

HIV Programme Review in Armenia

March 2015

HIV Programme Review in Armenia

March 2015

Prepared by: Jeffrey V. Lazarus (WHO Collaborating Centre on HIV and Viral Hepatitis), Valerie Delpech (Public Health England), Anders Sönnnerborg (Karolinska Institute), Hernan Fuenzalida (The World Progress Center, Inc), Emilis Subata (WHO Collaborating Centre on Harm Reduction)

Abstract

This WHO country mission conducted in January 2015 aimed to review five key components of the HIV/AIDS programme in Armenia: epidemiology; the HIV surveillance system; HIV treatment and care along the cascade of services; HIV services for key populations; and service delivery models for populations affected by the HIV epidemic from the perspective of the health system.

Armenia has a low HIV prevalence overall with a concentrated epidemic specifically affecting people who inject drugs, migrant workers, men who have sex with men, and sex workers. According to 2014 data, an estimated 4,000 people are living with HIV in the country of whom fewer than two out of five are aware of their status and only one-third are linked to care.

HIV and AIDS services are centralized at the National Centre for AIDS Prevention in the capital of the country and a key overarching recommendation for the country is to carefully fully or partially decentralize aspects of HIV prevention, treatment and care to reach those most in need including targeted testing to reach those unaware of their status. As a part of this process, additional training for health care providers as well as non-governmental organizations is needed and both stigma and discrimination will need to be addressed among health care providers and the general populations. Additional recommendations are made in this report for the rationalization of antiretroviral therapy regimens; expanded testing; the increased provision of opioid substitution therapy, and government supported needle and syringe programmes for people who inject drugs.

Keywords

AIDS – prevention & control

HARM REDUCTION

HEALTH SYSTEMS

HIV INFECTIONS – drug therapy, prevention & control

Address requests about publications of the WHO Regional Office for Europe to:

Publications

WHO Regional Office for Europe

UN City, Marmorvej 51

DK-2100 Copenhagen Ø, Denmark

Alternatively, complete an online request form for documentation, health information, or for permission to quote or translate, on the Regional Office website

(<http://www.euro.who.int/pubrequest>).

© **World Health Organization 2015** All rights reserved. The Regional Office for Europe of the World Health Organization welcomes requests for permission to reproduce or translate its publications, in part or in full. The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement. The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by the World Health Organization in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters. All reasonable precautions have been taken by the World Health Organization to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either express or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall the World Health Organization be liable for damages arising from its use. The views expressed by authors, editors, or expert groups do not necessarily represent the decisions or the stated policy of the World Health Organization.

Table of Contents

- 1. Executive Summary1
- 2. Introduction4
 - 2.1 The HIV epidemic in Armenia: latest trends and figures 4
 - 2.2 Testing and late diagnosis 7
 - 2.3 Treatment and care 7
 - 2.4 HIV testing and care of HIV-infected pregnant women..... 9
 - 2.5 Coinfection, TB 9
 - 2.6 Coinfection, viral hepatitis 10
 - 2.7 Sexually transmitted infections (STIs) 10
 - 2.8 HIV and TB services for prisoners 10
 - 2.9 Investments in the national HIV/AIDS response 11
- 3. Purpose and objectives12
- 4. Methods12
- 5. Strengths and achievements12
- 6. Weaknesses and challenges16
 - Priority Area 1: Increase HIV diagnosis and enrolment into care of key populations, including season workers (labor migrants)..... 16
 - Priority Area 2: Employ a public health approach in delivering ART and HIV care 17
 - Priority Area 3: Optimize service delivery, including integration of services and continuum of care 18
 - Priority Area 4: Scale up harm reduction services for PWID, including OST 20
 - Priority Area 5: Improve strategic information, including HIV surveillance and monitoring of HIV patients 23
- 7. Cross-cutting issues24
 - 7.1 Sustainability 24
 - 7.4 Human rights and legislation..... 24
- 8. Main recommendations25
- References30
- Annex 1. Terms of Reference.....32
- Annex 2. Mission programme37

Abbreviations

3TC	lamivudine
ABC	abacavir
AIDS	acquired immunodeficiency syndrome
APEC	“AIDS Prevention, Education, Care” NGO
ATV/r	atazanavir/ritonavir
ART	antiretroviral therapy
ARV	antiretroviral
CD4	T-lymphocyte cell bearing CD4 receptor
DRV/r	Darunavir/ritonavir
EFV	efavirenz
FTC	emtricitabine
GRT	genotypic resistance testing
HBV	Hepatitis B virus
HCV	Hepatitis C virus
HIV	human immunodeficiency virus
ID	infectious diseases
LPV/r	lopinavir/ritonavir,
MARP	most-at-risk population
M&E	monitoring and evaluation
MoF	Ministry of Finance
MoH	Ministry of Health
MSM	men who have sex with men
NCAP	National Centre for AIDS Prevention (Armenia)
NGO	nongovernmental organization
NNRTI	non-nucleoside reverse transcriptase inhibitors
NSP	needle and syringe programme
NTC	National TB Control Centre
NVP	nevirapine
OST	opioid substitution therapy
OW	outreach workers
PLHIV	people living with HIV
PMTCT	prevention of mother-to-child transmission (of HIV)
PI/r	protease inhibitor/ritonavir
PWID	people who inject drugs
RAL	raltegravir
RNC	Republican Narcological Centre
SHA	State Health Agency
SW	sex worker
TB	tuberculosis
TDF	tenofovir
VCT	voluntary counselling and testing
ZDV	zidovudine
UNAIDS	Joint United Nations programme on HIV/AIDS
WHO	World Health Organization

1. Executive Summary

This WHO mission to Armenia, conducted in January 2015, aimed to review five key components of the HIV/AIDS programme: epidemiology; the HIV surveillance system; HIV treatment and care along the cascade of services; HIV services for key populations; and service delivery models for populations affected by the HIV epidemic from the perspective of the health system.

Armenia has a low HIV prevalence overall with an epidemic specifically affecting migrant (seasonal) workers, people who inject drugs, , men who have sex with men (MSM) and sex workers (SW) – with some of these categories overlapping and the largest reported mode of transmission being heterosexual contact. The National AIDS Programme has remarkable achievements: national HIV/AIDS legislation is consistent with the international guidelines on HIV/AIDS and human rights; antiretroviral therapy (ART) is provided to all registered patients, who are eligible and gave consent to receive it; since 2007 no case of HIV infection has been registered among children born to HIV-positive mothers who received prevention of HIV mother-to-child services; no case of HIV transmission through donated blood has been registered since 2001; HIV surveillance has improved; HIV prevalence rate among all most-at-risk populations has decreased and does not exceed 5% in any group. However, the number of newly HIV registered cases grows annually (from 67 in 2006 up to 238 in 2013), indicating insufficient coverage with some essential interventions.

According to 2014 data, an estimated 4,000 people are living with HIV in the country of whom fewer than two out of five are aware of their status and only one-third are linked to care. This poses a major challenge to the health system in general and HIV prevention, treatment and care specifically.

The findings from the mission are divided into five main priority areas:

- Increase diagnosis and enrolment into care of key populations, including seasonal workers
- Employ the public health approach in delivering ART
- Optimize service delivery, including integration of services and continuum of care
- Scale up harm reduction for PWID, including OST
- Improve strategic information, including HIV surveillance and monitoring of HIV patients

The main recommendations from the mission are listed below.

Main recommendations: Priority area 1: Increase diagnosis and enrolment into care of key populations, including seasonal workers

- Scale up community based rapid testing significantly for key populations including PWID, MSM, SW as well as seasonal workers, who work abroad.
- Introduce HIV rapid testing (capillary) for key populations in all narcology centres, at all NSP sites, all TB clinics/hospitals, all community-based organizations (CBOs)/ nongovernmental organizations (NGOs) who have contact with key populations, at gay venues, at all sexually transmitted infection (STI) clinics, mobile testing sites, and in all prisons and detention centres.

- Support the licensing of NGOs for performing HIV rapid tests, similar to other countries in the region and throughout Europe.
- Increase the opening hours for HIV testing at NCAP in order to test more people and provide clients with options for when to get tested, noting that some will travel far and others may have work, school or family to consider.
- Medical facilities seeing patients presenting with HBV or HCV clinical or laboratory markers should routinely offer HIV testing as recommended by the “HIV testing and counselling procedure, approved by the appropriate Order of the Minister of Health of the Republic of Armenia”.
- Minister of Health to strengthen the monitoring of a testing offer in risk groups and indicator conditions by implementing audits of testing offer/uptake and positivity rates
- Ensure the linkage of key populations with rapid HIV positive tests to the Republican AIDS Centre through accompanying them by peers/outreach workers for a confirmation test and enrolment in HIV care.
- Implement systematic follow up of those identified as being HIV positive, but who are not enrolled in care.
- Shorten the time between taking the blood sample to performing the first HIV test, particularly in the regions, to ensure that delivery of the test result can be handled as quickly as possible.
- Consider that new approaches for generating HIV estimates (number of people living with HIV, HIV incidence and ART need) based on case reporting data, are forthcoming via ECDC and UNAIDS in 2015, apply one or both of these approaches to triangulate estimates generated through Spectrum.

Main recommendations: Priority area 2: Employ the public health approach in delivering ART

- Rationalize prescribed ART regimens for a more cost-effective public health approach without compromising the quality of care:
 - Preference of first line ART should be given to TDF/FTC (or 3TC) + EFV.
 - Adult patients on ABC or ZDV-based regimen should be switched to preferably TDF-based regimens, if there are no contraindications to TDF.
 - ARVs: Didanosine, unboosted atazanavir should be avoided.
 - The combination of ABC/ddI in adults and children, and triple-nucleoside regimens, respectively, should be avoided.
 - Switch patients receiving PI/r as part of 1st line ART to one of the standard regimens (preferably TDF/FTC/EFV), if use of NNRTI-based therapy is not contraindicated due to prior use or prior side-effects. If PI/r is given as part of the 1st-line treatment due to side-effects to EFV, the use of NVP should instead be considered.
 - Standard EFV dose of 600mg can be used in the vast majority of patients during concomitant TB therapy including rifampicin.
 - TDF/FTC (or 3TC) + either ATV/r or LPV/r should be used for second-line treatment and can be selected based on previous treatment history, if resistance testing facilities are implemented. If TDF cannot be used, AZT/3TC + either ATV/r or LPR/r are the alternatives.
 - DRV/r and or RAL should only be used in 3-rd line ART, if no other alternatives are available. In view of the low genetic barrier to drug resistance for RAL, this drug should only be used in exceptional cases.

- Reduce the number of ART regimens in children. The treatment regimens given to adolescents (10-19 years) should follow those of adults.

Main recommendations: Priority Area 3: Optimize service delivery, including integration of services and continuum of care

- Reassess the organization of care in order to ensure optimization and cost-savings, i.e. reduce the number of visits with staff at NCAP and the number of viral load and blood chemistry measurements.
- Establish early TB diagnosis at the AIDS Centre by using GeneXpert MTB/RIF system and ensuring clinical TB part time/consultative visits for diagnosis and treatment.
- Have TB diagnosis made by a single TB doctor instead of by an assembly of them
- Continuation of HIV treatment and care started in ID hospitals/TB hospitals/prison health, etc. should be strengthened in particular for key populations (including social accompanying for key populations by peers/social workers; operational follow-up by NCAP, actively using community-based organizations to facilitate this linkage).
- Initiate a study to evaluate the cost, cost-effectiveness and effectiveness of (partial) decentralization of HIV care and needs for capacity building of health care staff, laboratories and communication.

Main recommendations: Priority area 4: Scale up harm reduction for PWID, including OST

- Increase number of OST sites to improve access: consider the establishment of OST sites at Republican Narcological Service branches in other types of health care institutions in the country.
- Ensure quality of OST delivery by aligning with WHO guidelines:
 - sufficient dosages of OST should be continued and ensured through training and the update of guidelines;
 - restrictive inclusion/exclusion criteria for OST happening in practice should be stopped;
 - ensure the confidentiality of patients by keeping medical registers private, including from the police;
 - complement existing OST sites with comprehensive psychosocial services by employing more trained social workers, who would be able to assess individual patient needs and promote social integration of patients.
- Review legal acts to allow integration of OST with HIV and TB services, reduce barriers for the continuation of OST in health care institutions, particularly in hospitals, and protection of confidentiality.
- Continue NSP in prisons and expand OST into the remaining 4 prison institutions, and consider gradual increase governmental budget for OST and NSP in prisons.
- Establish stationary/mobile NSP sites which will serve as settings for rapid community HIV and hepatitis testing and counselling of PWID and will allow for the significant expansion of community testing among PWID.
- Improve the quality of NSP services, including the better selection of outreach workers, their training and regular supervision of their work.

Main recommendations: Priority Area 5: Improve strategic information, including HIV surveillance and monitoring of HIV patients

- Develop a national HIV database and cohort to track persons from diagnosis through to treatment and care. Such a database could be housed at NCAP.
- Improve the tracking of people tested by setting and risk group and tracking of new versus repeat testers annually. The current system provides test volumes and mixes risk and setting. This information will provide a better understanding of whom and where to test and allow for the monitoring of testing programmes.
- Estimates of the undiagnosed population should be improved by using revised estimates of MARPs. The country should use more than one method for estimating the number of undiagnosed (e.g. there is a new ECDC method that will be ready in the next few months and Armenia could use it along with Spectrum).
- Improve the tracking of numbers and causes of death among PLHIV through the matching of databases/Excel spreadsheets with the National Statistics Service (this is now possible with computerized records).
- Death data must be improved through matching with data from the national surveillance system. AIDS or AIDS deaths at HIV diagnosis (concurrent diagnosis) versus at least three months after diagnosis should be routinely monitored and assessed, as should the cause of death among PLHIV. Routine reconciliation between databases will provide insights into loss to follow up or not linked to care. Armenia could carry out a study to establish a better understanding of causes of loss to follow up.

2. Introduction

2.1 The HIV epidemic in Armenia: latest trends and figures

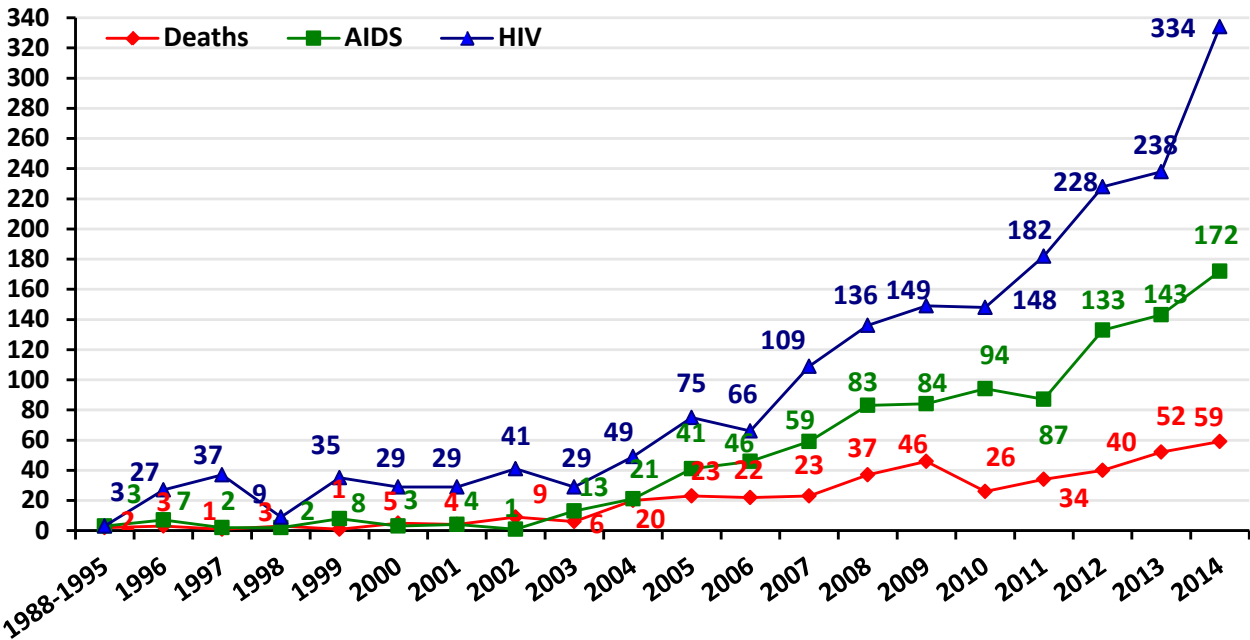
Armenia is located in the South Caucasus (bordered by Turkey to the west, Georgia to the north, Azerbaijan to the east and the Islamic Republic of Iran to the south) The official population of Armenia was estimated to be 3.27 million in 2012, but it has been estimated that between 1990 and 2005 between 700,000 and 1.3 million people (22-40% of Armenia's nominal population) emigrated.

Initial severe economic and socio-political difficulties during the 1990s affected population health, with life expectancy in 2009 relatively low at 70.6 years for men and 76.9 years for women (1).

Armenia has a low HIV prevalence overall. According to 2014 data, an estimated 4,000 people are living with HIV (PLHIV) in the country.

Routine case reporting of new diagnoses of HIV infections is well established in Armenia. Since the first case in 1988, there have been 1,953 cumulative cases registered in the country including 38 children under the age of 15 at time of diagnosis (data up to 31 December 2014) (Fig. 1) (2). There have been 1,006 cumulative AIDS cases reported and 417 people are known to have died among all registered cases.

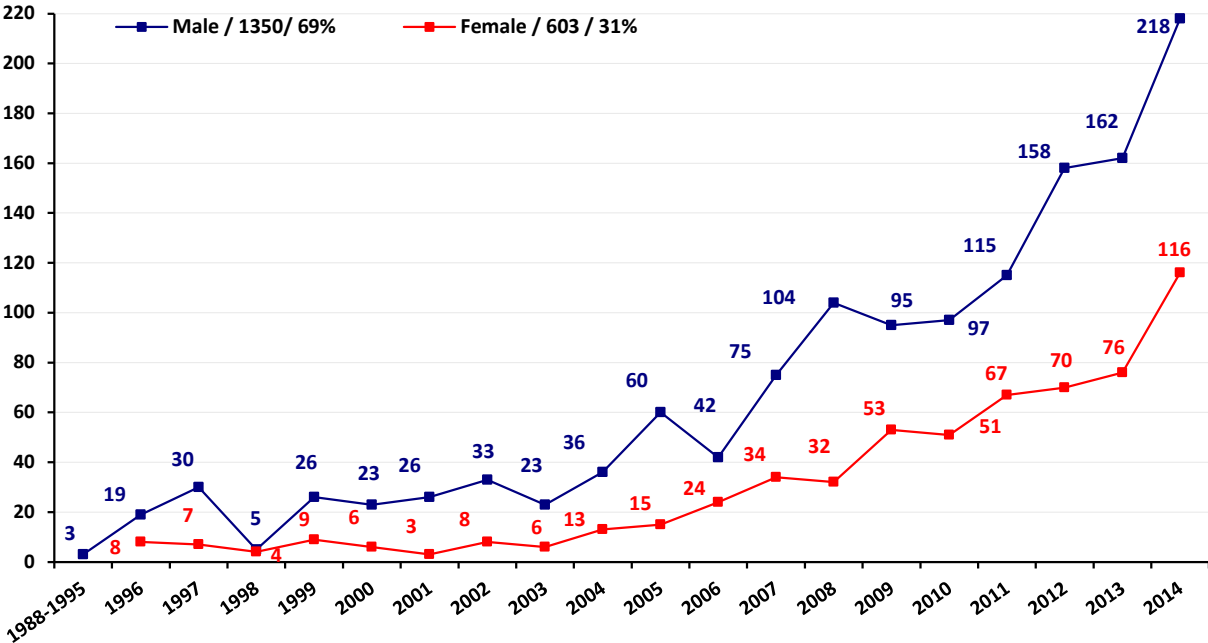
Fig 1. Number of new HIV diagnoses, AIDS diagnoses and deaths



Source: Grigoryan S. HIV/AIDS epidemic update, HIV services, Activities in Republic of Armenia. Oral presentation. NCAP Conference Hall, Yerevan, Armenia, 26 January 2015.

There has been a substantial increase in the number of new HIV cases, AIDS cases and deaths among PLHIV in recent years; in 2014 these reached 334, 172, and 61 respectively. The male:female ratio of reported HIV cases has been about 2:1 throughout the epidemic: in 2014, 218 males were reported versus 116 women (Fig. 2).

Fig. 2. Allocation of HIV cases by gender and by years of registration



Source: Grigoryan S. HIV/AIDS epidemic update, HIV services, Activities in Republic of Armenia. Oral presentation. NCAP Conference Hall, Yerevan, Armenia, 26 January 2015.

For all years, the majority of infections were reported to have been acquired through sex between men and women. HIV transmission routes for all years are shown in Table 1. Nearly all women acquired their infection heterosexually with a large proportion reporting a partner with a history of working abroad. Infection among sex workers (SW) accounted for a low number of reported HIV cases.

Table 1: HIV transmission routes, all years

Transmission mode	Percentage
Infected through heterosexual contact	63%
Injecting drug use	28%
Male-to-male sexual contact (MSM)	2.4%
Mother-to-child transmission	1.8%
Blood transfusion	0.2%
Unknown transmission	<5%

Source: Grigoryan S. HIV/AIDS epidemic update, HIV services, Activities in Republic of Armenia. Oral presentation. NCAP Conference Hall, Yerevan, Armenia, 26 January 2015.

In 2014, the proportion of reported heterosexually acquired cases increased to 79% (n=264). These were further classified into infection acquired within Armenia (43%) versus abroad (57%). The reported number of HIV cases acquired through injecting drug use and sex between men has remained relatively stable. Over half (59%) of all new diagnoses of HIV between 2012-2014 were probably acquired abroad, although there is no conclusive data on this, and an additional 14% had reported sexual partners who worked abroad. Infections associated with migration/seasonal work abroad have become the most dominant transmission group. Most are men believed to have acquired HIV infection whilst working in the Russian Federation with evidence of secondary transmission to their sexual partners in Armenia.

The overall (diagnosed and undiagnosed) prevalence of HIV among the 3.2 million people in the country in 2014 was 0.12% (2). HIV prevalence was estimated to be higher among PWID with some indication of a decline (6.7% in 2012 to 4.0% in 2014 in Yerevan). There are considerable geographic variations: Yerevan – 6.3% in 2012, Vanadzor city – 4.2%, and Gyumri city – 2.3% (3). HIV prevalence among sex workers was 1.6% and cases among MSM dropped from 2.6% in 2012 to 0.4% in 2014, in Vanadzor 1.9% and 1.4% in Gyumri in 2014. Declines may indicate non-comparable convenient samples or a true decline associated with a high death rate and/or out migration. The estimated prevalence in Armenians who have travelled abroad was 0.4% in 2014.

Behavioural surveys among key populations indicate low or moderate knowledge of HIV prevention with poor condom use among PWID and migrants especially, moderate condom use among MSM (60% at last anal sex) and high use among SW (90%), with little change over the past five years.

2.2 Testing and late diagnosis

There are three types of HIV testing in Armenia:

- Provider initiated testing for patients with clinical indications (OIs, TB, hepatitis and STIs), for key populations (PWID, MSM and SWs) and other vulnerable populations (prisoners, labour migrants and their partners) and pregnant women;
- Client initiated;
- Mandatory for blood and organ donors and children of HIV-positive women.

When there are two positive tests, a western blot (immunoblot analysis) confirmation is carried out. Rapid tests results are reported almost immediately. For Elisa tests, the waiting time is as follows:

- NCAP, private and state laboratories: 0-1 days;
- Counselling and testing sites in Yerevan: 5-7 days, depending on the transfer time of blood samples from the collection site to a laboratory, usually to NCAP;
- Counselling and testing sites in marzes of Armenia: 5-30 days, it depends on the transfer time of blood samples from the collection site to a laboratory, usually to Regional laboratories.

The increase in the annual number of new HIV diagnoses in recent years is associated with an increase in targeted HIV testing (from 57,000 in 2010 to 68,000 in 2014). The majority of HIV tests in 2014 were conducted among pregnant women (46,976). Over 12,000 people were tested because of clinical indication in 2014 compared with 5,700 in 2010. Community counselling and rapid tests in targeted populations has resulted in slightly increased HIV testing rates among PWID, MSM and SW; however, these rates still remain relatively low.

The available data on CD4 cell count at the time of HIV diagnosis for 2010-2012 indicates a serious problem with late presentation for treatment and care services in Armenia (4). In 2010-2012, for example, 55% of newly identified HIV-positive people had a CD4 count of $<350\text{cells}/\text{mm}^3$, and 37% of these had a CD4 count of $<200\text{ cells}/\text{mm}^3$. Only 29% had a CD4 count of $> 500/\text{mm}^3$, suggesting that at least 71% of the newly diagnosed patients are in need of ART according to the National Protocol on Antiretroviral Treatment and Management of Adults with HIV, approved by the Minister of Health on 21 August 2014, though the first priority is to provide treatment to those with a CD4 count of $<350\text{cells}/\text{mm}^3$.

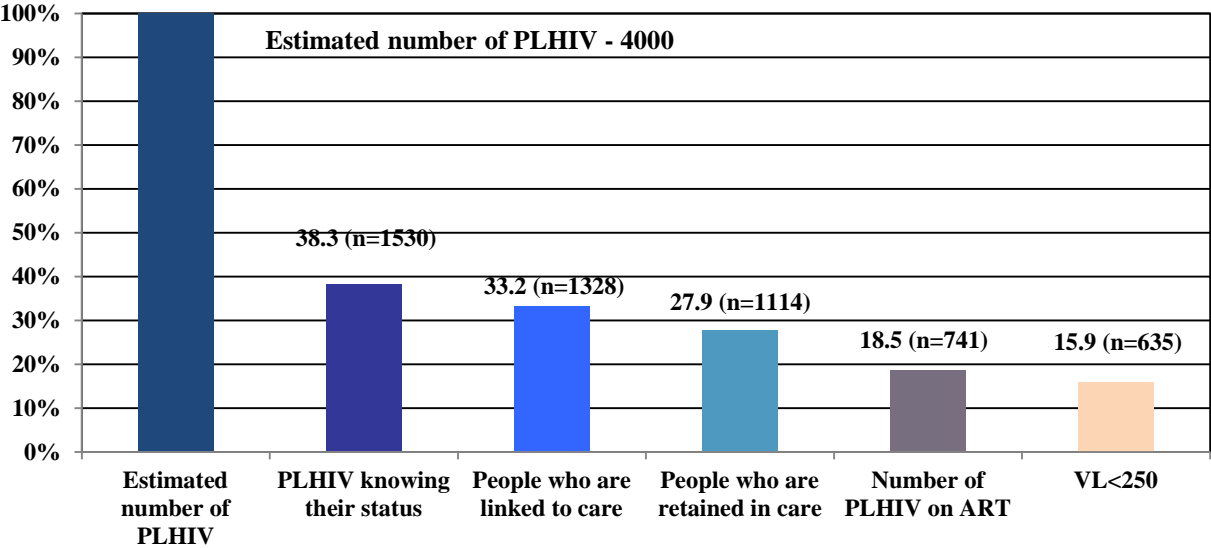
2.3 Treatment and care

Of the total estimated number of PLHIV (noting that estimates are based on just one method and are likely deficient), less than two out of five (Fig. 3) are aware of their HIV status, one-third were linked to care and 27.5% were retained in care.

Of those diagnosed with HIV, the majority are linked to care (86.7%); 71.9% are retained in care; and 48.3% are provided with antiretroviral treatment (ART) of whom 94.7% have an undetectable viral load (using a viral load assay with 250 copies/ml as the cut-off) as reported in an on-treatment analysis (2).

The large number of undiagnosed HIV cases is a major challenge for achieving the individual and public health benefits of ART, and at present viral suppression is thus estimated to be achieved in less than one in five (17.6%) PLHIV in Armenia. Of note, detailed analyses of the different subcategories of patients are lacking. Further, no gender analysis of the treatment cascade has been performed. If more people who inject drugs (PWID) enter care, for example, it will be critical to ensure that each of the components of the treatment cascade is maintained at current or even higher levels.

Fig. 3. The continuum of HIV care / treatment 2014



Source: Grigoryan S. HIV/AIDS epidemic update, HIV services, Activities in Republic of Armenia. Oral presentation. National Centre for AIDS Prevention (NCAP) Conference Hall, Yerevan, Armenia, 26 January 2015.

ART service delivery is governed by the National Protocol on Antiretroviral Treatment and Management of Adults with HIV, 2014, which is primarily based on the 2013 WHO Consolidated Guidelines “On the use of antiretroviral drugs for treating and preventing HIV infection”(5). The WHO 2013 recommendations on criteria for starting ART were adopted in 2014 but will first be implemented from 1 June 2015, when the new ARV drugs order will be filled.

All HIV diagnoses are made at NCAP in Armenia and all PLHIV followed at the National Centre for AIDS Prevention (NCAP) in the capital, Yerevan. In January 2015, 741 HIV-positive adults and children were on ART (2). ART is provided free of charge to all patients who are eligible for treatment and who give their informed consent upon being provided with relevant information on ART.

For infected children, ART is provided based on the consent of a guardian to patients recognized as disabled and, based on the consent of parents or a legal representative, to children (according to the National Protocol on Antiretroviral Treatment and Care for Children with HIV, 2014, approved by the appropriate Order of the Minister of Health of the Republic of Armenia).

2.4 HIV testing and care of HIV-infected pregnant women

Option B for PMTCT has been adopted in Armenia. The coverage rate of HIV testing in pregnant women is reported to be very high, at 99% (2). HIV infected pregnant women are referred to the Institute of Perinatology, Obstetrics and Gynaecology. The number of pregnant HIV-infected women increased to 30 in 2014. During pregnancy, they have a minimum of five check-ups at the institute. Extra visits may be conducted depending upon conditions. HIV expert physicians from NCAP are in regular contact with obstetrician-gynaecologists and visit the institute only when needed. In addition, there are 5-6 visits to NCAP. During 2014, all women had an undetectable viral load at delivery. During the period 2007-2014, the official figures show that no HIV-positive children were born. Since the end of 2014, no caesarean sections have been performed in women with undetectable virus. Breastfeeding is not recommended and the newborn child receives breast milk substitution. HIV-positive mothers may apply to local primary health care facility to get free of charge milk substitution, the cost of which makes about USD 350 for 6 months, which is rather substantial in the context of Armenia. However, no case of such application has been reported to date according to NCAP.

2.5 Coinfection, TB

The follow-up of the HIV patients includes the provision of outpatient treatment, prevention and relevant laboratory testing for opportunistic infections, including TB, viral hepatitis B and C, toxoplasmosis, cytomegalovirus, syphilis and other sexually transmitted infections. The follow-up is carried out at NCAP. Systematic TB/HIV collaborative activities were initiated in 2007 by setting up a joint coordinating body (working group), the development of national guidelines and protocols, epidemiological surveillance for HIV among TB cases, the training of staff for the provision of diagnostic testing and counselling on HIV for TB patients. A system for active TB screening in people living with HIV has not been implemented to date. TB case detection in PLHIV will be strengthened at the NCAP in line with the latest WHO/UNAIDS recommendations for intensified TB case finding including the application of Gene Xpert TB and resistance to rifampicin technology. There is no TB expert in NCAP. In 2014, 15.5% of PLHIV were tested for TB (X-ray, sputum test, etc.). HIV patients are referred to TB dispensary once in a year.

All HIV/TB coinfecting patients have free access to treatment for both diseases. An HIV expert clinician from NCAP visits the NTC at least twice a week for consultation of HIV/TB coinfecting patients. ART is initiated within 2-8 weeks (mean of 4 weeks) after the initiation of TB treatment. TB/HIV coinfecting patients receive ART at NCAP upon their discharge from a TB clinic, which is usually done a maximum of 1.5 months after their treatment.

In 2013, the percentage of adults and children living with HIV newly enrolled in care who were detected with having new active TB disease was 19.6% (6). The percentage of adults and children enrolled in HIV care who had their TB status assessed and recorded during their last visit was 22.4% (6). Patients with TB/HIV coinfection are provided with ART according to the National Protocol on Management of TB/HIV Coinfection, 2014, approved by the appropriate Order of the Minister of Health of the Republic of Armenia.

The National TB Control Centre (NTC) is located in Abovian city of the Kotayk region of Armenia. Since 2013, three regional hospitals provide care for TB-infected patients, which is a decrease from 14. There are an additional 60 units in the primary health care system that

provide care for out-patients of which nine are situated in Yerevan. Two TB hospitals are run by the Ministry of Justice and are located in prisons. There are 25 microbiological laboratories involved in TB diagnostics and one national reference laboratory. MDR-TB has been found in 9.5% of newly diagnosed and in 40% of previously treated patients. Thirty patients have presented with extensively drug-resistant TB.

In 2014, 86 HIV-positive patients were treated for TB at the NTC. Of these 57 (66%) had a CD4+ T-cell count $<200/\text{mm}^3$; 72 (84%) had $<350/\text{mm}^3$; and 85 (92%) had $<500/\text{mm}^3$. PLHIV represents $<4\%$ of all TB cases in Armenia and $<10\%$ of the patients at hospitals. NCAP is planning to establish TB care and diagnostics at their premises in Yerevan.

2.6 Coinfection, viral hepatitis

Patients with HIV/hepatitis B virus (HBV) and HIV/hepatitis C virus (HCV) coinfections are provided with ART according to the National Protocol on Hepatitis B and HIV Coinfection (2012), and the National Protocol on Hepatitis C and HIV Coinfection (2008), approved by Order of the Minister of Health of the Republic of Armenia. All newly diagnosed patients are tested for antibodies to HBV and HCV upon being diagnosed with HIV. These tests are repeated once a year in HBV and/or HCV negative individuals. The number of new HIV/HCV patients has increased per year from 12 in 2010 to 43 in 2014. The corresponding figures for HIV/HBV are 1 and 7, respectively. From 2005 to 2015, 228 PLHIV (13.9%) tested positive for chronic hepatitis C virus (HCV) and 37 (2.3%) for hepatitis B virus (HBV). In addition, four patients have presented with a triple infection, HIV/HBV/HCV. With few exceptions, HCV patients are not treated with the new, highly effective antiviral drugs due to the high costs of the treatment. Also, combinative HCV treatment with Pegasys and Ribavirin is not accessible nor affordable for most HCV patients, since there is no state financing for this treatment. Hepatitis B treatment is provided only to HIV patients in combination with HIV treatment. There is no budget for hepatitis C treatment for all patients, including those with HIV coinfection.

2.7 Sexually transmitted infections (STIs)

HIV-positive patients are tested for syphilis once a year at NCAP. Testing for other STIs is done on demand. At this centre, as part of a Global Fund project, testing for STIs and treatment are offered for free. However, at other dermatology centres, testing is not free and there is reluctance among risk exposed individuals to visit these centres. Also, it is reported that dermatologists in Armenia are not always open for STI and HIV testing among sex workers and MSM.

Pregnant women are tested twice for syphilis, and around 50-60 cases are detected annually. No case of congenital syphilis has been diagnosed during the last years.

2.8 HIV and TB services for prisoners

An extensive project directed towards detecting HIV and TB is run at the prisons in Armenia. In 2014, 549 blood samples of prisoners were analysed for HIV, and 3,666 pre- and post-counselling meetings were held. Further, 27,000 condoms and 19,500 needles were distributed. All new prisoners are tested for HIV. TB-diagnostics (X-ray and sputum analysis) are performed twice a year. During 2014, 26 individuals were diagnosed with TB, of whom 9 had MDR-TB.

2.9 Investments in the national HIV/AIDS response

Armenia's current national HIV/AIDS programme runs from 2013 to 2016. The target is for the state budget to finance 40% of the annual expenditures – representing an increase in the government's proportional coverage of expenditures (7). In 2009 (baseline), Armenia's state budget financed 27.5% of the national HIV/AIDS programme.

The HIV/AIDS programme is funded by the state budget via the Ministry of Health, complemented by support from international organizations (see Table 2).

The ongoing HIV/AIDS programme has established several strategies and goals pertaining to financing:

Strategy 1. To increase the efficiency and effectiveness of funding, including by strengthening the capacity of procurement specialists, and conducting a review of M&E data with financial allocations.

Strategy 2. To increase new funding resources and sustain the existing funding. Goals include increasing the percentage of private sector funding of the total HIV/AIDS spending, to develop a PLHIV entrepreneurship scheme to sustain the HIV programme, and to develop and submit proposals to the Global Fund and other international organizations. ART provision and interventions targeting key populations have been supported through Global Fund financing.

Table 2. AIDS spending in the Republic of Armenia in 2013 by financial sources (AMD)

	2013	
	Absolute number	%
State Budget	439,454,728	21.4%
GFATM	1,172,066,564	57.2%
UN agencies	9,395,955	0.5%
International	427,265,901	20.8%
<i>Russian Government</i>	<i>301,509,206</i>	<i>70.6%</i>
Private sector	2,268,000	0.1%
Total	2,050,451,148	100%

Source: UNGASS COUNTRY PROGRESS REPORT Republic of Armenia: Reporting period: January-December 2013. Geneva, UNAIDS 2014.

3. Purpose and objectives

Armenia is eligible for a Global Fund grant to support its national programme on HIV/AIDS. The country requested the WHO Regional Office for Europe to provide technical assistance to conduct an HIV programme review and a review of its National Strategic Plan for the development of a Global Fund concept note in the spring of 2015. The programme review included five key components:

1. Epidemiological analysis
2. Analysis of the HIV surveillance system
3. Review of HIV treatment and care along the cascade of services
4. HIV services for key populations
5. Analysis of service delivery models for populations affected by the HIV epidemic from the perspective of the health system.

The full terms of reference are available in Annex 1, and the in-country programme in Annex 2.

4. Methods

The evaluation builds on a desk review and a country mission, which took place from 26-30 January 2015 in Armenia.

Readily available information on the country epidemic and HIV/AIDS treatment and care has been drawn from secondary sources including journal articles, national publications, WHO reports, etc.

During the country mission, the WHO experts visited sites within Yerevan, Abovian and Gyumri, along with sites in the villages of Argel and Geghashen in Kotayk Region. See the in-country programme for details.

5. Strengths and achievements

5.1 HIV testing

HIV testing is well established and laboratory network for HIV testing has been established country-wide. High coverage with HIV testing at blood donation stations and antenatal services and relevant interventions resulted in no HIV cases among blood and blood products recipients registered since 2001, no HIV cases among HIV pregnant women starting 2007.

Due to relevant training provided to health care workers their level of HIV/AIDS-related knowledge has increased, which resulted in scaling up of health care provider-initiated HIV testing and counselling and improving of HIV detectability. Mobile medical team and mobile medical and diagnostic clinic have been operated in 100 towns and rural communities, access to provider-initiated HIV testing and counselling for labour migrants and their families.

5.2 Well functioning HIV treatment and care programme

The HIV treatment programme is staffed with a professional team at NCAP with a good understanding of the issues and challenges. Diagnostic facilities at NCAP are well developed including access to HIV-RNA viral load and CD4+ count monitoring, as well as diagnosis of the various types of opportunistic infections which AIDS patients may acquire. Also, the diagnostics of viral hepatitis are well-developed. Equipment for genotypic resistance testing (GRT) has recently been obtained and GRT is planned to be implemented in clinical care during 2015. Since in-house methods most often have substantially lower costs than commercial assays, with acceptable performance, such methods should be considered for genotypic resistance testing if the NCAP laboratory can provide such services with high quality and such testing should be carried out for those that failed on second-line ART. Recently, a more sensitive HIV RNA assay (25 copies/ml) has been implemented. This has meant that caesarean section is no longer routine at delivery.

HIV-RNA viral load and CD4+ count monitoring are generally used in an efficient manner. The frequency of viral load and CD4+ count monitoring is in general adequate and related to the clinical status of the patients. After stabilization of viral load as undetectable and high CD4 cell counts, these analyses are used every 6-12 month. In certain patients with high CD4+ counts and undetectable viral load for a long time, quantification of HIV RNA is performed once a year.

The care component is highly prioritized in Armenia, to the benefit of the patients, which results in higher retention rates and a higher rate of virological treatment success than in majority of other countries in the region (8). The emphasis on adherence support, in which nurses and NGOs also play an important role, is effective. A close collaboration has been established with NGOs through weekly and informal contacts. Several mechanisms are in place for the retention of patients in care. The patients can be contacted by mobile phone by nurses (and physicians). NGOs are frequently used if a patient does not turn up for planned visits.

NGOs also play an important, though limited, role in the delivery of ARV drugs to patients, including difficult-to-reach migrants – and this should be maintained and further strengthened as needed. NGOs also offer counselling and referrals to an STI unit. The aforementioned Scientific Centre of Dermatology and STIs runs a valuable project on HIV testing in STI patients and STI treatment with Global Fund support.

5.3 Good national surveillance of HIV

Overall, there is good national surveillance of HIV. The achievements include:

- Effective central reporting, which provides Armenia with the possibility to capture all diagnosed cases and people attending for HIV care.
- HIV surveillance in Armenia has adapted to better understand those most at risk of HIV infection (including the State Migration Service's estimate of the some 70,000 labour migrants) and monitoring of testing at health services and through HIV testing and counselling (HTC) programmes.
- There is generally good data on treatment, CD4 cell count and viral load at the national level, which provides a solid picture of the quality of care received e.g. through the treatment cascade (Fig. 1).

5.4 Examples of good cooperation within services for PWID

Within services for PWID, examples of good cross-sector cooperation and integration exist:

- Within selected OST sites, patients who demonstrate stable remission (clean urines tests, employment) or are in difficult physical condition may come to the clinic three times per week and take methadone for home use. This practice is possible because of a close alliance between medical facilities and the police.
- Patients can continue OST if the police incarcerate him/her into the remand (detention) prison or one of the six prisons after the court sentence.
- In the Central Hospital of Detainees, patients who have HIV infection receive integrated ART and OST in the infectious disease ward.

OST good practices

In order to make access for PWID to drug treatment easier and, thus, prevent many complications of injecting (including HIV and viral hepatitis infections), health care authorities in Armenia have during the past ten years systematically introduced and expanded OST as an effective treatment approach. The Republican Narcological Centre (RNC), in Yerevan, has developed clinical standards of dependence treatment, including OST (2005) and National Clinical Guidelines for OST with methadone (2006) (9). The Ministry of Health approved both documents as legal acts. The RNC started to implement OST with methadone in 2009. OST later became available in two other locations and in the penitentiary system.

The target number of OST patients for October 2015 set as part of the Global Fund grant is 370 PWID (10) or 3% of PWID. By 1 January 2015, there were 10 OST sites in Armenia, 7 of them in prisons. The total number of patients on OST in the end of 2014 was 430, of which 131 were in prisons. 26 HIV-positive patients were on OST at the end of 2014 (6% of patients in OST in Yerevan).

The biggest site was at the RNC, which had 256 patients on OST as of January 2015 or 85% of all OST patients outside prisons. Since OST was implemented in 2009, the RNC site treated more than 500 PWID, of which only five were women. OST patients may use the infrastructure of RNC, including inpatient detoxification, laboratory tests and consultations of specialists. Geographically, this OST site in Yerevan is located far from the centre of the city. Frequent or daily travel may significantly interfere with the social integration of many patients. In addition, patients have financial expenses for daily travel, which can pose a barrier.

OST patients, who demonstrate stable remission (clean urines tests, employment) or are in difficult physical condition, may come to the clinic three times per week and take methadone for home use. Patients who live 30 to 50 km from Yerevan may also use this privilege. The staff of the OST site informed that 78 patients (or 30%) used the privilege to come to the OST site three times per week. Due to stable remission or difficult physical conditions several patients were allowed to attend the OST site just once per week.

A patient can continue OST if the police incarcerate him/her into the remand (detention) prison or to one of the six prisons after a court sentence. In the Central Hospital of Detainees, patients who have HIV infection receive integrated ART and OST in the infectious disease

ward provided by its medical staff. An experienced physician in the Central Hospital of Detainees consults and supports less experienced medical staff in other prisons about OST. There are mechanisms which allow for the continuation of OST at a health institution without interruption after a patient leaves prison. In addition, PWID may initiate OST in prison, if there is a slot, funded by the Global Fund. Currently, there are 135 slots of OST in prisons, while there are many more applications from PWID. Medical staff of prisons indicated that if slots were available, the number of PWID in prisons could easily increase to 300.

Medical records at the RNC and the Central Hospital of Detainees indicated that there is a variation of the methadone dose between 10 to 160 mg, with the average dose between 60 and 70 mg. There is no OST duration limit for patients or pressure to leave treatment. Some patients at the RNC have been on OST since the beginning in 2009.

Methadone is available in water-soluble tablets of 5, 10 and 40 mg. The price of a 40 mg tablet was AMD 236 (USD 0.5), 10 mg tablet 103 (USD 0.22) and 5 mg tablets AMD 73 (USD 0.15). This puts the average daily dose of methadone in the range of USD 1–1.5.

For home use, methadone was given in intact tablets. In five years there were only sporadic reports from police about individual cases of diversion of methadone by patients.

OST has a strong perspective for sustainability in Armenia due to following factors:

- Governmental institutions under the Ministry of Health and Ministry of Justice implemented and expanded OST, and integrated it to a certain level into their regular services;
- The State budget provides some support for OST (financing of premises, specialist consultations, lab exams, etc.);
- The Ministry of Health passed legal acts on OST, including National Clinical Guidelines;
- There is a history of alliance between medical institutions and law enforcement agencies in the provision of OST, reducing the turnover of illegal drugs, and preventing the diversion of methadone for illegal resale;
- This alliance provided opportunities to provide methadone for home-use for patients in remission/serious physical condition/from remote geographic areas;
- Medications (methadone tablets) are affordable with the price for a daily dose USD 1-1.5;
- OST is available in 7 of 11 prisons;
- There is continuity in OST provision between prisons and community health care institutions and the reverse;
- OST is positively valued by administrations of penitentiary institution and medical staff (due to the reduction of criminality/drug use/drug overdose/integration with ART).

NSP good practices

NSP operate almost exclusively on an outreach basis. A study recommended outreach as an approach in order to reach PWID with needles and syringes in the most affected areas in the fastest and most cost-effective way (11). During the last three years, APEC has significantly expanded NSP. By 2015, APEC employed 43 outreach workers (OW): 27 in Yerevan and 16 in other districts. Most OWs walk to their PWID contacts. There is a car for their support in Yerevan, though the OWs primarily carry out NSP on foot. The number of PWID reached, as

reported by APEC, increased from 1,071 in 2012 to 2,881 (2013). OWs use a coding system to register clients and protect their anonymity.

The number of people who underwent HIV testing and counselling increased from 647 in 2012 to 1983 (or 15.6% of the estimated PWID) in 2013. Outreach workers referred PWID to medical institutions, where testing was carried out. In 2010-2011 APEC detected seven HIV-positive cases, in 2012-2013 six.

A psychologist is employed on the NGO premises. The most frequent questions for a psychologist are about the treatment availability. The NGO has good relations with RNC and refers patients to OST and detoxification.

The NGO has a formal agreement with the STI clinic for HIV and STI testing. According to this agreement, if patients have STI symptoms, the outreach workers refer them to the STI clinic for examination and treatment free of charge. APEC has no other formal agreement with other health care institutions.

The Ministry of Justice launched a pilot NSP project in 2004. Currently, all 11 prisons implement NSP programmes through outreach workers.

6. Weaknesses and challenges

Below, the identified weaknesses and challenges are described in priority areas for interventions.

Priority Area 1: Increase HIV diagnosis and enrolment into care of key populations, including season workers (labour migrants)

Despite the increase in testing, the high number of undiagnosed cases and late presentations indicate an urgent need for greater scale up. Furthermore, HIV incidence among MARPS is thought by some to be high and will likely continue to rise unless HIV testing is substantially increased.

Testing remains largely centralized with most tests on MARPs conducted at NCAP, in Yerevan, which is not easily accessible. Testing should be performed using rapid tests directly by outreach workers without having to be referred to a clinic for blood taking. Further, the pre-test counselling is unnecessarily long and the ultrasound conducted as part of HIV testing on the mobile testing van is resource intensive and time-consuming.

As described above, late HIV diagnosis is an important public health problem in Armenia and leads to high morbidity and mortality among those diagnosed and in care (2). Low testing coverage of people at risk is the core of the problem.

HIV testing has been insufficiently expanded to include the testing of most-at-risk populations in recent years. These groups include migrant workers, tested through mobile testing using a single van and NCAP mobile teams, as well as recommended testing by NGO outreach workers who conduct voluntary counselling with MSM, PWID and SWs. However, HIV testing rates in most-at-risk populations are poorly monitored and are too low. The testing data currently do not distinguish between repeat testers who are already HIV positive and those who are newly diagnosed. As it is well known that persons who test positive may represent for testing to reconfirm their diagnosis, it is possible that the number of new cases is

over-reported. Furthermore, the data are aggregate numbers of tests rather than individual based data so it is not possible to look at frequency of testing of MARPs attending STI clinics for example.

Available data show that tests remain too low and STI rates among MSM and SW are high, indicating poor condom use. For example, syphilis prevalence among SWs in Yerevan was 0.8% (0-2.5% 95% CI); trichomoniasis prevalence among SWs in Yerevan city was 20.8% (11.1-27.6% 95% CI); gonorrhoea among SWs in Yerevan city was 3.8% (0.7-10% 95% CI) and syphilis prevalence among MSM in Yerevan was 1.8% (0-2.5% 95% CI). There is no routine offer of an HIV test at STI clinics and needle and syringe programmes.

Priority Area 2: Employ a public health approach in delivering ART and HIV care

Careful planning is necessary to ensure that the high quality of the treatment programme is maintained as the Government of Armenia takes over from the Global Fund. A future up-scaling of testing activities will lead to a marked increase in HIV patients diagnosed in need of care and ART. Resources for the various components of the treatment programme will have to be increased to ensure that the high quality of care is not compromised.

A challenge for the retention in care and for long-term treatment results is the high proportion of HIV-infected Armenians working abroad for substantial periods of time. NGOs play an important role in the distribution of ARV drugs to this patient population, including providing some with medicine while abroad. A specific analysis of this particular situation should be carried out with regard to the treatment and care cascade. Detailed analysis of the treatment and care cascade for other subcategories of patients, as noted above, is lacking.

The insights from the project at the Scientific Centre of Dermatology and STIs have not been implemented at STI dermatology and STI cabinets. Increased testing for HIV and other STIs at STI cabinets is highly needed.

Key issue: Optimization of drug regimens and cost reduction

Also, the care component in Armenia is prioritized to the benefit of the patients; patient satisfaction and trust in the system seem very high. A simplification of the drug regimens must be carried out – as set out below – with a focus on open communication between the PLHIV and the physician but without jeopardizing the simplification strategies.

While current antiretroviral therapy combinations follow international standards, efforts to rationalize and simplify the approach over the coming years should be made. The suggestions for simplification discussed during the mission are based on the WHO 2013 consolidated guidelines and recommend a shift from an individualized patient approach to a more cost-effective public health approach. Reducing the number of drugs used in line with the guidelines will also reduce procurement costs and likely the overall cost of the antiretroviral drugs as they are purchased in larger numbers.

Key issue: Organization of care

The general number of patients' visits to NCAP is high, although the number of visits to an infectious disease clinician seems to be relevant, ranging from more frequent visits during the first time period after initiation of ART to about twice a year. The patient has, however,

frequent visits to NCAP for other reasons as well, e.g. to get the ARV drugs, for blood sampling and for counselling. It is recommended to critically review the organization of care, considering that not all patients live close to NCAP or would necessarily prefer to go there. At present, regular patient visits to NCAP occur mainly during a short window of 9.00 to 13.00, as stipulated by national legislation. As a result, the facilities at NCAP, including the laboratory, are underused, particularly after lunch.

The monitoring of viral load and CD4+ cell count follows a relevant schedule in well-treated patients and are limited to twice a year. The monitoring of viral load of untreated patients is carried out once a year. The frequency of monitoring for ARV toxicity is relevant although the frequency can be reduced in well-treated patients with stable regimens to one-two times a year.

It is important to underline that the care system needs to be prepared to handle an increase in the number of diagnosed PLHIV as testing improves, which will put an additional burden on the care system. Further, many more PLHIV will be (or are already) in need of ART. It is recommended to ensure that retention in care is continuously developed and takes into consideration the specific patient groups of seasonal workers/labour migrants, PWID and MSM and any specific needs for share-care models. PWID can achieve optimal virologic outcomes but require additional adherence support, something NGOs should be encouraged to provide. Scaling up OST programmes and harm reduction programmes (see below) is key to achieving adherence to ART for PWID.

Priority Area 3: Optimize service delivery, including integration of services and continuum of care

Over the last decades a vertical and centralized scheme to address HIV and AIDS at NCAP in Armenia has grown in importance. It has enlarged centralized testing, laboratory and treatment capacity and achieved success in treatment of people living with HIV. Vertical programmes play a key initial role in addressing specific diseases usually supported by substantial external funding when the health system, for instance, is weak, rapid response is needed, to gain economies of scale, and to address the needs of target groups difficult to reach (12) – all of which are the case in Armenia. Inevitably, these programmes expand in terms of infrastructure and in staff and laboratory capacity as they gain experience and recognition, which is what transpired with NCAP. Over time, however, vertical and central programmes tend to have undesirable and potentially detrimental impact on the health systems due to the parallel service system they maintain. Ministries of health and donors, such as the Global Fund, have become aware of this and dedicate efforts to integrate vertical services into the general health system. Further, vertical schemes reach a limit point in which they cannot effectively reach, target, test and treat a specific population for a defined disease. NCAP is also such a case.

Apart from the government budgetary contribution for salaries and maintenance of NCAP, the entire service operation is based on donor financing. The government financial commitment has been relatively absent. From a political economy perspective, because of the substantial donor funding, the Ministry of Finance has not felt the need to engage in following up the developments in HIV and AIDS prevention and treatment and foresee the fiscal implications to substitute and sustain the financing of such services over time.

The issue of partial decentralization, a process that many national and regional policy-makers have introduced in European countries (13) and that by definition leads to partial or full integration of services was discussed both with NCAP and the MoH during the mission. NCAP realises that partial decentralization is important and the MoH is an active proponent of it. Sustained almost entirely by external donor funding, NCAP is conscious that donor financing is and will continue to decline – not least because of the low HIV prevalence, which means the Global Fund will reduce and ultimately stop assistance – and that there is a need to increase the reach and targeting of an important portion of the population at risk that is not covered (estimated at over 60% of the population with HIV).

The present national AIDS programme might be not sustainable financially or programmatically in a long term perspective. Therefore, there is a need to start addressing the issue of partial decentralization of services already in 2015. For example, HIV treatment experts at NCAP prescribe and oversee ART, but distribution of ART outside of the capital, for example at regional health care settings can be added.

It is recommended to begin the process by initiating a study to evaluate the cost, cost-effectiveness and effectiveness of (partial) decentralization of HIV care and needs for capacity building of health care staff, laboratories and communication.

A principal challenge would be to articulate the coordination and cooperation between the MoH and NCAP. NCAP has a major role in the process of partial decentralization. This includes the training of MoH staff (physicians and nurses) and laboratory training (both the operation and maintenance of laboratory equipment and laboratory personnel).

The Law on AIDS may need to be revised to be in line with the suggested new service model in the health system (14). Additional challenges include:

- Addressing the partial decentralization of ARV drug distribution and ensure safe and proper ARV management in health care facilities;
- Allowing for the dynamic management of medicine inventory with inter-pharmacy movement of medicines as appropriate (e.g. a region with more demand and less inventory);
- ARV drug supply when Global Fund support declines and eventually ends at the end of 2018; and
- Barriers such as complicated procedures for the decentralized use of rapid tests for HIV and viral hepatitis, including by NGOs and in community settings.

The partial decentralization of services assumes gradual establishment of infectious disease cabinet-style services in selected health facilities in marzes (regions), training of medical and nursing staff to perform HIV tests, counselling and medicine dispensing under protocols developed by NCAP (and monitored by them) and the MoH. This option is supported by the fact that 80% of PLHIV currently on ART live within 120-130 km from Yerevan (NCAP figures). In this model, testing and medicine dispensation can be carried out locally. Patient visits could take place once, twice or as required a year, also at care points closer to their home if they so desire. With sensible and adequate measures, including respect for non-disclosure by health care personnel, confidentiality and anonymity should be assured.

Patients should have the option to go to NCAP, although a referral/counter-referral mechanism is preferable to preserve the continuity of patient service and treatment, as well as

for data collection and processing. Another advantage would be the increase in case detection to solve the issue of cases that are undetected and unregistered, and increase the level of prevention and treatment in the country. This would be particularly useful in the north of the country, where many of the cases related to seasonal/migrant workers/ partners/family/social relations take place. . NGOs should participate in expanding reach and contacting vulnerable groups such as seasonal workers. Eventually, NGOs should play an important complementary role with the health system by performing rapid community-based tests for HIV and viral hepatitis. NCAP should remain in its key role as the technical normative and clinical referral point for HIV.

From the financial standpoint, the MoH/NCAP, the MoF and donors should work out a cost-analysis for the partial decentralization of HIV and AIDS services. The main financial implications would be in terms of existing staff (doctors and nurses) to be trained. Laboratory setting/upgrading would be another financial implication, as well as trained laboratory staff, supplies and maintenance.

Priority Area 4: Scale up harm reduction services for PWID, including OST ***Opioid substitution therapy***

The overall coverage of OST remains very low at 3.4% of the current estimated 12,700 PWID (low-level target up to 20%; the mid-level target is 20-40% as set by WHO/UNODC/UNAIDS (15). The estimated HIV prevalence has decreased from 10.7% (2010) to 4% (2014) (16) while the overall incidence of HIV infection increases. It is estimated that there are around 500 HIV-positive PWID in Armenia.

For the past several years, codeine-containing medication has been the most prevalent injection drug (around 85%) (17) in Armenia. PWID extract self-made opioids from medications in their kitchens, using gasoline.¹ They use red phosphorus, iodine, acids and other chemicals to prepare extracted opioids for injection (18). Injected substances have many chemical impurities. There are studies on individual harms from self-produced injectable opioids (local tissue, systemic and neurologic) as well as on the process of kitchen self-production (19). Desomorphine, derived from codeine-containing medications, is an analgesic that is ten times stronger than morphine (thus stronger than heroin) and with a short half-life (19). This makes desomorphine very addictive, and PWID may feel the need to inject frequently.

In Armenia, medical staff at health care institutions and prisons, as well as NGOs and PWID during the mission, indicated jaw osteonecrosis as a common complication among PWID (20). Several dozen PWID with jaw osteonecrosis have received surgical treatment since 2009 (21), even though this operation was expensive and difficult for PWID to access. Jaw osteonecrosis relates to continuous exposure of PWID to red phosphorus, scrapped from the striking pads of matchboxes (18), which PWID use as a kitchen chemical to produce opioids for injecting.

¹ In local slang, because PWID use gasoline to extract codeine from medications, they often refer to injected substances as “benzines”, or in Russian “krokodil”.

The possibility to take methadone for home use is a great advantage for patients in OST programmes and should be available at all OST sites, which is not currently the case in Armenia. This practice was possible because of a close alliance of medical facilities with the police. On the other hand, OST sites continuously share the names of their patients in OST with the police, including names of patients who receive methadone for home use. This has become a significant barrier for PWID to apply for treatment earlier and avoid or minimise the adverse effects of injecting, which include HIV and viral hepatitis.

In case an OST patient has to stay in the hospital (e.g. for HIV infection, TB or other physical conditions) medical facilities send a nurse with methadone to hospitals daily, apparently due to the lack of an Armenian legal act to ensure the continuity of OST in different health care institutions.

The indications for OST, which require two unsuccessful attempts of the failed drug-free treatment, are not in line with WHO Guidelines (2009) (22). Even if a patient fulfils the requirements, he or she might receive the first methadone dose after a significant delay. A patient needs to undergo HIV and HCV tests and submit their results, and submit a certificate from the mental health care centre about his/her mental status. A patient might wait for the formal decision of a Consultative Commission meeting (see below). There is a lack of information in the networks of PWID and OW about how PWID can access OST. Often, as many PWID lack social skills, they need practical advice and support from their peers to navigate through pre-inclusion procedures (23). This support is available in some cases at NGOs.

The staff carry out random urine screens prior to allowing methadone for home use and based on clinical indications. They are more tolerant if urine screens indicate benzodiazepines or cannabis than opioids. Positive urine screens for opioid use could lead to termination of OST or sanctions from the police, which is contrary to WHO guidelines (22).

PWID submit HIV and HCV test results before entering OST. There are around 20 HIV-positive patients at the OST site in Yerevan (7.8%) and “almost 99 percent” have an HCV infection (24). Patients on OST do not undergo regular annual screening for HIV, STIs or TB. OST National Clinical Guidelines do not require it. Therefore, hundreds of OST patients might not have an HIV test for years.

OST staff inform police about each patient who start such treatment and receive methadone for home use. In fact, a police representative is on the Consultative Commission of the OST site. The Consultative Commission is responsible for the most important decisions with regards to OST, i.e. inclusion and termination of the therapy and allowing methadone for home use. The police officer is regularly present at the OST site as a guard.

The RNC site employs three addiction physicians, three nurses, one social worker, one psychologist and one laboratory technician. Thus, the RNC provides OST mainly as a medical service. The OST site does not have the capacity or internal procedures to assess individual comprehensive needs of patients, nor can it develop and implement multidisciplinary coordinated individual treatment plans.

In summary, significant barriers exist for PWID to access and stay on OST, including:

- Geographic remoteness of OST sites/additional substantial transportation costs for patients as well as opportunity costs;
- OST is less attractive for PWID to access earlier as patients' names are shared with police; there are significant patient data confidentiality issues in Armenia;
- Medical indications for OST are unjustifiably restrictive and procedures to initiate OST are still unnecessarily complicated;
- Police are involved continuously in the treatment process including having access to patient details;
- There is a low level of integration with HIV, TB and STI care and treatment services (patients are not referred for HIV and STI testing/TB screening, there are problems to continue OST if the patient is hospitalized for HIV or TB, for example nurses have to deliver the methadone on a daily basis); and
- At OST sites, patients' individual comprehensive needs are minimally met, the development of individual treatment plans and coordination of different services might be improved.

Many barriers, as indicated above, make OST less attractive to PWID. There were 256 patients in January 2015 and no waiting list for PWID at the RNC. This OST site, though, as indicated by staff, could provide service for up to 300 OST patients and possibly more.

Needle and syringe programmes

The current coverage of PWID by the NGO "AIDS Prevention Education Care" (APEC) is 23% (25), which is in the lower end of the mid-level target for NSP coverage (20-60%) (15). In 2013 as APEC indicated 1,983 PWID or 15.6% underwent HIV testing and counselling. This is a low-level indicator, (the medium-level indicator is 40-75% (15). In 2013, APEC distributed 512,270 needles/syringes or 40 per estimated PWID/per year (the low-level indicator is <100 syringes per estimated PWID per year; the mid-level indicator is between 100 and 200 syringes per year (15).

The Global Fund NSP coverage target for the country by 2015 was 26.3% of the estimated number of PWID (10). The National Programme for the Response to the HIV Epidemic 2013-2016 (7) (item 46) approved the target that 60% of all PWID will undergo HIV testing by the end of the programme in 2016.

APEC provides low threshold services in 8 of 10 districts. As reported by APEC, the number of NSP locations increased from three in 2010-2012 to 10 in 2013.

There are no legal acts of the Ministry of Health on NSP and there is no governmental funding for it. Governmental institutions do not participate in NSP in any way. Only NGOs provide NSP. Agreements with the Principal Recipient of the Global Fund grant for NGOs are the only documents that describe requirements for NSP provision.

The quality of NSP services is questionable. For example, NGOs provide services solely on an outreach basis. It is difficult to observe how OWs provide service in reality. Interviews indicated that some outreach workers apparently lack awareness of drug use e.g. production and injecting practices, which are important in HIV and hepatitis prevention, as well as skills in assessing client's needs and counselling on drug treatment availability. Most OWs are

current or former PWID – which is positive. Overall, it is difficult to verify the exact scope and quality of work of the outreach workers and the number of clients they reach.

There are no fixed location NSPs in the country. Formally, there is a stationary NSP on the premises of the NGO APEC. However, only very few PWID go there for injecting equipment. Staff of the APEC suggested two main reasons for this. Firstly, PWID are afraid of being arrested by the police and of administrative sanctions for drug use. Secondly, PWID prefer not to go to an NSP due to stigmatization.

In summary, the sustainability of the current provision of NSP is rather low due to the following factors:

- To date, governmental funding is not available for NSP; NSP rely fully on the Global Fund for financial support;
- Governmental institutions are not engaged in NSP;
- The quality of NSP services is questionable as all services are provided on an outreach basis and OW have low professional skills; and
- The stigmatization and lack of cooperation from the law enforcement sector create difficulties for the establishment of NSP.

Priority Area 5: Improve strategic information, including HIV surveillance and monitoring of HIV patients

An important strategy to optimize the use of antiretroviral drugs and reduce costs is to focus on retaining patients in care and supporting their adherence to the drug regimens. At NCAP, patients' records are kept in paper format and patient data are manually introduced into the Excel computer programme. This means that data management is cumbersome and analyses are at risk of human error. Using this system, NCAP keeps track of the patients and can identify those lost to follow up. However, an improvement of the database system to monitor patients with HIV at NCAP would be a valuable achievement, allowing for proper monitoring and evaluation including facilitating the detailed analysis of the statistics. Analyses of deaths, for example, are required to better understand the burden of HIV/AIDS as well as identify missed opportunities for timely diagnosis. The reporting of deaths and cause of death is poor at present.

A concurrent HIV and AIDS diagnosis and/or death is an indicator of very late presentation and therefore poor access to HIV testing. An AIDS diagnosis and/or death after HIV diagnosis (i.e. at least 3 months after diagnosis) is an indication of linkage to HIV care. The subset of those on ART indicates a failure of retention in care and/or treatment failure

Improvements in measuring the treatment cascade: Using the date the sample was taken (or rapid test undertaken) is better as a date of diagnosis than the date the diagnosis was confirmed to ensure that linkage to care can be closely monitored. This is particularly important as testing is expanded and the number of reported HIV cases increases. Estimates of undiagnosed cases could be improved by using revised estimates of most-at-risk populations (MARPs). The current estimated proportion of men likely to be MSM (0.7%) in Armenia is most likely too low and therefore likely to underestimate the number of MSM living with HIV. Multiple estimates studies with different methods should be carried out. (Note that reliable methodologies to estimate the proportion of MSM among the male

population produce a figure of 2-3% (26,27)– though this can vary by country and may in Armenia be affected by emigration).

It is currently not easy to distinguish first testers from repeat testers, because only aggregate data on tests performed are collated by local laboratories and sent to NCAP. This means that reported testing rates are to some extent inflated. Computerised data systems which allow tracking of tests for individuals would allow reducing duplication of tests and ensuring repeat testers can be distinguished from first testers in a given period. This is critical in monitoring testing programmes especially among MARPS. It is also at present not possible to distinguish new diagnoses detected through the special population programmes as most are referred to NCAP for testing, and new diagnoses are subsequently categorised as “NCAP site” rather than belonging to a MARP group.

7. Cross-cutting issues

7.1 Sustainability

As mentioned above, sustainability has two principal dimensions: financial and programmatic. Financially, it is imperative to involve the Ministry of Finance in the transition process from donor funding to gradually increase financial resources for HIV and AIDS in the national health system and for the re-defined role of NCAP.

The MoH would need additional resources to increase/transfer staff, training, laboratory upgrading and the like.

7.2 Human rights and legislation

Human rights protection of PLHIV is essential. Health care personnel should never disclose the status of someone living with HIV, for example. There are some documented cases of this happening outside of NCAP. And the right for children to attend any public school and for adults to work, without discrimination, must be ensured. A specific analysis would be pertinent as there are gaps already identified in the Armenian legislation in relation to human rights (28).

- There are no legal acts of the Ministry of Health on NSP;
- Stigma in the country remains very high and impedes a public health response.
- There are reported instances of disclosure of HIV status by health professionals.
- Law enforcement also impedes a public health response. For example, the names of methadone patients are shared with the police with the result that most in need of methadone, do not wish to access it.
- The police are regularly involved in OST and participate in the main decisions such as inclusion or exclusion of patients in OST programmes and allowing methadone for use at home. Health care institutions share with the police the names of all the patients, who receive either OST or undergo detoxification. Health care institutions do not guarantee patients’ rights to confidentiality with regards to his/her medical status.
- Potential police arrests of PWID and administrative penalties for drug use significantly interfere with the provision of NSP services.

8. Main recommendations

Main recommendations: Priority Area 1: Increase diagnosis and enrolment into care of key populations, including seasonal workers

- Scale up community based rapid testing significantly for key populations including PWID, MSM, SW as well as seasonal workers, who work abroad.
- Introduce HIV rapid testing (capillary) for key populations in all narcology centres, at all NSP sites, all TB clinics/hospitals, all community-based organizations (CBOs)/ nongovernmental organizations (NGOs) who have contact with key populations, at gay venues, at all sexually transmitted infection (STI) clinics, mobile testing sites, and in all prisons and detention centres.
- Support the licensing of NGOs for performing HIV rapid tests, similar to other countries in the region and throughout Europe.
- Increase the opening hour for HIV testing at NCAP in order to test more people and provide clients with options for when to get tested, noting that some will travel far and others may have work, school or family to consider.
- Medical facilities seeing patients presenting with HBV or HCV should routinely offer HIV testing as recommended by the “HIV testing and counselling procedure, approved by the appropriate Order of the Minister of Health of the Republic of Armenia”
- Minister of Health to strengthen the monitoring of a testing offer in risk groups and indicator conditions by implementing audits of testing offer/uptake and positivity rates
- Ensure the linkage of key populations with rapid HIV positive tests to the Republican AIDS Centre through social accompanying by peers/outreach workers for a confirmation test and enrolment in HIV care.
- Implement systematic follow up of those identified as being HIV positive, but who are not enrolled in care
- Shorten the time between taking the blood sample to performing the first HIV test, particularly in the regions, to ensure that the delivering of the test result can be handled as quickly as possible.
- Considering that new approaches for generating HIV estimates (number of people living with HIV, HIV incidence and ART need), based on case reporting data are forthcoming via ECDC and UNAIDS in 2015, apply one or both of these approaches to triangulate estimates generated through Spectrum.

Suggested target setting for priority area 1

- HIV testing coverage of PWID – 9,500 or 75% of the estimated PWID 12,700 (40-75% coverage is the mid-level target).
- HIV testing coverage of MSM and SW: at least 50% first year, at least 60% second year of carefully and reliably estimated key populations, and prioritize using rapid tests for key populations.
- Enrolment in care: 90% of those diagnosed are enrolled into care.

Main recommendations: Priority Area 2: Employ the public health approach in delivering ART, ensuring support for key populations

- Rationalize prescribed ART regimens for a more cost-effective public health approach without compromising the quality of care:
 - Preference of 1st line ART should be given to TDF/FTC (or 3TC) + EFV.
 - Adult patients on ABC or ZDV-based regimen should be switched to preferably TDF-based regimens, if there are no contraindications to TDF.
 - ARVs: Didanosine, unboosted atazanavir should be avoided.
 - The combination of ABC/ddI in adults and children, and triple-nucleoside regimens, respectively, should be avoided.
 - Switch patients receiving PI/r as part of 1st line ART to one of the standard regimens (preferably TDF/FTC/EFV), if use of NNRTI-based therapy is not contraindicated due to prior use or prior side-effects. If PI/r is given as part of the 1st-line treatment due to side-effects to EFV, the use of NVP should instead be considered.
 - Standard EFV dose of 600mg can be used in the vast majority of patients during concomitant TB therapy including rifampicin, TDF/FTC (or 3TC) + either ATV/r or LPV/r should be used for second-line treatment and can be selected based on previous treatment history, if resistance testing facilities are implemented. If TDF cannot be used, AZT/3TC + either ATV/r or LPR/r are the alternatives.
 - DRV/r and or RAL should only be used in 3rd line ART, if no other alternatives are available. In view of the low genetic barrier to drug resistance for RAL, this drug should only be used in exceptional cases.
 - Reduce the number of ART regimens in children. The treatment regimens given to adolescents (10-19 years) should follow those of adults.
 - Continuously develop strategies to support adherence in key populations which might require additional adherence support.

Suggested targets for priority area 2:

- Increase the number of PLHIV on ART, and who are in need of it, to a minimum of 90% by 2020 in accordance with UNAIDS goals. This means, based on Spectrum estimates, that 90% of the estimated number of PLHIV in need of treatment, according to the 2013 WHO guidance, for this year and the next three are:
 - 2015: 2,659
 - 2016: 2,818
 - 2017: 2,978
 - 2018: 3,142
- Keep the proportion of PLHIV on ART with a VL below the limit of detection (<50 copies/ml) at the already reached 95%

Main recommendations: Priority Area 3: Optimize service delivery, including integration of services and continuum of care

- Reassess the organization of care in order to ensure optimization and cost-savings, i.e. reduce the number of visits with staff at NCAP and the number of viral load and blood chemistry measurements.
- Establish early TB diagnosis at the AIDS Centre by using GeneXpert MTB/RIF system and ensuring clinical TB part time/consultative visits for diagnosis and treatment
- Have TB diagnosis made by a single TB doctor instead of by an assembly of them
- Continuation of HIV treatment and care started in ID hospitals/TB hospitals/prison health, etc. should be strengthened in particular for key populations (including social accompanying for key populations by peers/social workers; operational follow-up by NCAP, actively using community-based organizations to facilitate this linkage).

Initiate a study to evaluate the cost, cost-effectiveness and effectiveness of (partial) decentralization of HIV care and needs for capacity building of health care staff, laboratories and communication. Suggestion for goals/target indicators in the National Strategic Plan and the Global Fund concept note:

- Support for an operational outline for a country transition plan towards financial and programmatic sustainability.
- Support for the full decentralization of HIV prevention and testing into the national health system and partial decentralization of ART delivery in geographically remote areas, with NCAP oversight; and
- Support the inclusion of HIV-related indicators into State Health Agency (SHA) list of indicators for performance-based remuneration.
- Re-define the health policy regarding HIV and AIDS considering some elements of results-based financing, which would contribute to increased results. Involvement of the MoH and the Ministry of Finance (MoF) is fundamental.

Main recommendations: Priority Area 4: Scale up harm reduction for PWID, including OST

- Increase number of OST sites to improve access: consider the establishment of OST sites at Republican Narcological Service branches in other types of health care institutions in the country; consider the establishment of OST sites at Narcological Service institutions in the country.
- Ensure quality of OST delivery by aligning with WHO guidelines:
 - Sufficient dosages of OST should be continued and ensured through training and the update of guidelines;
 - Restrictive inclusion/exclusion criteria for OST happening in practice should be stopped;
 - Ensure the confidentiality of patients by keeping medical registers private, including from the police;
 - Complement existing OST sites with comprehensive psychosocial services by employing more trained social workers, who would be able to assess individual patient needs and promote social integration of patients.

- Review legal acts to allow integration of OST with HIV and TB services, reduce barriers for the continuation of OST in health care institutions, particularly in hospitals, and protection of confidentiality.
- Continue NSP in prisons and expand OST into the remaining 4 prison institutions, and consider gradual increase governmental budget for OST and NSP in prisons.
- Establish stationary/mobile NSP sites which will serve as settings for rapid community HIV and hepatitis testing and counselling of PWID and will allow for the significant expansion of community testing among PWID.
- Improve the quality of NSP services, including the better selection of outreach workers, their training and regular supervision of their work.

Suggested harm reduction targets over three years:

- Expand OST programmes – 2,540 PWID or 20% of the estimated PWID 12,700 (20-40% coverage of OST is the mid-level target).
- Expand NSP – 7,600 or 60% of the estimated PWID 12,700 (20-60% coverage of NSP is the mid-level target).

Main recommendations: Priority Area 5: Improve strategic information, including HIV surveillance and monitoring of HIV patients

- Develop a national HIV database and cohort to track persons from diagnosis through to treatment and care. Such a database could be housed at NCAP.
- Improve the tracking of persons tested by setting and risk group and tracking of new versus repeat testers annually. The current system provides test volumes and mixes risk and setting. This information will provide a better understanding of whom and where to test and allow for the monitoring of testing programmes.
- Estimates of the undiagnosed population should be improved by using revised estimates of MARPs. The country should use more than one method for estimating the number of undiagnosed (e.g. there is a new ECDC method that will be ready in the next few months and Armenia could use it along with Spectrum).
- Improve the tracking of numbers and causes of death among PLHIV through the matching of databases/Excel spreadsheets with the National Statistics Service (this is now possible with computerised records).
- Death data must be improved thorough matching with data from the national surveillance system. AIDS diagnosis and AIDS related deaths at HIV diagnosis (concurrent diagnosis) versus at least three months after diagnosis should be routinely monitored and assessed, as should the cause of death among PLHIV. Routine reconciliation between databases will provide insights into loss to follow up or not linked to care. Armenia could carry out a study to establish a better understanding of causes of loss to follow up.

Main recommendations: cross-cutting issues

Stigma among the general population and health care providers must be addressed in Armenia. There is a need for a national general population education campaign stressing that HIV is no longer a death sentence and that anyone can acquire it – and if they do, there is free treatment and care in the country. Should anyone suspect that they might have HIV, they should be encouraged to get tested – locally if possible.

- Greater awareness training of the health workforce including the creation of ‘friendly non-judging champions’ towards PLHIV, MSM, PWID and SW (restricted to NCAP at present).
- Reducing stigma around HIV testing and diagnosis can be addressed at the institutional level through the “normalisation” of testing procedure and the introduction of a universal offer of testing (that is offer of testing to all patients) in health care settings. This approach around the world has found high levels of uptake and acceptability among patients in a variety of settings including antenatal and STI services. Training of health care providers can effectively increase HIV testing rates and improve health care providers’ attitudes towards HIV and confidence in conducting a test (29).
- Change of laws and practice, and training of police are needed. Medical records of patients who receive methadone at health care facilities must remain confidential and methadone “take-aways” (for 2-3 days) must be provided without fear of imprisonment or harassment.

References

1. Richardson E. Armenia: Health system review. Health Systems in Transition. Copenhagen: WHO Regional Office for Europe, 2013; 15(4):1– 99.
2. Grigoryan S. HIV/AIDS epidemic update, HIV services, Activities in Republic of Armenia. Oral presentation. NCAP Conference Hall, Yerevan, Armenia, 26 January 2015.
3. UNGASS Country Progress Report Republic of Armenia. Reporting period January – December 2013.
4. Mallitt KA, Grigoryan SR, Papoyan AS, Wand HC, Wilson DP. Access to antiretroviral therapy and survival in eastern Europe and central Asia: a case study in Armenia. J Int AIDS Soc 2014 Aug 4;17:18795. doi: 10.7448/IAS.17.1.18795. eCollection 2014.
5. World Health Organization. Consolidated Guidelines on the use of antiretroviral drugs for treating and preventing HIV infection. Geneva, WHO, June 2013.
6. UNGASS Country Progress Report Republic of Armenia: Reporting period: January-December 2013. Geneva, UNAIDS 2014.
7. Government of the Republic of Armenia 2013. Decree N 232 N, BUDGET FOR THE NATIONAL PROGRAMME ON THE RESPONSE TO THE HIV EPIDEMIC, 2013-2016. March 2013.
8. Joint United Nations Programme on HIV/AIDS.
<http://www.unaids.org/en/regionscountries/>.
9. Potosyan A, Sahakyan E. Clinical guidelines for methadone treatment of opioid dependence. 2006, The Ministry of Healthcare of the Republic of Armenia, Narcological Clinic of “The Psychiatric Medical Centre” CJSC of the Ministry of Healthcare of the Republic of Armenia, “Antidrugs Civil Union” NGO.
10. Performance Framework RCC Years 4, 5 & 6c: Indicators, Targets and Periods Covered, Global Fund to Fight AIDS, Tuberculosis and Malaria, unpublished document.
11. Geographic Distribution of Persons who Inject Drugs in Armenia, Availability of Non-Governmental Organizations Working with Persons who Inject Drugs and Expansion Opportunities for Needle and Syringe Programs. Report, 2013. Armenian Center for Health Initiatives.
12. Atun R, Bennett S, Duran A. *When do vertical (stand-alone) programmes have a place in health systems?* Policy Brief. Copenhagen: World Health Organization, on behalf of the European Observatory on Health Systems and Policies, 2008.
13. Saltman RB, Bankauskaite V, Vrangbæk K. Introduction: the question of decentralization, in *Decentralization in Health Care. Strategies and Outcomes*. European Observatory on Health Systems and Policies, WHO, 2007.
14. The Law "On prevention the disease caused by Human Immunodeficiency Virus" of the Republic of Armenia, adopted by the National Assembly of the Republic of Armenia on 3 February 1997.
15. WHO, UNODC, UNAIDS Technical Guide for countries to set targets for universal access to HIV prevention, treatment and care for injecting drug users, 2012 revision, Geneva: WHO.

16. Results from biological and behavioural surveillance in the Republic of Armenia. Report, 2014. Ministry of Health, National Centre for AIDS Prevention, Armenia.
17. Personal communications at meetings with the Republican Narcological Centre and NGOs.
18. Gahr M, Freudenmann RW, Hiemke Ch, Gunst IM, Connemann BJ, Schönfeldt-Lecuona C. Desomorphine Goes “Crocodile”, *Journal of Addictive Diseases*, (2012) 31:4,407-412.
19. Grund JP, Latypov A, Harris M. Breaking worse: The emergence of krokodil and excessive injuries among people who inject drugs in Eurasia. *International Journal of Drug Policy* 2013;24: 265–274.
20. Personal communications from prison hospital, NCAP and NGOs.
21. Poghosyan YM, Hakobyan KA, Poghosyan AY, Avetisyan EK. Surgical treatment of jaw osteonecrosis in “krokodil“ drug addicted patients. *Journal of Cranio-Maxillofacial Surgery* 12/2014.
22. Guidelines for the Psychosocially Assisted Pharmacological Treatment of Opioid Dependence. Geneva: WHO, 2009.
23. Personal communication at the meeting at the NGO ”Real World, Real People,” January 2015.
24. Personal communication at the RNC, January 2015.
25. Personal communication at the NGO APEC, January 2015.
26. Mercer C, Fenton K, Copas A, Wellings K, Erens B, McManus S, Nanchahal K, Macdowall W, Johnson A: Increasing prevalence of male homosexual partnerships and practices in Britain 1990–2000: evidence from national probability surveys. *AIDS* 2004, 18(10):1453-1458.
27. Marcus U, Hickson F, Weatherburn P, Schmidt A and the EMIS Network. Estimating the size of the MSM populations for 38 European countries by calculating the survey-surveillance discrepancies (SSD) between self-reported new HIV diagnoses from the European MSM internet survey (EMIS) and surveillance-reported HIV diagnoses among MSM in 2009. *BMC Public Health* 2013, 13:919.
28. Zopunyan V, et al. "Identifying the Gaps. Armenian Health care Laws and Human Rights in Patient Care Protection." *Health and Human Rights*, Vol. 15, No. 2, December 2013.
29. European Centre for Disease Prevention and Control. HIV testing: Increasing uptake and effectiveness in the European Union. Stockholm: ECDC; 2010.
30. World Health Organization. Consolidated guidelines on the use of antiretroviral drugs for treating and preventing HIV infection. Geneva, 2013. Available at <http://www.who.int/hiv/pub/guidelines/arv2013/download/en/>.

Annex 1. Terms of Reference

WORLD HEALTH ORGANIZATION
REGIONAL OFFICE FOR EUROPE

WELTGESUNDHEITSORGANISATION
REGIONALBÜRO FÜR EUROPA



ORGANISATION MONDIALE DE LA SANTÉ
BUREAU RÉGIONAL DE L'EUROPE

ВСЕМИРНАЯ ОРГАНИЗАЦИЯ
ЗДРАВООХРАНЕНИЯ
ЕВРОПЕЙСКОЕ РЕГИОНАЛЬНОЕ БЮРО

HIV Program Review in Armenia

26-30 January 2015

1. Background

By 30 September 2014, there had been 1,881 HIV cases registered among the citizens of the Republic of Armenia, with 238 new cases of HIV infection registered during 2013.

Estimations show that there are 3,500 people living with HIV in Armenia, and HIV prevalence among people aged 15-49 is 0.2%. According to the data of the behavioral and biological HIV surveillance conducted in Armenia in 2012-2013, the HIV epidemic in Armenia is in a concentrated stage with HIV prevalence among people who inject drugs (PWID) at an estimated 6.7%; HIV prevalence among sex workers (SW) is 1.6%; and HIV prevalence among men who have sex with men (MSM) is 2.9%.

The majority of HIV cases are among males (69%). Out of all reported cases, 2% of HIV infection is registered among children. At the time of diagnosis, 53% of HIV-infected people were in the 25-39-year-old age group.

The major mode of HIV transmission is heterosexual (63%), followed by injecting drug use (28%) and homosexual transmission (2.3%).

834 patients have had an AIDS diagnosis, of whom 214 are women and 15 are children.

143 of all the AIDS cases were registered in 2013. From the beginning of the epidemic, 357 deaths have been registered among HIV patients.

In recent years, an increase in the number of registered HIV cases has been observed, which is associated with the scaling up the laboratory diagnostic capacities, increasing accessibility of HIV testing and establishing a voluntary counseling and testing (VCT) system throughout the country. An increase in the number of registered AIDS cases is also associated with the scaling up of laboratory capacities for diagnosing AIDS and AIDS-indicator diseases. The improvement of AIDS diagnostic services is also associated with increased HIV/AIDS-related knowledge among health care providers. The number of new cases of HIV infection and AIDS has also increased due to the fact that in recent years, more Armenian citizens with an HIV diagnosis and clinical symptoms have been returning to Armenia from the Commonwealth of Independent States. Labour migrants are a sub-population vulnerable to HIV in Armenia. Recent data show that in about 58% of the HIV cases registered during 2012-2013 the individual was infected abroad.

WHO and the Global Fund have a Cooperative Agreement regarding the provision of WHO technical assistance to applicants to the Global Fund prior to submission of their concept notes. The contract is effective during period from 1 January 2014 to 31 December 2015. Technical assistance is organised through the WHO Collaborating Centre on HIV and Viral Hepatitis and external consultants. It is based on discussions with the country and the Global Fund Portfolio Manager and formal country requests.

Armenia is eligible for a Global Fund grant to support their national programme on HIV/AIDS. The country requested the WHO Regional Office for Europe to provide technical assistance to conduct an HIV programme review and a review of the National Strategic Plan for the development of a Global Fund concept note.

2. Programme review

The programme review will include 5 key components:

6. Epidemiological analysis
7. Analysis of the HIV surveillance system
8. Review of HIV treatment and care along the cascade of services
9. HIV services for key populations
10. Analysis of service delivery models for populations affected by the HIV epidemic from the perspective of the health system.

A. Epidemiological analysis and analysis of HIV surveillance will focus on:

- Assessment of the level of, and trends in, HIV disease burden (incidence, prevalence, mortality), including estimated data on the HIV epidemic;
- Assessment of whether trends in the HIV burden are plausibly related to programmatic efforts or other factors; and
- Defining the investments needed to directly measure trends in HIV disease burden in future.

B. Assessment of current national HIV surveillance and vital statistics, with particular attention to the capacity to measure the level of and trends in HIV disease burden (incidence, prevalence, morbidity and mortality). In particular:

- Provide a written description and explanation of the main features of the current national HIV data and information system across the results chain. The sources should include routine programme reports on inputs (resource tracking documents; national health accounts; control programme budgets); service delivery outputs (including facility assessments and clinical reporting); and outcome and impact (population-based surveys, HIV surveillance, and vital registration sources). See “Q11. Strategic Information” in WHO Guidelines document. The description should include:
 - i. Definition of the agencies/individuals responsible for data collection, analysis and reporting;
 - ii. Mechanisms/processes used to assure data quality;
 - iii. Timing and timeliness of reporting including lag times that hamper reporting;
 - iv. The type of data available at the national level and sub-national levels (e.g. aggregated/disaggregated reports, case-based data);
 - v. Approach to analysis and reporting of data;
 - vi. How HIV data are related to/linked with any other health information systems (e.g. TB Programme Information Systems).

- Assess the current capacity of national systems, surveys and the vital registration systems to provide direct measures of HIV disease burden.
- Summarize the main strengths of the current surveillance system and the weaknesses/gaps that need to be addressed, based on the findings

C. Review of HIV treatment and care programme along cascade of services

- HIV testing: for general population and key populations, including community-based testing and linkage to HIV treatment and care services, CD4 count at time of diagnosis
- Early HIV infant diagnosis, MTCT and paediatric ART
- Enrolment and retention in HIV care, including general HIV care, management of coinfections and co-morbidities, integration of HIV/Viral hepatitis, HIV/TB, HIV/OST services
- ART: estimated need and coverage, criteria for ART initiation, adherence
- ART regimens (1st line, 2nd line and 3rd line)
- Monitoring of ART response and diagnosis of treatment failure: VL, ARV toxicity, HIVDR
- Patient tracking system
- ART outcome: viral suppression

The analysis of HIV treatment and care programme will also include review of treatment and care policy and national clinical protocols.

D. Coverage of HIV services for key populations (PWID, SW, MSM, prisoners, labour migrants)

- Needle and syringe programme
- Drug dependency treatment (OST)
- ART access
- Prison settings
- Community outreach (HIV testing and linkage to HIV treatment and care services, ARV dispense, case management/social accompanying)

The analysis of HIV services for key populations will focus on coverage, quality and integration with other health services within health system

E. Analysis of service delivery models for populations affected by the HIV epidemic from the perspective of the health system

The analysis will be focused on:

- capacity of the national health system to provide effective human, financial and infrastructural resources to address the health needs of the populations affected by the HIV epidemic, including key populations which require a proactive approach in service delivery with strong social support and case management
- health systems barriers and interventions needed to optimize and monitor HIV services along the continuum of care and ensure high coverage with HIV testing, enrolment to HIV treatment and care, adherence to ART, integration and coordination of services.
- Analysis of health financing policies for advancing universal health coverage and increasing access to HIV services (including antiretroviral therapy) for better health outcomes.

F. Analysis of service delivery models and effective coverage for populations affected by the HIV epidemic from the women of reproductive age and children and newborn health perspective.

The analysis will be focused on:

- progress achieved in the country in prevention of mother to child transmission (MTCT) of HIV and congenital syphilis (CS) including the impact and progress indicators of elimination of MTCT of HIV and CS
- challenges in access to and coverage by prevention, treatment and care services related to the MTCT of HIV and CS with a special emphasis on pregnant women and their babies belonging to key populations primarily PWID and partners of PWID, SW, MSM, prisoners, migrants
- recommendations to accelerate progress towards achieving elimination of MTCT of HIV and CS in Armenia.

3. National Strategic Plan on HIV

The review of the NSP should focus on its components and ensure that:

- NSP defines and determines priorities and strategic directions over a period of time (e.g.: five years and is aligned with the national health plan);
- NSP provides a clear framework that specifies the appropriate strategic interventions to reach the country's HIV/AIDS care and control goal(s), objectives and targets;
- It guides decision-making on allocating resources and on taking action to pursue strategies and set priorities;
- Interventions and objectives are adequately and coherently linked. Moreover, activities and sub-activities inherent to each intervention are clearly specified, highlighting clear target(s) for each intervention and identifying where and when each activity or sub-activity should be implemented and who will implement it;
- NSP specifies the budget needed to implement interventions and activities;
- It clearly describes how the interventions and activities will be operationalized as well as how the implementation will be monitored and their effect will be evaluated; and
- It provides information on the technical assistance needed to make this operationalization effective.

Based on the above review, recommendations for updating the current NSP will be developed by the expert team.

4. Participants

Five external experts:

Jeffrey Lazarus, Team leader, public health expert, WHO CC on HIV and Viral Hepatitis, Denmark

- ✓ Anders Sönerborg, professor, clinical expert, Karolinska Institute, Sweden
- ✓ Emilis Subata, harm reduction expert, WHO CC on Harm reduction, Lithuania
- ✓ Hernan Fuenzalida, health System expert, freelance consultant
- ✓ Valerie Delpech, Epidemiologist, Public Health England

External consultants will be supported by the WHO country staff members:

- ✓ Gayane Ghukasyan – national professional officer, WHO CO (Yerevan)

5. Methodology

The preparation phase will include a desk review and analysis of available documents (WHO guidelines, national policy/strategy/plans, clinical guidelines, publications, reports, etc.).

During the country mission the experts will visit relevant institutions and facilities and discuss with key informants: policymakers, health care providers and beneficiaries, NGOs, other national partners where appropriate. Together with local clinical experts, they will also have access to the medical records of PLHIV for a review of their clinical management.

6. Time, duration and geographical sites of the mission

The mission is planned for 26-30 January 2015. Logistic support in Armenia will be provided by the WHO and national health authorities.

7. Deliverables

1. Key recommendations based on the public health approach will be developed and presented to the national stakeholders by the end of the mission. Compliance of approaches and recommendations with the main WHO recommendations, i.e. 'Consolidated guidelines on the use of antiretroviral drugs for treating and preventing HIV infection' 2013[33] and 'Consolidated guidelines on HIV prevention, diagnosis, treatment and care for key populations' 2014 (30) will be ensured.
2. All team members will provide their written contribution using the template (will be delivered) to Jeffrey Lazarus by **10 February 2015**. Draft mission report will be shared with team members for comments. Key recommendations will be agreed and finalised no later than **20 February 2015**, and will be shared with the stakeholders in Armenia and will inform the final version of the Global Fund concept note.
3. Final report with findings and recommendations, including recommendations on NSP will be submitted to WHO Regional Office for Europe by **25 March 2015**.
4. The findings and recommendations of the HIV surveillance, HSS and RMNCH components will be incorporated into the Program review report.

The reports will be posted on the WHO EURO website.

Annex 2. Mission programme

Extensive Review of the National HIV/AIDS Program in Armenia

26-30 January 2015

Time	Activity	Place	Participants
26 January, Monday			
09:30 - 10:00 Departure from Hotel at 09:00	Mission internal briefing in the WHO Country Office (WHO CO)	AUA Business Centre (AUABC), room 209 9 Alek Manukyan str.	WHO Review Team T. Hakobyan, Head of the WHO CO Armenia G. Ghukasyan, CPO
10:30-11:00	Meeting with Vahan Poghosyan, Deputy Minister of Health Initial briefing by the mission: goals and objectives of the Review mission	MoH, Government bld. 3	WHO Review Team G. Ghukasyan K. Karapetyan (transl.)
11:30-18:00 11:30-12:30	Visit to the National Center for AIDS Prevention (NCAP) Meeting with Dr Samvel Grigoryan, Director, and staff: - General situation with HIV/AIDS in Armenia - Program implementation and priorities - Structure of the HIV/AIDS Service in Armenia	National Center for AIDS Prevention (NCAP) Conference Hall 2 Acharyan Str.	WHO team members NCAP staff Partners K. Karapetyan (transl.)
12:30-14:00	Lunch		

Time	Activity	Place	Participants
14:00 – 18:00	<p>Work in the NCAP: meeting with Director of NCAP (Samvel Grigoryan)</p> <ul style="list-style-type: none"> - Government policy and commitments on HIV/AIDS - National Strategic Plans (2013 – 2016; 2017 – 2021) – implementation, achievements, gaps, future directions - OSTfor HIV patients - HIV services for key populations and their sustainability - Capacity of the national health system to provide effective human, financial and infrastructural resources to address health needs of affected by HIV epidemic populations - Health systems barriers and interventions needed to optimize and monitor HIV services along continuum of care and ensure high coverage with HIV testing, enrolment to HIV treatment and care, adherence to ART, integration and coordination of services. - Analysis of health financing policies for advancing universal health coverage and increasing access to HIV services (including antiretroviral treatment) for better health outcomes. 	NCAP 2 Acharyan Str.	H. Fuenzalida (HSS) J. Lazarus, PH (until 16:30) G. Ghukasyan K. Karapetyan (transl.)
14:00-18:00	<p>Work in the NCAP: Epidemiological surveillance department& National M&E Unit</p> <ul style="list-style-type: none"> - Epi analysis and assessment of the national HIV surveillance system and vital statistics 	NCAP 2 Acharyan Str.	V. Delpech (Epi) N. Iskandaryan (transl)
14:00-16:30	<p>Work in the NCAP: Medical care department</p> <ul style="list-style-type: none"> - HIV/AIDS treatment and care along cascade of services - National treatment and care policy and protocols - Enrolment and retention in HIV care, management of coinfections and co-morbidities - MTCT, paediatric ART - ART: need, coverage, criteria for initiation, adherence, regimens, monitoring of ART response, patient tracking system, ART outcome 	NCAP 2 Acharyan Str.	A. Sonneborg (Cl.) G. Guevorkian (transl.)
16:30-18:00	<p>Work in the NCAP: Socio-Psychological Counseling and Laboratory diagnostic departments (incl. NRL)</p> <ul style="list-style-type: none"> - HIV testing for general and key populations, community based testing - CD4count at time of diagnosis - early HIV infant diagnosis - monitoring of ART response and diagnosis of treatment of failure: VL, toxicity, HIVDR, patient tracking system 	NCAP 2 Acharyan Str.	J. Lazarus (PH) A. Sonneborg (Cl.) G. Guevorkian (transl.)

Time	Activity	Place	Participants
14:00-18:00	Visit to the “AIDS Prevention Education Care, APEC” NGO (PWID) <ul style="list-style-type: none"> - Needle and syringe program - Community outreach (HIV counseling & testing, social accompanying, peer education) - Sustainability of services 	3 Nansen str., Office 136	E. Subata (HR) V. Arzakanyan, NCAP
27 January, Tuesday			
09:00 - 12:00 Departure from Hotel at 08:20	Visit to the National TB Control Center (NTC) <ul style="list-style-type: none"> - Management of TB/HIV coinfection - Testing (TB and HIV) and preventive treatment 	Republican TB Dispensary/NTC, Abovian city	A. Sonneborg (Cl.) H. Fuenzalida (HSS) A. Davidyan, NCAP A. Papoyan, NCAP G. Guevorkian (transl.)
09:30-12:30 Departure from Hotel at 08:50	Meeting at the Republican Narcological Center with Petros Semerjyan, Director and the staff <ul style="list-style-type: none"> - Needle and syringe program - Drug dependency treatment (including OST, meeting with 6 OST patients) - HIV/OST related legislation, policies and guidelines - Services for the key populations, sustainability, integration with HIV/TB services and linkages with other services 	Narcological Center 2 Acharian Str.	E. Subata (HR) V. Arzakanyan, NCAP G. Ghukasyan
09:30-13:00 Departure from Hotel at 08:40	Visit with Russian government-funded HIV mobile clinic (labour migrants, partners and family members) <ul style="list-style-type: none"> - HIV related services and testing (incl. HIV, Hep B/C, syphilis, referral to related services) Resource center in the village Argel Sustainability of services	From Aviatrans hotel to the Kotayk region v. Argel and v. Geghashen	V. Delpech (Epi) J. Lazarus (PH) L. Nanushyan, UNAIDS M. Asryan, NCAP N. Iskandaryan (transl)
Between 12:30 and 14:00	Lunch – upon completion of morning meetings all teams come to the AUA BC for lunch, and for composing new teams for the afternoon meetings	AUA Business Center 9 Alek Manukyan Str	All team members
15:00 – 17:00	Meeting with Dr. Vahan Poghosyan, sector responsible Deputy Minister of health and representatives of related MoH divisions appointed by the MoH <ul style="list-style-type: none"> - Capacity of the national health system to provide effective human, financial and infrastructural resources to address health needs of PWHA, including key populations - Analysis of health financing policies for advancing universal health coverage and increasing access to HIV services 	MoH, Government bld. 3	H. Fuenzalida (HSS) G. Ghukasyan K. Karapetyan (transl.)
15:00 – 16:30	Meeting with Alexander Bazarjyan, Head of the National Institute of Health <ul style="list-style-type: none"> - Vital statistics system - Integrated health information system (incl. HIV indicators) - HIV training course for health care providers 	NIH Komitas 49/a	V. Delpech (Epi) T. Grigoryan, NCAP Zh. Petrosyan, NCAP N. Iskandaryan (transl)

Time	Activity	Place	Participants
14:00-18:00	Visit to the Infectious Disease Clinic designated by the MoH for inpatient care and management of co-morbidities/opportunistic infections	Clinical Center 2 Sherami Str.	A. Sonneborg (Cl.) A. Asmaryan, NCAP G. Guevorkian (transl.)
28 January, Wednesday			
9:00-13:30 Departure from Hotel at 08:30	Work in the NCAP: continued Medical care department Discussion of clinical cases, ART regimen optimization Reproductive, mother & child and newborn health - progress achieved in the country in prevention of mother to child transmission (MTCT) of HIV including the impact and progress indicators of elimination of MTCT of HIV - challenges in access to and coverage by prevention, treatment, care services related to the MTCT of HIV with special emphasis on pregnant women and their babies belonging to key populations	NCAP 2 Acharyan Str.	A. Sonneborg (Cl.) K. Karapetyan (transl.)
09:30 – 13:30 Departure from Hotel at 09:00	Meeting with the “Education in the Name of Health” NGO (MSM) -Community outreach (HIV testing, ARV dispense, case management/social accompanying) - Sustainability of services	7 Amiryman str., apt. 5	E. Subata (HR) J. Lazarus (PH) T. Grigoryan (NCAP) G. Ghukasyan G. Guevorkian (transl.)
13:30 – 14:30	Lunch: upon completion of morning meetings all teams come to the AUA BC for lunch, and/or for composing new teams for the afternoon meetings	9 Alek Manukyan Str. Jraghats	All teams in one place
15:00-18:00	Visit to the “Real World Real People” NGO (PLHA) - Needle and syringe program - Community outreach (HIV testing, ARV dispense, case management/social accompanying) - Non-medical care - Peer counseling, self-help groups - Sustainability of services	4 Minas Avetisyan str., house 33	J. Lazarus (PH) E. Subata (HR) A. Davidyan, NCAP V. Arzakanyan, NCAP V. Grishechkina, TGF V. Zemlyanskay, TGF G. Guevorkian (transl.)
15:00 – 18:00	Meetings at the “Mission East” (NGO sector Principle Recipient of TGF grant) Mr Raffi Doudaklyan, Director and the staff - Analysis of HIV services for key populations (PWID, SW, MSM, labour migrants): coverage, quality, integration with other health services within health system	Mission East Office 9 Sarian str.	E. Subata (HR) V. Delpech (Epi) G. Ghukasyan
15:00-18:00	Visit with mobile medical team ("Positive People Armenian Network, PPAN" NGO and NCAP clinician) - ARV dispense - HIV case management/social accompanying, - Patients follow up	PPAN Office at Aram Khacatrayn 6, apt.2 Visit to patients in Yerevan	A. Sonneborg (Cl.) J. Hakobyan, NCAP A. Asmaryan, NCAP K. Karapetyan (transl.)

Time	Activity	Place	Participants
29 January, Thursday			
10:30 – 14:00 Trip to region Departure from hotel at 08:30 Lunch as convenient	- 10:30 Blood transfusion centre in Gyumri city (HIV blood testing for SW, PWID)+ STI services for MSM/SW - 11:00 Gyumri city polyclinic (STI testing/treatment for MSM/SW, HIV VCT for MSM and SW) - 12:00 Gyumri city Mental Health Clinic (OST, PWID outreach)	Shirak region c. Gyumri	V. Delpech (Epi) J. Lazarus (PH) Mission East staff E. Hovhannisyan NCAP G. Guevorkian (transl.)
9:00 – 11:00 Departure from hotel at 08:30	Visit to Maternity House and polyclinic in Yerevan - VCT for pregnant women, HIV diagnostics - HIV testing for general population and key populations - Patient tracking system - HIV referral system and recording - progress achieved in the country in prevention of mother to child transmission (MTCT) of HIV and Congenital Syphilis (CS) - challenges in access to and coverage by prevention, treatment, care services related to the MTCT of HIV and CS with special emphasis on pregnant women and their babies belonging to key populations	Institute of Perinatology, Obstetrics and Gynaecology 6/2 Markaryan str.	A. Sonneborg (Cl.) H. Fuenzalida (HSS) V. Arzakanyan, NCAP K. Karapetyan (transl.)
Departure from hotel at 10:30	E. Subata will depart from the hotel at 10:30 in a separate car to go to the maternity house, to pick up A. Sonneborg, V. Arzakanyan and K. Karapetyan to then drive to the Central Hospital of Detainees		E. Subata (HR)
11:40-14:00 Lunch: as convenient or at AUA BC	Visit to Central Hospital of Detainees in Yerevan and meeting with the HIV Coordinator of the Criminal-Executive Department of the MoJ (Dr AraHovhannisyan) - Coverage of HIV services for prisoners - HIV T&C, access to treatment and care in penitentiary system - Harm reduction services (needle and syringe program, OST) - ART - TB/HIV Mission members need to have their passports to get permission to enter the premises	Criminal-Executive Department, MoJ 63 Arshakunyants Str. Central Hospital of Detainees 2 Arshakunyants Str.	A. Sonneborg (Cl.) E. Subata (HR) V. Arzakanyan, NCAP K. Karapetyan (transl.)
11:30 – 13:00	Meeting at the State Health Agency (SHA) - purchaser of health services in Armenia SaroTsatyryan, Head of the SHA - Capacity of the national health system to provide effective financial and infrastructural resources to address health needs of PWHAs, including key populations - Analysis of health financing policies for advancing universal health coverage and increasing access to HIV services	SHA, Nork, 10 Gevorg Hovsepyan Str.	H. Fuenzalida (HSS) A. Hakobyan, NCAP N. Iskandaryan (transl)
Between 13:00 and 14:30	All teams come to AUA BC for the lunch and/or composing new teams for the afternoon meetings	AUA BC 9 Alek Manukyan Str.	All teams

Time	Activity	Place	Participants
15:00-17:00	Meeting with the Global Fund (TGF) Project Coordination Team (PCT) and CCM Secretary of the MoH (Hasmik Harutyunyan and the team, Tatevik Kostanyan, CCM Secretary) - Health system barriers and interventions needed to optimize HIV services along continuum of care - Current HIV project(s) of TGF - TGF support to NSP implementation, future directions - Concept Note development for TGF New Funding Model - Procurement of drugs and medical supplies	MoH, Government bld. 3	H. Fuenzalida (HSS) G. Ghukasyan
15:30-17:00	Meetings at the STI Center Hovhannes Hovhannisyan and Sahak Hakobyan, STI doctors - Coverage of STI services and HIV testing for key populations - progress achieved in the country in prevention of Congenital Syphilis (CS) including the impact and progress indicators of elimination of CS - challenges in access to and coverage by prevention, treatment, care services related to the CS with special emphasis on pregnant women and their babies belonging to key populations	Scientific Center of Dermatology and STIs 32 Fuchik str.	J. Lazarus (PH) A. Sonneborg (Cl.) V. Arzakanyan, NCAP V. Grishechkina, TGF K. Karapetyan (transl.)
16:00-18:00	Meetings at the National Center for Diseases Control and Prevention (CDC) - public health priorities - prevention and control of infectious diseases - control of nosocomial infections (Hep, TB, HIV)	CDC, Davitashen, Ambulance Station, 3rd floor	V. Delpech (Epi) Zh. Petrosyan, NCAP K. Lalayan, NCAP Vira Zemlyanska, TGF G. Guevorkian (transl.)
30 January, Friday			
09:00 – 13:00 Departure from hotel at 08:45	Work on preparation for the final debriefing	WHO CO, room 209 9 Alek Manukyan Str.	WHO team members
13:00 – 14:00	Lunch	AUA BC	WHO team members
14:30 – 15:30	Technical working meeting with the NCAP staff	NCAP Conference Hall 2 Acharyan Str.	WHO team members K. Karapetyan (transl.) G. Guevorkian (transl.)
15:30 – 17:30	Official debriefing of the mission - round table meeting with the MoH, NCAP and other national and international partners	NCAP Conference Hall 2 Acharyan Str.	Chaired by Vahan Poghosyan, Deputy Minister of Health K. Karapetyan (transl.) G. Guevorkian (transl.)



World Health Organization
Regional Office for Europe
UN City, Marmorvej 51
DK-2100 Copenhagen Ø
Denmark
Tel.: +45 45 33 70 00
Fax: +45 45 33 70 01
Email: aids@euro.who.int
Web site: www.euro.who.int/aids