EXTERNAL REVIEW OF THE NATIONAL HEALTH SECTOR RESPONSE TO HIV AND SEXUALLY TRANSMITTED INFECTIONS 2013

Republic of the Philippines





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WHO Library Cataloguing-in-Publication Data

External review of the national health sector response to HIV and sexually transmitted infections 2013: Republic of the Philippines

1. Acquired immunodeficiency syndrome. 2. HIV infections. 3. Sexually transmitted diseases. I. World Health Organization Regional Office for the Western Pacific.

ISBN 978 92 9061 706 8 (NLM Classification: WC 503.6)

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Contents

Acknowledg	ements	iv
Abbreviations		
Executive su	mmary	vii
Organization and conduct of the external review		
The report		xi
Part 1. Strat	egic information	1
1.1	Mapping, counting and assessing risks of key	populations 1
1.2	Assessing outcome and impact: moving beyo	nd HIV prevalence 8
1.3	Monitoring retention and quality across healt	h services 11
Dart) Cont	num of mountion, and motion and	16
2 1	Minimum prevention, care and treatment	ations 16
2.1	Withintum prevention packages for key popul	
2.2	Laboratory support	32
2.3	Laboratory support	ion ol our operation de
2.4	Beformel and access to and use of treatment of	ional exposures 49
2.5	Referral and access to and use of treatment, ca	are
2.6	and support services	52
2.6	Pre-antiretroviral therapy	54
2.7	Norms, standards and practices of antiretrovi	ral therapy 56
2.8	Prevention of mother-to-child transmission of	t HIV
2.0		61
2.9	Clinical and biological monitoring and viral r	esistance 64
2.10	Overcoming contextual, structural and system	nic barriers 66
2.11	Health financing	76
2.12	Research: generating new knowledge	79
2.13	Moving forward	81
Annexes		85
Anne	(1 List of review team members (Team B)	85
Anne	2 Work schedule	88
Anne	3 List of sites visited and persons met	90
Anno	4 Research issues of high relevance to the	national health
11110	sector response to HIV / AIDS in the Phil	inning 05
Anno	5 Summary of recommondations	07
List of boyo	figures and tables	
References	, iiguies allu lables	113
References		114

Acknowledgements

First and foremost, the review team expresses its thanks and support to people living with HIV in the Philippines. They confront HIV with great courage and resilience despite the difficulties they encounter as a result of sparsely available prevention, treatment and care services as well as unabated stigma and discrimination.

The review team also extends its thanks to the Department of Health and the Philippine National AIDS Council for having invited the team to review the accomplishments, constraints and opportunities for further progress in the national response to HIV and sexually transmitted infections (STIs). The team also warmly acknowledges the members of the national and external secretariats who supported its work managerially, administratively and technically with great efficiency, commitment and courtesy. They played a critical role in assembling documents, analysing data, securing site visits and appointments, and making sure the evaluators kept their appointments.

Equally important to the conduct of this review were the many health workers, social workers and others at all levels of governmental and nongovernmental systems who took precious time out of their busy schedules to meet with the team members, while also keeping an eye on their routine work in their offices, crowded clinics, laboratories and other facilities.

The review team was deeply impressed by the competency and dedication of first-line actors who, since the emergence of HIV in the Philippines, have borne the brunt of the national response to HIV and STIs, often in understaffed, underfunded and suboptimal environments. Health-care providers, counsellors, peer educators, community-based workers and nongovernmental organizations deserve recognition for playing a pivotal role in the extension of services to key populations. They should be credited for saving the lives of many men, women and children infected or affected by HIV, while also improving their quality of life.

Finally, the review team offers its heartfelt support to communities, families and individuals who recently confronted two major natural disasters. While the review was unfolding, the Bohol earthquake and Typhoon Haiyan (Yolanda) took a devastating toll in lives, property, basic needs and means of survival for people living in central Philippines. Reportedly, services extended to people living with HIV in the disaster areas were severely affected, and the sustained provision of care and treatment services to survivors was seriously hampered. The review team extends its condolences to the affected families and wishes their communities a speedy recovery. It sincerely congratulates rescue staff for their courageous and relentless work on the ground in the disaster areas.

Abbreviations

	11 12 1 1 2
ALP	alkaline phosphatase
AMTP	AIDS Medium-Term Plan
ANC	antenatal clinic
ART	antiretroviral therapy
ARV	antiretroviral
ASEAN	Association of Southeast Asian Nations
BHFS	Bureau of Health Facilities and Services
BSF	blood service facility
CBO	community-based organization
CD4	T-lymphocyte cell bearing CD4 receptor
DDB	Dangerous Drugs Board
DOT	directly observed treatment
DOTS	directly observed treatment short course
DSWD	Department of Social Welfare and Development
FIA	onzyme immunoassay
EDD	Estimation and Projection Package
ENT	external quality accurance system
EQA5 FWI	early warning indicator
	Early warning indicator
	formale and prug Authority
	LINV / AIDC core home
	Holth Action Information Natural
ΠΑΙΝ	
	HIV courseling and testing
HIVDK	HIV drug resistance
HIC	HIV testing and counselling
IDO	Infectious Disease Office
IEC	information, education and communication
IHBSS	Integrated HIV Behavioral and Serologic Surveillance
IRIS	immune reconstitution inflammatory syndrome
ISO	International Organization for Standardization
IPT	isoniazid preventive therapy
LGU	local government unit
MARPs	most-at-risk populations
M&E	monitoring and evaluation
MSM	men who have sex with men
MSW	male sex worker
MTB	mycobacterium tuberculosis
NASA	National AIDS Spending Assessment
NAAT	nucleic acid amplification test
NASPCP	National AIDS and STI Prevention and Control Program
NCDPC	National Center for Disease Prevention and Control
NCHFD	National Center for Health Facilities Development
NCR	National Capital Region
NEC	National Epidemiology Center
NRL	National Reference Laboratory
NVBSP	National Voluntary Blood Services Program
OFW	overseas Filipino worker
OOP	out-of-pocket (expenditures)
PAFPI	Positive Action Foundation of the Philippines Incorporated
PCP	pneumocystis jiroveci pneumonia
PCR	polymerase chain reaction
	1 /

PEM	post-exposure management
PEP	post-exposure prophylaxis
PhilHealth	Philippine Health Insurance Corporation
PHP	Philippine peso
PICT	provider-initiated counselling and testing
PLHIV	people living with HIV
PNAC	Philippine National AIDS Council
PMTCT	prevention of mother-to-child transmission
PWID	people who inject drugs
QMS	quality management system
RAV	rapid assessments of vulnerability
RITM	Research Institute for Tropical Medicine
SACCL	STD-AIDS Cooperative Center Laboratory
SHC	social hygiene clinic
SO	strategic objective
SOP	standard operating procedure
SRH	sexual and reproductive health
SSESS	Sentinnel STI Etiologic Surveillance System
STI	sexually transmitted infection
TAG	technical advisory group
ТВ	tuberculosis
TCS	treatment, care and support
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
VCT	voluntary counselling and testing
WHO	World Health Organization

This review was requested by the Department of Health of the Philippines and the Philippine National AIDS Council (PNAC) and conducted with the support of the World Health Organization (WHO) and the Joint United Nations Programme on HIV/AIDS (UNAIDS). An external review of the health sector response to HIV and Sexually Transmitted Infections in the Philippines was conducted by a team of national and external reviewers (Team B) at the request of the Department of Health. A broader review of the multisectoral response to HIV was conducted simultaneously in September and October 2013 by another team of consultants (Team A) under the auspices of the Philippine National AIDS Council (PNAC). The aim of this combined review was to assess progress and constraints at the midterm of implementation of the *Fifth AIDS Medium-Term Plan 2011–2016* (AMTP5). AMTP5 is structured around five strategic objectives, two of which are directly relevant to and managed by the health sector, namely prevention, and care and treatment.

In an effort to limit duplication of work and to ensure there were no major gaps in the scope of the review, tasks specifically assigned to the two teams had to be clearly delineated. Team A, which considered the multisectoral response, examined among other issues approaches such as HIV prevention in the population at large and in particular among young people and other populations exposed to a moderate or low risk of infection. Team B, tasked with examining the health sector response, focused its attention on populations at greater risk, including female and male sex workers, people who inject drugs (PWID), men who have sex with men (MSM) and transgender people – all of whom who will be collectively referred to in this report as "key populations" or occasionally as "most-at-risk populations".

Given the wide scope of the review assigned to Team B, it was further subdivided into smaller teams, each assigned specific tasks. This enabled Team B to include almost 40 sites in its review (14 sites in the National Capital Region, seven in Iloilo, 11 in Cebu and seven in Davao). In each of these areas, team members met with and visited a wide variety of authorities and governmental and nongovernmental facilities, including mayors, municipal health officers, social hygiene clinics (SHCs), public and private hospitals, health centres, maternal and child health centres, epidemiological surveillance offices, laboratories, community-based organizations, prisons/jails, and rehabilitation centres. Members of the team also interviewed representatives of key populations during site visits, either individually or in the form of focus group discussions. This report covers the findings of the review conducted by Team B. It will, however, be incorporated in a combined report presenting key findings of both teams.

A summary of recommendations arising from Team B's review is presented in Annex 5. The list is quite long and detailed as it addresses several readerships contributing to the health sector's response to HIV and sexually transmitted infections (STIs), including the governmental, nongovernmental and private sectors. In an attempt to protect and promote the continuum of prevention, care and treatment, the structure of this report cuts across these dimensions of the health sector response to HIV and STIs in the Philippines. A recommendation to this effect is applicable to the next national strategic plan on HIV/AIDS and STI intended to cover 2014 to 2020 (See Section 2.13).

Overall, Team B acknowledges that much has been done over the last two decades to keep the HIV epidemics at a low level of transmission and to control STIs. In particular, the review noted that until a few years ago the HIV epidemic had remained concentrated in key populations, essentially female sex workers (FSWs) and their clients. Since the beginning of this decade, however, a sudden and sharp rise in HIV prevalence occurred among MSM and PWID. Unfortunately, ongoing efforts to prevent, treat and support these vulnerable populations did not shift direction with appropriate strategies. Most programme activities remain focused on FSWs, mostly through the vast and busy network of SHCs, while HIV continues to spread, unabated, among other key populations that have little or no access to services suited to their needs.

- This report calls for an important strategic shift towards investing greater resources and effort in newly affected key populations while continuing to provide essential services to sex workers in particular those described as "freelance" and who work outside sexoriented establishments. The report also call attention to the imperative need for SHCs to reach out to key populations through partnerships with community-based organizations, in particular networks of people from affected communities and people living with HIV (PLHIV). Only then, people at greatest risk of HIV infection will access prevention, care and treatment to which, by law, they are entitled.
- The report also calls on the National AIDS and STI Prevention and Control Program to prepare with great urgency to respond to the rising needs for quality HIV testing and counselling within key populations at greatest risk, the timely enrolment in antiretroviral therapy by people meeting eligibility criteria, and the strengthening of the cascade of services as increasing numbers of individuals become aware of their HIV infection status and adhere to sustained treatment.

The Department of Health is strongly advised to seek additional human and financial resources at a time when the fast-spreading epidemics among key populations threaten to spin out of control. The ongoing political and administrative decentralization process in the Philippines surely has merits. Yet, in the case of HIV, which could rapidly become a major public health emergency, measures should be taken to ensure that national policies, norms and standards are widely disseminated, known and implemented at the local government level. Health staff members engaged in the response to HIV have demonstrated, with exemplary dedication, their commitment to curb the spread of HIV and care for PLHIV, but they need additional resources from both local and national governments to continue to do so successfully.

Organization and conduct of the external review

1. Introduction

In July 2013, the Department of Health requested the World Health Organization (WHO) to organize an external review of the health sector response to HIV and sexually transmitted infections. The review conducted in October 2013 would encompass HIV-related public health issues, including sexually transmitted infections (STIs) and tuberculosis. The review would be conducted simultaneously with a broader review of the multisectoral response to HIV conducted in September and October by another team of consultants under the auspices of the Philippine National AIDS Council (PNAC). The aim of this combined review was to assess progress and constraints at the midterm of implementation of the *Fifth AIDS Medium-Term Plan 2011–2016* (AMTP5). AMTP5 is structured around five strategic objectives, two of which were directly relevant to and managed by the health sector, namely prevention, and care and treatment.

2. Two review teams, one goal, one report

During discussions among the agencies sponsoring the review – the Department of Health, PNAC, WHO and the Joint United Nations Programme on HIV/AIDS (UNAIDS) – and the chairpersons of the two review teams, it was agreed that the reviews performed by Team A and Team B would complement one another. Team A would take responsibility for the overall review, its chairperson acting as the coordinator of the entire exercise, and would evaluate progress against Strategic Objectives 3, 4 and 5 of the AMTP5. Team B would focus its review on the health sector responses to HIV and related diseases, with a strong focus on key populations, covering Strategic Objectives 1 and 2. In order to keep duplication of work to a minimum and leave no gaps within the scope of review, an "Inception Note" developed by Team A and amended by Team B described the overall review objectives, methods and expected outcomes. This preparatory work met the approval of entities directly engaged in this review, namely PNAC, the Department of Health–National Center for Disease Prevention and Control (NCDPC), WHO and UNAIDS.

3. Reviewing a common strategic plan

Most of the health sector's responsibilities were enshrined in Strategic Objectives 1 and 2 of the AMTP5, and its work expanded to other strategic objectives. Thus, the tasks assigned to Teams A and B had to be further delineated. As an example, HIV prevention approaches as implemented in the population at large, in particular among young people, overseas workers, employees in industry, private business or administration, migrants, and other populations exposed to a moderate or low risk of infection were assigned to Team A. Meanwhile, Team B focused its attention on populations at greater risk, including female and male sex workers, people who inject drugs, men who have sex with men, and transgender and transsexual people who will be collectively referred to in this report as "key populations" or occasionally as "most-at-risk populations".

Once the division of tasks for the two review teams had been mapped out and confirmed in informal meetings of the two team chairpersons and the lead agencies overseeing the review, Team A began its work and had already made significant progress by the time Team B arrived in Manila. Team B was briefed in Manila right after its arrival and promptly deployed to review documents, interview key informants, monitor focus groups discussions and observe work at various sites according to a pre-set schedule. The membership of Team B appears in Annex 1.

4. Team B: process of review of the health sector response to HIV

Within the broader scope of the AMTP5 review, the review scope and expected outcomes assigned to Team B were spelt out by the Department of Health as shown in Box 1.

Box 1. Scope and expected outcomes of the review, Department of Health, **Philippines** 1. Review: overall programme impact, coverage and outcomes; progress towards achieving the goals and objectives of the health sector component of the AMTP5: ways by which the HIV and STI burden may have changed across sub-populations and how the programme has reached them; other non-health determinants that may have contributed to increase in HIV and STI risk factors: overall technical, administrative and financial management of the programme, identifying constraints and facilitating factors (health financing); data quality and management capacity to monitor trends, plus the procurement and supply management systems; progress made vis-à-vis previous reviews; and communication and collaboration among implementing partners. 2. Analyse how various partners have contributed to the observed impact, coverage and outcomes. 3. Make recommendations for: • strengthening programme implementation; • strategic direction of the programme over the next five years to inform drafting of a new longterm Health Sector Strategy 2014-2020; and possible funding options and how donor contributions can be improved to accelerate HIV programme implementation. Given the wide scope of the review assigned to Team B, it was further subdivided into smaller teams, each assigned specific tasks. This enabled Team B to include almost 40 sites in its review (14 sites in the National Capital Region, seven in Iloilo, 11 in Cebu and seven in Davao). In each of these areas, team members met and visited a wide variety of local

authorities and facilities – mayors, municipal health officers, social hygiene clinics, public and private hospitals, health centres, maternal and child health centres, epidemiological surveillance offices, laboratories, community-based organizations, nongovernmental organizations, prisons/jails and rehabilitation centres. Members of the team also interviewed members of key populations during site visits, either individually or in the form of focus group discussions.

The report

This report was prepared with assistance from members of the Department of Health and WHO secretariat. Past and current national and external consultants to the National AIDS and STI Prevention and Control Program in the Philippines (NASPCP) also contributed to this report. The report is intended to address the expected deliverables defined by the Department of Health and the terms of reference formulated by the Philippine National AIDS Council (PNAC). A condensed version of this report has been integrated in the overall review report commissioned by PNAC.

In a departure from usual practice, the first part of this report addresses issues of programme monitoring and review (Part 1, Sections 1.1–1.3). It would be customary to begin a report such as this by first presenting review findings concerning the sequence of the managerial processes of the NASPCP and end the report with considerations relevant to monitoring and review. However, the Review Team felt that it would encourage priority action on a very weak link among components of the NASPCP to give prominence first to monitoring and review and, more generally, to strategic information. The aim of this approach is to stimulate action on the monitoring and review of the cascade of services throughout the prevention, care, support and treatment continuum advocated globally and regionally as part of HIV best practices.

Overall, the team was very satisfied with the openness of authorities who on the national and local levels were most willing to provide access to facilities the teams wished to visit and to provide opportunities for confidential interviews of key informants. The Department of Health and the WHO country office staff supporting Team B efficiently arranged the logistics of the review, which were occasionally hampered by traffic congestion in Manila and by an abrupt, severe disruption of the domestic airline schedule as field reviews in distant cities were concluded. Overall, however, the review schedule was reasonably well adhered to and adjusted with minimum inconvenience.

The collection of information took about 10 days. Then, over three days, the teams pooled their information, formulated agreed-upon key recommendations and fleshed out their report around a table of contents. The results of the many observations and findings accumulated by the team are presented in this report, together with salient issues and recommendations aimed at alleviating some of the major obstacles hampering further progress of the national health sector's response to HIV in the Philippines.

1.1 Mapping, counting and assessing risks of key populations

Attempts have been made through a variety of studies, using different assessment methods, to estimate the size of key populations and define their risk behaviours and other factors of vulnerability to acquiring HIV infection and accessing care and treatment. These studies, of which the biannual Integrated HIV Behavioral and Serologic Surveillance (IHBSS) surveys should constitute a central piece, have shown that the HIV epidemics in the Philippines are highly concentrated in key populations, in particular among people who inject drugs (PWID) and men who have sex with men (MSM). Accordingly, this report strongly underscores the need to consider these populations as the utmost priority in the targeting of beneficiary populations. Risk assessment, the monitoring and review of behavioural trends, and outcome and impact measurements should provide the evidence needed to inform policy and the design and implementation of HIV prevention, care and treatment and the allocation of resources.

1.1.1 Risk assessment

The Philippines has developed a robust surveillance system for HIV and sexually transmitted infections (STIs) that incorporates many of the components recommended by WHO and the Joint United Nations Programme on HIV/AIDS (UNAIDS) for concentrated HIV epidemics (Table 1). The cornerstone of this system, as in any concentrated epidemic, are biological and behavioural surveys of most-at-risk populations: the Philippine IHBSS survey for MSM, for registered and freelance female sex workers (FSWs) and for PWID is conducted every two years and involves testing for other STIs, as well as sampling and recruitment methods that are appropriate for hard-to-reach, stigmatized populations, including time-location sampling for MSM and FSWs and respondent-driven sampling for PWID. (1) The IHBSS was initiated in 2005, following the integration of existing biological surveillance (1993) and behavioural surveillance surveys (1997). Initially, 10 cities were included for FSWs and MSM and three cities for PWID, with additional sites added over time to meet reporting requirements of the Global Fund to Fight AIDS, Tuberculosis and Malaria. The valuable trend data produced by the IHBSS have proved instrumental in allowing the timely detection of the recent and rapid increases in HIV prevalence among PWID, MSM and freelance FSWs beginning in 2007. A formative stage preceding each round of the IHBSS includes mapping and enumeration of MSM and FSWs to support size estimation and the targeting of local prevention activities. The 2013 IHBSS surveillance round added transgender women as a new key population (in Cebu), following a recent global review of evidence of a high burden of HIV in this group globally. (2)

National HIV and STI case reporting systems (for etiological diagnosis of syphilis, hepatitis B and gonorrhoea) are also in place with high coverage of health facilities. In 2012, coverage of the Sentinel STI Etiologic Surveillance System (SSESS) included 83% of public and private facilities reporting, exclusive of the Department of Health social hygiene clinics (SHC).^a Both the HIV and STI reporting systems capture data that allow disaggregation by age, sex and the most-at-risk groups tracked by the IHBSS. In addition, the HIV and AIDS registry captures initial CD4 and symptomatic versus asymptomatic cases to allow for disaggregation of cases diagnosed as advanced HIV infection.

^a The coverage figure is based on analysis of the database of the SSESS conducted as a part of this review.

Tracking of HIV deaths began only in January 2013, with the introduction of national mandatory reporting of HIV deaths, so that there is currently very limited information on HIV mortality.

Drug resistance testing among HIV-positive participants of the IHBSS has reportedly been conducted, but is not mentioned in either the study protocol nor in any reports or findings available for this review. The National Epidemiology Center (NEC) of the Department of Health manages all of the above surveillance activities. In addition, NEC develops estimates and projections of the number of people living with HIV (PLHIV) and the impact of HIV response by using UNAIDS Estimation and Project Package (EPP) and Spectrum models, and more recently, the Asian Epidemic Model. NEC has also carried out prioritization exercises drawing on IHBSS data and size estimates, leading to classification of cities as Category A (highest priority for HIV interventions), B and C, and others (not prioritized). The prioritization (Table 1) is widely used as a basis for geographic targeting of HIV activities.

Although the review identified important gaps in the kinds of data produced by surveillance in the Philippines (noted below) the most pressing issue relates to analysis, dissemination and use of existing data. Key achievements, limitations and recommendations regarding risk assessment follow.

Surveillance component	Methods	Geographic coverage of data	Frequency
IHBSS	 HIV and STI testing Face-to-face behavioural questionnaire 		
MSM	Time-location sampling	Angeles, Baguio, Cagayan de Oro, Cebu, Davao, General Santos, Iloilo, Zamboanga, Mandaue, Bacolod, Pasay, Quezon City, Makati, Marikina, Pasig, Mandaluyong, Manila, Caloocan	Every two years
FSW (registered and freelance)	Time-location sampling	Angeles, Baguio, Cagayan de Oro, Cebu, Davao, General Santos, Iloilo, Zamboanga, Mandaue, Bacolod, Caloocan, Makati, Mandaluyong, Manila, Marikina, Pasig, Pasay, Quezon	Every two years
PWID	Respondent-driven sampling	Cebu, General Santos, Mandaue, Zamboanga,	Every two years
Transgender women	Venue-based sampling (with sampling probability proportional to venue size)	Cebu	Initiated in 2013
Population size estimates			
MSM	 Mapping and enumeration from IHBSS General population survey 	IHBSS locations (18 cities)National	Every two years
FSW (registered and freelance)	 Mapping and enumeration from IHBSS^a Social hygiene clinic client rosters 	 IHBSS locations (18 cities) Social hygiene clinics (89 locations) 	Every two years
PWID	 Unique object multiplier in Cebu General population survey 	CebuNational	One off
HIV case reporting	 Routine reporting of newly diagnosed cases of HIV infections 	 Public and private facilities nationally that conduct HIV testing 	Ongoing
STI case reporting	 Routine reporting of STI (etiological) for syphilis, hepatitis B, and gonorrhoea^b 	 Public and private facilities nationally that provide STI diagnostic services 	Ongoing
Antenatal surveillance	None	-	-
Mortality surveillance	 Routine reporting of HIV deaths 	 All physicians 	Ongoing
HIV incidence surveillance	None	-	-

Table 1. HIV surveillance components, Philippines

FSW, female sex worker; IHBSS, Integrated HIV Behavioral and Serologic Surveillance; MSM, men who have sex with men; PWID, people who inject drugs, STI, sexually transmitted infections

a. These sources are not mentioned in the most recent published estimates (REF #3) or documented in IHBSS fact sheets, however NEC indicated that these data have been collected.

b Gonorrhoea is assessed routinely and in IHBSS surveys by gram stain. In 2012–2013, a "special surveillance" round was undertaken to estimate the prevalence of gonorrhoea and chlamydia by polymerase chain reaction (PCR) and to determine the genotype of gonorrhoea in selected cities.

1.1.2 Limited analysis and access to IHBSS

Analysis and dissemination of data and the technical details of IHBSS have been sorely lacking. Although scientific manuscripts based on these data have appeared in peer-reviewed journals, the review team found great frustration among health facilities and stakeholders at national and local levels regarding access to technical reports and findings. Findings from the IHBSS are not published on the NEC website as in the case of reports from the HIV and AIDS registry and no complete technical report has been released since 2005, with the exception of a 2007 report for the MSM group only. Findings are displayed annually at a national workshop, but only in visual presentation format. There has been a laudable effort to disseminate abbreviated fact sheets from the 2009 and 2011 rounds to local governments and health facilities; however; these are not available online and do not provide adequate detail of the samples obtained. In addition, there are uncertainty intervals around the estimates or study methods, all of which are necessary to interpret the important recent trends in prevalence. For example, interviews with NEC staff found that changes in study inclusion criteria have changed over time, yet these are not documented. Although the study protocol describes methods, technical reports are needed following each surveillance round in order to describe actual implementation - which may vary in practice – and develop a more complete analysis of behavioural question items, most of which are not presented in the fact sheets.

In addition, researchers at universities attempting to access IHBSS data for purposes of graduate and postgraduate research have been routinely rejected, resulting in further sub-utilization of this invaluable data source. The lack of disclosure of survey findings and methods is surprising, considering that these surveys are publicly funded and, as is the practice in most scientifically advanced countries around the world, findings, methods and databases should fall in the public domain even before their publication in professional journals. The survey results analysis would benefit from expertise in data analysis and presentation. As there is concern by NEC regarding human resources capacity to develop technical reports, an expert panel – rather than or in addition to the existing technical advisory group concerned with the implementation of the surveys – should be set up to review and provide scientific guidance on and input to drafts. The existing technical advisory group (TAG) established to oversee the surveys does not seem to be in a position to perform these tasks. An expert panel consisting of members with extensive epidemiological, behavioural, social and statistical expertise should be engaged in data analysis and presentation. The costs involved in marshalling the needed expertise should be carved out of the budget set aside for the biannual IHBSS.

Recommendation 1.1.2

NEC should make widely available complete technical reports from IHBSS surveillance rounds accompanied by actionable fact sheets, within 6 to 12 months after the completion of each surveillance round, through online publication, local briefings and distribution of hard copies. A thorough description of the methods applied, samples obtained, analytic techniques and confidence intervals should be included in all materials. The current IHBSS Technical Working Group has not provided effective oversight regarding dissemination to date. Thus, scientific oversight should be carried out jointly by the leadership of NEC and/or the Office of the Secretary of the Department of Health, which oversees NEC, with an expert panel, feeding early results to the Department of Health, local governments and the PNAC Executive Committee, given the importance of IHBSS data to HIV programming.

1.1.3 Local government resistance to data sharing

IHBSS findings, including fact sheets, are not published online. One reason cited by NEC is that local government officials sometimes demand that findings for their area not be made public, due to concern about the political implications, for example, findings of high prevalence. In some instances, local governments have threatened to withdraw their participation in future IHBSS if NEC makes findings public.

Recommendation 1.1.3

Ahead of IHBSS surveillance rounds, NEC should enter into a formal agreement (e.g. via a memorandum of understanding) with local governments selected to participate, stating that national and local findings will be made publicly available through technical reports, fact sheets and other media, and made available online, regardless of what the results show. Civil society should be made a part of this process via national and local AIDS councils so that their voices may be heard.

1.1.4 Coverage of IHBSS among people who inject drugs

Most major urban cities and regions – most notably the National Capital Region (NCR) – are not included in surveillance of PWID, so that the coverage of surveillance appears limited. Injecting drug use behaviour could potentially be present in many parts of the country and could theoretically spread elsewhere from Cebu. Yet, the review found no evidence, suggesting that the presence of PWID had been systematically explored in large urban areas throughout the country. Rapid assessments of vulnerability (RAV) to improve local understanding of risk behaviours were carried out in 2010 and 2012 in larger cities; however, the RAV framework offers limited guidance to local governments regarding how to assess the presence of PWID. Furthermore, there are no criteria for establishing new IHBSS sites based on RAV findings, thus surveillance does not seem equipped to adapt quickly to changes in injecting drug use patterns nationally.

Recommendation 1.1.4

Building on the RAV, regular assessments to identify the presence of significant PWID populations should be conducted in urban areas that meet objective criteria, such as all Category A sites, nationally. Additional criteria should be established to determine under what circumstances findings from these PWID vulnerability assessments should lead to establishing a new IHBSS site for PWID. The NEC's RAV guidelines should be enhanced to ensure that the assessments systematically gather and triangulate data from hospital emergency departments, substance abuse rehabilitation centres, police and local nongovernmental organizations working with drug users in order to identify evidence of injecting drug use.

1.1.5 Reaching individuals at highest risk through local mapping

SHCs and others involved in outreach and prevention for most-at-risk populations would benefit greatly from information about the locations where high-risk behaviours among members of most-at-risk populations are common. Mapping is currently done as part of the IHBSS to identify where members of most-at-risk populations can be found, and how many are at each location; however, mapping does not currently help peer educators identify where to find the highest risk individuals within these groups: those with the highest number of partners, lowest condom use, most needle sharing or overlapping risk behaviours, such as MSM or FSWs who inject drugs. Such information at the local level could improve the efficiency and effectiveness of outreach and prevention to reduce HIV transmission.

Recommendation 1.1.5

In order to guide more effective targeting of prevention efforts, data from IHBSS should be used to generate local maps that identify those locations (establishments and streets) with the highest concentration of highest-risk behaviours, including patterns of low condom use, a high number of partners, frequent needle sharing and overlapping risks (MSM–PWID, FSW–PWID). Organizations carrying out outreach, including SHCs and needle–syringe programmes, should be trained on how to use this information to target individuals at highest risk for HIV infection and transmission.

1.1.6 Monitoring HIV among pregnant women in areas with heavy HIV burden

As levels of HIV among MSM, PWID and FSW increase, transmission may begin to move beyond these groups. A main goal of surveillance is to detect such emerging trends so that prevention activities can respond quickly. WHO/UNAIDS guidelines recommend that in concentrated epidemics surveillance efforts should include monitoring of levels of HIV infection in antenatal women in areas where there are significant epidemics among most-at-risk populations, in order to allow for early detection of rising levels of HIV in the general population. (4) This can be done in two ways: either through routine HIV screening, provided the coverage of testing is high enough to eliminate concerns of selection bias due to refusals to test; or through periodic antenatal surveillance surveys. In the Philippines, levels of HIV screening in antenatal settings are too low to permit useful tracking of prevalence. Reportedly, efforts to study antenatal settings have been carried out in 2009 in Davao and more recently in Cebu; however, findings were not available and there is no plan to continue these efforts systematically.

Sero-surveillance of HIV among pregnant women can also provide important clues about the possible transmission of HIV from male members of key populations to their sexual partners. Such sero-surveys can be conducted as part of regular behavioural and serological surveillance rounds or on a periodic basis in the form of sentinel surveillance in selected sites at two- to three-year intervals. The 2013 updated version of the WHO/UNAIDS Guidelines for Second Generation HIV Surveillance propose that sentinel surveillance for HIV (and syphilis) in pregnant women be considered "in areas where HIV prevalence among key populations is high (for example, more than 10%) and the size of male key populations is large (for example, PWID comprises more than 1% of the adult male population)". The guidelines further recommend that "only sites where the ANC [antenatal clinic] volume is larger than 150 new attendees per month" be included in the sentinel surveillance system (G.M. Samonte, Director, HIV team, NEC, personal communication to Jerry Jacobson, 31 October 2013). In some of the areas visited (Cebu, Mandaue, Metro Manila) the acceptance rate of prenatal HIV testing was so high (reportedly 90% and above) that routine testing results in ANCs could also inform surveillance.

Recommendation 1.1.6

HIV sero-surveillance in antenatal women in cities where high levels of HIV infection in any of the most-at-risk populations (e.g. at least 10%) should be incorporated into local and national surveillance systems by either: (1) strengthening routine screening among pregnant women in these areas to bring HIV testing coverage to at least 90%; or (2) conducting periodic antenatal surveillance studies at selected sites in these areas every one to two years.

1.1.7 Surveillance in closed settings

Prisons and jails worldwide are often home to the risk behaviours that are most central to the HIV epidemic in the Philippines: MSM and injecting drug use. Yet, while some screening for HIV has occurred in jails as a result of local initiatives, and some SHCs have established support to local jails to ensure treatment is available to inmates identified with HIV (such as in Cebu City), there has been no systematic assessment of these risk behaviours and HIV prevalence in prisons in the country. This is needed most in areas with outstanding epidemics – Category A areas – to determine the need for and scale of HIV and STI prevention in prisons. Recommendations appear elsewhere in this report (see Section 2.1.7) for scaling up HIV and tuberculosis (TB) prevention, care and treatment in prisons.

Recommendation 1.1.7

Formative research to characterize MSM and injecting drug use risk behaviours in prison populations should be carried out to determine the need for biological and/ or behavioural surveillance. Criteria for selecting sites for the formative assessment should be established and should include consideration of: (1) the number of inmates; and (2) the geographic proximity to Category A areas. These data should be used to design, implement and monitor HIV and TB prevention, care and treatment in prisons.

1.1.8 Population size estimates

Population size estimates for MSM, FSW (freelance and registered) and PWID have been developed by the NEC, drawing on several data sources, including client rosters from SHCs and mapping and enumeration carried out during the IHBSS for MSM and FSW. Rates of drug injection and male-to-male sexual behaviours from national general population surveys have also been used. A multiplier estimate – derived by comparing data on the reach of a local service or activity with IHBSS survey data – was used in the 2013 IHBSS round to estimate the number of PWID in Cebu. However, previous use of multipliers in 2009 and 2011 is not documented. Although size estimates appear on IHBSS fact sheets developed by NEC, the review found that some SHCs and other local stakeholders are not familiar with size estimates for their service areas.

Recommendation 1.1.8a

Dissemination of population size estimates for most-at-risk populations in Category A (and potentially Category B) areas should be improved by: (1) documenting the specific methods employed and findings (including the uncertainty ranges of the estimates) from size-estimation exercises in technical reports within six months of completion; and (2) providing technical support and capacity-building for programme implementers and service providers in Category A and B areas to improve their understanding and use of size estimates in prevention activities.

Recommendation 1.1.8b

Size estimation using the multiplier method should be integrated into all future IHBSS surveillance rounds for MSM, freelance and registered FSWs, and PWID, using services and/or unique-object multipliers. Given the wide confidence intervals typically associated with these estimates, multiple multipliers should be used for each population when possible. Methods and findings from multiplier estimates should be documented as in the preceding recommendation.

1.2 Assessing outcome and impact: moving beyond HIV prevalence

In the national plan for monitoring and review of the *Fifth AIDS Medium-Term Plan* 2011–2016 (AMTP5), HIV prevalence is the primary measure for assessing impact of HIV policies and programmes. However, HIV prevalence is a poor measure of how the epidemic is changing over time, particularly as prevalence rises and as treatment becomes more widely available. This is because prevalence will tend to increase as people on treatment live longer lives (a very positive outcome) and tend to decrease as more people die of HIV (a negative outcome). Thus, tracking prevalence as a measure of success is problematic. Data on mortality due to HIV and the incidence of HIV infection can provide more informative measures of impact.

1.2.1 Monitoring and assessing outcome and impact

The national HIV programme is currently not able to evaluate the impact of prevention, care and treatment as could be measured by incidence and prevalence trends of HIV or morbidity, disability and mortality. Newly available technologies and a broader understanding of outcome and impact measurement should be considered when building the evidence of the combined effects of prevention, care and treatment on the spread of HIV as well as its individual and collective impacts. Establishing causation or probable or plausible association between inputs/outputs and outcome/impact is no easy task, (5) but the current epidemiological situation and uncertainties about priority setting in HIV work both nationally and locally command that efforts be made in this direction. Outcome and impact review should combine an assessment of: HIV prevalence trends in key populations (registered and unregistered sex workers, MSM and PWID, transgender and transsexual people, STI patients, and TB patients); HIV incidence using newly available assays; mean CD4 count in newly diagnosed PLHIV; and the incidence and prevalence of STIs as proxies for assessing changing preventive

and care-seeking behaviours. Other measures of outcome and impact should consider behavioural trends (e.g. use of condoms and other safe sexual practices; use of sterile needles and other harm-reduction practices, such as drug substitution and treatment); as well as trends in the ability of key populations and PLHIV to be freed of stigma and discrimination, resume productivity, increase their autonomy and participation in public affairs, and improve their quality of life.

Recommendation 1.2.1

Three decades into the HIV epidemic, the HIV programme in the Philippines should not only remain accountable for the delivery of quality services and goods and the use of resources, but also acquire the capacity to provide evidence of the outcome and impacts of the health sector's response to HIV. This implies the strengthening of epidemiological surveillance, the application of new laboratory technologies along with greater dispersion of existing technologies (e.g. rapid tests for HIV and STIs, CD4 count and viral load), stronger data linkages from individual entry into active prevention programmes, HIV testing and counselling, and enrolment in the care and treatment continuum (and eventually through the end of life), as well as improvements in social, behavioural and economic determinants of health and well-being.

1.2.2 HIV incidence

Tracking HIV incidence – the rate of new infections – is critical to understanding how the epidemic is evolving over time. The national monitoring and evaluation (M&E) plan for AMTP5 proposes using the number of new HIV cases reported (from the HIV and AIDS registry) as a measure of incidence, but this is not a good measure of recent infection because of HIV's long asymptomatic period and potential variations in patterns of routine reporting. Better measures include laboratory assays for incidence and tracking prevalence trends in young childbearing women.

Recommendation 1.2.2

The national surveillance system should incorporate measures of HIV incidence that include two strategies. First, incidence assays should be applied to specimens from IHBSS studies to estimate incidence among key populations, potentially pooling samples across nearby cities to obtain sufficient sample size.^c Second, trends in HIV prevalence should be analysed among young childbearing women (ideally younger than 20 years old, in whom infection is most likely to be recent) from antenatal facilities in the geographic areas recommended under Recommendation 1.1.6.

1.2.3 Mortality

A new HIV mortality report was introduced by NEC in January 2013; however, it is acknowledged that only a small fraction of HIV deaths are likely to be detected and reported by health facilities. Yet, high-quality mortality data are needed for two reasons: (1) data on all deaths among PLHIV (whether attributable to HIV or not) are needed to exclude PLHIV who have died from measures of treatment retention; and (2) data on deaths attributable to HIV are needed to track patterns in HIV mortality, which is crucial to improving the effectiveness of care and treatment services. Standard algorithms exist to identify both kinds

c Reportedly, incidence assays have been applied previously, but there is no evidence of them in the IHBSS study protocol, fact sheets or the one technical report available for 2009 for MSM.

of deaths, even in the presence of under reporting of HIV as a cause of death on death certificates. (6)

Recommendation 1.2.3

NEC should develop methods to regularly (every one to two years) cross-check the Philippine HIV and AIDS registry with the national civil deaths registry in order to: (1) capture deaths among PLHIV due to any cause; and (2) capture deaths attributable to HIV. Analysis based on these combined data should be developed to improve understanding of patterns in mortality (demographic and risk characteristics, relation to late diagnosis and treatment characteristics) at the national and local levels, with the aim of improving the effectiveness of care and treatment.

1.2.4 Morbidity due to opportunistic infections

Monthly reports containing analysis of the Philippine HIV and AIDS registry are informative and disseminated widely through the NEC website. However, analysis of care and treatment in these reports is limited to presenting the number of patients currently on antiretroviral therapy (ART). NEC is now piloting a new data collection form that would capture opportunistic infections at the time of HIV diagnosis. However, there is currently no data available to determine patterns in opportunistic infections after diagnosis and over the course of care and treatment.

Recommendation 1.2.4

The Philippine HIV and AIDS Registry reports should summarize rates, opportunistic infections and characteristics of PLHIV who have opportunistic infections. Summaries of trends in the rate of opportunistic infections should be made available to treatment hubs with support in using these trends to improve treatment effectiveness.

1.2.5 Improving analysis presented in STI case reports

Similarly, SSESS quarterly reports contain useful data on the number of STI cases detected, but the utility of these reports could be greatly improved by including trends over time and breakdowns by age, sex and type of facility in order to understand the occurrence of STI in different populations and across types of service (e.g. blood banks, hospitals and SHCs). Analysing and facilitating access to these data would also improve the likelihood they are used to improve services.

Recommendation 1.2.5

Analyses presented in the SSESS reports should be expanded to include breakdowns by age, sex and type of facility. The analyses should be made more accessible and actionable by including figures illustrating trends, characterizing STI risks and vulnerability, and making the reports available to health practitioners and researchers online.

1.3 Monitoring retention and quality across health services

1.3.1 National cascade of HIV care and treatment

The Department of Health began providing ART in 2004. Enrolment has increased rapidly from 56 patients in 2005 to 1274 in 2012. (7, 8, 9, 10) ART eligibility is becoming increasingly more inclusive, moving from a threshold of CD4 count \leq 200 in 2005 to \leq 350 in 2012 and will potentially expand to ≤ 500 in response to more recent WHO recommendations, bringing more individuals into treatment. Fig. 1 shows the services cascade at the national level for 2012, based on cross-sectional data. There were an estimated 22 840 PLHIV in 2012 and by the same year cumulatively 11 729 (51%) had been diagnosed with HIV, excluding deaths reported by health facilities. Of these, there is currently no information on the number of PLHIV who have been linked to care. However, 4115 individuals (18% of the estimated PLHIV) were enrolled in ART as of May 2013 (the figure is not available closer to 2012 year end). Finally, based on a cohort analysis conducted as a part of this review, an estimated 78% of individuals enrolled in ART continue in treatment at 12 months. These numbers are suggestive of "loss to follow-up", which is consistent with perceptions among staff at treatment hubs and SHCs. Loss to follow-up, particularly among PWID, is seen as an important problem. Yet, there is no systematic monitoring of referrals and retention in care and treatment. Further, SHCs and treatment hubs do not appear to be using the data they have for quality improvement, with few exceptions.

Recommendation 1.3.1

Standardized mechanisms for referral (see Section 1.3) should be accompanied by standardized mechanisms to routinely monitor that referrals have actually resulted in linkage between services (such as programme registers and summary reports), using a unique identifier, such as the STD-AIDS Cooperative Center Laboratory (SACCL) code. Procedures for tracking referrals should be incorporated into existing standard operating procedures (SOPs), and training and supportive supervision should ensure their use. Data on trends over time in the percentage of referrals that are realized – from outreach to testing, testing to care, and care to treatment – should be made available to SHCs, treatment hubs, and TB treatment centres and directly observed treatment (DOT) facilities. Procedures for personnel to meet periodically (e.g. quarterly) to review these data and collaboratively identify measures to improve referrals should also be established. A data field for "source of referral into testing" should be added to the Philippine HIV and AIDS Registry form in order to capture referrals from TB treatment centres, antenatal clinics and private testing facilities.



Figure 1. National cascade of HIV care and treatment, and data gaps, Philippines

Sources: National Epidemiology Center (2013)

1.3.2 Monitoring retention of pre-ART patients

Currently there is no mechanism to track linkage from testing to care. Only individuals who enrol in ART are followed. However, recently NEC began piloting a new reporting form for patients in care ("Form B", an add-on to the *Philippine HIV and AIDS Registry*). Tracking loss to follow-up into care, as well as retention in care, could be accomplished by requiring regular follow-up reports using Form B or, alternatively, a facility-level register that records visits by patients in care. Such a register implemented in Excel, Epi-Info or other software and shared periodically (e.g. monthly) with NEC in a way that preserves patient confidentiality (i.e. without personal identifiers) could prove less burdensome to health facilities and reduce the data entry burden on NEC. Either system – follow-ups using Form B or facility-level registers – would provide the raw data needed to track loss to follow-up and retention in care.

Recommendation 1.3.2

Linkage to and retention in care should be monitored either through routine reporting using the new Form B, or by establishing facility-level registers that capture sufficient data on enrolment and follow-up (including SACCL code) to allow tracking of individuals over time. Additionally, standard care and treatment reports at the facility and national levels should include summaries of patients who are awaiting eligibility screening, those in pre-ART and those in ART. Cohort-based measures of retention in both care and treatment should be developed and procedures established for data review and decision-making to ensure the data are used regularly (e.g. monthly) for programme improvement.

1.3.3 Tracking the cascade for key populations

Given the country's concentrated epidemic, tracking the cascade for MSM, FSW and PWID is as important as tracking national-level figures, particularly given concerns of increased loss to follow-up among PWID. Currently, population size estimates provide the data needed to estimate the first stage of the cascade by risk group. The HIV and AIDS registry also identifies each of the key populations, and because the registry also records the SACCL code, tracking the cascade for each most-at-risk population is possible.

Recommendation 1.3.3

At national and facility levels, trends in retention and loss to follow-up for MSM, FSWs (registered and freelance) and PWID should be routinely monitored through standard reports (ideally the same reports developed under Recommendation 1.3.2) with procedures for regular review and decision-making based on findings. Analyses to generate these trends would be most easily generated at the national level, given that national-level databases would allow the analyses to account for transfers between facilities.

1.3.4 Monitoring health facilities' adherence to services protocols

The review team found instances of nongovernmental organizations and laboratories using non-standard forms for pre- and post-test counselling. Non-standard practices – such as counsellors failing to review test results as a part of post-test counselling – were also observed in multiple SHCs. During visits to SHCs and treatment hubs, physicians and counsellors were often unable to produce SOPs for testing, care and treatment. The review found no evidence of routine supervision or monitoring of procedures at these facilities.

Recommendation 1.3.4

The level of training and supportive supervision to help HIV testing and treatment facilities adhere to services protocols should be strengthened through inception and periodic in-service refresher training activities centred around existing SOPs.

1.3.5 Bringing it all together: continuous quality improvement

The review team found that with few exceptions, data and analysis are not available or used at the local level to improve services and support is not provided to build local capacity to use data. Many of the recommendations above involve generating and reviewing indicators of programme quality and effectiveness, such as referrals realized, retention and morbidity. Use of these data would be most effective if organized into a single qualityimprovement report and a single review process carried out at the local level.

Recommendation 1.3.5

A single report should be developed for use at the local government unit (LGU) level that provides data and trends in indicators of programme quality and effectiveness, such as referrals into care and treatment, retention in care and treatment, and morbidity. A standard procedure should be developed to ensure regular review (e.g. quarterly) of the quality measures by individual health facilities (SHCs, treatment hubs and TB facilities) and local collaborative HIV teams in order to facilitate early detection of problems and collaborative solutions. The national level (NEC and PNAC) could support these efforts by providing guidance, training and supportive supervision for the review and interpretation of the quality indicators and problem-solving process.

1.3.6 Human resources for strategic information: essential, under-resourced and vulnerable

The numerous recommendations above are essential: they address gaps needed to ensure that the HIV programme and services are effective and lead to favourable outcomes and impact. However, implementing these recommendations will require new investments in human resources and capacity. The HIV Team at NEC has two permanent positions: a medical specialist and a supervising health programme officer. All other staff members are on short-term (generally one-year) contracts, creating instability and high likelihood of attrition. The workload of NEC, including all of the elements listed in Table 1, in addition to estimates, projections and prioritization exercises, is extremely heavy. With just one regional epidemiology surveillance officer in each of the nation's 17 regions, there is little regional capacity to provide support for these activities. Currently, four NEC staff members are involved nearly full time "validating" data: manually checking for inconsistencies in routine reporting data and IHBSS questionnaires. Notably, a rationalization plan under consideration by Department of Health at the time of this review contemplates reductions to human resources and national and regional levels. Ensuring that the minimal components for HIV/STI surveillance and programme monitoring are in place will require just the opposite: investment and strengthening of human resources and additional financial resources to attain adequate coverage of all high-priority (Category A) cities. In addition to seeking additional resources, savings can be had by improving efficiency. For example, savings could be attained by automating the data entry of the considerable volume of IHBSS questionnaires, work that is required every two years for three populations in three to 10 cities per population, amounting to about 20 000 questionnaires per surveillance round. This results in over-utilization of staff and a long delay (reportedly, five to six months for data entry and validation) before statistical analysis of the data can commence.

Recommendation 1.3.6

The bulk of this work would be better accomplished by computer programmes, with manual review reserved for following up on those inconsistencies that are automatically detected. Such validation checks could be automated at low cost. Optical character recognition technology should be introduced to automate the data entry process and reduce data entry error. This would require an initial investment, but would appear quite justified given the high volume of work involved.

Part 2. Continuum of prevention, care and treatment

2.1 Minimum prevention packages for key populations

In the Philippines, the HIV epidemic continues to grow and is fast shifting from a low epidemic to a concentrated epidemic among key populations that include MSM, PWID and sex workers, freelance sex workers in particular. (9)

This chapter will focus on populations that are most at risk for HIV infection. It reviews their current access and use of services and suggests means to rationalize services targeted at them. Minimum packages of services are emphasized for key populations that are at greatest risk of becoming infected and/or being denied access to treatment. For other key populations, reference to international standards of best practice will allow the reader to construct minimum packages that would be best adapted to local needs and capacities. This chapter also comments on access to condoms and the diagnosis and treatment of STIs among key populations. A subsequent chapter will examine in some depth current practices and gaps concerning HIV counselling and testing, a pivotal component of the continuum of HIV prevention, care and treatment.

2.1.1 Policies and strategies relevant to prevention, care and treatment packages for key populations

At the national level, there are policies and strategies attached with the comprehensive packages of HIV prevention interventions for PWID, MSM and transgender people, as well as for sex workers, which are defined in the AMTP5. AMTP5 provides comprehensive guidance to HIV and STI prevention and control in the country. Over the last three years, progress was made against Strategic Objective 1 (SO 1) on the prevention of HIV and other STIs. However, current prevention responses are patchy and fragmented. The coverage of prevention interventions among key populations remains low at below 40% for MSM and PWID (Fig. 2).



Fig. 2. Percentage of most-at-risk populations reached with HIV prevention interventions (2007–2011)

Source: IHBSS 2007, 2009, 2011

Moreover, prevention activities are largely uniform due to the mostly donor-driven and project-based approach they tend to promote. The 2013 review of the Global Fund, Round 6, reported that the numeric targets (example for MSM and sex workers) were reached, but no evidence indicated that any significant impact on the HIV epidemic among these key populations had been achieved. This draws serious concerns on both coverage and quality of prevention efforts. (*11*)

The main bottleneck has notably been the gap between the development of the national guidance and its subsequent implementation at the local level. To date, the defined comprehensive package of intervention services for key populations has not been implemented systematically anywhere in the country. There are many reasons for the gap between guidance and practice:

- insufficient resources at the national level to support implementation of national operational work plans;
- insufficient technical assistance provided to regions or LGUs due to limited capacity and resources at central and regional levels;
- lack of a consistently supportive environment to scale up effective HIV prevention interventions among key populations (PWID, sex workers, MSM and transgender people);
- recent national guidelines have not yet reached all levels of health service facilities, and where reached, the level of understanding of the comprehensive packages for key populations is low;
- HIV is often not a priority of LGUs and HIV prevention is often left behind HIV treatment when limited resources are available;
- low capacity and weak commitment at the LGU level to deliver necessary prevention services for key populations where political will and leadership are lacking; and
- STI services do not always reach the most important target groups, and there are serious concerns on the efficiency and effectiveness of present STI services provided by SHCs. SHCs are overloaded and inefficient in conducting effective STI smearing, and thus failed to respond to the need of HIV prevention.

Peer education remains the main strategy to reach hard-to-reach key populations, but most provide limited, simple, disease-focused information, with very weak linkages to HIV testing and counselling and other health services. The prevention activities are also largely ignoring the psychological and social contexts in which risk and preventive behaviours take place. There is a need to strengthen strategic and critical thinking and action, to take a more practical approach to the adaption of evidence-based international programmes to the Philippines' unique circumstances, and to undertake proper needs and capacity assessments before starting a service or programme. In a context where the actual risk of becoming infected with HIV is on the rise and the perceived risk of becoming infected with HIV is still low, awareness information and behaviour change approaches are insufficient and lack of good linkage with HIV testing and counselling (HTC) and other necessary services. Situation analyses – by large projects in particular – have been conducted repeatedly, but ended up with very limited actual implementation of prevention services. Operations research and assessments of the effect of specific prevention activities are lacking. With the present level of response, the target of reducing HIV new infections among key populations by 50% by 2015 will unlikely be achieved, and a larger epidemic may spread both within and beyond the MSM population, given the rampant risk factors prevailing in the country.

Recommendation 2.1.1a

The overarching principle is respect for and protection of human rights, and ensuring health services are delivered in a stigma-free and friendly manner to key populations in health-care settings. Specific efforts should be made to address the bottleneck prohibiting the full implementation of the national guidelines at local level. The comprehensive packages for key populations should be reassessed, and a minimal package of prevention interventions should be defined and accompanied with a concrete quality-assurance mechanism.

Recommendation 2.1.1b

The development of a master health sector plan should be considered, maximizing the utilization of the existing health infrastructure, SHCs in particular, to mainstream evidence-informed and rights-based prevention services to key populations. In addition, staff capacity at SHCs should be built to expand their scope of services in order to cover all key populations and establish a stronger partnership with nongovernmental organizations and community-based organizations (CBOs) working with key populations. Local innovation of service delivery models should also be encouraged and best practices documented for sharing and replication.

2.1.2 Prevention packages for key populations

Effective HIV prevention requires the combination of appropriate interventions targeting populations that are at risk of acquiring or spreading HIV infections. Priority prevention efforts should always follow the epidemic – from where and whom the new infections originate. It is clearly noted that in the Philippines the HIV epidemic continues to grow and is fast shifting from a low epidemic to a concentrated epidemic among key populations that include MSM, PWID and sex workers (freelance sex workers in particular. (12)

2.1.2a People who inject drugs

HIV infection among PWID was first detected in Cebu in five cities during the 2005 round of surveillance. The prevalence remained low at less than 1% until 2009, due perhaps, at least in part, to the intensive needle–syringe programme supported by Global Fund Round 3. Unfortunately this programme was phased out in 2009. Two years later, in 2011, the

prevalence rocketed up to 54% among PWID who were using "shooting galleries" where a high rate of needle-and-syringe sharing behaviour prevailed (Fig. 3). Since then, Cebu has become a high spot for HIV transmission among PWID. Most recently HIV prevalence above 40% was also detected among PWID in Mandaue. (10) Significant HIV spread among PWID has not been documented elsewhere in the country, but drug use patterns and impacts are poorly documented in other large cities, including Metro Manila.





Source: IHBSS 2005, 2007, 2009, 2011 of 10 sentinel sites, NEC

Harm reduction for HIV prevention among PWID is limited. Active distribution of clean needles and syringes is limited to only one location in Cebu City where a trial is under way in one facility at which only one to two staff are permitted to provide needles and syringes to PWID. Peer educators hired under a Global Fund Transitional Funding Mechanism project often provide only health information during outreach; they are not allowed to distribute needles and syringes to PWID. The endorsement by the Dangerous Drugs Board of a pilot needle-and-syringe project in one barangay in Cebu where HIV among PWID reached more than 50% has not yet been implemented. (9) Through the needle-and-syringe exchange project in Cebu, PWID are found to more likely undergo HIV testing and to know their test results than in other settings. However, among PWID eligible for ART, very few are actually enrolled in treatment. Although not condoned by national guidelines, several treatment hubs require PWID to stop injecting drugs before and during the course of treatment. These, combined with limited access to CD4 counts and possible injecting drug interaction with antiretrovirals (ARVs), create obstacles to enrolment in and adherence to ART by this population. The coverage of peer outreach targeting PWID with education for behaviour change is very low, with Cebu slightly higher than three other sites but below 35% overall. Fewer than 15% of male PWID have received free needles or syringes in the past 12 months. Needle-sharing behaviour among PWID in all four surveillance sites remains popular, though slightly reduced from 67% in 2009 to 58% in 2011, about 90% sharing at last injection was reported in General Santos. The percentage of PWID who reported using sterile injecting equipment the last time they injected was 25%. The vast majority has never been tested for HIV. (9) The percentage of PWID who last injected at a shooting gallery is high in Cebu (80% in 2011) and Mandaue (72% in 2011), which explains the highest HIV prevalence among the group in 2013, 52% for Cebu and 42% for Mandaue, respectively. (10) Current HIV prevention among PWID is minimal, and the scale of harm-reduction interventions – the needle-and-syringe programme in particular – is insufficient to generate any measurable impact on the spread of HIV in this population. Needle-and-syringe programmes should be scaled up considerably to achieve coverage of at least 60%, as recommended by WHO. (13)

Recommendation 2.1.2a

National surveillance for PWID should be strengthened by covering more of the NCR sites (Manila and Quezon City in particular) to detect epidemics early, while continuing to monitor the high level of needle-and-syringe sharing behaviour. Given the high HIV prevalence already detected in Cebu and Mandaue, it is urgent to initiate community-based pilot needle-and-syringe exchange projects, in line with the instruction of the Dangerous Drugs Board in collaboration with the Department of Health, WHO, other key partners and all local stakeholders in selected cities.

Attention and resources should be directed urgently to respond to the powerful HIV epidemic spreading among PWID communities. To this end, programmes and projects should be designed, monitored and implemented according to standards of best practices in HIV prevention, treatment and care among PWID. Human resources at facility-based service delivery sites for PWID should be increased and responsible staff assigned to comprehensive data collection and local use. Health service providers, law enforcement officers, prison staff and peer educators should undergo further training on harm reduction. Community and local stakeholders should be orientated and sensitized to PWID and HIV issues in order to secure their support to operational research on PWID service provision in Kamagayan Barangay. Needle and syringe distribution by peer educators in the community should be allowed, implemented, monitored and documented. Multi-stakeholder meetings should be held on a quarterly basis on PWID, with the participation of members of this community.

2.1.2b Men who have sex with men

MSM currently bear the highest burden of HIV in the Philippines, but coverage for HIV services remains low. Over the last three years, more than 80% of the newly reported HIV cases were from male-to-male sex, (14) with the national surveillance data showing that the average HIV prevalence among MSM in 10 sites rose from 1% in 2009 to 3.5% in 2013; city-specific data during the same period indicated an even sharper increase in HIV prevalence among MSM in Quezon City (1.4–6.7%) (Fig. 4). However, prevention activities among MSM have been limited to stand-alone information, education and communication, and/or behavioural chang e communication efforts. There were very weak linkages between peer outreach and HIV testing, STI and other services.



Figure 4. HIV prevalence trends among MSM by location, 2009–2013

Current reach for peer education and outreach services for behaviour change among MSM is weak and in some instances not known. For example, in Cebu, only 2500 MSM have been reached out of the estimated 7000 MSM, while in Iloilo, the number of MSM has not been estimated. Peer educators have undergone training; they participate in monthly meetings and are supervised in theory by site implementation officers. These peer educators are temporary staff supported by the Global Fund or in some instance by the local government. Peer educators supported by the Global Fund have a performance target of seven MSM per month expected to have undergone HIV testing and returned for test results. Even with this low target, peer educators are unable to meet their target due to the modest return rate of MSM for test results. This may be attributed to the low quality of peer education, inappropriate choice of peer educators expected to engage with middle-income MSM, single peer educator encounter instead of repeat encounters, and low follow-up rates. Peer educators are not supported by appropriate tools to enable them to provide quality services.

Peer outreach is the proper approach for delivering prevention messages to MSM and promoting preventive measures, but the approach often lacks standardization and a quality-control mechanism. The percentage of MSM exposed to interventions has not increased much over the years; the overall coverage remains at 23%. (14)

There is no sign that condom use during anal sex among MSM has increased; the rate fluctuated slightly over 30% during 2007–2011. In 2011, 35% of MSM reported using a condom at last anal sex with a male partner. In 2011 as well, a mere 14% of MSM had been tested for HIV and received test results. Another 8% were tested but did not receive the results. The majority had never been tested for HIV. (14) Findings during the field assessment and observations were consistent with the surveillance surveys and other research findings: MSM engage in sex with multiple sexual partners, both males and females; condom use is low; and buying sex or receiving payment for the provision of sex services are also prevalent within the MSM population. Focus-group discussions revealed that MSM frequently engage in receptive sex with clients self-identified as heterosexual men, and this often without condoms.

Source: IBSS 2009, 2011, 2013, NEC

Stigma and discrimination keep the MSM and gay population away from health services and make them difficult to reach. Both actual and perceived levels of stigma in health-care settings are high. Also essential to programme success are addressing stigma and discrimination; enhancing the appropriate clinical skills, knowledge and sensitization of health-care workers; removing structural barriers to appropriate services delivery; (15) and increasing health-seeking behaviours of MSM. Consequently, an increased proportion of MSM and transgender people living with HIV will realize their right to positive health, including access to existing public health ART services, life-saving therapies, and targeted prevention and care through community programmes designed and run by and for MSM living with HIV, as well as the provision of clinical management of coinfections such as TB and hepatitis.

The review team noted that some interesting initiatives have opened new avenues for greater outreach. These include:

- Internet-based communication for MSM in Cebu, although the number of MSM reached through this commendable initiative have not been documented.
- Some SHCs have adjusted their hours of operation to provide services dedicated to MSM, which include peer outreach, voluntary counselling and testing (VCT), and STI and ART services. In these clinics, STI services are provided but are limited to syphilis screening. Syndromic management of urethral discharge is being provided; while proctoscope examinations for ano-rectal infection screening are rarely performed.
- Few nongovernmental organizations provide services for MSM and drop-in centres are available in some cities, although the actual utilization of these services could not be evaluated.
- There is a cadre of MSM who are young professionals or middle-income earners who are not reached and are reportedly reluctant to utilize existing SHC and nongovernmental organization services (VCT and ART services for MSM are often accessed and available free of charge).
- Among MSM seeking services SHCs, the majority of those interviewed indicated that services were acceptable to them.

Recommendation 2.1.2b

MSM must be engaged more actively in delivering services and peer outreach. Prevention activities must be adapted to the diversity of MSM sub-populations, including those living with HIV, and must address sexual health needs through a variety of approaches and combinations of interventions best suited to the specific needs, demands and capacities of these sub-populations. Innovative use of mass and targeted media, including the Internet and cell phones, should be integrated components in the delivery of prevention messages, health promotion and social support services. Commodities, such as condoms and lubricants, should be readily available and widely promoted. Prevention activities should be strengthened using a variety of channels and there should be encouragement of local innovations, including structural interventions, in locations where high-risk behaviour may occur. These should be included in a minimal package of preventive services, with strong linkages with HTC and ARV. A minimal package for HIV prevention among MSM should consist of essential elements in line with recommendations of WHO, the United Nations Development Programme (UNDP) and UNAIDS. (16)

Prevention programming should also include sexual risk-taking linked to recreational drug use among MSM, as well as access to needle-and-syringe programmes for MSM who also inject drugs and the availability of prevention programmes for male-to-male sexual transmission in prisons and other closed settings.

Essential elements of programme success include addressing stigma and discrimination; enhancing the appropriate clinical skills, knowledge and sensitization of health-care
workers; removing structural barriers to appropriate service delivery; and increasing health-seeking behaviours of MSM. An increased proportion of MSM and transgender people living with HIV should be able to fulfil their right to health through community programmes, including access to ART, clinical management of coinfections such as TB and hepatitis, and other targeted prevention and care. Ideally, these programmes should be designed and run by and for MSM living with HIV.

2.1.2c Sex workers and their clients

Sex work in the Philippines is marked by its diversity and the high volume of transactions. It has evolved from establishments where primarily registered entertainment-based FSWs would meet clients to an expanding purchase of sex by male clients from freelance female, male and transgender sex workers who can be met on the street or through the Internet and mobile phones. Sex work is often associated with substance use, specifically alcohol consumption with clients, and *shabu*, a slang term for the drug methamphetamine, which is sometimes mixed with caffeine, and is used in Hong Kong Special Administrative Region (China), Indonesia, Japan, Malaysia, the Philippines and other countries. (17)

Prevention work among registered FSWs in particular revolves predominantly around social hygiene clinics (SHCs). These sex workers pay for their HIV, syphilis and STI checkups and registration. These services represent an important source of revenue for SHCs, although this money is reportedly forwarded to the local government administration. Freelance male sex workers who are at higher risk of HIV than their registered peers (Fig. 5) are insufficiently or not accessed by prevention services. Transgender sex workers are generally ignored. Although the 100% Condom Use Programme was mentioned during field visits in some of the SHCs, no clear operational guidance was readily available to some of the local staff to implement this programme. Reported condom use among registered FSWs over the last three years indicated a slight increase since 2007, but still fluctuated around 80% or less. The use rate is much lower among freelance sex workers, fluctuating around 60%, with no indication of improvement during 2007–2011 (IHBSS 2007–2011). Yet, the risk of acquisition of STIs and HIV among registered sex workers was real: the reported rates of condom use with clients remained below target, and sex workers declared not using condoms with frequent customers or with their regular partners.



Figure 5. HIV prevalence among MSM, registered FSWs and freelance FSWs in 10 sentinel sites, 2005–2013

Source: IHBSS 20015,2007,2009,2011 and 2013, NEC

"Pink cards" provided by SHCs as a form of protection for sex workers in establishments are used to certify that they were given adequate information on HIV/AIDS, STI and other diseases and that they are regularly screened for infections. Without an up-to-date pink card that can be presented to sex establishment's managers or the police, registered sex workers can be suspended from work. A similar system of green cards also exists in some sites for freelance sex workers.

Donor agencies, governments and nongovernmental organizations supporting HIV and STI prevention and care have long recognized the need for targeted national programmes for sex workers. Most programmes have focused on FSWs with fewer working with male sex workers (MSWs). While those working with MSWs recognize that they are working with MSM, very few have specific programmes for transgender sex workers or collect disaggregated data on this population. To be effective, programmes should require a combination of peer outreach, risk reduction counselling, condom promotion and provision of STI services. None of these components appeared to be fully functional in any SHC visited during the review.

Recommendation 2.1.2c

Prevention interventions for sex workers should be adapted based on local sex work patterns, local STI prevalence and the policy environment. SHCs should be better used to improve the services for registered sex workers, building partnership with sex work nongovernmental organizations and CBOs to extend the scope of quality services to freelance female sex workers, male sex workers and transgender sex workers. Interventions should incorporate input from sex workers and their community into how to make services user-friendly.

Sex workers are frequently exposed to HIV and other STIs, and have multiple risks for infection, including multiple sexual partners, barriers to the negotiation of consistent condom use and high STI prevalence. Sex workers are often not in a position to control these risk factors because of the legal, political and social environment, and the context in which they live and work, making them vulnerable to HIV and STIs. However, many good practices addressing these challenges in preventing HIV among sex workers have been documented in Asian countries. (*18*) Based on a global systematic review of the past HIV response among sex workers, WHO, together with partners including the United Nations Population Fund (UNFPA), UNAIDS and the Network of Sex Work Projects (NSWP) have crafted a set of evidence-based recommendations to strengthen the HIV and STI programme for sex workers in low- and middle-income countries. (*19*) These provide guidance for a minimal package of HIV preventions for sex workers (male, female and transgender) in the context of the Philippines.

2.1.2d Transgender people

Prevention interventions specifically targeting transgender people do not exist, and as a result leave this group, particularly transgender sex workers, especially vulnerable to HIV. Transgender people have special health needs that have been severely neglected in Asia and the Pacific, including the Philippines. Transgender people are often included in MSM services, although their needs and expectations are often different from those of MSM. This is a neglected population at very high risk of HIV and STI infection. A recent review of evidence from 15 countries found that around 20% of transgender women are living with HIV. Transgender women have almost 50 times the odds of HIV infection than did the reference population. (2) The survey also noted that an ongoing survey on HIV and syphilis prevalence, as well as other health needs of transgender people, has been conducted in Cebu; the results will be available by end of 2013 and used to guide planning and programming for essential services.

Recommendation 2.1.2d-1

A transgender-specific programme, informed by the forthcoming findings of a study being conducted in Cebu, should be created in consultation with transgender community representatives. Other project areas should also be more active in identifying transgender peer leaders as peer educators to initiate partnerships between health services and the transgender community. Health providers should receive orientation and sensitization on transgender issues and on how to stimulate the participation of transgender people in peer outreach and in the delivery of services.

Recommendation 2.1.2d-2

In order for transgender people to protect themselves from HIV and other STIs, they must have access to the full spectrum of prevention services including information, sexuality counselling, and HIV counselling and testing, as well as prevention commodities such as male and female condoms, lubricants and sterile injection equipment to be used for hormone treatment or injection of other drugs. (20) It is critical that substance-using transgender people be able to access support services if their drug or alcohol use becomes problematic and increases their risk of HIV transmission and acquisition.

Recommendation 2.1.2d-3

It is desirable for transgender people living with HIV to seek early treatment for HIV, given the recent developments supporting HIV treatment as prevention. Similarly, it is important that other vulnerable transgender groups, such as migrants and sex workers, also have access to services that are sensitive to their specific needs. One of the consequences of stigma and discrimination in employment is that many transgender people have few options other than sex work to survive. This, in turn, has detrimental health consequences including the risks of HIV and other STI transmission, as well as violence, drug and alcohol use, anxiety and depression. Condom use is usually lower among transgender sex workers than other sex workers.

2.1.3 Condom promotion and distribution programmes

Condoms are often provided free of charge to key populations in Global Fund Transitional Funding Mechanism sites, but lubricants are often not available. Social marketing of condoms for the general population is not encouraged in the Philippines; social marketing of condoms targeting key populations is not actively implemented; condom promotion through the media does not exist; and condom distribution at risky venues is not allowed due to the barrier of local ordinances. Although supplied by the Department of Health to SHCs, condoms are not always available or actively promoted in these facilities. Peers, volunteers and outreach workers do not always carry condoms or promote their correct and consistent use.

The 2011 surveillance round reported that only 65% of registered FSWs declared having used a condom with their last client. This figure was significantly below the Department of Health target of 80%. Unprotected sex is rampant in all key populations and reported condom use remains low among populations at high risk for HIV and STIs. Condom use was extremely low among PWID: less than 5% in 2002–2005, and 20%–25% in 2007–2009.

Only slightly over one third of MSM used condoms with their most recent sex partner. Consistent condom use is a pivotal component of HIV prevention efforts since early days of HIV epidemic. Condoms, when used consistently and correctly, protect against unwanted pregnancy and the transmission of HIV and several other STIs.

Recommendation 2.1.3

A national condom strategy should be developed. Policies on correct and consistent condom use in sex work settings should be in place, and the policies should be supportive of community empowerment for the work norm of "no condom, no sex". Condoms should be made available through a variety of channels: free-of-charge distribution, a condom social marketing approach and private sector promotion. Condoms should be easily available and accessible for registered sex workers based in sex venues. Outreach activities should be scaled up to offer free distribution of condoms and water-based lubricants to freelance sex workers, MSM, PWID and transgender people.

2.1.4 Sexually transmitted infections

The magnitude of the STI burden among most-at-risk groups is currently unknown. There are also no recent prevalence surveys on STIs. A few special surveys revealed that STIs are high among sex workers and MSM. A STI prevalence survey among MSM in 2005 revealed high rates of rectal gonorrhoea (7.7% in Metro Manila and 10.8% in Baguio City) and rectal chlamydial infection (14.6% in Metro Manila and 18.4% in Baguio City). (21) A study conducted in 2007, revealed an STI chlamydial prevalence of 17–32% among registered FSWs in Iloilo.(22) Positivity rates for gonorrhoea and non-gonococcal infections from the 2012 SSESS have shown increasing positivity rates for gonorrhoea and non-gonococcal infections.(23) This is only the tip of the iceberg because screening of STIs among sex workers only utilizes gram stains of vaginal smears, which are not sensitive or specific for *N. gonorrhoeae* and non-gonococcal infections.(24) Syphilis testing, which has been conducted together with HIV testing, has shown low rates among registered sex workers but higher rates among freelance sex workers and MSM (Table 2).

	2009	2011
People who inject drugs	2.3	2.5
Men who have sex with men	2.54	1.5
Freelance female sex workers	3.0	2.0
Registered female sex workers	0.3	0.3

Table 2. Prevalence (%) of syphilis by key populations, 2009 and 2011

Source: IHBSS 2009 and 2011, 10 sentinel sites, NEC

Rates of asymptomatic STIs are high among sex workers and MSM. (25, 26) It is therefore critical to screen for STIs in these key populations. Screening for STIs among registered sex workers has been ongoing in SHCs as mandated by the Sanitation Code. However, gram staining has a low sensitivity and specificity. The nucleic acid amplification test (NAAT) and the polymerase chain reaction (PCR) test for gonorrhoeal and chlamydial infections are being recommended for STI screening, but resources and laboratory capacity are limited. Genital examinations are often not done properly to detect cervical infections.

In most of the clinics visited, STI screening for MSM is not done routinely. Proctoscopic examinations are not being performed to screen for presence of ano-rectal infections, but in some instances rectal gram stains is used among MSM. In HIV positive patients, the

likelihood of having other STIs is high. However, most PLHIV are not being screened for STIs. There is also limited STI laboratory training among medical technologists in SHCs, hampering the early and reliable diagnosis of STIs among clinic attendees.

In some areas, peer education has largely focused on the promotion of HIV testing and there has been limited attention on education about STIs, recognition of symptoms and signs of STIs, encouraging regular STI check-ups, or enhancing health-seeking behaviours for key populations with STI syndromes.

Recommendation 2.1.4

Particular efforts should be made to improve the quality of STI screening among key populations. To this end, more systematic and optimal standards of clinical and biomedical diagnostic procedures should be enforced by periodically trained and retrained staff.

In practice, this recommendation requires specific approaches for each key population. For example:

- a. Reduce the frequency of STI screening for sex workers from twice a month to monthly check-ups, but improve the quality of STI screening procedures. It is essential to probe for any STI symptoms, perform a genital examination to determine the presence of signs of cervical infection and perform a Gram stain of vaginal smear adequately. A well-performed examination and Gram stain of vaginal smear will improve the sensitivity and specificity of the current algorithm. Reducing screening frequency to once-a-month for registered sex workers will reduce workloads and increase time that can be spent for quality genital examinations for FSWs and MSM who are more likely to have higher rates of STIs).
- b. Encourage all MSM to undergo proctoscopic examination to detect the presence of ano-rectal discharge and ulcers. Use of Gram stain to detect ano-rectal infection is currently not recommended. It is essential to conduct a prevalence study on gonorrhoea, chlamydial infection and *mycoplasma genitalium* for sex workers and MSM. This should also include the validation of the current algorithm for screening sex workers and MSM. Syphilis screening and HIV testing should continue to be offered systematically. All syphilis-positive cases should be treated. In some set-ups the use of rapid tests for chlamydia, which have low sensitivity and specificity and have not been validated, should be discouraged. It might be essential to explore negotiated prices for NAAT or PCR tests for gonorrhoea and chlamydial tests. Although costly in the short term, this approach might prove to be cost-effective in the long run. Medical technologists operating in SHCs should benefit from regular proficiency training in STI laboratory diagnosis in addition to HIV testing.
- c. PLHIV should be screened for STIs. They should have a complete STI history taken and should have a genital examination.
- d. Include in peer education training a module on peer education on STIs, recognition of STI symptoms and signs, and encouragement for regular STI check-ups and positive health-seeking behaviour in the presence of STI syndromes. Sex workers should also be informed about the negative effects douching has on the reliability of vaginal swab testing.
- e. Ensure that, in the SSESS, the NEC collates the data and provides feedback to SHCs; conducts antimicrobial resistance monitoring of *Neisseria gonorrhoeae* in selected sites, given the increasing resistance to cephalosporins globally; and includes urethral discharge as part of the SSESS as it provides a better indication of rising trends of gonococcal infection in men, whose infections are more frequently symptomatic than in women.

2.1.5 Availability, accessibility, acceptability and quality of STI/HIV services

Although services are acceptable to the key populations interviewed, there are areas where the quality of services should be improved.

Peer educators are being trained and are supervised to provide appropriate services. However, there is a need for ongoing support and for peer educator tools to improve peer education. Peer education requires continuous quality improvement. Counselling services need to be improved. A checklist is available to guide counselling, but skills on counselling need to be improved. Clinic counsellors are often not available.

Prevention commodities are unevenly available: condoms are readily available but lubricants are often not. Laboratory reagents for syphilis screening, Gram stain and HIV testing are being provided regularly by the Department of Health. STI drugs are available, based on the national STI guidelines. A couple of SHCs served as satellite treatment hubs and were supplied with ARVs, but one SHC experienced several stock-outs. Isoniazid for TB prophylaxis is not available, since the TB programme does not supply it to SHCs. Appropriate information, education and communication (IEC) materials suiting the specific needs of key populations are usually not available.

Recommendations 2.1.5a

Greater investment in peer education and other service delivery models apart from SHCs should be considered. Skills of peer educators should further be enhanced through regular training and supportive supervision from site implementation officers. Appropriate peer educators should be recruited, including an adequate number of peer educators. Eligibility criteria should be developed for recruitment and should set the optimal ratio of peer educators over the number of key populations (e.g. one peer educator for every 50 members of a key population). Peer educators should perform microplanning to ensure systematic approaches for reaching key populations. They should have appropriate monitoring tools to track the number of key population members reached, repeat visits, services provided and required follow-up. Training modules and job aids for peer educators should be developed and standardized.

Recommendation 2.1.5b

In order to ensure availability of essential HIV prevention commodities, there is a need for a designated person at the national level to track stock-outs of essential HIV prevention commodities. Guidelines on tracking stock-outs could be provided by the Global Fund procurement focal point at the national level.

Recommendation 2.1.5c

It is essential to maintain or improve coordination between SHCs and nongovernmental organization peer educators. Regular meetings should be held to discuss targets and issues concerning the quality of services. The needs of MSM and PWID and the acceptability of current services should be assessed, seeking suggestions on the best way to increase access and the acceptability of services. The conduct of exit interviews of key populations using services and the conduct of focus-group discussions among key populations not using these services should result in the design of new service delivery models aimed at increasing access to and the use of services by MSM. Minimum standards of quality of service should be formulated along with monitoring indicators. The physical infrastructure of venues where services are provided (SHCs and others) must urgently be improved.

2.1.6 Sexual and reproductive health and rights (including reproductive choices), contraception and fertility enhancement

All people have sexual and reproductive health (SRH) needs and are entitled to reproductive health rights. The main concerns of key populations and PLHIV are often not just STI and HIV, but other reproductive health issues. For example, unwanted pregnancy or infertility can be critical issues among sex workers. As PLHIV are living longer and more productive lives, some PLHIV express a desire to be pregnant. Reportedly, women living with HIV are not discouraged by health-care providers to plan a pregnancy. Information and advice are reportedly given to them to make an informed choice about pregnancy, opting for the prevention of mother-to-child transmission (PMTCT) if they so desire. Whether or not these statements have been translated into practice could not be verified by the review team.

Contraceptive counselling among PLHIV is provided during post-HIV test counselling. In addition, SHCs are encouraged to provide contraceptive counselling to sex workers, but this is generally not done. In most of the treatment hubs and SHCs, contraceptive methods are not readily available. Referrals for contraception are being done at family planning service points. Screening for reproductive tract cancers is often not performed. Transgender women often need advice on the use of contraceptives to enhance their feminizing effects. They should be forewarned about adverse events and side effects associated with the use of hormones in high doses.

SRH needs are often overlooked, and it is important to expand services beyond STI and HIV to address these needs. Making SRH services available on-site or by referral will address the broader needs of key populations and PLHIV and increase their confidence and participation in the programme.

Recommendation 2.1.6

The following SRH services should be provided on-site or by establishing functional referral mechanisms: family planning and contraceptive counselling, promoting dual protection for pregnancy, STIs and HIV; availability of condoms and if possible contraceptives at service delivery points for sex workers and PLHIV; orientation of women to reproductive choices, safe pregnancy, abortion and post-abortion care and reproductive tract cancer screening (e.g. cervical, ano-rectal and prostatic cancers); and counselling on hormone use and referral to other gender enhancement practices for transgender people.

2.1.7 Populations living in confinement

Prisons

From an HIV and health perspective, the relationships between key populations and prisons operate in three ways, often in a cyclic and repetitive fashion. First, PWID sex workers and MSM are more likely than other members of the population to be incarcerated, particularly when they combine two or more of the above attributes. These key populations may already be affected by HIV at the time of their incarceration. Second, during their stay in prisons, they may be exposed to the transmission of HIV and other STIs through same-sex sexual contact. They may also be exposed to stigma, discrimination and violence during their incarceration. Third, as a result of their sudden incarceration or transfer from one prison to another and on release to the community, interruption of treatment for HIV or related infections may occur, endangering people who are on treatment and exacerbating the risk of viral resistance to therapies. Prevention of HIV transmission is promoted in some prisons through the availability of condoms and some access to diagnosis and treatment of STIs. TB treatment is reportedly available to those diagnosed within the prison environment. TB is diagnosed on the basis of history, clinical symptoms, chest X-ray and basic biological confirmation. HIV infection is diagnosed on the basis of voluntary HIV testing. The prison administration is well aware of its responsibility to provide health services to its inmates within its own budgetary limits. In the case of HIV, however, expensive ARVs are obtained by the prison administration from the Department of Health, but this arrangement and others relating to HIV prevention, care and treatment of inmates are informal, relying mainly on good relationship between prison officers and their local health counterparts. The prison administration has proposed to the Department of Health a joint agreement defining respective responsibilities in managing HIV. However, there is no policy, SOP or memorandum of understanding between the two units of government sealing such a cooperative agreement.

Recommendation 2.1.7a

It is recommended that a formal agreement between the prison administration and the Department of Health be approved in the form of a joint policy, accompanied by SOPs for the management of HIV within prisons and after transfer between prisons, addressing as well best practices in HIV/STI prevention and care and related supplies of medicines and commodities in detention facilities. It is further recommended that such procedures also cover the referral of inmates treated for HIV upon their release from prison so as to ascertain the continuum of care and prevention once they return to their communities. Civil society organizations and more generally nongovernmental organizations should be prompted and supported to play a key role in enhancing continuity of prevention, care and treatment for people in and out of jail.

Rehabilitation centres

Rehabilitation centres under the Department of Health are known as treatment and rehabilitation centres and provide drug rehabilitation for seven months for first-time participants and nine months for repeaters. The location of the centre visited by the team was noted to be far from cities, where most of the residents normally reside. This government facility has a maximum capacity of 150 residents, charges 3000 Philippine pesos (PHP) (equivalent to US\$ 69.60)^d per month per person and requires a court order for admission. They are usually staffed by a nurse, social worker/psychologist and house parents, the latter of whom are former drug users.

The national policies and programmes for HIV interventions in closed settings in the Philippines are yet to be formulated, and official SOPs within the centres do not exist. But some centres have already initiated the implementation of certain strategies and programmes in relation to STI and HIV. One of the centres visited by the team has actively collaborated with Cebu City Health Department in the conduct of regular (every six months) education and information campaigns on STI and HIV together with HCT services. The centre also implemented baseline routine screening for hepatitis B and hepatitis C, syphilis and TB. When needed, residents are referred to nearby health facilities where diagnostic and treatment services are available. The current practice in the management of HIV is for the diagnosed resident to follow up by visiting the city health office on discharge. Information on the HIV status of residents is, in theory, not known by staff members of the rehabilitation centre. However, current practice in the centre is to isolate residents with illnesses (i.e. HIV and others) and the reason for isolation is usually not confidential to other residents. Staff members in the centres are not trained to handle and respond to situations surrounding the presence of a resident known to be HIV positive. Despite the presence of post-care services, the rate of relapse to drug use is reported to be high at about 90%.

Recommendation 2.1.7b

There is a need to document current practices in rehabilitation centres where STI and HIV intervention activities have been initiated. Such evidence could inform future policy and practices that could be generalized to all rehabilitation centres, both private and government.

Recommendation 2.1.7c

The ongoing STI and HIV-related interventions in some rehabilitation centres need to be coupled with capacity-building among staff, in particular on the handling of residents diagnosed with these conditions.

Recommendation 2.1.7d

Given the large and growing number of drug-dependent residents, outreach and open rehabilitation services providing psychosocial support should be explored and enhanced. The high relapse rate after discharge from rehabilitation centres should be taken into consideration in the review of the design, implementation and effectiveness of the interventions and support services.

2.2 HIV testing and counselling

The health sector response to HIV has, over the years, emphasized the need for adolescents and adults to know their HIV status. Often seen as an entry point into the continuum of prevention, care and treatment, knowledge of one's HIV status in fact does more than this. It is a means to ascertain whether or not individual behaviours have been protective against HIV infection and whether or not referral to treatment services is required. But it is also a means to ensure that when PLHIV are on treatment, their own behaviours and practices are protective to themselves as well as to partners who may share their risk behaviours. Thus, HTC is an integral part of the prevention, care and treatment continuum, both on the individual and collective levels.

2.2.1 Promotion and uptake of HIV testing and counselling

While the Government has done much to raise public awareness of HIV, campaigns targeting key populations, in particular MSM via text messaging and "Take the Test" initiatives, have provided limited coverage. Lack of practical strategies remains a reason for the low uptake of HIV testing and counselling among key populations. Indeed, campaigns targeting sub-populations within key populations (such as young MSM, transgender people and PWID) were very limited in scope. Sub-population campaigns are those that acknowledge that subcultures exist within risk groups and these may require different HTC promotional strategies utilizing different media and different linkages to preferred HTC services.

The report on Health Sector Models to Increase Access to HIV Counselling and Testing (HCT)^e among MSM in the Philippines (2012)(27) notes that most MSM get information about HIV from friends and, in some locations from TV, radio and SHCs. Certain sub-populations of MSM, for example MSM who favour males exclusively and those who are overseas Filipino workers or are social networkers, or who know many other MSM, have not only higher risk behaviours but also better access to HIV services. By contrast, the report notes that married MSM and bisexual men who favour females or who know few other MSM are at lower risk but have poorer access to services and information. It is further noted in the report that young MSM and high-income MSM also have lower access to HIV services and that HTC throughput for MSM in general is grossly inadequate. Only 15% of MSM have ever had an HIV test, and only 5% were tested in 2012 and know their result. (28) Further, regional experience and focus group discussions suggest word-of-mouth promotion of HTC is one of the most potent means of influencing uptake of testing and counselling. (29) However, the content of most peer education observed or reported during this review consists of handing out referral cards and using flip charts that contain basic HIV risk reduction messages, and advised people to take a HIV test. Peer educators are poorly prepared to engage in one-on-one discussions that allow them to explore and challenge barriers to uptake of testing and return for results.

NASPCP uses the acronym HTC for HIV Testing and Counselling. Other partners in HIV prefer to use the acronym HCT for HIV counselling and testing. These two acronyms are used interchangeably in this report.

Recommendation 2.2.1

Peer educators require standardized training with skills rehearsal that enables them to ask if people have had a test, to explore reasons for not having had a test, and to be able to challenge the client's thinking and encourage them to take a test. Similarly, this training needs to ensure peer educators also learn to ask in a sensitive manner whether or not people have collected their HIV test results and – without requesting to know the result – explore and challenge the reasons for not returning for results.

2.2.2 Coverage and access

HIV testing is offered at 522 facilities. It is offered through government facilities, including SHCs and hospitals, a limited number of donor-dependent, nongovernmental and community-based services, and private medical clinics and hospitals. The type of facilities vary widely from a simple clinic, with one medical technician using a single rapid test to large private laboratories that provide large throughput with automated HIV serology testing and CD4 and viral load. While Government, nongovernmental organization and community-based organization services have employed counsellors; there is little evidence that private clinics and hospitals or laboratories offer any HIV test-related counselling. At least 1.3 million HIV tests were performed in the Philippines in 2012. However, the majority of these tests were not performed on individuals with the highest risk. For example, in 2011, it is estimated that there were more than 2.2 million Filipino nationals seeking to work overseas, referred to as overseas Filipino workers (OFWs), and that most of these would have had a HIV test as part of their initial employment testing. This population is generally at low risk of HIV.

SHCs largely target and attract FSWs and are underutilized by MSM and PWID. Service hours are restricted, clinics are overcrowded and clients complain of long delays in receiving services. Overcrowding at these services results from mandated weekly or bimonthly check-ups, and this fact makes it difficult to envisage these services being ready to take on any increased demand for HTC. Often SHCs are not open at the times or in the locations convenient to target populations. Discussions with unregistered MSWs and FSWs acknowledge a preference for attending private practices, partly as the wish to remain unregistered despite having to pay more for this choice. HIV testing in private medical clinics or hospitals is not currently covered under Philippine Health Insurance Corporation (PhilHealth).

Access to HTC for minors is a significant concern, especially in an epidemic where younger individuals in key populations seem to be significantly at risk. The Philippines AIDS Prevention and Control Act of 1998 (RA 8504) restricts access to testing to individuals below the age of 18 years old except when consent is provided by a parent or guardian. Imposing such age restrictions on testing, except with parental consent, resulted in less than 1% of high-risk males under 18 ever having an HIV test, which is a prerequisite to seeking potential life-saving treatment and care. Drawing on national consultations in 2009 and 2010, further options to ensure the access of adolescents to HTC and related services were debated. In conclusion, lowering the age of consent for HIV testing to 15 years was included as part of the proposed amendments to RA 8504. The proposed AIDS bill, which was approved in principle by the appropriations committee of the House of Representatives in 2012, is still under consideration by congress. Meanwhile, as an interim measure to improve access to HTC for minors, the department of Social Welfare and Development (DSWD) is strengthening efforts to make HTC more accessible to adolescents under the current AIDS law by mainstreaming HIV in social work, building the capacity of social workers and revisiting the role of social workers in the consent process. Some counsellors and medical practitioners interviewed during this review acknowledged that they declined to test minors. Some medical practitioners indicated that they provided consent on behalf of the minor, drawing on their medical code of ethics to provide necessary care.

Recommendation 2.2.2

Expanding the available range and type of HTC models is key to improving coverage, access and entry into care. Innovative service models should be field-tested. These models include private-public partnerships with shared resources, such as counsellors provided by nongovernmental organizations, or government funding of private service providers that are favoured by key populations. Additionally, the expansion of service hours and the employment of different models of pre-test counselling that require less time should be considered to alleviate congestion and to meet future increased demand for HTC and to improve the quality of HTC in SHCs. Innovative service implementation should continue, for example referral to treatment hubs and the enrolment of MSM who are community VCT clients after they have had a provisional diagnosis following the receipt of two reactive results from two different tests. Such approaches should be applied and replicated where these services can be monitored for compliance with the Department of Health service standards. In order to improve access to necessary health care for minors, it is imperative that there is immediate, strengthened advocacy for the revision of RA 8504, the Philippines AIDS Prevention and Control Act of 1998, with respect to the testing of minors.

2.2.3 Quality of HIV testing and counselling

The Government should be commended for developing and later revising the counselling curriculum, conducting HTC Master Trainer of Trainers training, and undertaking detailed reviews of counselling and laboratory services, as well planning and funding a serial testing algorithm validation study for point-of-care testing for key populations over the first three years of AMTP5. Despite this considerable effort, inconsistent quality and content of counselling, poor commodity management, a lack of equipment and equipment maintenance, and substantial delays in in the provision of results continue to hamper fulfilment of primary prevention and the treatment, care and support effort.

Pre- and post-HIV test counselling

Many counselling services are performed in areas lacking visual and auditory privacy. During this review, the team interviewed clients after counsellor consultations and directly observed provider processes and procedures using standard criteria checklists referenced against WHO and the United States Centers for Disease Control and Prevention guidance on standards of practice. In many HTC services, it was observed that clients left the HTC service without a clear understanding of the level of risks associated with different types of transmission risk behaviours and appropriate riskreduction methods. MSM were rarely asked if they had female partners and were rarely briefed on how to prevent mother-to-child transmission. It is of considerable concern that in direct observations of counselling sessions, as well as in findings from staff and client interviews, HTC counsellors, mostly from nongovernmental and communitybased organizations, provided clients with test results in a sealed envelope without first checking the results or requiring the client to show the counsellor the result. Further, many of HTC providers indicated that they were "upholding the client's right to privacy" in following this practice. It is noteworthy that some of the counsellors also disclosed that they felt uncomfortable giving reactive screening or confirmed HIV-positive diagnosis results to clients, and this may also contribute to the counsellor's desire not to learn the client's results. Similarly, some of these counsellors also felt it was up to clients to

disclose their status to their partners and acknowledged that they either did not raise the disclosure issue or simply informed the client that they should disclose their status to their partners. Few counsellors indicated that they had received practical skills training in facilitation of HIV disclosure. Issues related to the quality of counselling provided to parents of infants and children living with HIV are discussed in the section of this report on PMTCT and paediatric care.

Recommendation 2.2.3

There is a need for the Department of Health to develop a quality monitoring and management system for HTC and assume a strengthened regulatory role. The HTC quality management programme would assume responsibility for standardizing preand post-test counselling training courses, ensure SOPs are available for different types of service models (e.g. mobile or community-based VCT), and ensure standard medical record documentation occurs across government, nongovernmental and private HTC services. It is further recommended that in order to ensure appropriate, explicit and consistent health messages are delivered by counsellors, counselling tools should be developed that are specifically oriented to the needs of specific key populations. There is an urgent need to send out a circular or memorandum to all HTC service providers alerting them to their legal and ethical duty to check results before provision to clients to ensure that the correct result has been provided to the client. Additionally, it is essential that HTC providers realize that they need to check a client's understanding of the results and implications for transmission prevention and to facilitate linkages to treatment and care. There is also a duty to assess a client's ability to cope with an HIV-positive result and, as necessary, address the threat of risk of harm to one's self and others.

2.2.4 Counselling HIV-positive pregnant women, new mothers and their partners

While it is understood that most of the content of counselling of pregnant women is focused on PMTCT, partner and family disclosure, it is important to note that pregnant women recently diagnosed and those who have deteriorating health are especially vulnerable to depression. HIV-infected new mothers are also at increased risk of postpartum depression. While most doctors caring for pregnant women and new mothers may have some training on recognition and management of post-natal depression, most counsellors reported that they had not been trained to screen or manage this issue. Male partners of HIV-positive pregnant women and new mothers are not routinely offered counselling, and few counsellors indicated that they had skills in relationship or family counselling.

Recommendation 2.2.4

Depression not only reduces the quality of life of infected women but also can contribute to poor treatment adherence and to an inability to bond with and care for their newborn baby. It is imperative that counsellors are trained to be aware of common signs and symptoms of depression and the phenomena of post-partum depression and understand the importance of referring to appropriate mental health professionals. It is further recognized that it is important to increase the male partner's involvement in antenatal and postnatal care. Partners should be invited to consultations and offered partner testing, as appropriate and feasible. Counsellors require training that enables them to offer family or relationship support.

Counselling of children and their parents

Most counsellors, treatment enablers and site implementation officers (SIO) indicated little experience or training in counselling children living with HIV or their parents because only 0.5% of PLHIV on ARV were children less than 14 years old. Counsellors and community-support workers reported grappling with complex issues, such as what advice to provide to they when and what they tell their children about the parent's health status, and when and what parent should disclose about the child's own infection.

Other concerns reported by families and caregivers dealing with HIV involve interacting with the medical environment and addressing medical concerns. Families must negotiate financial and insurance issues and learn to communicate effectively with physicians and health workers. Additionally, they are coping with hospitalizations, clinic visits and important medical decisions. Caregivers are often required to manage their children's medical condition as well as their own condition simultaneously, and possibly, that of other family members. The medical regimen associated with HIV can be notoriously difficult to follow for adults and more so for children. Providers interviewed indicated that it was important to address parental reluctance to take children for repeated painful blood tests and to ensure children take medication. Counsellors and caregivers noted that they required training to address these issues. Counsellors or support workers working with children noted their personal anxiety about approaching death and dying with children. Finally some counsellors noted that it was going to be difficult to manage the prospect of having to discuss safer sex with HIV-positive adolescents.

Recommendation 2.2.5

Counsellors and ancillary support workers working with parents and children require specific training to address issues of disclosure, the preparation of children for clinic and hospital visits, and the provision of age-appropriate counselling for HIV-positive children and adolescents and their siblings. Parents may also need additional support in managing treatment adherence in children.

2.3 Laboratory support

This section^f presents an overview of HIV testing and testing facilities in the Philippines. It also reviews the testing of HIV in key populations (also referred to as most-at-risk populations) and their usage of HCT centres. The focus is on MSM who use HTC as this is the group contributing the most new HIV cases in the Philippines and the entry point to care. However, this section expands to broader aspects of laboratory work supporting the continuum of prevention, care and treatment, pointing to several deficiencies that need attention to ensure quality HIV prevention and treatment.

Information was collected from discussions with the Bureau of Health Facilities and Services, the National Center for Health Facilities Development, San Lazaro Hospital/SACCL the WHO Regional Office for the Western Pacific and WHO country staff, as well as various reports.

f Section 2.3 was prepared independently by Sandy Walker on the invitation of the review team and WHO as a valuable input to this report.

2.3.1 HIV testing and testing facilities

At least 1.3 million HIV tests were performed in the Philippines in 2012.⁹ However, the majority of these tests were not performed on individuals with the highest risk. For example, it is estimated that there were more than 2.2 million OFWs in 2011 and most of these would have had a HIV test as part of their initial employment testing. This population is generally at low risk of HIV. Only 10% of PLHIV who were diagnosed in 2013 were OFWs as of October 2013). (14)

There are 522 HIV testing facilities, including 29 SHCs, operating in the country. The types of facilities vary widely from a simple clinic with one medical technician using a single rapid test to large private laboratories that provide large throughput with automated serology testing and CD4 and viral load. Many HTC services were observed conducting venepuncture in cramped or in high-traffic areas that offered little visual or auditory privacy, or afforded the opportunity of blood extraction without distraction and possible needle-stick injury. In the key informant workshop, informants noted that at some sites staff reported that they were nervous or reluctant to perform venepuncture on PWID with extensive scar tissue. In response to questioning, some informants indicated that sites often did not have equipment such as "butterfly clips" to assist with blood draw. Some providers processing rapid tests complained that they did not have necessary equipment such as timers and instead utilized mobile phones and were observed to have used them as timers in between responding to text messages or taking calls. Some appeared to have relied on their memory of start times to process tests and did not adhere to recording start and finish times.

There are 35 HIV serology tests kits that have been registered and approved for use by the Food and Drug Authority (FDA). These include anti-HIV, Ag only, Ag/Ab combination test kits. In the 2012 SACCL External Quality Assessment Scheme (EQAS) for HIV serology testing, 477 participants used a total of 29 serology test kits. Rapid test kits were used by 66% of the laboratories. There are three HIV testing algorithms in place, one each for diagnosis of a client/patient, diagnosis of a neonate and screening of blood donations. There is no algorithm available for testing key populations. A specimen from an MSM or PWID is tested in the same way as a specimen from the general population.

The long turnaround time for provision of results-ranging from 10 days to five weeks or longer – is a major factor related to poor rates of return for results and delayed entry into treatment among individuals from key populations, particularly MSM and PWID. As noted in the report prepared to complement this review and confirmed by field observations and key informant interviews, there are multiple reasons for the reported delays and that these occur at different points along the sample-processing continuum. Firstly, screening facilities employed "batch testing" whereby they test multiple specimens in one batch to save resources rather than testing the specimen on the day it is received/collected.

Reactive specimens then must be transported to SACCL, and it is reported that this can be logistically difficult due to the geographical location of testing facilities and environmental factors. In addition, some couriers and airlines were reported to prefer not to carry blood specimens. As the cost of transporting specimens is covered by the referring laboratory and many of these laboratories acknowledged that they send specimens in large batches, this also contributed to the overall delay. This practice may also affect the integrity of the specimen and result in the client being required to undertake testing again. SACCL is the only facility that can conduct confirmatory testing, and the maximum turnaround time for reporting confirmatory results by SACCL is 10 days. All result reports sent to the HTC centres in paper format further contributes to the delay. Additional concerns with the current algorithm relate to the cost of the Western blot confirmatory test. While implementation

⁹ Correspondence between Sandy Walker (WHO short-term consultant) and SACCL, San Lazaro Hospital, Philippines, October 2013.

of a serial rapid testing algorithm with provision for an immediate result is expected to virtually ensure receipt of results, this is reportedly unlikely to be implemented by 2015, and therefore, interim strategies to improve return for results and loss to follow-up are urgently needed. Challenges relating to testing of neonates are reported under PMTCT paediatric care and treatment.

2.3.2 Reference laboratories

There are two national reference laboratories (NRLs) for HIV in the Philippines:

- SACCL at San Lazaro Hospital is the NRL responsible for conducting confirmatory testing in clinical (i.e. non-blood donor) situations for HIV, hepatitis B, hepatitis C and gonorrhoea. In addition the SACCL EQAS test kit evaluation and training, as well as services for the national surveillance system mandated by the Department of Health.
- The NRL at the Research Institute for Tropical Medicine (RITM) provides services to the National Voluntary Blood Services Program (NVBSP-NRL). It is also responsible for conducting confirmatory testing for HIV, hepatitis B and C, syphilis and malaria for blood donors and provide quality assurance and training to blood service facilities (BSFs).

In some instances, confirmatory testing is being performed by both SACCL and NVBSP-NRL for the same individual. For example, specimens from blood donors that are reactive are referred to NVBSP-NRL for confirmatory testing. Those that are confirmed positive and are able to be contacted are referred as a patient to VCT for screening. When the VCT screening result is reactive the specimen is referred to SACCL for confirmatory testing. Additional duplicative activities between SACCL and NVBSP-NRL were also identified in the provision of EQAS. SACCL and NVBSP-NRL are both open to identifying opportunities to harmonize activities. However, departmental orders require that both parties conduct testing in this manner.

The 522 facilities performing screening select the test kit or kits from the FDA-approved list that is appropriate for their facility and volume of specimens. Facilities use only one or a combination of two enzyme immunoassay (EIA) or rapid test kits. Negative results are reported to the patient without additional testing. Specimens for which a reactive screening test was achieved are sent to SACCL for confirmatory testing.

SACCL performs two parallel tests that are of different formats: particle agglutination and EIA. If both are nonreactive, then the result is released as negative. If the individual is high risk, then the individual is supposed to receive counselling, be taught preventive measures and be encouraged to have another test within six months. Specimens that are reactive or discordant in both tests are tested on a Western blot. SACCL is mandated to perform confirmatory testing under RA 8504. There has been a large increase in the number of confirmatory testing specimens, currently between 380 and 480 per month. In 2012 there were a total of 4443 referrals for HIV of which 78% were confirmed positive and 3% indeterminate. Some 19% of the referrals were false positive (negative specimens that were falsely reactive in the test or tests used at the screening facility).

Concerns with the current algorithm relate to the delay between collecting a specimen and the reporting of results. The long turnaround time is a major reason for key populations, particularly MSM and PWID, not returning to get their results. The delay is the result of a combination of factors including:

- Screening facilities often "batch test". They test multiple specimens in one batch to save resources rather than testing the specimen on the day it is received / collected.
- Reactive specimens must be transported to SACCL. This can be logistically difficult due to the geographical location of testing facilities and environmental factors. In addition, some couriers/airlines do not want to carry blood specimens. Moreover, the cost of transporting specimens is covered by the referring laboratory, and hence facilities send

specimens in large batches. This can result in specimens not being sent to SACCL for more than a month. This practice may also affect the quality of the specimen.

• SACCL is the only facility that can conduct confirmatory testing, but it does not have the capacity to meet current demands.

Additional concerns with the current algorithm relate to the cost of the Western blot. Reviews in 2011 and 2013 by the NRL in Australia at the request of the Department of Health and WHO resulted in a recommendation to simplify the current algorithm and decentralize confirmatory testing into regional laboratories. The new proposed algorithm would involve using rapid and other tests in prescribed combinations to eliminate the use of the Western blot. Briefly, screening laboratories would screen specimens using a test kit that they have selected from a list of test kits approved for screening. Specimens with reactive results would be sent to the regional laboratory, which would conduct confirmatory testing using two HIV test kits that have been prescribed for confirmatory testing. This would significantly decrease the turnaround time for confirmatory results and be more cost-effective than the current algorithm. (30)

The new three-test algorithm must be validated before implementation due to the risk of false-positive results owing to the relatively low prevalence of HIV in the general population in the Philippines. The plan to validate the new algorithm has been approved and funding was made available in 2013. SACCL will coordinate the project with support from WHO and the NRL in Australia. It is estimated that the validation will be completed and the new testing algorithm recommended in 2015. Eliminating the delay in the return of results would significantly improve the number of key populations that get a final test result and a report of HIV status. Recommendations for implementing a WHO serial rapid testing algorithm in HTC centres were made following a review in 2013. An algorithm providing for screening and confirmatory testing with rapid tests with an immediate result could be considered for use in the HTC settings in the Philippines. However, the testing facilities would need to ensure they meet regulatory requirements, such as licensing, participation in EQAS using only FDA- approved kits for the prescribed purpose (screening or confirmatory), and testing performed by a trained proficient medical technician. In addition they would need support, supervision and appropriate quality management system elements including SOPs. Also, careful attention would be required to manage the balance between the expiration date and wastage of the two confirmatory rapid test kits. During the validation of the new HIV testing algorithm, it will be determined whether screening and confirmatory testing could be performed using only rapid tests. The plan to validate the new HIV testing algorithm should ensure that data are collected to enable this analysis.

In October 2013 there was a WHO/UNAIDS regional meeting on community-based testing. The meeting discussed ways to improve access to HTC for key populations. The meeting suggested that rapid testing should be used in community settings. Two of the four testing models discussed included screening and confirmatory testing with rapid tests with an immediate result; these were recommended for the community setting. The meeting also recommended that the Department of Health provide the appropriate support to community organizations, such as funding and training in rapid tests. In addition, it recommended that the Department of Health provide the services. It stated that personnel conducting HIV testing require training, demonstrate proficiency and require ongoing support and monitoring of performance. (*31*)

Recommendation 2.3.2a

In order to accelerate the availability of confirmed results and reduce the number of those clients not returning for test results, it is critical that the planned serial rapid test validation study proceeds as soon as possible. It is also critical to assess available quality systems to support the implementation of a three rapid-test algorithm for screening and confirmatory screening – with immediate results in non-laboratory facilities, such as SHCs and community-based HTC centres as soon as possible. As an interim measure until the serial rapid test algorithm can be implemented, delays in the provision of results should be shortened by extending the model of service currently employed by community-based services whereby the referral to treatment hubs and enrolment of MSM who are community VCT clients occurs after provisional diagnosis with receipt of two reactive results from two different tests. This approach should be replicated only where these services can be fully monitored for compliance with the Department of Health in order to support quality testing. There is an urgent need to address the gaps in quality assurance of HIV testing. To this end, the licensing, regulation of test kits, participation in EQAS and training should be considered. There is also a need to develop national training elements around the management and procurement of test kits and reagents. It is further recommended that the NRL extend EQAS schemes from one round of distribution of samples to be tested for HIV by laboratories participating in the scheme to two annual rounds.

Viral load, NAAT and CD4 testing: There are at least five facilities offering HIV viral load testing, including the two NRLs, two large private hospitals in Manila, and one in Cebu City. All use the Roche COBAS TaqMan HIV-1. Some large private hospitals offer genotypic drug-resistance testing. At least one reference laboratory uses the PCR test for diagnosis in neonates. Within the national health system, there are at least eight facilities offering CD4 testing, including four in the NCR, including the two NRLs and four in Visayas and Mindanao that are funded by the Global Fund. All are using the Partec instrument with the exception of NVBSP-NRL, which is using the Becton Dickinson (Facscan) instrument. There may be a few additional tertiary private hospitals providing CD4 testing. NAAT and CD4 testing fall outside the established quality systems for HIV serology testing. For example, there is no licensing system for NAAT and CD4 testing facilities. It is assumed that staff members are trained by the supplier of the NAAT and CD4 test kits and instruments. The limited availability of CD4 count facilities operated by trained staff is a bottleneck to the needed scaling up of enrolment in ART. CD4 count is the procedure of choice for the planned scaling up of enrolment in HIV care and treatment below the threshold of 500 CD4+ cells per mm³. A simple estimate should be made of the trends in CD4 testing facilities that would be needed across the country, taking into account: (1) existing availability and replacement need of CD4 count instruments; (2) the rising trends in HIV VCT among key populations and the projected positivity rate of these tests; (3) the pace at which referral to CD4 count facilities will increase and the level of skills of the operating staff; (4) the optimal geographic distribution of CD4 count facilities to ensure rapid and equitable access, factoring in the local HIV burden; and (5) the anticipated need for CD4 testing for monitoring purposes.

Recommendation 2.3.2b

A three rapid-test algorithm for screening and confirmatory testing with immediate results should be considered during the validation of the new HIV testing algorithm. The availability of quality systems to support the implementation of a three rapid-test algorithm for screening and confirmatory test with immediate results in non-laboratory facilities, such as SHCs and HIV testing and counselling centres should be explored.

Recommendation 2.3.2c

CD4 count technology and operating skills should be scaled up to match the expected increase in HIV testing demands, particularly as the criteria for enrolment in care change.

2.3.3 Blood safety

The national HIV positivity rate in blood donations for 2012 was 0.15%. The proportion of key populations that donate blood with the aim of getting an HIV test has not been estimated. For MSM, it is known that this is occurring and this may be because MSM do not know of, or want to use, available services such as SHCs. (27, 28) Donated blood offered by people whose primary intent is to know their serological status decreases the safety of the blood supply. This is of particular importance where the test kits used to screen blood donations are not NAAT or Ag/Ab combination kits that lower the risk of missing positive donations from individuals in the window period. Donating blood to get a test result may also be providing MSM with a false sense that they are HIV negative. This is because it is BSF policy to not advise donors if they have a reactive test result. There is variation in the way this policy is followed. Some BSFs believe that not advising donors of reactive results is unethical and may release results to donors with reactive test results. (27) The management of blood transfusion services and the assurance of blood donation safety are discussed in greater details in Section 2.3.10.

The Global Fund Round 6 HIV grant recommendations state that hidden paid replacement donations are still collected and that this should be decreased. (11) It is difficult to determine the experiences around this issue without visiting multiple BSFs, which was beyond the scope of this review.

Recommendation 2.3.3

It is recommended that the policy of not providing results should be made clear to donors. For example, signage indicating that HIV test results will not be given to blood donors should be clearly posted in the BSF. Leaflets providing contact details for VCT services should be available to donors who request knowledge of their HIV status. Donors who volunteer that they have engaged in a recent exposure risk should be referred to an appropriate VCT service. Additionally, in light of the reported incidence of MSM presenting at BSF services in order to learn their HIV status, it is important that MSM outreach programmes address this issue in their peer education programmes.

2.3.4 HIV testing algorithm used for blood screening

Blood donations are screened by BSFs for HIV, hepatitis B and C, syphilis and malaria. Those that are negative are released for transfusion. Those that are reactive are sent for confirmatory testing to NVBSP-NRL. The confirmatory testing algorithm used by NVBSP-NRL is complex and includes five different tests including Ag/Ab combination EIA, Ab particle agglutination, Ag only EIA, automated Ab ChLIA and a Western blot. NVBSP-NRL plans to include a sixth test, a nucleic acid test. NVBSP-NRL is in the process of conducting a retrospective analysis of data that have been generated from the laboratory testing strategy, however, this has been difficult as data critical to this analysis are not collected.

NVBSP-NRL is mandated to conduct confirmatory testing under the Department of Health Departmental Order No. 393-E Series 2000 and Administrative Order No. 2005–0002. The number of donations requiring confirmatory-testing has increased. In 2010 there was a total of 13 606 referrals for the five transfusion transmittable infections and 818 of these were for HIV. Of the donors who require confirmation, approximately 81% are confirmed as positive, 13% negative and 6% indeterminate. The majority of the confirmed positive donors come from mobile blood collections in Metro Manila.

Recommendation 2.3.4

It is recommended to review the orders that require NVBSP-NRL and SACCL to conduct parallel and duplicate activities for confirmatory testing and EQAS. This duplication in activities undermines the efficiency and quality of the testing.

2.3.5 HIV testing of neonates

Diagnosis in neonates is complicated by the presence of maternal antibodies in the neonate's circulation. The SACCL algorithm requires that a neonate have two positive PCR tests within 18 months to be given a HIV-positive status. Some private testing facilities offer viral load tests for infants under 18 months. Caution should be exercised with this approach because manufacturers of viral load tests do not validate them for the purpose of diagnosis and specifically exclude diagnosis from their intended use. The results of these tests in neonates may be difficult to interpret reliably in the absence of serology.

Recommendation 2.3.5

SACCL and clinicians should review current operating procedures to determine the most appropriate HIV testing algorithm for children less than 18 months of age, in particular whether PCR testing should be centralized at SACCL only for the purpose of diagnosing HIV among infants and young children and if two positive PCRs should be sufficient to decide on enrolment in paediatric ART.

2.3.6 HIV testing for key populations and HIV testing and counselling services

As mentioned earlier in this report, the percentage of MSM who have been tested for HIV is 15%, with only 5% having been tested in the last 12 months. (27,28) Possible reasons for the low rate of testing were suggested by the Health Action Information Network (HAIN) in 2012, including the generally inadequate health-seeking behaviour of Filipinos, the cost of testing, the perception that MSM may be stigmatized in facilities, and the perceived lack of confidentiality. (32) There is also a lack of awareness of HTC with 47% of MSM saying they do not know where to get a HIV test. (27,28) An additional factor is the perception that

SHCs are for sex workers. The 5% HIV testing rate noted in the last 12 months among MSM is within the range of testing practices among other key populations: in 2012, only 4% of PWID and 17% of sex workers reported that they had an HIV test in the last 12 months. (28)

MSM who are most likely to be tested are OFWs (37% more likely than other MSM), social networkers (21% more likely) and those who have an income below the median value (11% more likely). MSM who are less likely to be tested include those under 20 years of age (62% less likely than their older peers), those who know fewer than 20 MSM (25% less likely) and those who are married (18% less likely than those who are not). MSM younger than 20 years of age are also 40% less likely than their older peers to return and get their test results.(27, 28)

Minors, classified as anyone under 18 years of age, are unable to be tested without permission of a guardian. SHCs report that they are required to turn away minors who are "begging to be tested". Lowering the age of consent of testing to 15 years was included as part of a proposed amendment to RA 8504, the Philippines AIDS law.(28)

Testing facilities used by MSM

Some MSM perceive SHCs as a service for sex workers. Twenty-five per cent of the newly diagnosed HIV cases in 2011 were clients of SHCs, with 25% detected equally in Government hospitals, private hospitals, laboratories and clinics. MSM who are most likely to be tested in an SHC are those with an income below the median value (8% more likely). Social networkers are 12% less likely, and OFWs are 44% less likely to have had a test at an SHC. Most of the newly diagnosed cases come from a small number of testing facilities. In fact, 45% of the new HIV cases diagnosed in MSM in 2011 were from 10 testing facilities. Twenty per cent of new cases were from three SHCs located in Manila, Cebu and Quezon City. Data available by region show that between 2007 and 2011, 82% of new HIV positive cases were detected in only four regions: NCR 54%, Region IV-A (Cavite to Batangas) 12%, Region VII Cebu 9% and Region XI Davao 7%(28), underscoring the urgent need to scale up VCT among MSM in other regions.

MSM not returning to receive results (loss to follow-up)

The IHBSS report suggests that only 65% of all MSM who have been tested received results. Others estimate that on average 81% of those MSM given a reactive result returned for the confirmatory result when the testing was performed by specific facilities. For those that did not return for results, the reasons given include the long turnaround time for receiving results, the quality of pre-testing counselling and the clarity around what a reactive result actually means. In addition, some subgroups show greater loss to follow-up than others. For example young MSM under 20 years old are 40% less likely to return to get a test result. (27) A simplified algorithm that decreases the turnaround time from specimen collection to confirmed result would improve loss to follow-up. Start-to-finish tracking, such as that used by the Love Yourself programme, could also improve loss to follow-up. (27) However, start-to-finish tracking may not be feasible on a national level.

2.3.7 Regulation, quality assurance and quality systems

The Bureau of Health Facilities and Services (BHFS) is responsible for licensing facilities that perform HIV testing. The BHFS is responsible for the licnesing process at level-two and level-three facilities, while the Regional Health Offices, also known as Centers for Health Development, oversee the smaller level-one facilities. A licensed HIV testing facility must meet certain requirements, such as participation in EQAS, staffing by at least one proficient medical technician and basic laboratory facilities. A clinical laboratory must be headed by a pathologist. Before a facility is awarded a license it is inspected to ensure requirements are met. Renewal of registration is supposed to occur each year with the exception of blood services, but in reality this is not achieved.

An administrative order of the BHFS includes an exception for government testing facilities that conduct the Department of Health programmes, such as SHCs that test for HIV and STIs. These facilities are not required to be licensed by BHFS. The administrative order does specify that facilities that are exempt from securing a license must adhere to programme policies and participate in quality assurance programmes. The Department of Health is responsible for managing these facilities and their requirements. BHFS lists 546 facilities as licensed to test for HIV. This list is not complete, however, and underestimates the total number of facilities that are testing for HIV. Licensed HIV testing laboratories are required to participate in EQAS. However, there does not seem to be consistent monitoring to ensure that all licensed laboratories participate.

There is a well-established programme for the pre-market evaluation, registration and regular renewal of registration of HIV serology test kits, but this does not include viral load, PCR or CD4 tests. FDA manages the programme, and the technical aspects are handled by SACCL. Post-market surveillance is managed by a re-evaluation of a registered test kit every two years. These activities were reviewed by the NRL in Australia in 2011 and recommendations for improvements were made. In addition, a review of the pre-market evaluation process is being undertaken in light of the harmonization requirements of the Association of Southeast Asian Nations (ASEAN). (*30*)

In 2013, SACCL provided EQAS training to more than 500 testing facilities that conduct HIV testing for diagnosis and some BSFs. Feedback to participants occurred in a timely manner, within one to two months of laboratories reporting results. Currently the EQAS training is provided only once per year; however, it is recommended that this be increased to two times per year.

Laboratory performances in 2012 SACCL EQAS

Six of 477 (0.01%) testing facilities used a test kit that was not FDA registered. It is not clear how or why this occured, but a mechanism should be implemented to prevent it. Twenty-five of the 477 laboratories (5%) reported results in the EQAS that were aberrant, that is, reported an incorrect HIV status for at least one specimen. Five of the 27 aberrant results reported (19%) were false-negative results, which in a real setting would result in a negative result being given to a HIV-positive patient (Table 3).

Table 3. Type of aberrant results that were reported in the 2012 SACCL EQAS

Type of aberrant results	Number of aberrant results
False positive (reported for negative specimen)	8
False negative (reported for positive specimen)	5
False inconclusive / indeterminate (reported for positive specimen)	11
Other	3
Total	27*

*Two laboratories each reported two aberrant results.

Facilities that reported an aberrant result were required to investigate the reason for the result and report to SACCL what action they have taken to resolve the issue.

2.3.8 National Voluntary Blood Services Program at the national reference laboratory and the external quality assurance system

NVBSP-NRL provided EQAS to some BSFs prior to 2012. More BSFs participated in the SACCL EQAS (n=124 in 2010) than in the NVBSP-NRL EQAS (n=35 in 2010). Some of the BSFs participated in both programmes. The majority of the funding for the NVBSP-NRL EQAS was from the Global Fund. Feedback on the performance of laboratories or test kits was either not provided at all or was extremely late. A fragmented system of two different EQAS (SACCL and NVBSP-NRL) is not recommended as it reduces the ability to detect problems in testing due to splitting data sets.

The National Center for Health Facilities Development (NCHFD) and the National Health Laboratory Network released in 2008 the first edition of the *Manual of Standards on Quality Management System (QMS) in Clinical Laboratories*. The standard draws on some elements of the International Organization for Standardization (ISO) standard for QMS in medical laboratories (ISO 15189) and can be applied to any clinical laboratory. NCHFD conducts QMS training programmes for government facilities using this standard. So far 74 laboratories have been trained, mainly at the district level. This programme may indirectly include a small number of facilities that test for HIV but will not have a great impact on the QMS in the majority of HIV testing facilities. There is no mandatory requirement for HIV testing facilities to have a QMS.

Training of laboratory technicians

SACCL and NVBSP-NRL are mandated to provide training for laboratory technicians. In 2012, SACCL conducted 13 training programmes in which 136 new medical technicians were trained. In addition, 253 medical technicians underwent retraining, which is required every three years after initial training. The technicians were from 13 regions, with 66% from private facilities and 34% from government facilities. The Proficient Medical Technician course includes HIV, hepatitis B and C, and syphilis and is undertaken over seven days. The training includes safety, waste management, test methodologies and troubleshooting, quality assurance, and pre- and post-test counselling, and other topics. In 2010, NVBSP-NRL conducted three training programmes in which 74 technicians were trained. More recent information on training has not been provided by NVBSP-NRL.

Recommendation 2.3.8

HIV testing facilities should be supported to implement QMS, address the gaps in the national systems that support quality assurance in HIV testing, and consider allowing the use of test kits only if they are licensed for use in the Philippines by the National Regulatory Authority and accompanied by participation in EQAS and training.

2.3.9 Test kit procurement

A wide variety of HIV test kits are used in the country (Fig. 6). Stock-outs of rapid tests occur in multiple settings including hospitals, SHCs and HTC centres. This is generally due to lack of financing and lack of appropriate demand forecasting. (27, 28)

Other factors that influence stock-outs are the inefficient internal processes operating within facilities. For example, government hospitals undertake a public bidding process when they purchase test kits, and only those offering FDA-approved test kits are invited to submit bids. This process can take up to two months and the internal ordering process can take an additional month. In some facilities the bidding process occurs once a year. It is assumed

that frequent bidding processes ensure that test kit prices remain competitive. While this may be true, these processes as currently administered cause inefficiency, confuse testing statistics and confound the traceability of test results.

Programmes need to be developed to minimize stock-outs, and it has been suggested that these programmes be instigated at the national level. Training in forecasting and managing reagents and test kits could be included in the Proficient Medical Laboratory Technician training that is conducted by SACCL and NVBSP-NRL. In addition, each facility should designate an individual to be responsible for managing test kits and reagent stocks. The process and timelines should be documented in an SOP.



Figure 6. HIV test kits used by laboratories as presented in the SACCL 2012 report on external quality assurance system (EQAS)

Source: SACCL

* Information about the testing of NAAT and CD4 was provided by SACCL. A more accurate description would involve visiting each of the testing sites, which was not done for this review due to time constraints.

+ Information on the testing and EQAS performed by NVBSP-NRL was taken from *Report: Confirmatory testing and EQAS activities of the national reference laboratory TTI*, Research Institute of Tropical Medicine, Sandy Walker, NRL Australia December 2011. Attempts to collect more current information during report preparation from NVBSP-NRL were unsuccessful.

Recommendation 2.3.9

NASPCP should develop national training elements around the management and procurement of test kits and reagents. CD4 and viral load testing need be considerably expanded in an effort to remove the current bottleneck to increased enrolment of PLHIV in the treatment cascade. Availability, coverage, uptake and costs should be considered. Programmes need to be developed to minimize stock-outs; each facility should have an individual responsible for managing test kits and reagent stocks.

2.3.10 Blood transfusion safety

The national HIV positivity rate in blood donations for 2012 was 0.15%. (14) The proportion of key populations that donate blood with the aim of getting an HIV test has not been estimated. For MSM, it is known that this is occurring and it may be because MSM do not know of, or want to use, available services, such as SHCs. (27) Donated blood offered by people whose primary intent is to know their serological status decreases the safety of the blood supply. This is of particular importance where the test kits used to screen blood donations are not NAAT or Ag/Ab combination kits that lower the risk of missing positive donations from individuals in the window period. Donating blood to get a test result may also be providing MSM with a false sense that they are HIV negative. This is because it is BSF policy to not advise donors if they have a reactive test result. There is variation in the way this policy is followed. Some BSFs believe that not advising donors of reactive results is unethical and may release results to donors with reactive test results.

The Global Fund Round 6 HIV grant recommendations state that hidden paid replacement donations are still collected and that this should be decreased. (11) It is difficult to determine the experiences around this issue without visiting multiple BSFs, which was beyond the scope of this review.

Recommendation 2.3.10a

It is recommended that the policy of not providing results should be made clear to donors. For example, signage indicating that HIV test results will not be given to blood donors should be clearly posted in the BSF. Paid blood donation schemes should be phased out and eliminated as soon as possible.

Blood donations are screened by BSFs for HIV, hepatitis B and C, syphilis, and malaria. Those that are negative are released for transfusion. Those that are reactive are sent for confirmatory testing to the NVBSP-NRL. The confirmatory testing algorithm used by NVBSP-NRL is complex and includes five different tests including Ag/Ab combination EIA, Ab particle agglutination, Ag only EIA, automated Ab ChLIA and a Western blot. NVBSP-NRL plans to include a sixth test, a nucleic acid test. NVBSP-NRL is in the process of conducting a retrospective analysis of data that have been generated from the laboratory testing strategy; however, this has been difficult as data critical to this analysis have not been collected.

NVBSP-NRL is mandated to conduct confirmatory testing under the Department of Health Departmental Order No. 393-E Series 2000 and an Administrative Order No. 2005–0002. The number of donations requiring confirmatory testing has increased. In 2010, NVBSP-NRL received 13 606 referrals for confirmation of the five blood borne infections, of which blood donations were screened and 818 of these were for HIV. Of the donors that require confirmation, approximately 81% are confirmed as positive, 13% negative and 6%

indeterminate. The majority of the confirmed positive donors come from mobile blood collections in Metro Manila.

In the national blood donation programme, donors are required to complete a donor questionnaire or answer screening questions verbally, but time and cultural considerations make it difficult to fully address the potential risk of HIV exposure. Individuals who have either a significant risk or health issue disclosed on their donor questionnaires or in their responses to interview questions are declined.

It is understood that in communities where HIV remains a highly stigmatized disease, where limited VCT services are available and where certain exposure risk behaviours are illegal, high-risk or vulnerable individuals who wish to learn their status put the blood supply at risk. Three key factors may make donor disclosure of risk problematic. The first is the stigma associated with risk-taking behaviours, the second is the lack of privacy in some blood-collection sites and the third is the imperative to donate blood when relatives need it. The skill of the person who conducts initial screening is critical in encouraging individuals to disclose risk factors.

In summary, the safety of the clinical blood supply is potentially jeopardized when there are insufficient options for individuals from marginalized populations to seek low-cost, anonymous HTC.

Recommendations 2.3.10b

Scale up access to VCT and provider-initiated counselling and testing (PICT) and promote the use of these services among blood donors. Discourage the use of blood donor screening as a de facto testing service by clearly indicating to prospective donors that they will not be informed of their results. Donors who indicate that they have been exposed or who have potential ongoing exposure should be referred for a detailed assessment at a VCT service and declined as donors. Donors who are declined as regular donors should be informed that they require further health assessment and that they should refrain from donating blood as they may have an infection and that one of the possible infections may be HIV.

2.4 Infection control and management of occupational exposures

Counsellors working with clients suspected of having active TB report that they do not have adequate ventilation in some of their counselling rooms. During the recent HTC assessment, the small group working on PWID noted the concern of laboratory technicians in association with the performance of venepuncture on PWID with significant scar tissue. Group members stated that this posed an increased occupational threat and possibility contributed to staff turnover in services working with this population. Group members further asserted that equipment that made blood easier to collect blood from PWID was not readily available.

Earlier reports reviewed had indicated that there might be significant underreporting of occupational exposure, and therefore low uptake of post-exposure testing, counselling and post-exposure prophylaxis. It is unclear whether this underreporting continues, and whether it is significant. This may warrant further research. In December 2010, during a master counsellor training workshop, some health workers acknowledged that they had indeed

sustained occupational exposures and/or had knowledge of other health workers who had sustained exposures and not reported them. It is unknown to what extent occupational exposures are underreported. Discussions in the 2010 workshop further indicated that often health workers had a lack of clarity about correct post-exposure first aid and reporting procedures.

At a workshop in November 2012, key informants noted that staff at some sites were nervous or reluctant to perform venepuncture on PWID with extensive scar tissue. The informants indicated that sites often did not have equipment such as "butterfly clips" to assist with blood draw. As the Department of Health scales up interventions on HIV, preventing disease transmission in health-care settings is of utmost importance. The prevention of iatrogenic transmission includes general infection control measures, proper decontamination procedures, proper waste disposal, and the provision of post-exposure prophylaxis (PEP).

Management of occupational exposure, also known as post-exposure management (PEM), is particularly important for health-care workers who have been exposed to blood and other infectious body fluids/tissues through a needle injury or other accident at work. Policies and SOPs in infection control, including those for PEM, are available in hospitals, including treatment hubs/centres and mostly follow national guidelines. Secondary and primary health-care facilities, SHCs and health centres generally do not have them. And if they do, there is no written policy in the facility to which a health-care worker can refer. Health-care personnel interviewed have no knowledge about existing protocols so that the management of occupational exposures for them mainly involves washing exposed areas with soap and water.

Recommendation 2.4a

As with other issuances from the Department of Health, guidelines and policies on pre- and post-exposure management should be disseminated to health-care facilities and a system should be in place so that this is coupled with training/ orientation of protocols and supportive supervision from clinic managers to local and regional health departments. It is further recommended that a simple flow chart that summarizes the steps in pre- and post-exposure management be required to be displayed on walls in exposure-prone health service areas, such as outpatient departments, emergency wards, laboratories, surgery facilities and service areas for the HIV/AIDS core team (HACT). The wall chart should also have after-hours contact numbers of staff designated to support exposed workers.

National pre- and post-exposure management guidelines for HIV and hepatitis B and C in health-care settings were developed in 2009 by the National Center for Disease Prevention and Control (NCDPC) with technical assistance from WHO. (*33*) It recommends that an exposed health-care worker must be evaluated as soon as possible, preferably during the first hour after the exposure, especially if the source is known to have HIV. PEM should not be offered beyond 72 hours after the exposure. There is a formal PEM reporting system including three steps: (1) the health-care worker reports his or her accident to the infection control nurse; (2) the nurse consults the HACT chair with the report; and (3) HACT provides PEM, including PEP, pre-test counselling, testing, post-test counselling and follow-up. Although infection control nurses play a central role of coordinating PEM between the exposed health-care worker and HACT, it does not work well if the accident happens during the night and/or the weekend, which delays PEP initiation. In addition, some health-care workers seem not to report their accident for PEM because of their low awareness of occupational infection and its reporting system.

Recommendation 2.4b

A written policy that includes prompt reporting of incidents and referrals should be in place within the health-care facility and be visible and readily accessible by health-care workers. For compliance, this requirement should be included in the general infection control checklist of the health facility assessment or in a quality assurance checklist from a regulatory body from the Department of Health.

It was noted in reports that increasing numbers of health-care workers are availing of PEP – through ARV for HIV – provided free in the HIV treatment hub. The biggest challenge in providing access to PEP, however, is in the coordination between HACT and health-care workers from remote areas. Exposed health-care personnel in some sites have difficulty in accessing PEP, especially on non-working days (weekends and holidays). In this scenario, the initiation of PEP would be delayed.

Recommendation 2.4c

Strengthen collaboration and establish a robust referral system from different health facilities to HACT of nearest treatment hub or satellite hubs so there can be timely access to PEP for exposed health-care workers. To prevent delay, somebody should be delegated by HACT to be available during regular non-working hours to attend to and provide PEP to exposed health-care workers.

The Department of Health began integrating HIV intervention services, such as HTC, in health centres that also provide other medical services such as TB and antenatal care. Equal consideration should be made in the capacity, as well as the structural set-up, of these facilities.

Recommendation 2.4d

The Department of Health and the health departments of LGUs may need to revisit the structural set-up in these facilities and support facility enhancement and compliance to environmental control as part of infection control measures. It is important and beneficial for health-care personnel to have a safe working space place as they attend to the various medical needs of patients in one facility. Mechanisms should also be in place for their health care, such as regular medical and laboratory evaluation and vaccinations.

Some treatment hubs provide PEP to victims of sexual assault, but no official guidelines have been issued for this practice.

Recommendation 2.4e

The Department of Health may consider revising its policy on PEM for health-care personnel to expand coverage to victims of sexual assault. Any policy changes should be disseminated and formal links should be established between units tasked with protecting women and children and the HIV treatment hub so access to PEP for victims of sexual assault, especially women and children, is facilitated in timely fashion.

2.5 Referral and access to and use of treatment, care and support services

Even though HIV prevalence among key populations, especially FSWs, MSM and PWID, has been increasing and HTC has been promoted actively among these populations, there is a yawning gap between HTC practice and people's awareness of their test results. This gap is a major obstacle to the timely referral of PLHIV to treatment centres.

The review team was informed that in some facilities, more than 50% of those who are found positive through screening do not get the result of their confirmatory test and were lost to follow-up. Reportedly, this occurs due to a combination of factors including:

- Screening facilities often "batch test". They test multiple specimens in one batch to save resources rather than testing the specimen on the day it is received/collected.
- Reactive specimens must be transported to SACCL. This can be logistically difficult due to the geographical location of testing facilities and environmental factors.
- In addition, some couriers/airlines do not want to carry blood specimens. Moreover, the cost of transporting specimens is covered by the referring laboratory, and hence facilities send specimens in large batches. This can result in specimens not being sent to SACCL for more than a month.
- SACCL is the only facility that can conduct confirmatory testing, with the maximum turnaround time of 10 days for reporting confirmatory results.

Recommendation 2.5a

The laboratory services system for confirmatory HIV tests should be reformed. Services urgently need to be decentralized in consideration of the demographic coverage of screening test sites. The long turnaround time of confirmatory HIV testing can be a big barrier for key populations being referred and access to treatment, care and support (TCS) services.

Currently, TCS services are available at only 18 treatment hubs in the Philippines, while there are at least 522 screening / testing sites. Since each treatment hub covers several testing facilities within a large catchment area, the long distance between a testing site and treatment hub may also become a barrier to timely referral and early enrolment in TCS services. The absence of a functioning tracking system or record of linkages between HIV testing sites and treatment hubs aggravates the loss to follow-up from the very outset of the cascade of services. Even though the referring facility writes a referral letter with a return slip and gives it to a client for delivery to the care facility, the client may chose to not visit the referral treatment hub. In other instances, the referral facility does not return the slip to the referring agents who remain unaware of steps taken by their client. Given the inefficiency of the formal referral tracking system, it often relies on informal personal connections between staff initiating the referral and treatment providers, as wll as the use of mobile phones, email, Facebook and other tools. There are obvious limits to this informal system, especially in the facilities with a heavy patient load, where tracking clients until they reach treatment hubs may be too time consuming.

Recommendation 2.5b

A formal referral system from HIV testing sites to treatment hubs, including a client tracking system, urgently needs to be established. The system should allow easy linkage of client information across sites and locations so the system can assess whether people are receiving services at the most proximal site suggested, or anywhere else in the TCS. NEC should provide the methods and tools to ensure close monitoring of the TCS continuum and provide early warnings when the tracking system fails to perform.

According to national guidelines, baseline clinical assessment, along with CD4 count or viral load, should be conducted to determine the eligibility of PLHIV to enrolment in TCS services (Fig. 7). In some treatment hubs where a laboratory is not available, blood samples are transferred to the nearest hub where CD4 or viral load examinations can be conducted. The average turnaround time of the results of these tests is about two to four weeks. In addition, some treatment hubs provide these examination services one to two times per week and can only perform a finite number of tests during a given period due to the scarcity of instruments, reagents and skilled laboratory technicians. These constraints delay further clients availing of TCS services.

Recommendation 2.5c

Clinical and immunological assessments (e.g. CD4 test) needed to determine ART eligibility should be conducted immediately after clients are referred to TCS services in order to provide early treatment, if indicated. Blood drawn for the confirmatory HIV test could be used for baseline clinical assessments. It could cut the time needed to begin treatment.

Figure 7. Continuum of care and treatment



2.6 **Pre-antiretroviral therapy**

2.6.1 Late presentation and loss to follow-up of PLHIV

National data show that the median CD4 cell count at enrolment in TCS services was 142 cells/mm³. Clients with cell counts between 250 and 350 cells/mm³ are currently not yet eligible for ART and proceed to regular clinical monitoring, until ART initiation. The national guidelines recommend that an individual's CD4 count should be monitored every six months and isoniazid preventive therapy (IPT) and vaccines should be provided if indicated. Although IPT is recommended in Administrative Order 2008-0022 on TB and HIV, it is not practised systematically in all facilities or by all local care providers. In most of the sites we reviewed, health-care workers tend to pay less attention to monitoring pre-ART clients as compared to ART clients, and there was no formal system to follow the clients who did not come back to the sites for regular monitoring. At some sites, on behalf of health facilities, CBOs reminded clients of their appointment date for monitoring. Since pre-ART clients still have high CD4 cell counts and are not symptomatic, they often do not return to the clinic for the monitoring if they do not recognize its important purpose. Post-test counselling by health-care workers might be insufficient to ensure higher rates of return. These factors might increase the potential of pre-ART clients being lost to followup. In addition, the CD4 cell count examination for pre-ART is not covered by PhilHealth because these patients are recognized as clients who are "not yet on treatment". Clients have to pay or find a source of funding to cover the cost of follow-up CD4 or viral load tests (only the first test is free) and this is likely to act as a disincentive for the patient to adhere to proposed monitoring requirements. Since pre-ART patients are not entitled to the benefits of Outpatient HIV-AIDS Package of PhilHealth, exploratory and advocacy talks should be conducted between the NASPCP and PhilHealth to expand its coverage to include pre-ART patients.

Recommendation 2.6.1a

Through post-test and/or pre-treatment counselling, health-care workers should provide information and education to PLHIV in pre-ART on the importance of clinical monitoring.

Recommendation 2.6.1b

A formal follow-up system for pre-ART clients should be established urgently. Otherwise, clients will miss timely ART initiation, which could lead to poor outcomes and allow further transmission of HIV in the community. Cohort analysis may be a useful way to monitor clients' retention rate and the rate of loss to follow-up

2.6.2 Prevention and control of opportunistic infections in pre-ART

Opportunistic infections pose a serious problem for PLHIV who are not yet on ART. The risk for opportunistic infections increases as the CD4 count declines. Treatment of opportunistic infections is required before ART begins to avoid complications associated with immune reconstitution inflammatory syndrome (IRIS).

Opportunistic infections diagnosis and treatment are part of the monthly reports submitted by treatment hubs. Records from the treatment hubs at the RITM and San Lazaro Hospital were obtained during the review. TB, candidiasis, *Pneumocystis jiroveci* pneumonia (PCP) and syphilis were the most common opportunistic infections diagnosed. While prophylaxis using co-trimoxazole preventive therapy (CPT) has been reported, IPT has not been reported. Although IPT is not part of the most recent NASPCP guidelines on clinical management of HIV, some treatment hubs started adopting the practice of IPT beginning in 2012. New guidelines recommending IPT are still under approval process in the Department of Health. Screening for active TB in pre-ART relies on chest X-rays and sputum acid-fast bacillus staining. (*34*) GeneXpert®, a cartridge-based, automated diagnostic test that can identify *Mycobacterium tuberculosis* (MTB) and resistance to rifampicin, is part of the screening for active TB in some treatment hubs (e.g. RITM). Administrative Order 2008–0022 addresses the issue of TB and HIV and recommends offering HIV counselling and testing to all people diagnosed with TB in DOTS (directly observed treatment, short course) centres.

The HACT guidelines from NASPCP provide recommendations on starting prophylaxis to guard against PCP TB and *Mycobacterium avium* complex. Baseline referrals to an ophthalmology specialist to detect signs of cytomegalovirus retinitis is not part of the HACT guidelines but is also done routinely in some treatment hubs. Co-trimoxazole is used for treatment and prophylaxis against PCP and toxoplasma infection. Macrolides (commonly azithromycin) are used for prophylaxis against *Mycobacterium avium* complex. Clindamycin and primaquine are used to treat PCP in cases of allergy to co-trimoxazole, and dapsone is used for prophylaxis. Amphotericin B is prescribed for cryptococcal infections. The deoxycholate formulation is often used because the lipid complex and liposomal formulations are much more expensive and are not widely available. Ganciclovir or valganciclovir is used for cytomegalovirus infections. The cost of drugs for opportunistic infections treatment may be covered by the PhilHealth Outpatient HIV-AIDS Package, but clearly the amount allotted under the package quickly runs out when a PLHIV requires the more expensive medicines for opportunistic infections treatment, for example, ganciclovir and amphotericin B. (*35*)

Some laboratory tests for diagnosing opportunistic infections are not widely available. Examples are sputum-staining methods to detect PCP and stool-concentration and staining methods to detect intestinal protozoan infections, for example *Cryptosporidium*. Primaquine which is used as part of second-line treatment for people with PCP and who are allergic to co-trimoxazole is not widely available. It is only available in the Department of Health central and regional offices as part of malaria treatment, and a special request must be made to be able to access these drugs for PCP treatment. These offices are closed on weekends, which may result in possible treatment delays. Isoniazid is not provided at TB centres for DOTS as the focus of the DOTS centres is on treatment of active cases, not prophylaxis.

The current method of reporting also shows inconsistencies. One treatment hub, for example, showed that a number of PLHIV are diagnosed with TB during each reporting period. However, the number of PLHIV started on TB treatment is reported as zero for each of the three treatment periods for which data are available.

Recommendation 2.6.2a

NASPCP should produce national guidelines on treatment for opportunistic infections and response monitoring, including guidance on dealing with IRIS. Currently available guidelines do not provide details of diagnosis and treatment in varying clinical scenarios. At present, a technical working group is preparing guidelines on the treatment of opportunistic infections in PLHIV. These guidelines, intended for physicians who are non-specialists, must be released soonest to aid the timely and accurate diagnosis and treatment of opportunistic infections in PLHIV.

Recommendation 2.6.2b

Reinforced linkages between HIV and TB, which is the most frequent coinfection among PLHIV, will enhance an efficient continuum of services. The HIV testing rate among TB patients has been increasing dramatically through an effort by the Department of Health to promote the implementation of a new policy of universal testing for TB patients. TB screening among PLHIV is also routinely conducted at HIV clinics as a part of clinical assessment. However, the treatment of TB and HIV has been provided in each clinic separately, despite the strong demand by co-infected clients for a one-stop service. It is recommended that arrangements be made within the health system to respond to this demand.

Recommendation 2.6.2c

A mechanism to make drugs for the treatment of opportunistic infections accessible, at least in the country's treatment hubs, must be forged. This is especially important for drugs that are either quite costly or are not usually part of hospital formularies.

Recommendation 2.6.2d

Laboratory capacity of treatment hubs to diagnose opportunistic infections must be strengthened. Sputum-staining methods for PCP diagnosis, serology for toxoplasma infection, and stool-concentration and staining methods for diagnosing protozoan intestinal infections are examples of laboratory exams that must be more widely available to aid in diagnosis of opportunistic infections.

Recommendation 2.6.2e

Reporting and recording of diagnosis and treatment for opportunistic infections should be more consistent. Developing a systematic method of organizing data for opportunistic infections from the country's treatment hubs will help characterize the quality of the treatment of opportunistic infections received by PLHIV. Many PLHIV are treated for opportunistic infections in public and private hospitals outside of treatment hubs. Therefore, devising a method by which data on the treatment of opportunistic infections from these hospitals can be collected will also help track progress in the diagnosis and treatment of opportunistic infections. Integrating reports from TB-DOTS centres and treatment hubs will also yield a more accurate picture of TB in PLHIV.

2.7 Norms, standards and practices of antiretroviral therapy

2.7.1 Treatment care and support counselling

After revision of the national HIV counselling curriculum, and in response to two reviews of HIV counselling services completed in 2012 and 2013, (27, 28) the Department of

Health has reinstated HIV partner disclosure counselling into the training curriculum. It is also understood that the Department of Health is considering recent WHO guidance on management of sero-discordant couples. It is very encouraging to see that PLHIV and community volunteers are serving as valued partners in many treatment and care services. However, services often are largely dependent on nongovernmental organizations, PLHIV peer educators and site implementation officers to provide counselling, foster linkages, and escort clients between HIV testing sites and treatment and care facilities, as well as to help clients navigate crowded and circuitous routes within hospitals to access other services, such as those for TB, STIs and pharmacy. Services providing care counselling are often reliant on either project funding or volunteer service providers. Too often, dedicated and enthusiastic individuals with little or no training or quality supervision are found to be providing these important services. Further, there does not seem to be a plan in place to transition this cadre of care providers to other funding sources when project funding contracts.

Recommendation 2.7.1a

There is a need to develop transition plans to ensure the sustainability of the cadre of treatment enablers and site implementation officers whose positions currently are either funded or are filled by volunteers.

Most treatment and care services have no formal screening tool to assist with either the initial screening of the psychosocial and medical support needs of new patients, the ongoing review of a patient's understanding of his or her current health status, adherence to transmission and risk reduction, or their use of drugs and alcohol throughout the course of their care. There does not seem to be adequate and specific prevention information or assessment of an individual HIV-positive patient's or client's barriers to risk reduction. Key informants report that most HIV-positive individuals interviewed did not understand the rationale of using condoms with other partners who are also HIV positive, and several had an expressed belief that if you were taking HIV medications that you did not need to use condoms. Further, clients and patients of services demonstrated in focus group discussions that they did not comprehend the relationship between HIV and STIs or the importance of routine STI check-ups, vaccinations for hepatitis B, STI treatment completion, or the concept of STI re-infection related to partners not being treated. Practical strategies to support partner disclosure counselling are generally not offered to clients, largely as many counsellors have not been trained. In general, clients are counselled that they should disclose to their partners, though in some services counsellors acknowledge actively avoiding raising disclosure with clients. Many counsellors acknowledge they do not know how to advise individuals about disclosure decisions when individuals have multiple partner relationships and repeated casual sexual contacts. Currently there are no current SOPs for management of sero-discordant couples, although as mentioned earlier the Department of Health is in the process of considering WHO global guidance on this issue. HIV prevention services in treatment and care facilities are limited to telling people to use condoms.

In this review, with the agreement of patients and clients, treatment adherence counselling processes were directly observed, key patient education tools reviewed, and patients and clients were interviewed after consultations with providers. With few exceptions, counsellors in general did not know how to appropriately inquire about barriers to adherence, and they did not demonstrate that they could solve common adherence problems. Some counsellors displayed limited treatment literacy themselves. There was a notable paucity of client–provider tools used to support treatment education.

Many individuals from marginalized populations, especially those who report that they became infected with HIV as a result of poor knowledge or limited choices or lack of means to protect themselves, may have less incentive to invest in the protection of others. In terms of providing consistent and effective key messages for risk reduction, health workers need to shift the seemingly universal overemphasis on the "responsibility" of the HIV-positive individual to protect "others" to offering messages that emphasize the need for PLHIV to look after their own health by protecting their immune systems from other types of infections. An example of a more potent message could be: "Now that you have HIV you need to protect your health, and not bring other infections into your body, and in doing so you will also protect the health of others."

Counsellors struggle to manage the complex array of mental health and welfare issues confronting PLHIV, and this task largely falls to this same group of people with limited training. Trained health professionals, such as social workers, psychologists and professional health counsellors and doctors, are limited in number and are often overburdened serving multiple roles within treatment facilities. Counsellors supporting patients and clients with drug and alcohol dependency or binge substance use had little knowledge of appropriate referral services. Where they were able to cite referral services, they did not know whether these services employed evidence-based treatments. Again to highlight an earlier point, most counsellors did not routinely assess a patient's or client's drug and alcohol intake, and most could not educate the client about drug and alcohol interactions with HIV or STI treatments.

The counselling needs of parents and children affected by HIV are discussed in section 2.8.1.

Recommendation 2.7.1b

All counsellors, site implementation officers and nongovernmental organization treatment enablers should undergo standardized adherence support and care counsellor training that incorporates skills rehearsal focusing on how to assess and facilitate ongoing HIV transmission risk reduction, as well as appropriate partner disclosure counselling. It is recommended that simple treatment literacy adherence tools be developed and the use of these be rehearsed in training. Tools that have been developed need to be more broadly disseminated. Counsellors who have undertaken HIV counsellor training without the inclusion of partner disclosure strategies should be offered a one-day, skill-focused course on the topic. The Department of Health is advised to finalize the current review and consider implementation of current WHO guidance on the management of sero-discordant partners.

2.7.2 Retention and loss to follow-up

In 2012, as shown in the fig below, 3300 PLHIV were enrolled in ART at 18 treatment hubs (Fig. 8). This number grew to 4115 by mid-May 2013. By then, the estimated retention rate at one year was 78%.^h According to the current national guideline, PLHIV whose CD4 cell count is 350 or less cells/mm³ are eligible for ART. The up coming national guideline revision of CD4 cell count threshold for ART initiation (500cells/mm³) will probably add a significant number of PLHIV eligible for ART. The national guidelines recommend both regular clinical and biological monitoring. (*36*) The frequency of clinical monitoring contacts will depend on the client's response to ART. Clients should be followed up on at least two, four, eight, 12 and 24 weeks after ART initiation and then every six months once the patient

h Estimate based on enrolment numbers and monthly follow-up forms submitted to NEC for 306 PLHIV enrolled from January to March 2012. ART Database 2012; Department of Health.
has been assessed to be stable. Biological monitoring including toxicity of ART and response to ART should also be conducted regularly by laboratory examinations according to the ART regimen (see Section 2.2.9). Regrettably, the review team observed that no treatment hubs had established a formal follow-up system.



Figure 8. ART targets, accomplishments and funding sources, 2011–2015

ART, antiretroviral treatment; DOH, Department of Health; GF, Global Fund; PLHIV, people who live with HIV Source: Department of Health, Philippines

In an informal way, on behalf of health facilities at some sites, CBOs are willing to remind clients of their appointment dates for regular monitoring. However, as the number of treatment hubs is small and covers large geographic areas, even CBOs cannot reach all of the clients attending treatment hubs. Clients, especially those living very far from hubs, are more likely to be lost to follow-up. The distance between their homes and hubs might also rank high among the reasons for loss to follow-up.

Recommendation 2.7.2a

To maximize the impact of ART services, a formal follow-up system for ART clients should be established urgently at treatment hubs. Strengthening communication between treatment hubs and CBOs and, through them, to patients would be a valid approach.

Recommendation 2.7.2b

Decentralization of ART services is urgently needed, in particular if the criteria for ART enrolment change and suddenly more PLHIV become eligible for treatment. The large gap between the numbers of HIV testing sites and treatment hubs must be narrowed promptly. Scaling up satellite treatment hubs could be one solution. However, the feasibility, cost-effectiveness and capacity-building efforts needed to decentralize quality ART services should be examined prior to any decision on a structural change.

In addition, there was no monitoring and evaluation system of ART services in each treatment hub. Monitoring clients' outcomes, commodities management and the capacity of the staff would be useful to improve services. In terms of client outcomes, those should be assessed by cohort analysis to evaluate the continuum of care. Some indicators such as the retention rate, on time pick-up rate and pharmacy stock-out rate could be utilized for the monitoring and evaluation of ART services. These indicators are also useful to the monitoring of drug-resistant HIV. (*37*)

Recommendation 2.7.2c

As a means to monitor and evaluate the continuum of ART services, cohort analysis should be introduced in each treatment hub. The results should be utilized to improve services. A national database should also be built by aggregating all data from treatment hubs. Along with the cohort analysis, operational research on the reasons for loss to follow-up and death could contribute to improve the quality of services.

2.7.3 Ancillary care and treatment (not directly related to HIV), palliative, and end-of-life care and support.

Ancillary services in hospitals are provided in three areas: records, dietary and social services. These are common to almost all the HIV treatment hubs; however, there are varying degrees of provision of services depending on how well the illnesses of the patients and their needs are understood. On palliative care, HACT in treatment hubs are aware of this approach, which is to provide support services to improve quality of life of patients and their families facing the problems associated with life-threatening illnesses stemming from the HIV infection. However, services provided within hospitals are limited and usually rely on civil society or faith-based organizations, to name a few, to extend comprehensive care to patients. In San Lazaro Hospital, for example, government agencies such as the DSWD, nongovernmental organizations such as Precious Jewels for Children, and religious groups including priests and brothers, extend terminal care and support. However, such collaboration between government and nongovernmental partners implies a commitment on the part of the HACT team, especially the team leader, to such partnerships. In 2009, the Department of Health, the Positive Action Foundation of the Philippines Incorporated (PAFPI) and WHO produced a resource document on palliative care for PLHIV. (38) It is a useful guidance document for hospital teams as well as managers.

Recommendations 2.7.3

The existing guidance document on palliative care should be reproduced, shared with all treatment hubs, nongovernmental organization partners and SHCs. All personnel of treatment hubs and nongovernmental organization partners engaged in the continuum of care should receive training in palliative care, including hospital directors and administrators who should be made aware of palliative care needs and best practices.

2.8 Prevention of mother-to-child transmission of HIV and paediatric HIV

2.8.1 Prevention of mother-to-child transmission of HIV

The Department of Health has adopted the recommended four-pronged strategy for PMTCT of HIV. (*39*) The strategy includes: (1) prevention of HIV infection for women of childbearing age together with their partners; (2) prevention of unintended pregnancy among HIV-positive women; (3) prevention of direct transmission among HIV-positive women to their babies; and (4) provision of appropriate follow-up for the mother, babies and their families. In the Philippines, only 7.6% (18/237) of HIV-positive pregnant women receive ARVs to reduce the risk of mother-to-child transmission.

PMTCT of HIV is one of the major strategies of the NASPCP mentioned in its *Health Sector HIV and AIDS Strategy (2013–2016)* to lower new paediatric HIV infections by 90%. The implementation of this programme was supported by administrative orders (Department of Health Administrative Order 2009–0016 PMTCT)(40) and existing linkages of STI/HIV services (41) with the maternal and child health (MCH) programme through its antenatal care services. With an increasing number of HIV cases detected in high-burden areas, the NASPCP recommends the routine offer of HTC/opt-out PICT to all pregnant women in priority areas. (42) This recommendation was already implemented in some sites, and although cases were low, an increasing number of newly diagnosed HIV infections in pregnant women was documented in one site where the prevalence of HIV was high, both among PWID (54%, 2011 IHBSS) and freelance FSWs (5.5%, 2011 IHBSS). This strategy of opt-out PICT, however, is yet to be implemented in government hospitals, especially those known to be treatment hubs and other LGUs considered priority sites, as there is still no official Department of Health order on this intervention.

Recommendation 2.8.1a

If the Department of Health is to consider implementing opt-out testing in antenatal care facilities, close collaboration between NASPCP and the MCH programme at national, regional and local offices should be strengthened in order for guidelines to be disseminated, implemented and closely supervised. Adequate coverage with proper recording and reporting should strive to produce pertinent data.

Recommendation 2.8.1b

Technical assistance for capacity-building in health centres (lying-in centres) should also be provided as additional services are expected to be implemented. The implementation PMTCT for HIV, especially PICT (opt-out testing), as part of antenatal care services entails the need for structural, logistical and human resource-related support from the national level and for LGUs.

Recommendation 2.8.1c

Given the structural make-up and diverse medical services provided in health centres by overburdened service providers, tools with specific targets for clients in antenatal care are not only helpful but can also provide a standardized messaging and improved quality of services.

Pregnant women diagnosed with HIV are referred to and being managed at treatment hubs for ART, biological monitoring and management of labour, delivery, and follow-up. However, other services such as those for reproductive health and related commodities are available only in health centres.

Recommendation 2.8.1d

As pregnant women living with HIV are being provided antenatal care services in treatment hubs, the Department of Health may consider the integration of some services in these facilities (e.g. the one-stop-shop concept, with reproductive health and related commodities). This is convenient for clients and also allows them to receive a more comprehensive package of care.

It is also reported that after being referred, some pregnant women living with HIV do not access services in treatment hubs missing crucial ART to prevent maternal transmission of HIV. On the other hand, treatment hubs reported that some women after giving birth do not return for follow-up, compromising the opportunity for early infant diagnosis and continuity of their treatment and care. The Department of Health policy on HTC recommends testing an HIV-exposed infant at six weeks of age. NASPCP provides free PCR testing for infants, but this free test is available only at SACLL in Manila.

Recommendation 2.8.1e

To ensure continuity of care from prevention to treatment and care among pregnant women living with HIV, all levels of care in priority areas need to be strengthened, as well as targeted and comprehensive PMTCT services (following the Department of Health guidelines), including the formation of a functional referral system and an effective tracking mechanism. Establishing partnerships with nongovernmental organizations for TCS for close monitoring, tracking and provision of peer support could be helpful in reducing loss to follow-up, as this issue is problematic in some sites.

2.8.2 Paediatric HIV

The Philippine HIV and AIDS registry reported in August 2013 that there are 64 children under 15 years of age diagnosed with HIV. The Department of Health crafted a national guideline on the management of paediatric HIV and AIDS three years ago and provided corresponding training to treatment hubs and selected nongovernmental organizations. This guideline was used by trained health-care workers on the management of paediatric HIV.

Recommendation 2.8.2a

With the July 2013 release of the WHO *Consolidated Guideline on the Use of Antiretroviral Drugs for Treating and Preventing HIV Infection,* which also covers treatment for paediatric patients, the Department of Health may consider revisiting its guideline on the management of paediatric HIV and AIDS developed three years ago.

A very good practice in the management of paediatric HIV – the holistic approach – was noted at one of the major treatment hubs. It included providing a child-friendly environment and greater involvement of the child in his or her treatment to providing support and constant counselling to caregivers, which resulted in excellent adherence and retention to care. This active partnership not only lessens the workload of health-care personnel but also provides a comprehensive and holistic management of those HIV-positive and affected children.

Recommendation 2.8.2b

It is recommended that the Department of Health continue to provide technical assistance to treatment hubs to ensure their readiness to handle cases of paediatric HIV. This is necessary for several reasons, including the rapid turnover of trained health-care workers and because not all treatment hubs are capable of proving holistic treatment, care and support services to children living with HIV. Given HIV cases among pregnant women are increasingly reported, institutionalizing or contracting the conduct of training by an organization with solid experience in handling paediatric HIV should be considered, institutionalizing or contracting the conduct of training with solid experience in handling paediatric HIV should be a plus.

On the other hand, ARV drugs for paediatric formulation are available in the country but are limited to the first-line drug regimen. As there is no paediatric formulation for second-line ARVs, one reported case now on the second-line regimen has had some issues on adhering to his ART as the second-line ARV is in adult formulation (tablet) and needs to be accurately partitioned to provide the correct dose. The cost is much as 650 PHP for a two-week supply. This service is available only in private pharmacies and the cost can actually be prohibitive to the patient, thereby compromising adherence to ART.

Recommendation 2.8.2c

While best efforts should be made to procure and ensure availability of paediatric formulations where needed, treatment hubs should consider investing in equipment to powder adult ARV tablets for the paediatric second-line regimen, in case paediatric formulation is not available. The service for powdering ARVs must be provided with minimal charge, or in a socialized scheme – not just for HIV-positive children on ARV but also for other children with various conditions. The service is needed at treatment hubs where ARV prescriptions are filled. The Department of Health may consider supporting this need, prioritizing facilities where cases of paediatric HIV are being managed.

One very important issue and concern related to paediatric HIV are reports of orphaned and abandoned children infected and affected by HIV. A treatment hub primarily provides medical services to these patients and may not be able to address these complex social issues.

Recommendation 2.8.2d

An efficient and capable social welfare system may need to be in place to address issues of orphaned, abandoned and even abused children affected and infected by HIV. Close collaboration, partnership and functional referrals and linkages between treatment hubs and social services from government or private organizations may need to be established and should be considered as one of the roles of HACT. This would serve as preparation to deal with these cases.

2.9 Clinical and biological monitoring and viral resistance

2.9.1 Monitoring toxicity

The current ART national guidelines (*36*) recommend regular laboratory monitoring, including a complete blood count and blood chemistry work to check serum glutamic oxaloacetic transaminase (SGOT), serum glutamic pyruvic transaminase (SGPT), creatinine, alkaline phosphatase (ALP) and free blood sugar, as well as a lipid profile urine analysis. These examinations can be covered within the limit of the outpatient package (PHP 30 000 per year) for clients registered with PhilHealth. Furthermore, since less attention is paid to monitoring ARV toxicity as compared with monitoring response to treatment, conducting these tests irregularly or not at all could delay the detection of toxicity, thus leading to severe disability. If the facility does not have a laboratory, these examinations will be tasked to the nearest laboratory. The transportation and cost of testing samples might become barriers to monitor ARV toxicity.

2.9.2 Monitoring response to treatment

The current national guidelines (*36*) recommend monitoring clinical, immunological and virological response to ART. Clients are followed up at least every six months once they have been assessed as stable. For clients with good compliance to ART, clinical response is recommended to be monitored together with CD4 cell count (immunologic response) and viral load determination (virological response) to detect treatment

failure. Although CD4 cell counts can be done every six months for immunological monitoring where resources are available, viral load assays have not been widely available as a routine service due to their high cost and insufficient laboratory capacity. CD4 cell count examinations for clients on ART can be covered within the limit of the PhilHealth outpatient package if the client is registered with PhilHealth. But tests for pre-ART clients are not covered by PhilHealth, which means the clients have to cover the costs. There are at least nine facilities offering CD4 cell count examinations, including the two NRLs and seven hospitals and medical centres, as well as a few additional tertiary private hospitals. There are at least four facilities offering viral load examinations, including the two NRLs and two large private hospitals. Some large private hospitals offer genotypic drug-resistance testing. The upcoming national guideline revision of CD4 count threshold for ART initiation (350-500 cells/mm³) will probably add a significant number of PLHIV eligible for ART. Currently it is doubtful whether the Department of Health can cover these essential laboratory services for proper monitoring.

Recommendation 2.9.2a

Additional investment in laboratory services should be considered. Decentralization of laboratory services could be one option to cover additional laboratory examinations, decreasing missed opportunities of PLHIV to receive proper monitoring. Ideally, each treatment hub should provide laboratory services together with treatment and care. Further investments in human resources, commodities and machines will be essential to strengthen the capacity of existing laboratories.

Recommendation 2.9.2b

A great number of laboratory services need to be covered by PhilHealth and/or other sources to ensure appropriate monitoring of treatment. Out-of-pocket expenses should not become a barrier to monitoring. Otherwise, it might create increased financial needs for treatment of ARV toxicity and drug-resistant HIV.

Recommendation 2.9.2c

A surveillance system of HIV drug resistance (HIVDR) should be established immediately. Monitoring early-warning indicators (EWIs) of HIVDR can alert ART programmes to situations that favour the emergence of HIVDR and provide an opportunity for corrective action to be taken. It is recommended that all clinics providing ART monitor EWIs annually as a component of routine programme monitoring and evaluation. Individual indicators should not be aggregated beyond the clinic; however, national results should include the proportion of clinics able to achieve each target. Annual viral load monitoring is essential for this monitoring, therefore the scaling up of viral load examinations needs to be considered.

Recommendation 2.9.2d

A surveillance system to monitor HIVDR should be established along with a recording and reporting system of ART services in each treatment hub, feeding into a national database. HIVDR should be integrated or linked to treament monitoring. This would help at the national level in projecting demand for second- and third-line ARVs.

2.9.3 Procurement, distribution, quality assurance and control

Procurement of ARV drugs is centralized under NASPCP, the Infectious Disease Office (IDO) and the National Center for Disease Prevention and Control (NCDPC). It is distributed in treatment hubs according to their requirements. ARVs are not available commercially; they are only available in or from treatment hubs. Private patients are referred by their treating physicians to the hubs, where they can receive their supply of ARVs. FDA, which is under the oversight of the Department of Health, assumes responsibility for quality assurance and the control of ARVs, as part of the procurement process. Other supplies, such as HIV rapid test kits and diagnostic equipment, are procured through individual hospital-based procurement processes. It is expected that the increasing epidemic among MSM and PWID, the expansion of HIV testing and counselling, and the planned change in ART enrolment criteria will result in a steep additional demand for laboratory diagnostics and ARVs.

Recommendations 2.9.3

NASPCP must be prepared to estimate and respond to future procurement requirements. Additional workers should be hired and trained to assist in procurement, distribution and monitoring, both within NASPCP and within the Department of Health's procurement service. The Department of Health procurement staff must be part of yearly programme implementation reviews.

2.10 Overcoming contextual, structural and systemic barriers

This section, as well as sections 2.11 and 2.13, examine existing policies, laws and regulations framing the health sector response to HIV in the Philippines. It explores barriers to increasing the performance of the national response to HIV/AIDS from a health sector perspective and suggests ways to alleviate these constraints. It includes a brief review of the management structure and roles of the health sector's programme and highlights the review findings relevant to human resources availability, needs and capacities, as well as the financial implications of delivering the programme according to current and future plans.

2.10.1 Policy, legal and regulatory context

The Philippine AIDS Prevention and Control Act of 1998 (Republic Act No. 8504) promulgates policies and prescribes measures for the prevention and control of

HIV/AIDS in the Philippines, institutes a nationwide HIV/AIDS information and educational programme, establishes a comprehensive HIV/AIDS monitoring system, strengthens the PNAC, and serves other purposes. The law also stipulates the budget allocation for the HIV response in the Philippines. Among other important provisions, the law determines that all citizens are entitled to HIV prevention and control services. The law makes compulsory HIV testing and discrimination unlawful, and it establishes and empowers a National AIDS Council to oversee the national response to HIV. The law also lays the ground for a health-centred, although multisectoral, response to the epidemic. Overall, the law aimed to protect individuals vulnerable to or affected by HIV, while enabling the rest of the population to have access to prevention information and education. Some limits were set to this law to avoid conflict with other pre-existing laws and regulations. For example, it promoted HIV education for the youth "provided that it shall not be used as an excuse to propagate birth control or the sale or distribution of birth control devices". It also prescribed that "The State shall positively address and seek to eradicate conditions that aggravate the spread of HIV infection, including ... prostitution ...[and] drug abuse." The changing context and evolving knowledge about effective HIV prevention, care and treatment have motivated a revision of this law. This process is under way, with a new law expected to be passed in 2014.

Some laws impede the implementation of the HIV response. For example in Cebu, the Dangerous Drug Act (Republic Act No. 9165) has initially hindered the needle-and-syringe programme. However, Cebu has negotiated an exemption from implementing this act, pending the results of the operational research on the neddle-and-syringe programme. The anti-trafficking law, particularly protecting children from prostitution, is commendable. On the other hand, this law resulted in more difficult access for unregistered (freelance) sex workers and their pimps for HIV prevention services due to the fear of law enforcement. These also result in less protection of these sex workers from violence.

The Sanitation Code of the Philippines has required the issuance of a health certificate to all establishment-based sex workers as a prerequisite for establishments to operate their business. This has resulted in opportunities for regular access to STI screening and HIV prevention education for registered sex workers.

The majority of the cities visited have local AIDS ordinances that need to be revised based on the changing context in the Philippines. The majority of AIDS ordinances have focused on the functioning of SHCs and targeted interventions for registered sex workers. These local laws have not been responsive to MSM and PWID, the main drivers of the epidemic in the Philippines. In cities visited, the current local ordinance included a 100% condom-use policy, requiring the availability of condoms in establishments, the availability of one peer educator per establishment, non-hiring of minors, mandatory provision of HIV education, local HIV monitoring and nonstigmatizing services for PLHIV. The prioritization of response at the local level is politically motivated, rather than being based on evidence. Advocacy tools are not sufficient and appropriate to generate firm and long-term commitment by LGUs to support HIV responses for all key populations.

NASPCP has developed normative guidelines to support implementation of the health sector response to HIV. Some of the recent guidelines are shown in Box 2.



These guidelines are disseminated through regional HIV/STI coordinators. However, there is a need for their wider dissemination. In some settings, there are limited resources, human capacity and training to implement some of these guidelines.

Recommendation 2.10.1a

It is of utmost importance that the formulation of the new law amending or replacing the Philippine AIDS Prevention and Control Act of 1998 takes into account the advancement of knowledge about effective health facility- and community-based responses to HIV, which can be highly effective if accompanied by appropriate legal and social measures. These include encouraging active participation of key populations in prevention, care and treatment programmes intended for their benefit. The formulation of the law should receive input from people representing these communities. Its potential impacts – both desirable and undesirable – on access to services by key populations should be carefully studied before the law is enacted. Once passed, the law should be widely disseminated, along with quality and targeted documentation on how to interpret and apply the law in different settings, in particular for LGU authorities, the judiciary, law enforcement and health systems, as well as among key populations and their service providers.

Recommendation 2.10.1b

Operational research on the needle-and-syringe programme should be expedited to inform the scale-up of the programme and to enable an amendment of the Dangerous Drugs Act. In addition to revising the local AIDs ordinance, it is important to undertake structured and well-planned advocacy campaigns at the local level, building on evidence, demands from affected communities, and lessons learnt from other cities and municipalities and from other countries. National guidelines should be widely disseminated and updated as new evidence is available. NASPCP should consider updating its website as a means to widely disseminate guidelines, the latest epidemiologic data and advocacy tools.

2.10.2 Management structure, programme management, strategic planning and priority setting, and the impact of strategic planning and priority setting on financing

In 1988, the Department of Health took the lead in the HIV response by creating the NASPCP to implement the following strategic directions: surveillance; HIV prevention; stigma and discrimination; strengthened collaboration between the Department of Health and LGUs and nongovernmental organizations; research support; and multisectoral response. In 1998, the Philippine Congress enacted the Philippine AIDS Prevention and Control Act. Subsequently the *AIDS Medium-Term Plan* was crafted to become the Philippines's comprehensive response to HIV/STI prevention.

The AMTP5, covering 2011–2016, is the current national strategic plan. It aims to reduce the rate of HIV infections, improve the quality of life of PLHIV and reach 80% of the most-at-risk population by 2016. AMTP5 recommends prioritizing investments and interventions to avert new infections among MSM and PWID. However, the local response driven by LGUs has focused on sex workers, with slow-growing efforts to booster activities targeted at MSM and PWID. The total national investment needed to meet the objectives of AMTP5 was projected at PHP 19 billion.¹ However, as most interventions will be largely, although not exclusively, implemented in Category A and B cities and municipalities, the total investment cost has been brought down to PHP 6.9 billion.¹ This amount is likely to fall short of the actual needs if greater equity across the country and across most infected and affected populations is to be achieved.

NASPCP is under IDO of the National Center for Disease Prevention and Control (NCDPC) (Fig. 9). All centres for health development have a similar structure at the subnational level, with the subnational accountability and scope. NASPCP coordinates primarily with the NEC and PNAC secretariat to harmonize the nationwide HIV strategic response. NEC is the focal point for strategic information for programming, policy direction and research. PNAC ensures coordination across all sectors. The PNAC secretariat coordinates the country's policy-making body for broad-based response. NASPCP is the technical lead in planning, development, implementation and monitoring of HIV and STI programmes. There are 16 treatment hubs in the country that provide ART and HIV treatment care and support. The majority are government-supported hospitals, with strong linkages to PLHIV networks. There are now plans to create satellite treatment hubs to expand access to ART.

j Cities and municipalities are categorized as A, B and C to prioritize HIV implementation. Category A are prioritized for HIV response. This categorization has been based on surveillance data, reported HIV cases, number of most-at-risk groups and increased vulnerability to rapid HIV increase



Figure 9. Management structure, staffing, and roles and functions at different levels of the health sector

ADB, Asia Development Bank; ARV, Antiretroviral; GF, Global Fund; OI, Opportunistic infections; M&E, monitoring and evaluation; STI, sexually transmitted infections

Source: Department of Health, Philippines

Recommendation 2.10.2

Collaboration between PNAC and NASPCP should continue to be articulated and strengthened around the next *AIDS Medium-Term Plan* (AMTP) and should serve as a strategic reference and accountability framework for both parties. The Department of Health will require a more detailed strategic plan than AMTP6 can accommodate in view of the vast agenda it has to develop in order to further expand its outreach, fulfil adequately its diverse roles, and strengthen its normative, implementing and monitoring functions.

2.10.3 Decentralization

The local government code of the Philippines (devolution) decentralized health functions, including decision-making, resource allocation, implementation, and accountability, to local governments. The intention of the local code is to make local governments more responsive to the needs of local communities, which could result in more appropriate and sustainable responses emanating from a bottom–up approach. However, in the majority of LGUs, priorities are decided based on political advancement, rather than on evidence and health outcomes or impact. HIV/AIDS continues to be a low priority given strong stigma and discrimination, resulting in limited budget allocations or even reallocations for the HIV/STI response and political appointments and development of local policies that impede HIV responses. Regular changes in LGU leadership have also affected the sustainability of local responses. Local ordinances have been developed to ensure continuity of HIV responses, however these ordinances need to be revised to include responses for MSM, PWID, and support for HIV testing and counselling, as well as treatment and care.

From all levels of the health sector – national, subnational and local – funding and human resources have remained static or even decreased, despite expanding services and a growing target population. The Global Fund has supported funding for the HIV response. Government spending is around 25% of total spending for the HIV response. The majority of the staff positions are non-permanent posts funded through the Global Fund, revenues from PhilHealth or by LGUs. These have implications on the continuity and sustainability of the health sector response to HIV.

Recommendation 2.10.3a

The normative role of the national level should be strengthened through interaction with the regional and local levels, empowered by national directives and greater financial means and human resources. The production, updating, dissemination, and monitoring and evaluation of guidelines and SOPs should be supported by a highly experienced technical working group. Safety nets and monitoring mechanisms should be in place to maximize positive effects and minimize negative effects of decentralization within the health sector.

Recommendation 2.10.3b

To reinforce the alignment of local actions on HIV with national norms and standards, and as part of the capacity-building and standardization of services across the national health system, job descriptions and minimum eligibility criteria should be developed for the hiring and deployment of staff (e.g. SHC personnel, treatment providers at hubs and satellite hubs, peer educators, and counsellors). Minimum staffing patterns for SHCs should be reviewed and revised to reflect current service needs.

Recommendation 2.10.3c

A common minimum package of interventions at the LGU level, including minimum requirements (staffing and resources, roles and responsibilities, and accountability mechanisms) should be established as a national norm, advocated by PNAC and promoted on the regional and LGU levels.

Recommendation 2.10.3d

Given the serious implications for HIV and for health in general of a dysfunctional decentralization of health services, a bold effort should be made by the Department of Health to seek and analyse evidence regarding the efficiency of the decentralized health system and to consider mechanisms to re-centralize some of the peripheral functions to the national level, ensuring appropriate resources to scale up prevention, HIV testing and counselling and ART services.

2.10.4 Social hygiene clinics

Historically, SHCs have played a pivotal role in the control of STIs and the prevention of HIV among registered FSWs. Given the limited resources available to SHCs and the ever-growing public health roles they are expected to play, it is important to improve the efficiency and effectiveness of services and seek ways to increase their human and financial resources. This may include revisiting the *Manual of Operating Procedures for Social Hygiene Clinics* and initiating bold reforms of the ways they are expected to operate.

Currently, much if not most of the activities of SHCs are geared to control the spread of STIs (and HIV) within the sex work environment, with a strong focus on establishment-based sex workers. It has become very clear that the HIV epidemic is affecting more severely other populations, including freelance female and male sex workers, PWID, MSM and transgender people. SHCs have very limited experience in engaging with these populations. It lacks the capacity to extend outreach services to these communities and, when it does so, it has to develop a more effective relationship to community-based organizations and nongovernmental organizations that would benefit from easier access to the communities they serve.

It is very challenging to bring together evidence of the impact SHCs may have on HIV vulnerability and risk reduction among key populations. The rate of HIV prevalence among registered FSWs remains very low, and the rate is slightly higher in non-registered sex workers. The rates of STI incidence and prevalence in registered FSWs also remain very low. A natural tendency would be to credit the regular check-ups of registered sex workers performed on a monthly, biweekly or weekly basis by SHCs. Such an optimistic view would have to be balanced by several observations:

- 1. The reported rates of STIs diagnosed at the clinics are extremely low. The yield of confirmed cases may be below 1% in most clinics. Where Gram stain tests are performed, the rates of confirmed gonococcal infections are also low. Other suspected cases of cervical infection are then reported as non-gonococcal infections.
- 2. Several reasons could explain the poor positive diagnosis rate, including the low validity of gram staining, the fact that sex workers may self-treat (antibiotics or vaginal douching before check-ups due to fears that their authorization to work will be withheld until treatment is completed.

3. The low performance of local laboratory technicians may affect results. It is, however, important to note that visits to SHCs may be among the few opportunities for establishing and nurturing a connection between the formal health care system and registered sex workers. Regular contacts create space for information, education and communication on sexual health (and occasionally, reproductive health), stimulate the creation of peer groups and peer educators, and allow the distribution of free condoms.

Sex workers who took part in focus group discussions during this review acknowledge that they were generally well received and cared for at SHCs. Some of them, in particular freelance sex workers, declared that they generally did not visit SHCs and, when needed, preferred to consult private practitioners. Some SHCs have made successful attempts to improve the services and expand them to other most-at-risk populations through provision of outreach services and strengthened linkages with nongovernmental organizations. Dedicated clinic hours in some sites now enable MSM, including MSWs, to use SHC services. To avoid patient overload in SHCs as their clientele expands, a quick review must be made of LGU ordinances concerning mandatory check-ups for registered sex workers. Initially performed on a monthly basis, these check-ups are mandated at two-week intervals in some LGUs and even weekly in others. The real benefits of such approaches are highly questionable when the very low yield of confirmed infections and treatment are considered.

It must be mentioned here that with a few exceptions, SHC buildings were in a bad state of physical maintenance, had very little space available to receive more than a handful of patients at any given time, with other patients lining up in corridors. The lack of space hampered confidentiality of interviews and hampered safety where venepuncture and laboratory examinations were performed. There is a general need to renovate these structures to make them both more functional and friendlier.

Finally, the dedication and professionalism of the staff encountered during the review must be noted. The commitment to perform their duties was very clear among doctors, nurses, midwives, laboratory technicians and support staff, despite the lack of significant incentives, the poor working environment, the general absence of recognition and job insecurity.

Recommendation 2.10.4a

Personnel at SHCs must be commended for and supported in the performance of their work through better recognition, the improvement of their working environment, and the creation of incentives and the enhancement of their skills.

Recommendation 2.10.4b

The role, outcome and impact of regular visits by sex workers to SHCs need a thorough assessment to determine if the clinics do fulfil their expected role or whether a different approach to STIs and HIV would result in improved diagnostic and treatment capacity and yield more meaningful data on the vulnerability and risks to which clients are exposed. This implies shifting the mind-set of SHC personnel and LGU leaders from the current emphasis on regulatory function performed by SHCs to the provision of a wider array of services to a diversified clientele, including MSM and transgender people.

Recommendation 2.10.4c

Increase the effectiveness and efficiency in clinics by shifting from weekly and bimonthly check-ups of registered sex workers to a monthly check-up while, at the same time, improving the array and quality of services being provided.

Recommendation 2.10.4d

The programme management capacity of SHCs should be strengthened by a more efficient use of collected data to determine epidemiological trends, coverage and uptake in each of the key populations they serve.

Recommendation 2.10.4e

The income generated by SHCs from user fees should be utilized to improve services, the physical infrastructure of the facilities, logistical support and capacitybuilding, as well as to increase staff (laboratory technicians, clinical nurses, dedicated counsellors and peer educators).

2.10.5 Human resources

The review team was deeply impressed by the high level of professionalism and dedication displayed by the health staff and community-based workers engaged in HIV and STI prevention, care and support work. These individuals are an invaluable asset for the HIV response at all levels of the health system. However, these admirable staff members are of insufficient numbers to reach the set coverage targets for prevention, HTC and ART. It must be noted that greater human resources and staffing will be needed when ART treatment eligibility expands as a result of increased demand for HIV testing and counselling and once the criterion to start treatment increases to the 500 CD4 per mm³ count. The scale of expansion of staff size required to cope with the anticipated increase in PLHIV enrolled in care and treatment in coming years is largely in excess of the growth previously experienced by the programme. As the permanent staffing pattern is fixed, contractual personnel are being hired on an ad-hoc basis to make up for the human resources shortfall. This practice, which has already been instituted in NASPCP, is viewed as more costly due to rapid turnover of short-term staff resulting in additional needs for training, capacity-building and supervision.

Although administrative and financial procedures exist for NASPCP to outsource managerial and technical work, no plan thus far has been developed to bring this approach to scale. In some facilities the review team visited, it found that small portions of the funds drawn from PhilHealth ART treatment and care allocations had been pooled and applied to the contractual hiring of care providers. Such arrangements could be formally endorsed by PhilHealth and replicated elsewhere. Other avenues for bridging the human resources gaps in the field of HIV and linking more strongly formal services and affected communities include expanded partnerships between SHCs and community-based organizations, in particular key population groups, PLHIV networks and faith-based institutions, inviting their contribution to outreach prevention, care and support schemes. Such approaches could stimulate interest and commitment of LGUs for the sharing of staff cost.

Responses to HIV and STI have evolved over the years. Currently, patchy and fragmented responses in the Philippines are framed according to varied levels of local commitment and

capacity, infrastructure, services and affected communities. HIV and STI national guidelines are available and have been the basis for training, but are often not well disseminated and even less well adhered to. Resources and capacity are limited to implement these guidelines. Training has been conducted, but supportive supervision is usually not being conducted. Regional coordinators have numerous functions and little time to provide supportive supervision and disseminate guidelines widely to the local level. The high turnover of staff creates additional and recurrent training needs.

Recommendation 2.10.5

In order to ensure that high-quality HIV/STI interventions are brought to scale and standardized, human resources must be expanded and health-care workers must be offered standardized training packages dictated by their roles. Intervention coverage, service uptake, sustainability and quality are key parameters that should be monitored and progressively improved by means of systematic capacity-building, incentive schemes and supportive supervision.

The following actions may be considered towards implementing this recommendation:

- 1. National guidelines need to be disseminated widely and SOPs and tools to monitor quality need to be developed. Training curriculum should be standardized, including that for peer educators.
- 2. Job aids and tools for implementing guidelines and SOPs could be developed.
- 3. Regional or local centres of excellence could be selected as training sites to provide on-the-job training of new staff as a stopgap measure, until a next training opportunity opens up.
- 4. Supportive supervision should ensure that guidelines, SOPs and quality services are being implemented. To this end, quality monitoring indicators and tools (scorecards) need to be developed for use by a cadre of national and regional staff. Given the shortage of national and regional staff available to provide supportive supervision, additional contracted staff could be drawn from other institutions and trained for this purpose.
- 5. Eligibility criteria should be defined and applied for a "stepladder" promotion of peer educators based on improved competencies and skills.
- 6. Staff performing well should be recognized, for example through the award of certificates of recognition.

Government health services cover only a fraction of the current and anticipated needs for HIV clinical assessment, care and treatment to scale up pre-ART and ART. The private medical sector plays an important role in this domain. For example, it is estimated that 80% of PLHIV enrolled at the Cebu Treatment Hub are referred by private practitioners and return to them to seek treatment once they have been supplied with their medicines by the hub. These private practitioners are often well qualified in infectious diseases and have taken advantage of short in-service inception or refresher courses on ART in the Philippines or overseas. Yet, the practice of ART should follow national norms and standards, and these are evolving over time as knowledge expands and technology advances. To avoid disparity in the use of ART, particularly when viral resistance threatens and second- and third-line treatments become necessary, practitioners (both public and private) engaged in HIV care and treatment should meet minimum criteria of knowledge and skills through training or continuing education. Such a scheme was mandated by the Department of Health and applied successfully a few years ago for practitioners wishing to engage in the treatment of tuberculosis. An ART accreditation scheme could be established and implemented under the auspices of professional medical associations.

Recommendation 2.10.6

Continuing education of public and private medical practitioners engaged in HIV/ AIDS care and treatment, along with an accreditation scheme operated by medical associations, should ensure that treatment practices, in particular ART, are in line with the Department of Health norms, standards and guidelines.

2.11 Health financing

2.11.1 Out-of-pocket expenditure and HIV

In 2011, 53% of total health expenditure (THE) in the Philippines was out-of-pocket (OOP) payments. (43) An additional 10% of THE went through private health insurance mechanisms and health-maintenance organizations. This means that in total around two thirds of health expenditures in the Philippines are private and only one third is public.

The response to HIV is what could be described as a public good, meaning that the common, society-wide benefits from it (the positive externalities) require common action. An environment where only one third of health spending is public thus poses a structural challenge, especially for prevention, since international evidence shows that prevention is something for which people are not willing to pay OOP. (*44*) Data from the Philippine National AIDS Spending Assessment (NASA) are limited on OOP and other private spending. The Community Access to Treatment, Care and Support Study shows that the total yearly OOP for PLHIV is a PHP 12 600 (median). According to 2011 NASA figures, public and international funding for HIV amounted to around PHP 346 million. Relating this to the estimated 20 000 PLHIV, the average public and international spending by year by a PLHIV would amount to PHP 17 300. Comparisons here can be seen as a proxy at best, but still the OOP spending derived from the Community Access to Treatment, Care and Support Study (CAT-S), around PHP 13 000 (median), does compare more favourably with public and international HIV spending than general health expenditure, where OOP is double that of public and international spending.

Focus group discussions and discussions with HACT team leaders and SHC staff indicate that financial barriers to HIV services might not be seen as a crucial problem. Strategies to increase financial access had been put in place, including supporting PhilHealth enrolment (70% coverage of those on ART in Iloilo) or nongovernmental organization support (the main source of financial support in Cebu, for example). But there were concerns, for example, regarding antibiotics against opportunistic infections (see Section 2.2.6) or access to CD4 cell count examination during the pre-ART stage (see Section 2.2.6). A further concern is the sustainability of the support. Local campaigns have been able to support and subsidize PhilHealth memberships for those who cannot afford the premiums, but only for a year at a time, and there are no clear guarantees of multiyear support for enrolment. This will be an even more acute problem in the near future, since the LGUs will need to double their subsidy from PHP 1200 to PHP 2400 per enrollee in 2014. However, this will be counterbalanced by increased central-level funding earmarked for increased enrolment of the 40% of the all poort population. So the net effect of these ongoing reforms and dynamics is still unclear. Nongovernmental organization support is mostly tied to short- to mediumterm project funding and thus not sustainable.

Some evidence suggests that OOP spending may impact negatively on prevention as well. A recent study focusing on FSWs found that 40% of the women primarily buy their condoms from a drugstore. (45) The study concluded that those FSWs who bought their condoms at

drugstores where less likely to negotiate condom use with clients than those getting them from SHCs, thus it could be hypothesized that the price of condoms could be a factor for not using them. There is also some clear evidence – from the CAT-S and from on-site discussions – that transport cost can also be a major barrier for accessing HIV services.

2.11.2 The current levels and channels of public funding and future scenarios

Public, prepaid and pooled funding will be crucial to decrease OOP spending and increase financial access. The AMTP5 investment plan estimated that total nationwide investment needed for 2011–2016 for HIV prevention, treatment and system strengthening targeting key populations is PHP 18 billion or PHP 3 billion a year on average. In costing, an assumption on OOP spending for MSM is taken into account; this can be indeed used as proxy in order to estimate the gap in public and international funding net of OOP spending – in this case the investment need is at PHP 12.5 billion, or PHP 2 billion yearly. Alternatively, if the objective is to lower the level of OOP spending then the projected OOP levels need to be added into the funding needs – using a pro rata method linked to a target in lowering OOP spending would make most sense. But it is clear that even the PHP 2 billion target is still a faraway goal. One aspect of the current funding gap relates to a planned costing study and need to address its current weaknesses, which is comprehensively discussed in the AMTP5 document.

While the current situation does not allow a complete analysis of the current funding gap, it is clear that greater financial resources would lead to higher quality services and better service coverage. The volume and dynamics of funding flowing through central-level public mechanisms in recent years and projections based on the approved 2014 budget can be seen in Table 4.

			2012 PHP (US\$ in million)	2013 PHP (US\$ in million)	2014 PHP (proposed) (US\$ in million)
Department of Health total budget appropriations			42 billion (962.4)	50 billion (1145.7)	80 billion (1833.2)
	Selected special provisions				
		National Health Insurance Program (PhilHealth subsidies)	3.7 billion (84.8)	13 billion (297.9)	35 billion (808.8)
		Facilities Enhancement Programme	5 billion (114.6)	11 billion (252.1)	13 billion (297.9)
		Other infectious diseases	223 million (5.1)	320 million (13.5)	780 million (17.8)

Table 4. Public health funding at the central level

Note: Budget for the Commission on Population and National Nutrition Council not included. Exchange rate was US\$1=43.64 Philippine pesos as of November 2013.

The increase of the budget section for "other infectious diseases", which includes HIV funding, has outpaced the overall increase in the Department of Health funding. Discussions with the Department of Budget and Management (DBM), however, revealed that this was perhaps less because of any lobbying, particularly evidence-based lobbying, and more because the DBM Executive Committee members had been sensitized to raise in HIV funding through media. This budget section also covers other diseases and activities in addition to HIV, but overall HIV is the biggest driver of resource allocation within the section.

It needs to also be noted that a major part of the Department of Health budget increase is due to monies targeting PhilHealth subsidies. This increase in PhilHealth funding will have an indirect impact on access to HIV care as this increases the number of people under the Outpatient HIV-AIDS Package – although, as already discussed, the current PhilHealth enrolment distribution is very uneven and in many places a better dialogue with LGUs for having a more HIV-sensitive approach to PhilHealth subsidy decisions will need to be established. It is also important to realize that increased funding through PhilHealth might have a negative impact on the available resources for primary prevention and promotion activities, as PhilHealth, as an insurer, will be focused on reimbursing treatment costs. In Thailand for example, the rollout of the Universal Coverage Scheme lead to steady decline in funds for promotion and primary prevention. (46) The Department of Health has embarked on an actuarial study on the possible impact of including ARVs in the PhilHealth package and on the impact of possibly extending the package to previously uncovered laboratory tests and medicines for opportunistic infections, and there are also ongoing discussions on widening the HIV package towards increased coverage of preventive services. Thus there are some positive dynamics around PhilHealth coverage and the HIV actors will need to be actively engaged in these discussions in order to use the increased PhilHealth funding to the advantage of the HIV response, for example when it comes to hiring and paying salaries, as discussed in Section 2.2.5.

The increased funding through the Facilities Enhancement Project needs to also be noted since, as mentioned earlier in this review, inadequate and crowded facilities for VCT and other services are a major issue. It seems that the Facilities Enhancement Project can be captured also for HIV; this was demonstrated in Iloilo where these infrastructure funds were used to build new facilities for the treatment hub.

Decentralization is also a crucial funding issue. The general feeling of those looking at things from the central level was that the LGUs were not prioritizing HIV funding, but voices to the contrary were heard at the local level, at least in Iloilo, where the message was the opposite: the central Government is not prioritizing HIV. More indepth studies would need to be conducted in order to gather more solid evidence on the actual level of HIV funding from LGUs. It would also be very important to continue strengthening the process for establishing the local level HIV investment plans and to roll them out throughout the country. The need to do this is already acknowledged in the AMTP5 Investment Plan, but progress has been slow.

2.11.3 Efficient use of resources

Increasing efficiency in the future will be crucial. Currently, the reach of public funding to those needing HIV services is hampered by the reduced number of facilities through which the funding transits – creating bottlenecks and inefficiencies. Some progress has been made by, for example, increasing the number of PhilHealth-accredited facilities and through the establishment of satellite treatment hubs. This increases access to services, and it also increases the absorption capacity within the health sector. With projected increases in domestic HIV funding, the question of absorption capacity will become increasingly important. The HIV response will need to show DBM that the monies are

effectively used, otherwise there is a risk of reduced budget allocation in further rounds. Increasing geographical access will also lower transportation costs, which have been reported to be a barrier to access.

Recommendation 2.11

There is a need to develop a dynamic HIV financing strategy that relies on key improvements in: (1) resource tracking – including a more comprehensive view on LGU HIV spending and OOP spending for HIV; (2) linking financial planning with the recent shifts in public funding and scenarios regarding international funding – this includes for example factoring in the developments of the PhilHealth package extension; (3) advocacy towards LGUs in increasing their contributions to HIV funding – including the national roll-out of the local HIV investment plans; and (4) efficiency – especially through a more comprehensive and strategic contractual approach to further increase the fluidity and reach of funding. This approach could also be extended to the private sector providers in line with what has been achieved through accreditation of private hospitals for ARV distribution and follow-up. But any expansion of contracting with private providers should be accomplished in parallel to a strategy of capacity-building and monitoring of private practitioners (as discussed in Recommendation 2.14).

2.12 Research: generating new knowledge

In any programme for prevention, care, treatment and support for HIV, numerous lessons can be learnt. Capturing these opportunities for the generation of new knowledge can make the difference between a national response that is vibrant and in tune with the dynamics of the HIV epidemic or one that misses opportunities and wastes human and financial resources. The Philippines is blessed with a large number of universities and well-trained potential researchers who would seemingly be ready to undertake the task of generating new knowledge.

In 2012, with the support of UNAIDS, PNAC published an excellent report, *Philippine HIV and AIDS Research and Evaluation Agenda Fifth AIDS Medium-Term Plan, 2011–2016*. (47) The report lays out an extensive research plan and priorities relevant to the overall national response to HIV. In this team's review of AMTP5, however, no evidence of the benefits of research efforts in the Philippines was apparent. The limited research portfolio and output is an issue that should be addressed if the Philippine programme is to stay ahead of its unfolding epidemic.

While on site, the team received and reviewed numerous research reports from various organizations across the Philippines. Given the observed capacity for research in the Philippines, this assortment of research reports was thinner than expected. Following the time spent in the Philippines, we conducted a quick systematic review of the published literature on interventions to prevent HIV infection – as an example – focusing on the English language, peer-reviewed literature, using "Philippines" as a key search term. This search yielded very limited results. This exercise supported our in-country impression that research on the prevention of HIV in the Philippines either has been less frequent than it could or should have been, or has languished in unpublished reports with limited access and usefulness for recharting programme direction.

The limited research portfolio is not exclusive to prevention either. Taking the various types of research (epidemiologic, biologic, operations, evaluation, social and behavioural) into consideration, the team found that the portfolio of research in the Philippines was limited across all types.

Recommendation 2.12a

The review team recommends that the 2012 Research Agenda published by PNAC be funded and gradually implemented and that research findings be made publicly available and used by policy- and decision-makers, managers, and local actors to orient and update the national response to HIV/AIDS on the basis of the new information generated.

One real implication of the limited attention paid to research was seen at the local level. The team observed that local governments would greatly benefit from improved programme direction. Much of the raw data used at the national level for programme guidance originate at the local level. The ability of the local governments to compile and use their own data for local programme decisions appears to be very limited. In some cases, this was clearly seen as an activity that is outside the responsibility of the local governments. As a result, data from the local and regional level are seen as accumulating at the national level, where it remains inaccessible to programme managers. The team heard this consistent complaint in its visits to various health and programme directors: data flow from the local level to the national level, particularly to the National Epidemiology Center, where it resides for a long time. As observed elsewhere in this report, IHBSS, which should contribute to new programme direction and innovation, is not released in a timely fashion and is often not released in full. The most recent data that most respondents had seen were from the 2008 round of IHBSS, even though the 2011 and 2013 rounds have been collected. What little has been seen from these other surveys was presented only as simple summaries in PowerPoint presentations. This presentation does not allow interested researchers to query the data for possibly important findings that could affect programme direction the Philippines. More direct access to their own local data may improve the ability of local governments to avoid lengthy delays in problem detection, and improve the reach, coverage, accessibility and quality of the services for which they are responsible.

Some accomplishments in research deserve mention. In the area of evaluation research, the 2010 evaluation of peer education interventions for FSWs and PWID is noteworthy. But the sense that key opportunities to generate new knowledge and understand the current or potential challenges posed by the developing HIV epidemic in the Philippines are being lost is inescapable. The release in full of these rich data sets needs to be much quicker and the network of researchers with full access to them needs to be much broader if the full potential of this research is to be achieved.

Several unanswered questions presented themselves while the team was on the mission to the Philippines. These questions spanned the range of research types. In general, much more evaluation research is needed to inform the direction and best use of resources in the Philippine HIV response. Improvement in the quality, reach, efficiency and effectiveness of HIV prevention, treatment, care and support services offered requires a more concerted evaluation research effort.

Epidemiological research is also clearly needed. At the local level, it appeared as if decisions about programme direction were being taken based on other factors, not on observed need. For example, fully elaborated procedures for PMTCT, including the provision of Option B+, were found in areas where no pregnant women living with HIV had yet to give birth. Preparation for these eventualities is good, but the use of HIV prevention resources for

other more pressing prevention issues may be more justified. A clearer understanding of local HIV epidemiology would be beneficial for prioritizing local HIV responses.

Similarly, basic social research is called for. A better understanding of the social factors that have given rise to the injecting drug use in Cebu – but possibly nowhere else in the country – is clearly needed. This could add to the confidence that injecting drug use is not being overlooked elsewhere in the country and may provide an avenue through which the spread of that behaviour can be limited in the future.

A key feature of the Philippines HIV response, the registration of sex workers and their frequency of visits to SHCs, presents another rich venue for research. Numerous operations research questions, particularly focused on the ideal frequency of the return visits, were immediately obvious to the team. Equally compelling were questions about the best screening tests to use for the registered sex workers to detect STIs with greater sensitivity. The limited prevalence of STIs and HIV among registered sex workers could be seen as an indication of the utility of the registration system. If so, research to develop a functional analogue for freelance sex workers and MSM and the majority of new HIV infections in the Philippines might be merited. Evaluation research in these areas is needed.

Dissemination of research activities and outputs in the country is poor since results of research work rarely get published, except some epidata. A systematic mechanism of sharing new information from various research efforts is needed. More fundamentally, encouraging research publication by providing technical assistance for writing publishable works, including technical assistance for publication, could also be useful.

However, the generation of new knowledge can be a lengthy, expensive and time-consuming process. Because of this, careful consideration should be given to the highest-priority questions that would benefit from the generation of new knowledge. In some cases, it was felt that sufficient information is already available but not being used – many improvements and redirections are probably amenable to action now. These should not be delayed while waiting for new knowledge generation. Annex 4 contains a non-prioritized list of research topics that appeared to the review team to be worthy of consideration and that would have particular relevance to the health sector's response to HIV/AIDS.

Recommendation 2.12b

Greater emphasis should be placed on the development of new knowledge, with a firm commitment to share results in a timely fashion and actively consider their impact on programme direction. Increase the priority given to publishing research results. Make available to universities and research institutes datasets such as IHBSS and AIDS registries for secondary analysis to answer various research questions. Consideration should be given to developing local capacity to engage with local data for the improvement of services. Agreement on the highest-priority research questions should be achieved, with a secure source of seed funding available to allow the development of proposals for research funding. Recognition of the importance of new knowledge for improving the quality and effectiveness of prevention, care, treatment and support is sorely needed.

2.13 Moving forward

NASPCP requested this external review to propose strategic directions for the programme over the next five years in order to inform the drafting of a new long-term *Health Sector Strategy* 2014–2020.

The next strategic plan for the health sector response to HIV should be informed by available evidence and produce and use additional evidence that is currently lacking in critical areas. The evidence tells us that the epidemic remains concentrated in certain key populations and certain geographic areas and that these populations should be the highest-priority beneficiary for receiving the full cascade of services: from awareness creation to HIV testing and counselling in a supportive environment, to accessing prevention services, early referral to care and treatment facilities, supportive follow-up aimed at stimulating adherence to treatment, early management of adverse events, and preventive behaviours over the long term. Ample evidence exists from both within the Philippines and other countries indicating that policies, law and practices should allow for effective prevention, care and treatment in a context free of stigma and discrimination.

Undoubtedly, in spite of the dedicated and admirable efforts of thousands of committed workers and members of civil society, the present strategy in the Philippines is neither producing the desired measurable impacts on currently affected populations, nor preventing the slow spread of the ongoing concentrated epidemic to populations who engage in unprotected sex with members of these communities.

The formulation of the next strategy should consider the specific recommendations offered as part of the review report. Below are more general recommendations applicable to the strategic shift from the current Health Sector Strategy to its next iteration covering 2014–2020. The following strategic changes should be considered:

- 1. Continuum of prevention, care and treatment. The next strategic plan should not create a dichotomy between prevention on one hand and care and treatment on the other, but rather build on the continuum of these interlinked components of a modern health sector response to HIV. In particular, the cascade of services should serve as the backbone for determining the sequence of essential services; their specific roles and substantive contents; the skills requirements to ensure quality and timely services; the monitoring and evaluation indicators to measure inputs, outputs, outcomes and impacts; and the financial allocation to each of the elements for the continuum. Thus, in future strategic formulations, rather than artificially differentiating prevention and care, it is the whole continuum of prevention, care, treatment and support that should serve as the cornerstone to strategic planning and financing.
- 2. **Targeting most-affected populations first.** A stronger focus and priority investments should be directed to offering prevention, care, treatment and support to MSM, transgender and transsexual populations, PWID, and female and male sex workers.
- 3. **Mapping and differentiating key populations.** Priority setting requires a systematic mapping of these beneficiary populations in epidemiological, geographic, demographic, behavioural, social and economic terms so as to disaggregate beneficiary populations according to characteristics that will best inform the design of services offered to them.
- 4. Reorienting social hygiene clinics. The current centrality of SHCs in the health system aimed at the prevention and control of HIV/STIs needs to be extensively evaluated so as to assess their actual impacts and cost-effectiveness and determine how best they can support key populations in their confrontation with HIV and STIs. Services that are currently offered are mis-targeted (the emphasis being placed on registered FSWs who display low reporting of symptomatic STIs, low laboratory confirmed STIs and very low HIV prevalence, despite a condom usage

rate that rarely exceeds 80% – rather than on severely affected MSM, PWID or unregistered FSWs). Further, the extremely low yield of screening SHC clients for STIs does not seem to constitute a wise investment of ever-shrinking financial and human resources.

- 5. Making check-ups at SHCs more effective and used by those who need them most. The frequency and nature of the regular check-ups performed by SHCs on registered sex workers may be a useful way to sustain contact and disseminate preventive information and counselling, but these clinical and biological check-ups are unlikely to have much impact on the transmission of HIV or other STIs, the reported rates of which are objectively very low in these populations. The contents of the check-ups, if they have to be maintained, should be reconsidered in the light of shortage of skilled staff, suboptimal structures available to accommodate these services and the lack of funds allocated to them. Space, resources and time should be created to encourage the use of SHC services by MSM, PWID, and unregistered sex workers and their clients. This will require the development of more effective linkages between SHCs and these affected communities. This type of work is best performed by community-based civil society organizations, which should be financed to fulfil this role.
- 6. Enhancing the coverage and quality of HIV VCT. Generally, the practice of VCT fails to achieve its targets. Not only are rates of HIV/VCT low in at-risk populations, but the return rates of people seeking the results of their tests are even lower. Combined with this failing, the HIV laboratory diagnoses performed in private health facilities are fraught with problems of inaccuracies: in 2013, 20% of the HIV screening tests yielding a positive result were false negative. On the community level, in facilities seeing key populations and in laboratories, focused efforts must be developed to promote and expand more innovative, simpler and community-based voluntary HIV testing and counselling in ways that guarantee the awareness by the people tested of their results and stimulate prompt referral to prevention, care and services.
- 7. **HIV screening at ANCs.** The systematic HIV testing of pregnant women should be strengthened in populations currently exposed to a significant risk of acquiring HIV infection. In many populations where the practice of prenatal HIV screening is promoted, however, no HIV infections have ever been found in pregnant women. Systematically offered prenatal HTC should be limited to areas where HIV has spread in certain key populations beyond recommended thresholds (see WHO guidelines on third-generation surveillance). A careful analysis of the targeted approach to antenatal careening for HIV should take into consideration epidemiological HIV trends in the local area, the risk of missing HIV-infected pregnant women, and the relative efficiency of group counselling often applied to systematically offered HIV testing versus the individual, confidential counselling aimed at risk assessment prior to an HIV testing offer.
- 8. Scaling up care and treatment capacity. The services providing care and treatment (mostly treatment hubs but increasingly SHCs) are hardly sufficient in number and capacity to respond to the currently growing demand. The CD4 count threshold for eligibility for ART is 350, but there is a plan to raise this threshold to 500. This implies a considerable increase in CD4 count testing capacity, in the further scaling up of treatment and in the follow-up capacity of PLHIV on treatment. While no projections have been made of the incremental number of PLHIV to be treated as the CD4 threshold rises to 500, a rule of thumb may suggest that it could represent an increase of 40–60% over current numbers. The existing services do not have the capacity to cope with this anticipated increase. The number of treatment hubs, structures that can accommodate higher numbers of candidates for treatment, counselling capacity, CD4 testing facilities, viral load testing sites and skilled staff to operate these services need considerable expansion as the prescription criteria for ART change and SOPs are formulated and disseminated to public, private prescribers and health staff.

9. Investing in human resources. The expansion of HTC, combined with the change in the criteria for eligibility to ART, will increase the workload at all levels of HIV services, in particular at SHCs, treatment hubs and laboratories. This situation calls for a comprehensive assessment of the additional human resources needed to cope with such an expected increase in demands throughout the lifespan of the next AMTP. A costed plan for recruitment, financing, training, deployment, monitoring, supervision and an incentive scheme should be developed urgently; failing to do so will see the rising demand exceed the response capacity of the health system. Simultaneously, the formal health system should actively stimulate collaborative work with community-based organizations that could contribute their outreach capacity to this effort. A structured plan for bridging immediate gaps through the selection, training, monitoring and supervision of contracted personnel and other outsourcing options must be developed, costed, funded and promptly implemented.

Annexes

Annex 1. List of review team members (Team B)

Review of the Health Sector Programme on STI, HIV and AIDS in the Philippines Midterm Review of the 5th AIDS Medium Term Plan (AMTP5) 16–30 October 2013

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Supervising Health Programme Officer National Epidemiology Center Department of Health Building 19, 2nd Floor, San Lazaro Compound, Sta. Cruz, Manila Tel: (632) 495 0513; 651 7800 ext. 2952 Mobile: (63) 916 747 6303 E-mail: Noel_1226@yahoo.com

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(27)	Jonathan Neil Erasmo Medical Specialist II STI HIV Coordinator Center for Health Development for Central Visayas Department of Health Osmena Boulevard, Sambag II, Cebu City Tel: (63 32) 2544387 E-mail: jneilverasmo@yahoo.com
(28)	Charity Perea Nurse-STI/HIV/AIDS Program Coordinator Abito Street, Mandurriao Iloilo City Tel.: 033–321-02–04
(29)	Geofford Montejo Jr. Nurse-STI/HIV/AIDS Program Coordinator J. P. Laurel Ave, Bajada,

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Annex 2. Work schedule

Date	Sites visited		
17 October 2013	Health Policy Development and Planning Bureau (HPDPB), Department of Health		
18 October 2013	Bureau of Departme	International Health Cooperation (BIHC), nt of Health	
	Philippine Pasig City	Health Insurance Corporation (PHIC, PhilHealth),	
	Bernardo S	Social Hygiene Clinic, Quezon City	
19 October 2013	Research I Manila	nstitute for Tropical Medicine (RITM) Satellite Clinic,	
	Manila He Manila	ealth Department and Manila Social Hygiene Clinic,	
	AIDS Soci	ety of the Philippines, Quezon City	
21 October 2013	Cebu	Cebu City Health Office Bureau of Jail Management and Penology (BJMP) Regional Office VII	
		Cebu City Jail - Male, Female and Operation Second Chance (minor offenders)	
	Iloilo	Center for Health Development – Western Visayas Western Visayas Medical Center	
	Davao	Center for Health Development – Davao Region Southern Philippines Medical Center (SPMC)	
22 October 2013	Cebu	Vicente Sotto Memorial Medical Center (VSMMC) – Treatment Hub	
		Cebu City Social Hygiene Clinic	
		Mandaue City Health Office and Mandaue City	
		Social Hygiene Clinic	
		Cebu Plus Association Inc. (CPAI) (two offices: VSMMC and Cebu City Health Office)	
		The Rehabilitation Center, Argao City	
	Iloilo	Iloilo City Health Office	
		Iloilo City Social Hygiene Clinic	
		St. Paul's Hospital Iloilo	
	Davao	Reproductive Health and Wellness Center (RHWC) (formerly Davao City SHC)	
		Alliance Against AIDS in Mindanao, Inc. (ALAGAD)	
		Private Infectious Disease Physician	

Date		Sites visited	
23 October 2013	Cebu	Center for Health Development – Central Visayas	
	Iloilo	PhilHealth Region VI Office Kabalaka Reproductive Health Center	
	Davao	Mindanao AIDS Advocates Association, Inc. (MAAI)	
24 October 2013	National E	Epidemiology Center (NEC), Department of Health	
	AIDS Research Group (ARG), Research Institute for Tropical Medicine (RITM), Muntinlupa		
	Department of Budget and Management, Manila		
	Makati Me	edical Center, Makati City	
	Makati City Health Office, Makati City Social Hygiene Clinic, Makati City		
	Pasay City	Social Hygiene Clinic and Health Center, Pasay City	
	Pasay City	Antenatal Clinics, Pasay City	
	Positive A Manila	ction Foundation Philippines Incorporated (PAFPI),	
25 October 2013	National C	Center for Disease Prevention and Control (NCDPC),	
	Departme	nt of Health	
	National AIDS and STI Prevention and Control Program (NASPCP), Department of Health		
	STD AIDS H4 Pavilio	Cooperative Central Laboratory (SACCL), Manila n, San Lazaro Hospital, Manila	
	Precious Je Lazaro Co	ewels Ministry, Extended Child Care Center, San mpound, Manila	
	TB-DOTS tuberculos	(Directly Observed Therapy for the treatment of is) Facility, San Lazaro Compound, Manila	
	Pinoy Plus	s Association, San Lazaro Hospital, Manila	
	Philippine Inc. (PNG	NGO Council on Population Health and Welfare, OC), Pasay City	

Annex 3. List of sites visited and persons met

17	October 2013	
1.	Health Policy Development and Planning Bureau (HPDPB), Department of Health	Dr Marwynn Bello (Division Chief)
18	October 2013	
2.	Bureau of International Health Cooperation (BIHC), Department of Health	Dr Maylene Beltran (Director IV)
3.	Philippine Health Insurance Corporation (PHIC,	Dr Mary Antonette Remonte (MDG Team Leader)
	PhilHealth), Pasig City	Dr Lizelle Lagrada (Officer-in-charge, Vice-President)
4.	Bernardo Social Hygiene Clinic, Quezon City	Dr Rolly Cruz (Quezon City HIV/STI Coordinator)
		Mr John Jardenil (Peer Educator Supervisor for Quezon City)
		Mr John Dave David (Peer Educator)
		Mr Jason Sepino (Peer Educator)
19	October 2013	
5. Rese Med Clini	Research Institute for Tropical Medicine (RITM) Satellite	Mr Philip Tanpoco, Jr. (Program Coordinator, AIDS Research Group)
	Clinic, Manila	Mr Christopher Lagman (Director of Learning and Development)
		Ms Marianne Ramos (Medical Technologist)
6.	Manila Health Department and	Dr Diane Mendoza (SHC Manager)
Manila S Manila	Manila Social Hygiene Clinic, Manila	Dr Rosalina Tan (Maternal and Child Health [MCH]) Coordinator of Manila Health Department)
		Dr Jonathan Fontanilla (Global Fund Transitional Funding Mechanism Coordinator)
		Mr John Torres (Peer Educator)
		Mr John Lenard Cortes (Nurse)
		Ms Anika dela Merced (Site Implementation Officer [SIO] / Peer Educator Supervisor)
		Dr Leonora Barboza (Administrative Officer)

7. AIDS Society of the Philippines,		ty of the Philippines,	Ms Cecil Anonuevo (Program Manager)
Quezon City		У	Mr Jose Bayani Velasco (Monitoring and Evaluation Officer)
			Ms Christelle Sotello (Nurse, Icon Clinic)
			Ms Vivien Santos (Medical Technologist)
			Dr Nerissa Sescon (Physician, Icon Clinic)
21 October 2013			
Cebu	8.	Cebu City Health Office	Dr Stella Ygona (Cebu City Health Officer)
	9.	Bureau of Jail Management and Penology (BJMP) Regional Office VII	Jail Supt. (Father) Bartolome C. Sasadal, MD (Assistant Regional Director for Operations, Prison - Chaplain)
			Jail Supt. Dr Priscillana Lee Gilboy (Medical Officer for BJMP VII, Prison Development Officer and Medical Doctor)
	10.	Cebu City Jail - Male, Female and Operation Second Chance (minor offenders)	Jail Supt. (Father) Bartolome C. Sasadal, MD (Assistant Regional Director for Operations, Prison - Chaplain)
			Jail Supt. Dr Priscillana Lee Gilboy (Medical Officer for BJMP VII, Prison Development Officer and Medical Doctor)
			JO3 Armando Novela (Nurse Male Jail)
			JO3 Nanette Bolodo (Nurse Female Jail)
Iloilo	11.	Center for Health Development – Western Visayas	Dr Maria Sophia Pulmones (Cluster Head, Infectious Disease and Environmental and Occupational Health)
			Ms Charity Perea (NASPCP Coordinator)
			Mr Rodolfo Chin, Jr. (HIV & STI Surveillance Assistant)
	12.	Western Visayas Medical Center	Dr Jose Mari Fermin (Hospital Director)
			Dr Ray Celis (HACT Physician/Medical Specialist III)
			Ms Eden June Simora (HACT Nurse)
			Ms Charro Love Perea (Project Aide III)
			Mr George Bartolome, III (President, United Western Visayas, Inc.)

Davao 13	13.	Center for Health Development – Davao Region	Director Abdullah Dumama (Regional Director)
			Ms Myrna Aida Macayra (Regional Health Education and Promotion Officer; Regional AIDS Action Team Point-person)
			Ms Clarisse Andong (HIV/STI Surveillance Assistant)
			Mr Geofford Montejo, Jr. (Nurse IV, Assistant NASPCP Coordinator)
	14.	Southern Philippines Medical Center (SPMC)	Dr Leopoldo Vega (Chief of Hospital III)
			Dr Alicia Layug (HACT Chair)
		center (or me)	Mr Eric Prias (Nurse)
			Ms Evelyn Aranola (Social Worker)
			Ms Maria Fatima Pemi (Project Aide III)
			Ms Julie Anne Gabawan (Nurse)
			Mr JC Loren (HACT Personnel)
			Dr Ian Jun Querubin (Treatment Center Head, PMDT (Programmatic Management of Drug- Resistant Tuberculosis)-SPMC)
			Ms Jean Piqueño (Nurse I – OIC)
			Ms Celenia Delima (Nurse)
			Ms Gina Rulete (Nurse)
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22 Octobe	er 201	5	
22 Octobe Cebu	er 201 15.	Vicente Sotto	Dr Chamberlain Agtuca, Jr. (HACT Asst. Chair)
22 Octobe Cebu	201 15.	o Vicente Sotto Memorial Medical Center (VSMMC) –	Dr Chamberlain Agtuca, Jr. (HACT Asst. Chair) Dr Abelardo Alera, Jr. (HACT Leader)
22 Octobe Cebu	15.	Vicente Sotto Memorial Medical Center (VSMMC) – Treatment Hub	Dr Chamberlain Agtuca, Jr. (HACT Asst. Chair) Dr Abelardo Alera, Jr. (HACT Leader) Ms Cindy Reformina (SIO for Treatment Care and Support), Cebu Plus Association Inc. Staff)
22 Octobe Cebu	201 15.	Vicente Sotto Memorial Medical Center (VSMMC) – Treatment Hub	Dr Chamberlain Agtuca, Jr. (HACT Asst. Chair) Dr Abelardo Alera, Jr. (HACT Leader) Ms Cindy Reformina (SIO for Treatment Care and Support), Cebu Plus Association Inc. Staff) Ms April Matutinao (Project Aide)
22 Octobe Cebu	er 201 15. 16.	Vicente Sotto Memorial Medical Center (VSMMC) – Treatment Hub Cebu City Social Hygiene Clinic	Dr Chamberlain Agtuca, Jr. (HACT Asst. Chair) Dr Abelardo Alera, Jr. (HACT Leader) Ms Cindy Reformina (SIO for Treatment Care and Support), Cebu Plus Association Inc. Staff) Ms April Matutinao (Project Aide) Dr Ilya Tac-an (SHC Manager)
22 Octobe Cebu	15. 16. 17.	Vicente Sotto Memorial Medical Center (VSMMC) – Treatment Hub Cebu City Social Hygiene Clinic Mandaue City	Dr Chamberlain Agtuca, Jr. (HACT Asst. Chair) Dr Abelardo Alera, Jr. (HACT Leader) Ms Cindy Reformina (SIO for Treatment Care and Support), Cebu Plus Association Inc. Staff) Ms April Matutinao (Project Aide) Dr Ilya Tac-an (SHC Manager) Dr Edna Seno (City Health Officer)
22 Octobe Cebu	15. 16. 17.	Vicente Sotto Memorial Medical Center (VSMMC) – Treatment Hub Cebu City Social Hygiene Clinic Mandaue City Health Office and Mandaua City	Dr Chamberlain Agtuca, Jr. (HACT Asst. Chair) Dr Abelardo Alera, Jr. (HACT Leader) Ms Cindy Reformina (SIO for Treatment Care and Support), Cebu Plus Association Inc. Staff) Ms April Matutinao (Project Aide) Dr Ilya Tac-an (SHC Manager) Dr Edna Seno (City Health Officer) Ms Elma Gonzales (Medical Technologist)
22 Octobe Cebu	15. 16. 17.	Vicente Sotto Memorial Medical Center (VSMMC) – Treatment Hub Cebu City Social Hygiene Clinic Mandaue City Health Office and Mandaue City Social Hygiene	Dr Chamberlain Agtuca, Jr. (HACT Asst. Chair) Dr Abelardo Alera, Jr. (HACT Leader) Ms Cindy Reformina (SIO for Treatment Care and Support), Cebu Plus Association Inc. Staff) Ms April Matutinao (Project Aide) Dr Ilya Tac-an (SHC Manager) Dr Edna Seno (City Health Officer) Ms Elma Gonzales (Medical Technologist) Dr Debra Catulong (SHC Physician)
22 Octobe Cebu	15. 16. 17.	Vicente Sotto Memorial Medical Center (VSMMC) – Treatment Hub Cebu City Social Hygiene Clinic Mandaue City Health Office and Mandaue City Social Hygiene Clinic	Dr Chamberlain Agtuca, Jr. (HACT Asst. Chair) Dr Abelardo Alera, Jr. (HACT Leader) Ms Cindy Reformina (SIO for Treatment Care and Support), Cebu Plus Association Inc. Staff) Ms April Matutinao (Project Aide) Dr Ilya Tac-an (SHC Manager) Dr Edna Seno (City Health Officer) Ms Elma Gonzales (Medical Technologist) Dr Debra Catulong (SHC Physician) Ms Conchita Icalira (SHC Midwife)
22 Octobe Cebu	15. 16. 17. 18.	Vicente Sotto Memorial Medical Center (VSMMC) – Treatment Hub Cebu City Social Hygiene Clinic Mandaue City Health Office and Mandaue City Social Hygiene Clinic Cebu Plus Association Inc.	Dr Chamberlain Agtuca, Jr. (HACT Asst. Chair)Dr Abelardo Alera, Jr. (HACT Leader)Ms Cindy Reformina (SIO for Treatment Care and Support), Cebu Plus Association Inc. Staff)Ms April Matutinao (Project Aide)Dr Ilya Tac-an (SHC Manager)Dr Edna Seno (City Health Officer)Ms Elma Gonzales (Medical Technologist)Dr Debra Catulong (SHC Physician)Ms Conchita Icalira (SHC Midwife)Mr Floyd Maldepeña (Satellite Treatment Hub Nurse)
22 Octobe Cebu	15. 16. 17. 18.	Vicente Sotto Memorial Medical Center (VSMMC) – Treatment Hub Cebu City Social Hygiene Clinic Mandaue City Health Office and Mandaue City Social Hygiene Clinic Cebu Plus Association Inc. (CPAI) (2 Offices: VSMMC and Cebu	Dr Chamberlain Agtuca, Jr. (HACT Asst. Chair)Dr Abelardo Alera, Jr. (HACT Leader)Ms Cindy Reformina (SIO for Treatment Care and Support), Cebu Plus Association Inc. Staff)Ms April Matutinao (Project Aide)Dr Ilya Tac-an (SHC Manager)Dr Edna Seno (City Health Officer)Ms Elma Gonzales (Medical Technologist)Dr Debra Catulong (SHC Physician)Ms Conchita Icalira (SHC Midwife)Mr Floyd Maldepeña (Satellite Treatment Hub Nurse)Mr Nathan Navarette (Peer Educator)
22 Octobe Cebu	15. 16. 17. 18.	Vicente Sotto Memorial Medical Center (VSMMC) – Treatment Hub Cebu City Social Hygiene Clinic Mandaue City Health Office and Mandaue City Social Hygiene Clinic Cebu Plus Association Inc. (CPAI) (2 Offices: VSMMC and Cebu City Health Office)	Dr Chamberlain Agtuca, Jr. (HACT Asst. Chair)Dr Abelardo Alera, Jr. (HACT Leader)Ms Cindy Reformina (SIO for Treatment Care and Support), Cebu Plus Association Inc. Staff)Ms April Matutinao (Project Aide)Dr Ilya Tac-an (SHC Manager)Dr Edna Seno (City Health Officer)Ms Elma Gonzales (Medical Technologist)Dr Debra Catulong (SHC Physician)Ms Conchita Icalira (SHC Midwife)Mr Floyd Maldepeña (Satellite Treatment Hub Nurse)Mr Nathan Navarette (Peer Educator)Ms Jasil Villares (SIO-CPAI)
22 Octobe Cebu	15. 16. 17. 18. 19.	Vicente Sotto Memorial Medical Center (VSMMC) – Treatment Hub Cebu City Social Hygiene Clinic Mandaue City Health Office and Mandaue City Social Hygiene Clinic Cebu Plus Association Inc. (CPAI) (2 Offices: VSMMC and Cebu City Health Office) The Rehabilitation Center, Argao City	Dr Chamberlain Agtuca, Jr. (HACT Asst. Chair)Dr Abelardo Alera, Jr. (HACT Leader)Ms Cindy Reformina (SIO for Treatment Care and Support), Cebu Plus Association Inc. Staff)Ms April Matutinao (Project Aide)Dr Ilya Tac-an (SHC Manager)Dr Edna Seno (City Health Officer)Ms Elma Gonzales (Medical Technologist)Dr Debra Catulong (SHC Physician)Ms Conchita Icalira (SHC Midwife)Mr Floyd Maldepeña (Satellite Treatment Hub Nurse)Mr Nathan Navarette (Peer Educator)Ms Jasil Villares (SIO-CPAI)Mr Tomas Jonathan Refe (Program Director and Senior Nurse)

Iloilo	20.	Iloilo City Health Office	Dr Urminico Baronda, Jr. (City Health Officer)
	21.	Iloilo City Social Hygiene Clinic	Dr Ma. Odeta Villaruel (SHC Physician)
			Ms Razel Portugalete (SHC Nurse)
			Ms Virgie Advincula (Behavior Change Communication Coordinator)
			Mr Romeo Bordamonte (Peer Educator)
	22.	St. Paul's Hospital Iloilo	Dr Ellamae Divinagracia (HACT Physician)
			Ms Ana Joy Jamera (HIV Proficient Medical Technologist)
			Ms Jocelyn May Millan (Infectious Disease Nurse / HACT Nurse)
			Sister Marilyn Rigor (HIV Proficient Medical Technologist)
Davao	23.	Reproductive Health and Wellness Center (RHWC) (formerly	Dr Josephine Villafuerte (City Health Officer)
			Mr Patrick Albit (SIO-GF)
			Mr Eddie Batoon (SIO-GF)
		Davao City SHC)	Ms Ambeth Laganzo (Peer Educator)
			Mr Nathaniel Malinao (Peer Educator)
			Mr Erwin Suarez (Peer Educator)
			Mr Nick Reyes (Peer Educator)
			Mr Jims Rivera (Peer Educator)
	24.	Alliance Against AIDS in Mindanao, Inc. (ALAGAD)	Ms Alma Mondragon (Executive Director)
			Ms Connie Ailut (Care and Support)
			Ms Michael Jesus Mahinay (Project Officer)
	25.	Private Infectious Disease Physician	Dr Pamela Ferrer (Private Physician – Infectious Disease)
23 October	r 201	3	
Cebu	26.	Center for Health Development – Central Visayas	Dr Jonathan Neil Erasmo (STI-HIV Coordinator)
Iloilo	27.	PhilHealth Region VI Office	Dr Bernadette Reynes (Chief of the Health Care Delivery Management Division)
			Mr Romel Dilag (Chief of the Membership Division)
	28.	Kabalaka Reproductive Health Center	Professor Nennalyn Abioda (Exective Director)
			Ms Melba Sale (Healthcare Service Provider)
Davao	29.	Mindanao AIDS Advocates Association, Inc. (MAAI)	Mr Midgie Tindoc (President)

24	October 2013	
30.	National Epidemiology Center (NEC), Department of Health	Mr Noel Palaypayon (Supervising Health Program Officer)
		Dr Marlene Bermejo (HIV Surveillance Database Supervisor)
		Ms Krizelle Anne Ronquillo (Project Associate III)
		Ms Jessica Raphaela Mirano (Project Associate III)
		Mr Geoffrey Garcia (Project Assistant III)
		Mr Juan Carlos Miguel Camacho (HIV Surveillance Assistant)
31.	AIDS Research Group (ARG),	Dr. Rossana Ditangco (Chair)
	Research Institute for Tropical Medicine (RITM), Muntinlupa	Ms Rosa Lyn Bantigue (Data Manager)
	City	Mr Roldan Bucal (Project Assistant III)
		Dr Frank Anthony Wico (Physician)
		Ms Clara Francesca Roa (Nurse)
		Ms Janelle Pasajal (Nurse)
		Ms Pamela Nicole Jumonong (Nurse)
		Mr Raymon Lumanlan (Nurse)
		Ms Nikka Martinez (Nurse)
32.	Department of Budget and Management, Manila	Ms Cleopatra Bernardino (Chief, Management and Planning Specialist, Bureau B)
33.	Makati City Health Office, Makati City Social Hygiene	Dr Diana Jocelyn Vaño (City Health Officer)
	Clinic, Makati City	Dr Bernard Sese (SHC Physician)
		Dr Corazon Salinas (SHC Physician)
34.	Makati Medical Center, Makati	Dr Janice Caoli (Clinic Officer)
	City	Mr Adrian Joseph Anbochi (HACT Nurse)
		Ms Mercedita Marcestra (SIO)
35.	Pasay City Social Hygiene	Dr Joan Carlota Ranieses-Santos (SHC Manager)
	City	Ms Marie Pierre Parlade (SHC Nurse)
36.	Pasay City Antenatal Clinics, Pasay City	Dr Grace Salle-Noble (MCH Coordinator/ Health Center Physician)
		Ms Marcia de Dios (Medical Technologist, Health Center)

Mr Boying (Laboratory Aide)
37.	Positive Action Foundation Philippines Incorporated (PAFPI), Manila	Mr Rodel Navarra (Executive Director)
		Ms Ana Portia Banal-Carza (Administrative Staff)
		Ms Rosemarie Barrientos (Administrative Finance Officer)
		Ms Elsa Chia (Program Assistant for Implementation)
25 October 2013		
38.	National Center for Disease Prevention and Control (NCDPC), Department of Health	Dr Irma Asuncion (Director IV)
		Dr Jose Gerard Belimac (Program Manager, National AIDS and STI Prevention and Control Program (NASPCP))
39.	National AIDS and STI Prevention and Control Program (NASPCP), Department of Health	Dr Jose Gerard Belimac (Program Manager, NASPCP)
		Ms Helen D. Paaño (Project Associate III, NASPCP)
40.	STD AIDS Cooperative Central Laboratory (SACCL), Manila	Dr Arlan Lopez (Medical Specialist II)
		Ms Susan Leano (Chief Medical Technologist)
41.	H4 Pavillion, San Lazaro Hospital, Manila	Dr Rosario Abrenica (Medical Specialist II, HACT Leader)
42.	Precious Jewels Ministry, Extended Child Care Center, San Lazaro Compound, Manila	Ms Lorraine Anderson (Executive Director)
43.	TB-DOTS (Directly Observed Therapy for the treatment of tuberculosis) Facility, San Lazaro Compound, Manila	Dr Flora Marin (TB-DOTS Physician)
		Mr Luisito Manuel (TB-DOTS Nurse)
44.	Pinoy Plus Association, San Lazaro Hospital, Manila	Mr Edu Razon (President)
45.	Philippine NGO Council on Population Health and Welfare, Inc. (PNGOC), Pasay City	Dr Grace Chan (Program Manager, ISEAN- Hivos)
		Mr Mario Balibago (Program Officer, FHI360 ROMP)

Annex 4. Research issues of high relevance to the national health sector response to HIV/AIDS in the Philippines

Below is a non-prioritized list of research topics that appeared to the review team to be worthy of consideration.

Prevention for key populations at risk

- Evaluation research to assess the effectiveness of all interventions being directed to key populations.
- Evaluation of services of social hygiene clinics for all key populations.
- Decentralization of HIV testing and counselling among key populations: development of a community-based model with strong linkages to ARV treatment and care; development of an HIV testing algorithm for key populations.
- Operational research on peer education for key populations.
- Operational research to improve coverage of outreach, testing and returning for results.

Prevention for key populations at risk: people who inject drugs

- Understanding the barriers and facilitators of injecting in Cebu. What has given rise to injecting there and why has it remained there and not spread to other cities?
- Analysis of IHBSS data on needle sharing.
- Does opioid substitution therapy work for nalbuphine which is used by most PWID in Cebu?
- Operational research on a test-and-treat model among PWID.
- Determinants of adherence to treatment among PWID; operational research to improve treatment adherence.
- Understanding effectiveness of needle and syringe programmes to reduce spread of infection.
- Qualitative research on uptake and use of sterile needles.

Prevention for key populations at risk: men who have sex with men

- Operational research on a test-and-treat model among MSM.
- Defining sub-populations of MSM, describing the social and behavioural characteristics and health-seeking behaviours.
- Mobilizing and reinforcing community leadership among MSM to induce positive changes in community norms and behaviours (key opinion leaders).
- Determinants of adherence to treatment among MSM.

Prevention for key populations at risk: female sex workers

- Assessing the impact of mandatory visits by FSWs to social hygiene clinics on the spread of STIs and HIV, and on preventive behaviour in general, especially condom use.
- Mapping risk factors for sexually transmitted infections and HIV among non-registered (freelance) female and male sex workers
- Developing an evidence-base for sex worker interventions: validation of STI screening algorithm for sex workers and modelling of cost-effectiveness of weekly, biweekly, monthly and quarterly visits.
- What should be the optimal package of services offered for registered sex workers by SHCs?
- How to incentivize regular visits to SHCs by registered FSWs other than through registration?

Prevention for key populations at risk: transgender people

• Development of essential HIV and STI service delivery models to address special service needs for transgender people.

HIV testing and counselling, and treatment, care and support

- Develop estimates and projections of antiretroviral therapy (ART) care needs through 2016 in the light of current trends in case detection and the anticipated change in CD4+ count threshold from 350 to 500.
- Prospective cohort analysis to evaluate the cascade between HIV testing and treatment and care (Cox proportional hazard model).
- Cost-effectiveness analysis on decentralization/scale-up of treatment services (addressing the large gap between the number of HIV testing and counselling sites and treatment hubs).
- Developing an operational model for the efficient and effective deployment of mobile voluntary counselling and testing.
- Tracking the treatment cascade: managing and evaluating the continuum of HIV prevention, care and treatment.
- Qualitative research to clarify the reason why patients are becoming lost to follow-up.
- Mortality study of AIDS deaths using verbal autopsy.

Clinical services: other issues

- Evaluating the quality of HIV care offered by public and private clinicians.
- Identifying the reasons for high rate of false positive HIV testing, for example, 19% of referrals from screening labs to SACCL were false positive in 2012.
- Factors impeding the introduction and use of rapid tests for STIs.
- How to avoid high staff turnover: incentives to ensure greater staff retention in STI/ HIV public health services?

Vulnerability

• Evaluating the impact of the anti-child trafficking and sexual exploitation laws in preventing the sexual exploitation of underage sex workers and on the ability to effectively engage unregistered adult sex workers in HIV prevention services.

Annex 5. Compilation of recommendations

(The recommendation numbers refer to the section of the External Review under which these issues were discussed.)

Use data more efficiently

Recommendation 1.1.2

NEC should make widely available complete technical reports from IHBSS surveillance rounds accompanied by actionable fact sheets, within six to 12 months after the completion of each surveillance round, through online publication, local briefings and distribution of hard copies. A thorough description of the methods applied, samples obtained, analytic techniques and confidence intervals should be included in all materials. The current IHBSS Technical Working Group has not provided effective oversight regarding dissemination to date. Thus, scientific oversight should be carried out jointly by the leadership of NEC and / or the Office of the Secretary of the Department of Health, which oversees NEC, with an expert panel, feeding early results to the Department of Health, local governments and the PNAC Executive Committee, given the importance of IHBSS data to HIV programming.

Recommendation 1.1.3

Ahead of IHBSS surveillance rounds, NEC should enter into a formal agreement (e.g. via a memorandum of understanding) with local governments selected to participate, stating that national and local findings will be made publicly available through technical reports, fact sheets and other media, and made available online, regardless of what the results show. Civil society should be made a part of this process via national and local AIDS councils so that their voices may be heard.

Map and estimate the size of key populations

Recommendation 1.1.4

Building on the Rapid Assessment of Vulnerability (RAV), regular assessments to identify the presence of significant PWID populations should be conducted in urban areas that meet objective criteria, such as all Category A sites, nationally. Additional criteria should be established to determine under what circumstances findings from these PWID vulnerability assessments should lead to establishing a new IHBSS site for PWID. The NEC's RAV guidelines should be enhanced to ensure that the assessments systematically gather and triangulate data from hospital emergency departments, substance abuse rehabilitation centres, police and local nongovernmental organizations working with drug users in order to identify evidence of injecting drug use.

Recommendation 1.1.5

In order to guide more effective targeting of prevention efforts, data from IHBSS should be used to generate local maps that identify those locations (establishments and streets) with the highest concentration of highestrisk behaviours, including patterns of low condom use, a high number of partners, frequent needle sharing and overlapping risks (MSM-PWID, FSW-PWID). Organizations carrying out outreach, including social hygiene clinics (SHCs) and needle-syringe programmes, should be trained on how to use this information to target individuals at highest risk for HIV infection and transmission.

Recommendation 1.1.6

HIV sero-surveillance in antenatal women in cities where high levels of HIV infection in any of the most-at-risk populations (e.g. at least 10%) should be incorporated into local and national surveillance systems by either: (1) strengthening routine screening among pregnant women in these areas to bring HIV testing coverage to at least 90%; or (2) conducting periodic antenatal surveillance studies at selected sites in these areas every one to two years.

Recommendation 1.1.7

Formative research to characterize MSM and injecting drug use risk behaviours in

prison populations should be carried out to determine the need for biological and/ or behavioural surveillance. Criteria for selecting sites for the formative assessment should be established and should include consideration of: (1) the number of inmates; and (2) the geographic proximity to Category A areas. These data should be used to design, implement and monitor HIV and TB prevention, care and treatment in prisons.

Recommendation 1.1.8a

Dissemination of population size estimates for most-at-risk populations in Category A (and potentially Category B) areas should be improved by: (1) documenting the specific methods employed and findings (including the uncertainty ranges of the estimates) from size-estimation exercises in technical reports within six months of completion; and (2) providing technical support and capacitybuilding for programme implementers and service providers in Category A and B areas to improve their understanding and use of size estimates in prevention activities.

Recommendation 1.1.8b

Size estimation using the multiplier method should be integrated into all future IHBSS surveillance rounds for MSM, freelance and registered FSWs, and PWID, using services and/or unique-object multipliers. Given the wide confidence intervals typically associated with these estimates, multiple multipliers should be used for each population when possible. Methods and findings from multiplier estimates should be documented as in the preceding recommendation.

Assess outcome and impacts

Recommendation 1.2.1

Three decades into the HIV epidemic, the HIV programme in the Philippines should not only remain accountable for the delivery of quality services and goods and the use of resources, but also should acquire the capacity to provide evidence of the outcome and impacts of the health sector's response to HIV. This implies the strengthening epidemiological surveillance, of the application of new laboratory technologies along with greater dispersion of existing technologies (e.g. rapid tests for HIV and STIs, CD4 count and viral load), stronger data linkages from individual entry into prevention programmes, active HIV testing and counselling, and enrolment in the care and treatment continuum (and eventually through the end of life), as well as improvements in social, behavioural and economic determinants of health and wellbeing.

Recommendation 1.2.2

The national surveillance system should incorporate measures of HIV incidence that include two strategies. First, incidence assays should be applied to specimens from IHBSS studies to estimate incidence among key populations, potentially pooling samples across nearby cities to obtain sufficient sample size.^a Second, trends in HIV prevalence should be analysed among young childbearing women (ideally younger than 20 years old, in whom infection is most likely to be recent) from antenatal facilities in the geographic areas recommended under Recommendation 1.1.6.

Recommendation 1.2.3

NEC should develop methods to regularly (every one to two years) cross-check the Philippine HIV and AIDS registry with the national civil deaths registry in order to: (1) capture deaths among people with HIV due to any cause; and (2) capture deaths attributable to HIV. Analysis based on these combined data should be developed to improve understanding of patterns in mortality (demographic and risk characteristics, relation to late diagnosis and treatment characteristics) at the national and local levels, with the aim of improving the effectiveness of care and treatment.

Recommendation 1.2.4

Philippine HIV and AIDS registry reports should summarize rates, opportunistic infections and characteristics of PLWH who have opportunistic infections (OIs). Summaries of trends in the rate of

^a Reportedly, incidence assays have been applied previously, but there is no evidence of them in the IHBSS study protocol, fact sheets or the one technical report available for 2009 in MSM.

opportunistic infections should be made available to treatment hubs with support in using these trends to improve treatment effectiveness.

Recommendation 1.2.5

Analyses presented in the SSESS reports should be expanded to include breakdowns by age, sex and type of facility. The analyses should be made more accessible and actionable by including figures illustrating trends, characterizing STI risks and vulnerability, and making the reports available to health practitioners and researchers online.

Monitor the continuum of prevention, care and treatment and the cascade of services

Recommendation 1.3.1

Standardized mechanisms for referral (see Section 1.3) should be accompanied by standardized mechanisms to routinely monitor that referrals have actually resulted in linkage between services (such as programme registers and summary reports), using a unique identifier, such as the STD AIDS Cooperative Center Laboratory (SACCL) code. Procedures for tracking referrals should be incorporated into existing standard operating procedures (SOPs), and training and supportive supervision should ensure their use. Data on trends over time in the percentage of referrals that are realized - from outreach to testing, testing to care, and care to treatment - should be made available to SHCs, treatment hubs, and TB treatment centres and directly observed treatment (DOT) facilities. Procedures for personnel to meet periodically (e.g. quarterly) to review these data and collaboratively identify measures to improve referrals should also be established. A data field for "source of referral into testing" should be added to the Philippine HIV and AIDS registry form in order to capture referrals from TB treatment centres and antenatal clinics and private testing facilities.

Recommendation 1.3.2

Linkage to and retention in care should be monitored either through routine reporting using the new Form B, or by establishing facility-level registers that capture sufficient data on enrolment and follow-up (including SACCL code) to allow tracking of individuals over time. Additionally, standard care and treatment reports at the facility and national levels should include summaries of patients who are awaiting eligibility screening, those in pre-ART and those in ART. Cohort-based measures of retention in both care and treatment should be developed and procedures established for data review and decision-making to ensure the data are used regularly (e.g. monthly) for programme improvement.

Recommendation 1.3.3

At national and facility levels, trends in retention and loss to follow-up for MSM, FSWs (registered and freelance) and PWID should be routinely monitored through standard reports (ideally the same reports developed under Recommendation 1.3.2) with procedures for regular review and decision-making based on findings. Analyses to generate these trends would be most easily generated at the national level, given that national-level databases would allow the analyses to account for transfers between facilities.

Recommendation 1.3.4

The level of training and supportive supervision to help HIV testing and treatment facilities adhere to services protocols should be strengthened through inception training and periodic in-service refresher training activities centred around existing SOPs.

Recommendation 1.3.5

A single report should be developed for use at the local government unit (LGU) level that provides data and trends in indicators of programme quality and effectiveness, such as referrals into care and treatment, retention in care and treatment, and morbidity. A standard procedure should be developed to ensure regular review (e.g. quarterly) of the quality measures by individual health facilities (SHCs, treatment hubs and TB facilities) and local collaborative HIV teams in order to facilitate early detection of problems and collaborative solutions. The national level (NEC and PNAC) could support these efforts by providing guidance, training and supportive supervision for the review and interpretation of the quality indicators and problem-solving process.

Recommendation 1.3.6

The bulk of this work would be better accomplished by computer programmes, with manual review reserved for following up on those inconsistencies that are automatically detected. Such validation checks could be automated at low cost. Optical character recognition technology should be introduced to automate the data entry process and reduce data entry error. This would require an initial investment, but would appear quite justified given the high volume of work involved.

Offer minimum prevention packages to key populations

Recommendation 2.1.1a

The overarching principle is respect for and protection of human rights, and ensuring health services are delivered in a stigma-free and friendly manner to key populations in health-care settings. Specificefforts should be made to address the bottleneck prohibiting the full implementation of the national guidelines at local level. The comprehensive packages for key populations should be reassessed, and a minimal package of prevention interventions should be defined and accompanied with a concrete qualityassurance mechanism.

Recommendation 2.1.1b

The development of a master health sector plan should be considered, maximizing the utilization of the existing health infrastructure, SHCs in particular, to mainstream evidence-informed and rights-based prevention services to key populations. In addition, staff capacity at SHCs should be built to expand their scope of services in order to cover all key populations and establish a stronger partnership with nongovernmental organizations community-based and organizations (CBOs) working with key populations. Local innovation of service delivery models should also be encouraged and best practices documented for sharing and replication.

Recommendation 2.1.2a

National surveillance for PWID should be strengthened by covering more of the National Capital Region (NCR) sites (Manila and Quezon City in particular) to detect epidemics early, while continuing to monitor the high level of needle-andsyringe sharing behaviour. Given the high HIV prevalence already detected in Cebu and Mandaue, it is urgent to initiate community-based pilot needle-and-syringe exchange programmes, in line with the instruction of the Dangerous Drugs Board in collaboration with the Department of Health, WHO, other key partners and all local stakeholders in selected cities.

Recommendation 2.1.2b

MSM must be engaged more actively in delivering services and peer outreach. Prevention activities must be adapted to the diversity of MSM sub-populations, including those living with HIV, and must address sexual health needs through a variety of approaches and combinations of interventions best suited to the specific needs, demands and capacities of these sub-populations. Innovative use of mass and targeted media, including the Internet and cell phones, should be integrated components in the delivery of prevention messages, health promotion and social support services. Commodities, such as condoms and lubricants, should be readily available and widely promoted. Prevention activities should be strengthened using a variety of channels and there should be encouragement of local innovations, including structural interventions, in locations where high-risk behaviour may occur. These should be included in a minimal package of preventive services, with strong linkages with HIV testing and counselling (HTC) and ARV. A minimal package for HIV prevention among MSM should consist of essential elements in line with recommendations of WHO, the United Nations Development Programme (UNDP) and UNAIDS.

Recommendation 2.1.2c

Prevention interventions for sex workers should be adapted based on local sex work patterns, local STI prevalence and the policy environment. SHCs should be better used to improve the services for registered sex workers, building partnership with sex work nongovernmental organizations and CBOs to extend the scope of quality services to freelance FSWs, MSWs and transgender people. Interventions should incorporate input from sex workers and their community into how to make services user-friendly.

Recommendation 2.1.2d-1

transgender-specific programme, Α informed by the forthcoming findings of a study being conducted in Cebu, should be created in consultation with transgender community representatives. Other project areas should also be more active in identifying transgender peer leaders as peer educators to initiate partnerships between health services and the transgender community. Health providers should receive orientation and sensitization on transgender issues and on how to stimulate the participation of transgender people in peer outreach and in the delivery of services.

Recommendation 2.1.2d-2

In order for transgender people to protect themselves from HIV and other STIs, they must have access to the full spectrum of prevention services including information, sexuality counselling, and HIV counselling and testing, as well as prevention commodities such as male and female condoms, lubricants and sterile injection equipment to be used for hormone treatment or injection of other drugs. It is critical that substance-using transgender people be able to access support services if their drug or alcohol use becomes problematic and increases their risk of HIV transmission and acquisition.

Recommendation 2.1.2d-3

It is desirable for transgender people living with HIV to seek early treatment for HIV, given the recent developments supporting HIV treatment as prevention. Similarly, it is important that other vulnerable transgender groups, such as migrants and sex workers, also have access to services that are sensitive to their specific needs. One of the consequences of stigma and discrimination in employment is that many transgender people have few options other than sex work to survive. This, in turn, has detrimental health consequences including the risks of HIV and other STI transmission, as well as violence, drug and alcohol use, anxiety and depression. Condom use is usually lower among transgender sex workers than other sex workers.

Recommendation 2.1.3

А national condom strategy should be developed. Policies on correct and consistent condom use in sex work settings should be in place, and the policies should be supportive of community empowerment for the work norm of "no condom, no sex". Condoms should be made available through a variety of channels: free-of-charge distribution, a condom social marketing approach and private sector promotion. Condoms should be easily available and accessible for registered sex workers based in sex venues. Outreach activities should be scaled up to offer free distribution of condoms and water-based lubricants to freelance FSWs and MSWs, MSM, PWID and transgender people.

Recommendation 2.1.4

Particular efforts should be made to improve the quality of STI screening among key populations. To this end, more systematic and optimal standards of clinical and biomedical diagnostic procedures should be enforced by periodically trained and retrained staff.

Recommendations 2.1.5a

Greater investment in peer education and other service delivery models apart from SHCs should be considered. Skills of peer educators should further be enhanced through regular training and supportive supervision from site implementation officers. Appropriate peer educators should be recruited, including an adequate number of peer educators. Eligibility criteria should be developed for recruitment and should set the optimal ratio of peer educators over the number of key populations (e.g. one peer educator for every 50 members of a key population). Peer educators should perform microplanning to ensure systematic approaches for reaching key populations. They should have appropriate monitoring tools to track the number of key population members reached, repeat visits, services provided and required follow-up. Training modules and job aids for peer educators should be developed and standardized.

Recommendation 2.1.5b

In order to ensure availability of essential HIV prevention commodities, there is a need for a designated person at the national level to track stock- outs of essential HIV prevention commodities. Guidelines on tracking stock-outs could be provided by the Global Fund procurement focal point at the national level.

Recommendation 2.1.5c

It is essential to maintain or improve coordination between SHCs and nongovernmental organization peer educators. Regular meetings should be held to discuss targets and issues concerning the quality of services. The needs of MSM and PWID and the acceptability of current services should be assessed, seeking suggestions on the best way to increase access and the acceptability of services. The conduct of exit interviews of key populations using services and the conduct of focus-group discussions among key populations not using these services should result in the design of new service delivery models aimed at increasing access to and the use of services by MSM. Minimum standards of quality of service should be formulated along with monitoring indicators. The physical infrastructure of venues where services are provided (SHCs and others) must urgently be improved.

Recommendation 2.1.6

The following SRH services should be provided on-site or by establishing functional referral mechanisms: family planning and contraceptive counselling, promoting dual protection for pregnancy, STIs and HIV; availability of condoms and if possible contraceptives at service delivery points for sex workers and PLHIV; orientation of women to reproductive

choices, safe pregnancy, abortion and post-abortion care and reproductive tract cancer screening (e.g. cervical, ano-rectal and prostatic cancers); and counselling on hormone use and referral to other gender enhancement practices for transgender people.

Recommendation 2.1.7a

It is recommended that a formal agreement between the prison administration and the Department of Health be approved in the form of a joint policy, accompanied by SOPs for the management of HIV within prisons and after transfer between prisons, addressing as well best practices in HIV/STI prevention and care and related supplies of medicines and commodities in detention facilities. It is further recommended that such procedures also cover the referral of inmates treated for HIV upon their release from prison so as to ascertain the continuum of care and prevention once they return to their communities. Civil society organizations and more generally nongovernmental organizations should be prompted and supported to play a key role in enhancing continuity of prevention, care and treatment for people in and out of jail.

Recommendation 2.1.7b

There is a need to document current practices in rehabilitation centres where STI and HIV intervention activities have been initiated. Such evidence could inform future policy and practices that could be generalized to all rehabilitation centres, both private and government.

Recommendation 2.1.7c

The ongoing STI and HIV-related interventions in some rehabilitation centres need to be coupled with capacity-building among staff, in particular on the handling of residents diagnosed with these conditions.

Recommendation 2.1.7d

Given the large and growing number of drug-dependent residents, outreach and open rehabilitation services providing psychosocial support should be explored and enhanced. The high relapse rate after discharge from rehabilitation centres should be taken into consideration in the review of the design, implementation and effectiveness of the interventions and support services.

HIV testing and counselling

Recommendation 2.2.1

Peer educators require standardized training with skills rehearsal that enables them to ask if people have had a test, to explore reasons for not having had a test, and to be able to challenge the client's thinking and encourage them to take a test. Similarly, this training needs to ensure peer educators also learn to ask in a sensitive manner whether or not people have collected their HIV test results and – without requesting to know the result – explore and challenge the reasons for not returning for results.

Recommendation 2.2.2

Expanding the available range and type of HTC models is key to improving coverage, access and entry into care. Innovative service models should be field-tested. These models include private-public partnerships with shared resources, such as counsellors provided by nongovernmental organizations, or government funding of private service providers that are favoured by key populations. Additionally, the expansion of service hours and the employment of different models of pre-test counselling that require less time should be considered to alleviate congestion and to meet future increased demand for HTC and to improve the quality of HTC in SHCs. Innovative service implementation should continue, for example referral to treatment hubs and the enrolment of MSM who are community VCT clients after they have had a provisional diagnosis following the receipt of two reactive results from two different tests. Such approaches should be applied and replicated where these services can be monitored for compliance with the Department of Health service standards. In order to improve access to necessary health care for minors, it is imperative that there is immediate, strengthened advocacy for the revision of RA 8504, the Philippines AIDS Prevention and Control Act of 1998, with respect to the testing of minors.

Recommendation 2.2.3

There is a need for the Department of Health to develop a quality monitoring and management system for HTC and assume a strengthened regulatory role. The HTC quality management programme would assume responsibility for standardizing preand post-test counselling training courses, ensure SOPs are available for different types of service models (e.g. mobile or communitybased VCT), and ensure standard medical record documentation occurs across government, nongovernmental and private HTC services. It is further recommended that in order to ensure appropriate, explicit and consistent health messages are delivered by counsellors, counselling tools should be developed that are specifically oriented to the needs of specific key populations. There is an urgent need to send out a circular or memorandum to all HTC service providers alerting them to their legal and ethical duty to check results before provision to clients to ensure that the correct result has been provided to the client. Additionally, it is essential that HTC providers realize that they need to check a client's understanding of the results and implications for transmission prevention and to facilitate linkages to treatment and care. There is also a duty to assess a client's ability to cope with an HIV-positive result and, as necessary, address the threat of risk of harm to one's self and others.

Recommendation 2.2.4

Depression not only reduces the quality of life of infected women but also can contribute to poor treatment adherence and to an inability to bond with and care for their newborn baby. It is imperative that counsellors are trained to be aware of common signs and symptoms of depression and the phenomena of post-partum depression and understand the importance of referring to appropriate mental health professionals. It is further recognized that it is important to increase the male partner's involvement in antenatal and postnatal care. Partners should be invited to consultations and offered partner testing, as appropriate and feasible. Counsellors require training that enables them to offer family or relationship support.

Recommendation 2.2.5

Counsellors and ancillary support workers working with parents and children require specific training to address issues of disclosure, the preparation of children for clinic and hospital visits, and the provision of age-appropriate counselling for HIVpositive children and adolescents and their siblings. Parents may also need additional support in managing treatment adherence in children.

Laboratory support

Recommendation 2.3.2a

In order to accelerate the availability of confirmed results and reduce the number of those clients not returning for test results, it is critical that the planned serial rapid test validationstudy proceeds as soon as possible. It is also critical to assess available quality systems to support the implementation of a three rapid-test algorithm for screening and confirmatory screening - with immediate results in non-laboratory facilities, such as SHCs and community-based HTC centres as soon as possible. As an interim measure until the serial rapid test algorithm can be implemented, delays in the provision of results should be shortened by extending the model of service currently employed by community-based services whereby the referral to treatment hubs and enrolment of MSM who are community VCT clients occurs after provisional diagnosis with receipt of two reactive results from two different tests. This approach should be replicated only where these services can be fully monitored for compliance with the Department of Health in order to support quality testing. There is an urgent need to address the gaps in quality assurance of HIV testing. To this end, the licensing, regulation of test kits, participation in EQAS and training should be considered. There is also a need to develop national training elements around the management and procurement of test kits and reagents. It is further recommended that the NRL extend EQAS schemes from one round of distribution of samples to be tested for HIV by laboratories participating in the scheme to two annual rounds.

Recommendation 2.3.2b

A three rapid-test algorithm for screening and confirmatory testing with immediate results should be considered during the validation of the new HIV testing algorithm. The availability of quality systems to support the implementation of a three rapid-test algorithm for screening and confirmatory test with immediate results in non-laboratory facilities, such as SHCs and HTC centres should be explored.

Recommendation 2.3.2c

CD4 count technology and operating skills should be scaled up to match the expected increase in HIV testing demands, particularly as the criteria for enrolment in care change.

Recommendation 2.3.3

It is recommended that the policy of not providing results should be made clear to donors. For example, signage indicating that HIV test results will not be given to blood donors should be clearly posted in the BSF. Leaflets providing contact details for VCT services should be available to donors who request knowledge of their HIV status. Donors who volunteer that they have engaged in a recent exposure risk should be referred to an appropriate VCT service. Additionally, in light of the reported incidence of MSM presenting at BSF services in order to learn their HIV status, it is important that MSM outreach programmes address this issue in their peer education programmes.

Recommendation 2.3.4

It is recommended to review the orders that require NVBSP-NRL and SACCL to conduct parallel and duplicate activities for confirmatory testing and EQAS. This duplication in activities undermines the efficiency and quality of the testing.

Recommendation 2.3.5

SACCL and clinicians should review current operating procedures to determine the most appropriate HIV testing algorithm for children less than 18 months of age, in particular whether PCR testing should be centralized at SACCL only for the purpose of diagnosing HIV among infants and young children and if two positive PCRs should be sufficient to decide on enrolment in paediatric ART.

Recommendation 2.3.8

HIV testing facilities should be supported to implement QMS, address the gaps in the national systems that support quality assurance in HIV testing, and consider allowing the use of test kits only if they are licensed for use in the Philippines by the National Regulatory Authority and accompanied by participation in EQAS and training.

Recommendation 2.3.9

The National AIDS and STI Prevention and Control Program (NASPCP) should develop national training elements around the management and procurement of test kits and reagents. CD4 and viral load testing need be considerably expanded in an effort to remove the current bottleneck to increased enrolment of PLHIV in the treatment cascade. Availability, coverage, uptake and costs should be considered. Programmes need to be developed to minimize stock-outs; each facility should have an individual responsible for managing test kits and reagent stocks.

Recommendation 2.3.10a

It is recommended that the policy of not providing results should be made clear to donors. For example, signage indicating that HIV test results will not be given to blood donors should be clearly posted in the BSF. Paid blood donation schemes should be phased out and eliminated as soon as possible.

Recommendations 2.3.10b

Scale up access to VCT and providerinitiated counselling and testing (PICT) and promote the use of these services among blood donors. Discourage the use of blood donor screening as a de facto testing service by clearly indicating to prospective donors that they will not be informed of their results. Donors who indicate that they have been exposed or who have potential ongoing exposure should be referred for a detailed assessment at a VCT service and declined as donors. Donors who are declined as regular donors should be informed that they require further health assessment and that they should refrain from donating blood as they may have an infection and that one of the possible infections may be HIV.

Infection control and occupational exposure

Recommendation 2.4a

As with other issuances from the Department of Health, guidelines and policies on preand post-exposure management should be disseminated to health-care facilities and a system should be in place so that this is coupled with training/orientation of protocols and supportive supervision from clinic managers to local and regional health departments. It is further recommended that a simple flow chart that summarizes the steps in pre- and post-exposure management be required to be displayed on walls in exposure-prone health service areas, such as outpatient departments, emergency wards, laboratories, surgery facilities and service areas for the HIV/AIDS core team (HACT). The wall chart should also have after-hours contact numbers of staff designated to support exposed workers.

Recommendation 2.4b

A written policy that includes prompt reporting of incidents and referrals should be in place within the health-care facility and be visible and readily accessible by health-care workers. For compliance, this requirement should be included in the general infection control checklist of the health facility assessment or in a quality assurance checklist from a regulatory body from the Department of Health.

Recommendation 2.4c

Strengthen collaboration and establish a robust referral system from different health facilities to HACT of nearest treatment hub or satellite hubs so there can be timely access to PEP for exposed health-care workers. To prevent delay, somebody should be delegated by HACT to be available during regular non-working hours to attend to and provide PEP to exposed health-care workers.

Recommendation 2.4d

The Department of Health and the health departments of LGUs may need to revisit the structural set-up in these facilities and support facility enhancement and compliance to environmental control as part of infection control measures. It is important and beneficial for health-care personnel to have a safe working space as they attend to the various medical needs of patients in one facility. Mechanisms should also be in place for their health care, such as regular medical and laboratory evaluation and vaccinations.

Recommendation 2.4e

The Department of Health may consider revising its policy on PEM for health-care personnel to expand coverage to victims of sexual assault. Any policy changes should be disseminated and formal links should be established between units tasked with protecting women and children and the HIV treatment hub so access to PEP for victims of sexual assault, especially women and children, is facilitated in timely fashion.

Referral and access to care, treatment and support services

Recommendation 2.5a

The laboratory services system for confirmatory HIV tests should be reformed. Services urgently need to be decentralized in consideration of the demographic coverage of screening test sites. The long turnaround time of confirmatory HIV testing can be a big barrier for key populations being referred and access to treatment, care and support (TCS) services.

Recommendation 2.5b

A formal referral system from HIV testing sites to treatment hubs, including a client tracking system, urgently needs to be established. The system should allow easy linkage of client information across sites and locations so the system can assess whether people are receiving services at the most proximal site suggested, or anywhere else in the TCS system. NEC should provide the methods and tools to ensure close monitoring of the TCS continuum and provide early warnings when the tracking system fails to perform.

Recommendation 2.5c

Clinical and immunological assessments (e.g. CD4 test) needed to determine ART eligibility should be conducted immediately after clients are referred to TCS services in order to provide early treatment, if indicated. Blood drawn for the confirmatory HIV test could be used for baseline clinical assessments. It could cut the time needed to begin treatment.

Pre-antiretroviral therapy

Recommendation 2.6.1a

Through post-test and/or pre-treatment counselling, health-care workers should provide information and education to PLHIV in pre-ART on the importance of clinical monitoring.

Recommendation 2.6.1b

A formal follow-up system for pre-ART clients should be established urgently. Otherwise, clients will miss timely ART initiation, which could lead to poor outcomes and allow further transmission of HIV in the community. Cohort analysis may be a useful way to monitor clients' retention rate and the rate of loss to follow-up

Recommendation 2.6.2a

NASPCP should produce national guidelines on treatment for opportunistic infections and response monitoring, including guidance on dealing with immune reconstitution inflammatory syndrome (IRIS). Currently available guidelines do not provide details of diagnosis and treatment in varying clinical scenarios. At present, a technical working group is preparing guidelines on the treatment of opportunistic infections in PLHIV. These guidelines, intended for physicians who are non-specialists, must be released soonest to aid the timely and accurate diagnosis and treatment of opportunistic infections in PLHIV.

Recommendation 2.6.2b

Reinforced linkages between HIV and TB, which is the most frequent

coinfection among PLHIV, will enhance an efficient continuum of services. The HIV testing rate among TB patients has been increasing dramatically through an effort by the Department of Health to promote the implementation of a new policy of universal testing for TB patients. TB screening among PLHIV is also routinely conducted at HIV clinics as a part of clinical assessment. However, the treatment of TB and HIV has been provided in each clinic separately, despite the strong demand by coinfected clients for a one-stop service. It is recommended that arrangements be made within the health system to respond to this demand.

Recommendation 2.6.2c

A mechanism to make drugs for the treatment of opportunistic infections accessible, at least in the country's treatment hubs, must be forged. This is especially important for drugs that are either quite costly or are not usually part of hospital formularies.

Recommendation 2.6.2d

Laboratory capacity of treatment hubs to diagnose opportunistic infections must be strengthened. Sputum-staining methods for PCP diagnosis, serology for toxoplasma infection, and stool-concentration and staining methods for diagnosing protozoan intestinal infections are examples of laboratory exams that must be more widely available to aid in diagnosis of opportunistic infections.

Recommendation 2.6.2e

Reporting and recording of diagnosis and treatment for opportunistic infections should be more consistent. Developing a systematic method of organizing data for opportunistic infections from the country's treatment hubs will help characterize the quality of the treatment of opportunistic infections received by PLHIV. Many PLHIV are treated for opportunistic infections in public and private hospitals outside of treatment hubs. Therefore, devising a method by which data on the treatment of opportunistic infections from these hospitals can be collected will also help track progress in the diagnosis and treatment of opportunistic infections. Integrating reports from TB-DOTS centres and treatment hubs will also yield a more accurate picture of TB in PLHIV.

Norms, standards and practices of antiretroviral therapy

Recommendation 2.7.1a

There is a need to develop transition plans to ensure the sustainability of the cadre of treatment enablers and site implementation officers whose positions currently are either funded or are filled by volunteers.

Recommendation 2.7.1b

All counsellors, site implementation officers and nongovernmental organization treatment enablers should undergo standardized adherence support and care counsellor training that incorporates skills rehearsal focusing on how to assess and facilitate ongoing HIV transmission risk reduction, as well as appropriate partner disclosure counselling. It is recommended that simple treatment literacy adherence tools be developed and the use of these be rehearsed in training. Tools that have been developed need to be more broadly disseminated. Counsellors who have undertaken HIV counsellor training without the inclusion of partner disclosure strategies should be offered a one-day, skillfocused course on the topic. The Department of Health is advised to finalize the current review and consider implementation of current WHO guidance on the management of sero-discordant partners.

Recommendation 2.7.2a

To maximize the impact of ART services, a formal follow-up system for ART clients should be established urgently at treatment hubs. Strengthening communication between treatment hubs and CBOs and, through them, to patients would be a valid approach.

Recommendation 2.7.2b

Decentralization of ART services is urgently needed, in particular if the criteria for ART enrolment change and suddenly more PLHIV become eligible for treatment. The large gap between the numbers of HIV testing sites and treatment hubs must be narrowed promptly. Scaling up satellite treatment hubs could be one solution. However, the feasibility, cost-effectiveness and capacity-building efforts needed to decentralize quality ART services should be examined prior to any decision on a structural change.

Recommendation 2.7.2c

As a means to monitor and evaluate the continuum of ART services, cohort analysis should be introduced in each treatment hub. The results should be utilized to improve services. A national database should also be built by aggregating all data from treatment hubs. Along with the cohort analysis, operational research on the reasons for loss to follow-up and death could contribute to improve the quality of services.

Recommendations 2.7.3

The existing guidance document on palliative care should be reproduced, shared with all treatment hubs, nongovernmental organization partners and SHCs. All personnel of treatment hubs and nongovernmental organization partners engaged in the continuum of care should receive training in palliative care, including hospital directors and administrators who should be made aware of palliative care needs and best practices.

Prevention of mother-tochild transmission of HIV and paediatric HIV

Recommendation 2.8.1a

If the Department of Health is to consider implementing opt-out testing in antenatal care facilities, close collaboration between NASPCP and the MCH programme at national, regional and local offices should be strengthened in order for guidelines to be disseminated, implemented and closely supervised. Adequate coverage with proper recording and reporting should strive to produce pertinent data.

Recommendation 2.8.1b

Technical assistance for capacity-building in health centres (lying-in centres) should also be provided as additional services are expected to be implemented. The implementation of PMTCT for HIV, especially PICT (opt-out testing), as part of antenatal care services entails the need for structural, logistical and human resource-related support from the national level and for LGUs.

Recommendation 2.8.1c

Given the structural make-up and diverse medical services provided in health centres by overburdened service providers, tools with specific targets for clients in antenatal care are not only helpful but can also provide a standardized messaging and improved quality of services.

Recommendation 2.8.1d

As pregnant women living with HIV are being provided antenatal care services in treatment hubs, the Department of Health may consider the integration of some services in these facilities (e.g. the one-stopshop concept, with reproductive health and related commodities). This is convenient for clients and also allows them to receive a more comprehensive package of care.

Recommendation 2.8.1e

To ensure continuity of care from prevention to treatment and care among pregnant women living with HIV, all levels of care in priority areas need to be strengthened, as well as targeted and comprehensive PMTCT services (following the Department of Health guidelines), including the formation of a functional referral system and an effective tracking mechanism. Establishing partnerships with nongovernmental organizations for TCS for close monitoring, tracking and provision of peer support could be helpful in reducing loss to followup, as this issue is problematic in some sites.

Recommendation 2.8.2a

With the July 2013 release of the WHO Consolidated Guideline on the Use of Antiretroviral Drugs for Treating and Preventing HIV Infection, which also covers treatment for paediatric patients, the Department of Health may consider revisiting its guideline on the management of paediatric HIV and AIDS developed three years ago.

Recommendation 2.8.2b

It is recommended that the Department of Health continue to provide technical assistance to treatment hubs to ensure their readiness to handle cases of paediatric HIV. This is necessary for several reasons, including the rapid turnover of trained health-care workers and because not all treatment hubs are capable of proving holistic treatment, care and support services to children living with HIV. Given the HIV cases among pregnant women are increasingly reported, institutionalizing or contracting the conduct of training by an organization with solid experience in handling paediatric HIV should be considered.

Recommendation 2.8.2c

While best efforts should be made to procure and ensure availability of paediatric formulations where needed, treatment hubs should consider investing in equipment to powder adult ARV tablets for the paediatric second-line regimen, in case paediatric formulation is not available. The service for powdering ARVs must be provided with minimal charge, or in a socialized scheme - not just for HIV-positive children on ARV but also for other children with various conditions. The service is needed at treatment hubs where ARV prescriptions are filled. The Department of Health may consider supporting this need, prioritizing facilities where cases of paediatric HIV are being managed.

Recommendation 2.8.2d

An efficient and capable social welfare system may need to be in place to address issues of orphaned, abandoned and even abused children affected and infected by HIV. Close collaboration, partnership and functional referrals and linkages between treatment hubs and social services from government or private organizations may need to be established and should be considered as one of the roles of HACT. This would serve as preparation to deal with these cases.

Clinical and biological monitoring and viral resistance

Recommendation 2.9.2a

Additional investment in laboratory services should be considered. Decentralization of laboratory services could be one option to cover additional laboratory examinations, decreasing missed opportunities of PLHIV to receive proper monitoring. Ideally, each treatment hub should provide laboratory services together with treatment and care. Further investments in human resources, commodities and machines will be essential to strengthen the capacity of existing laboratories.

Recommendation 2.9.2b

A great number of laboratory services need to be covered by PhilHealth and/ or other sources to ensure appropriate monitoring of treatment. Out-of-pocket expenses should not become a barrier to monitoring. Otherwise, it might create increased financial needs for treatment of ARV toxicity and drug-resistant HIV.

Recommendation 2.9.2c

A surveillance system of HIV drug resistance (HIVDR) should be established immediately. Monitoring early-warning indicators (EWIs) of HIVDR can alert ART programmes to situations that favour the emergence of HIVDR and provide an opportunity for corrective action to be taken. It is recommended that all clinics providing ART monitor EWIs annually as a component of routine programme monitoring and evaluation. Individual indicators should not be aggregated beyond the clinic; however, national results should include the proportion of clinics able to achieve each target. Annual viral load monitoring is essential for this monitoring, therefore the scaling up of viral load examinations needs to be considered.

Recommendation 2.9.2d

A surveillance system to monitor HIVDR should be established along with a recording and reporting system of ART services in each treatment hub, feeding into a national database. HIVDR should be integrated or linked to treament monitoring. This would help at the national level in projecting demand for second- and third-line ARVs.

Recommendations 2.9.3

NASPCP must be prepared to estimate and respond to future procurement requirements. Additional workers should be hired and trained to assist in procurement, distribution and monitoring, both within NASPCP and within the Department of Health's procurement service. The Department of Health procurement staff must be part of yearly programme implementation reviews.

Overcoming contextual structural and systemic barriers

Recommendation 2.10.1a

It is of utmost importance that the formulation of the new law amending or replacing the Philippine AIDS Prevention and Control Act of 1998 takes into account the advancement of knowledge about effective health facility- and communitybased responses to HIV, which can be highly effective if accompanied by appropriate legal and social measures. These include encouraging active participation of key populations in prevention, care and treatment programmes intended for their benefit. The formulation of the law should receive input from people representing these communities. Its potential impacts both desirable and undesirable - on access to services by key populations should be carefully studied before the law is enacted. Once passed, the law should be widely disseminated, along with quality and targeted documentation on how to interpret and apply the law in different settings, in particular for LGU authorities, the judiciary, law enforcement and health systems, as well as among key populations and their service providers.

Recommendation 2.10.1b

Operational research on the needle-andsyringe programme should be expedited to inform the scale-up of the programme and to enable an amendment of the Dangerous Drugs Act. In addition to revising the local AIDs ordinance, it is important to undertake structured and well-planned advocacy campaigns at the local level, building on evidence, demands from affected communities, and lessons learnt from other cities and municipalities and from other countries. National guidelines should be widely disseminated and updated as new evidence is available. NASPCP should consider updating its website as a means to widely disseminate guidelines, the latest epidemiologic data and advocacy tools.

Recommendation 2.10.2

Collaboration between PNAC and NASPCP should continue to be articulated and strengthened around the next AIDS Medium-Term Plan (AMTP) and should serve as a strategic reference and accountability framework for both parties. The Department of Health will require a more detailed strategic plan than AMTP6 can accommodate in view of the vast agenda it has to develop in order to further expand its outreach, fulfil adequately its diverse roles, and strengthen its normative, implementing and monitoring functions.

Recommendation 2.10.3a

The normative role of the national level should be strengthened through interaction with the regional and local levels, empowered by national directives and greater financial means and human resources. The production, updating, dissemination, and monitoring and evaluation of guidelines and SOPs should be supported by a highly experienced technical working group. Safety nets and monitoring mechanisms should be in place to maximize positive effects and minimize negative effects of decentralization within the health sector.

Recommendation 2.10.3b

To reinforce the alignment of local actions on HIV with national norms and standards, and as part of the capacity-building and standardization of services across the national health system, job descriptions and minimum eligibility criteria should be developed for the hiring and deployment of staff (e.g. SHC personnel, treatment providers at hubs and satellite hubs, peer educators, and counsellors). Minimum staffing patterns for SHCs should be reviewed and revised to reflect current service needs.

Recommendation 2.10.3c

A common minimum package of interventions at the LGU level, including minimum requirements (staffing and resources, roles and responsibilities, and accountability mechanisms) should be established as a national norm, advocated by PNAC and promoted on the regional and LGU levels.

Recommendation 2.10.3d

Given the serious implications for HIV and for health in general of a dysfunctional decentralization of health services, a bold effort should be made by the Department of Health to seek and analyse evidence regarding the efficiency of the decentralized health system and to consider mechanisms to re-centralize some of the peripheral functions to the national level, ensuring appropriate resources to scale up prevention, HIV testing and counselling and ART services.

Recommendation 2.10.4a

Personnel at SHCs must be commended for and supported in the performance of their work through better recognition, the improvement of their working environment, and the creation of incentives and the enhancement of their skills.

Recommendation 2.10.4b

The role, outcome and impact of regular visits by sex workers to SHCs need a thorough assessment to determine if the clinics do fulfil their expected role or whether a different approach to STIs and HIV would result in improved diagnostic and treatment capacity and yield more meaningful data on the vulnerability and risks to which clients are exposed. This implies shifting the mindset of SHC personnel and LGU leaders from the current emphasis on regulatory function performed by SHCs to the provision of a wider array of services to a diversified clientele, including MSM and transgender people.

Recommendation 2.10.4c

Increase the effectiveness and efficiency in clinics by shifting from weekly and bimonthly check-ups of registered sex workers to a monthly check-up while, at the same time, improving the array and quality of services being provided.

Recommendation 2.10.4d

The programme management capacity of SHCs should be strengthened by a more efficient use of collected data to determine epidemiological trends, coverage and uptake in each of the key populations they serve.

Recommendation 2.10.4e

The income generated by SHCs from user fees should be utilized to improve services, the physical infrastructure of the facilities, logistical support and capacity-building, as well as to increase staff (laboratory technicians, clinical nurses, dedicated counsellors and peer educators).

Recommendation 2.10.5

In order to ensure that high-quality HIV/ STI interventions are brought to scale and standardized, human resources must be expanded and health-care workers must be offered standardized training packages dictated by their roles. Intervention coverage, service uptake, sustainability and quality are key parameters that should be monitored and progressively improved by means of systematic capacitybuilding, incentive schemes and supportive supervision.

Recommendation 2.10.6

Continuing education of public and private medical practitioners engaged in HIV/ AIDS care and treatment, along with an accreditation scheme operated by medical associations, should ensure that treatment practices, in particular ART, are in line with the Department of Health norms, standards and guidelines.

Health financing

Recommendation 2.11

There is a need to develop a dynamic HIV financing strategy that relies on key improvements in: (1) resource tracking including a more comprehensive view on LGU HIV spending and OOP spending for HIV; (2) linking financial planning with the recent shifts in public funding and scenarios regarding international funding – this includes for example factoring in the developments of the PhilHealth package extension; (3) advocacy towards LGUs in increasing their contributions to HIV funding - including the national roll-out of the local HIV investment plans; and (4) efficiency – especially through a more comprehensive and strategic contractual approach to further increase the fluidity and reach of funding. This approach could also be extended to the private sector providers in line with what has been achieved through accreditation of private hospitals for ARV distribution and followup. But any expansion of contracting with private providers should be accomplished in parallel to a strategy of capacity-building and monitoring of private practitioners (as discussed in Recommendation 2.14).

Recommendation 2.12a

The review team recommends that the 2012 Research Agenda published by PNAC be funded and gradually implemented and that research findings be made publicly available and used by policy- and decisionmakers, managers, and local actors to orient and update the national response to HIV/ AIDS on the basis of the new information generated.

Recommendation 2.12b

Greater emphasis should be placed on the development of new knowledge, with a firm commitment to share results in a timely fashion and actively consider their impact on programme direction. Increase the priority given to publishing research results. Make available to universities and research institutes datasets such as IHBSS and AIDS registries for secondary analysis to answer various research questions. Consideration should be given to developing local capacity to engage with local data for the improvement of services. Agreement on the highest-priority research questions should be achieved, with a secure source of seed funding available to allow the development of proposals for research funding. Recognition of the importance of new knowledge for improving the quality and effectiveness of prevention, care, treatment and support is sorely needed.

- Box 1. Scope and expected outcome of the review, Department of Health, Philippines
- Box 2. Normative guidelines of the Department of Health, Philippines
- Figure 1. National cascade of HIV care and treatment, and data gaps, Philippines
- **Figure 2.** Percentage of most-at-risk populations reached with HIV prevention interventions (2007–2011)
- Figure 3. HIV point prevalence in PWID in four cities, 2005–2011
- Figure 4. HIV prevalence trends among MSM, by location, 2009–2013
- **Figure 5.** HIV prevalence among MSM, registered FSWs and freelance FSWs in 10 sentinel sites, 2005–2013
- Figure 6. HIV test kits used by laboratories in the SACCL 2012 EQAS
- Figure 7. Continuum of care and treatment
- Figure 8. ART targets, accomplishments and funding sources, 2011–2015
- **Figure 9.** Management structure, staffing, and roles and functions at different levels of the health sector
- Table 1.
 HIV surveillance components, Philippines
- **Table 2.**Prevalence (%) of syphilis by key populations, 2009 and 2011
- Table 3.
 Type of aberrant results that were reported in the 2012 SACCL EQAS
- **Table 4.**Public health funding at the central level

References

- 1. Protocol for the Philippine Integrated HIV Behavioral and Serologic Surveillance (IHBSS). Manila: National Epidemiology Center; 2011.
- 2. Baral SD, Poteat T, Strömdahl S, Wirtz AL, Guadamuz TE, Beyrer C. Worldwide burden of HIV in transgender women: a systematic review and meta-analysis. *Lancet Infect Dis.* 2013;13(3):214–22. doi: 10.1016/S1473-3099(12)70315–8.
- 3. 2011 Philippine estimates of the most at-risk populations and people living with HIV. Manila: Philippine National AIDS Council; 2011 (http://www.doh.gov.ph/sites/default/files/2011%20PLHIV%20and%20MARP%20Estimates.pdf, accessed 9 June 2014).
- Joint United Nations Programme on HIV/AIDS, WHO Working Group on Global HIV/AIDS and STI Surveillance. Guidelines for second generation HIV surveillance: an update: know your epidemic. Geneva: World Health Organization; 2013 (http://www.aidsdatahub.org/sites/default/files/publication/2013_SGS_ guideline.pdf, accessed 11 December 2013).
- 5. Monitoring and Evaluation Reference Group. Strategic guidance for evaluating HIV prevention programmes. Geneva: Joint United Nations Programme on HIV/AIDS; 2010 (http://www.unaids.org/en/media/unaids/contentassets/documents/document/2010/12_7_MERG_Guidance_Evaluating%20HIV_PreventionProgrammes.pdf, accessed 9 June 2014).
- 6. Kowalska JD, Mocroft A, Ledergerber B, Florence E, Ristola M, Begovac J, et al. A standardized algorithm for determining the underlying cause of death in HIV infection as AIDS or non-AIDS related: results from the EuroSIDA study. *HIV Clini Trials*. 2011; 12(2):109–17. doi: 10.1310/hct1202-109.
- Philippine National AIDS Report 1999–2008. Manila: Philippines National AIDS Council; 2010 (http://www.pnac.org.ph/index.php?page=philippine-nationalaids-council-report-1999---2008, accessed 9 June 2014).
- 8. 2009 Integrated HIV Behavioral and Serologic Surveillance (IHBSS): factsheets. Manila: National Epidemiology Center; 2009 (http://www.doh.gov.ph/sites/ default/files/2009%20IHBSS%20Factsheets.pdf, accessed 9 June 2014).
- 9. 2011 Integrated HIV Behavioral and Serologic Surveillance (IHBSS): information sheet. Manila: National Epidemiology Center; 2013 (http://www.doh.gov.ph/sites/default/files/2011IHBSSComprehensiveReport.pdf, accessed 9 June 2014)
- 10. 2013 Integrated HIV Behavioral and Serologic Surveillance (IHBSS): Males who have sex with males (MSM) and male injecting drug users (IDU). Manila: National Epidemiology Center; 2014 (http://www.doh.gov.ph/sites/default/ files/2013IHBSSBrieferMSMandMaleIDU.pdfhttp://www.doh.gov.ph/diseasesurveillance.html, accessed 9 June 2014)
- Carael M, Manaloto C, Singh U. Evaluation report: Global Fund Round 6 HIV grant Philippines 2007–2012. Manila: Joint United Nations Programme on HIV/ AIDS; 2013 (http://www.unaids.org.ph/apanel/uploads/5.1_2013_GFATM_R6_ Grant_Philippines_End_Term_Evaluation.pdf, accessed 9 June 2014)
- 12. Philippines Asia epidemic modeling report 2013. Manila: Joint United Nations Programme on HIV/AIDS; 2014.
- 13. World Health Organization, United Nations Office on Drugs and Crime, Joint United Nations Programme on HIV/AIDS. WHO, UNODC, UNAIDS Technical

guide for countries to set targets for universal access to HIV prevention, treatment and care for injecting drug users. 2012 rev. Geneva: World Health Organization; 2012 (http://apps.who.int/iris/handle/10665/77969, accessed 9 June 2014).

- 14. Disease surveillance: HIV/STI. Manila: National Epidemiology Center; 2014 (http://202.90.151.151/disease-surveillance.html, accessed 9 June 2014)
- 15. World Health Organization, United Nations Development Programme. The time has come: enhancing HIV, STI and other sexual health services for MSM and transgender people in Asia and the Pacific: training package for health providers to reduce stigma in health care settings. Bangkok: United Nations Development Programme Asia-Pacific Regional Centre; 2013.
- 16. Prevention and treatment of HIV and other sexually transmitted infections among men who have sex with men and transgender populations: recommendations for a public health approach 2011. Geneva: World Health Organization; 2011 (http://apps.who.int/iris/handle/10665/44619, accessed 31 October 2014).
- 17. Urada LA, Strathdee SA, Morisky DE, Schilling RF, Simbulan NP, Estacio LR Jr, et al. Sex work and its associations with alcohol and methamphetamine use among female bar and spa workers in the Philippines. *Asia Pac J Public Health*. 2014;26(2):138–46. doi: 10.1177/1010539512471969.
- 18. Steen R, Zhao P, Wi TE, Punchihewa N, Abeyewickreme I, Lo YR. Halting and reversing HIV epidemics in Asia by interrupting transmission in sex work: experience and outcomes from ten countries. *Expert Rev Anti Infect Ther.* 2013;11(10):999–1015. doi: 10.1586/14787210.2013.824717.
- 19. Prevention and treatment of HIV and other sexually transmitted infections for sex workers in low and middle income countries: recommendations for a public health approach. Geneva: World Health Organization; 2013 (http://apps.who.int/iris/handle/10665/44619, accessed 9 June 2014 2014).
- 20. HIV, sexually transmitted infections and other health needs among transgender people in Asia and the Pacific: joint regional technical brief. Manila: WHO Regional Office for the Western Pacific; 2013 (http://iris.wpro.who.int/handle/10665.1/6773, accessed 31 October 2014).
- 21. Neilsen G. Epidemiology and clinical management of sexually transmitted infections among men who have sex with men. Research Triangle Park, North Carolina: Family Health International; 2009.
- 22. Saison F, Mahilum-Tapay L, Michel C. Prevalence of chlamydia trachomatis infection among low and high-risk Filipino women and performance of chamydia rapid tests in resource-limited settings. *J Clin Microbiol.* 2007;45(12):4011–5007.
- 23. STI consolidated report: sentinel STI etiologic surveillance system. Manila: National Epidemiologic Center; 2012.
- 24. Manual of procedures for social hygiene clinics in the Philippines. Manila: Department of Health; 2010 (http://www.doh.gov.ph/sites/default/files/ List%20of%20HIV%20Testing%20Hospitals.xls, accessed 9 June 2014)
- 25. Wi T, Ramos ER, Steen R, Esguerra TA, Roces MC, Lim-Quizon MC, et al. STI declines among sex workers and clients following outreach, one time presumptive treatment, and regular screening of sex workers in the Philippines. *Sex Transm Infect.* 2006;82(5):386–91.
- 26. Rieg G, Lewis RJ, Miller LG, Witt MD, Guerrero M, Daar ES. Asymptomatic sexually transmitted infections in HIV-infected men who have sex with men: prevalence, incidence, predictors, and screening strategies. *AIDS Patient Care and STDs*. 2008;22(12):947–54. doi: 10.1089/apc.2007.0240.

- 27. Philippines Department of Health, WHO Regional Office for the Western Pacific, United Nations Children's Fund. Health sector models to increase access to HIV counseling and testing (HCT) for males who have sex with males (MSM) in the Philippines. Manila: WHO Regional Office for the Western Pacific (2012. http:// www.unaids.org.ph/apanel/uploads/2011%20Health%20Sector%20Models%20 to%20Increase%20HCT%20among%20MSM%20(October%202012).pdf, accessed 9 June 2014).
- 28. Philippines Department of Health, United Nations Children's Fund Philippines. Situation analysis and strategy for quality HIV testing and counselling within the context of the Philippine HIV epidemic. Manila: Department of Health; 2013.
- 29. Samonte GM, Palaypayon N, Segarra A, Tayag E, Nadoll G. Integrating mostat-risk adolescents into the national integrated HIV behavioural and serologic surveillance (IHBSS) in the Philippines: AIDS 2010 - XVIII International AIDS Conference: Abstract no. THPE0319. Geneva: International AIDS Society; 2010 (http://www.iasociety.org/Abstracts/A200740202.aspx, accessed 9 June 2014).
- 30. Best S. Report of review and update of HIV testing algorithms for the Philippines, National Reference Laboratory, Australia. Manila: WHO Regional Office for the Western Pacific; 2011.
- 31. WHO Regional Office for the Western Pacific, Joint United Nations Programme on HIV/AIDS. Joint statement on scaling up voluntary community-based HIV testing and counseling for key populations in Asia and the Pacific. Manila: WHO Regional Office for the Western Pacific; 2013 (http://www.wpro.who.int/entity/ hiv/Joint_Statement_on_scalling_up_community_based_testing_in_AP.pdf, accessed 9 June 2014).
- 32. Health Action Information Network, United Nations Development Programme. Usapang bakla: assessing the risk and vulnerabilities of Filipino men who have sex with men (MSM) and transgender people in three cities. Quezon City: Health Action Information Network; 2013 (http://www.ph.undp.org/content/dam/ philippines/docs/HIV/Usapang%20Bakla-%20Assessing%20the%20Risks%20 and%20Vulnerabilites%20of%20Filipino%20MSM%20and%20TG_2013.pdf, accessed 9 June 2014).
- 33. Philippines National AIDS/STI Prevention and Control Programme. Post exposure management (PEM) for HIV, Hepatitis B and C in healthcare settings. Manila: Department of Health; 2009.
- 34. National guidelines in the collaborative approach of TB and HIV in HIV prevention and control. Manila: Department of Health; 2008.
- 35. Philippines National AIDS and STI prevention and control programme. HIV/ AIDS core team (HACT) guidelines. Manila: Department of Health; 2010.
- 36. Guidelines on antiretroviral therapy among adults and adolescents with human immunodeficiency virus infection. Manila: Department of Health; 2009.
- 37. World Health Organization global strategy for the surveillance and monitoring of HIV drug resistance: an update. Geneva: World Health Organization; 2012 (http:// apps.who.int/iris/bitstream/10665/77349/1/9789241504768_eng.pdf, accessed 9 June 2014).
- 38. Palliative care manual for people living with HIV. Manila: Department of Health; 2009.
- 39. 2009–2016 policies and guidelines on the prevention of mother to child transmission (PMTCT) of HIV. Manila: Department of Health; 2009.

- 40. Philippines Department of Health National AIDS and STI Prevention and Control Programme. Philippines health sector HIV and AIDS strategy (2013–2016). Manila: Department of Health; 2014.
- 41. Guidelines on the management of sexually-transmitted infections (STI) in pregnancy. Manila: Department of Health; 2010 (http://www.unicef.org/philippines/STI_in_pregnancy.pdf, accessed 9 June 2014.
- 42. Guideline on the integrated management of paediatric HIV and AIDS. Manila: Department of Health; 2010.
- 43. Rezayatmand R, Pavlova M, Groot W. The impact of out-of-pocket payments on prevention and health-related lifestyle: a systematic literature review. *Eur J Public Health.* 2013;23(1):74–9. doi: 10.1093/eurpub/cks034.
- 44. Philippines national health accounts [website]. Makati City: National Statistical Coordination Board; 2013 (http://www.nscb.gov.ph/pressreleases/2013/PR-20130606-SS1-01_PNHA.asp, accessed 12 November 2013).
- 45. Urada LA, Morisky DE, Pimentel-Simbulan N, Silverman JG, Strathdee SA. Condom negotiations among female sex workers in the Philippines: Environmental influences. PLoS ONE 2012;7(3): e33282. doi:10.1371/journal.pone.0033282
- 46. Srithamrongswat S, Aekplakorn W, Jongudomsuk, P, Thammatach-aree J, Patcharanarumol, Swasdiworn W, et al. Funding health promotion and prevention - the Thai experience: World Health Report 2010 background paper, No. 45. Geneva: World Health Organization; 2010.
- 47. Philippine HIV and AIDS research and evaluation agenda, Fifth AIDS Medium-Term Plan, 2011–2016. Manila: Philippine National AIDS Council; 2012. (http:// www.pnac.org.ph/index.php?page=2011---2016-philippine-hiv-aids-researchand-evaluation-agenda, accessed 9 June 2014).

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ISBN-13

978 92 9061 706 8