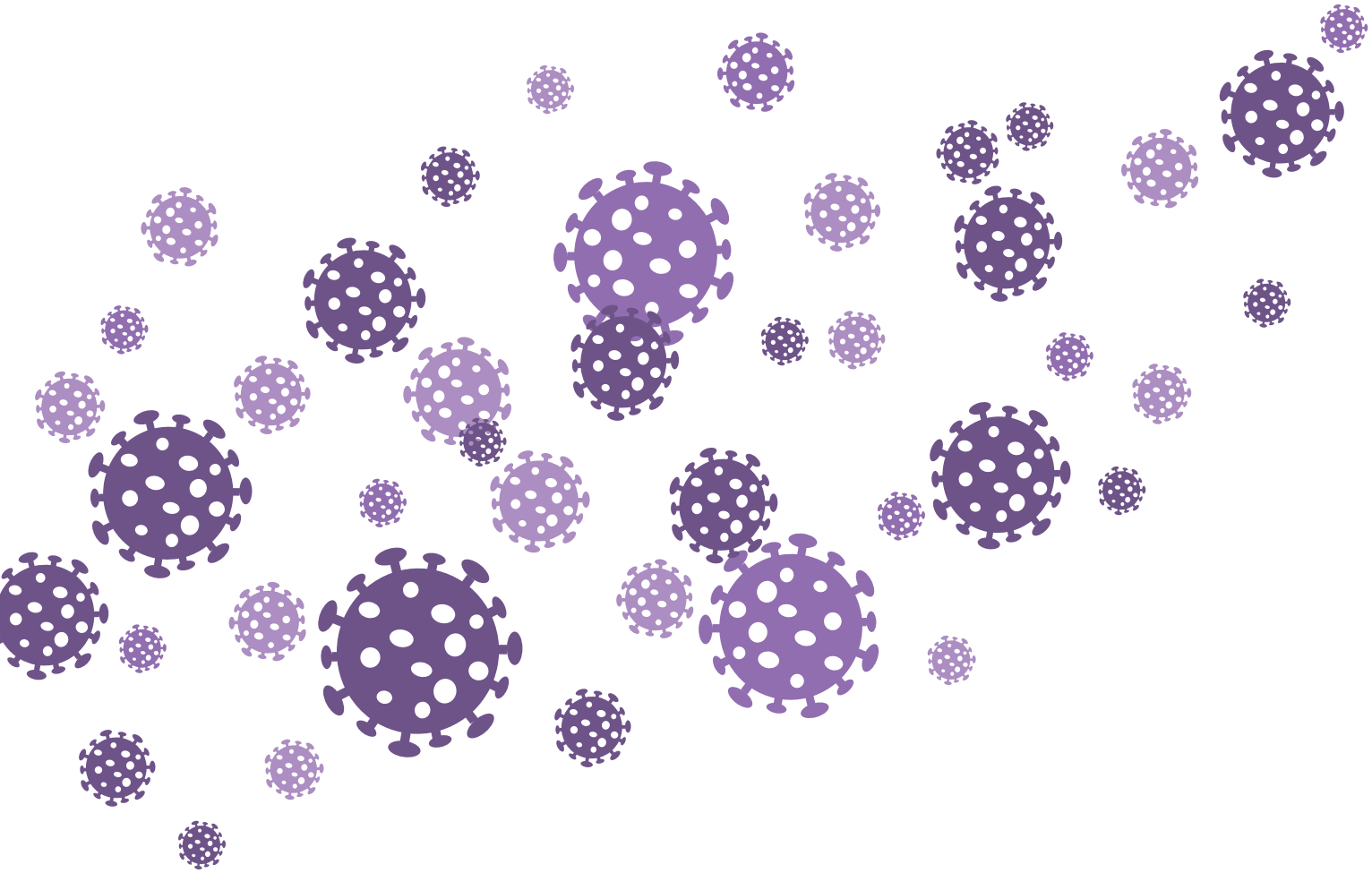
EXTERNAL REVIEW OF THE NATIONAL HEALTH SECTOR RESPONSE TO HIV 2014

The Lao People's Democratic Republic



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Acronyms

ADB	Asian Development Bank
AIDS	acquired immunodeficiency syndrome
ANC	antenatal care
ART	antiretroviral therapy
ARV	antiretroviral (drug)
CD4+	T-lymphocyte cell bearing CD4 receptor
CDC	Centers for Disease Control and Prevention
CHAI	Clinton Health Access Initiative
CHAS	Centre for HIV / AIDS and STI
DCCA	District Committee for the Control of AIDS
DHIS2	District Health Information System 2
EQA	external quality assessment
FSW	female sex worker
GARPR	Global AIDS Response Progress Reporting
Gavi	Gavi, The Vaccine Alliance (formerly the Global Alliance for Vaccines and Immunization)
GHI	Global Health Initiative
Global Fund	Global Fund to Fight AIDS, Tuberculosis and Malaria
HCF	health care financing
HIS	health information system
HIV	human immunodeficiency virus
HMIS	health management information system
HRH	human resources for health
HSR	health sector reform
HSS	health systems strengthening
HTC	HIV testing and counselling
IBBS	integrated biological and behavioural surveillance
IEC	information, education and communication
IQC	internal quality control
IT	information technology
KP	key population
LaoPHA	Lao Positive Health Association
LCDC	Lao Commission for Drugs Control
MCH	maternal and child health
MCHC	Maternal and Child Health Centre
MDG	Millennium Development Goal
MNCH	maternal, neonatal and child health

MoH	Ministry of Health
M&E	monitoring and evaluation
MPSC	Medical Procurement and Supplies Centre (in MoH)
MSM	men who have sex with men
NCCA	National Committee for the Control of AIDS
NCLE	National Center of Laboratory and Epidemiology
NGO	nongovernmental organization
NTCP	National Tuberculosis Control Programmae
NTSP	National TB Strategic Plan
OI	opportunistic infection
PCCA	Provincial Committee for the Control of AIDS
PEDA	Promotion for Education and Development Association
PITC	provider-initiated testing and counselling
PLHIV	people living with HIV
PM	Prime Minister
PMTCT	prevention of mother-to-child transmission
PR	Principal Recipient (of funding from the Global Fund)
PrEP	pre-exposure prophylaxis
PSI	Population Services International
PWID	people who inject drugs
PWUD	people who use drugs
STI	sexually transmitted infection
SWOT	strengths, weaknesses, opportunities and threats
TB	tuberculosis
TG	transgender people
TWG	technical working group
UHC	universal health coverage
UIC	unique identification code
UN	United Nations
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
UNODC	United Nations Office on Drugs and Crime
USAID	United States Agency for International Development
VCT	voluntary counselling and testing
VL	viral load
WHO	World Health Organization

Executive summary

This external review of the health sector response to HIV in the Lao People's Democratic Republic was held from 28 July to 8 August 2014. The review was requested by the Ministry of Health (MoH) and supported by the World Health Organization (WHO). It was designed to build on the extensive 2012 external review of the health sector response to HIV in the Lao People's Democratic Republic, and was preceded in early July 2014 by a review of the epidemiological status, trends and impact of the HIV epidemics in the country.

In response to the request from the MoH, WHO deployed a team of five external reviewers to conduct a desk review, an on-site assessment and a series of interviews with key informants. The review team visited Vientiane Capital City and province, as well as Luang Prabang, Savannakhet and Champassak provinces. Following the field visits, the review team compiled and verified data, drafted conclusions and recommendations, and presented a preliminary version of its work to stakeholders, including government officials, nongovernmental organizations (NGOs), international partners and civil society through a dissemination workshop.

The objectives of the review were as follows:

(1) to assess the efficiency, effectiveness and impact of peer education with an emphasis on key populations;

(2) to assess the coverage, timeliness, quality and equity of access to care and treatment for HIV, from HIV testing and counselling to enrolment in HIV care and treatment, and in the context of the prevention of mother-to-child transmission (PMTCT) of HIV; and

(3) to assess opportunities for health systems strengthening (HSS) under the planned national health sector reform.

Informed by the earlier review of the HIV epidemiological situation and trends, and by additional information provided by the Centre for HIV/AIDS and STI (CHAS), the review team supported the view that HIV was primarily affecting key populations in large urban areas, particularly in provinces situated along the Mekong River and Thailand. In these populations, the prevalence of HIV remained below 5%, which may be credited not only to contextual factors that sustain low epidemiological reproductive rates but also to prevention and care efforts gradually scaled up over the past decade.

The review team found that the decision made under the 2011–2015 HIV/STI Action Plan to prioritize key populations and selected geographical areas was appropriate. The Plan proposed to invest in limited ways in all provinces but to focus attention and resources primarily on Vientiane Capital City, and the provinces of Vientiane, Savannakhet, Champassak, Luang Prabang and Khammouane. Document analysis, interviews and observations led the review team to the conclusion that within these priority provinces, large urban areas should receive the utmost priority as the density of key populations in these areas was considerably higher than that in rural areas.

The review team concluded that the reach of prevention interventions varied, with fair-to-good coverage in the main cities and priority provinces. HIV testing has been expanded and standard care and treatment provided to people living with HIV (PLHIV) who were enrolled. However, two main gaps were observed in the diagnosis, care and treatment cascade – gaps in identifying PLHIV through HIV testing, and in enrolling identified PLHIV in care and treatment. Addressing these gaps in the next few years would be a priority for the country. The review team also noted that service coverage for key populations needed

to be expanded and special attention paid to the migrant population, ethnic minorities and partners of PLHIV.

The review team also found that it had become critical to incorporate the HIV response more closely within efforts being deployed by the MoH to strengthen health systems under the ongoing health sector reform programme, and sought connections between the various facets of the response to HIV and the five priority areas of the first phase of the health sector reform. These include the following:

- Human resources for health: capacity development should be coordinated and streamlined. Individual incentive schemes should be shifted to facility-based schemes, which would be linked to programme performance.

- Health financing: an internal audit should be conducted of priority health programmes with a view to creating savings and improving efficiency, reducing management costs and increasing domestic financing.

- Governance, management and coordination: a road map and implementation plan needs to be developed to restructure the governance structure of the HIV response in line with the health sector reform framework.

- Service delivery: access to HIV testing and treatment needs to be expanded and geographical barriers to these reduced as necessary. PMTCT services could be included as a part of standard maternal, neonatal and child health (MNCH) practices.

- Health information system: the entire monitoring and evaluation (M&E) action plan 2011–2015 should be fully implemented, in line with a possible revision of governance structure to be reflected in the next HIV strategic plan 2016–2020. Inclusion of an HIV/AIDS programme module may be considered under the National Health Management Information System (HMIS).

The review team formulated a set of recommendations, several of which reiterated the recommendations expressed by the external review in 2012 and by the review of the epidemiological status and trends, and impact of HIV in July 2014. These are summarized below and also appear throughout the report. Key action points for implementing these recommendations are included in Annex 4.

Recommendations

1. Key populations and vulnerable populations

A. Geographical prioritization

- Focus on key populations (KPs) including female sex workers (FSWs), men who have sex with men (MSM), and transgender people (TG). Particular efforts should be made to reach hard-to-reach KPs at higher risk of HIV.

- Retain the current priority focus of HIV prevention in provinces with the largest populations and the largest numbers of people reported as being infected with HIV: Vientiane Capital City, Vientiane Province, Luang Prabang, Savannhakhet, Champassak and Khammouane.

- Within those provinces, focus mostly on the cities, as this is where there are sexual networks large enough to enable enough regular transmission to sustain an epidemic. Ensure that existing prevention work is continued in all these places and is expanded to reach FSWs, TG and MSM in every one of these cities.

- Continue pilot projects with people who inject drugs (PWID) in the northern and eastern provinces close to provinces in Viet Nam that report a high HIV prevalence among PWID.

- Ensure further periodical rapid assessment to observe any increase in the use of drugs or injecting of drugs, particularly in all provinces close to Viet Nam and China.

B. Quality of prevention programme

- All groups involved in HIV prevention in each province should meet regularly, at least twice a year, to share lessons learnt, solve problems and learn how to expand implementation of evidence-based and effective interventions, or introduce new methods for prevention, including treatment literacy. NGOs and community representatives should be invited to be members of policy-making bodies, including provincial committees for the control of AIDS (PCCAs).

C. Reaching subgroups

- Men who have sex with both men and women (bisexual men), who do not all identify as MSM: expand outreach work into other districts of Vientiane Capital City and into Savannakhet, Champassak and Khammouane.

- Young members of KPs: programme managers should consider how to meet with young people within the existing informal networks where HIV transmission is taking place – young MSM, young TG and young FSWs – and understand and address their special needs by involving young peer leaders.

- Further development of national FSW networks supported by CHAS could contribute significantly to the sustainability of peer education activities among FSWs.

D. HIV testing

- Promote HIV testing further, while continuing to ensure there is no mandatory testing, and confidentiality is maintained about who is tested and what their results are.

E. Treatment literacy

- CHAS should immediately hold discussions with community groups on how best to introduce treatment literacy. CHAS should change the national prevention policy after these discussions, develop new national campaigns, and support community groups to include this in peer education programmes.

F. Community empowerment

- Ways to introduce these health responses should be developed through discussion between health service providers and community representatives.
- The importance of community systems strengthening should be included in the next national HIV strategy, and its links with support for psychosocial, physical, sexual and reproductive health should be outlined.

G. Introduction of mobile technologies and social media

- Develop that strategies for the gradual introduction of mobile technologies and social media, with technical assistance from nearby countries.

H. Pre-exporsure prophylaxis (PrEP) for MSM

- A PrEP advisory group should develop a strategy to introduce PrEP when the Group considers that technical, financial, educational and community support features are in place to enable this.
- Evaluate the impact of programmes to promote treatment literacy, as PrEP will work only when treatment literacy is strong and widespread.

I. Analysis of unit costs for an effective prevention package

- This should be led by CHAS in collaboration with the Department of Finance and Planning, and may require provision of technical assistance; data from the recently concluded national health accounts survey could be used in addition to other data collected by CHAS.

2. HIV testing, care and treatment including PMTCT

A. HIV testing and laboratory services

- HIV testing should be expanded with a special focus on four priority provinces for those in need, including KPs and pregnant women.
- The quality control system of HIV-related laboratory tests, including HIV rapid test, CD4 cell count and viral load (VL), should be expanded and monitored at the national level.
- The current two HIV tests strategy should be re-examined, as well as the re-testing policy for those diagnosed HIV positive.
- The volume of CD4 count and VL tests in the country should be monitored, and a future plan, including procurement and maintenance of equipment, should be developed.

B. Care and treatment

- National treatment guidelines should be revised as soon as possible based on the WHO 2013 guidelines. *(5)* A shift to eligibility criteria of CD4 cell count of <500 cells/mm^3 and use of tenofovir (TDF) + lamivudine (3TC) (or emtricitabine [FTC]) + efavirenz (EFV) as a fixed-dose combination should be considered. Streamlining of regimens would improve clinical care as well as forecasting and stock management, and contribute to cost saving. Projection, forecasting and costing of care and treatment should be a part of the new guidelines.

- A national committee (or technical working group) for care and treatment should be established to monitor and supervise care and treatment in the country as well as to develop/update national guidelines.

- The Department of Health Care should be actively involved in HIV care and treatment, and should lead care and treatment activities in terms of monitoring and supervision, and training, with support from CHAS.

- As one of the means to decentralize services, a service delivery model whereby provincial hospitals initiate treatment and district hospitals/points of care follow up on stable patients should be piloted, especially for provinces with a high volume of patients. Savannakhet Province could pilot this model for two to four district hospitals.

C. TB/HIV

- CHAS and the tuberculosis (TB) programme leaders should further increase their collaboration towards the implementation of common activities, such as the development and periodic updating of standard operating procedures, planning, supervision, management of staff turnover, and reviews from the central to the grass-roots levels.

- With specific reference to HIV testing of TB patients, the following is recommended:

    - Ensure the availability of HIV testing for TB patients at district level.

    - Scale up, after a short assessment of the pilot, isoniazid preventive therapy to include all HIV-positive patients.

    - Strengthen timely coordination between the HIV, TB and maternal and child health (MCH) programmes on the quantification, distribution and consumption of HIV tests.

    - Implement the WHO recommendation on the use of Gene-Xpert for testing HIV-positive patients with symptoms suggestive of TB.

D. PMTCT

- The country should set a target for and engage more actively in the elimination of mother-to-child transmission of HIV and syphilis, in line with the regional initiative on dual elimination.

- A national technical coordinating team for PMTCT should be established, composed of representatives of CHAS, the Maternal and Child Health Centre (MCHC) and other stakeholders. Standard operating procedures or protocols for PMTCT services should be developed.

- A shift from Option B (i.e. antiretrovirals [ARVs] for women living with HIV during pregnancy and breastfeeding) to Option B+ (i.e. lifelong antiretroviral therapy [ART] for all pregnant and breastfeeding women living with HIV) should be considered, as it would further benefit the health of women in their subsequent pregnancies as well as their serodiscordant partners, when such is the case.

- Follow-up of mother–baby pairs and early infant diagnosis should be strengthened.

- The reproductive health of women living with HIV should be enhanced by making contraceptive options available and accessible, and enhancing the reproductive choices of women living with HIV.

3. Health systems

A. Human resources for health

- Following a focused national operational HIV/AIDS plan, a training plan (and appropriate curricula) that addresses the needs and demands of the staff in the (technical and geographical) focus areas should be developed; taking into account the deployment of additional staff in the coming years, and the increased demands of prevention and care activities following the change in CD4 count criterion for initiating treatment. This also includes possible (re)training of selected staff to enable them to implement the national TB/HIV coinfection, sexual transmitted infections (STI) and PMTCT guidelines.

- An incentive scheme should be linked to overall performance of the programme, and linked to the collection of national programme data. It should be developed at the local level, which allows for facility performance assessment (e.g. people counselled, tested, treated and followed up) as the basis for the incentive. This could be applied to the other disease and public health programmes as well.

- A more comprehensive community systems strengthening programme should be developed, which includes capacity development of a more formal community health worker cadre, which could take the lead in peer education, identification of those at risk, treatment follow-up (e.g. drug compliance monitoring), as well as link up with the services provided by the local chapters of the Lao People's Democratic Republic Women and Youth Unions, and other civil society organizations.

B. Health financing

- There is a need to increase the funding landscape for the HIV/AIDS programme (and for the other Global Fund-supported diseases). At the same time, domestic funding should be increased to cover the operational expenses of the programme. This could partially be achieved through integrating functions and activities with other programmes in the MoH and

at the local level. The increase in funding could be through increased ring-fencing of central government funding from income from natural resources (hydropower and mining), and increased tax revenues. Ring-fencing could also happen at the local level in key affected provinces and districts not only through local tax revenues but also through ensuring that districts not only grant allocations additionally cover operational expenses of the HIV/AIDS (and other vertical) programme(s). This needs to be reflected in the national and local sector plans and budget forecasts.

- An internal programme expenditure audit should be conducted across all Global Health Initiatives (GHI) programmes being implemented in the Lao People's Democratic Republic to determine the potential for sharing of resources, creating internal savings and efficiencies, and reducing programme management costs.

- A separate programme should be developed to strengthen capacities and systems for procurement supply management. Apart from rolling out inventory and forecasting software, this would also mean physically training store/warehouse keepers in inventory and distribution management, especially when the supply chain gets extended to include (key) districts.

C. Governance, management and coordination

- A detailed roadmap/implementation plan should be developed to restructure the governance structure of the HIV/AIDS programme (and other GHI-supported programmes such as the Vaccine Alliance) in line with the health sector reform (HSR) framework as well as the new (to be developed) Health Sector Strategic Plan 2016–2020. This requires clear role delineation between existing structures and levels, minimization of overlap in functions, and (over time) mainstreaming of generic functions, such as procurement, training and supervision, and health information system (HIS) into the MoH.

- The HSR Secretariat should be in charge of the Global Fund/HSS grant (possibly also the GAVI/HSS grant) to ensure mainstreaming of individual programmes and capacity development for generic functions in the MoH.

D. Service delivery

- The number of so-called "points of care" should be increased at district level and below (in high-burden areas) to bring services closer to patients and to spread the work burden. As this requires substantial training of current staff and/or allocation of appropriately trained additional staff, this should be done in a phased manner. It should also be complemented by allocating the right equipment and supplies to those points of care (expanding the supply chain).

- PMTCT services should be included as a standard part of the antenatal care (ANC) service delivery package (free MCH services package); this will require an increase in voluntary HIV testing at antenatal clinics and systematic testing for syphilis, with appropriate treatment when the results are positive.

- The TB/HIV coinfection and STI guidelines should be implemented in all/selected (as indicated) health facilities as per the national guidelines; this

may require additional focused training as reported under the Human resources for health section.

- The "minimum requirements", the tool for assuring basic quality services of the district hospitals and district health offices (supported under the current Global Fund/HSS grant), should be shared with all health facilities that are providing HIV/AIDS services.

- The Health Care Department should be further strengthened/facilitated to enable the integration of GHI programmes in the mainstream of health services; this includes the dissemination of integrated support supervision guidelines, the quality of care standards, and standards of best prevention and care practices.

E. Health information system

- The M&E action plan should be fully implemented, but in line with a possible revised governance (role delineation) structure as proposed under the governance, management and coordination section.

- Development should be considered of a separate HIV/AIDS (or other disease) programme module under the national health management information system (HMIS) using the District Health Information System 2 software, which is open source and can be adapted to existing forms as presently used by the disease programmes. This could even include the development of an inventory control management module.

- Data should be collected as per the Global AIDS Response Progress Reporting (GARPR) indicator set to enable timely monitoring and evidence-based decision-making.

- A national capacity development plan should be formulated to not only collect data but also to analyse and use data for planning, implementation, monitoring and management decision-making at different levels. Again, this should be part of the national training plan as proposed under the human resources for health section.

Introduction

At the request of the Centre for HIV/AIDS and STI (CHAS) of the Ministry of Health (MoH), this external review of the national health sector response to HIV in the Lao People's Democratic Republic was conducted from 28 July to 6 August 2014, with support from the World Health Organization (WHO). This review was designed to build on the findings and recommendations of a large-scale review conducted under the auspices of WHO by a multidisciplinary team in 2012, *(1)* and the epidemiological review and impact analysis of the HIV response conducted in early July 2014. The purpose of this review was to update the earlier findings and assess selected issues in greater depth, as reflected in the objectives.

Review objectives

The MoH and WHO agreed that the review would:

1. assess the efficiency, effectiveness and impact of peer education with an emphasis on key populations;

2. assess the coverage, timeliness, quality and equity of access to care and treatment of HIV, from HIV testing and counselling to enrolment in HIV care and treatment, and in the context of prevention of mother-to-child transmission of HIV (PMTCT); and

3. assess the opportunities for health systems strengthening (HSS) under the planned national health sector reform.

The rationale for selecting these topics was grounded in the commitment of the MoH to orient or re-orient the health sector response to HIV in ways that would ensure the highest impact and return on investment. The chosen topics were also stated as approaches (a) to enhancing prevention, care and treatment along the lines of the 2011–2015 National Strategy on HIV/AIDS; *(2)* (b) to contributing to the formulation of the new strategic plan 2016–2020; (c) to remaining consistent with the steps being taken towards rolling out an ambitious health sector reform; and (d) to securing the needed domestic and external funding. *(3)*

Review process and method

The main characteristics of the present external review were as follows:

- The review was conducted by a team of five external reviewers who were sufficiently distant from programme implementation in the Lao People's Democratic Republic to prevent conflicts of interest. Each of the five team members acted in their personal capacity, not as representatives of partner agencies or institutions.

- The team brought together the knowledge, experience and skills needed to assess the topics selected for review, including epidemiology, public health, social sciences, HIV prevention and clinical management, economics and system analysis.

- The work of the team was facilitated by locally based international and national programme officers of WHO engaged in HIV and TB work in the Lao People's Democratic Republic. Their role was to bring to the team's attention to specific features of the health sector response to HIV, and of the geopolitical and social context in which it operates in the Lao People's Democratic Republic. In addition, they facilitated communication and interpretation of documents, many of which were in the Lao language.

- Further, the team received support from staff members of CHAS; this ensured easy and timely access to sources of information by the review team. The role of the Monitoring and Evaluation Unit of CHAS was particularly important.

- The review process consisted of examining a large number of documents and reports, conducting interviews with key informants, and getting acquainted with the structures, services, modes of operation and information systems underpinning programme policies, strategies and activities at the national, provincial and district levels, as well as within selected communities. The review team observed activities at each of these levels in Vientiane capital and province, and in three other provinces: Luang Prabang, Champassak and Savannakhet. (See Annex 1: Review focus and schedule, and Annex 2: Persons met by members of the external review team and members of the WHO support team).

- The information collection phase of the review lasted five days, followed by a three-day period set aside for data verification, compilation, analysis and written presentation. It was intended that the review would span a short period and be focused on selected issues to impose the minimum additional burden on national and peripheral structures and staff, whose time and resources were to remain dedicated to the health sector response to HIV.

- Finally, key findings were discussed with the WHO Representative to the Lao People's Democratic Republic and the leadership of CHAS, and eventually shared in a feedback session attended by national and international stakeholders.

- To ensure that it remains focused, concise and action-oriented, this report deliberately omits the reiteration of descriptive information that can be found in existing documents. The documents have been referenced where relevant.

- The findings, conclusions and recommendations presented in this report are solely the responsibility of the external review team members who invite readers to bring to their attention any error or misunderstanding that might have found its way into this document.

Preceding this external review by a few weeks was a review of the status, trends and impact of the HIV epidemics in the country. *(4)* The findings, conclusions and recommendations of the report arising from this earlier review were studied and incorporated in a summary form into this report, and fully endorsed by the present external review team. Annotated excerpts from the earlier report appear in Annex 5.

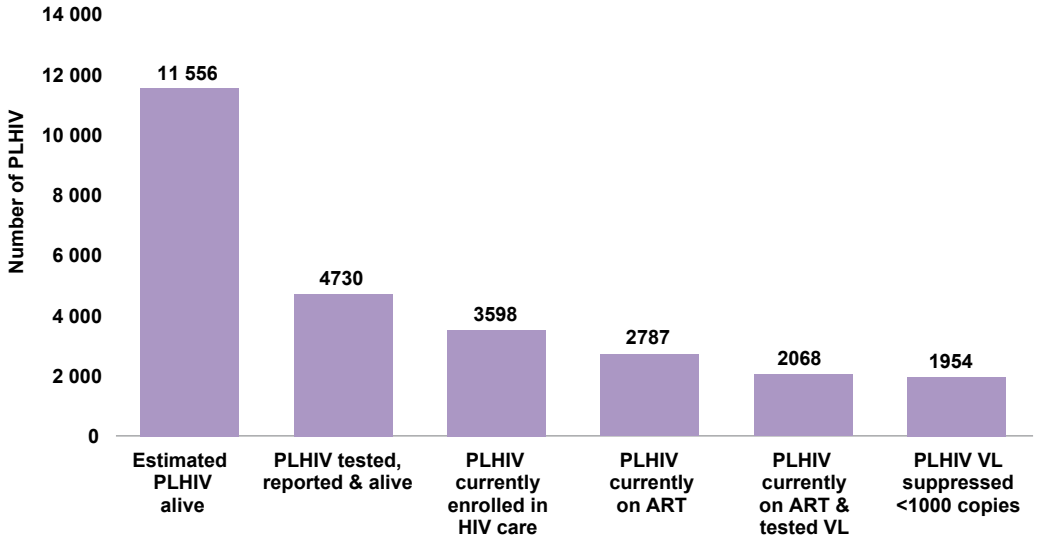
Review findings and recommendations

Findings, conclusions and recommendations appear in the following sections, 1 to 3, each addressing one objective of the review. In addition, key action points are presented in a table (Annex 4) which are aimed at facilitating the upcoming strategic planning process. Finally, a set of slides of a summary of this report presented to some 60 stakeholders at a feedback meeting held in Vietntiane on 6 August 2014 is attached as Annex 3.

Highlights of the HIV epidemic status and trends of the health sector response

The reader is referred to the report, *"HIV epidemiological review and impact analysis, Lao People's Democratic Republic". (4)* One of the most important items of information contained in this report and sourced to CHAS is the graph (Figure 1) displaying the cascade of HIV prevention, care and treatment in the country in 2013.

Figure 1. Cascade of HIV testing, care and treatment in the Lao People's Democratic Republic, 2013



ART antiretroviral therapy, PLHIV people living with HIV, VL viral load

Souce: CHAS, 2014.

Figure 1 depicts in a succinct fashion the performance of the continuum of HIV testing, care and treatment, and the gaps in coverage of services. It shows that fewer than half of the estimated 11 556 people living with HIV (PLHIV) in the Lao People's Democratic Republic have been tested for HIV and may be aware of their infection status. This has implications for the missed opportunities for these individuals to seek treatment early rather than waiting for symptoms of illness to set in, and also for the risk of transmission from these individuals to their sexual or drug injecting partners, or their offspring in the context of pregnancy. Even if tested for HIV, not all individuals will seek treatment: of the 4730 persons tested for HIV, one in four did not enrol in HIV care. This may result from their lack of awareness or understanding of their HIV status, physical obstacles to reaching care facilities, or fear of stigma and discrimination attached to HIV infection. Of the 3598 PLHIV enrolled in HIV care, 2787 (77%) were on antiretroviral therapy (ART) in December 2013. This partial enrolment in ART may be due to the fact that not all persons referred to care facilities meet the biomedical criteria for ART eligibility, and/or that the uptake of and

adherence to antiretroviral (ARV) medicines remain suboptimal. This issue will be discussed further in the care and treatment section of this report. Measuring the viral load (VL) of PLHIV on treatment provides a robust indication of the impact of treatment. Reportedly, the indications for VL testing do not seem to be strictly adhered to and some PLHIV may repeat their test unnecessarily while others do not receive this test (in theory at six months after initiation of ART and subsequently once a year). It is however apparent that the capacity for VL testing is currently commensurate with the needs. It is also encouraging to note that the majority of these tests reflect the suppression of VL among those tested. These data further underscore the efficacy of ART. The remarkable impact of ART on the quality of life of treated PLHIV and their survival, together with the scientifically established impact of low VL on the likelihood of transmitting infection, should be widely publicized among key populations (KPs) to encourage them to find out their HIV status early and seek care as soon as they become aware of their positive HIV status.

These important findings of the epidemiological review of HIV in the Lao People's Democratic Republic *(4)* anchor the analysis, conclusions and recommendations of the present report with sufficiently convincing evidence. Other findings and recommendations selectively excerpted from the same report are presented in Annex 5, along with annotations from the present review team.

The present report elaborates further on the access to and use of HIV prevention, care and treatment by KPs, and on the role peer education plays and should play in this regard. It then proposes approaches to safeguard the achievements of the health sector response to HIV, while amplifying the mutual benefits of a greater synergy between the response to HIV and the roles assigned to other branches of the health system under the health sector reform.

1. Key populations and vulnerable populations

Background

The National Strategy and Action Plan on HIV/AIDS/STI, for 2011–2015 notes that the country does not yet have a concentrated epidemic,[a] but that the main HIV epidemic in the Lao People's Democratic Republic is driven by sexual behaviour, with a potential further epidemic driven by injecting drug use. Within these epidemics, the National Strategy and Action Plan separates discussion of "key populations" and "vulnerable populations". *(2)*

The review considered what is suggested for KPs and vulnerable populations in the following documents, then conducted interviews and informal group discussions with key informants. Within the large amount of materials accessed by the review team, the following documents provided it with valuable contextual and normative information:

- National Strategy and Action Plan on HIV/AIDS/STI, 2011–2015; *(2)*
- 2012 external review recommendations for key populations; *(1)*
- WHO *Consolidated guidelines on the use of antiretroviral drugs for treating and preventing HIV infection* (2013); *(5)*
- WHO *Consolidated guidelines on HIV prevention, diagnosis, treatment and care for key populations*. *(6)*

[a] An HIV epidemic would be qualified as "concentrated" if the prevalence of HIV reaches at least 5% in any KP. Such is not and has never been the case in the Lao People's Democratic Republic.

The National Strategy has the following goals:

- Maintain the present low level of HIV prevalence in the general population (below 1%).
- Ensure that HIV seroprevalence among most-at-risk populations is lower than 5%.

The National Strategy suggests a need to increase the coverage and quality of HIV prevention services, aiming at 80% coverage of KPs, improve the quality of HIV care and treatment, and expand coverage of people in need of ART to 90%, with a treatment dropout rate of less than 10%.

a. Key populations

KPs are composed of female sex workers (FSWs), men who have sex with men (MSM), transgender people (TG), people who use drugs (PWUD) and people who inject drugs (PWID). The National Strategy aims to maintain and sharpen focus on these groups and scale up to 60–85% coverage with prevention interventions. *(2)* However, the exact numbers in each of these KPs is estimated through modelling, so the exact coverage is difficult to report accurately.

The HIV epidemic is clearly present in the largest cities and the most populated provinces, mostly situated along the Mekong River. The areas considered as high priority for HIV surveillance, prevention, care and treatment include: Vientiane Capital City, Vientiane province, Savannakhet, Champassak, Luang Prabang and Khammouane.

The prevalence of HIV among FSWs does not exceed 1.3% in any provincial sample of FSWs tested through several rounds of integrated biological and behavioural surveillance (IBBS) conducted from 2007 to 2014. However, preliminary analysis of the May 2014 IBBS reveals that there are still significant coverage gaps in prevention services targeted at FSWs, including information about HIV, access to and proper use of condoms, and early diagnosis and treatment of STIs. There is evidence to show that risk factors are present in this population, as reflected by their reported infrequent condom use with clients and a high rate of STIs. These suggest that this is where investments in STI and HIV prevention are likely to yield the greatest returns.

The National Strategy on HIV notes, "Transgender and gay-identified men tend to form sexual and social networks in urban areas." *(2)* A 2007 survey found an HIV prevalence of 5.6% among MSM in Vientiane Capital City, and zero prevalence of HIV among MSM in Luang Prabang. This seems to confirm that the risk for acquiring HIV is high only in cities with the largest populations. The same survey found that many MSM also have sex with women, including with FSWs. *(7)* A recent HIV / STI prevalence and behavioural tracking survey among male-to-female TG found an HIV prevalence of 3.34% among TG in Vientiane Capital City and 2.54% in Savannakhet. It also found that the availability of drop-in centres in both these cities had led to increased rates of HIV testing among TG; 50.9% of the whole sample had been tested in 2012, with 65% of these constituted by those who had been "exposed" to the drop-in centres. *(8)*

In 2010, there were 49 330 MSM and TG, including 16 440 assumed to be at high risk for HIV, and percentage of MSM reached by peer educators with HIV and AIDS prevention education was 27.2%, or 4832 out of 17 862.[b] The review team considers that this reach of 4832 MSM and TG in the largest cities is remarkable. There are still large numbers of MSM and TG who have not yet been tested for HIV, but surveillance indicates that HIV prevalence is not increasing. It would be sensible to expand coverage among urban MSM and TG populations where existing services could reach

[b] Estimates based on the Asian Epidemic Model, 2010.

more of those at a higher risk for HIV, rather than establishing new outreach services in smaller cities or in rural areas.

There are PWID in the Lao People's Democratic Republic, even though the numbers are small. A rapid assessment in 2010 found evidence of HIV infection among this population. *(9)* The assessment was done in the provinces of Huaphanh and Phongsaly with a sample of 550 drug users, of whom 46 reported injecting drug use. While the HIV prevalence was 2% among the total sample in both provinces, when only PWID were considered, the prevalence was closer to 17%. Before the rapid assessment, only 1.4% had been tested for HIV in Phongsaly and 2.4% in Houaphanh. Knowledge of HIV was extremely low in this sample, with less than 25% reporting that they had even heard of HIV. Most drug users were sexually active but did not report condom use; many had been to residential treatment centres; and around 9% reported having been to prison. Following this rapid assessment, initiatives to prevent HIV transmission and to promote the health of PWID commenced in these two provinces.

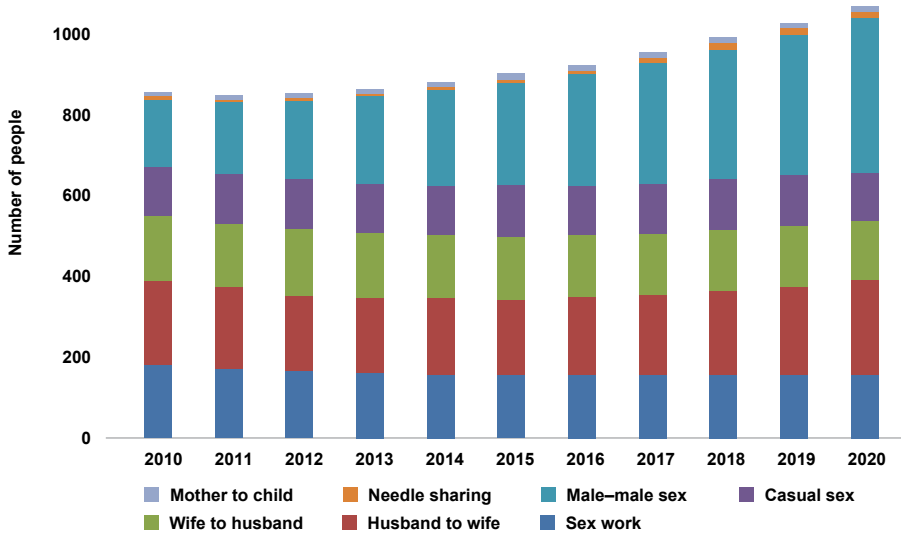
It is important to continue the pilot project on HIV prevention for PWID in these two provinces, which is now funded by the Asian Development Bank (ADB), as well as to continue to track any changes in the number of PWID or those who use drugs in other ways in these provinces and elsewhere. As new and improved roads are currently under construction between the Lao People's Democratic Republic, Viet Nam and China, careful observation may be needed to assess the potential impact of these on drug use and possible increase in HIV prevalence.

b. Vulnerable populations

The distribution of cumulative HIV infections reported in 2009–2013 reveals that 88.3% of these infections are attributed to heterosexual transmission, not to usually defined KPs. Modelling estimates, summarized in Figure 2, assume that most wife–husband and husband–wife transmission is a result of participation in sex work as either workers or clients. This modelling suggests that transmission related to sex work and male–male sex accounts for most estimated and predicted new infections in the next six years. For HIV prevention purposes, male clients of FSWs are notoriously difficult to target in a population where the purchase of sexual services by men is widespread. Focused prevention by peer educators cannot be delivered to the whole population, and experience has shown that simplistic, broad-based prevention just using media messages is not effective. The present focus of the Lao national response to HIV among FSWs is likely to have a bigger effect on the epidemic than focus on male clients.

It was reported that some PLHIV are from ethnic groups and are at risk as they are poor and have limited education, and often travel to other places for work. Many people in ethnic groups do not have access to HIV prevention programmes or testing services adapted to their cultural specificities and languages. Thus, there is a need for some prevention efforts to focus on the use of different ethnic languages, and involvement of ethnic community leaders. It was reported that one project in eight provinces bordering Viet Nam, funded by ADB since mid-2013, is now focusing on villages with ethnic populations, integrating HIV prevention and voluntary counselling and testing (VCT) with local health systems.

Figure 2. Breakdown of new infections by route of transmission (2010–2020)



Source: MoH/WHO

HIV prevention programmes for KPs

A range of prevention programmes is in place, and these appear to be well coordinated. They are all based on a "comprehensive package of services for HIV prevention". Some are run by the Provincial Committees for the Control of AIDS (PCCAs), and some by community-based organizations and international nongernmental organizations (NGOs). Funding to the PCCAs is provided by the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund), and to NGOs by the Global Fund and United States Agency for International Development (USAID). The review team was not told of any example of overlap between these programmes: while some operate in the same districts, they help different subgroups of KPs. For example, in a few provinces, programmes for FSWs include drop-in centres and outreach to local shops that employ FSWs run by the PCCAs; while outreach to larger entertainment venues and to women who use mobile phones to reach clients is conducted by Population Services International (PSI).

a. Drop-in centres

There are two types of drop-in centres: those for FSWs run by PCCAs and including outreach to small shops where FSWs work, and those for MSM, run by PSI, mostly attracting TG and limited numbers of MSM.

(i) Drop-in centres for FSWs

The drop-in centres for FSWs are run by PCCAs in nine districts in four provinces: Vientiane Capital City, Luang Prabang, Champassak and Savannakhet. There are four such drop-in centres in Vientiane Capital City and at least one in each of the other priority provinces. The four drop-in centres in Vientiane each reach 150–200 FSWs each year. They each employ the following:

- A centre manager: this person is invited to local shops to meet with new FSWs once they are identified by the permanent peers.
- Permanent peers: two or three women, full time. Some are ex-FSWs and some are community workers engaged specifically for this task. The 2012 review recommended employing only FSWs or ex-FSWs for these positions. The review team interviewed four of these permanent peers, and was impressed

with their level of understanding, empathy and support for the clients. Based on the current situation, we do not think that there is a need to employ only FSWs or ex-FSWs. These permanent peers also visit nearby shops that employ FSWs, get to know them and encourage them to visit the drop-in centres for health check-ups.
- VCT officer: working every day, so that VCT is available whenever clients request it. If found HIV positive, clients are referred to the closest ARV centre with assistance from permanent peers for the first visit upon request.
- Visiting doctor: a doctor works once a week to provide STI check-ups, treatment and advice.

The drop-in centres in Vientiane hold monthly meetings of all 15 permanent peers from the four drop-in centres. The PCCA also holds larger quarterly events in one of the drop-in centres, which brings together up to 50 FSWs and organizes STI screening campaigns.

The 2012 review suggested a reduction in the number of drop-in centres for FSWs, with an increase in the number of days that doctors are available. This review observed that the number of centres in Vientiane had been reduced to four, with doctors in each centre available one day a week. As the 2012 review recommended that targets be established, now each permanent peer aims to reach 15 women per month.

(ii) Drop-in centres for MSM and TG

The drop-in centres for MSM are run by PSI in three provinces: Vientiane Capital City, Luang Prabang and Khammouane. Staff include the following:
- centre manager;
- VCT officers;
- doctors; and
- Outreach workers who are members of the client group – TG or MSM. In Vientiane Capital City, six outreach workers support 21 peers each, a total of 126 peers. Each peer has a target of reaching 16 of their peers per year. This amounts to a total target of 756 community contacts per year.

In addition to Global Fund support, the PSI drop-in centres are also supported by USAID to run a range of activities, including small group discussions and cooking classes. One TG peer told the review team, "This is our second home." These drop-in centres also build informal community systems, which result in high visibility of TG in ways that garner respect from the rest of the community.

The 2012 review suggested that the outreach workers in the MSM and TG drop-in centres should strengthen their support of peer educators in the field; in effect, extending their centre work to be real "outreachers". This appears to have occurred, as all outreach workers now have specified numbers of peers with whom they work with. It also suggested that drop-in centres should provide a minimum package of HIV and STI services, and this has been defined and is in place.

Box 1.

"In the past, people who were told they have HIV would panic, and almost jump off their motor bike. Now because they have support from peers, they know there is treatment. The clients of the drop-in centres for sex workers help each other and go to the ARV centre together."

Manager, PCCA Drop-in Centre, Vientiane Capital City

The 2012 review suggested that PSI drop-in centres could expand services for MSM, in addition to targeting TG. There have been some efforts to do this. The drop-in centres in Vientiane Capital City, for example, now have full-time facilitators each for TG, FSWs, MSM and PLHIV. Although most of the clients are still TG, there are special events to encourage others to attend the drop-in centres.

There is a drop-in centre that targets both MSM and TG in Champassak (supported by Lao Positive Health Association [LaoPHA]). Currently, there are 27 peer educators, with a target of reaching 16 MSM and/or TG per peer educator per year. Only 216 MSM/TG have been reached since 2007, including 15 tested for HIV (testing coverage <10%). The cost–effectiveness of this activity appears to be low. There was a similar drop-in centre in Savannakhet, but it was closed in order to allocate resources to open a centre in Khammouane. The review team does not know why this decision was made, but does note that there are MSM in Savannakhet who no longer have access to drop-in centres. As this report was being finalized, the review team was told that USAID may be changing its level of support to PSI to run these drop-in centres; however, this was not confirmed from official sources. If this information is found to be correct, it will be important to ensure that the three existing drop-in centres continue to support TG and MSM in Vientiane Capital, Luang Prabang and Khammouane, to expand services to Champassak and reopen the centre in Savannakhet if possible.

b. Outreach by peers

The community-based prevention programmes for FSWs, TG and MSM all involve outreach workers who train groups of peers who reach the target populations. Following a recommendation by the 2012 review, all the programmes involving peer educators have reduced the number of topics addressed in peer education and increased the number of people peers should reach. *(1)* There is a standard format used by all organizations involved in HIV prevention for outreach, peer support and supervision, including PSI, Promotion for Education and Development Association (PEDA) and Norwegian Church Aid:

- One outreach worker trains, supervises and supports 16 peers.
- Each peer reaches 16 clients, or "targets" per year, which is too low.
- Peers reach each client on four occasions, and thus cover four topics per year: HIV, STIs, condom use (lubricants not mentioned) and VCT.
- Peers encourage testing and refer people to VCT sites, including drop-in centres and public VCT sites.
- Peers keep records of the number of clients met, but not records of how many referrals actually resulted in testing.

FSWs who work in nightclubs or who use mobile phones to communicate with clients are more difficult to reach. PSI tries to reach these women and refers them for VCT.

MSM who do not identify as gay are mostly reached by just three small projects. The PCCA in Vientiane Capital City employs two outreach workers for each of its two districts; 2 outreach workers x 2 districts x 16 peers x 16 target clients = 544 men reached per year in Vientiane Capital City. Similar projects operate from PCCAs in Bokeo and Sayabouly, but with only one outreach worker and 16 peers in each province. There are no such programmes in Savannakhet, Champassak or Khammoune, which are all priority provinces for prevention among KPs.

The PCCA outreach workers who reach MSM in community settings noted that the target number for each peer educator is high, given that their clients are not easily identified, do not meet in just one or two places, mostly do not identify as MSM, and

are sometimes hostile to the peer educators. The peers do not have 16 friends each, so they have to approach strangers. The peers meet regularly with the outreach workers and discuss how to reach more men, how to talk with them safely, and how to promote preventive behaviours. They told the review team that many men would not seek testing, particularly if they were well educated and held good jobs such as government workers or students of tertiary education.

The review team was told that there are some men who sell sex to men in massage parlours, particularly in Vientiane Capital City. It was not clear which peer outreach workers reach them, if any. The review team recognizes that these men, and the managers of the centres, may not acknowledge their work as "sex work", but they are nonetheless at risk. As part of improving the quality of prevention through improved collaboration, community groups should be trained and encouraged to discuss how to reach these men and ensure that this does not become an important programming gap.

c. Young people at higher risk

Many young people commence having sex with others before they know anything about HIV transmission through having sex. Initial data of the 2014 IBBS indicate that some women reported having engaged in transactional sex work at 10–12 years of age. The number of prevention programmes, drop-in centres and outreach services focusing on young people is limited. One youth centre based in Vientiane provides STI diagnosis, HIV testing (screening) and counselling, and pregnancy testing to young people aged 14–24 years. The total number of HIV tests since 2010 (as of June 2014) was 682. Of these, six persons tested reactive, six had confirmed HIV; follow-up and referrals were made for HIV confirmation and initiation of treatment in the company of a nurse. Information on and support for safe sexual behaviour is not available in schools or through the TV or radio. Some community organizations noted that it was difficult to reach people under the age of 15 years with prevention education for cultural rather than legal reasons. This needs to be changed, even though it will be difficult. Community organizations and CHAS will need to explore options together and identify ways to support young people both in and out of school.

d. PWID

A pilot programme on HIV prevention for PWID is under way in Houaphanh and Phongsaly provinces. It includes provision of information, needle and syringe exchange, HIV testing and opioid substitution therapy. Following withdrawal of donor support from Australia in late 2013, it is now supported by ADB from August 2014. These provinces have the highest rates of injecting drug use. They are close to Vietnamese provinces with high rates of drug use and a high prevalence of HIV among PWID.

An enabling environment for HIV prevention among PWID is in place, as a result of successful advocacy by CHAS, United Nations Office on Drugs and Crime (UNODC) and PCCAs in these two provinces. The Ministers and Vice Ministers of Health and Public Security have been on study tours hosted by CHAS to Viet Nam and China to observe harm reduction methods. The Lao Commission for Drugs Control (LCDC) is supportive of the harm reduction approaches being used in these two provinces, and this has also led to agreements with the police. Reportedly, the local police do not interfere with the project, but village security officers do know who is using drugs. Village Committees for Drugs Control have been working with the pilot project.

The 2012 review recommended continued rapid assessment, but this has not yet taken place. The current review found that the pilot project is important to follow through, because it will develop effective methods to reduce HIV transmission and evaluate these over the next two years. Further rapid assessments should inform the

development of future health projects for PWUD, and should perhaps be done every three years, but the pilot project is a more important short-term priority.

Clients are reached by peer educators, and VCT is done at the Houaphanh Central Hospital. A mobile point-of-care testing machine has been purchased and allows some testing in district hospitals. There is one peer in each village, with a total of 24 peers in 18 villages in four districts: three in Houaphanh and one in Phongsaly. Five health staff complements these outreach personnel. The project noted that the PCCA staff are highly skilled and can now conduct training without the need for the project to be directly involved.

e. Coordination and collaboration between HIV prevention programmes

The National Strategy notes the need to "ensure prevention and care interventions are relevant, effective and efficient". It suggests, "National guidelines for services have to be developed on the basis of a review of current national and regional best practice."

To ensure that HIV prevention programmes meet these criteria, it is important that policy-makers and communities work together to solve problems and improve prevention approaches. The review team found that both outreach workers and peers who work with KPs have extensive experience and understanding of the needs of these people. However, they do not have a chance to inform policy-makers or take part in shared problem-solving: most collaboration happens only between managers and policy-makers. Even though PCCAs consult with community groups and talk with some peers, this is by invitation only, and none of the KPs has representation on PCCAs or attends every meeting. Some community organizations at the national level say that they are invited to meetings by CHAS, but only to be taught about new policies, not to have input into what is taught or influence the new policies that are developed.
The 2012 review recommended increased representation of KPs in policy-making, and that CHAS should develop a workplan for their representation on national, provincial and district HIV committees and working groups. This has not yet happened.

With regard to collaboration, most community-based programmes collaborate with each other and with CHAS and PCCAs. They meet regularly through coordination meetings hosted by CHAS, up to three times per year, with funding from USAID. The groups share lessons learnt, solve difficulties and delineate groups they work with and the regional coverage, so that there is no overlap. There is also an HIV referral network, through which community groups share information about self-help groups and provision of care and support: this involves PSI, LaoPHA, PEDA and Lao Red Cross. Some community groups noted that CHAS's leadership is very important. Outreach workers are mostly trained by CHAS, and they then train peer educators.

VCT

a. Expansion of HIV testing

Many PLHIV have not yet been tested. The understanding of the benefits of early diagnosis and treatment is limited. This problem is compounded by the fact that many people do not seek testing until they are ill and start treatment late, then eventually fall seriously ill or die: this feeds community perceptions that treatment does not work. Moreover, there is limited community understanding of the fact that ART reduces the risk of transmission of HIV. No one interviewed in this review mentioned the concept of "treatment as prevention", which is a firm recommendation of the new WHO guidelines on the use of ART. *(5)*

HIV testing needs to be promoted more vigorously. The 2012 review suggested an HIV testing target of 30% of KPs annually by the end of 2015. Improved monitoring should track referrals and report on the proportion of people who receive testing. VCT should be expanded and peer educators should share experiences on what works to advocate testing without forcing people to be tested.

While some other countries with a much higher prevalence of HIV among KPs are starting to introduce HIV testing by peers, the review team felt that barriers to HIV testing at existing VCT sites should be addressed first before considering the introduction of peer testing. The possible breach of confidentiality of results—real or even perceived by the person being tested by peers—might act as a deterrent for such a responsibility shift. Promotion of testing could include outreach testing by trained and qualified personnel at large community events. Testing should also be promoted among a bigger pool of private practitioners, while maintaining the need for specific training, quality assurance, confidentiality, referrals to ARV sites and reporting of testing activities.

b. Referrals to VCT and follow-up

All community-based HIV prevention programmes, using drop-in centres or community outreach, recommend VCT to their clients, and organize referrals for clients who request them. However, there is no record of the actual number of clients who access VCT after being referred.

A pilot project supported by WHO and Centers for Disease Control and Prevention (CDC) has been exploring ways to more effectively promote testing and track referrals. This pilot project is now in place in two locations: Vientiane Province and Vientiane Capital City. It is now piloting the use of a "unique identification code" (UIC). The review team was privileged to attend a presentation by the staff of CHAS, WHO and visiting staff from the Thai CDC on a trial under way to assess the feasibility and efficiency of UIC. The proposed system seems to bridge the information gap on who gets referred and who actually gets tested for HIV, while reinforcing confidentiality, post-diagnosis referral to care and treatment facilities, and follow-up. Hence, no specific further recommendation is made here, apart from an encouragement to the developers of this scheme to document and disseminate the outcome of their project.

Treatment literacy

Treatment literacy needs to be promoted to raise awareness of the benefits of treatment for individuals, their partners, and the community as a whole. If most people understand that treatment works to prevent as well as benefit the individual on treatment, then this should also have an impact on reducing stigma.

Improving treatment literacy should not be allowed to occur by chance. It needs to be urgently and widely promoted. The challenges and barriers to ART- and ARV-based prevention noted in several countries of the Asia-Pacific region should be overcome in the Lao People's Democratic Republic. *(10)* To this end, introducing treatment literacy will require a change in the National Prevention Policy, to be led by CHAS and the National Committee for the Control of AIDS (NCCA). Community groups should be involved in discussions about these changes, not just informed once the changes take place. Two major initiatives will be required to promote treatment literacy. First, an ongoing introduction to treatment literacy should be introduced as a fifth topic to be talked about by all peers involved in prevention. This will require designing of training modules, and training and monitoring of peer educators' work. Second, a large one-off campaign will be needed, over a one-year period, to explain in simple language and images how treatment is effective. The review team acknowledges that there were previously eight or nine topics taught by

peers and that this was reduced to four topics in recognition of the fact that there were too many topics; however, treatment literacy is too important to allow it to be left out of prevention work.

Stigma, discrimination and gender inequity

Stigma and discrimination have been considered in two recent reports: the 2012 review; *(1)* and the report by the United Nations Development Programme (UNDP) on legal protections against human rights violations in Asia in 2013. *(11)* The latter report recommended the use of self-help groups, training of health workers, and careful use of information, education and communication (IEC) materials so that prevention materials do not inadvertently promote stigma and discrimination. All of these are now in place in the Lao People's Democratic Republic, although training of health workers on HIV is concentrated on staff of VCT sites and ARV centres.

The review team was told by many informants in Vientiane Capital City, Luang Prabang and Champassak that MSM and TG experience very little stigma and discrimination. However, in reality, some MSM and TG are still reluctant to seek HIV testing. The police do not interrupt HIV education programmes as happens in some other countries. FSWs do not have many problems with the police, except at certain public festivals when police appear to not want sex work to be visible. Carrying condoms does not lead to police harassment, as is the case in some neighbouring countries. The review team was told that FSWs do experience stigma from health workers, but not from VCT or ART workers who are trained specifically on HIV. FSWs sometimes have problems with clients who do not want to use condoms, or who do not want to pay after they have sex. They said that this does not usually result in overt violence, but male clients do sometimes "use their strength to insist", which the review team notes to be indeed a form of rape. The preliminary analysis of the May 2014 IBBS revealed, however, that exposure of FSWs to violent behaviours of clients was not uncommon. In Champassak, FSWs told the review team that they were able to enforce the rule "no condom, no sex" with their clients. FSWs in other provinces could learn from this experience, which is another reason why it is important to improve the quality of programmes through encouraging community involvement in policy-making. People who worked on the pilot project for PWID in two provinces (see below) noted that police understand the need for the project and do not interrupt the work of peer educators. PLHIV receive support for talking with their families when they request it from peer educators, doctors and others. Some families are supportive and some are not. Families of orphans living with HIV seek the support of community peers. Often, cousins or grandparents are looking after the children. While they support them, they do not have the resources to support travel to ARV centres, so community groups assist.

Staff of the project for PWID, which operates in Houaphanh and Phongsaly, advised the review team that they have engaged in extensive advocacy with LCDC with the strong assistance of CHAS, who they said have explained the concept of harm reduction very well. Because LCDC understands the need for the project, they have been able to secure support from the police at the province and district levels, and from village security. The project is able to ensure that the police are not told who is using drugs.

Health needs of KPs and community systems strengthening

The WHO guidelines on the use of ART make it very clear that issues of mental health, addiction, and sexual and reproductive health are not just optional, but should be an integral part of HIV prevention and treatment services for key populations. *(5)* The WHO guidelines on KPs recommend enhancing community empowerment and addressing critical enablers such as enforcing antidiscrimination and protective laws, not merely providing services to communities, as a way to make HIV prevention and related health services more effective. *(6)*

Health issues that need to be addressed by the health services and can be enhanced through community empowerment include: reproductive health of sex workers, including support for successful pregnancies and childbirth; reproductive health of all PLHIV, including all options for prevention of parent-to-child transmission; psychosocial health of MSM; health of TG, including psychosocial health and gender reassignment when this is desired; and reproductive health of bisexual men.

The May 2014 IBBS showed that a large proportion of FSWs reported a high rate of unwanted pregnancies and abortions. The review team was told by FSWs that some of them become pregnant by accident, while a few others choose to become pregnant; there was no recognition of their right to choose to have children or to realize and secure the support that this might require. Health services that explain their options for reproduction, and the benefits of treatment for prevention are required for partners of PLHIV.

None of these health services can be delivered by health staff, who just provide information. The myths about people's right to reproductive health are widespread, and community systems will need to be strengthened if community understanding and support for making choices in sexual and reproductive health are to be viable. Communities will need to work side by side with health workers to promote all available options and to overcome the types of discrimination that result in denial of these options. As an example of what is possible, the review team was told that the peer counsellors from the ARV centre in Vientiane, employed by LaoPHA, do sometimes work with the medical staff to conduct community campaigns in villages, and these include education about family planning for PLHIV. This is a good example of how community systems strengthening and health systems strengthening can be linked.

Mobile technologies and social networking

No HIV prevention or treatment programme is currently using mobile technologies or social networking websites to reach more people or to improve the quality of their work. These technologies are being widely used in most other countries, including China, Myanmar, Thailand and Viet Nam. They can be used to promote HIV testing, remind people to attend clinic appointments, remind people when to take ART, and inform people about the options for prevention, testing and treatment. They can also be used to engage people and connect them with peers, counsellors, doctors and others.

The absence of these initiatives is an important gap in programmes for KPs. Community organizations said that they want to use these to improve their reach and programme quality. They also said that they do not want to do this on their own, and would welcome collaboration from CHAS and from the Ministry of Information and Culture.

The review team was informed that there are problems in using mobile phone texting in Lao, because most mobile phones cannot use Lao text yet. Smart phones can use Lao text, but not many people have them. The review team learnt that it may soon become possible to use the Lao language for text messaging. In the meantime, there is an urgent need for CHAS to coordinate meetings between community groups, the Ministry of Information and Culture, and telecommunications companies. Technical assistance should be sought where possible from nearby countries, including Thailand and Viet Nam, to provide information on what is useful, how it can be introduced, and how it can be evaluated.

Pre-exposure prophylaxis for men who have sex with men

The new WHO guidelines for HIV and KPs recommend the provision of pre-exposure prophylaxis (PrEP) for MSM as an additional HIV prevention choice within a comprehensive prevention package, but not for other KPs, for reasons outlined in the guidelines. *(6)*

The review team suggests the Lao People's Democratic Republic to prepare for the introduction of this method of HIV prevention during the period of the next national strategic plan. It would not be realistic to deny the use of this method to MSM in the Lao People's Democratic Republic when it will soon be introduced elsewhere. Increased coverage of ART to all PLHIV should remain the priority before PrEP is introduced to people who are not yet infected. The introduction of PrEP requires good community understanding of how it works, which is not possible until the community understands that treatment works for people who are infected. The review team does not consider that there is yet good community understanding of treatment for people who are HIV positive. The earlier recommendation of this review about community strengthening will help in building the community understanding necessary for the introduction of PrEP.

Introduction of PrEP will require strategies for promotion and education, procurement, supply chains, funding and monitoring. These will not be easy or cheap. They should be developed as part of initiatives to improve the delivery of medicines and technologies, and not as a separate programme. This may require time, so that PrEP will not be available within the next two years. One of the major trials on PrEP has taken place in Thailand, in settings with a high prevalence of HIV among MSM. It is very likely that this trial will result in guidelines on use of PrEP in all South-East Asian countries. At that point, the Lao People's Democratic Republic should already have a system in place to evaluate whether PrEP is likely to work in some communities of MSM, what it might cost, and how it might be introduced.

It would be useful to prepare a strategy, including setting up a PrEP Advisory Group, so that Lao is able to evaluate the costs, benefits and risks of this prevention method during the period of the next national HIV strategy. This should be led by CHAS and include representatives of community groups, doctors and other health staff, the Medical Products Supply Centre, the Global Fund Principal Recipient (PR) and WHO. It is to be noted that, at this point, WHO does not recommend PrEP for FSWs or PWID.

Costs of prevention programmes

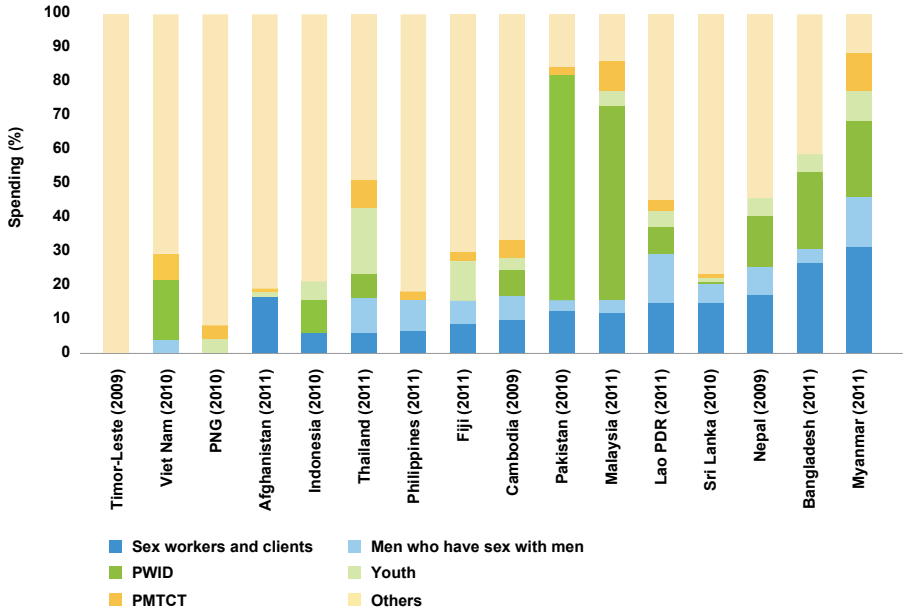
a. Proportion of HIV prevention spending on key populations, 2009–2010

The Joint Strategic Assessment on HIV in Asia, (*12*) the UNAIDS Investment Framework *(13)* and the Global Fund all highlight the need for countries with concentrated epidemics to focus their responses to HIV on KPs. The 2012 external review report included an in-depth analysis of the financing of the health sector response to HIV in the Lao People's Democratic Republic. Since that time, external resources available to support this response have declined and no significant amount of domestic resources has been made available to bridge this gap.

Figure 3 shows that spending on KPs in the Lao People's Democratic Republic in 2009–2010 was almost half of the total expenditure on prevention. This targeted allocation of prevention resources compared well with that in other countries of the region. Lao's proportional funding to these groups was similar to that of Thailand, and more than Cambodia, Viet Nam, the Philippines or Indonesia, which all have concentrated epidemics. It is less than Malaysia, which has an HIV epidemic that is highly concentrated just in KPs. Two additional comments can be made on this figure: (i) external resources made available to the Lao People's Democratic Republic were significantly less than the allocation to other countries, which have larger populations and, in several of them, a heavier HIV burden; and (ii) the "others" category, which is far larger proportionally than the resources assigned to KPs, implies a very heavy overhead cost. It is appropriate that substantial amounts were spent on FSWs, MSM,

TG and PWID, with smaller amounts spent on "others". HIV prevention spending on the three designated KPs occurred almost entirely in the five priority provinces. In the rest of the country, to have the same intense programmes focused just on these KPs would be difficult, because the numbers of visible FSWs, MSM and TG are small.

Figure 3. Breakdown of HIV prevention spending in selected countries in Asia and the Pacific, 2009–2011



PDR People's Democratic Republic, PMTCT prevention of mother-to-child transmission, PNG Papua New Guinea, PWID people who inject drugs,
Source: www.aidsdatahub.org based on www.aidsinfoonline.org

b. Costs for each activity

This review did not conduct a current cost analysis, but it did try to ascertain costs of prevention for KPs and consider whether these costs were standard across different organizations and across programmes funded by different donors. In the short time available, it was not possible to find definite answers to these questions. However, it does appear that there are inconsistencies, and it will be important for CHAS to conduct a national funding analysis of prevention before finalizing any future funding applications to any donors.

The 2012 external review report compared unit costs of clients reached in drop-in centres and clients reached through outreach work. That review found the following unit costs, all of which were lower than the regional cost estimates conducted by the Commission on AIDS in Asia, with an average of around US$ 100 per year per KP reached. In the Lao People's Democratic Republic, the equivalent costs were as follows:

- FSWs reached through drop-in centres: US$ 42 per FSW reached;
- FSWs reached by peers supported by outreach workers: unit cost US$ 68 per FSW reached;
- MSM reached through drop-in centres: US$ 82 per MSM reached;
- MSM reached by peers supported by outreach workers: US$ 77 per MSM reached.

This review considered the Global Fund's progress update and disbursement request for July–December 2013, and the workplan and budget for USAID funding to be provided to PSI and partners funded through PSI, which include CHAS, PCCAs, Lao

Red Cross, LaoPHA and PEDA. The reviewers note that these budgets were provided by CHAS, so it is clear that CHAS is playing an appropriate role in overseeing all expenses, regardless of funding source. However, it was not clear to the reviewers whether these budgets were drafts or final approved budgets. Hence, the reports below should be considered as tentative, not a comprehensive analysis.

These budgets reveal that outreach workers are paid US$ 100 per month; peers are paid US$ 40 per month in one budget and US$ 50 per month in another; drop-in centre managers are paid US$ 300 per month by the Global Fund as well as an additional US$ 150 per month by USAID; coordinators of outreach programmes are paid US$ 150 per month.

However, the USAID budget also includes a number of incentives, and it was not clear to the review team, in this very quick reading, which peers and others receive these incentives. For example, peer leaders for FSWs funded by PSI were to receive an incentive of US$ 40 per month: it was not clear whether some receive this in addition to the usual US$ 50 per month, or whether this was just use of different wording to describe payments to peers. Another example was that of an "incentive" for referring people who take up HIV testing, though it is not clear how this is measured. The incentive is US$ 1 per person tested. There was also a budget for an "incentive" of US$ 20 per person who is tested for HIV and ends up on treatment. Again, it is stressed that what the review team saw may have been an initial proposal and not a final budget. However, the reviewers question how such an incentive scheme can be implemented unless the peers are informed of the HIV status of the person tested and the commencement of treatment, which would violate confidentiality.

While it was not the purpose of this review to conduct a detailed financial analysis, this should definitely be conducted by CHAS during the remainder of 2014. Before further applications are made to donors, it will be important to understand what programmes really cost and how this is matched with the reach of HIV prevention and successful referrals to HIV testing.

Recommendations for key populations and vulnerable populations

A. Geographical prioritization

- Focus on KPs (FSWs, MSM and TG). Particular efforts should be made to reach hard-to-reach KPs at higher risk of HIV.
- Retain the current priority focus of HIV prevention in provinces with the largest populations and the largest numbers of people reported as being infected with HIV: Vientiane Capital City, Vientiane Province, Luang Prabang, Savannhakhet, Champassak, Khammouane.
- Within those provinces, focus mostly on the cities, as this is where there are sexual networks large enough to enable enough regular transmission to sustain an epidemic. Ensure that existing prevention work is continued in all these places and is expanded to reach FSWs, TG and MSM in every one of these cities.
- Continue pilot projects with PWID in the northern and eastern provinces close to provinces in Viet Nam, that report a high HIV prevalence among PWID.
- Ensure further periodic rapid assessment to observe any increase in the use of drugs or injecting of drugs, particularly in all provinces close to Viet Nam and China.

B. Quality of prevention programme

- All groups involved in HIV prevention in each province should meet regularly, at least twice a year, to share lessons learnt, solve problems and learn how to expand implementation of evidence-based and effective interventions, or

Recommendations for key populations and vulnerable populations (continued)

introduce new methods for prevention, including treatment literacy. NGOs and community representatives should be invited to be members of policy-making bodies, including PCCAs.

C. Reaching subgroups
- Men who have sex with both men and women (bisexual men), who do not all identify as MSM: expand outreach work into other districts of Vientiane Capital City and into Savannakhet, Champassak and Khammouane.
- Young members of KPs: programme managers should consider how to meet with young people within the existing informal networks where HIV transmission is taking place – young MSM, young TG and young FSWs – and understand and address their special needs by involving young peer leaders.
- Further development of national FSW networks supported by CHAS could contribute significantly to the sustainability of peer education activities among FSWs.

D. HIV testing
- Promote HIV testing further, while continuing to ensure there is no mandatory testing, and confidentiality is maintained about who is tested and what their results are.

E. Treatment literacy
- CHAS should immediately hold discussions with community groups on how best to introduce treatment literacy. CHAS should change the national prevention policy after these discussions, develop new national campaigns, and support community groups to include this in peer education programmes.

F. Community empowerment
- Ways to introduce these health responses should be developed through discussion between health service providers and community representatives.
- The importance of community systems strengthening should be included in the next national HIV strategy, and its links with support for psychosocial, physical, sexual and reproductive health should be outlined.

G. Introduction of mobile technologies and social media
- Ensure that strategies for gradual introduction of the use of mobile technologies and social media are introduced, with technical assistance from nearby countries.

H. PrEP for MSM
- A PrEP advisory group should develop a strategy to introduce PrEP when the group considers that technical, financial, educational and community support features are in place to enable this.
- Evaluate the impact of programmes to promote treatment literacy, as PrEP will work only when treatment literacy is strong and widespread.

I. Analysis of unit costs for an effective prevention package
- This should be led by CHAS in collaboration with the Department of Finance and Planning, and may require provision of technical assistance; data from the recently concluded national health accounts survey could be used in addition to other data collected by CHAS.

2. Care, treatment, support and PMTCT

Background

There were a total of 6230 reported cases of HIV by the end of 2013, and it is estimated that there will be 12 291 PLHIV by 2015. *(8,14)* Care and treatment has been provided since mid-2003 in the country. Currently, VCT and provider-initiated testing and counselling (PITC) are provided through a total of 165 testing sites and ART is available at nine hospitals.[c] By the end of 2013, a total of 2787 PLHIV (2598 adults and 189 children under 15 years of age) had received ART with a coverage of 58.3% based on the eligibility criteria of CD4 cell count of ≤350 cells/mm^3. Table 1 provides the number of patients at each ART site as of December 2013.

Table 1. ART sites and number of patients by December 2013

ART sites (year started ART services)	PLHIV registered in pre-ART and ART in 2013			Currently on ART (as of Dec 2013)		
	M	F	Child	Adult	Child	Total
	≥15	≥15	<15	≥15	<15	
Bokeo (2006)	4	3	0	58	8	66
Champasack (2010)	41	32	2	302	26	328
Khammouan (2010)				73	11	84
Luang Namtha (2006)	10	6	2	48	4	52
Luang Prabang (2009)	18	13	0	114	9	123
Mahosot (2008)	79	77	11	414	39	453
Savannakhet (2003)	90	71	20	821	52	873
Sethathirath (2006)	108	96	20	768	40	808
Total	404	244	55	2598	189	2787

ART antiretroviral therapy

Source: CHAS, 2014.

This review was conducted through the examination of available data and reports, key informant interviews and site visits to following sites (see Annex 2 for details).

- CHAS
- Mahosot Hospital, Vientiane Capital
- Sikhottabong District Hospital, Vientiane Capital
- PCCA, Savannakhet Province
- Savannakhet Provincial Hospital, Savannakhet Province
- Outmoumpone District Hospital, Savannakhet Province
- Phonsim Health Centre, Savannakhet Province

HIV testing (including PMTCT and TB/HIV)

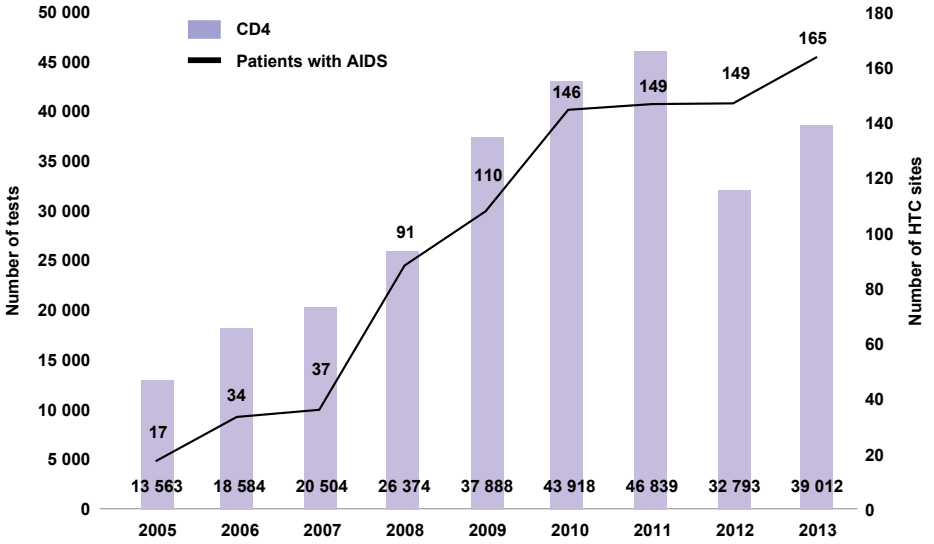
a. Service delivery

HIV testing has been expanded during the past six years with a total of 165 HIV testing and counselling (HTC) sites currently theoretically available (Figure 4). VCT is provided at health facilities and drop-in centres, and PITC is provided for patients

[c] CHAS programme data (2014)

suspected to have symptoms of HIV infection as well as for patients with TB and sexually transmitted infections (STIs). In theory, PITC is also offered to pregnant women attending ANC and their partners in all ART centres as well as in some hospitals but, to date, this is far from systematic. Vientiane Capital City has started rolling out HIV testing at ANC sites in district hospitals since 2014. However, all 165 testing sites are not necessarily functional; for example, only 21 sites out of a total of 51 in Savannnakhet province are currently operating.

Figure 4. Number of total HIV tests and testing sites, 2005–2013



HTC HIV testing and counselling

Source: CHAS, 2014.

b. Testing

At the time of the review, the two HIV tests strategy was being used for the diagnosis of HIV in the Lao People's Democratic Republic. The national guidelines for HIV testing are currently under development by the National Centre for Laboratory and Epidemiology, in which the testing strategy should be reviewed. With regard to quality control, external quality assessment (EQA) has been conducted in collaboration with Thailand. However, as results are reported directly from Thailand to participating hospitals, monitoring at the national level is difficult. The review team was informed by the director of CHAS that his attempts to be informed of the EQA results by the Thailand reference laboratory have not been successful, as the latter had determined that this would not be ethical and would jeopardize the sustainability of the EQA scheme. Internal quality control (IQC) was planned in 2012 for 20 pilot sites; however, it was conducted in only two sites due to the shortage of HIV test kits.

The country experienced a shortage of HIV test kits in 2012–2013, which explains the decline in the number of HIV tests in 2012 and 2013. While no shortage was reported at the national level during this review, some test sites reported shortages of test kits, including buffer for the Determine HIV rapid test, especially at TB clinics. Supply chain management of HIV test kits and coordination between the HIV and TB departments should be improved. In particular, forecasting and quantification of chase buffer for the Determine HIV rapid test should take into account not only the total number of tests but also the number of testing sites.

[d] AMDS Survey on ARV Use & Laboratory, Use and Implementation of WHO Related Guidelines (2012)

At present, the county is experiencing a large stockpile of HIV test kits. A total of 97 400 test kits were available in June 2014 to be used by the end of 2014, of which 15 800 will have expired by October 2014, 19 000 by December 2014 and 24 600 by February 2015.

With regard to service delivery, HTC should be provided more efficiently. For example, counselling training could be simplified so that more health workers could be trained, and pre-test counselling could be provided through group counselling for ANC attendees.

ART services

a. ART

As of August 2014, care and treatment are provided at nine ART centres (five reference centres and four satellite sites). The quality of care and treatment services is commendable. ART is initiated approximately three weeks after the CD4 test, with three consecutive counselling sessions. Patients are followed up regularly with a strong laboratory monitoring system, including CD4 cell count and VL testing. Counselling is provided both by nurses and peer educators. Activities to support PLHIV are organized by self-help groups. At present, paediatricians are involved in ART services in only a limited number of ART centres. PLHIV are also screened for hepatitis B and C. For those coinfected with hepatitis B, a tenofovir-based regimen is provided.

An increase in the mean CD4 cell count at enrolment to care has been observed since the past five years, which implies that PLHIV are being identified and enrolled earlier than before (Figure 5). It was also found that in 2013, 65% had a CD4 cell count of ≤350 cells/mm^3 and 13% had a count of 350–500 cells/mm^3.

In 2012, a total of 17 different ART regimens were used as first-line therapy in the country.[e] As shown in Figure 6, 66% of patients were on the preferred first-line regimens recommended by the national guidelines. It should be noted that 9% of patients were on stavudine (d4T)-based regimens. It was reported that 2.5% of patients were on second-line regimens in 2012.

In 2013, four out of eight ART centres experienced stock-outs of paediatric ARVs, instead of which adult formulations were given with adjustment of dosages.

HIVCAM-Plus is the national HIV data collection software in use since 2013. It includes data on TB/HIV and PMTCT. At present, each facility is in the process of entering data.

b. Care and treatment cascade

Figure 1 shows the care and treatment cascade in the country. It shows that 41% of the estimated number of PLHIV were identified, of which 76% were enrolled in care, whereas 24% failed to access care and treatment. Once diagnosed to be HIV positive, patients are advised to go to ART centres with a referral slip; however, there is no system to follow up these patients at present. The review team felt that an information system to enhance linkages from HIV testing to care and treatment services should be established and strengthened. More formal systems may be needed, including modification of referral slips so that they have a feedback form (or slip) from the treatment facility back to HIV testing sites.

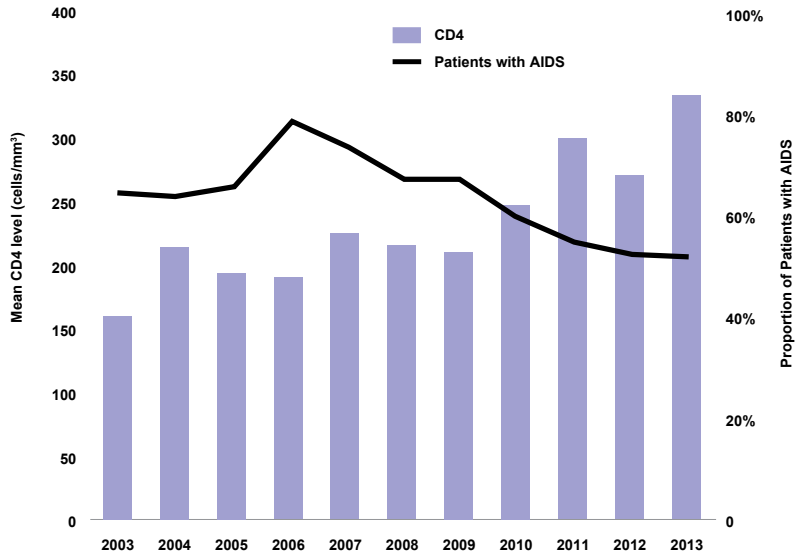
It was also reported that even after accessing care services, some patients were lost before initiating ART. With regard to adherence to treatment, the 12-month retention

[e] WHO Survey on ARV and Diagnostic Use 2012

rate was 83.7% in 2013.[f] Although the coverage of VL testing remained at 74% in 2013, viral suppression was reported in 94% of those on ART. The norm is to test for VL at sixmonths and 12 months after ART initiation and every year thereafter, but the team was informed that unscheduled VL tests also take place, which may affect the accuracy of the rate of viral suppression reported in Figure 1.

While the current quality of care is commendable, efforts are needed to further reduce loss to follow-up and improve retention in care. These could be achieved by reducing the number of visits required prior to ART initiation for those eligible for treatment and providing ARVs for three months, especially for PLHIV living far from the facility.

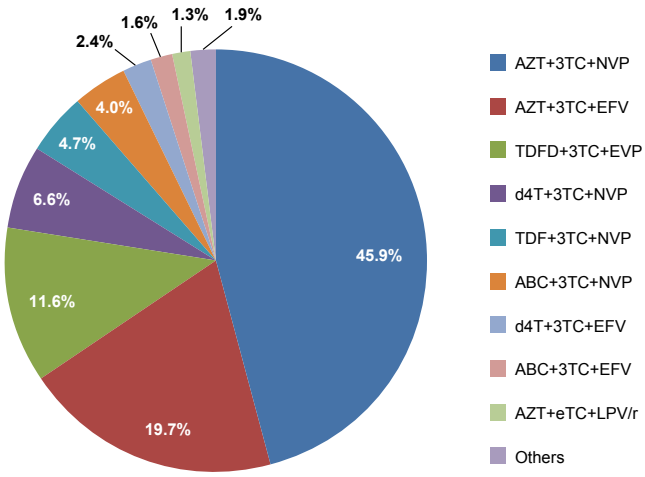
Figure 5. Mean CD4 level and proportion of patents with AIDS at enrolment (2003-2013)



CD4 T-lymphocyte cell bearing CD4 receptor, AIDS acquired immunodeficiency syndrome

Source: CHAS, 2014.

Figure 6. First-line ART regimens used by adults, Lao People's Democratic Republic 2012



AZT zidovudine, 3TC lamivudine, NVP nevirapine, EFV efavirenz, TDF tenofovir disoproxil fumarate, d4T stavudine, ABC abacavir, LPV/r lopinavir/ritonavir

[f] ART patient register Jan–Dec 2013, CHAS 2014

c. Decentralization of services

As the number of ART centres is limited, geographical barriers to accessing care and treatment are significant. Although a transportation fee is provided to patients, it is offered only to those with a low income, and for the first six months of care and treatment. Besides, some large ART reference centres provide services for a large number of patients. Table 2 shows the estimated patient load at Savannakhet hospital, which serves the largest number of PLHIV in the country. As this estimation does not include monthly visits required for those initiating ART, or the provision of care and treatment of emergency cases, the actual patient load would be higher than the figures displayed in this table.

Table 2. Patient load at Savannakhet provincial hospital

Number of PLHIV on care (both pre-ART and ART) by end 2013	**873**
Number of new patients (2013)	**181**
Number of doctors	**2**
Estimated total number of visits per year (every 2 months)	**6324**
Estimated number of patients per day	**30**
Time spent per patient (min)	**26**

Source: CHAS, 2014.

In order to maintain the current level of quality of care offered to PLHIV as well as reduce geographical barriers to their access to services, decentralization of ART services should be considered to points of care strategically located at provincial and district hospitals. In order to do so, careful consideration of care and services to be provided at each level should be reflected in the standard operating procedures, and incorporated in the training of medical, nursing and other staff newly engaged in administering ART. It would seem beneficial to assign to experienced provincial hospitals the responsibility for the initial biomedical assessment of PLHIV referred to them and the prescription of the initial treatment regimen. If they so prefer, people on ART could then be referred to peripheral points of care closer to their homes where they could be followed up. PLHIV on ART could then be referred back to provincial hospitals for periodic check-ups and in case of serious adverse events requiring regimen adjustments.

It is also important to closely monitor the required number of CD4 count and VL tests to be performed in the country, and the capacity of the current laboratory services. Similarly, the supply chain should be extended to points of care where the replenishment of prescriptions should be possible.

d. Self-help groups and peer counsellors

Self-help groups for PLHIV operate around the country. There are 14 groups in 12 provinces run by LaoPHA and some by the Lao Red Cross. These groups provide peer counselling, psychosocial support and education about treatment.

A group of community-based peer counsellors works in each ART centre. They are well integrated into the work of the centres, well respected by health staff, including doctors and others, and play an important role in providing counselling for people after they have been diagnosed as HIV positive, treatment information and support for adherence, and even in tracing people who are lost to follow-up. They operate as

[f] The review team was informed by the TB programme that the rate of HIV testing among newly enrolled TB patients in the first quarter of 2014 had increased to 70%. However, the team did not receive data supporting this assertion.

the centre's receptionists, take messages between health staff, deliverer blood samples to laboratories, prepare patient records before their next visit, and perform a range of tasks in the inpatient wards.

They also refer patients to self-help groups if requested, and sometimes go with them to their first self-help group meetings. The doctor met by review team reported that these peer counsellors are essential to the work of the centre. No resources are provided for peer support for adherence outside the ART centres; thus, follow-up and family support are limited.

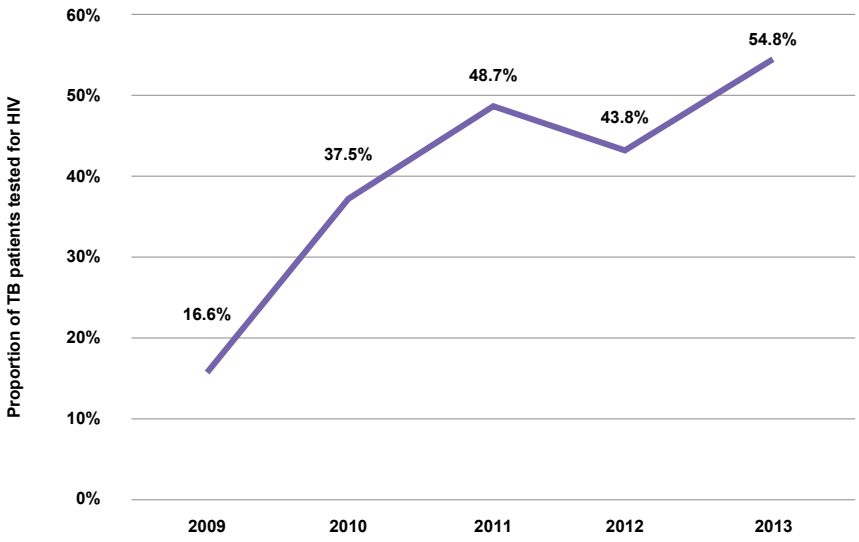
TB/HIV

a. Service delivery

Strengthening TB/HIV collaborative activities is one of the top three strategic priorities in the National TB Strategic Plan (NTSP). The National Technical Coordinating Team for TB/HIV was established and an HIV/TB coinfection manual developed in 2011. TB screening of all HIV patients and HIV screening of all TB patients are recommended. HIV patients are screened for TB symptoms at every clinic visit. HIV testing for TB patients has increased over threefold during the past five years, but remained below 60% in 2013 (Figure 7).[g]

Coinfected patients are referred to either ART centres or TB clinics. However, there is no formal system to confirm patients' access to the respective treatment at present, as the HIV and TB programmes use different databases, patient tracking and information systems.

Figure 7. HIV testing among newly enrolled TB patients, 2009-2013



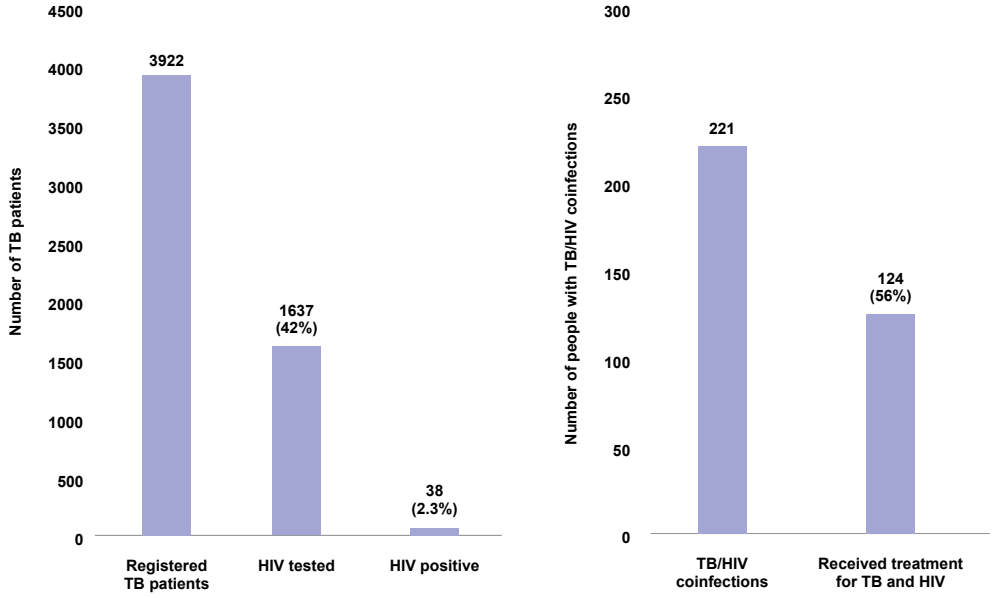
Source: CHAS 2014.

[g] The review team was informed by the TB programme that the rate of HIV testing among newly enrolled TB patients in the first quarter of 2014 had increased to 70%. However, the team did not receive data supporting this assertion.

b. TB/HIV cascade

Figure 8 shows the TB/HIV cascade for the year 2012. TB patients who were tested for HIV after the confirmation of a diagnosis of TB are presented in the left-side figure in order to examine the practice of HIV screening at TB clinics. As shown here, 42% of TB patients were tested; among them, 2.3% were HIV positive. This underscores the imperative need to offer dual HIV and TB diagnoses to all patients identified with one or the other condition. A total of 221 TB/HIV coinfections were identified (i.e. TB patients diagnosed with HIV and PLHIV diagnosed with TB) in 2012, of which 56% were reported to have been enrolled in treatment for both TB and HIV. Efforts are clearly leading to good results, but they should be reinforced to further improve the coverage of HIV/TB treatment. It is also urgent to ensure sharing of patient management information between the TB and the HIV programmes. The use of a single universal code/identifier described earlier in this report may facilitate linking between the TB and HIV datasets, and patient monitoring methods and tools favoured by each of the two programmes.

Figure 8. TB/HIV cascade, 2012



TB tuberculosis

Source: National Tuberculosis Control Programme (NTCP), Country progress report, 2014

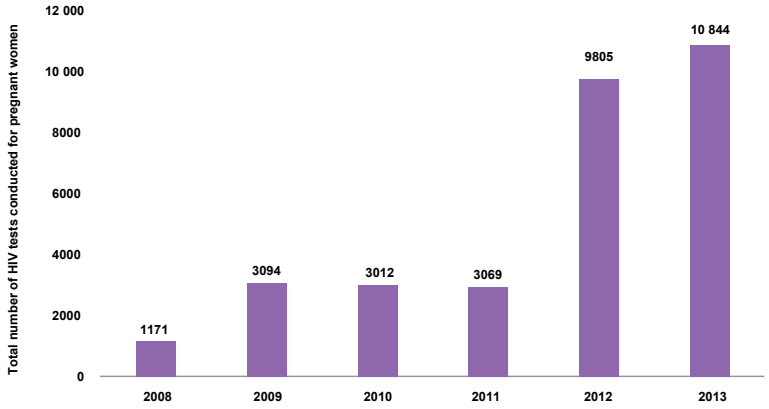
PMTCT

a. Current status

PMTCT is one of the specific outcomes of the National Strategy and Action Plan on HIV/AIDS/STI 2011–2015 with a target of providing PITC to 50% of antenatal care (ANC) attendees and ARV prophylaxis to 90% of those identified as being HIV positive. *(2)* In 2012, 16% of HIV-infected pregnant women received ARVs, 10.7% of exposed infants received ARVs and 39.6% of exposed infants were estimated to be infected.

The country has decided to implement PMTCT in a phased manner, with phase 1 (2013–2015) prioritizing four provinces (Vientiane City, Savannakhet, Champassak, Luang Prabang) with a target of 80% PITC coverage for all pregnant women who access ANC. Since 2013, the Maternal and Child Health Centre (MCHC) is leading PMTCT activities in collaboration with CHAS.

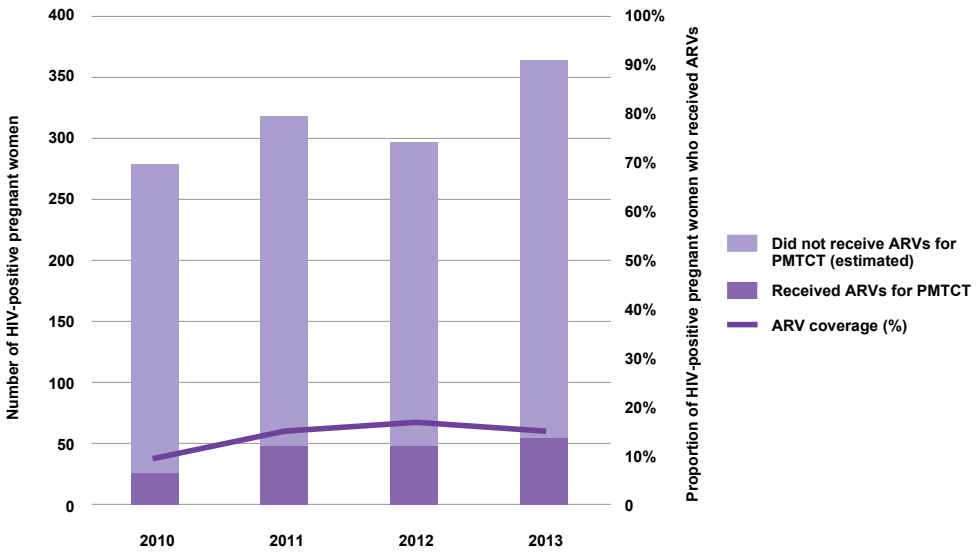
Figure 9. HIV testing among pregnant women, 2008 - 2013



Source: CHAS, 2014.

While a significant increase in the number of HIV tests among pregnant women was observed since 2012 (Figure 9), only a small proportion of HIV-positive pregnant women received ARV prophylaxis for PMTCT (Figure 10).

Figure 10. HIV-positive pregnant women who received ARVs for PMTCT, 2010-2013



ARV antiretroviral (drug), PMTCT prevention of mother-to-child transmission of HIV

Source: CHAS, 2014.

b. Service delivery and coordination

HIV testing is offered at ANC clinics to pregnant women and their partners. Once diagnosed, women are referred to ART centres where ARVs are provided for both mothers and infants, and HIV diagnosis is conducted for exposed infants. The review

team felt that the current service delivery model is feasible and, at present, the provision of ARVs for HIV-positive women should be the responsibility of ART centres due to the limited capacity of maternal and child health (MCH) clinics.

Although only limited data are available, some women were lost between HIV diagnosis and ARV prophylaxis. For example, among six HIV-positive pregnant women identified at the MCH clinic of Savannakhet provincial hospital from January to July 2014, only three reached the ART clinic to receive ARV prophylaxis/treatment. As discussed earlier in section 4.2, there is a need to improve linkages between HIV diagnosis and enrolment into care and treatment.

As PMTCT services will be provided by both MCH and ART clinics under the MCHC and CHAS, a National Technical Coordinating Team should be established and standard operating procedures developed to strengthen linkages and collaboration between the two implementing entities. The forthcoming National Maternal, Neonatal and Child Health (MNCH) Strategy should also incorporate PMTCT, in particular, the provision of testing and treatment for HIV as well as for syphilis.

c. Expansion of PMTCT services

The current approach of targeting four provinces based on the exercise which examined the cost and impact of PMTCT services in different scenarios,[h] *(15,16)* seems feasible, given the low HIV prevalence in other provinces. Further expansion should take into account the availability of ART services in the area. As the country expands HIV testing for pregnant women at ANC, provision of syphilis screening should also be considered as a means to further improve the quality of MCH care. Partner testing is already implemented in some facilities and should be further promoted, which could be one of the entry points to HIV care for the male population.

Synthesis

The review team observed two main gaps in the care and treatment cascade as well as the TB/HIV and PMTCT cascade: a gap in identifying PLHIV through HIV testing, and a gap in enrolling identified PLHIV to care and treatment. Addressing these gaps in the next few years would be a priority for the country.

a. Gap in identifying PLHIV through HIV testing

Although HIV testing has been significantly expanded, efforts should continue. Over 160 sites in the country have the capacity to provide HIV testing, and the unit cost for HIV testing was estimated to be as low as US$ 3 in 2012. (*17)* The issues to be addressed are to encourage people to access testing, provide opportunities for testing, strengthen procurement and supply chain management, and revitalize testing sites that are currently not functional.

While strengthening the provision of HIV testing in the country, geographical prioritization of activities would help improve its efficiency. As PMTCT services are provided in a phased manner by first focusing on provinces with a higher HIV prevalence and then expanding to other provinces, HIV testing for other population groups could also focus on these provinces first and intensify activities related to HIV testing.

[h] Cost estimation of PMTCT programme in four selected provinces (CHAS 2013) – presentation at the Eleventh International Congress on AIDS in Asia and the Pacific, 18–22 November 2013, Bangkok, Thailand

b. Gap in enrolling identified PLHIV in care and treatment

Having linkages between HIV diagnosis and enrolment in care and treatment is very important for improving the health of PLHIV as well as preventing HIV transmission. Besides, based on the unit cost estimates from 2012, *(1)* the estimated cost of identifying one PLHIV is between US$ 130 and US$ 1034 with the current HIV prevalence in the country, which could imply that the loss between diagnosis and treatment will diminish the impact of investment in HIV testing.

Urgent efforts are needed to improve the linkages between HIV testing, ARV prophylaxis and treatment. In addition to the referral slip currently given to patients, other means to follow and support their access to care and treatment are needed, which may include a system for health workers to follow referral cases more systematically within health facilities, districts and provinces with support from hospitals, District Committee for the Control of AIDS (DCCA), and PCCA.

Recommendations for HIV testing, care and treatment including PMTCT

The present review team supports the recommendations resulting from the external programme review of the national HIV programme in 2012, in addition to the specific issues described below.

A. HIV testing and laboratory services

- HIV testing should be expanded with a special focus on four priority provinces for those in need, including KPs and pregnant women.
- The quality control system of HIV-related laboratory tests, including HIV rapid test, CD4 cell count and VL, should be expanded and monitored at the national level.
- The current two HIV tests strategy should be re-examined, as well as the re-testing policy for those diagnosed HIV positive.
- The volume of CD4 count and VL tests in the country should be monitored, and a future plan, including procurement and maintenance of equipment, should be developed.

B. Care and treatment

- National treatment guidelines should be revised as soon as possible based on the WHO 2013 guidelines. A shift to eligibility criteria of CD4 cell count of <500 cells/mm^3 and use of tenofovir (TDF) + lamivudine (3TC) (or emtricitabine [FTC]) + efavirenz (EFV) as a fixed-dose combination should be considered. Streamlining of regimens would improve clinical care as well as forecasting and stock management, and contribute to cost saving. Projection, forecasting and costing of care and treatment should be a part of the new guidelines.
- A national committee (or technical working group) for care and treatment should be established to monitor and supervise care and treatment in the country as well as to develop/update national guidelines.
- The Department of Health Care should be actively involved in HIV care and treatment, and should lead care and treatment activities in terms of monitoring and supervision, and training, with support from CHAS.
- As one of the means to decentralize services, a service delivery model whereby provincial hospitals initiate treatment and district hospitals/points of care follow up on stable patients should be piloted, especially for provinces with a

Recommendations for HIV testing, care and treatment including PMTCT (continued)

high volume of patients. Savannakhet Province could pilot this model for two to four district hospitals.

C. TB/HIV

- CHAS and the TB programme leaderships should further increase their collaboration towards the implementation of common activities, such as the development and periodic updating of standard operating procedures, planning, supervision, management of staff turnover, and reviews from the central to the grass-roots levels.
- With specific reference to HIV testing of TB patients, the following is recommended:
  - Ensure the availability of HIV testing for TB patients at the district level.
  - Scale up, after a short assessment of the pilot, isoniazid preventive therapy to include all HIV-positive patients.
  - Strengthen timely coordination between the HIV, TB and MCH programmes on the quantification, distribution and consumption of HIV tests.
  - Implement the WHO recommendation on the use of Gene-Xpert for testing HIV-positive patients with symptoms suggestive of TB.

D. PMTCT

- The country should set a target for and engage more actively in the elimination of mother-to-child transmission of HIV and syphilis, in line with the regional initiative on dual elimination. (*18*)
- A national technical coordinating team for PMTCT should be established, composed of representatives of CHAS, MCHC and other stakeholders. Standard operating procedures or protocols for PMTCT services should be developed.
- A shift from Option B (i.e. ARVs for women living with HIV during pregnancy and breastfeeding) to Option B+ (i.e. lifelong ART for all pregnant and breastfeeding women living with HIV) should be considered, as it would further benefit the health of women in their subsequent pregnancies as well as their serodiscordant partners, when such is the case.
- Follow-up of mother–baby pairs and early infant diagnosis should be strengthened.
- The reproductive health of women living with HIV should be enhanced by making contraceptive options available and accessible, and enhancing the reproductive choices of women living with HIV.

3. HIV and the health sector reform

Background

The Lao People's Democratic Republic has embarked on an ambitious health sector reform (HSR) programme to achieve universal health coverage (UHC) by the year 2025. The initial phase (2013–2015) aims to achieve the Millennium Development Goals (MDGs); the second phase (2016–2020) aims to improve access to basic health care and financial protection; and the third phase (2021–2025) aims to achieve UHC.

The HSR also falls within the national party policy and PM Ordinance 16 of the "Three Builds" or three pillars objective of strengthening local service delivery, with the provincial level as the strategic unit, the district level as the strengthening unit and the village as the development unit.

The HSR aims to achieve affordable, reliable and accessible health services for the whole population, and has identified five priority areas (pillars) for doing so:

- Priority Area 1: Human resources for health – having skilled health workers at different types of health facilities, including a skilled birth attendant/community midwife at the health centre level;
- Priority Area 2: Health financing – secure sufficient financial resources for the provision of basic health services with a focus on free MNCH/under-5 services; common social protection for selected groups and eventually covering 90% of the population; collective out-of-pocket expenditure of less than 40% of the total health expenditure; and health expenditure efficiently managed and monitored;
- Priority Area 3: Governance, management and coordination – having a strong mechanism and structure for sectorwide, result-oriented management of HSR in place with clear roles and responsibilities defined, as well as appropriate regulation, supervision, monitoring and decision-making processes in place; and performance-based funding mechanisms introduced;
- Priority Area 4: Service delivery – provide integrated MNCH and other public health services of a sufficient standard of quality, which leads to the increased use of facilities;
- Priority Area 5: Health information system (HIS) – with proper data management, use and an information technology (IT) system in place, using a set of standardized national indicators to enable timely and accurate decision-making.

The next section will use this five-pillar HSR approach to describe the issues in the respective HSS areas of the HIV/AIDS (and other disease/public health) programmes, and suggestions for recommendations and actions. The HSR brings in its trail several strengths and opportunities for the creation of synergies across the health sector. It should be designed in a way and along a time line that does not result in adverse impacts on programmes, such as the response to HIV, which has progressed until now as a discreet entity spearheaded by the MoH. A succinct analysis of the strengths, weaknesses, opportunities and threats is presented in Box 2.

To be noted is that the recommendations from the 2012 external HIV/AIDS programme review remain valid, and what has been described below builds on those and is primarily meant to be considered as a potential input into the development of the separate HSS grant under the new funding model of the Global Fund. As this new HSS grant proposes to cover the three diseases (i.e. HIV, TB and malaria) and be aligned with the Vaccine Alliance (GAVI)/HSS grant under the coordination and leadership of the HSR Secretariat, it is anticipated that it will lead to convergence of approaches and sharing of resources (as there is both an internal and external push to do more with less resources), and eventually allow for mainstreaming of the disease programmes in general health service provision.

Box 2. HIV, HSS and HSR

An analysis of the strengths, weaknesses, opportunities and threats (SWOT)

Background:

The Lao People's Democratic Republic has received HSS support from the Global Fund since 2006 (Round 6/Malaria: 2006 and Round 8/HIV: 2009) and from GAVI since 2011. HSS support was primarily concentrated on improving procurement and

Box 2. HV, HSS and HSR (cont.)

distribution processes as well as facilitating an integrated approach for quality primary care and referral services. The review of 2012 pointed to other HSS areas that continue to be challenges to the implementation of HIV / AIDS programmes as well as the other Global Fund-supported diseases. Most of the issues found at the time are still relevant and the recommendations remain valid. However, for the purpose of this review, this section will review HSS issues using WHO's HSS building blocks and aligning them with the current HSR framework in the Lao People's Democratic Republic to ensure a more comprehensive and focused approach.

An overall SWOT analysis was undertaken[i] using current reviews of the three programmes (TB – 2013, HIV / AIDS – 2012, Malaria – 2013) to ensure synergy of HSS approaches across the disease programmes to enable a common approach in the future under the HSR initiative.

Strengths:

- Global Fund investments have scaled up responses to the three diseases, which included improvements in human resources development, information and logistic systems.
- Global Fund investments have helped to extend the network of facilities delivering care at the local level, thereby increasing access for patients.
- Counterpart funding has been made available to support the Global Fund programmes.
- There is greater understanding of the integrated nature of services to be provided to patients, especially in hospitals.

Weaknesses:

- Vertical approaches continue and there is weak integration with the general health system; there is a lack of synergy in supervision, diagnosis and treatment.
- HSS is seen as a separate "foreign body" in the overall Global Fund support; it is seen as a separate project with its own objectives, not related to the disease programmes.
- There are supply chain deficiencies, leading to stock-outs of key drugs and supplies.
- There is insufficient human resource development, especially at the local levels, both in terms of number of people as well as in terms of skill sets, with the latter not addressing the key prevention and care issues of the programmes.
- National strategic information continues to be missing; information is primarily collected to satisfy the global indicator requirements to ensure continuation of funding. Very few programme data are available to assist programme decisions (such as procurement at the right time) in a timely manner.
- Over time, HSS support has not been extended to ensure greater participation of the civil society and / or the private sector.
- Overhead / management costs are relatively high.
- There is a discrepancy between the concentration of the disease burden and the programme area, e.g. the HIV / AIDS burden is reported to be more urban based while HSS activities were carried out in the 47 poorest districts. And

[i] Global Fund/Country Coordination Mechanism discussion in April 2014 on whether to have a separate HSS grant supporting the three disease programmes

Box 2. HV, HSS and HSR (cont.)

while they were needed there, they may not have addressed the disease burden in urban areas.

Opportunities:

- The new HSR framework provides an anchor for cross-cutting HSS support, which would strengthen capacities and systems not only for disease programmes but also for the rest of the health sector.
- The allocation of new personnel to rural areas allows for an improved point-of-care and referral system.
- Implementation of components of HSS support from development partner-proposed programmes under an overall sector support approach allows greater synergy, efficiencies and sustainability of support.
- Decree 349 allows for the retention and use of locally raised funding to support incentive schemes at the local level.
- Prioritizing key populations and key geographical areas may see a rapid improvement in health outcomes and national indicators.

Threats:

- If not guided properly by the HSR and a detailed implementation plan, the HSS support may still be seen as an alien project.
- Fiscal space reduction and opaque decentralized budget and planning processes may lead to recentralization and limit resource availability at the local levels.
- The Government may therefore be unable to commit to the additional "willingness to pay" incentive provision by the Global Fund under the new funding model.

HRH

There continues to be a proliferation of uncoordinated training without clear outcomes undertaken by various programme stakeholders. Similarly, incentive schemes are opaque both at the operational and management levels, and not linked to performance. In addition, little use is made of community structures to support peer education, identify those at risk and follow-up treatment. *(1)*

As part of the development of the next health sector strategic plan 2016–2020, a detailed national capacity development plan may need to be developed, which addresses disease burden, and regional and technical focus areas to eventually improve service delivery. With the expansion of the workforce, this may include both formal training programmes as well as practical on-the-job training through supportive supervisory mechanisms.

Health financing

The current funding landscape sees that the Global Fund is still the major funder for the HIV / AIDS programme. In 2012, the Global Fund provided 72% of the funding, other donors 13% (mostly for operational expenses) and the government 15%; the latter mostly through human resource deployment and programme management.[j] Under the new funding model,

[j] National AIDS Spending Assessment

there is an opportunity for the government to get an additional incentive grant by indicating a higher "willingness to pay" contribution; they will have to commit to a co-payment of US$ 2.8 million for three years. However, from the current available expenditure and budget forecast analysis,[k] there is decreasing fiscal space for the government in the coming years (at least until 2018) to support recurrent costs due to decreasing donor support, national tax income and increase of the wage bill due to recruitment/conversion of additional health staff (4000 total in 2014), and therefore this may be unlikely to be approved by the National Assembly. With the vertical implementation of the programme leading to separate human resource development, support supervision, logistics and monitoring and evaluation (M&E) systems, as well as huge programme management costs, opportunities for internal efficiencies get lost. This applies to all vertical programmes.

The review team was informed by CHAS and other stakeholders that there is an increase in stock control, but at the same time, lack of timely reporting of inventories and incorrect forecasting have led to expiration of ARVs and drugs for opportunistic infections (OIs) to the tune of US$ 200 000. Similarly, the absence of a supplies distribution plan has led to overstocking in some areas and lack of supplies in other areas; this has particularly affected the availability and use of testing kits. Without the ability to properly forecast needs of commodities, including test kits and drugs, and to monitor consumption, there continues to be wastage and emergency procurement of commodities.

Governance, management and coordination

There are five main players in the HIV/AIDS programme arena: CHAS, the Global Fund PR, MoH, provincial health departments and service delivery sites. There is overlap and duplication of the roles of the three central agencies, while the roles at the national and local levels are also not clearly defined. Policy/strategy development, oversight, technical support and implementation functions need to be clearly delineated between the players. For example, procurement and M&E functions should be mainstreamed into the MoH to ensure capacity-building in the ministry. The procurement function is currently shared between CHAS, PR and MoH (Medical Procurement and Supplies Centre, MPSC), with technical assistance from the Clinton Health Access Initiative (CHAI).

Meanwhile, similar functions are also carried out by the other vertical programmes, which face similar challenges. There is no central coordination or oversight mechanism to facilitate the streamlining of generic functions. This could possibly be the role of the HSR Secretariat or the Sectorwide Coordination Mechanism; Global Fund programmes have up to now operated outside of the mechanism.

Service delivery

Currently, HIV/AIDS services are provided through drop-in centres and health facilities (over 160 VCTs and nine ARV sites) where HIV/AIDS as well as (in theory) STI prevention and treatment activities are carried out. When a patient gets diagnosed, she/he will be referred to, and receive treatment from, the ARV centre which, being based in a provincial/regional centre, may be far away for continuation of treatment, leading to poor compliance, drop-out and eventually unnecessary morbidity and mortality. Testing for syphilis is not systematically performed at ANCs but it should be, both as a means to improve MCH and as a national contribution to the elimination of congenital syphilis, to which Member States of the WHO Region for the Western Pacific have committed themselves. A new action plan for reproductive, maternal and neonatal health is currently being formulated. It should include specific activities related to syphilis (which the previous iteration of the action plan did) and HIV (which it did not).

[k] WHO internal briefing paper, UNICEF and World Bank presentation during Health Partners meeting in May 2014

The integration of services for TB coinfection or PMTCT is reported to be gradually improving, using the available guidelines. Yet, the sequence of counselling, testing, treatment and follow-up imposes on (ARV) staff a heavy and constantly expanding work burden. Considering the increase in the number of PLHIV referred for treatment as a result of improved HTC coverage and the possible change in the CD4 threshold for eligibility from <350 to <500 cells/mm^3, it is urgent to undertake a planned decentralization of points of care from provincial and satellite centres to district-level points of care. To this end, national and provincial authorities should set criteria for determining strategically where and when points of care should be created. The implications of such decentralization should be carefully considered when elaborating provincial plans, from the perspective of functionality of the infrastructure, catchment population, task description, expected patient load, available human resources, skills, funds, M&E and supply chain.

HIS

An M&E system was created by CHAS two years ago and has become operational fairly rapidly. The review team was favourably impressed by the amount and the increasing quality of data collected, presented and analysed. Even then, the dataset assembled by CHAS remains rather limited, leading to many national indicators not being reported on as part of the Global AIDS Response Progress Reporting (GARPR) indicators. Second, the existence of different information systems has led to duplication of information, though invariably used for different purposes by different stakeholders (CHAS, PR, MoH, hospitals). This includes the existence of different software tools, of which some of are proprietary and require substantial investment and recurrent costs. CHAS currently uses two different softwares, one for prevention, the other for care and treatment. Third, critical information on stock control and different regimens has been hard to obtain to ensure appropriate forecasting of commodities. CHAI has newly assigned a staff person to Vientiane to improve the Lao MoH supply chain management for commodities brought in under the Global Fund and other related sources. It plans to introduce a new software (m-Supply) specifically for this purpose. The integrated M&E system as proposed in the HIV M&E action plan for 2011–2015 has yet to see full implementation of all its components, as per the existing standard operating procedures. While M&E (human resources and functional) capacity may have been increased at the national level, this is rarely the case at the provincial level or below, where there are few staff and M&E functions get shared among the personnel, with limited or no special training until recently.

This is about to change. The e-Department of MoH is currently adapting the District Health Information System (DHIS2) developed by the University of Oslo, Norway. Core teams of HIS users and trainers have benefited from four consecutive workshops to introduce DHIS2. Training has begun for eight provinces and it is anticipated that all 18 provinces in the country will have benefited from such training. The DHIS2 software is described as very versatile and user-friendly. It can accommodate modules on specific health programmes and has already done so for TB and malaria; an HIV/AIDS module exists but is not operational in the Lao People's Democratic Republic. Data from other disease programmes for 2007–2013 have already been entered in the database, and it is expected that the new system will be able to generate the data needed by November 2015 to report on progress towards the MDGs. There is no immediate plan on the part of CHAS to integrate the HIV reporting system with the DHIS2 system. It is to be noted that HIV data are reported through parallel channels. For example, the tracking of ARVs and condoms is reported directly by provinces to the Global Fund PR. Other data are reported to and through CHAS. The private sector does not participate in the reporting to CHAS.

Recommendations for health systems

A. Human resources for health

- Following a focused national operational HIV/AIDS plan, a training plan (and appropriate curricula) that addresses the needs and demands of the staff in the (technical and geographical) focus areas should be developed; taking into account the deployment of additional staff in the coming years, and the increased demands of prevention and care activities following the change in CD4 count criterion for initiating treatment. This also includes possible (re)training of selected staff to enable them to implement the national TB/HIV coinfection, STI and PMTCT guidelines.
- An incentive scheme should be linked to overall performance of the programme, and linked to the collection of national programme data. It should be developed at the local level, which allows for facility performance assessment (e.g. people counselled, tested, treated and followed up) as the basis for the incentive. This could be applied to the other disease and public health programmes as well.
- A more comprehensive community systems strengthening programme should be developed, which includes capacity development of a more formal community health worker cadre, which could take the lead in peer education, identification of those at risk, treatment follow-up (e.g. drug compliance monitoring), as well as link up with the services provided by the local chapters of the Lao People's Democratic Republic Women and Youth Unions, and other civil society organizations.

B. Health financing

- There is a need to increase the funding landscape for the HIV/AIDS programme (and for the other Global Fund-supported diseases). At the same time, domestic funding should be increased to cover the operational expenses of the programme. This could partially be achieved through integrating functions and activities with other programmes in the MoH and at the local level. The increase in funding could be through increased ring-fencing of central government funding from income from natural resources (hydropower and mining), and increased tax revenues. Ring-fencing could also happen at the local level in key affected provinces and districts not only through local tax revenues but also through ensuring that district grant allocations additionally cover operational expenses of the HIV/AIDS (and other vertical) programme(s). This needs to be reflected in the national and local sector plans and budget forecasts.
- An internal programme expenditure audit should be conducted across all Global Health Initiative (GHI) programmes being implemented in the Lao People's Democratic Republic to determine the potential for sharing of resources, creating internal savings and efficiencies, and reducing programme management costs.
- A separate programme should be developed to strengthen capacities and systems for procurement supply management. Apart from rolling out inventory and forecasting software, this would also mean physically training store/warehouse keepers in inventory and distribution management, especially when the supply chain gets extended to include (key) districts.

C. Governance, management and coordination

- A detailed roadmap/implementation plan should be developed to restructure the governance structure of the HIV/AIDS programme (and other GHI-supported programmes such as GAVI) in line with the HSR

Recommendations for health systems (continued)

framework as well as the new (to be developed) Health Sector Strategic Plan 2016–2020. This requires clear role delineation between existing structures and levels, minimization of overlap in functions, and (over time) mainstreaming of generic functions, such as procurement, training and supervision, and HISs into the MoH.

- The HSR Secretariat should be in charge of the Global Fund/HSS grant (possibly also the GAVI/HSS grant) to ensure mainstreaming of individual programmes and capacity development for generic functions in the MoH.

D. Service delivery

- The number of so-called "points of care" should be increased at district level and below (in high-burden areas) to bring services closer to patients and to spread the work burden. As this requires substantial training of current staff and/or allocation of appropriately trained additional staff, this should be done in a phased manner. It should also be complemented by allocating the right equipment and supplies to those points of care (expanding the supply chain).
- PMTCT services should be included as a standard part of the ANC service delivery package (free MNCH services package); this will require an increase in voluntary HIV testing at ANC clinics and systematic testing for syphilis, with appropriate treatment when the results are positive.
- The TB/HIV coinfection and STI guidelines should be implemented in all/selected (as indicated) health facilities as per the national guidelines; this may require additional focused training as reported under the Human resources for health section.
- The "minimum requirements", the tool for assuring basic quality services of the district hospitals and district health offices (supported under the current Global Fund/HSS grant), should be shared with all health facilities that are providing HIV/AIDS services.
- The Health Care Department should be further strengthened/facilitated to enable the integration of Global Health Initiatives in the mainstream of health services; this includes the dissemination of integrated support supervision guidelines, the quality of care standards, and standards of best prevention and care practices.

E. HIS

- The M&E action plan (*19*) should be fully implemented, but in line with a possible revised governance (role delineation) structure as proposed under the governance, management and coordination section.
- Development should be considered of a separate HIV/AIDS (or other disease) programme module under the national health management information system (HMIS) using the DHIS2 software, which is open source and can be adapted to existing forms as presently used by the disease programmes. This could even include the development of an inventory control management module.
- Data should be collected as per the GARPR indicator set to enable timely monitoring and evidence-based decision-making.
- A national capacity development plan should be formulated to not only collect data but also to analyse and use data for planning, implementation, monitoring and management decision-making at different levels. Again, this should be part of the national training plan as proposed under the human resources for health section.

4. Summary and conclusions

In the Lao People's Democratic Republic, HIV primarily affects KPs in large urban areas, particularly in provinces situated along the Mekong River and the border with Thailand. The review team concludes that the decision made under the National Strategy and Action Plan on HIV/AIDS/STI, 2011–2015 to prioritize KPs and selected geographical areas was appropriate. The National Strategy proposed to invest in limited ways in all provinces but to focus attention and resources primarily to Vientiane Capital City, and the provinces of Vientiane, Savannakhet, Champassak, Luang Prabang and Khammouane. Document analysis, interviews and observations led the review team to the conclusion that within these priority provinces, large urban areas should receive the utmost priority as the density of KPs in these areas was noted to be considerably higher than that in rural areas.

The review team concluded that the reach of prevention interventions varies, with fair-to-good coverage in the main cities and priority provinces, and with some room for improvement in the area of peer education. Although HIV testing has been expanded, there are clear gaps in identifying PLHIV through HIV testing and in enroling identified PLHIV in care and treatment. These gaps need be fixed, including through: the expansion of voluntary HIV testing; systematic referral of newly diagnosed PLHIV to care; improvement of the quality and sustainability of services; and demand creation for HIV testing and care. The review team also found that it has become critical to incorporate the HIV response more closely within efforts being deployed by the MoH to strengthen health systems under the ongoing HSR programme.

The review team formulated a set of recommendations, several of which reiterate the recommendations expressed by the external review in 2012 and by the review of the epidemiological status and trends and impact of HIV in July 2014. These appear throughout the report, while key action points for implementing these recommendations appear in Annex 4 of this report.

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Annexes

Annex 1 Review focus and schedule

Team structure	Group A Policy and strategy	Group B Prevention and peer education	Group C Key populations	Group D Care and treatment	Group E Health systems
Scope of review	Governance, leadership and partnerships Information analysis and dissemination in macro system Technical management capacity Policy and law Gender and human rights, stigma and discrimination	Health sector-based prevention (vulnerable people – migrants, young people, prisoners, population in closed-setting populations) HIV testing and counselling, sexually transmitted infection Hepatitis Barriers to prevention and referral	Key population mapping – men who have sex with men, female sex workers, People who inject drugs, Transgender people, rehabilitation centres Geographical reach Participation of key populations Community-based prevention and care Barriers to access and use of testing and counselling services	Antiretroviral therapy coverage – adults and children HIV testing and counselling – referral system Coinfection (HIV/ tuberculosis/ hepatitis) Procurement, supply chain management Prevention of mother-to-child transmission Barriers to access, enrolment and adherence Cascade of care services	Human resources Strategic information Structures and services Financing Overall management Linkages to other health sectors Seeking synergies and efficiencies

Date	Activity
28/07/2014 (Mon)	Preparation – choice of methods, drafting of tools (indicators)
29/07/2014 (Tue)	Consolidation of methods and tools, and formal meeting with CHAS
30/07/2014 (Wed)	Visit of Vientiane Capital City
31/07/2014 (Thu)	Field visit
01/08/2014 (Fri)	Field visit
02/08/2014 (Sat)	Consolidation of findings in Vientiane
03/08/2014 (Sun)	Report drafting
04/08/2014 (Mon)	First draft
05/08/2014 (Tue)	Draft discussed with CHAS
06/08/2014 (Wed)	Consolidated draft
07/08/2014 (Thu)	Dissemination meeting
08/08/2014 (Fri)	Further discussion and report writing
09/08/2014 (Sat)	Team departs

Annex 2 Persons met by members of the external review team and members of the WHO support team

Group A: Daniel Tarantola, review team leader, WHO Consultant; Dominique Ricard, Medical Officer, WHO Vientiane; Beuang Vangvan, CHAS; (joined in some meetings by Sjoerd Postma, review team member, WHO Regional Office for the Western Pacific, Manila; Jun Gao, WHO Vientiane; and Thipphasone Vixaysouk, WHO National Medical Officer)

Name	Position	Organization
Bounkong Sihavong	Vice-Minister of Health	Ministry of Health, Vientiane
Som Ock Kingsada	Vice-Minister of Health	Ministry of Health, Vientiane
Chanphomma Vongsamphanh	Director, Department of Health Care	Ministry of Health, Vientiane
Vanliem Bouaravong	Vice-President for International Coordination	University of Health Sciences, Vientiane
Lytou Boouapao	Vice-Minister of Education and Sport	Ministry of Education and Sport, Vientiane
Bounlay Phommasack	Director of Communicable Disease Control	Ministry of Health, Vientiane
Bounpheng Philavong	Director of the Centre for HIV/AIDS and STI	Ministry of Health, Vientiane
Pascal Verhoeven	Adviser to Primary Recipient of the Global Fund	

Group B: Zhao Pengfei, WHO Regional Office for the Western Pacific, Manila, review team member; Mathida Thongseng, CHAS; Chanthasouk Bansalith, WHO National Programme Officer, Vientiane

Name	Position	Organization
Ya Phoummano	Physician	Lao Youth Clinic
Sila Phommalack	Nurse	Lao Youth Clinic
Oloth	Project Officer	UNFPA
Vanxay Sengpanya	Chief of Nursing, Coordinator of HIV/AIDS	109, Military Hospital
Khamkong Sengpanya	Nurse, Coordinator Assistant of HIV/AIDS	109, Military Hospital
Chansamone Chittakone	Deputy Director	Chanthabouly District Hospital
Souphalack Bounsome	PCCA Technical Staff	Vientiane Capital Health Department
Manivanh Vongsiha	Nurse, Coordinator of HIV/AIDS	Chanthabouly District Hospital
Vanh Phienthonglane	Nurse	Chanthabouly District Hospital
Thipphasone Phimmasone	Deputy Director of ARV Centre	Champasack Provincial Hospital
Xaykesone Vixay	DCCA	Pathoumphone District Hospital
Phonesamay Phommavong	Nurse	Pathoumphone District Hospital
Khampheun Saiyasack	Director	Champassak Military Provincial Hospital

Name	Position	Organization
Keooudone Saiyasack	Coordinator of HIV/AIDS	Champassak Military Provincial Hospital
Chansamone Chaleunnit	PCCA	Champassak Health Department
Lathsamy Siphanh	PCCA	Champassak Health Department
Khampho Chaleunvong	Director	Champassak Health Department
Somkhiet Volarath	Deputy Director	109, Military Hospital
9 MSM	Target group	LaoPHA Office, Champassak Province
7 PLHIV	Target group	LaoPHA Office, Champassak Province
Thipphasone Phimmasone	Deputy Director of ARV Centre	Champasack Provincial Hospital
Xaykesone Vixay	DCCA	Pathoumphone District Hospital
Phonesamay Phommavong	Nurse	Pathoumphone District Hospital
Khampheun Saiyasack	Director	Champassak Military Provincial Hospital
Vongphouthone	Physician	Drop-in centre, Champassak Province
6 FSWs	Target group	Drop-in centre, Champassak Province

DCCA District Committee for the Control of AIDS, FSW female sex worker, MSM men who have sex with men, PCCA Provincial Committee for the Control of AIDS, PLHIV people living with HIV, UNFPA United Nations Population Fund

Group C: Bruce Parnell, WHO consultant (Burnet Institute); Bouathong Simanovong, CHAS Vice Chief of M&E unit; Thipphasone Vixaysouk, WHO National Programme Officer

Name	Position	Organization
Projects for people who inject drugs:		
Irene Lorete	Technical adviser to ADB HIV project for people who inject drugs	Asian Development Bank
Soulivanh Phengxay	National Programme Officer	UNODC
PCCA drop-in centres, Vientiane Capital City:		
Chansamone Sengthavong	Coordinator, FSW drop-in centre	PCCA Vientiane Capital – FSW drop-in centre
Souphalak Bounsomh	Technical Officer	PCCA Vientiane Capital – VCT
Keolord Thammavong	Medical assistant, PCCA Vientiane Capital City	Vientiane Capital City
Keo Vongdala	Permanent peer, FSW drop-in centre	Vientiane Capital City – FSW drop-in centre

Name	Position	Organization
Community organizations		
Sihamano Bannavong	Global Fund Coordinator	PSI
Santi Douangpraseuth	Director	PEDA
Sengphet Thabandith	M&E Officer	LaoPHA
Lithsouvan Phoutthavong	Project Assistant	NCCA
Setthathirath ARV site:		
Ton (TG)	HIV peer counsellor	LaoPHA
Noi (MSM)	HIV peer counsellor	PSI
Souban	HIV peer counsellor	PSI
Bounthan	HIV peer counsellor	PSI
PSI drop-in centres for TG and MSM: Vientiane Capital City and Luang Prabang:		
Somphone	Manager	PSI drop-in centres, Luang Prabang
Vilaseuth (MSM)	Manager	PSI drop-in centres, Vientiane Capital
Souphalak Bounsom	Technical Officer	PCCA Vientiane Capital
Lisa	Laboratory Technician	PSI drop-in centres laboratory
Ya	Outreach Worker (OW)	PSI MSM programme
Khom	OW/VCT Counsellor	PSI MSM programme
Noy	OW	PSI MSM programme
Gai	OW	PSI MSM programme
FAM	OW	PSI MSM programme
Goy	OW	PSI MSM programme
Anoulak	OW	PSI MSM Luang Prabang
Simphaly	OW	PSI MSM Luang Prabang
Luang Prabang Health department:		
Thongsawath Xaiyasanh	PCCA Manager	PCCA Luang Prabang
Khamphiew Kounlavouth	Medical assistant, drop-in centres manager	PCCA – FSW drop-in centre
Latsamy	Permanent peer	PCCA – FSW drop-in centre
Si-Amone	Permanent peer	PCCA – FSW drop-in centre
ARV site Luang Prabang:		
Phichith	Chief of ARV site	ARV site, Luang Prabang
Sengchan	Medical Assistant, Deputy Chief of ARV site	ARV site, Luang Prabang
Somchan	Head Nurse	ARV site, Luang Prabang
Boun-Aly	Pharmacist	ARV site, Luang Prabang
Thongvanh	Vice-Chief of self-help group Luang Prabang and NCCA provincial facilitator	ARV site, Luang Prabang
Phengsy Sililath	PLHIV peer counsellor	ARV site, Luang Prabang
Phonsaysack Chanthamath	PLHIV peer counsellor	ARV site, Luang Prabang

Name	Position	Organization
Centre for HIV/AIDS and STI (CHAS):		
Bouathong Simanovong	Vice-chief of M&E	CHAS
Khanthanouvieng	Chief of management of AIDS and STI unit	CHAS
Southaphone Chittaphong	M&E unit	CHAS
PCCA Vientiane Capital:		
Xaiyavong Douangmany	Manager	PCCA, Vientiane Capital
Khamsouk Keovilaythong	MSM OW	PCCA, Vientiane Capital
Thanongsack Phouangkeo	MSM OW	PCCA, Vientiane Capital

ADB Asian Development Bank, ARV antiretroviral (drug) , CHAS Centre for HIV/AIDS and STI, FSW female sex worker, LAOPHA Lao Positive Health Association, MSM men who have sex with men, M&E monitoring and evaluation, NCCA National Committee for the Control of AIDS, OI opportunistic infection, PCCA Provincial Committee for the Control of AIDS, PEDA Promotion for Education and Development Association, PLHIV people living with HIV, PSI Population Services International, TG transgender people, UNODC United Nations Office on Drugs and Crime, VCT voluntary counselling and testing

Group D: Naoko Ishikawa, WHO Regional Office for the Western Pacific, Manila; Dr Panina Phoumsavanh, CHAS; and Dr Chintana Somkhane, WHO National Programme Officer

Name	Position	Organization
Panina Phoumsavanh	Chief of Administrative Unit	CHAS
Virasack Somoulay	Technical Officer	National Center of Laboratory and Epidemiology
Phuttalee Keomoukda	Deputy Chief of IEC Unit	CHAS
Philavanh Sitpounlang	Research Assistant	Centre of Infectiology Christophe Merieux of Laos
Khamphun Inthalangsi	Technical Officer	Maternal and Child Health Centre
Saysavath Chanthavong	Technical Officer	Vientiane Capital Health Department
Kongkham Sayalath	Technical Officer	National Tuberculosis Centre
Khanthanouvieng	Chief of Management of AIDS and STI	CHAS
Hapheng Phoummalath	Director of District Hospital	Sikhottabong District Hospital
Phissamay Manilat	Chief of ANC	Sikhottabong District Hospital
Khamhieng phetchalern	Nurse	Sikhottabong District Hospital
Khamphang Soulinphoumee	Chief of ART Ward	Provincial Hospital of Savannakhet Province
Atsaline Prasomsouk	Deputy Chief of ART Ward	Provincial Hospital of Savannakhet Province
Phonthong Bounkeo (MA)	Clinician	Provincial Hospital of Savannakhet Province
Mangkhala Rasaphon	Pharmacist	Provincial Hospital of Savannakhet Province
Kongchai Xayalat	Pharmacist	Provincial Hospital of Savannakhet Province
Aenoi	Self-help group	Provincial Hospital of Savannakhet Province
Bounpheng	Self-help group	Provincial Hospital of Savannakhet Province

Name	Position	Organization
Seng Sisomphone	Self-help group	Provincial Hospital of Savannakhet Province
Bounhong Sengaloun	Director of District Health Department	District Health Department of Outhoumphone District
Khampoy Sisombath	Director of District Hospital	District Health Department of Outhoumphone District
Nokaliya Chanthalangsi	Nurse	District Health Department of Outhoumphone District
Seng Ma	Laboratory Technician	District Health Department of Outhoumphone District
Panom Phongmany	Director General	Provincial Health Department of Savannakhet
Ketsaphone Ngathivong	Provincial Committee for the Control of AIDS	Provincial Health Department of Savannakhet
Bounlat Sourinphone	Provincial TB Coordinator	Provincial Health Department of Savannakhet
Phetsamay Champathilat	Technical Officer	Provincial Health Department of Savannakhet
Monemanee	Clinician at TB Ward	Provincial Hospital of Savannakhet Province
Bouangeun	Clinician at ANC Ward	Provincial Hospital of Savannakhet Province
Bouakhai	Medical Assistant, ANC Ward	Provincial Hospital of Savannakhet Province
Novachaky	Clinician, Labour Room	Provincial Hospital of Savannakhet Province
Phitsamay	Technical Officer	
Somsanok	Chief of Health Center	Phonesim Health Center
Thantavan	Nurse	Phonesim Health Center
Nitnoi	Medical Assistant	Phonesim Health Center
Viengvilat Vongphuckdee	Nurse	TB ward, Mahosot Hospital
Thonglay Vongphachanh	Chief of Infectious Disease for Paediatric Care	Mahosot Hospital
Keomanee Chanmala	Technical Officer, Infectious Disease for Paediatric Care	Mahosot Hospital
Phimmasone Sirimanothum	Deputy Chief of ANC Ward	Mahosot Hospital
Pankham Vongkheo	Clinician, ART Ward	Mahosot Hospital
Chanpheng Banchit	Chief of Labour Room	Mahosot Hospital
Sisouphan Vidamalee	Deputy Chief of Lung Ward	Mahosot Hospital
Inpan Phouangsouphun	Deputy Chief of Paediatric Ward	Mahosot Hospital

ANC antenatal care, ART antiretroviral therapy, CHAS Centre for HIV/AIDS and STI, IEC information, education and communication

Annex 3 Summary slides for dissemination workshop

External Review of Selected aspects of the Health Sector Response to HIV in the Lao People Democratic Republic

28 July-6 August, 2014

The Review Team wishes to express its gratitude to the Lao Centre for HIV/AIDS and STI (CHAS) for the information and support it contributed to this review. It also thanks other local and external partners in the national response to HIV for their contribution.

Objectives of this review

- Builds on the 2012 Health Sector Response to HIV in Lao PDR
- Explores three specific sets of issues:
  - (1) Efficiency, effectiveness and impact of **Peer-education** with emphasis on Key Populations;
  - (2) Coverage, timeliness, quality and equity of access to **care and treatment of HIV**, from HIV Testing and Counselling to enrolment in HIV care and treatment and in the context of the prevention of Mother-to-Child Transmission of HIV (**PMTCT**); and
  - (3) Opportunities for Health Systems Strengthening (HSS) under the planned **National Health Sector Reform**.

Cascade of HIV prevention, care and treatment, Lao PDR, 2013

Which groups are priorities?

- MSM, TG, SW: continue in priority provinces where there are larger urban areas: Vientiane Capital, Vientiane Province, Luang Prabang, Khammouane, Champassak, Savannakhet.
- People who inject drugs: pilot project in Houaihpanh and Phongsaly.
  - Do not expand until this is demonstrated to work
- Track HIV prevalence in other provinces so that changes in risk are identified
- Not enough prevention for these groups:
  - Men who have sex with men and women and who will not visit Drop In Centres
  - Young men who will start to mix soon with MSM and TG
  - Young women who might soon be encouraged to do sex work
  - Prisoners and drug users in Rehabilitation Centres.

Part 1. Key populations and other vulnerable groups

- Key populations are sex workers, men who have sex with men, transgender people and people who inject drugs
- Sexual behaviour drives the epidemic, with some injecting drug use in some provinces
- National Strategy on HIV aims to scale up to reach 60-80% of key populations, and 90% of people living with HIV who need treatment receive treatment
- Prevention reach is good in main cities and priority provinces, but HIV testing rates are low
- Ethnic groups, migrants: at risk when they engage in sex, not because of who they are. ADB Project is working on this in 8 provinces
- People who return from work in Thailand: at risk because Thailand has HIV, but mostly among key populations

Strengths of peer work

- Drop In Centres for TG (PSI, LaoPHA): 9 provinces
- Drop In Centres for SW (PCCA): 4 provinces
- Outreach for SW (PSI, NCA)
- Outreach Workers → train peers → reach key populations: SW, MSM: PEDA, NCA, PCCA
- Stigma and Discrimination is minimal in the community
  - But problems in health services apart from VCT and ARV Centres
  - Some clients, some men, are difficult for SW and TG
- ARV Centres: Peer Counsellors
  - Reception, counselling, client follow up, care, record keeping, assist ARV Centre medical staff
  - Follow up when requested with families, people from other provinces
- Self Help Groups for people living with HIV
  - Support, information, adherence support

Gaps

- Pre Exposure Prophylaxis (PrEP):
  - Working group considering this should continue
  - Do not introduce this immediately (costs, education, procurement, monitoring)
- Mobile and internet technologies:
  - Not being used effectively: also needs working group
- Prisoners and Rehab Centres:
  - Start in Vientiane, MOH and prison authority to work together
  - Some prisoners do visit ARV centres with prison staff
  - HIV: Provider initiated counseling and testing (stable prevalence)
- HIV testing: partners of people living with HIV

Weaknesses of peer work

- Related health needs undermine HIV prevention and treatment:
  - Sexual and Reproductive Health for Sex Workers
  - Sexual and Reproductive Health for men who have sex with both men and women
  - Mental health is not addressed well for any key populations
  - Transgender people do not have access to health support about gender options

Recommendations for change

- Coordination, shared learning and quality control
- HIV Testing: needs to be easier, needs to be promoted more
- Referral to VCT: collect data on how many are referred, tested, know results and if found positive do visit ARV Centres

Main recommendation:
Re-orient prevention to include the role of ART in prevention:

- Treatment Literacy in communities:
  - Treatment works: they do not all believe this. More AIDS will be prevented if more people are tested and treated
  - Treatment helps prevention: not talked about at all. More HIV will be prevented if more people are tested and treated

Part 2.
Care and treatment

Findings

HIV testing

•Number of testing sites have increased to 165 by 2013; approximately 40,000 HIV tests are conducted every year

•Quality control – EQA in place, IQC planned but not fully implemented

•There is a continued problem of stock-out of HIV test kits at facilities

•Referral from HIV diagnosis to care and treatment needs to be improved

Care and Treatment

•PLHIV are reaching care and treatment earlier (mean initial CD4 = 335)

•Quality of care and treatment is satisfactory – regular clinical/laboratory monitoring

•ARV stock-out (especially pediatric ARVs) is reported frequently

•ARV regimens – 17 regimens used regimens used as 1st line including d4T based regimens

Findings

TB/HIV

•Coverage of HIV testing for TB patients has been increasing

•Shortage of HIV test kits (including chase buffer for Determine rapid test) reported

PMTCT

•HIV testing for pregnant women and partners is increasing

•Follow up of HIV positive pregnant women and exposed infants is limited

Overall

•Two main gaps in care and treatment cascade (including TB/HIV and PMTCT)

- Identifying PLHIV through HIV testing
- Enrolling identified PLHIV to care and treatment

Recommendations

HIV testing

•Continue to strengthen HIV testing with more emphasis for 4 provinces with higher prevalence.

•Supply chain management of HIV test kits and coordination between HIV and TB sections should be improved.

•Quality control system of HIV-related laboratory tests, including HIV rapid test, CD4 cell count and VL should be expanded and CHAS made aware of overall national and peripheral laboratory performances.

•HIV Testing algorithm should be re-examined including possible use of ELISA for high volume of tests.

Care and treatment

•Treatment guidelines should be revised based on WHO 2013 guidelines as soon as possible. Projection, forecasting and costing of care and treatment should inform the development of guidelines.

Recommendations

Care and Treatment (cont'd)

•National technical working group for care and treatment should be established to monitor and supervise care and treatment as well as to develop/update national guidelines.

•A system to enhance linkages from HIV testing to care treatment and keep PLHIV in care should be strengthened.

•As one of the means to decentralize services, a service delivery model of provincial hospital to initiate treatment and district hospital to follow up stable patients should be piloted, especially for provinces with high volume of patients.

•Department of Health Care (DHC) should be actively involved in HIV care and treatment and leads care and treatment activities in terms of monitoring , supervision, and trainings.

Recommendations

PMTCT

•Set a target for the elimination of mother-to-child transmission of HIV and syphilis.

•The national technical coordinating team for PMTCT to be established and standard operating procedure (SOP) or protocol for PMTCT services should be developed.

•Shift from Option B to Option B+ should be considered, which will further benefit health of women and their subsequent pregnancies as well as their serodiscordant partners.

•Reproductive health of women living with HIV should be enhanced including making contraceptive options available and accessible.

Part 3.
The Health Sector Response to HIV and the Health Sector Reform (HSR) in Lao PDR

The HSR builds on 5 pillars:

- Priority Area 1: Human Resources for Health;
- Priority Area 2: Health Financing
- Priority Area 3: Governance, Management and Coordination
- Priority Area 4: Service Delivery
- Priority Area 5: Health Information System.

1. Human Resources for Health

- ❖ proliferation of uncoordinated training
- ❖ Likely revision of norms and standards (e.g. HIV ART eligibility, task shifting)
- ❖ Disseminating the 2016-2020 HIV strategy, updated Standard Operating Procedures, and HSR implementation guidelines
  - ➢ Develop a training plan taking into account the deployment of additional staff in the coming years. This also includes possible (re)training of selected staff on TB/HIV co-infection, STI and PMTCT. Arrange for on-site and distance mentoring .
  - ➢ Phase-out individual incentive scheme and develop and implement a facility-based incentive scheme. Provide management incentives linked to Health Information System performances.
  - ➢ Develop capacity of a cadre of Community Health Workers contributing to HIV prevention, care and treatment adherence, and more in other health priority areas.

2. Health financing

- ❖ GFTAM the major funder to HIV (72% of budget in 2012; GoL 15%);
- ❖ Shrinking fiscal space in 2014 onwards due to shortfall in GoL revenues
- ❖ Problems with delayed disbursements, slow procurement and forecasting and monitoring of the supply chain need be fixed
  - ➢ Integrate functions of HIV and other priority health programmes with other health sector functions;
  - ➢ "Ring-fencing" budget allocations to HIV and other priority health programmes; increasing domestic financing of operational cost from tax revenue on national and provincial levels
  - ➢ Conduct an internal audit of priority health programs (including HIV, TB, Malaria, GAVI, MCH) to create savings and efficiencies and reduce management costs.
  - ➢ Develop a targeted programme to improve procurement and supply management chain and enhance managerial capacity along the chain.

3. Governance, Management and Coordination

- Many players in HIV and other priority health programmes with unclear divison of roles in Policy/strategy development, oversight, technical support and implementation functions.
- No effective central coordination or oversight mechanism to facilitate the streamlining of those generic functions

  - develop a detailed roadmap/implementation plan to restructure the governance structure of the HIV/AIDS (and other Global Health Initiative supported programmes) in line with the HSR framework as well as the new (to be developed) Health Sector Strategic Plan 2016-2020.
  - Mainstream generic functions, such as procurement, training and supervision and Health Information System into the MoH
  - Strengthen the role of the HSR Secretariat and the Sector-wide Coordination Mechanism (SWCM) with pooled support from all Global Health Initiatives (Including GAVI)

4. Service Delivery

- Expanding the proportion of PLHIV brought to treatment centres is a priority
- This, in addition to change in eligibility criteria (CD4 count <500/ml would increase eligible population by 50% in 2015)
- Overload of certain ART centre (e.g. Savanakhet)
- Need to reduce geographic barriers to access to treatment

  - Open/strengthen "Points of Care" for HIV where ART can be monitored and ARVs replenished after initial clinical assessment and prescription at the Provincial level. Set criteria for capacitating PoC.
  - Include PMTCT as standard MCH practice
  - Adhere more closely to TB/HIV guidelines
  - Disseminate and apply 'Minimum Requirements', the tool for assuring basic quality services of the district hospitals and district health offices (supported under the current HSS grant), with all health facilities that are providing HIV/AIDS service
  - Bring Health Care Department and PCCA more centrally in implementation and norm setting for HIV (HIV/ART Committee to set standard regimens and care practices)

5. Health Information System

- **The CHAS M&E function has been marked by very significant progress in past couple of years**
- The integrated M&E system as proposed in the M&E action plan 2011-2015 still has to see full implementation
- Standard operating procedures are not systematically produced, disseminated and monitored
- Peripheral human and technical capacity is limited

  - Complete the full implementation of the M&E action plan as per the M&E Strategic Action Plan 2011-2015 but in line with a possible revised governance (role delineation under HSR), to be reflected in next HIV Strategic Plan 2016-2020.
  - Consider the development of a separate HIV/AIDS (or other disease) programme module under the national HMIS system using the DHIS2 software
  - start collecting data as per the GARP indicator set to enable timely monitoring and evidence-based decision-making
  - Formulate and implement a national capacity development plan (Nat, Prov, Dist) for decision making based on robust strategic information.

Thank you!

Annex 4 Key action points

I. Recommended action points: peer education

Recommendation	Action	Responsibility	Time frame
Geographical focus on key populations	**Prioritize geographical focus on key populations**: Continue existing drop-in centres and peer programmes. Ensure coverage of all key populations in all five priority provinces: Vientiane Capital City, Luang Prabang, Champassak, Khammouane and Savannakhet. Review gaps and include them in next national strategy. Seek additional funding for gaps.	CHAS and NGOs and PCCAs review gaps. CHAS and PR seek funding.	Q3/Q4 –2014
Expand prevention reach	**Intensify prevention to hard-to-reach key populations at higher risk of HIV – MSM, PWID, TG in particular.** **Expand prevention to subgroups of key populations with insufficient reach**: MSM who do not identify as gay, particularly bisexual men. Expand outreach to all districts of Vientiane Capital and at least two districts of each of the other priority provinces. Expand prevention to young people in key populations through existing drop-in centres and peer programmes.	CHAS, PCCAs, PR identify programmes and seek funding. CHAS, PCCAs, NGOs	Q3/Q4 – 2014 2016 2015 onwards
Quality of prevention	**Improve quality of prevention for key populations**: Meetings of educators to share lessons learnt. Include outreach workers and peers, not just managers. Problem-solving, not just teaching. Community groups as equal members of these meetings, not just invited to receive directions from CHAS and PCCAs.	CHAS and PCCAs to coordinate in each province. NGOs to participate.	Every six months, Q4 2014 onwards
HIV testing	**Promote voluntary HIV testing more vigorously:** Peer educators and drop-in centres to promote testing more vigorously. Commence with sharing ideas and experiences about what works. Each organization with peers or outreach workers to hold a discussion meeting on how to do this. Collate ideas and host a national planning meeting on how to promote community-based voluntary HIV testing. Monitor referrals and actual attendance at VCT sites. Develop ways to do this, teach community groups how to do it.	 Each organization with peers or outreach workers Pilot project of WHO and CDC to share lessons learnt CHAS CHAS M&E Unit to coordinate new methods of monitoring	 Q4, 2014 2015 Q2, 2015 Q2, 2015

Recommendation	Action	Responsibility	Timeframe
Treatment literacy	**Improve treatment literacy in key populations and the broader community:**		
	Revise the national policy to reinforce the awareness of key and other vulnerable populations about the benefits of ART for treatment and prevention.	CHAS, NCCA	Q4, 2014
	Develop a national campaign through collaboration with community groups.	CHAS, community groups, PCCAs	Q1, Q2, Q3 2015
	Introduce treatment literacy as the fifth topic for peer educators and outreach workers. Develop training modules to do this.	NGOs and PCCAs	Q1, Q2, Q3 2015
	Develop new reporting formats based on the new M&E guidelines.	CHAS M&E Unit	Q3 2015
Community empowerment and health	**Promote community empowerment, mental health, and sexual and reproductive health for key populations and people living with HIV**:		
	Meet to discuss how to introduce these aspects in training and practice.	CHAS, PCCAs, NGOs, MCH/FP, VCT providers	Q3 2015
	Develop guidelines and training.	CHAS, PCCAs, NGOs	Q4 2015
	Invite community organizations to join PCCAs.	CHAS, PCCAs	Q2 2015 onward
Technologies and social media	**Introduce mobile technologies and social media for HIV prevention, promotion of HIV testing, and treatment education and adherence**:		
	Learn about what is being used in other countries, develop guidelines for what can be used in the Lao People Democratic Republic and commence pilot projects.	CHAS, NGOs, Ministry of Information and Culture (MoIC)	2015
	Evaluate the impact of various methods and expand when identified as effective.	CHAS, MoIC, other partners	2016
PrEP for MSM and TG	**Prepare for gradual introduction of PrEP for MSM**:		
	Establish a working group. Consider lessons learnt in Thailand. Analyse costs and benefits, including cost of education, procurement, and training of health staff.	CHAS, NGOs, PCCAs, VCT and ARV providers	2015 establish working group.
	Evaluate the impact of programmes to promote treatment literacy, because PrEP will work only when this is strong.	CHAS, NGOs, PCCAs, VCT and ARV providers	Consider introducing PrEP only from 2016 onward.

ART antiretroviral therapy, ARV antiretroviral (drug) , CHAS Centre for HIV/AIDS and STI, M&E monitoring and evaluation, MCHC maternal and child health centre, MOH maternal and child health, MSM men who have sex with men, NGO nongovernmental organization, PCCA Provincial Committee for the Control of AIDS, PMTCT prevention of mother-to-child transmission, PR Principal Recipient (of funding from the Global Fund), PREP pre-exposure prophylaxis, PWID people who inject drugs, TG transgender people, VCT voluntary counselling and testing

II. Recommended action points: care, treatment and PMTCT

Recommendation	Action	Responsibility	Timeframe
General	Revise national guidelines for ART and PMTCT.	National Committee for Care and Treatment supported by CHAS and MCHC	Q4 2014–Q2 2015
	Develop an action plan to improve procurement and supply chain management for HIV test kits, ARVs, and other HIV-related commodities.	CHAS and MPSC	Q4 2014
HIV testing	Conduct IQC for HIV rapid tests in 20 pilot sites.	NCLE supported by CHAS	Q3/Q4 2014
	Re-examine the testing strategy and revise as necessary.	NCLE supported by CHAS	Q4 2014–Q2 2015
Care and treatment	Establish a National Committee for Care and Treatment.	CHAS and Department of Health Care, MoH	Q3/Q4 2014
	Pilot a decentralized model of care and treatment services in Savannakhet province.	Savannakhet provincial hospital supported by PCCA, CHAS and Department of Health Care, MoH	Q4 2014–Q4 2015
PMTCT	Set a target for elimination of mother-to-child transmission of HIV and syphilis.	MCHC and CHAS	Q4 2014
	Establish a National Technical Coordinating Team and develop standard operating procedures for PMTCT.	MCHC and CHAS	Q4 2014–Q1 2015
TB/HIV comorbidities	Increase collaboration between HIV and TB programmes for the implementation of common activities such as planning, supervision, management of staff turnover, reviews from central to grass-roots levels: 1. Make HIV testing for TB patients available at district level. After a short assessment, scale up the intervention to include all HIV-positive patients. 2. Strengthen timely coordination between the HIV, TB and MCH programmes on the quantification, distribution and consumption of HIV tests. 3. Implement the WHO recommendation on the use of Gene-Xpert for testing HIV-positive patients with symptoms suggestive of TB.	CHAS and TB Programme	

ART antiretroviral therapy, ARV antiretroviral (drug), CHAS Centre for HIV/AIDS and STI, IQC internal quality control, MCHC maternal and child health centre, MoH Ministry of Health, MPSC Medical Procurement and Supplies Centre (in MoH), NCLE National Center of Laboratory and Epidemiology, PCCA Provincial Committee for the Control of AIDS, PMTCT prevention of mother-to-child transmission, TB tuberculosis

III. Recommended action points: HIV, health systems strengthening and health sector reform

Section	Action	Responsibility	Timeframe
General	Develop comprehensive Global Fund and GAVI HSS proposals, taking into account this and earlier reviews, ensuring synergies between the various HSS components. As part of the HSS grant proposals, develop a detailed community system strengthening strategy.	HSR Secretariat, consultants and selected programme staff, supported by WHO Same as above, and selected civil society organizations	Q3/Q4 – 2014 Q3/Q4 – 2014
Human resources	Develop a long-term capacity development programme for health staff as part of the new Health Sector Strategic Plan 2016–2020	HRH TWG	2015
Health financing	Under the health care financing (HCF) strategy of the HSR programme, explore the possibility of incentive schemes for facility performance; to be implemented during phase 2 of the HSR.	Working group (UNDER HCF TWG OR HRH TWG) comprising at least HSR Secretariat, Department of Finance and Planning/ MoH, Ministries of Interior and Finance and selected development partners	2015 onwards
	Develop a medium expenditure framework reflecting government and development partners' sources as part of the new Health Sector Strategic Plan 2016–2020.	HSR Secretariat, HCF TWG	2015
	Use the data of the National Health Accounts survey to develop rational budgets for disease programmes, avoiding overlap/duplication of funding.	HCF TWG, Department of Finance and Planning	Q4/2014
	Agree on and rollout a standard inventory control and forecasting methodology and software.	CHAS, MoH/MPSC, PR, and CHAI	Q1/2 2015
Governance	Develop a detailed roadmap/ implementation plan to restructure the governance structure of the HIV/AIDS programme (and other Global Health Initiative-supported programmes)	HSR Secretariat, PR, Disease programme management	2015
Service delivery	Explore resource implications, capacity and system development, as well as a phased roadmap for increasing the number of "points of care" for the HIV/ AIDS programme.	CHAS, PR, MoH/Health Care Department	2015 exploration 2016 onwards roll-out
Health information	Complete the M&E Action Plan 2011–2015.	CHAS, PR, MoH/ M&E and Planning Department	As soon as possible
	If agreed, develop DHIS2 modules for disease programmes, reflecting data and information needs for all implementation and management levels.	M&E and Planning Department, and disease programme M&E units	2015

CHAI Clinton Health Access Initiative, CHAS Centre for HIV/AIDS and STI, DHIS2 district health information system 2, GAVI The Vaccine Alliance (formerly the Global Alliance for Vaccines and Immunization), HRH human resources for health, HSR health sector reform, HSS health systems strengthening, M&E monitoring and evaluation, MOH Ministry of Health, TWG technical working group

Annex 5 Annotated excerpts of the report on HIV epidemiological review and impact analysis

The findings and recommendation of the above report have been rearranged to fit the objectives and structure of the present health sector review report. To support the findings and recommendations arising from the above epidemiological review, data provided by the Monitoring and Evaluation Unit of the Lao Centre for HIV / AIDS and STI (CHAS) have been added in italics to the findings and recommendations in the form of brief commentaries.

Epidemiological patterns:

- Lao People's Democratic Republic is experiencing low-level HIV epidemics but has pockets of increasing prevalence, particularly among men who have sex with men (MSM) and transgender (TG) populations.
- Lao People's Democratic Republic remains a low HIV prevalence country at 0.29% in 2013, but slowly increasing trends are seen in some populations and geographical areas.
- Eighty-eight per cent of transmission *among all HIV-infected individuals notified during 1990–2013* was reportedly through heterosexual contact.
- **The sex distribution** of people living with HIV (PLHIV) is almost equal *(in 2013, 347 men and 332 women were newly diagnosed with HIV infection, an M:F ratio of 1.05)*, but female PLHIV are younger than male PLHIV. *(By 2013, the 15–29-year-old age group accounted for 28% of identified cumulative male PLHIV but 46% of female PLHIV.)*
- **Geographical distribution**: The majority of cases are identified in border provinces along the Mekong River, while migrants comprise the second highest proportion of cases. (Five provinces situated along the Mekong River contain 85% of all HIV cases reported in 1990–2013.)
- **Key populations (KPs)**:
  - ✓ Size estimates of KPs do not exist and estimates rely on modelling. *(In the absence of measured data, the application of an epidemic model assumed that 3% of the 15–49-year-old male population were MSM and that 0.8% of the female population in the same age group were or had been female sex workers (FSWs). Applying these rates to the 2013 Lao population suggested that, in that year, there were about **55 000 MSM** and **14 500 FSWs** in the country. Derived from the prevalence of injecting drug use in four districts bordering Viet Nam, the United Nations Office on Drugs and Crime (UNODC) estimates that there were around **8000 people who inject drugs (PWID)** (range 1500–29 000) in the whole country in 2014. While the present review team is unable to provide more robust estimates and accepts the use of the above figures for planning purposes, they wish to express their view, based on document reviews, integrated biological and behavioural survey (IBBS) reports and interviews, that these data probably result from an overestimation of the real situation in the country and encourage epidemiologists to further refine their assumptions and other variables fed into their KP size estimation models.)*
  - ✓ Coverage of prevention programmes among KPs remains at about 50%. *(Coverage by prevention services declined from 58% for MSM in Vientiane in 2007 and 55% for FSWs in 2011 to 36% and 38% for MSM and FSWs, respectively, in 2014, although these differentials are likely to have been induced by differences in sampling methods. The preliminary results of the 2014 IBBS conducted among FSWs and MSM in selected provinces confirm that prevention programmes are not progressing sufficiently in KPs.)*

  - **MSM:**
    - ✓ HIV prevalence among MSM appears stable *(5.6% in 2007 and 3.9% in 2014 in Vientiane; 0% in 2009 and 0.3% in 2014 in Luang Prabang)*. Given the small numbers and methodological differences, data supporting this assertion

remain insufficient but the sustained and relatively low rate of HIV infection among MSM is further supported by preliminary (although incompletely analysed at the time of releasing this report) results of the May 2014 IBBS.

- **TG:**
  - ✓ HIV prevalence in the self-identified TG population appears to be decreasing *(from 3.1% in 2010 to 2.4% in 2012 in Vientiane, and 1.1% to 0.7% in Savanakhet in the same period—confidence intervals are not available)*. However, rates are higher in TG who sell sex *(7% HIV prevalence in 2012)* than in any other KP.

- **FSWs:**
  - ✓ HIV prevalence in FSWs has overall been stable over the past 14 years, but has been increasing slightly in the past six years *(countrywide, from 0.5% in 2008 to 1.3% in the 2014 IBBS). The preliminary results of the May 2014 IBBS show that there are minor variations in HIV prevalence across FSW populations in different provinces, but that these rates remain within the band of confidence intervals of prevalence rates found in earlier surveys. What these results reveal, however, is that there remain severe gaps in prevention coverage, access to and use of condoms, and other safer sex practices among this population.*

- **Bisexual men**
  - ✓ Projections derived from modelling suggest that the greatest burden of new infections in 2015–2020 will be among MSM, while it is predicted to stabilize among FSWs. *The preliminary (although still partially exploited) results of the 2014 IBBS show that the prevalence rates of HIV among MSM have not increased significantly in recent years, remaining below 0.3% in pooled sample analysis.*
  - ✓ "Bisexual" men constitute a highly probable bridge population and projections suggest that the burden of HIV will increase in this group. *In 2007, the IBBS revealed that 57% of MSM reported having had sex with women in the past three months. Of the same population and for the same recall period, 30% reported having had a non-regular female sex partner and 17% having paid a woman for sex.*

- **PWID**
  - ✓ Injecting drug use is not perceived as a major source of HIV spread in the country. A small proportion of FSWs and MSM (around or below 1%, depending on the province) reported injecting drug use practices in the 2004 IBBS.
  - ✓ No HIV trend data exist for PWID but injecting drug use practices have been observed in the provinces bordering Viet Nam.

Availability and use of services:

- Proper condom use has not improved substantially among KPs. *By 2013, only 54% of estimated PLHIV had been diagnosed through HIV testing. This was further confirmed by the preliminary results of the May 2014 IBBS. Barriers to condom use reported in 2014 include lack of access to free condoms by FSWs and MSM, high rates of condom breakage, insurmountable resistance by clients to the use of condoms, clients' violent behaviours and irregular use of condoms with regular or non-regular sexual partners.*
- HIV testing has improved to narrow the gap between estimated PLHIV and those actually diagnosed. *However, overall, KPs still have low testing coverage, although the number of HIV testing sites increased from 17 in 2005 to 165 in 2013. Countrywide, close to 47 000 HIV tests were performed in 2011 (the largest number ever), which declined to 39 000 by 2013, reportedly due to shortage of test kits. The expansion of testing sites has been associated with hectic distribution of HIV testing kits, resulting in overstocking at some sites and stock-outs in others.*

- Although HIV testing coverage remains generally low, it has increased among MSM *(in Luang Prabang, as many as 85% of MSM and 51% of TG knew their HIV status in 2014, and among FSWs countrywide, 38% knew their HIV status in 2014, versus a mere 7% a decade earlier), but remained stable in the general population (below 5%) and very low in PWID (none in 2010). HIV testing coverage remains low in antenatal (ANC clinics): about 11 000 ANC clients – which accounts for about 5% of pregnant women annually in the country and about 15% of pregnant women attending ANC at least once during pregnancy in 2013 – were tested for HIV.*
- Loss to follow-up after HIV testing is high; almost a quarter of those tested were lost between a positive HIV test result and enrolment in care.
- ART coverage has steadily increased but still falls short of the needs. *Based on the CD4 eligibility criteria of <350 cells/mm^3 applied in the Lao People's Democratic Republic in August 2014, 55% of the estimated PLHIV needing ART are receiving it, while 10% of PLHIV on ART are lost to follow-up.*
- *Voluntary HIV testing and counselling of pregnant women and other components of prevention of mother-to-child transmission (PMTCT) remain low. Annually, over 200 000 deliveries occur in the Lao People's Democratic Republic but in 2011, only about 30% of the pregnant women attended ANC once in the course of pregnancy. Four provinces (Vientiane, Savannakhet, Champassak, Luang Prabang) were targeted for intensified PMTCT activities in 2014–2015, with gradual expansion to other provinces, with the aim of covering all of them by 2020. Once diagnosed with HIV infection, the reported coverage of eligible pregnant women with ART reached 85% and 100% in 2010 and 2012, respectively, but declined to 76% in 2013. This latter figure suggests that a mere 14% of all HIV-infected pregnant women actually receive ART. The coverage of treatment to their offspring is unknown.*
- HIV screening in patients with tuberculosis (TB) has expanded since 2009 but remains low. *(About 55% of TB patients were reportedly screened for HIV in 2013, but preliminary data for more recent reporting periods would indicate that this rate has increased significantly, and was perhaps as high as 70% as of mid-2014.)*
- The CD4+ count at identification of infection is increasing with time, showing earlier presentation of newly infected individuals. *Between 2003 and 2013, the mean CD4 count of newly diagnosed PLHIV rose from 161 to 335 cells/mm^3.*
- Viral load (VL) testing has improved in the past four years, with 89% of all people tested for VL found to be virologically suppressed. However, coverage gaps still exist and all PLHIV are not tested. *VL test results from repeatedly tested PLHIV without consideration of minimum recommended intervals (i.e. once after six months of ART and once every 12 months afterwards) are included in periodic reports, thereby affecting the overall trend analysis.*
- The fact that sex work remains illegal is just one of the several factors that hinder the building of sex worker networks. *The illegal status of sex work seems to be interpreted and enforced differently from one province to the next, with Luang Prabang regarded as the province with stricter enforcement of sex work control. However, nationwide, FSWs reported low levels of law enforcement concerning sex work and active discrimination against this population in the country.*
- The illegal nature of drug use creates obstacles to outreach to these communities and constrains their quest for prevention, HIV testing and treatment.

Outcomes and impact:

- HIV outcomes in the areas of knowledge, prevention coverage and condom use among FSWs has stagnated or decreased, while HIV prevalence has increased from 0.5% to 1.3%, *although the prevalence remains within confidence intervals.*
- By the end of 2013, 2598 adults and 189 children under 15 years of age were on ART. During that year, 350 men, 298 women (M:F ratio of 1.17) and 55 children <15 years of age had been newly enrolled in ART; and of the cohort of 2598 adults on ART, 27 men and 18 women had died.

- The decreasing trend in HIV-related mortality since 2010 can probably be credited to the increased number of people on ART in the past five years. *It is to be noted, however, that the reported mortality had begun to decline earlier, even though access to ART was minimal at that time.*
- Insufficient surveillance data exist to ascertain the HIV burden among MSM.

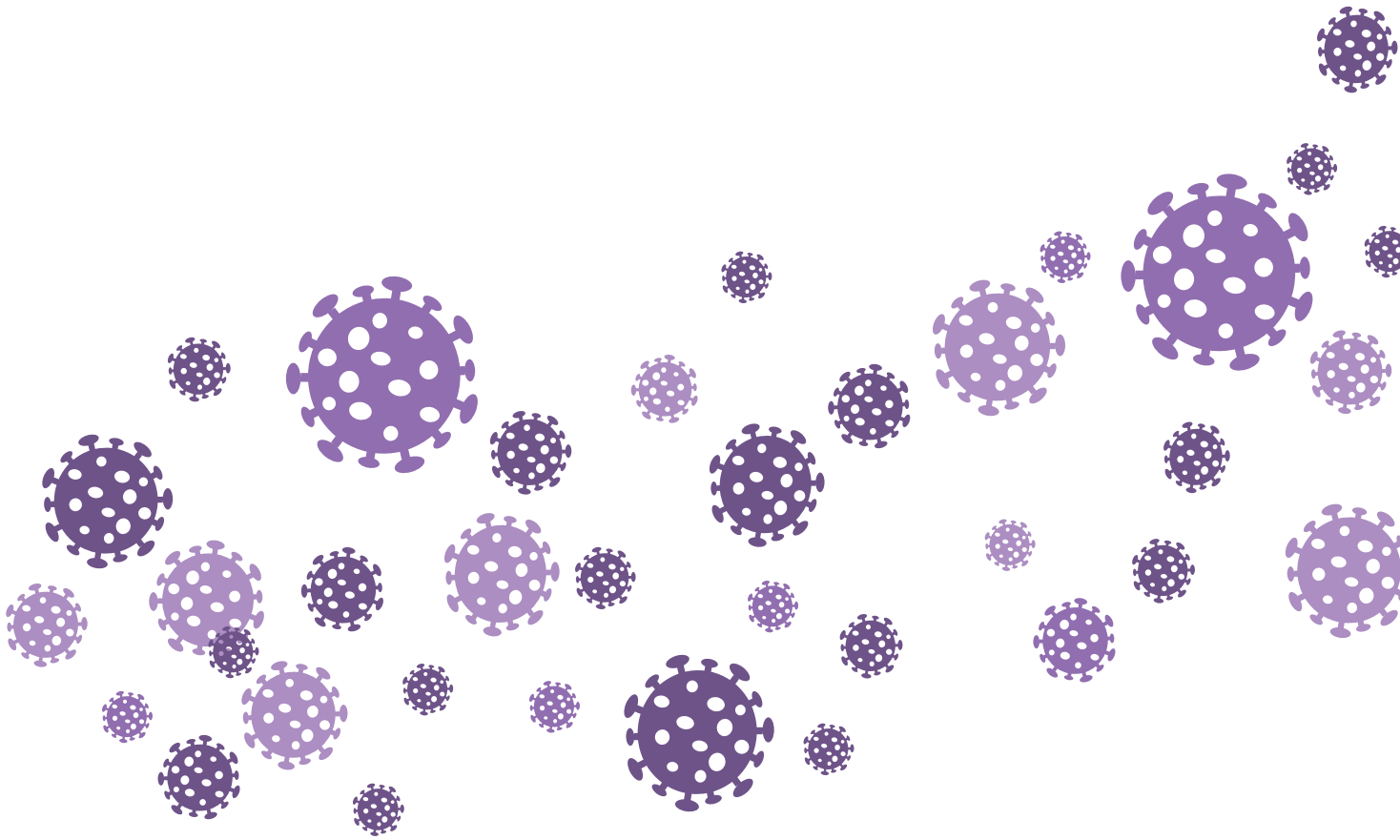
Based on the above analysis, the HIV epidemiological review and impact analysis team put forward the following recommendations:

- Strengthen the surveillance system by:
  - ✓ continuing the IBBS among FSWs and MSM every two to three years and expanding it to other groups where appropriate, such as PWID. Regular IBSS should be implemented among KPs with the same methods, incorporating variables that will enable estimation of population sizes;
  - ✓ investigating issues of migrant populations;
  - ✓ collecting and improving the quality of PMTCT data, which can be used as a proxy to monitor the epidemic among the general population;
  - ✓ increasing the completeness and timeliness of HIV and AIDS case surveillance, and linking with care and ART services;
  - ✓ improving existing vital statistics to obtain AIDS mortality data and monitor the impact of ART and other interventions;
  - ✓ improving data from ART clinics to develop and monitor the cascade of care; and
  - ✓ ensuring that HIVCAM (the national HIV data collection software) can be used as a tool for monitoring and analysis.

- Rapidly scale up intervention services to achieve enough coverage for impact, by:
  - ✓ defining and delivering effective preventive intervention services (including STI diagnosis and treatment) received by MSM, FSWs and clients;
  - ✓ developing a national sex worker network supported by CHAS, which could contribute significantly to the sustainability of peer education activities among sex workers;
  - ✓ addressing the high loss to follow-up;
  - ✓ targeting HIV testing by identifying most-at-risk individuals;
  - ✓ strengthening PMTCT coverage;
  - ✓ enhancing HIV/TB collaboration to improve HIV testing in TB patients;
  - ✓ ensuring linkages among different services, including those between nongovernmental organizations (NGOs) and health facilities, to address the bottlenecks in service delivery; and
  - ✓ targeting HIV prevention programmes for MSM, including bisexual men.

For more information, please contact:
WHO Western Pacific Regional Office
P.O. Box 2932
1000 Manila
Philippines
Email: hsi@wpro.who.int
http://www.wpro.who.int/hiv

HIV Hepatitis & STI



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