-finding of TB, isoniazid preventive therapy, and infection control for TB. WHO (2011).

1.2 Meeting participants

The meeting was attended by 99 participants from 13 countries and territories, including national HIV/STI, TB and MCH programme managers and other representatives from national HIV programmes, WHO, UNAIDS and UNICEF, other international organizations and civil society organizations based in the Region. Participating countries and territories included Cambodia, China, Japan, the Lao People's Democratic Republic, Hong Kong (China), Malaysia, Mongolia, Papua New Guinea, Philippines, Republic of Korea, and Viet Nam.

1.3 Programme (See Annex 1)

The four-day meeting was structured as follows:

On the morning of day one, participants received updates on global and regional progress on HIV and TB, STI surveillance and elimination of mother-to-child transmission (eMTCT) of HIV, congenital syphilis and hepatitis. This was followed by a panel discussion examining community perspectives on the response to HIV and TB. In the afternoon, countries presented reports on progress towards "Getting to Zero".

On day two, participants received technical updates on various approaches, strategies, tools and guidelines in the response to HIV and TB.

On day three, participants discussed four key topics: (1) scale-up of HIV testing; (2) scale-up of Three I's; (3) earlier initiation of ART and retention in care; and (4) eMTCT of HIV, syphilis and hepatitis B. The session used a "World Café" approach, whereby participants were divided into four groups with each group discussing each of the four topics for approximately 45 minutes. As each new group began discussing each topic, they added to and modified the output and conclusions generated by the previous group. After each of the four groups had discussed each of the four topics, the rapporteur for each topic summarized the points discussed, and reported back to the plenary during the afternoon session.

During the afternoon of day three, country delegations had the opportunity to meet in small groups and discuss common challenges and solutions.

On day four, participants visited government and community programmes in Kunming City, including a methadone maintenance therapy (MMT) site, a voluntary counselling and testing (VCT) clinic, a hospital providing PMTCT services and an ART clinic.

2. PROCEEDINGS

2.1 Opening session

Dr John Ehrenberg, Director, Combating Communicable Diseases, WHO Regional Office for the Western Pacific, delivered the opening remarks on behalf of the Regional Director, Dr Shin Young-soo. He thanked the Ministry of Health, China, and Yunnan Bureau of Health for hosting this meeting for the first time ever in China and in the city of Kunming.

Dr Shin commended the impressive progress which has been achieved in the Region in recent years, with large increases in number of people receiving ART. Despite progress, many countries in the Region are witnessing worrying trends of increasing new infections among men

who have sex with men (MSM) and transgender persons. Moreover, less than 50% of people living with HIV (PLHIV) in the Region are aware of their HIV status which is a missed opportunity for prevention and treatment. Self-reported coverage of HIV prevention interventions among key populations such as condoms and clean injecting equipment remains at less than 60% across the Region. Dr Shin also noted the need for continued efforts to implement collaborative TB/HIV activities. In his remarks, Dr Shin also noted that important scientific breakthroughs provided firm evidence that antiretroviral therapy prevents sexual transmission of HIV and new molecular diagnostic tests for detecting TB and TB drug resistance were developed in recent years. He highlighted that there is a need to learn how to implement interventions based on these new findings at the country level.

Mr Steven Kraus, Director, UNAIDS Regional Support Team for Asia and the Pacific, addressed the meeting, expressing appreciation for the leadership of Dr Shin and WHO Regional Office for the Western Pacific in organizing the joint meeting. Mr Kraus also hailed the progress which had been achieved so far and cautioned against complacency, noting that treatment coverage in the Asia-Pacific remains lower than in other regions. He commended countries for their leadership in scaling up domestic funding for national epidemics. Mr Kraus noted the opportunity in the Region to expand early access to ART in order to achieve important public health benefits. Finally, Mr Kraus noted that many countries would be undertaking legal reviews in 2013–2014, examining laws and policies that support or hinder national responses, and emphasized the importance of these initiatives.

Dr Xia Gang, Director, Division of HIV/AIDS Prevention and Management, Department of Disease Control, Ministry of Health, China, welcomed the meeting participants on behalf of the Department of National Cooperation and Bureau of Disease Control, Ministry of Health. Dr Xia highlighted the priority placed by the Chinese government and senior leaders on the response to HIV, and outlined the concrete measures taken and policies promulgated in recent years by the Government of China in response to HIV. Dr Xia noted that HIV has no borders and international collaboration is essential for a successful global response.

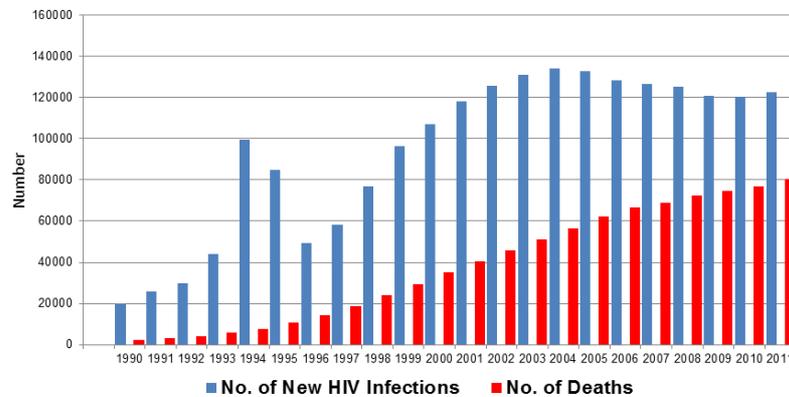
As the final opening speaker, Dr Xu Heping, Director-General, Yunnan Bureau of HIV Control, addressed the meeting. Dr Xu welcomed participants to Yunnan, provided an update on Yunnan's response to HIV and underlined Yunnan's commitment to continuing to strengthen its response.

2.2 Global and regional progress and updates on HIV/AIDS

(Dr Ying-Ru Lo, Team Leader HIV/STI, WHO Regional Office for the Western Pacific)

Asia bears the second highest burden of people living with HIV after sub-Saharan Africa. Out of the 4.9 million PLHIV globally, 1.3 million are in Western Pacific Region (2011). Over the past 10 years the estimated number of people over 15 years of age living with HIV has levelled off, but the number of AIDS-related deaths in the Western Pacific Region continues to rise (Figure 1). While the estimated number of new HIV infections has stabilized, HIV prevalence trends are on the rise among men who have sex with men, for example 10.6% in Ulanbaatar, Mongolia, and 16% in Chengdu, China. Sudden “outbreaks” of HIV can occur. For example in Cebu, Philippines, a survey in 2011 revealed 54% HIV prevalence among people who inject drugs (PWID).

Figure 1. Estimated number of new HIV infections and AIDS deaths in the Western Pacific Region, 1990–2011



Globally, progress has been impressive, with eight million PLHIV receiving treatment, accounting for 54% of the global total of PLHIV in need of ART. Further efforts are required, however, to increase uptake of HIV testing in particular among key populations where testing coverage remains low. It is also important to improve the efficiency of the continuum of care cascade, exploring approaches to improve linkages from HIV testing to care, ART, retention on ART and ultimately viral load suppression to harness the dual benefit of ART, reduction of mortality and prevention.

In July 2013, WHO has released a consolidated guideline on the use of antiretrovirals for the treatment and prevention of HIV.² This guideline addresses the use of antiretroviral drugs (ARV) across all age groups and populations, based on the broad continuum of HIV care. It is the first time that WHO guidelines include recommendations which address three dimensions – clinical, programmatic and service delivery dimensions and identify research gaps. In summary, the new recommendations address starting ART at $CD4 \leq$ in all adults. ART, regardless of immunological and clinical staging, is recommended for serodiscordant couples, pregnant women, TB/HIV and HIV/hepatitis B co-infected patients and children less than 5 year of age. The adoption and implementation of the new guidelines and implementing the continuum of care cascade requires major investment in the next few years in health systems, quality of services, public health laboratories and strategic information systems.

Conclusions:

- (1) Consolidated joint efforts are needed to find innovative ways to increase access to knowledge of HIV status.
- (2) There is a need to improve linkages from HIV testing to care and treatment.
- (3) Efforts to implement current HIV prevention interventions must be accelerated.
- (4) Steps should be taken to measure progress and publish findings.

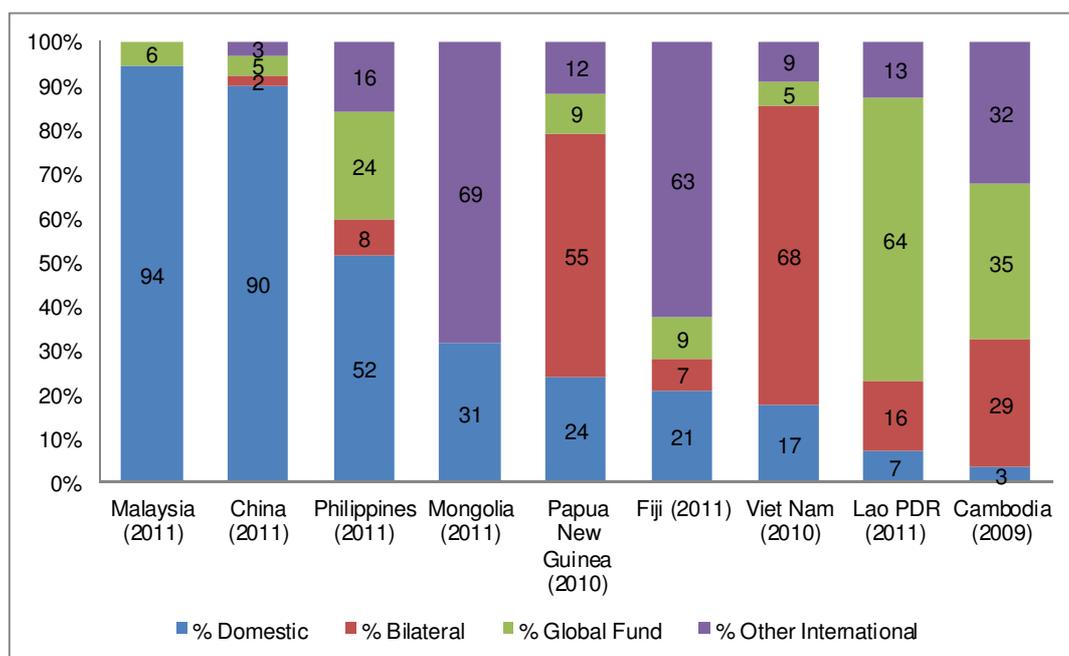
² WHO. Consolidated guidelines on the use of antiretroviral drugs for treating and preventing HIV infection (2013). World Health Organization, Geneva, Switzerland.

2.2 Sustaining the HIV response: AIDS expenditures in selected Asian countries of the Western Pacific (Dr Vladanka Andreeva, Regional Strategic Intervention Adviser Prevention and Treatment, UNAIDS RST)

International funding for AIDS has remained stable over the last few years, reaching US\$8.2 billion in 2011. Meanwhile, national investments have increased and now exceed international investments. In 2007, national investments accounted for 42% of the global AIDS response, while in 2011 they accounted for 51%. In BRICS (Brazil, Russia, India, China and South Africa) countries, more than 75% of funding is from domestic sources. In the Western Pacific Region, there has been a 100% increase in domestic expenditures between 2006–2011, mostly due to increases by China, the Lao People’s Democratic Republic, Mongolia and Viet Nam. (Figure 2.)

However, development partners (The Global Fund to Fight AIDS, TB and Malaria (Global Fund), the United States President's Emergency Plan for AIDS Relief (PEPFAR), the Australian Agency for International Development (AusAID), the Asian Development Bank (ADB) and the World Bank (WB)) continue to significantly invest in the regional HIV response.

Figure 2. HIV expenditure by sources in the Western Pacific Region (selected countries)



Source: Global AIDS Response Progress Reporting 2012

Smart investments should be based on principles of equity, evidence and efficiency, and must be grounded in countries’ epidemiological contexts. Financial sustainability plans with clear targets should be developed. The Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) flexibilities should be utilized and community participation must be effectively leveraged.

Discussion points:

- (1) There is a need to clearly identify which populations and groups are contributing most to the regional epidemic burden, and to use this information to guide investment decisions.

(2) External funding for the Region is set to decline, as the Region continues to experience strong economic growth. It will, therefore, become increasingly necessary to identify key synergies and opportunities to improve efficiency of investments. Countries in the Region, in particular those which currently rely heavily on external funding despite strong economic growth, will also need to increase domestic funding.

2.3 Global and regional progress and update on HIV/TB

(Dr Getahun Gebre Haileyesus, Coordinator Tuberculosis/HIV and Community Engagement, WHO headquarters)

TB is a leading cause of death among PLHIV. In 2011, 25% of AIDS-related deaths were from TB. The Asia Pacific region has very high TB case mortality compared to other regions, mostly due to late diagnosis.

Box 1: TB/HIV collaborative activities³

A. Establish mechanisms for integrated TB & HIV services (Joint HIV and TB)

1. set up or strengthen a TB/HIV coordinating body effective at all levels;
2. conduct HIV and TB surveillance among TB and HIV patients respectively;
3. carry out joint TB/HIV planning; and
4. conduct monitoring and evaluation.

B. Decrease the burden of TB in PLHIV (*Three Is for HIV/TB*) (HIV programme)

5. intensify TB case finding and ensure quality TB treatment;
6. introduce TB prevention with IPT and ART; and
7. infection control for TB in health care and congregate settings.

C. Decrease the burden of HIV in patients with presumptive and diagnosed TB (TB programme)

8. provide HIV testing and counselling to patients with presumptive and diagnosed TB;
9. introduce HIV preventive methods patients with presumptive and diagnosed TB;
10. provide CPT for TB patients living with HIV;
11. ensure HIV prevention, treatment and care for TB patients living with HIV; and
12. provide antiretroviral therapy to TB patients living with HIV.

There has been progress on the global level as well as in the Western Pacific Region level in providing HIV testing for TB patients. Globally, 40% of TB patients were tested for HIV. The Western Pacific Region lags behind the global level, with 25% of TB patients receiving an HIV test.

In pregnant women, TB increases the risk of almost every type of birth complication by a factor of two. The risks of perinatal death and fetal death increase by a factor of 10. Maternal TB also causes a 2.5 fold increase in mother-to-child transmission of HIV.

A systematic meta-analysis of 30 000 individuals from 12 studies, including data from Cambodia and Viet Nam, was used for development of guidelines around isoniazid (INH) preventive therapy (IPT). These guidelines recommend that PLHIV who have unknown or

³ WHO policy on collaborative TB/HIV activities: Guidelines for national programmes and other stakeholders. WHO (2012)

positive tuberculin skin test status and who are unlikely to have active TB should receive IPT for at least six months. In settings with high TB transmission, IPT should be provided for 36 months. IPT and ART, if given in combination, can lead to virtual elimination of TB among PLHIV. The guidelines also note that the WHO four symptom⁴ algorithms are effective in pregnant women living with HIV.

Conclusions:

- (1) HIV testing for TB patients and presumptive TB cases need to be urgently scaled up.
- (2) Symptom-based TB screening and prompt diagnosis and treatment of TB for all PLHIV is needed.
- (3) All HIV positive TB patients should receive ART.
- (4) IPT should be scaled up among pre-ART patients and in those receiving ART.
- (5) TB screening should be done in MCH services with diagnosis and treatment at site or effective referral.

2.4 Progress in STI surveillance and global priorities

(Dr Lori Newman, Medical Officer, Controlling Sexually Transmitted and Reproductive Tract Infections (STI), WHO headquarters)

Globally, there were an estimated 499 million new cases of curable STIs in 2008. The Western Pacific Region has the highest burden globally, with 128 million cases, including 42 million cases of gonorrhoea, 40 million cases of chlamydia, 0.6 million cases of syphilis and 46 million cases of trichomoniasis per year.

Of the 15 reporting countries in the Western Pacific Region, seven reported syphilis prevalence among pregnant women at over 1%. This is very high. Without treatment, active syphilis causes adverse outcomes in more than half of pregnancies. In the Western Pacific Region, it is estimated that syphilis gives rise to 15 000 adverse outcomes annually, including 9000 stillbirths or neonatal deaths and 6000 infants with clinical disease. (Table 1)

STI prevalence among key populations, including sex workers, is also unacceptably high in the Region.

⁴ The four symptoms are: current cough, fever, weight loss and night sweats. Source: Guidelines for intensified tuberculosis case-finding and isoniazid preventive therapy for people living with HIV in resource-constrained settings. WHO, 2011.

Table 1. Prevalence of STIs among sex workers

Country	Source of data	Year	STIs		
			Gonorrhoea (%)	Chlamydia (%)	Syphilis (%)
Cambodia	IBBS	2005	14	11.9	3.2
China (Guandong)	Li et al.	2010	3.9	9.6	8
China (Yunan)	Chen et al.	2005	58.6	37.8	9.5
Lao People's Democratic Republic	SGS	2008	17	6.5	0
Mongolia	SGS	2009	24.5	15.6	20.8
Papua New Guinea	Gare et al.	2005	19	21	25
Viet Nam (Hanoi)	SGS	2005–06	17.5	1.8	1.1
Viet Nam (Ho Chi Minh City)	SGS	2005–06	6.4	0.3	9.1

Sources: Country Integrated Biological and Behavior Surveillance (IBBS) and Second Generation Surveillance (SGS) reporting, various years, unless otherwise mentioned

Untreatable gonorrhoea is also a major threat, with at least five countries reporting decreased susceptibility to cephalosporins, the last widely effective class of antibiotics. Nearly all countries report resistance to quinolones, tetracyclines and penicillins.

Currently, 13 countries in the Region are participating in the WHO Gonococcal Antimicrobial Surveillance Programme (GASP). All countries are encouraged to monitor gonococcal susceptibility to prevent treatable infections. WHO has developed new tools to support countries including the global incidence and prevalence of selected curable sexually transmitted infections (2008), Strategies and laboratory methods for strengthening surveillance of sexually transmitted infections (2012) and congenital syphilis elimination within existing systems.

The global strategy and priorities for 2013–2015 are focused on eMTCT of syphilis, strategic information, development and introduction of new technologies, integration with cervical cancer response, and operationalization of guidelines and norms. The Regional Strategic Action Plan (2008–2012) is focused on improving STI case management, reducing transmission, increasing access to care and elimination of congenital syphilis.

Roadmap for improving STI surveillance

STI reporting can be very simple. The primary symptoms which need to be monitored for effective diagnosis are urethral discharge and genital ulcer. It is important to keep data collection simple.

Five basic principles should be adhered to in carrying out STI data collection:

- (1) monitor incidence (of gonorrhoea, syphilis and congenital syphilis);

- (2) monitor prevalence (particularly among sex workers, MSM and PWID);
- (3) disaggregate by demographics and population;
- (4) analyse trends by time and place; and
- (5) triangulate with other data and control efforts (including condom use trends, HIV prevalence trends).

The next steps for the WHO Regional Office for the Western Pacific should be:

- (1) to strengthen STI surveillance in pilot countries;
- (2) to engage in core STI indicator reporting through Global AIDS Response Progress Reporting in 2014;
- (3) to establish eMTCT HIV/syphilis regional validation committee (assess quality of data); and
- (4) to update/extend regional STI strategy.

Discussion:

Participants from Viet Nam requested further guidance on integrating STI surveillance within existing programmes.

Dr Newman recommended making use of existing data collected through routine service delivery, together with data from a smaller number of sentinel surveillance sites, providing higher quality data for verification.

Syphilis diagnostics are low cost and should not present a problem in terms of expense. Diagnostics for gonorrhoea and chlamydia are more expensive, but there is strong potential for technological solutions, including the GeneXpert® system, a molecular diagnostic test for multiple diseases which, although currently quite expensive, will likely fall in cost. There is also a need to recognize the importance of monitoring and responding to STIs and ensuring that this receives funding as a core element of a national HIV/STI programmes.

Monitoring of gonococcal susceptibility can more effectively be carried out as part of a broader microbiological resistance programme, as it requires the same skills and expertise. This is an important synergy that should be explored further.

2.5 Global and Regional Progress and Update on Elimination of MTCT of HIV, Syphilis, and Hepatitis B (Dr Marc Bulterys, director, US CDC Global AIDS Program–China)

An overview of the global PMTCT goals and targets was presented. These goals include:

- (1) contribute to Millennium Development Goals 4, 5 and 6;
- (2) eliminate paediatric HIV by 2015;
- (3) eliminate congenital syphilis by 2015—initial intensified support will be provided to 10 high burden countries (including China);

- (4) reduce morbidity and mortality due to viral hepatitis and improve care of patients with viral hepatitis; and
- (5) the WHO Regional Office for the Western Pacific goal for hepatitis B control: < 1% chronic hepatitis B virus infection rate among children < 1 year by 2020.

Important progress has been achieved in PMTCT over the past decade. Globally, some countries have made very impressive progress towards virtual eMTCT, including South Africa, Kenya, Zimbabwe and Zambia. In the Asia Pacific Region, progress is being seen in all countries. Between 2003-2010, more than 100 000 paediatric HIV infections were averted globally. However, there are still 330 000 new paediatric HIV infections annually.

WHO's recommendations for PMTCT have evolved over the past four years. Current WHO programmatic updates, issued in April 2012 and the consolidated 2013 guidelines, consider "option B+", lifelong provision of ART for all HIV-infected pregnant women, regardless of CD4 count. It is hoped that option B+ is simpler to implement for programmes than other options where pregnant women start and stop single and triple prophylaxis and the baby or the mother will continue antiretroviral prophylaxis until the complete cessation of breastfeeding. The benefits are: (1) positive HIV diagnosis is the only condition needed for initiation of treatment; (2) no need for CD4 testing; (3) use of a simple, standard regimen; (4) clear public health messaging: "ART is for life"; (5) avoids a *stop and start* approach; (6) keeps mothers alive: all pregnant women in need of treatment receive ART; and (7) benefits the prevention of sexual transmission. "Option B+" is therefore likely to prove preferable to "option A" (providing shortcourse AZT to pregnant women followed by a tail to mother and baby and daily nevirapine for the baby until cessation of breastfeeding) for programmatic and strategic reasons. New recommendations were released in July 2013, including guidance for pregnant women.

Initiation of ART early in pregnancy is of critical importance. For women who have a very high viral load in the first semester, it takes a long time to achieve suppression of viral load. For women with a starting viral load over 100 000, only about 50% achieve viral suppression, increasing the risk of transmission.

There is limited data available on the proportion of pregnant women who inject drugs or their partners. However, 25%–50% of HIV infections among pregnant women are driven by injecting drug use in Asian countries. ART coverage and methadone maintenance therapy (MMT) are important for women who inject drugs, including pregnant women. In the Region, PMTCT interventions are poorly linked with MMT and vice versa.⁵

In terms of congenital syphilis, the WHO target is to reduce incidence to less than 0.5 per 1000 live births. Programmatically, this will require more than 90% of HIV positive mothers to know their HIV and syphilis status.⁶

An overview was presented of global processes and criteria for validation of eMTCT of HIV and syphilis: a technical consultation was held in June 2012. It was decided that a common process is needed to support, but not require dual elimination; for HIV, the global plan will serve

⁵ Read J et al. CROI 2011.

⁶ UNICEF, WHO. Elimination of new paediatric HIV infections and congenital syphilis in Asia-Pacific, 2011-2014: Conceptual framework & monitoring and evaluation guide. Access on 14 August at http://www.unicef.org/eapro/PPTCT_CF_and_ME_guide_17Aug11.pdf

as the reference. It was proposed that a case rate should be added to provide an absolute target; for syphilis, criteria for validation are 95% ANC 1 coverage with 95% tested, 95% treated and congenital syphilis rate ≤ 0.5 per 1000 live births. It was recommended that WHO should serve as the Secretariat. Next steps will include establishment of regional validation criteria and identification of countries ready to request validation.

The Western Pacific Region has a high burden of hepatitis B virus infection of around 5%–7% of the general population. In certain areas prevalence is as high as 50%. There are approximately 350 million cases of hepatitis B virus (HBV) in the Region. WHO recommendations for prevention of perinatal transmission of hepatitis B are based on the 2009 WHO position paper on hepatitis B vaccination, and include an emphasis on timely birth dose (within 24 hours) and two subsequent vaccination doses to prevent perinatal transmission. Hepatitis B immunoglobulin has been shown to provide additional protection above that of the vaccine alone and, if resources allow, is recommended.

An integrated strategy for PMTCT of HIV, syphilis and hepatitis B should be based on:

- (1) early access to ANC care;
- (2) early intervention—test for HIV and syphilis at first visit to ANC and, where resources are available, consider testing for hepatitis B;
- (3) prompt test results and treatment (ideally same-visit testing and treatment); and
- (4) adequate coverage in all ANC settings.

Conclusions:

- (1) There is a need for innovative and bold programming tailored to the specific needs of pregnant women as HIV/syphilis and hepatitis co-infected pregnant women are increasingly seen at labour and delivery.
- (2) MMT is an effective HIV prevention strategy and should be widely available during and after pregnancy for pregnant women who inject drugs.
- (3) There is an urgent need for a paradigm shift to view ART initiation during pregnancy as an “emergency” intervention (especially after 20 weeks).
- (4) There is a need for an integrated strategy to rapidly extend coverage of testing and treatment for all three diseases.
- (5) Finally, there is a need for strong commitment and regional validation criteria for elimination of MTCT of HIV, Syphilis, and HBV.

Discussion:

Participants from Viet Nam sought guidance on the cost-effectiveness of universal HIV testing for pregnant women. Dr Bulterys noted the importance of carrying out analyses of cost effectiveness in country-specific settings. Cost effectiveness analysis carried out in the United States of America showed that universal testing was very effective when prevalence was higher than 0.1%, and may still be cost effective below this prevalence level. It was noted that by linking hepatitis, TB and HIV testing, cost effectiveness for all three diseases increased. In

Viet Nam, it would be beneficial to focus on testing all pregnant women, but initial focus should be placed on provinces with higher prevalence of HIV and syphilis.

A question was raised on the use of buprenorphine for substitution therapy for pregnant women. Dr Bulterys noted that buprenorphine can also be used for substitution therapy.

2.6 Panel discussion: Getting to zero – community perspectives

Panellists presented on the initiatives they were involved with, then opened the floor to questions from participants.

2.6.1 Mr Thomas Cai, director, AIDS Care China: Getting to zero through action

Mr Cai outlined some of the key achievements of AIDS Care China's community operations in China:

- (1) increased coverage of HIV testing by five times in project areas;
- (2) reduced loss to follow-up rate from 40% to less than 10% in project areas;
- (3) reduced time of HIV diagnosis to CD4 testing from 15 days to less than seven days in project areas; and
- (4) reduced time from HIV diagnosis to ART initiation from 45 days to 20 days in project areas.

In order to ensure “zero untreated HIV cases”, it will be necessary to: (1) optimize treatment guidelines and implementation; (2) optimize ARV regimens and ensure accessibility; and (3) leverage comparative advantages of nongovernment and non-profit treatment providers; and (4) provide access to diagnosis and treatment services for co-infection, particularly HCV and TB.

Laws protecting PLHIV and other affected populations from discrimination need to be strengthened and consistently implemented. Evidence-based harm reduction strategies need to be scaled up.

2.6.2 Mr Umesh Sharma, treasurer, Asian Network of People Who Use Drugs

The Asian Network of People Who Use Drugs (ANPUD) is involved in a number of projects, focusing on advocacy for changes to drugs laws and policies, as well as improving access to prevention, treatment and care services for people who use drugs in Asia.

In seeking to achieve zero new infections among people who use drugs, ensuring access to clean needle programmes, oral substitution therapy and condoms is essential. In reducing deaths, access to hepatitis C treatment is very important as the prevalence among PWID is very high (>90%). Among PWID, HIV and chronic active hepatitis C are important causes of death. Access to naloxone can prevent death from heroin overdose. In addressing discrimination, access to community networks is critical. Governments must create opportunities for PWID to engage at the country level. Adopting evidence-based approaches and decriminalizing people who use drugs are also important steps. Compulsory detention centres should be phased out and replaced with evidence-based interventions.

2.6.3 Dr Midnight Poonkasetwattana, Executive Director, Asia Pacific Coalition on Male Sexual Health (APCOM): Getting to Zero: Perspectives from MSM and transgender people

A number of trends are emerging in the Asia Pacific region: increasing new HIV infections among young people, the development of the Internet as a central channel for MSM sexual networking, rise in popularity of sex parties, increase in recreational drug use, and low levels of condom use with regular partners.

Barriers to accessing prevention and health services for key populations in the Asia Pacific are discrimination, including within service settings, and criminalization, especially of sex workers.

MSM account for more than 50% of new infections in the Asia Pacific but investment in MSM services remains very low. Most resources for MSM services are from donors, with very little domestic investment. As a result, sustainability is a key issue. Coverage of HIV prevention services among MSM and transgender people is very low. The same is true for VCT and treatment access. Access is even worse for subpopulations of MSM such as young MSM and MSM who sell sex or use drugs, and transgender people.

Stigma and discrimination constitute major barriers to access for MSM and transgender people, particularly within the health sector. Criminalization of homosexuality hinders access to services by MSM and jeopardizes service delivery. Criminalization of sex work and drug use is an additional barrier. By addressing basic needs beyond sexual health, such as livelihood and social protection, sexual health outcomes can be improved. Contextual interventions such as legal literacy/assistance and engaging law enforcement officials can be important components of sexual health services.

Ensuring the quality of prevention services is often a challenge; standard setting and quality assurance are, therefore, needed. Prevention, treatment, care and support services must be linked to reduce the treatment cascade. This will also require better partnership between community and government services.

Discussion points:

- (1) Mr Thomas Cai reported that AIDS Care China has been able to increase numbers of clients bringing partners for testing. This is a result of clients feeling greater ownership of testing and treatment. AIDS Care China is gathering data on this.
- (2) WHO guidelines specify that in generalized and concentrated epidemics, there is no need for confirmatory testing using Western Blot. However, countries are still resisting implementing this. There is a need to decentralize testing to the community and increasingly use of HIV testing algorithms which use HIV rapid tests.
- (3) New approaches to working with sex worker communities need to be explored. High prevalence is occurring among low-income sex workers and clients. There is also a need to focus on male sex workers and transgender sex workers. This will require strong community participation.
- (4) Investing in communities is beneficial in the long run to reach populations which governments are unable to access.

2.7 Getting to Zero: Country progress updates

Representatives from participating countries presented updates on progress towards the Three Zeros goals in their countries, looking particularly at linkages and inefficiencies within their national cascade of care continuums and transferable experiences.

2.7.1 Cambodia

Cambodia has set national targets for 2020:

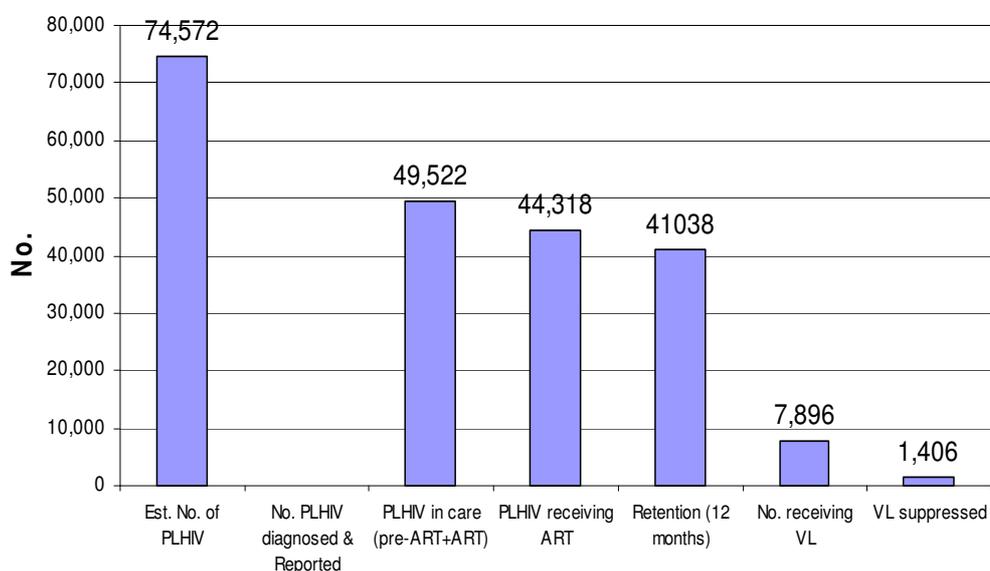
- (1) reduction of HIV incidence in population above 15 years of age from 18 per 100 000 to 3 per 100 000 or less;
- (2) reduction of HIV transmission from mothers to children from 13% in 2010 to 2% or less; and
- (3) increase of coverage of screening/treatment for syphilis among pregnant women to 95%.

HIV incidence has declined steadily in Cambodia since the mid-1990s, with a tenfold reduction since the peak in 1995. AIDS-related deaths have also fallen. It is estimated that 71 000 people are currently living with HIV in Cambodia. Of the 1202 new infections estimated to have occurred in 2012, heterosexual transmission remains the primary mode of HIV transmission (50%) followed by about 30% from female sex work, 10% from people who inject drugs, less than 10% from mother-to-child transmission, and less than 1% from male-to-male sex in Cambodia.

Cambodia's health sector response can be divided into phases for the period 1991–2020. The current phase, Phase 3.0, is characterized by efforts to eliminate new infections through ART as prevention, eMTCT and a focus on key affected populations, health/community systems strengthening, and strengthened monitoring and evaluation.

Cambodia is a regional leader in delivering ART, with ART coverage of over 95% in 2011. Nevertheless, there are important inefficiencies in the cascade of HIV services.

Figure 3. Cascade of HIV Services, Cambodia 2012



Cambodia has expanded HIV testing among pregnant women, but PMTCT coverage remains insufficient. Cambodia is also working to expand coverage among other key populations, instead of focusing exclusively on female sex workers. Cambodia has already achieved and sustained high levels of condom use among female entertainment workers, and is now planning to strengthen work on partner tracing and bringing partners into care. STIs remain a major problem in Cambodia and data show an increase in STI prevalence among female entertainment workers.

Identified next steps for Cambodia's response:

In the short term (next 12 months):

- (1) conduct baseline assessment and launch Cambodia 3.0 strategy in 16 high-burden operational districts;
- (2) budget Cambodia 3.0 and other key components of the National Strategic Plan III (i.e., enabling environment);
- (3) carry out health sector HIV programme review; and
- (4) develop a five-year resource mobilization plan.

In the longer term (two to five years):

- (1) expand Cambodia 3.0 to all high-burden operational districts;
- (2) review progress, draw lessons from and adjust strategies to scale-up Cambodia 3.0 strategy; and
- (3) diversify funding sources for HIV/AIDS to reduce risks and ensure sustainability and increase national resources for HIV/AIDS.

Discussion:

Participants asked for further detail on Cambodia's plans for expanding treatment among key populations. Cambodia is currently running a pilot project in one province to track service usage by PLHIV. After 12 months, this model will be reviewed and expanded to other treatment sites. Cambodia will also develop a standardized system for management of key affected populations to prevent duplication of services. Nevertheless, Cambodia recognizes that achieving scale-up among key populations will be challenging.

2.7.2 China

Strong Government commitment has remained a central feature of China's response. China's Five-Year Action Plan for HIV/AIDS Prevention and Control (2011–2015) sets out targets for reducing incidence by 25% and reducing AIDS-related deaths by 30%. Targets have also been set out for prevention coverage (90% among key populations), testing (70% among key populations), ART (>80%) and PMTCT (>80%).

The number of newly reported HIV cases remains high in China and continues to increase. The most important reason for this increase is a major scale up of testing. Sexual transmission is the leading cause of new infections in China, accounting for 83.2% of all new infections. MSM transmission has increased to 17.6%, a more than fivefold increase over the past five years.

China's new HIV strategy features "Five Expansions": expansion of education, testing, PMTCT, interventions and ART; and "Six Strengthens": strengthening of blood safety, medical services, care and support, rights, leadership and human resources. China's new strategy focuses on testing as a prevention intervention and treatment as prevention. For 2012, China aimed to detect 77 500 cases of HIV and enrol 46 000 people onto ARV. Both these targets were exceeded. During the past three years, China has significantly scaled-up testing, with 45 million people tested in 2008, 84 million in 2011 and over 100 million people tested in 2012. Efforts have also been made to strengthen follow-up. CD4 testing has increased from 45.3% in 2007 to 81.8% in 2011.

MMT has reduced HIV incidence in China. Numbers on ART have also increased dramatically, reaching 210 000 people in 2012. This has resulted in a 64% drop in mortality since ART was launched in 2002. Treatment as prevention for serodiscordant couples was launched in 2011, and has led to a 55% reduction in transmission.

Despite progress, inefficiencies still exist in the continuum of care cascade. Less than 50% of people living with HIV have been diagnosed. Testing, therefore, remains a central priority. Late diagnosis is still a serious issue, with 27.6% of newly identified cases in 2011 constituting late diagnoses.

2.7.3 The Lao People's Democratic Republic

The Lao People's Democratic Republic remains a low HIV prevalence country, but is witnessing increasing infections amongst MSM, who now account for the largest proportion of new infections. Incidence among other populations remains relatively stable. Condom use among key populations is quite high.

Coverage of prevention interventions is 68% among sex workers, and a target of 85% has been set for 2015. Coverage among drug users is very low, below 5%. HIV testing of pregnant women is low, at less than 2%, and PMTCT coverage is just 14%. ARV coverage is at 52.3%. STI prevalence among sex workers remains high, despite high levels of reported condom use.

Among TB patients, 46% are tested for HIV, with around 10% being found to be HIV positive. Prevalence of HIV among registered TB patients is around 5%. The country's ART programme began in 2003, and is now providing treatment to 1855 adults and 133 children.

The majority of the country's AIDS budget (over 96%) comes from international sources, including in 2011.

Priority actions for the Lao People's Democratic Republic's HIV programme include:

- (1) strengthening programme management and community mobilization;
- (2) mobilization of financial resources: increasing government contribution;
- (3) strengthening national monitoring and evaluation (M&E) system; and
- (4) improving coverage and quality of services.

Discussion:

Dr Lori Newman noted that monitoring STI prevalence among sex workers can serve as a useful approach to understand how well condom programming is working within the country.

2.7.4 Malaysia

Harm reduction has proven effective in Malaysia, and HIV incidence amongst PWID has fallen in recent years. Sexual transmission is now the primary mode of HIV transmission. Surveillance for HIV/TB co-infection was initiated in 2000, and TB infections are now decreasing. IPT was initiated in 2010. PMTCT was started in Malaysia in 1998. Prevalence among pregnant women is now 0.02%–0.07%, putting Malaysia on track for eMTCT by 2015.

Key strategies for eMTCT in Malaysia are: service provision in private clinics/hospitals, close monitoring of HIV-positive women, identification of lost opportunities, e.g. interventions in labour rooms, and implementation of quality assurance. While STI prevalence in Malaysia has fallen since 1981, there has been a slight increase in gonorrhoea prevalence in recent years.

Domestic funding accounts for over 90% of total AIDS expenditure in Malaysia. Key priorities for future work include:

- (1) maintain funding commitments;
- (2) continue and enhance harm reduction, PMTCT and ARV;
- (3) enhance IPT; and
- (4) review interventions with female sex workers and implementation research on treatment as prevention.

Discussion:

Participants asked whether Malaysia had considered offering partner testing. Malaysia already promotes partner tracing. In 2012, 75% of partners came for voluntary testing and 40% were found to be HIV positive. In situations where couples are serodiscordant, Malaysia is considering using treatment as prevention.

2.7.5 Mongolia

Mongolia's national targets for 2015:

- (1) percentage of MSM reached with HIV prevention programmes: 80%;
- (2) percentage of female sex workers reached with HIV prevention programmes: 80%;
- (3) percentage of adults and children with advanced HIV infection receiving antiretroviral therapy: 80%;
- (4) prevalence of syphilis among antenatal care attendees: 2.5% (by 2013, 3.5% in 2008);
- (5) number of reported cases of congenital syphilis: 0; and

- (6) zero HIV infection among newborns.

In Mongolia, the majority of new HIV infections are reported among MSM. MSM accounted for 56% of new infections in 2012. Mongolia has a consistently high prevalence of STIs. STIs are widespread among the general population and the incidence has steadily increased since 1990. STIs accounted for 33.5% of all infectious diseases in Mongolia in 2012. Syphilis has increased from 7.2 per 10 000 persons to 17.8 per 10 000 persons between 2001-2012. Among MSM, syphilis prevalence stands at 27.5%. Mongolia does not have reliable estimates of the number of pregnant women living with HIV.

Priority actions for Mongolia include:

- (1) carry out review of HIV and STI programme with support from the WHO Regional Office for the Western Pacific (planned in May 2013);
- (2) increase government funding for HIV and STI prevention step-by-step;
- (3) carry out revision of national HIV and STI management guidelines;
- (4) strengthen laboratory capacity for diagnosis of STIs; and
- (5) improve national capacity on HIV estimation and projection, estimation of size of population.

Discussion:

It was noted that there is significant uncertainty around the estimated number of PLHIV in Mongolia since surveillance was only carried out in Ulaanbaator, with prevalence figures then extrapolated out to apply to the whole country. It was suggested that provincial sites should be included in surveillance to generate a more accurate picture of the whole country.

Mr Steven Kraus applauded Mongolia for its recent removal of entry restrictions for PLHIV.

It was noted that given the very few HIV cases, it would make sense to put all PLHIV on treatment, regardless of their CD4 count, in order to contain the epidemic. The representative from Mongolia noted that this recommendation may be included in future guidelines.

2.7.6 Papua New Guinea

National HIV prevalence in Papua New Guinea is estimated at 0.79%, with about 33 431 people living with HIV in 2012. The main mode of HIV transmission in Papua New Guinea is heterosexual intercourse, followed by perinatal transmission.

Papua New Guinea has set out targets for 2015 within its National HIV Strategy. These include:

- (1) stabilizing prevalence in adults at 0.9%;
- (2) 80% of adults aged 15 to 59 with more than one sexual partner in the past 12 months reporting the use of a condom during last intercourse;

- (3) 90% of female and male sex workers reporting the use of a condom with their most recent client;
- (4) 80 operational family and sexual violence action committees;
- (5) 80% of pregnant women are tested for HIV and receiving results;
- (6) 100% of TB clients have an HIV test result recorded in the TB register; and
- (7) 80% of adults and children with advanced HIV infection receive ART.

If current epidemic trends continue, Papua New Guinea will fall short of its target of reducing new infections by 50% by 2015 by 800 cases. In 2012, more than 12 000 adults are eligible for ART. By 2015, this is projected to rise to 16 167. ART coverage among adults is currently around 70% in Papua New Guinea. HIV prevalence at ANC sites has fallen steadily since 2005 from a peak of around 1.3% to around 0.5% in 2011.

Papua New Guinea has an estimated 16 000 TB cases annually. The percentage of TB patients tested for HIV has increased from less than 5% in 2007 to almost 35% in 2011. The number of people tested for HIV has also increased dramatically in recent years, increasing from approximately 20 000 in 2005 to approximately 140 000 in 2011.

Reported STI cases have increased over the past five years. Prevention intervention coverage is high among MSM and female sex workers in Port Moresby, at around 95%.

Key challenges for Papua New Guinea's HIV response include:

- (1) keeping adults in HIV care and treatment;
- (2) weak TB/HIV collaboration;
- (3) scale up of PPTCT—improving MCH services;
- (4) limited monitoring and surveillance systems;
- (5) shortage of skilled staff; and
- (6) limited funding.

2.7.7 Philippines

The Philippines has set out national targets for 2015:

- (1) reduce sexual transmission of HIV by 50%;
- (2) eliminate mother-to-child transmission of HIV;
- (3) 90% of people living with HIV on antiretroviral treatment; and
- (4) reduce tuberculosis deaths in people living with HIV by 50%.

The number of people living with HIV has continued to increase steadily since 2001. The epidemic is expanding. Less than 50% of PLHIV have been diagnosed. Among those

diagnosed, 66% are receiving treatment. Transmission is now primarily through MSM, accounting for almost 80% of new cases in 2012.

There has been a very rapid increase in HIV prevalence among PWID in recent years. Phasing out of international funding has been accompanied by an increase in government support for the response.

Key challenges in the Philippines include:

- (1) very low coverage of prevention interventions;
- (2) gaps between number diagnosed and number placed on treatment (including TB HIV, mother and child);
- (3) integrating services and information systems for HIV, TB and mother and child; and
- (4) resource gap.

2.7.8 Viet Nam

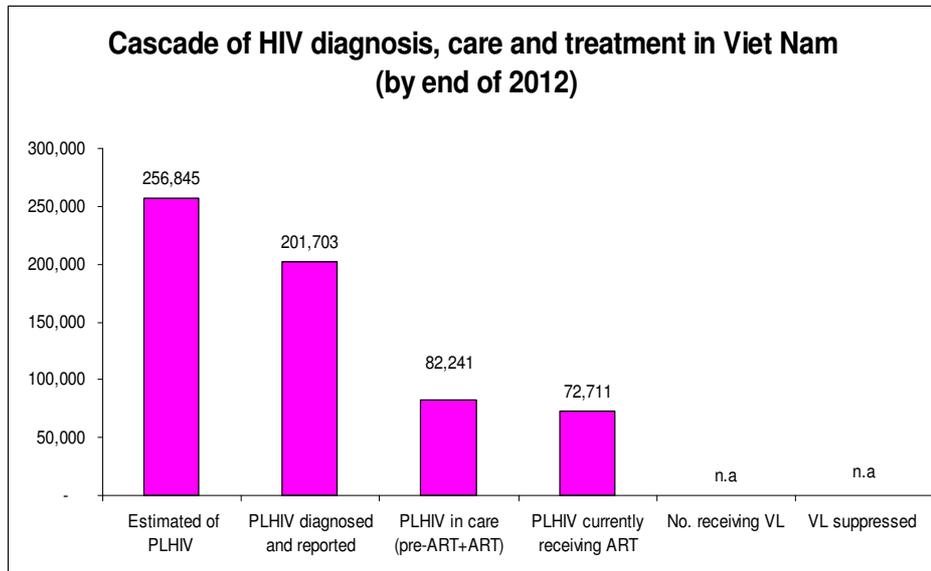
Viet Nam has witnessed a decline in new HIV infections since 2007. HIV remains concentrated among key populations, with diverse epidemics across the country.

Viet Nam has set out national targets for 2015:

- (1) reduce new HIV infections among people who inject drugs by 50% by 2015 and by 80% by 2020 as compared to the level in 2010;
- (2) reduce new HIV infections through sexual transmission by 50% by 2015 and by 80% by 2020 as compared to the level in 2010;
- (3) reduce HIV transmission from mother to child to less than 5% by 2015 and to less than 2% by 2020 as compared to the level in 2010; and
- (4) increase the percentage of people receiving antiretroviral treatment (ART) to 80% of all the people who are eligible to receive treatment by 2020.

Viet Nam has expanded its harm-reduction efforts, focusing on needle and syringe programmes and MMT. ART has been scaled up rapidly, with 72 711 people receiving ART in 2012. This has resulted in a significant drop in AIDS-related deaths in recent years. However, many people initiate ART too late, with more than 50% of those initiating treatment having CD4 count <100. (Figure 4)

Figure 4. Cascade of HIV services, Viet Nam 2012



Source: VAAC 2012

Viet Nam is exploring the strategic use of treatment for prevention, including through a serodiscordant couple treatment pilot, studies of early treatment among key populations and triple ARV regimens for pregnant women.

Key challenges include:

- (1) late treatment initiation;
- (2) limited access, linkage and retention;
- (3) TB/HIV, PMTCT and hepatitis; and
- (4) financial resources and sustainability.

2.8 Experiences from high-income settings

Representatives from high-income countries and territories presented updates on their experience of working towards the Three Zeros goals in their countries.

2.8.1 Hong Kong (China)

Hong Kong (China) continues to experience an expanding epidemic, but the number of AIDS cases is stabilizing, likely due to the advent of ART in the mid-1990s.

Heterosexual transmission is stable. Infections among PWID are declining slightly. The MSM epidemic remains the most important challenge. An increase in the MSM epidemic has been seen since 2005–2006 and remains at a very high level.

Hong Kong (China) has established a special fund to support the community response to HIV, which was launched in 2006. This fund supports HIV prevention and research projects. The number of MSM service organizations in Hong Kong (China) has increased dramatically thanks to the establishment of this fund.

Efforts to strengthen HIV prevention are based around the following approaches:

- (1) raise awareness on HIV and MSM epidemic;
- (2) safer sex promotion, particularly, consistent condom use;
- (3) promote HIV and syphilis testing;
- (4) acceptance of people living with HIV;
- (5) enhance access to condom and lubricants;
- (6) tackle facilitating factors, such as drug abuse;
- (7) work with MSM community to leverage community activities for prevention; and
- (8) involve and engage communities.

The MMT programme has been very successful and has prevented an HIV epidemic among people who inject drugs in Hong Kong (China). The MMT programme includes 20 clinics and serves over 8000 PWID, with more than 6000 attending MMT daily. Various other harm-reduction initiatives have been implemented at MMT clinics, including condom distribution, risk reduction counselling, etc.

2.8.2 Japan

Japan remains a low-prevalence country, with national prevalence at less than 0.1%. Since 2007, there have been around 1500 new cases per year. In 2011, 68% of new infections resulted from homosexual intercourse. Heterosexual intercourse accounted for 20%. Mother-to-child transmission and injecting drug use accounted for a very low proportion of new infections.

Japan's national strategy is based around three pillars: (1) sensitization and education, (2) strengthening of testing and counselling systems, and (3) strengthening of medical service systems. Japan is also seeking to decentralize prevention and treatment interventions to local authorities, working with NGOs. Community centres have been established to promote MSM outreach and empowerment in larger cities, in partnership with NGOs.

Japan's population of PLHIV is ageing rapidly, and therefore has particular needs such as institutional care, home care systems.

2.8.3 Republic of Korea

As of December 2011, the Republic of Korea had 7030 PLHIV. In 2011, 888 new cases were reported. Incidence is increasing gradually. In 2011, 92% of all PLHIV were male. Almost all cases are sexually transmitted, with sexual contact accounting for 99.2% of all new infections (60% heterosexual and 39.2% homosexual transmission).

TB/HIV co-infection has increased in recent years, and the cumulative number of cases of co-infection reached 784 in 2011.

All HIV-related medical treatment costs are covered by national medical insurance and government subsidy.

Stigma and discrimination remain key issues and need attention. There is also a need to strengthen comprehensive care for TB, STI and PMTCT. Increased attention on key populations is needed to strengthen prevention.

2.9 Regional research framework to strengthen communicable disease control and elimination in the Western Pacific Region (2012–2016) (Dr John Ehrenberg, WHO)

Significant progress has been achieved in communicable diseases, prevention, control and elimination in the Western Pacific Region. In spite of this, many gaps remain, threatening regional targets. Infection transmission dynamics have changed over time. Weak health systems, economic crisis, donor priorities, and political agendas are among several challenges faced by these programmes. While some challenges may seem beyond reach, others can be addressed through operational research.

Shifting donor priorities have resulted in health receiving less attention in favour of other fields. Operational research is essential to highlight and address resulting gaps.

Research is one of the six core functions of WHO. The Combating Communicable Disease Division's role is primarily in capacity-building, monitoring implementation, disseminating the information and providing assistance in translating research findings into policy.

The draft Regional Research Framework in Communicable Diseases seeks to harmonize research activities, provide a platform for resource mobilization, identify cross-cutting activities between programmes, identify disease-specific research areas and topics, and provide a template for the development of a regionwide research plan of action.

Regional plans have been developed for HIV/STI, immunization, TB, malaria and parasitic diseases. These plans will be taken to the regions to generate ownership and buy-in. All plans contain embedded research components. These regional plans will seek to address the lack of articulation between research, policy and implementation.

Discussion:

It was noted that the WHO Regional Office for the Western Pacific has very strong partners in the operational research area, including the United States Centers for Disease Control and Prevention (US CDC) and PEPFAR. Further steps should be taken to continue and reinforce collaboration, which is already strong at the country level.

Participants pointed out that obtaining funding for research is challenging, but important. Dr Ehrenberg remarked that by pooling efforts from different programmes, and looking at cross-cutting trends in technologies, capacity-building, etc., there are greater opportunities for funding.

Participants noted the need for bottom-up participation in the generation of a research agenda. It was stressed that involvement and ownership from ministries of health and programme managers are also essential.

2.10 Strategic use of antiretrovirals: WHO guidelines and implementation sciences
(Dr Ying-Ru Lo, Team Leader HIV and STI, WHO Regional Office
for the Western Pacific)

Treatment as prevention refers to the use of antiretrovirals (ARVs) for treating people living with HIV. When ARVs are effective in reducing viral load, they also reduce a person's likelihood of transmitting HIV to others, independent of CD4 cell count. Ecological studies suggest a population-level impact of ART. Based on experience with generalized epidemics, ART coverage significantly decreases individual risk. A longitudinal surveillance cohort study in KwaZulu Natal, South Africa, showed that every % point increase in ART coverage among all HIV-positive adults in a community was associated with a 1.7% decline in the hazard of HIV acquisition ($p < 0.001$). The HPTN052 study results, released in May 2011, confirmed that earlier ART reduces HIV transmission by 96% among discordant couples in a stable relationship.⁷

The effects of ART at a population level depend on: durable and reliable HIV suppression; preventing transmitted resistance; dealing with acute HIV infection; and numerous implementation issues. Possible issues around the prevention benefit of ART in MSM and PWID need to be flagged, since transmission possibilities vary by route of infection. There is increased probability of transmission for penile-anal intercourse and for blood-borne transmission with substantial impact of behaviour and syringe types; there is also differential penetration of ARVs in different compartments: blood, semen, rectum, and vagina.

A consultation was convened in 2011 to discuss whether ART prevents HIV transmission among MSM. Results from this consultation are available in the public domain. Experts found that it is biologically plausible, but that an individual randomized efficacy trial was not warranted. It was concluded that a delivery of a combination of interventions has more impact than delivery of one intervention.

The effectiveness of ART and its prevention benefit in concentrated HIV epidemics in Asia has not yet been addressed. It is likely that earlier treatment can be implemented in this type of setting if the pool of infected people to treat is small. However, the pool of people to be tested is very large. Several ART implementation research projects are planned in Asia among various populations. These projects will gather data to inform national programmes and WHO guidelines.

Harnessing the prevention benefit of treatment encompasses a wide range of programmatic approaches. Countries developing such approaches should define:

- (1) outcomes;
- (2) priority groups for primary prevention;
- (3) immunological, virological and clinical criteria to use for initiating ART among PLHIV; and
- (4) service delivery bottlenecks to be addressed.

⁷ Cohen MS, Chen YQ, McCauley M, Gamble T, Hosseinipour MC, Kumarasamy N, et al. Prevention of HIV-1 infection with early antiretroviral therapy. *Prevention of HIV-1 infection with early antiretroviral therapy.* N Engl J Med 2011;365:493-505

Strategies must also consider:

- (1) clear definitions of specific goals for treatment as prevention programme;
- (2) cost-effectiveness assessment of various approaches
- (3) modelling of potential impact of implementation; and
- (4) identification of the strengths and weaknesses of existing surveillance and monitoring programs for HIV epidemiology and treatment.

Through strengthening monitoring of treatment programmes, countries can also evaluate the prevention benefits. Cascades for HIV treatment can be adjusted with few, carefully chosen, additional indicators.

Treatment as prevention monitoring should:

- (1) be largely based on existing available data to monitor testing, linkage, retention, ART use, and viral suppression;
- (2) identify clearly persons started for earlier or immediate treatment i.e. CD4 >500 or regardless of CD4 versus those started on treatment according to existing national guidelines;
- (3) specify the target population, e.g. discordant couples, key populations such as MSM, etc.;
- (4) monitor adverse events, including HIV drug resistance, adverse reactions and risk behaviour compensation.

Treatment must be seen as a multicomponent intervention.

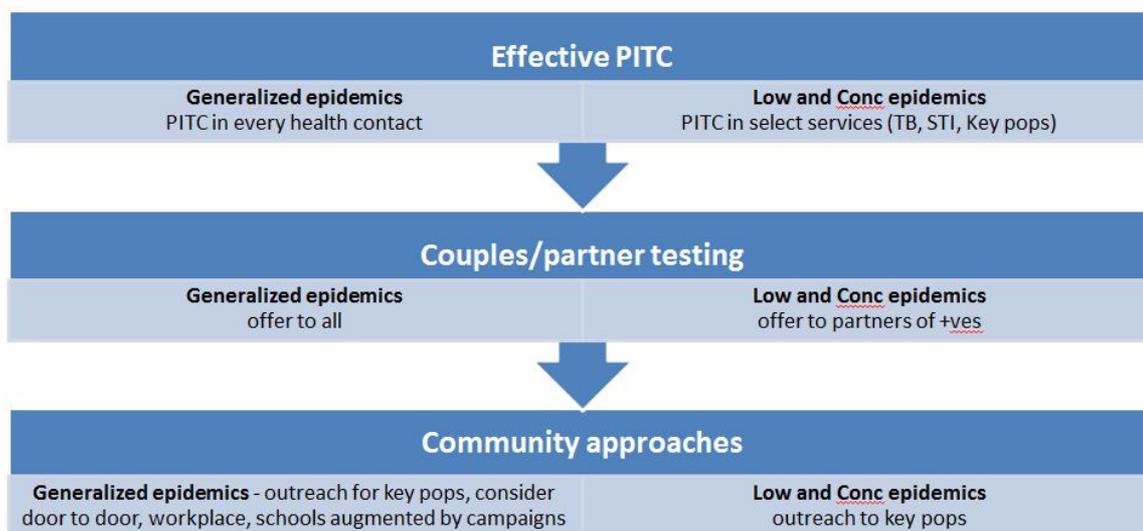
2.11 Treatment 2.0: Service delivery models to increase uptake of HIV testing, linkages to care and treatment (Dr Masaya Kato, Medical Officer, Office of the WHO Representative in Viet Nam)

UNAIDS and WHO have initiated the Treatment 2.0 initiative in order to catalyse the next phase of treatment scale up. In the Asia Pacific region, UNAIDS and WHO jointly held a consultation in Myanmar in September 2012 where the regional taskforce on Treatment 2.0 was established. Treatment 2.0 is based around five pillars: (1) optimizing drugs/regimens; (2) using point-of-care and simplified laboratory diagnostics; (3) promoting price/cost reductions; (4) adapting delivery systems; and (5) mobilizing communities.

Treatment 2.0 can contribute to improving the continuum of care cascade, and addressing bottlenecks seen across the continuum, which are similar across countries. This can be achieved through: point of care diagnosis, simplified lab monitoring (pillar 2); adapting service delivery (pillar 4); mobilizing communities, promoting human rights (pillar 5).

WHO recommends a strategic approach to expanding HIV testing and counselling, depending on epidemic type (Figure 5).

Figure 5. HIV testing approaches by type of HIV epidemic



PITC= provider initiated testing and counselling
Source: WHO 2012

Experiences from Viet Nam showed that co-located VCT and ART resulted in much more successful referral. Decentralization of basic services, including OST and ART to satellite sites, with linkages to specialist services, has a number of potential benefits and is recommended.

HIV/TB integration is also effective and has been demonstrated in South Africa to nearly double the number of people able to start HIV services. Community support has also been shown to promote retention.

There is a need to address structural barriers to service access, including stigma and discrimination and punitive laws.

2.12 Molecular diagnosis of TB among people living with HIV
(Dr Katsunori Osuga, Medical Officer Stop TB, WHO Regional Office for the Western Pacific)

Technologies and approaches for TB diagnosis among PLHIV have progressed rapidly in recent years. Previously, TB diagnostics among PLHIV were often challenging, with sputum smear often negative and extrapulmonary TB. In 2007, liquid culture diagnosis was approved by WHO. In 2010, automated nucleic acid amplification test (NAAT) was approved. This can be carried out using GeneXpert MTB/RIF® within two hours, through a fully automated, highly sensitive process.

GeneXpert MTB/RIF® is also portable, easy to use, with low bio-safety requirements. However, it has high running costs. As for many other tests the positive predictive value (PPV) of TB drug resistance depends on its prevalence. GeneXpert MTB/RIF® costs between US \$17 000–17 500 using the negotiated prices with the Geneva-based Foundation for Innovative Diagnostics (FIND). Test cartridges cost approximately US\$10.

2.13 Test and treat implementation sciences in China

(Dr Wu Zunyou, Director, National Center for AIDS Control [NCAIDS], China)

Effective implementation of treatment as prevention requires expanded coverage of testing, particularly within concentrated epidemics. In China, many PLHIV are diagnosed late. A study from Chengdu, in China's Sichuan province, showed that among MSM, diagnosis only occurs on average five years after infection.

China launched treatment as prevention as a component of its national strategy in February 2011. Treatment as prevention in China is focused on serodiscordant couples. China is implementing a number of large-scale pilot projects to investigate impact of treatment as prevention among serodiscordant couples, MSM, low-income sex workers and people who inject drugs. Early results from a four-county pilot treating all PLHIV have shown strong impact, with mortality falling by 50% after six months.

2.14 Modelling potential impact of expanding ART and combination treatment to inform test and treat programmes in Viet Nam (Dr Bui Duc Duong, Vice Director-General, Vietnam Authority of HIV/AIDS Control, Viet Nam)

Viet Nam has sought to model the potential impact of expanding ART and combination treatment in order to inform test and treatment programmes. These modelling studies were carried out with the support of WHO, US CDC and Partners for Health Research. Data from Viet Nam's Can Tho province were used, including data on HIV prevalence, population size and risk behaviours. Assumptions regarding the impact of ART on HIV transmission were: 96% reduction in sexual transmission and 96% reduction in transmission through contaminated needle use. Cost assumptions were: ART: US \$415/year; HIV testing: US \$7.2/test.

The model covered seven subpopulations: PWIDs, MSM, female sex workers, male clients of female sex workers and low-risk women. MSM and female sex workers were classified as injecting and non-injecting drug users. Three scenarios were explored:

Scenario set 1: Periodic testing and immediate treatment offered to all adults

Scenario set 2: Periodic testing and immediate treatment targeted to a specific group

Scenario set 3: Potential policy scenarios

(1) Standard ART (CD4 \leq 350) scale-up to 90% by 2020

(2) MMT/condom scale-up

(3) MMT/condom scale-up + periodic testing and immediate treatment for key populations (people who inject drugs, female sex workers, MSM)

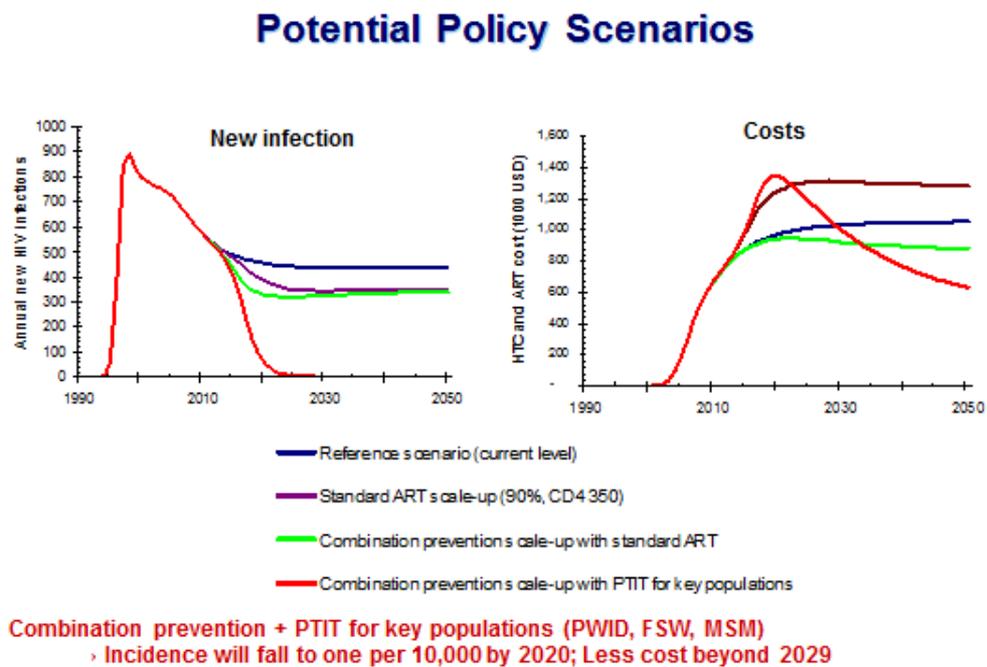
Scenario 2: Periodic testing and immediate treatment offered to individual groups

The model showed that focusing on all groups or low-risk women would incur high HIV testing and counselling costs, whereas focusing on key populations would incur significantly lower cost. The most effective and cost-effective approach was to target injecting MSM, PWID and injecting female sex workers.

The policy scenario including combination prevention and periodic testing and immediate treatment for key populations resulted in a fall in incidence to one per 10 000 by 2020 and to 0 by 2033. While the annual cost of the **periodic testing and immediate treatment** -containing combination prevention is higher than that of the reference scenario until 2029, the former will cost less after 2029.

Limitations of this modelling exercise include the uncertainty of assumptions, use of data from a single province, and exclusion of the cost of outreach and other interventions. Nevertheless, the model showed that active case-finding and early ART will likely have substantial impact on Viet Nam's epidemic, with potential to eliminate HIV transmission in 15 years (Figure 6)

Figure 6. Potential policy scenarios for different prevention measures to key populations in Viet Nam



2.15 Update on WHO tools and guidelines on HIV and key populations
(Dr Zhao Pengfei, Technical Officer HIV Prevention WHO Regional Office for the Western Pacific)

Updated guidelines for prevention and treatment of HIV and other STI among MSM and sex workers have been jointly developed and published by WHO and partners. These guidelines emphasize the importance of consistent use of condoms and combination prevention approaches to prevent HIV and other STI among key populations. Training guidelines for health workers for responding to HIV among MSM and transgender people are being field tested in several countries in 2012.

WHO, UNAIDS, the United Nations Development Programme (UNDP) and the Asia Pacific Transgender Network recently issued a regional technical brief on HIV/STI and sexual health among transgender people. This brief highlights the importance of ensuring that data from HIV and STI studies routinely disaggregate gender-related data by male, female and transgender status. Transgender people are highly vulnerable to HIV but widely neglected by national

responses. In Cambodia, India, Indonesia, Malaysia and Pakistan, 2005–2009, HIV prevalence among transgender people is alarmingly high, even higher than that among MSM. The size of the transgender population remains undetermined. However, an estimate for Asia-Pacific region is around 9–9.5 million, according to a recent UNDP report.

Prevention and treatment of HIV and other sexually transmitted infections for sex workers in low- and middle-income countries, published by WHO in December 2012, sets out good practice recommendations and evidence-based technical recommendations for strengthening the response among sex workers. The guidelines note that health services for sex workers and their clients must be comprehensive, sex workers friendly and stigma free, and should be made available, accessible and acceptable. Periodic presumptive treatment (PPT) for asymptomatic STIs is recommended in settings with high prevalence and limited clinical services.

For PWID, a revised edition of the *Technical guide for countries to set targets for universal access to HIV prevention, treatment and care for injecting drug users* was issued in 2012. Key improvements on the 2009 edition include: distinction between drug-user-specific interventions and general interventions; prioritizing indicators with greater focus on drug-user specific interventions such as needle and syringe programmes, opioid substitution therapy/MMT as well as HIV testing and counselling and ART; an expanded framework for assessing the quality of key interventions; greater guidance on applying the framework for setting targets, measuring programme implementation and reporting and analysing findings.

There is a need to strengthen monitoring and evaluation and ensure strategic use of ART and TasP to address HIV, particularly amongst MSM.

2.16 Community-based HIV testing and linkages to care and treatment in China (Mr Roger Meng, Guangtong Organisation, China)

In 2011 and 2012, the Ministry of Health, China, and NCAIDS published rapid testing and counselling guidelines, including guidelines for community-based organizations (CBOs) to provide rapid testing and counselling. CBOs are now playing a key role in delivering health services to the community. With resources from the Global Fund, four national mentoring training centres have been established in Tianjin, Chengdu, Xi'an and Beijing, to provide three-day training for MSM CBOs.

A number of pilot projects have been implemented in China, featuring strong CBO participation in service provision. Projects have been implemented in Chengdu, Wuhan, Tianjin and Guangzhou. Since 2011, when CBOs were permitted to conduct rapid tests, finger prick testing has been conducted in drop-in centres. This model has dramatically increased testing coverage. In a Wuhan pilot, coverage was increased by a factor of three. Provision of oral fluid rapid testing has also dramatically increased coverage of HIV testing and counselling among MSM in Wuhan. Online interventions have also been tested, allowing counselling to be provided before HIV testing access. Internet interventions are highly scalable and cost-effective.

Key lessons learnt include:

- (1) innovative HIV testing and counselling strategies and use of CBOs is highly effective in increasing the number of MSM who know their status and access ART;
- (2) adapted STI services are essential for MSM;
- (3) coordination between community-based organizations-China CDC and health services is key for success;

- (4) there is a need to scale up these models to achieve higher coverage; and
- (5) CBOs require financial and capacity-building support.

Discussion:

Participants inquired whether Internet coverage was high in China, particularly among key populations including MSM. Mr Meng reported that Internet coverage is very high in China, and is a primary channel for MSM sexual networking.

It was noted that concern around the performance of oral test kits (lower sensitivity) may have to be balanced against their high acceptability, and consequent high levels of coverage achieved using these tests.

2.17 From compulsory centres to community-based interventions for people who inject drugs: The Malaysian experience (Dr Sha'ari Ngadiman, Deputy Director of Disease Control (CDC), Head of HIV/STI Sector, Disease Control Division, Ministry of Health, Malaysia)

Malaysia has over 500 000 people who inject drugs. Starting in the 1990s, Malaysia adopted a drug response strategy based on supply and demand reduction. A policy of promoting treatment and rehabilitation through compulsory treatment centres was initiated in 1983. In the early 2000s, harm reduction became a central part of national policy, with introduction of MMT pilots in Malaysia.

Malaysia has now moved towards a voluntary, open-access treatment model, based around cure and care rehabilitation centres. This programme was launched in July 2010 and has been extended to eight facilities nationwide. Treatment centres are open and participation is voluntary, without legal consequences. Services are provided in the community and are private and confidential. Services provided include MMT, psychological support and referral to specialist services. Malaysia is planning to phase out all compulsory treatment centres by 2015.

Results from the rehabilitation centre programme have been very positive. One study found an 80.7% reduction in injecting drug use and high satisfaction among clients. Malaysia has also opened 40 cure and care service centres to serve over 430 000 clients. These centres provide a range of services to PWID including outreach, treatment and community rehabilitation, religious programmes, recreational activities and psychosocial support.

The shift from punitive approaches to community-based treatment in Malaysia has created an enabling environment for PWID to access substitution treatment. Malaysia has become an example for other PWID programmes in the Region.

Discussion:

Participants noted the importance of cross-border collaboration in PWID programmes, particularly among ethnic minority groups, which are often highly underserved and neglected.

2.18 Global and regional progress on HIV drug resistance surveillance (Dr Silvia Bertagnolio, Medical Officer, Department of HIV, WHO Headquarters)

Over the period 2004–2009, WHO recommended monitoring loss-to-follow-up ($\leq 20\%$), retention on first-line ART ($\geq 70\%$), on-time drug pick-up ($\geq 90\%$), on-time appointment keeping ($\geq 80\%$), drug supply continuity (100%) and viral suppression at 12 months ($\geq 70\%$) as HIV

drug resistance (HIVDR) early warning indicators. More than 50 countries monitored more than 131 000 people in 2107 clinics.

This early warning indicators analysis found that: only 69% of clinics monitored met targets of achieving less than 20% loss-to-follow-up; only 67% of clinics met the target of at least 70% of patients retained on first line treatment after 12 months; only 65% of clinics did not experience any drug stock-out.

WHO drug resistance surveillance protocol recommends sampling ARV naïve populations likely to have been recently infected. Pooled analysis of 82 surveys covering 3588 people from 30 countries collected between 2004–2010 showed a slight increase in HIVDR, peaking at 3.4% in 2009. This seems to be driven by higher levels of HIVDR in Africa, particularly for the non-nucleoside reverse transcriptase inhibitors (NNRTI) class. No increased levels of drug resistance were observed in any other region for any other drug class.

Higher levels of ART coverage are associated with higher levels of transmitted resistance to NNRTI. Nevertheless, increases in treatment coverage did not trigger large increases in drug resistance.

In order to assess levels of acquired HIVDR, WHO protocols sample populations starting first-line ART at select clinics. The objective is to describe HIVDR in cohorts prior to ART initiation and to estimate viral load suppression and resistance 12 months after ART initiation. In order to evaluate levels of acquired HIVDR, 12 countries implemented 40 surveys between 2006–2010 using WHO methodology. The objective was to determine whether there was an increase in baseline drug resistance in people initiating treatment. Data suggested that there is a borderline increase in the prevalence of resistance, mainly driven by NNRTI resistance, particularly in Africa.

After 12 months of monitoring of HIVDR: 76.1% of people initiating ART prevented drug resistance; 5.1% had resistance after 12 months; 18.8% had possible resistance; almost one quarter (27.9%) of people had no resistance detected, but were switched to second line unnecessarily. Relatively few patients had resistance to tenofovir or zidovudine (NRTI drugs). Therefore, if patients were switched after 12 months to second line regimens, there is high confidence that these regimens will be effective.

Clinic surveys showed that possible drug resistance was primarily driven by loss-to-follow-up.

Conclusions:

- (1) Transmitted resistance (particularly to NNRTI) in recently infected people is increasing over time in areas surveyed in Africa, but is still within the expected levels (3.4% in 2009).
- (2) In 2010, HIVDR in pre-treatment population, 5.4% (3.7–7.4) to NNRTI; 6.8% (4.8–9.0) overall;
- (3) Currently recommended first-line ART regimens are still effective for most people initiating treatment.
- (4) Response to first-line ART is excellent at 12 months (90% OT, 76% ITT).

(5) Attention needs to be given to:

- unnecessary switch for approximately 30% people failing ART with wild type; and
- "possible" drug resistance (particularly LTFU) for approximately 18% of people initiating ART.

(6) At 12 months, drug resistance patterns largely preserve NRTIs for second-line.

Dr Bertagnolio listed a number of key questions for national programmes to consider:

- (1) At what level is transmission of HIVDR occurring in my country?
- (2) Are currently recommended first-line regimens still effective for the majority of adults initiating ART in my country?
- (3) What is the HIVDR prevalence in children (with or without PMTCT exposure) and the potential implications for response to ART?
- (4) Is my ART programme achieving optimal virological suppression in people on first-line ART? Is second-line regimen predicted to be active at population-level?
- (5) How are ART clinics and the ART programme as a whole performing in minimizing population-level HIVDR?

Discussion:

Representatives from Mongolia asked whether it is worthwhile to undertake HIVDR monitoring despite low numbers of treatment recipients. Dr Bertagnolio confirmed that HIVDR monitoring remains important even in low-prevalence settings, particularly where treatment as prevention is being implemented. Dr Bertagnolio suggested that HIVDR testing capacities of neighbouring countries could be used.

2.19 Experiences implementing HIV drug resistance surveillance in China

(Dr Xing Hui, Deputy Chief, Division on Virology and Immunology, National Centre for AIDS and STD Control, China)

China's HIVDR surveillance network falls under the Ministry of Health, and is coordinated by a National HIVDR Surveillance Working Group. The surveillance network consists of four core laboratories and 31 provincial CDCs.

Based on sentinel monitoring and threshold surveillance, as well as cluster sampling cross-sectional surveys, China issued national guidelines for HIVDR surveillance and monitoring in August 2012. A number of cross-sectional and cohort studies of acquired drug resistance have been conducted since 2004. Surveys of transmitted drug resistance have also been carried out. China carried out monitoring of early warning indicators at four selected sites between 2007-2008. A continuous pilot has been conducted over 33 sites in four provinces. All ART sites were incorporated into the National Patient Database in 2012.

Surveys showed that patients with the earliest detectable drug resistance had the highest risk of death. There was a significant increase in the median time from virological failure (17.5 months) to drug resistance (36.6 months), to immunologic failure (55.2 months), and to death.

2.20 Surveillance of TB drug resistance through laboratory network

(Professor Kai Man Kam, School of Public Health, Chinese University of Hong Kong)

The Supranational Reference Laboratory Network (SRLN) was formed in 1994 to ensure optimal performance of laboratories participating in the Global TB drug resistance project. The network has expanded since 2004 and now includes 26 laboratories in six WHO regions. It is coordinated by the Prince Léopold Institute of Tropical Medicine in Antwerp, Belgium. A panel of 30 pre-tested and coded isolates is exchanged annually within the network, and the 14th round of proficiency testing initiated in 2007 included isolates with resistance to second-line anti-TB drugs.

The objectives of the SRLN are: to provide national TB programmes with reliable drug resistance data; to promote development of human networks; to ensure quality of data (including sample representativeness and inter-laboratory data quality); to improve capacities of national laboratory networks; to ensure proper analysis and interpretation of drug resistance surveillance (DRS) data and; to provide essential data for programmatic management of drug-resistant TB.

In the Western Pacific Region, the DRS project has measured prevalence of drug resistance in 11 countries while fostering human development at the regional level and capacity-building at the country level.

One major technical concern encountered in carrying out drug resistance surveillance was the representativeness of sampling when extrapolated nationally. This highlights the importance of representative sampling methods; distinguishing primary drug resistance from acquired drug resistance; and complying with international standards for susceptibility.

Data used in the Anti-Tuberculosis Drug Resistance in the World Fourth Global Report (2008) were obtained through routine or continuous surveillance of all TB cases (48 countries) or from specific surveys of sampled patients, as outlined in approved protocols (35 countries). High levels of resistance were identified in the Russian Federation, China, India and a number of countries in Africa and South America.

The *WHO policy on collaborative TB/HIV activities: Guidelines for national programmes and other stakeholders* (2012) provides a number of key recommendations: establish and strengthen mechanisms for delivering integrated HIV and TB services; reduce the burden of TB in people living with HIV and initiate early ART (and Three I's for HIV/TB); and reduce the burden of HIV in patients with presumptive and diagnosed TB.

Discussion:

Participants asked for advice on the suggested frequency of TB drug resistance surveys. Dr Kai suggested that surveys should be completed within one year of initiation in order to maintain political commitment. Surveys should be repeated every five years, or every three years where sufficient resources are available. Sentinel surveys should also be carried out if there are signs of changes in drug resistance.

2.21 New protocols for surveillance and monitoring of HIVDR

(Dr Michael Jordan, Tufts Medical Center)

Widespread population-level emergence and transmission of HIVDR is a concern of public health experts and ART programme planners. Significant levels of HIVDR have the potential to undermine benefits of population-level ART. This is especially relevant in the context of test and treat.

Lessons learnt from implementation of WHO's global strategy for surveillance and monitoring of HIVDR between 2004–2011, and the realities of continued expansion and decentralization of ART delivery, suggested that elements of the strategy required updating.

The updated strategy encompassed a number of core elements, including monitoring of HIVDR early warning indicators, surveillance of transmitted drug resistance (TDR), HIVDR in populations initiating ART (baseline HIVDR) and HIVDR in populations receiving ART (ADR). Early warning indicators are quality of care indicators which assess factors associated with virological failure and emergence of HIVDR. They are designed to be monitored at all ART clinics as part of routine monitoring and evaluation, and provide clinic-specific information offering an opportunity for corrective action. For the 2012 revision, early warning indicators were evaluated using the Grading of Recommendations, Assessing, Development and Evaluations (GRADE) methodology to assess strength of association of individual early warning indicators with drug resistance and optimal population-level targets. Early warning indicators without strong association with HIVDR or VL suppression were eliminated. Early warning indicators retained were: (1) on-time pill pick-up; (2) retention in care; (3) pharmacy stock-outs; (4) dispensing practices; and (5) viral load suppression at 12 months. A scorecard was developed to simplify reporting of clinic performance.

In evaluating transmitted HIVDR, the updated strategy moves away from assessment of transmitted HIVDR in defined geographical regions to a method designed to provide a national prevalence estimate. The updated strategy proposes a change from area-specific surveillance to national sampling by using data from other national HIV survey efforts, such as HIV sero-surveillance. Two separate cross-sectional methods were developed to provide nationally representative prevalence estimates of HIVDR in populations initiating ART and populations on ART.

In conclusion, the 2012 strategy aims to:

- (1) generate data for enhanced programme and public health decision-making;
- (2) provide nationally representative results; and
- (3) provide HIVDR surveillance methods relevant in low-prevalence and concentrated HIV epidemics as well as generalized epidemics.

Country input is required to inform this strategy and transform concept notes into protocols.

2.22 Statistical response to the challenges of global HIV drug resistance surveillance
(Ms Natalie Exner, Department of Biostatistics, Harvard University School of Public Health)

Ms Exner provided an overview of updated sampling strategies and sample size considerations for surveillance of TDR and baseline HIVDR.ADR.

For surveillance of TDR, the sampling frame is:

- (1) primigravida women presenting at antenatal care (ANC) sites under 25 years of age;
- (2) individuals under 25 years of age newly diagnosed with HIV at voluntary counseling and testing (VCT) sites; and

(3) key populations under 25 years of age, such as MSM, people who inject drugs (PWID), or sex workers (SW). It is suggested to calculate a point prevalence and 95% confidence interval.

For baseline HIVDR, it is proposed to use multistage cluster survey of clinics and eligible patients within clinics.

For surveillance of ADR in populations receiving ART, it is proposed that probability to size (PPS) sampling method be used.

The primary purpose of the discussion was to seek inputs from the programme managers and technical staff to inform the strategy and transform the concept notes into protocols.

Discussion

Participants asked for details on how to operationalize surveillance in a low-prevalence setting. Countries should make use of existing surveillance systems (e.g. VCT sites), apply epidemiological criteria to maximize the likelihood that serotyped patients are recently infected and then genotype patients remaining in sample.

Participants questioned the cost effectiveness of DR surveillance in concentrated epidemics. It was noted that surveillance is a worthwhile investment considering the substantial investments being made in scale-up of ART. Ensuring that currently utilized regimens are effective is essential in this context.

2.23 Parallel sessions: achievements, gaps/challenges, and way forward for HIV, TB and MCH collaborative activities

On the third day of the meeting, participants were divided into four groups, and allocated to one of four thematic roundtable discussions. The topics for each roundtable were:

Topic 1: Scaling-up HIV testing and counselling

Topic 2: Intensified TB case-finding and treatment, isoniazid preventive therapy (IPT) and infection control (The Three Is) in HIV/AIDS care settings

Topic 3: Earlier initiation of ART and retention in care

Topic 4: Strengthening linkages between HIV, RH and MCH for eMTCT of HIV, syphilis and HBV

Roundtable discussion topic 1: Scaling-up HIV testing and counselling

Discussion objectives: to review challenges and discuss innovative approaches to increase HIV testing; and to identify priority key actions, steps and proposed national policy changes for scaling up voluntary HIV testing in HIV/AIDS care settings, TB settings including facilities providing ANC services for subsequent inclusion into country operational plans.

Health sector related challenges:

- no community-based testing – non-health-care providers are not authorized to undertake HIV testing;
- dealing with false-positive results during self-testing;

- lack of availability of confirmatory testing in health facilities;
- lack of active recruitment of new clients by testing facilities;
- lack of HIV rapid testing algorithm to validate and/or allow confirmatory testing outside of laboratory facilities; and
- overburdened health-care workers.

Access-related challenges:

- unwillingness of MSM and sex workers to access testing in hospitals; and
- difficulty of reaching rural populations where health centre access is poor and staff capacity low.

Subpopulation-related challenges:

- reaching hidden MSM and other hard-to-reach populations;
- reaching young MSM; and
- lack of funding for community-based work.

Cost-related challenges:

- test kits and transportation are expensive;
- reliance on external donors; and
- funding for CBOs for testing and capacity-building.

Proposed programmatic solutions:

- provision of services via Internet and mobile technology for MSM;
- integration of HIV testing and STI screening;
- creation of national testing days promoted through media;
- promotion of peer-initiated HIV testing and counseling and linkage to care;
- intensified use of existing nongovernmental organization networks;
- development of standard operating procedures for HIV testing rapid test algorithm; and
- decentralization of HIV testing and counseling to community health centres.

Proposed policy solutions:

- certify and/or allow trained non-health-care workers to conduct HIV testing, particularly within communities;
- develop cross-border agreements to address issue of access to ART and services for migrants and non-registered persons;
- provide additional resources for community-based response; and
- facilitate certification of TB facilities to carry out blood draws for HIV testing (countries where this is allowed show higher uptake of HIV testing than in countries where this is not the case).

Roundtable discussion topic 2: Intensified TB case finding and treatment, Isoniazid preventive therapy (IPT) and infection Control (The Three Is) in HIV/AIDS care settings

Discussion objectives: to review challenges and best practices and identify priority key actions, steps and proposed national policy changes for improving TB screening and treatment, the provision of IPT and the prevention of TB transmission in HIV/AIDS care settings including facilities providing ANC services for subsequent inclusion into country operational plans.

Challenges related to TB screening among PLHIV:

- limited coordination between programmes;
- HIV doctors and health-care workers often have limited understanding of TB screening;
- MCH teams are often not aware of importance of TB screening of HIV-positive pregnant women;
- weaknesses in referral systems (HIV and MCH to TB/CDC to hospitals);
- unavailability of sensitive TB diagnostic tests; and
- lack of screening protocols, standard operating procedures or policies.

Proposed solutions related to TB screening among PLHIV:

- establish or strengthen national coordination;
- conduct training and awareness-raising activities for health-care workers on symptomatic TB screening;
- review and improve referral mechanisms; and
- plan to develop TB diagnosis systems with more sensitive diagnostic tests.

Challenges related to INH preventive therapy:

- misconceptions among programme managers and health-care workers around IPT;
- reluctance of patients to take INH; and
- lack of operational guidelines

Proposed solutions related to INH preventive therapy:

- promote national discussion around IPT;
- introduce TB symptom screening algorithm;
- carry out training for health-care workers on TB screening and IPT; and
- encourage operational research to address barriers.

Challenges related to infection control:

- inadequate implementation of TB infection control in HIV and MCH facilities; and
- limited TB screening by HIV health-care providers.

Proposed solutions to infection control:

- TB screening of PLHIV conducted at HIV clinics; and
- strengthened administrative TB infection control.

Roundtable discussion topic 3: Earlier initiation of ART and retention in care

Discussion objective: to identify challenges and discuss strategies and priority actions to promote early ART initiation, pre-ART/ART retention, and optimal ART adherence. Discussion will cover the roles of HIV care, TB, MCH services, services for key populations, and community and civil society.

Participants identified challenges at various points of the continuum of care cascade:

Challenges in pre-ART phase:

- limited access to services due to insufficient facilities providing HIV services;
- conditions for entry to ART;
- unwillingness of asymptomatic treatment-eligible patients to initiate treatment; and
- inability of migrants or non-registered persons to access ART.

Proposed solutions in pre-ART phase:

- work with peers and NGOs/other organizations to provide counseling;
- strengthen case management; and
- promote point-of-care CD4 testing.

Challenges with linkages between TB, MCH and opioid substitution therapy services for key populations:

- weak linkages between HIV-TB-MCH services;
- separation of diagnosis and treatment facilities;
- weak coordination between TB, HIV, MCH services;
- late diagnosis of HIV-positive pregnant women; and
- lack of early ART for TB/HIV patients.

Proposed solutions relating to linkages:

- promote “one-stop shop” integration/co-location of TB, HIV, MCH and STI services;
- strengthen linkages and referrals between TB, HIV, MCH and STI services;
- provide training and develop procedures to strengthen linkages and referral;
- integrate diagnosis and treatment;
- promote decentralization of services (TB, MCH, HIV) and integration into primary health-care systems;
- carry out repackaging of services;
- promote cost reduction through better linkages;
- conduct regular meetings and data sharing between TB, HIV and MCH programmes to address service delivery issues and multisectoral coordination;
- ensure access to point-of-care services for key populations including through community delivery;
- strengthen performance evaluation of different actors implementing different services across the continuum of care through introduction of unique health identifiers or alternative simpler options while the unique health identifiers are being introduced;

- work with support groups to accompany patients; and
- foster empowerment of SWs and MSM through capacity-building and active engagement in planning and provision of services not only for prevention but also enrolment to care and treatment and retention in care.

Challenges resulting in morbidity, death, loss to follow-up and sub-optimal adherence

- side effects of drugs;
- desire of patients to delay treatment initiation;
- disruption of treatment by detention of patient;
- prohibitive prices of second-line ARV and drugs to treat multidrug-resistant TB; and
- limited availability of drugs due to inefficient national approval mechanisms.

Proposed solutions to address morbidity, LTFU and sub-optimal adherence:

- engage support groups for PLHIV to increase adherence;
- promote PLHIV treatment literacy using PLHIV networks and CBOs;
- strengthen use of technology to improve follow-up (e.g. SMS alerts for improved adherence);
- improve access to CD4 testing
- establish comprehensive HIV programmes in detention centres;
- engage UN to take a leading role in reducing drug prices; and
- use case management volunteers.

Participants also identified a number of issues which apply across the continuum of care cascade (Table 2):

Table 2: Challenges and proposed solutions for cascade of HIV services

Challenges Identified	Solutions Proposed
Health System-related	
Lack of capacity of health workers providing counselling and ART Laboratory capacity and cost Low salaries for health care workers Limited key population friendly services Long distance to service	Strengthening capacity of health workers for counselling and ART “One stop” integrated services Expand satellite sites to provide minimum standard of care to people living with HIV
Patient-related	
Fear of breach of confidentiality Awareness and knowledge on ART	Social support and support of transportation cost for people living with HIV Monitoring linkages (with unique Identifier code, and harmonized database/system) Policy development – delinking care from residence registration Improve follow up with technology Planning with epidemiological context Case management focal point Strengthening health care financing Strategic use of donor funds
Social/legal/economic-related	
Stigma and discrimination Religious beliefs of patients Lack of support from families Cross border issues	Psychological support for people living with HIV Intercountry communication for border issues Directory for each country Lifting travel restrictions Strengthening performance evaluation of different actors implementing services (with unique identifier code) Cross border collaboration Advocacy to high level politicians

Roundtable discussion topic 4: Strengthening linkages between HIV, RH and MCH for eMTCT of HIV, syphilis and HBV

Discussion objective: to review constraints and challenges and discuss key action points, including coordination mechanisms, to strengthen integrated programmes for eMTCT of HIV, syphilis, and HBV.

Challenges related to policy:

- vertical nature of health systems: poor integration;
- problem of task shifting (e.g. HIV testing); and
- policies around migration (including in-country and cross-border migration).

Challenges related to health systems:

- limited number and capacity of health workers;
- lack of effective monitoring and evaluation due to weak surveillance systems;
- poor network/coverage at peripheral level (e.g. ANC services); and
- high cost of health services.

Epidemiological, geographical and social challenges:

- low and/or concentrated nature of epidemics;
- poor coverage of health services in geographically remote areas;
- migration (including in-country, cross-border and natural disaster-related);
- stigma and discrimination; and
- religious barriers to condom policy.

Programmatic challenges:

- segmented and overly vertical structure of services;
- loss-to-follow-up and inefficient referral;
- high time to diagnosis and consequent late entry into care and treatment; and
- insufficient awareness of health-care workers (e.g. around injections for syphilis exposed infants).

Proposed solutions and action points:

- foster stronger political commitment;
- promote greater service integration;
- promote joint leaderships/ownership of MCH programme;
- task shifting;
- strengthen prioritization of high-burden areas and women living with HIV;
- engage in health system strengthening including through:
 - capacity-building;
 - strengthening of health information systems;
 - creation of ANC/PCH-based one-stop services;
- improve access through outreach services and satellite sites;

- promote family, community and private sector involvement in service delivery;
- conduct operational research; and
- promote cross-programme collaboration.

3. CLOSING REMARKS

Dr John Ehrenberg delivered the closing remarks on behalf of WHO. Dr Ehrenberg thanked the Ministry of Health and Government of China for hosting the meeting and underlined the importance and value of strong cooperation between WHO and UNAIDS and between programme managers in different functional areas.

Mr Steven Kraus delivered the closing remarks on behalf of UNAIDS. Mr Kraus noted that the AIDS response is at a crossroads: current trends will result in the Asia Pacific region falling short of the 2015 targets for new infections by 110 000 new infections. ART is improving in the Asia Pacific but lagging behind global averages. In terms of PMTCT, the Asia Pacific is doing poorly compared to the global average. Mr Kraus stressed that countries in Asia and the Pacific have the capacity to lead the world in achieving the three zeros, but bold political leadership, country ownership and meaningful community participation will be essential.

4. CONCLUSIONS AND RECOMMENDATIONS

4.1 Conclusions

The meeting produced the following conclusions, which apply in all settings of HIV, TB and MCH.

- (1) Countries have made impressive progress in the Western Pacific Region in scaling up HIV prevention, testing, care and treatment. Nevertheless, important challenges remain.
- (2) Countries have identified a number of inefficiencies in the HIV continuum of care cascade, in particular in the uptake of HIV testing, linkages from testing to care, antiretroviral treatment, retention in care and HIV viral load suppression.
- (3) Particular issues highlighted included:
 - (a) diagnosis of HIV should be seen as a public health issue. Early testing through active HIV case finding and earlier antiretroviral treatment have benefits both at the individual level and for public health levels;
 - (b) the high cost for HIV testing, and antiretroviral drugs remain a major bottleneck; and
 - (c) there is a need for greater community participation in delivery of services including outreach, HIV testing and treatment, in order to improve coverage of key affected populations.

- (4) There is an alarming rise of HIV among men who have sex with men and transgender persons across cities in Asia.
- (5) There is limited attention to key populations accessing HIV and TB screening, prevention and treatment services, not only in the community but also in closed settings.
- (6) There is a persistent lack of awareness among communities, healthcare workers and policy-makers around the benefits of testing and early initiation of treatment for individuals and for public health.
- (7) Unregistered migrants do not have access to health services including HIV testing and ART in recipient countries.
- (8) With continued scale-up of treatment, prevention and monitoring of HIV drug resistance has become essential for understanding the quality of antiretroviral treatment programmes and the efficacy of currently recommended first and second line treatment regimens in countries.
- (9) Service delivery systems remain overly centralized and vertical with insufficient linkages. This results in low proportions of people who live with HIV and pregnant women being able to access screening for TB, STIs, hepatitis, and accessing isoniazid preventive therapy and other necessary treatments and newly registered TB patients being tested for HIV and accessing both TB treatment and ART.
- (10) Global economic shifts are resulting in phasing out of external donor support (including Global Fund to Fight AIDS, TB and Malaria and bilateral donors) in the Region threatening sustainability of national responses.

4.2 Recommendations

Based on the above conclusions, the following recommendations were identified:

- (1) There is a need to sustain momentum and political commitment in scaling up HIV prevention, testing, care and treatment as we are moving into the post-2015 era of the Millennium Development Goals, driving further progress towards the three zeros.
- (2) Inefficiencies in the continuum of care cascade for HIV, TB/HIV and MCH/PMTCT services require attention, in order to harness the individual and public health prevention benefits of treatment, including through:
 - (1) fostering coordinating mechanisms between programmes, strengthening linkages between services and promoting decentralization;
 - (2) engaging communities as equal partners in programme planning and delivery of services to key populations, including active HIV case finding using HIV rapid testing algorithms and referral to care and ART; and
 - (3) continued collective advocacy, negotiation and strengthening of legal frameworks to ensure access to affordable and quality-assured HIV assays and first- and second-line antiretroviral drugs.

- (3) Allocate and mobilize more resources at country level and develop effective low-cost HIV testing approaches in low prevalence and concentrated epidemics in order to achieve earlier access to treatment and elimination of mother-to-child transmission of HIV, syphilis and hepatitis B. These should include community-based testing approaches.
- (4) Increase awareness among communities, health-care workers and policy-makers around benefits of HIV testing and early initiation of treatment for individual and for public health through peer outreach, community health workers and promotion of use of new information and communication technologies. In this context actions to address stigma and discrimination are of crucial importance.
- (5) Concerted efforts to implement the WHO guidelines on prevention and treatment of HIV and other STI among men who have sex with men and transgender persons, in particular among youth, are recommended as an emergency response to contain the rapid rise of HIV and other STI.
- (6) Providing access of key populations to HIV and TB screening, prevention and treatment services, not only in the community but also in closed settings. TB screening for pregnant and post-partum women, as well as partners and close contacts of TB patients, should also be intensified.
- (7) Utilize the Association of Southeast Asian Nations and other regional platforms for cross-border cooperation and South-South collaboration to promote and advocate for the recommendations of this meeting.
- (8) Continue to invest in the strengthening and harmonization of strategic information systems across HIV/AIDS, TB and MCH programmes including the surveillance of HIV and TB drug resistance.
- (9) Diversify funding sources, increase domestic funding for national programmes, further prioritize investments into evidence-informed interventions and sustainable community-led responses and ensure inclusion of HIV services into universal health care coverage programmes.
- (10) Implementation research should serve as a central tool for piloting and improving programmes and services.

WHO and UNAIDS are committed to provide continued support to countries to implement recommendations.

PROVISIONAL AGENDA

Day 1 – Monday, 25 February 2013

Time	Topic	Presenter
08:00–08:30	<i>Registration</i>	
08:30–09:00	<i>Opening session</i>	
	<ul style="list-style-type: none"> • WHO Regional Office for the Western Pacific 	Shin Young-soo, Regional Director, <i>WHO Regional Office for the Western Pacific, to be delivered by John Ehrenberg</i>
	<ul style="list-style-type: none"> • UNAIDS Regional Support Team for Asia and the Pacific 	Steven Kraus, Director, <i>UNAIDS Regional Support Team for Asia and the Pacific</i>
	<ul style="list-style-type: none"> • Ministry of Health, China 	Xia Gang, Director, Division of HIV/AIDS, Bureau for Disease Control, <i>Ministry of Health, China</i>
	<ul style="list-style-type: none"> • Yunnan Provincial Health Bureau, China 	Xu Heping, Director General, <i>Yunnan Provincial Bureau of AIDS Control, China</i>
09:00–09:30	<i>Introduction to the meeting</i>	Ying-Ru Lo and Yu Dongbao, <i>WHO Regional Office for the Western Pacific</i>
	Group photo	
09:30–10:00	<i>Coffee/tea break</i>	
	<i>Plenary sessions</i>	
10:00–11:30	Global and regional progress and update on HIV/AIDS	Ying-Ru Lo, <i>WHO Regional Office for the Western Pacific</i>
		Vladanka Andreeva, <i>UNAIDS Regional Support Team for Asia and the Pacific</i>
	Global and regional progress and update on HIV and TB	Haileyesus Getahun, <i>WHO Headquarters</i>
	STI surveillance: What is new?	Lori Newman, <i>WHO Headquarters</i>
	Global and regional progress and update on elimination of mother-to-child transmission of HIV, congenital syphilis and hepatitis	Marc Bulterys, <i>Centers for Disease Control and Prevention, Global HIV/AIDS</i>

Annex 1

Time	Topic	Presenter
11:30–12:30	Panel discussion: Getting to zero – Community perspectives	Thomas Cai, <i>AIDS Care China</i> Umesh Sharma, <i>Asian Network of People Who Use Drugs</i> Midnight Poonkasetwattana, <i>Asia Pacific Coalition on Male Sexual Health</i>
12:30–13:30	<i>Lunch break</i> <i>Plenary sessions</i>	<i>Representatives</i>
13:30–15:00	Getting to Zero – country progress <ul style="list-style-type: none">• Cambodia• China• Lao PDR• Malaysia	
15:00–15:30	<i>Coffee/tea break</i>	
15:30–17:00	Getting to Zero – country progress (continued) <ul style="list-style-type: none">• Mongolia• Papua New Guinea• Philippines• Viet Nam	<i>Representatives</i>
17:00–18:00	Getting to Zero – experiences from high income settings <ul style="list-style-type: none">• Hong Kong SAR (China)• Japan• Republic of Korea	<i>Representatives</i>
18:00	<i>Welcome reception</i>	
19:00–20:00	WHO-UNAIDS Secretariat meeting	

Day 2 – Tuesday, 26 February 2013

Time	Topic	Presenter
	<i>Plenary sessions</i>	
08:00–08:15	Regional research framework to strengthen communicable disease control and elimination in the Western Pacific Region (2012-2016)	John Ehrenberg, <i>WHO Regional Office for the Western Pacific</i>
08:15–09:30	Strategic use of antiretrovirals: WHO guidelines and implementation sciences	Ying-Ru Lo, <i>WHO Regional Office for the Western Pacific</i>
	HIV testing approaches in low and concentrated epidemics	Stephen Mills, <i>FHI360</i>
	Treatment 2.0: Service delivery models to increase uptake of HIV testing, linkages to care and treatment	Masaya Kato, <i>WHO Viet Nam</i>
	Molecular diagnosis of TB among people living with HIV	Katsunori Osuga, <i>WHO Regional Office for the Western Pacific</i>
09:30–10:00	Implementation of ‘Test and Treat’ in Asian countries.	
	<ul style="list-style-type: none"> • Test and treat implementation sciences in China 	Wu Zunyou, <i>National Center for AIDS Control, China</i>
	<ul style="list-style-type: none"> • Modelling to inform test and treat programmes in Viet Nam 	Bui Duc Duong, <i>Ministry of Health, Vietnam</i>
10:00–10:30	<i>Coffee/tea break</i>	
10:30–12:00	Perspectives on the current AIDS response - “game changer” among key populations	
	<ul style="list-style-type: none"> • Update on WHO tools and guidelines on HIV and key populations 	Pengfei Zhao, <i>WHO Regional Office for the Western Pacific</i>
	<ul style="list-style-type: none"> • Community-based HIV testing and linkage to care and treatment in China 	Zhao Jiangang, <i>Trans China</i>
	<ul style="list-style-type: none"> • From compulsory centres to community based interventions for people who inject drugs: The Malaysian experience 	Sha'ari Ngadiman, <i>Ministry of Health, Malaysia</i>
12:00–14:00	<i>Lunch break</i>	<i>Lunch meetings</i>
	<i>Plenary sessions</i>	
14:00–14:20	Global and regional progress on HIV drug resistance surveillance	Silvia Bertagnolio, <i>WHO Headquarters</i>

Annex 1

Time	Topic	Presenter
14:20–14:40	Experiences in implementing HIV and TB drug resistance surveillance <ul style="list-style-type: none">• China experience• Surveillance of TB drug resistance through laboratory network	Xing Hui, <i>National Center for AIDS Control, China</i> Kai Man Kam, <i>School of Public Health, Chinese University of Hong Kong</i>
14:40–15:30	<i>Plenary presentation and discussion:</i> New protocols for surveillance and monitoring of HIVDR	Michael Jordan, <i>Tufts Medical Center</i>
15:30–16:00	<i>Coffee/tea break</i>	
16:00–17:00	New protocols for surveillance and monitoring of HIVDR (<i>discussions continued</i>)	Facilitators
17:00–18:00	WHO-UNAIDS Secretariat meeting	

Day 3 – Wednesday, 27 February 2013

Time	Topic	Presenter
08:00–08:15	Introduction to the Parallel sessions: achievements, gaps/challenges and way forward for HIV, TB and MCH collaborative activities	Yu Dongbao, <i>WHO Regional Office for the Western Pacific</i>
08:15–10:00	Parallel sessions	Facilitators
10:00–10:30	<i>Coffee/tea break</i>	
10:30–12:00	Parallel sessions (continued)	Facilitators
12:00–13:00	<i>Lunch break</i>	
13:00–14:00	Parallel sessions reporting back	Rapporteurs
14:00–15:00	<i>Individual country sessions</i> Strengthening linkages of programmes and coordination with WHO/UNAIDS/Partners	
15:00–15:30	<i>Coffee/tea break</i>	
15:30–16:30	Individual country sessions (continued)	
16:30–17:00	Conclusions and recommendations	WHO/UNAIDS
17:00	Closing session	

Day 4 – Thursday, 28 February 2013

Participants are divided into four groups for site visits.

AM: Leave hotel at 8:30 am, back to hotel at 12:30 pm;

PM: Leave hotel at 1:30 pm, back to hotel at 5:50 pm.

GROUP 1:

AM: Provincial CDC VCT clinic (Dongsijie) → MMT, DAYTOP needle exchange center (PWID CBO, Xibalu) → Guandu Huayangniahua Yizhan (SW CBO, No.365 Shuangqiaolu)

PM: Yunnan AIDS Care Center (YACC) ART Clinic (all four groups convene in YACC in pm)

GROUP 2:

AM: MMT, DAYTOP needle exchange center (PWID CBO, Xibalu) → PMTCT (Yunnan Provincial Care Center for Women and Children) → Provincial CDC VCT clinic (Dongsijie)

PM: Yunnan AIDS Care Center (YACC) ART Clinic (all four groups convene in YACC in pm)

GROUP 3:

AM: Guandu Huayangniahua Yizhan (SW CBO, No.365 Shuangqiaolu) → Provincial CDC VCT clinic (Dongsijie) → PMTCT (Yunnan Provincial Care Center for Women and Children)

PM: Yunnan AIDS Care Center (YACC) ART Clinic (all four groups convene in YACC in pm)

GROUP 4:

AM: PMTCT (Yunnan Provincial Care Center for Women and Children) → Guandu Huayangniahua Yizhan (SW CBO, No.365 Shuangqiaolu) → MMT, DAYTOP needle exchange center (PWID CBO, Xibalu)

PM: Yunnan AIDS Care Center (YACC) ART Clinic (all four groups convene in YACC in pm)

LIST OF PARTICIPANTS

1. PARTICIPANTS

<p>CAMBODIA</p> <p>SOPHEAP Seng Deputy Chief of Technical Bureau National Center for HIV/AIDS, Dermatology and STD (NCHADS) 254H, Street 6A, Phum Kean Klang Sangkat Prekleap Russey Keo <u>Phnom Penh</u> Tel: (855) 12 233417 Email: sengsopheap@nchads.org</p> <p>KHUN Kim Eam Deputy Chief of Technical Bureau National Center for TB and Leprosy Control No. 1, Street 278-95, Boeung Keng Kang 2, Khan Chamkar Morn <u>Phnom Penh</u> Tel: (855) 12 856 146 Fax: (855) 23 224 671 E-mail: kkimeam@yahoo.com</p> <p>SOPHEAB Heng Assistant to the Director HIV Surveillance National Center for HIV/AIDS Dermatology and STD (NCHADS) 254H, Street 6A, Phum Kean Klang Sangkat Prekleap Russey Keo <u>Phnom Penh</u> Tel: (855) 12 516 026 E-mail: hsopheab@nchads.org; hsopheab2002@yahoo.com</p>	<p>CHANDARA Mom Head, HIV and STI Laboratory National Center for HIV/AIDS, Dermatology and STD (NCHADS) 254H, Street 6A, Phum Kean Klang Sangkat Prekleap Russey Keo <u>Phnom Penh</u> Tel: (855) 97 8890 767 E-mail: mchandara@nchads.org</p> <p>TUON Sovanna PMTCT Program Manager National Maternal and Child Health Center <u>Phnom Penh</u> Tel: (855) 12 734 935 E-mail: sovannatuon@yahoo.com</p> <p>CHINA</p> <p>WU Zunyou Director, National Center for AIDS/STD Control and Prevention (NCAIDS) Chinese Center for Disease Control and Prevention <u>Beijing</u> Tel: (8610) 5890 0901 Fax: (8610) 5890 0900 E-mail: wuzy@263.net or wuzunyou@chinaaids.cn</p> <p>WANG Ailing Deputy Director, Department of Women's Health, National Center for Woman and Child's Health Chinese Center for Disease Control and Prevention <u>Beijing</u> E-mail: ailing@chinawch.org.cn</p>
---	--

<p>ZHOU Lin Director, Division of TB Care and Treatment National Center for Tuberculosis Chinese Center for Disease Control and Prevention <u>Beijing</u> E-mail: zhoulin@chinatb.org</p> <p>ZHANG Fujie Director Division of Treatment and Care National Center for AIDS/STD Control and Prevention (NCAIDS) Chinese Center for Disease Control and Prevention <u>Beijing 100050</u> Tel: (8610) 6303 9086 Fax: (8610) 6303 9072 E-mail: treatment@chinaaids.cn</p> <p>HONG KONG (CHINA)</p> <p>WONG Ka-hing Consultant, Special Preventive Programme 3/F Wang Tau Hon Clinic 200 Junction Road East Kowloon, <u>Hong Kong</u> Tel: (852) 31437288 Fax: (852) 2780 9580 E-mail: khwong@dh.gov.hk</p> <p>JAPAN</p> <p>Naoko ISHIKAWA Deputy Director, International Affairs Division Ministry of Health, Labour and Welfare Japan 1-2-2 Kasumigaseki, Chiyoda-Ku <u>Tokyo</u> Tel: (813) 5253 1111 E-mail: ishikawa-naokoaa@mhlw.go.jp n-ishikawa@it.ncgm.go.jp</p> <p>LAO PEOPLE'S DEMOCRATIC REPUBLIC</p> <p>Bounpheng PHILAVONG Director, National Centre for HIV/AIDS and STI, Ministry of Health Km. 3, Thadeua Road <u>Vientiane</u> Tel: (856) 20 2367 1175 Fax: (856) 21 315500 E-mail: pbounpheng@gmail.com, bounphengphilavong@yahoo.com</p>	<p>Phannasinh SYLAVANH Director, National Tuberculosis Centre TB Program Manager, Global Fund Unit Hygiene and Prevention Department Ministry of Health <u>Vientiane</u> Tel: (856) 21 219078 E-mail: chanmy.sramany@theglobalfundlao.org</p> <p>Phouthong RATTANAVONG Technical Officer, Focal Person for PMTCT Maternal and Child Health Centre Ministry of Health <u>Vientiane</u> Tel: (856) 21 452519 E-mail: ptmchc@yahoo.com</p> <p>MALAYSIA</p> <p>Sha'ari bin NGADIMAN Deputy Director of Disease Control (CDC) Head of HIV/STI Sector, Disease Control Division, Ministry of Health Malaysia Level 4, Block E10, Parcel E 22590 <u>Putrajaya</u> Tel: (603) 8883 4262 Fax: (603) 8883 4285 E-mail: drshaari@moh.gov.my</p> <p>Suzana MOHD HASHIM Senior Principal Assistant Director Disease Control Division, TB/Leprosy Sector Level 4, Block E10, Parcel E, Federal Government Administrative Building 62590 <u>Putrajaya</u> Tel: (603) 8883 4507 Fax: (603) 8883 4309 E-mail: suzanamhashim@moh.gov.my</p> <p>Ida Dalina binti NOORDIN Senior Principal Assistant Director Family Health Development Division Ministry of Health Malaysia Level 7 & 8, Block E10, Parcel E 22590 <u>Putrajaya</u> Tel: (603) 8883 2228 Fax: (603) 8883 6150 E-mail: dridalina@moh.gov.my</p>
--	---

MONGOLIA**AUMAKHAN Bulbulgul**

Specialist, Department of HIV/AIDS/STI
Surveillance
and Research
National Center for Communicable Diseases
NCCD Campus, Nam-Yan-Ju Street
Bayan-Zurkh District
Ulaanbaatar-210648
Tel: (976) 11 462421
E-mail: au_bulbul@yahoo.com

ENKHDALAI Sukhbaatar

Officer-in-Charge of Policy Implementation
and Coordination for Medical Services Quality
and Safety, Division of Medical Services
Ministry of Health
Government Building VIII, Olympic St-2
Ulaanbaatar-14210
Tel: (976) 9909 7887
Fax: (976) 11 320916
E-mail: esukhbaatar87@yahoo.com

DAVAADAGVA Oyunnemekh

Officer-in-Charge of Policy Implementation
and Coordination for the Prevention and Control of
STI/AIDS and Tuberculosis, Division of Public
Health
Ministry of Health
Government Building VIII, Olympic Street 2,
Ulaanbaatar-14210
Tel: (976) 9101 8078
E-mail: oyun788082@yahoo.com

PAPUA NEW GUINEA**Nick DALA**

National Program Manager
STI/HIV/AIDS
National Department of Health
P.O. Box 807
Waigani NCD
Tel: (675) 301 3737
Fax: (675) 301 3752
E-mail: mawedala@gmail.com

Elizabeth GANDE

Coordinator
National PPTCT Program
National Department of Health
Family Health Service Division
Boroko NCD
Tel: (675) 301 3779
Fax: (675) 323 9710
E-mail: Elizabeth_gande@yahoo.com

John Gomah MILLAN

Clinical Consultant
PNG Sexual Health Society
Boroko, NCD
E-mail: millangjohn@gmail.com

Peniel BOAS

Senior Medical Officer, Care and Treatment
National Health Department, P.O.Box 807
Waigani NCD
Tel: (675) 301 3747
Fax: (675) 301 3753
E-mail: pjboas@gmail.com

PHILIPPINES**Anna Marie Celina GARFIN**

Medical Specialist IV
National Center for Disease Prevention and
Control
Department of Health
San Lazaro Compound, Sta. Cruz
Manila
Tel: (632) 651 7800 ext. 2350
Fax: (632) 7117846
E-mail: garfinamc@yahoo.com

Genesis May J. SAMONTE

Medical Specialist III
National Epidemiology Center
2/F Building 19, Department of Health
San Lazaro Compound, Sta. Cruz
Manila 1003
Tel: (632) 495 0513
Fax: (632) 495 0513
E-mail: genesis.samonte@gmail.com

Naomi Ruth D. SALUDAR

Medical Specialist II
San Lazaro Hospital
Quiracada Street, Sta. Cruz
Manila
Tel: (632) 732 3777 Ext. 148
E-mail: nrdsaludar@yahoo.com

Elizabeth Freda O. TELAN

Medical Specialist II
San Lazaro Hospital
Department of Health
San Lazaro Compound, Sta. Cruz
Manila
Tel: (632) 309 9528
E-mail: betelan@yahoo.com

REPUBLIC OF KOREA

YOO Hyosoon

Research Scientist, Division of HIV and
Tuberculosis Control
Korea Centers for Disease Control and Prevention
Osong Health Technology Administration
Complex, 187 Osongsaeangmyeong 2(i)-ro
Yeongje-ri, Osong-eup, Cheongwon-gun
Chungcheonbuk-do
Tel: (82) 43 719 7328
Fax: (82) 43 719 7339
E-mail: hsyookcdc@daum.net

VIET NAM

BUI Duc Duong

Vice Director-General
Vietnam Authority of HIV/AIDS Control
135/3 Nui truc
Hanoi
Tel: (844) 3754 6574
E-mail: bdduong06@gmail.com

DUONG Thi Hai Ngoc

Expert of Maternal and Child Health Department
Ministry of Health
138A Giang Vo Street
Hanoi
Tel: (844) 3736 7082
Fax: (844) 3846 4060
E-mail: phuckhaingoc@gmail.com

TRINH Minh Hoan

Manager, Programme Steering Department
National Lung Hospital
463 Hoang Hoa Pham Tham Street,
Hanoi
Tel: (843) 832 6002
Fax: (843) 832 6162
E-mail: trinhhoanvl@yahoo.com

NGUYEN Vu Thuong

Deputy Head, Department of Disease Control
and Prevention
Pasteur Institute
167 Pasteur Street, District 3
Ho Chi Minh City
Tel: (84) 903 121 112
Fax: (848) 3823 1419
E-mail: nguyenthuong@yahoo.com;
nguyenthuong@Pasteur-hcm.org.vn

DO Thi Nhan

Chief of Care and Treatment Unit
Vietnam Authority of HIV/AIDS Prevention and
Control
Ministry of Health
135/3 Nui Truc Street
Hanoi
Tel: (84) 914 893 069
Fax: (844) 3846 5732
E-mail: dothinhan@gmail.com

UNITED STATES OF AMERICA

Natalie EXNER

Department of Biostatistics
Harvard School of Public Health
655 Huntington Avenue
Boston, MA 02115
United States of America
Tel: (1781) 2231750
E-mail: nexner@mail.harvard.edu

Michael Robert JORDAN

Assistant Professor of Public Health and Family
Medicine
Tufts University School of Medicine
Tufts Medical Center
800 Washington Street Box 41
Boston, MA
United States of America
E-mail: mjordan@tuftsmedicalcenter.org

2. TEMPORARY ADVISERS

<p>Thomas Tao CAI Director, AIDS Care China Room 601, Unit 1, Building 3 Jiangdong Yaolong Kangcheng 26 Lin Yu Road <u>Kunming</u> 650223, China Tel: (8613) 802769268 E-mail: aidscarecn@gmail.com</p> <p>Kai Man KAM Postgraduate Education Center School of Public Health, Faculty of Medicine Chinese University of Hong Kong <u>Shatin</u>, Hong Kong Tel: (852) 2252-8755 Fax: (852) 2635-4977 E-mail: kmkam@cuhk.edu.hk</p> <p>Jintana NGAMVITHAYAPONG-YANAI Senior Researcher The Research Institute of Tuberculosis Japan Anti-Tuberculosis Association 1-13-3-1201 Matsuyama, Kiyose-shi <u>Tokyo</u> 204-0022, Japan Tel: (81) 42 493 5766 Fax: (81) 42 492 8258 E-mail: jintanajip@yahoo.com; jintanajip@gmail.com</p> <p>Panusart(Midnight) POONKASETWATTANA Executive Director APCOM Secretariat Unit 201, 51/2 Ruamrudee III Building Soi Ruamrudee, Ploenchit Road <u>Bangkok</u> 10330, Thailand Tel: (662) 255 4410 E-mail: midnightp@apcom.org</p> <p>Hidangmayum Umesh SHARMA Treasurer Asian Network of People Who Use Drugs 83 Badrinath Apartment, Plot No. 18, Sector 4, Dwarka, <u>New Delhi</u> Tel: (91) 99 1054 7681 E-mail: umesh.sharma@anpud.info husharma@gmail.com</p>	<p>WANG Qianqiu Director, Department of STD Clinical Management National Center for STD Control Chinese Center for Disease Control and Prevention 12 Jiangwangmiao Road <u>Beijing</u>, China Tel: (8613) 951921995 E-mail: wangqq@ncstdlc.org</p> <p>WANG Xiaochun Director Division of Hepatitis C and STD Prevention National Center for AIDS/STD Control and Prevention (NCAIDS) Chinese Center for Disease Control and Prevention No. 27 Nan Wei Road <u>Beijing</u>, China Tel: (8610) 6304 0311 E-mail: wxcaids@hotmail.com</p> <p>XIA Gang Director, Division of HIV/AIDS Prevention and Management, Department of Disease Control Ministry of Health 1 Xizhimenwai Nanlu <u>Beijing</u> 100044, China Tel: (8610) 6879 2361 Fax: (8610) 6879 2342 E-mail: xiagang@moh.gov.cn</p> <p>XU Keyi Director, WHO Collaborating Centre for Comprehensive Management of HIV Treatment and Care Ditan Hospital <u>Beijing</u> 100015, China Tel: (8613) 601070307 E-mail: xukeyi8567@sina.com</p> <p>XING Hui Deputy Director Division on Virology and Immunology National Center for AIDS/STD Control and Prevention (NCAIDS) Chinese Center for Disease Control and Prevention 155 Changbai Road, Changping District <u>Beijing</u> 102206, China Tel: (8610) 5890 0647 Fax: (8610) 5890 0980 E-mail: xingh@chinaaids.cn</p>
---	---

3. OBSERVERS

<p>Centers for Disease Control and Prevention</p> <p>Marc BULTERYS Director CDC Global AIDS Program - China <u>Beijing</u> 100600, China E-mail: zbe2@cdc.gov</p> <p>Achara TEERARATKUL Chief, Strategic Information Global AIDS Program/Thailand and Asia Regional Office, U.S. Centers for Disease Control and Prevention Ministry of Public Health Muang, <u>Nonthaburi</u> 11000, Thailand Tel: (662) 580 0669 ext 552 E-mail: agt4@th.cdc.gov</p> <p>National Center for Global Health and Medicine</p> <p>Shinya TSUZUKI Senior Resident, Department of Paediatrics National Center for Global Health & Medicine 1-21-1 Toyama, Shinjuku-ku <u>Tokyo</u> 162-8655, Japan Tel: (813) 3403-3388 Fax: (813) 3205 7860 E-mail: s-tsuzuki@it.ncgm.go.jp;</p> <p>WHO Collaborating Center for Comprehensive Management of HIV Treatment and Care</p> <p>WU Yan Office Director NO8, Jingshun Dongjie, Chaoyang District, Beijing, China Tel: (8613) 811661956 Email: ditanwuyan@163.com</p>	<p>National Center for STD Control</p> <p>GONG Xiangdong National Center for STD Control Chinese Center for Disease Control and Prevention 12 Jiangwangmiao Road <u>Beijing</u>, China Tel: (8613) 951921995 E-mail: wangqq@ncstdlc.org</p> <p>National Center for Maternal and Child Health China</p> <p>QIAO Yaping National Center for Maternal and Child Health Chinese Center for Disease Control and Prevention <u>Beijing</u>, China E-mail:</p> <p>WANG Fang National Center for Maternal and Child Health Chinese Center for Disease Control and Prevention <u>Beijing</u>, China Tel:13501383918 E-mail: wangf@chinawch.org.cn</p> <p>WANG Qian National Center for Maternal and Child Health Chinese Center for Disease Control and Prevention <u>Beijing</u>, China E-mail: wq197889@hotmail.com</p> <p>Hou Yucaic, China</p> <p>Gang Meng, China</p> <p>Ma Yanling, China</p> <p>Wei Tao, China</p> <p>Zou Ya Qin, China</p> <p>Pang Yu Ying, China</p>
--	--

<p>Rain Sky Group</p> <p>CHEN Yanlin Rain Sky Group <u>Yunan, China</u> Tel: 13368809889 E-mail: Cyt2010@163.com</p> <p>The Research Institute of Tuberculosis</p> <p>Kuniko MURAKAMI Director, International Training Course Department of International Cooperation Research Institute of Tuberculosis 3-1-24 Matsuyama, Kiyose City <u>Tokyo, Japan</u> E-mail: kmurakami@jata.or.jp</p> <p>Trans China</p> <p>ZHAO Jian Gang Coordinator Trans China Kunming, China Tel: (86) 130 8536 5769 Fax: (86) 871 3320786 E-mail: transchina2008@gmail.com; zhaogang9940@hotmail.com</p> <p>United Nations Children's Fund</p> <p>Wing-Sie CHENG Regional Adviser, HIV and AIDS United Nations Children's Fund East Asia Pacific Regional Office 19 Phra Athit Road <u>Bangkok</u> 10200, Thailand Tel: (662) 356 9464 Fax: (662) 280 3563 E-mail: wscheng@unicef.org</p> <p>Etienne POIROT Chief of HIV/AIDS Programme UNICEF China 12 Sanlitun Lu <u>Beijing</u> 100600, China Tel: (86 139) 10975181 E-mail: epoirot@unicef.org</p>	<p>United States Agency for International Development</p> <p>Maria AU Senior Monitoring and Evaluation Advisor Office of HIV/AIDS 1201 Pennsylvania Avenue, NW #200 <u>Washington, D.C.</u> 20004 United States of America Tel: (1202) 808 3870 E-mail: mau@usaid.gov</p> <p>Yunnan AIDS Care Center</p> <p>LAO Yunfei Yunnan AIDS Care Center <u>Yunan, China</u> Tel:13354905957 E-mail: laoyunfei@hotmail.com</p> <p>Yunnan Institute of Drug Dependence Research</p> <p>LI Jianhua Yunnan Institute of Drug Dependence Research Tel: 13078796686 E-mail: leejianhua77@gmail.com</p> <p>Yunnan Provincial Center for Disease Control and Prevention</p> <p>LU Lin Director Yunnan Provincial Center for Disease Control and Prevention E-mail: lulin@yncdc.cn</p> <p>JIA Manhong Director Center for AIDS/STD control and Prevention Yunnan Provincial CDC Tel:13908851060 E-mail:jmanhong@yahoo.com.cn</p> <p>Yunnan Provincial Maternal and Child Health NI Junxue Tel:087165177000 E-mail:njxsx@163.com</p> <p>ZHANG Yan Tel:13608809201 Email:yncdczy@126.com</p> <p>YANG Haixia Tel:15925220517 E-mail:yanghaixiayn@126.com</p>
---	---

4. SECRETARIAT

<p>WHO/WPRO</p> <p>John EHRENBURG Director Combating Communicable Diseases WHO Regional Office for the Western Pacific P.O. Box 2932, 1000 <u>Manila</u>, Philippines Tel: (632) 528 9701 Fax: (632) 521 1036 E-mail: ehrenbergj@wpro.who.int</p> <p>Ying-Ru LO Team Leader HIV/AIDS and STI WHO Regional Office for the Western Pacific P.O. Box 2932, 1000 <u>Manila</u>, Philippines Tel: (632) 528 9714 Fax: (632) 521 1036 E-mail: loy@wpro.who.int</p> <p>Katsunori OSUGA Medical Officer Stop TB WHO Regional Office for the Western Pacific P.O. Box 2932, 1000 <u>Manila</u>, Philippines Tel: (632) 528 9709 Fax: (632) 521 1036 E-mail: osugak@wpro.who.int</p> <p>YU Dongbao Epidemiologist HIV/AIDS and STI WHO Regional Office for the Western Pacific P.O. Box 2932, 1000 <u>Manila</u>, Philippines Tel: (632) 528 9711 Fax: (632) 521 1036 E-mail: yud@wpro.who.int</p> <p>ZHAO Pengfei Technical Officer (Prevention) HIV/AIDS and STI WHO Regional Office for the Western Pacific P.O. Box 2932, 1000 <u>Manila</u>, Philippines Tel: (632) 528 9718 Fax: (632) 521 1036 E-mail: zhaop@wpro.who.int</p>	<p>WHO/CAMBODIA</p> <p>Masami FUJITA Team Leader HIV-TB Medical Officer HIV/AIDS Representative Office in Cambodia P.O.Box 1217 No.177-179 Pasteur (St.51) (Corner 254) Sangkat Chak Tomouk Phnom Penh,Cambodia Tel: (855) 23 216 610 Fax: (855) 23 216 211 Email: fujitam@wpro.who.int</p> <p>WHO/CHINA</p> <p>Nicole SEGUY Team Leader HIV/AIDS and STI WHO CHINA 401, Dongwai Diplomatic Office Building 23, Dongzhimenwai Dajie, Chaoyang District <u>Beijing</u> 100600 Tel: (8610) 6532 7190 Fax: (8610) 6532 2359 E-mail: :seguyn@wpro.who.int</p> <p>ZHANG Lan National Officer HIV/AIDS, TB WHO CHINA 401 Dongwai Diplomatic Office Building 23, Dongzhimenwai Dajie, Chaoyang District <u>Beijing</u> 100600 Tel: (8610) 6532 7189 Fax: (8610) 6532 2359 E-mail: zhangl@wpro.who.int</p> <p>WHO/LAO PEOPLE'S DEMOCRATIC REPUBLIC</p> <p>Dominique RICARD Medical Officer HIV/AIDS and STI Office of the WHO Representative in the Lao People's Democratic Republic Ban Phonxay, 23 Singha Road <u>Vientiane</u> Tel: (856) 21 353 902 Fax: (856) 21 353 905 E-mail: ricardd@wpro.who.int</p>
--	---

WHO/MONGOLIA**Naraantuya JADAMBAA**

National Professional Officer
Office of the WHO Representative in Mongolia
Ministry of Health
Government Building No. 8
Ulaanbaatar

Tel: (976) 11-327870

Fax: (976) 11-324683

E-mail: jadambaan@wpro.who.int

WHO/PAPUA NEW GUINEA**Fabian NDENZAKO**

Team Leader, HTM
Office of the WHO Representative
in Papua New Guinea
4th Floor, AOPI CENTRE
Waigani Drive, Port Moresby

Tel: (675) 325-7827

Fax: (675) 325-0568

E-mail: ndenzakof@wpro.who.int

WHO/VIET NAM**Fabio MESQUITA**

HIV Senior Adviser and Team Leader
Office of the WHO Representative in Viet Nam
63 Tran Hung Dao Street, Hoan Kiem District,
Hanoi

Tel: (844) 3943 3846

Fax: (844) 3943 3740

E-mail: mesquitaf@wpro.who.int

Masaya KATO

Medical Officer
HIV Care and Treatment
Office of the WHO Representative in Viet Nam
63 Tran Hung Dao Street, Hoan Kiem District,
Hanoi

Tel: (844) 3943 3846

Fax: (844) 3943 3740

E-mail: katom@wpro.who.int

WHO/HQ**Lori NEWMAN**

Medical Officer, Controlling Sexually Transmitted
and Reproductive Tract Infections (STI)
Department of Reproductive Health and Research
(RHR)

Avenue Appia 20, 1211 Geneva 27

Tel: (41 22) 791 4740

E-mail: newmanl@who.int

Haileyesus GETAHUN GEBRE

Coordinator
Tuberculosis/HIV and Community Engagement
Department of STOP TB
Avenue Appia 20, 1211 Geneva 27
Tel: (41 22) 79 11862
E-mail: getahunh@who.int

Silvia BERTAGNOLIO

Medical Officer
HIV Technologies and Commodities
Avenue Appia 20, 1211 Geneva 27
Tel. 41 22 79 13958
E-mail: bertagnolios@who.int

UNAIDS REGIONAL SUPPORT TEAM**Steven J. KRAUS**

Director
UNAIDS Regional Support Team
UN Building Room 906, Rajadamnern Nok
Avenue, Bangkok 10200
Thailand
E-mail: krauss@unaids.org

UNAIDS REGIONAL SUPPORT TEAM, Asia and the Pacific**Vladanka ANDREEVA**

Regional Strategic Intervention Adviser
Prevention and Treatment
UNAIDS Regional Support Team, Asia and the
Pacific
UN Building Room 906, Rajadamnern Nok
Avenue, Bangkok 10200, Thailand
Tel: (662) 680 4120
E-mail: AndreevaV@unaids.org

UNAIDS, CAMBODIA**Dr Robert VERBRUGGEN**

Senior Strategic Information Adviser
UNAIDS Cambodia
House No. 221, Street No. 51 (Pasteur)
Sangkat Boeung Keng Kang I
Khan Chamkar Mon,
Phnom Penh, Cambodia
Tel: (855 23) 219 340
E-mail: verbruggenb@unaids.org

Annex 2

UNAIDS, CHINA

Nana Taona KUO

Officer in Charge
UNAIDS Country Office, China
2-8-1 Tayuan Diplomatic Building
14 Liangmahe Nanlu, Chaoyang District
Beijing 100600, China
Tel: (8610) 8532 2226 Ext 122
Fax: 8610-8532 2228
E-mail: kuot@unaids.org

Dr Guy TAYLOR

UNAIDS Country Office, China
2-8-1 Tayuan Diplomatic Building,
14 Liangmahe Nanlu, Chaoyang District
Beijing 100600, China
E-mail: TaylorG@unaids.org

Dr CHEN Zhongdan

Strategic Information Adviser
2-8-1 Tayuan Diplomatic Building,
14 Liangmahe Nanlu, Chaoyang District
Beijing 100600, China
E-mail: Chenz@unaids.org

UNAIDS, PAPUA NEW GUINEA

Stuart WATSON

Country Coordinator
UNAIDS Country Office, Papua New Guinea
P O Box 1041, Port Moresby, NCD
Level 1, Ela Beach Tower, Bramwell Street
Port Moresby
Tel: (675) 321 7999
Fax: (675) 321 3968
Email: watsons@unaids.org

UNAIDS, PHILIPPINES

Teresita P. BAGASAO

Country Coordinator
UNAIDS Country Office, Philippines
31/F RCBC Plaza, Ayala Avenue
corner Sen. Gil J. Puyat Avenue
Makati City, 1226, Philippines

UNAIDS, PHILIPPINES

Alankar MALVIYA

Senior Policy and Strategy Adviser
UNAIDS Country Office, Viet Nam
UNAIDS Vietnam
No.24 Lane 11 Trinh Hoai Duc St
Ha Noi, Viet Nam
Tel: (84) 43734 2824
Fax: (84) 43734 2825
E-mail: MalviyaA@unaids.org

