Review of the HIV Programme in Azerbaijan

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<td>AIDS</td>
<td>Acquired immunodeficiency syndrome</td>
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<tr>
<td>ART</td>
<td>Antiretroviral therapy</td>
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<td>ARV</td>
<td>Antiretroviral (drugs)</td>
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<tr>
<td>BCC</td>
<td>Behaviour Change Communications</td>
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<td>CSO</td>
<td>Civil Society Organization</td>
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<tr>
<td>ELISA</td>
<td>Enzyme-linked immunosorbent assay</td>
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<td>DOT</td>
<td>Directly observed treatment</td>
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<td>EU</td>
<td>European Union</td>
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<td>FSW</td>
<td>Female sex workers</td>
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<td>GARPR</td>
<td>Global AIDS Response Progress Report</td>
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<td>GDP</td>
<td>Gross domestic product</td>
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<td>GFATM</td>
<td>Global Fund to Fight AIDS, Tuberculosis and Malaria</td>
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<td>HBV</td>
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<td>HCV</td>
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<td>HIV</td>
<td>Human immunodeficiency virus</td>
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<td>HTC</td>
<td>HIV testing and counselling</td>
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<td>IBBS</td>
<td>Integrated Bio-Behavioural Surveillance</td>
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<td>ID</td>
<td>Infectious disease</td>
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<td>IDU</td>
<td>Injecting Drug User</td>
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<td>IEC</td>
<td>Information, education and communication</td>
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<td>MDR-TB</td>
<td>Multidrug-resistant tuberculosis</td>
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<td>MMT</td>
<td>Methadone maintenance treatment</td>
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<td>MoH</td>
<td>Ministry of Health</td>
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<td>MSM</td>
<td>Men who have sex with men</td>
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<td>MTCT</td>
<td>Mother-to-child transmission</td>
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<td>NGO</td>
<td>Nongovernmental Organization</td>
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<td>NSP</td>
<td>Needle and syringe exchange programme</td>
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<td>OST</td>
<td>Opioid substitution therapy</td>
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<td>PLHIV</td>
<td>People living with HIV</td>
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<td>Prevention of mother-to-child transmission</td>
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<td>PWID</td>
<td>People who inject drugs</td>
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<td>RAC</td>
<td>Republican AIDS Centre</td>
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<td>SGS</td>
<td>Second generation surveillance</td>
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<td>SRH</td>
<td>Sexual and Reproductive Health</td>
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<td>STI</td>
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<td>TB</td>
<td>Tuberculosis</td>
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<td>UNAIDS</td>
<td>The Joint United Nations Programme on HIV/AIDS</td>
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<td>VL</td>
<td>Viral load</td>
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<td>WHO</td>
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1. Executive Summary

This World Health Organization (WHO) country mission was performed in October 2014 to assess the achievements, strengths and shortcomings of the implementation of the Azerbaijan programme on HIV/AIDS treatment and care, and to generate strategic recommendations for improving key outcomes and impacts. The mission focused specifically on providing recommendations on HIV/AIDS epidemiological analysis, HIV services for key populations, HIV treatment and care along the cascade of services, and integration of services.

The mission found that the Azerbaijan HIV epidemic continues to grow. In the past 10 years the rate of newly diagnosed HIV infections increased by 358%, from 1.2 per 100 000 population (101 cases) in 2004 to 5.5 in 2013 (514 cases). This 358% increase is above the average increase for the European Region (80% increase) and is indicative of some weaknesses in HIV prevention for key populations, notably people who inject drugs and other people with high risk behaviours, including their sexual partners. HIV sero-prevalence in key populations is 9.5% among people who inject drugs (PWID), 5.8% among prisoners, 2.0% among men who have sex with men (MSM), and 0.7% among female sex workers (FSW). Although PWID represent over 57% of all registered HIV cases in the country, recent trends in the epidemiology of HIV in Azerbaijan suggest that the incidence of HIV is increasing among those infected through heterosexual transmission, particularly among young women. As in most countries within the region, this heterosexual transmission is most likely to be from men at high risk (such as PWID and MSM) to their female sexual partners. HIV prevalence in the country differs from region to region and is notably higher in Shirvan, Hajigabul, Astara, Lankaran, and Sumgayit.

Azerbaijan has achieved some successes, both in the establishment of services for key populations and for people living with HIV. However, current opioid substitution therapy (OST) programmes reach a small proportion of PWID and key officials expressed little support for a rapid expansion of this vital service. Due to a lack of a credible national population size estimation for MSM, calculations of preventative service coverage is unreliable.

The mission additionally found that inadequate HIV testing of key populations is a major barrier to controlling the HIV epidemic in Azerbaijan. HIV testing is mostly focused on the general population and is not provided where most key populations reside or gather. Adapting HIV testing strategies to the needs of key populations is crucial to achieving a significantly higher proportion of people who are aware of their HIV positive status. As such, introducing community-based rapid testing is highly recommended.

Another worrying observation is that people with HIV in Azerbaijan are generally diagnosed very late and/or start antiretroviral therapy (ART) late. Among people who are diagnosed with HIV, only about one third are enrolled into HIV treatment and care and, of these, only half are started on ART and even fewer have suppressed viral load (VL). Furthermore, the national criteria used for VL suppression (<5000 copies/ml) is significantly higher than international recommendations. Loss to follow-up, as well as patient migration and death, are undetected in the current system, which is characterized by vertical silos of disease categories, deficient
referral systems, disrupted information between providers, delayed testing results, limited efforts to track patients not presenting for care, and an inefficient use of resources.

Inadequate enrolment of patients into ART harms both the patient in question and the community at large by letting the virus continue its spread throughout the country. The problem of linkage to and retention in care, particularly for PWID, requires urgent attention. The current health care system is not functioning to an extent that provides the PWID community with sufficient treatment options and support. This needs to be addressed as a high priority in order to halt the HIV epidemic. Very low OST coverage of PWID and inadequate harm reduction initiatives are major barriers to enrolment and retention in HIV care. Scaling up OST and needle and syringe exchange programmes (NSP) is therefore crucial for the success of future HIV prevention and treatment programmes in Azerbaijan. Community systems should be strengthened and formal partnerships of Civil Society Organizations (CSOs) and government structures nurtured. CSOs can and should play a larger role in this next phase of HIV programmes in order to reach key populations.

Within ART, 18 different regimens were used among adults; however, the vast majority of all patients on ART (79%) receive one of the three most common regimens: TDF/FTC/EFV, TDF/FTC/LPV/r, or AZT/3TC/EFV. The high proportion of patients on AZT-based ART regimen (40%) is concerning and should be revised.

The annual number of deaths of people living with HIV (PLHIV), as well as AIDS-related deaths, continues to increase every year and has almost doubled since 2008 (from 191 in 2008 to 368 in 2013). In 2013 alone, Tuberculosis (TB) accounted for 37.5% of all deaths of PLHIV. One of the major reasons is late diagnosis of TB. The need to refer HIV patients to other facilities for TB diagnostics is delaying anti-TB treatment and ART initiation for those newly diagnosed. Obstacles in collaboration between the Republican AIDS Centre (RAC) and TB care causes delays in diagnostics, in starting ART and in the referral of patients from one specialized care institution to another.

Six priority areas for Azerbaijan have been identified and recommendations are provided for each area:

Priority area 1: Increase diagnosis and enrolment into care of key populations
Priority area 2: Ensure timely initiation of quality ART and retention in care
Priority area 3: Optimize service delivery models, including integration of services
Priority area 4: Scale up harm reduction for PWID, including OST
Priority area 5: Prevent sexual transmission of HIV and prevent mother-to-child transmission (PMTCT)
Priority area 6: Improve management, coordination and strategic information
**Main recommendations Priority area 1: Increase diagnosis and enrolment into care of key populations**

- Focus HIV testing strategically on the populations that are at highest risk for HIV, including hard-to-reach populations such as PWID.
- Revise the national HIV testing policy to allow NGOs working with key populations to perform community-based rapid HIV tests.
- Significantly scale up community-based rapid testing for key populations.
- Introduce and implement provider-initiated HTC in health care settings for patients with hepatitis B and C (clinical or laboratory markers).
- Urgent efforts to ensure linkage to care are needed (including social accompanying).
- Implement systematic follow up for those identified as HIV positive, but who are not enrolled into care.
- Shorten the time between taking the blood sample and delivering test results, for example through simplification of the diagnostic algorithm, and develop an algorithm to optimize information flow of test results. The algorithm should comprise either one Enzyme-linked immunosorbent assay (ELISA) + Immunoblot or two different 4th-generation ELISA tests.

**Suggested targets for priority area 1:**

- HIV testing coverage of key populations: at least 50% in the first year and at least 60% in the second year of the carefully and reliably estimated key populations, and prioritize using rapid tests for key populations.
- Enrolment into care: at least 80% of those diagnosed are enrolled into care.

**Main recommendations Priority area 2: Ensure timely initiation of ART and retention in care:**

- ART should start without any delay when a person with clinical symptoms has been identified.
- Ensure 100% access to ART for all eligible PWID.
- OST needs to be scaled up substantially to allow for increased adherence of PWID to ART.
- Implement strong internal and external quality control systems at major laboratories and at the reference laboratory, including systems for VL and CD4 monitoring.
- Minimize the number of visits before ART can be initiated (for example, by simplifying the HIV testing algorithm and by conducting epidemiological investigation later).
- Closely follow up patients who miss a visit (through peers, nurses or social workers) to locate lost to follow up patients in the RAC or regional ART clinics.
- Set up a system for clinic appointments and send reminders through SMS.
- Ensure the same doctor follows individual patients through therapy whenever possible.
Suggested targets for priority area 2:

- Increase the number of PLHIV on ART by 2051 in 2015, by 2534 in 2016, and by 3077 in 2017.
- The proportion of PLHIV on ART with VL below limit of detection (<50 copies/ml) should be 85% by 2016.

Main recommendations for Priority area 3: Optimize service delivery models, including integration of services

- Provide a clinical TB expert on the premises of the RAC, ART regional clinics and OST sites (e.g. part time/consultative visits) for diagnosis and treatment.
- Sputum collection should be available at ART regional clinics while the RAC will use GeneXpert (need to revise clinical protocols and algorithms).
- Ensure timely initiation of ART in TB/HIV co-infected patients and enter key HIV information into TB/HIV co-infected patient records.
- Dispense ARV drugs in TB hospitals by TB experts during hospitalization.
- Dispense ARV drugs on site in OST centres and expand OST for PWID in ART clinics.
- Provide OST in all hospitals by outreach OST providers to enable continuation of OST.
- The continuation of HIV treatment and care started in the RAC should be strengthened in particular for key populations (including social accompanying for key populations by peers/social workers, operational follow-up by ART centres in the regions and by actively using community-based organizations to facilitate this linkage).

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

- Significantly scale up OST coverage.
- Ensure quality of OST delivery:
  - Sufficient dosages of OST should be ensured through training and updated guidelines.
  - Restrictive inclusion/exclusion criteria for OST currently occurring in practice should be revised.
- Consider changes in legislation which would allow take-home dosages for 2-4 days of methadone for stable methadone users.
- Work towards removing drug user registration requirements in order to access narcology services.
- Ministry of Health (MoH) to revise current financing model of narcology centres and include OST in results-based financing model.
- MoH to show governmental commitment by co-financing OST programmes.

Suggested targets for priority area 4:
1. Increase the number of OST clients to at least 10% of estimated PWIDs, including prison populations, in 2016, and up to 40% (28 000) in 2017.
2. Scale up NSP to reach at least 60% coverage of estimated PWIDs, including prisoners.
Main recommendations Priority area 5: Prevent sexual transmission of HIV and PMTCT

Sexual transmission:

- Increase outreach to partners of key populations (behaviour change communication (BCC), condoms and HIV rapid testing).
- The apparent low efficiency of preventive programmes among sex workers should be thoroughly analysed and future programmes should be planned based on the results of such evaluations.
- Ensure access to ART regardless of CD4 cell count to HIV-infected partners in HIV serodiscordant couples.
- Regularly monitor VL in patients on ART and evaluate the proportion of patients with sustained VL suppression as they are low-risk for HIV sexual transmission.

Prevention of mother-to-child transmission (PMTCT):

- Address regional differences in HIV testing among pregnant women to ensure 95% testing coverage of pregnant women.
- Target HIV testing towards high risk pregnant women (key populations or the partner of persons from key population).
- Early infant diagnosis must be implemented widely.
- Use social accompanying when needed.

Main recommendations Priority area 6: Improve management, coordination and strategic information

Management and coordination:

- Appoint a national HIV/TB coordinator, preferably at the MoH level.
- Use epidemiologists to analyse data collected and produce outputs for action and strategic planning.

Strategic information:

- Ensure future second generation surveillance (SGS) is conducted which can then inform policy-making.
- Collect and analyse information on CD4 cell count at time of HIV diagnosis for all HIV identified people.
- Scrutinize the quality of recent estimations of the size of key populations.
- Enhance geographical information of key populations (in particular PWIDs) and use modelling to estimate size. Capacity development to improve modelling of key populations should be considered.
- Strengthen the collection of national data on TB/HIV co-infection and include reporting MDR/XDR-TB co-infection data.
- Perform systematic quality control of data collection.
- Analyse key information on a regular basis, including the HIV treatment and care cascade, and use this information for policy development.
2. Introduction

Azerbaijan has a population of 9.5 million. 22.7% of the population are under the age of 15 years, and 6.3% of the population are above the age of 65 years. 53.6% of the population resides in urban areas. Administratively, the country is divided into 66 rayons and 11 cities.

2.1 Epidemic analysis: latest trends

The incidence of newly diagnosed HIV infections in 2013 was 5.6 per 100 000 population. HIV sero-prevalence in key populations was 9.5% among people who inject drugs (PWID), 5.8% in prisoners, 2.0% among men who have sex with men (MSM), and 0.7% among female sex workers (FSW). Recent trends in the epidemiology of HIV in Azerbaijan suggest that the incidence of HIV is increasing among those infected through heterosexual transmission, particularly among young women: the proportion of female HIV cases has risen from 17% in 2010 to 22% in 2013 (1). As in most countries in the region, this heterosexual transmission is most likely to be from men at high risk (such as PWID and MSM) to their female sexual partners. Of Azerbaijani citizens with HIV, 558 (21.3%) were infected with HIV abroad, predominantly in the Russian Federation (2).

HIV prevalence in the country differs from region to region and is notably higher in Shirvan, Hajigabul, Astara, Lankaran and Sumgayit. The number of cumulative HIV cases from 1987 to 2013 was 4298, of whom 4149 (96.5%) were Azerbaijan citizens; 3353 (78%) were male and 945 (22%) female. The estimated sizes of key populations include people living with HIV (PLHIV): 9159, PWID: 71 283, FSW: 25 054, MSM: 6572, and prisoners: 17 000.

As cited in the Global Fund to Fight Aids, Tuberculosis and Malaria (GFATM) Project Implementation Unit May 2014, Semi-Annual Progress Report (3), injecting drug use continues to be the primary mode of HIV transmission. According to the 2014 press release from the AIDS Center, out of 4149 Azerbaijani citizens with HIV, 2400 (57.8%) were infected through injecting drugs; 1310 (31.6%) through heterosexual contact; 51 (1.2%) through MSM; 65 (1.6%) through mother-to-child-transmission (MTCT); 1 (0.02%) through unsafe blood donation; and 332 (7.8%) via unknown sources. As seen in the figure below, the total 4298 registered HIV cases (including foreign citizens) from 1987 to 2013 are divided by mode of transmission: PWID (56.9%), heterosexual transmission (31.9%), unknown transmission (8.5%), MTCT (1.5%), and MSM (1.2%). The substantial “unknown” category may contain a significant number of MSM, as this behaviour, as well as IDU, is stigmatized in Azerbaijan.
Fig. 1. Modes of transmission 1987-2013

Taking undiagnosed infections into account, the Joint United Nations Programme on HIV/AIDS (UNAIDS) and the World Health Organization (WHO) estimate that 9200 (6700-12 000) people were living with HIV in Azerbaijan at the end of 2013, 1200 (<1000-1500) people became newly infected, and less than 1000 people died from AIDS-related causes during 2013. HIV prevalence in the adult population was estimated to be 0.2% (0.1–0.2%) (4). The HIV prevalence among key populations, as noted in the Integrated Bio-Behavioural Surveillance Studies (IBBS) carried out in 2008 and 2011, is presented in Table 1.

Table 1. HIV prevalence among key populations in 2008 and 2011

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<th>2008</th>
<th>2011</th>
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<tr>
<td>PWID</td>
<td>10.3</td>
<td>9.5</td>
</tr>
<tr>
<td>MSM</td>
<td>1.0</td>
<td>2.0</td>
</tr>
<tr>
<td>FSW</td>
<td>1.7</td>
<td>0.7</td>
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Key populations – people who inject drugs

While the HIV prevalence among PWID was found to have fallen from 10.5% in the 2008 IBBS to 9.5% in the 2011 IBBS, there remains serious cause for concern regarding the epidemiology of HIV among PWID in Azerbaijan. The 2012 IBBS (5) found that HIV prevalence among PWID correlated with frequent reporting of needle and syringe sharing at last injection (52.9%). It is particularly concerning that this number has risen since 2008, when the IBBS found this indicator ranged from 8.5% in Baku to 41.3% in Ganja. In addition, only 66.5% of participants in 2012 were aware of the possibility of getting clean needles and syringes. Of these, 85.5% obtained the clean needles and syringes from pharmacies and 26.2% through a syringe exchange.
In Baku, between 2008 and 2012, the number of people obtaining syringes from pharmacies had fallen, and those obtaining from needle syringe exchange programmes (NSP) had risen. Another startling finding was that only 5.2% of PWID were tested for HIV in the previous year; this is an extremely low percentage.

In the previous 12 months, 36.3% of PWID reported having commercial sex partners (median of three partners). 30.7% of those participants did not use a condom during their last sexual encounter with a commercial partner. Only 4.1% of injecting drug users (IDU) reported using a condom with an occasional sexual partner, and only 19.2% of PWID reported participating in prevention programs in the previous year (this figure was higher in Baku than for any of the other 6 cities surveyed). Out of all male IDUs participating in the survey, 3.6% reported having sex with a male partner; using the population size estimation of 71 283 PWID in Azerbaijan, this would mean that there are 2567 MSM who inject drugs in Azerbaijan.

In 2011, 63.3% of all PLHIV in Azerbaijan were co-infected with hepatitis C (HCV) (6). Given that HCV spreads most commonly among PWID, and that 63.1% of all HIV infections by 2011 were related to injecting drug use, it is likely that close to 60% of HIV-positive PWID in Azerbaijan are co-infected with HCV. There are no good estimates for total number of PWID living with HIV. It should also be noted that 62.8% of all PWID surveyed in the 2012 IBBS were HCV positive (5).

Key populations – men who have sex with men

HIV prevalence among MSM doubled (from a low base) from 1% to 2% between 2008 and 2011. If the number of MSM is truly 6572 (as the population size estimate report states), this would be a small overall number, but this is likely to be a significant underestimate of the number of MSM in Azerbaijan. As noted above, the PWID survey results suggest there are 2567 MSM who inject drugs, and that most PWID have hepatitis C. This would mean that over one third of all MSM in the country are also PWID. Yet the hepatitis C rate found among MSM in 2012 was 6.5%. Considering all data, it is likely that the MSM population size is much larger than the official figure. For example, even if all the hepatitis C positive MSM were PWID, this would mean 2567 MSM who inject drugs account for 6.5% of the total MSM population, resulting in a total MSM population of more than 40 000 (2% of 40 000 is 800 HIV-positive MSM).

The 2012 IBBS found that a high proportion of MSM (26.0%) engaged in commercial sex in the previous six months, suggesting that the sample included a sizeable proportion of male sex workers. Despite some knowledge about risks and preventative methods, actual condom use during last sexual intercourse with a regular partner was as low as 3.4%, while with commercial partners it was only slightly higher at 4.9%. HIV testing was low, as only 27.0% of MSM reported ever being tested for HIV. Only 26.5% reported having received HIV prevention services in the previous year. HIV prevalence was 2.0%, HCV – 6.5%, hepatitis B (HBV) – 5.0%, and syphilis – 8.0%. More than 40% of MSM surveyed had sex with both men and women.
Key populations – female sex workers

Female sex workers (FSW) were more consistently reached by preventative programs than other key populations but several important indicators showed that this group continues to experience difficulties changing towards safer behaviour. In the 2012 IBBS, the median number of clients reported by FSW in the previous week was 15, while condom use with clients during their last sexual encounter was 53.7%. The most frequently mentioned reason for not using condoms with clients was partner’s refusal (59.6%). Condom use with a non-commercial sex partner at the last sexual encounter was much lower (16.3%). Slightly more than half of FSW (56.7%) reported participation in preventive programs. Prevalence of HIV in FSW is 0.7%, HCV – 11.7%, HBV – 5.3%, and syphilis – 6.0%.

It is also concerning that only 65.7% of FSW were aware that using condoms protects them against HIV (Baku – 70.0%, Sumgayit – 84.0% and Ganja – 30.0%), while 82.3% knew that sharing needles and syringes may lead to HIV transmission (Baku – 82.3%, Sumgayit – 66.0%, and Ganja – 72.0%).

The HCV prevalence (11.7%) suggests that the proportion of FSWs who also inject drugs is higher than the 2% of respondents who admitted injecting illicit drugs. Extrapolation of HCV prevalence from the survey to an estimated 25 000 FSWs provides that about 3000 FSWs are infected with HCV. The number of HIV-positive FSW is estimated to be about 175.

Key populations – prisoners

The 2012 IBBS found there was a high percentage of needle sharing (42.3%) among a small proportion (2.5%) of prisoners who reported injecting drug use in the past month. The high prevalence of HIV (5.8%) and HCV (57.8%) in this group may indicate that injecting drug use is higher than reported by participants. Prevalence of HBV and syphilis were 5.8% and 5.3% respectively. Awareness about prevention programs and use of condoms was low in this group as well. With a total population size of 17 000, these figures suggest that there are at least 425 active PWID prisoners, and about 985 HIV-positive prisoners.

Individual populations – street children

The 2012 IBBS also examined street children in Baku. The majority of the 200 recruited street children were boys (92.5%) and their median age was 17 years, with 17% of participants having been arrested at least once. Surprisingly, the majority of children reported being employed (95%) while illegal activities such as begging, commercial sex, stealing, and drug substance selling as ways of earning money, were reported by 5.7%.

HCV was the most frequently diagnosed infection among street children (8.0%) yet all participants denied injecting drugs. There were no children who tested positive for HIV, but prevalence of HBV was 3.5% and syphilis 0.5%. As many as 59.5% of street children reported having sex with a commercial sex partner in the last 12 months; however, only 14.9% reported
using a condom during their last sexual encounter with a commercial partner. Only 48.0% of children knew that they could protect themselves from HIV by using a condom. Prevention coverage is very low, and only 3% of children had ever been tested for HIV.

2.2 Investments in the national HIV/AIDS response
The National Strategic Plan for HIV 2016-2020 is currently under development. In its draft form (7), 5 key objectives are identified:

1. Implement evidence-based preventive activities focused primarily on affected key populations.
2. Ensure access to accurate diagnosis of HIV infection.
5. Develop program capacities, including human and infrastructural resources.

The expected outcomes of the National Strategic Plan are:

- a reduction in the spread of HIV infection among vulnerable groups (PWID, FSW, sexual minorities, and prisoners) by means of preventive measures;
- elimination of HIV transmission from mother to child through preventive measures;
- a reduction of mortality associated with HIV infection by means of early detection, treatment, care and support, and the extension of days lived for those with HIV; and
- a rise in public awareness of HIV/AIDS to reduce stigma and discrimination.

The Ministry of Health (MoH) has approved comprehensive Guidelines on Supportive Supervision of HIV for Service Providers (8). The Guidelines provide instruction for supervision to promote compliance with service delivery standards, and to promote improvements in the quality of HIV services. The objectives of supervision of service delivery levels are as follows:

a) to assist staff in providing improved preventive, promotional and essential curative services;

b) to review health services coverage and quality and to assist in the implementation of plans and strategies for improvement; and

c) to build capacity for self-assessment, problem-solving, solution-finding and solution implementation through guidance, support and on-the-job training.

Currently, the Azerbaijan MoH is the Principal Recipient for the GFATM HIV Grant. The Project started in October 2010, and is expected to finish in September 2015, with total funds of €23.6 million. The 13 subrecipients include: a) the Republican Centre of the Struggle Against AIDS; b) the Main Medical Department of the Ministry of Justice of the Republic of Azerbaijan; c) the Scientific-Research Institute of Obstetrics and Gynaecology; and d) 10 local NGOs. The GFATM HIV Grant in Azerbaijan has eight programme objectives:

1. Strengthening national capacities for effective responses to the HIV epidemic.
2. Strengthening HIV prevention among most at-risk groups through harm reduction.
3. Expanding access to HIV services in the penitentiary sector.
4. Improving knowledge and raising awareness about HIV among youth.
5. HIV surveillance, counselling/testing and laboratory diagnosis.
7. Scaling up anti-retroviral therapy (ART) and associated care and support.
8. Operational research in priority issues of HIV control.

According to the latest available GFATM Grant Scorecard (9), the HIV Grant has been successful in the following main areas:

- the decentralization and regionalization of ARV treatment (six regional centres were added in addition to the ARV centre at the National AIDS Centre);
- the establishment of Voluntary HIV Counselling and Testing (VCT) points throughout the country (43 points in various health facilities);
- the recruitment of social workers to work in the penitentiary facilities providing support for ARV treatment and HIV testing;
- the provision of palliative care for PLHIV;
- the amendment of the national PMTCT protocols (decreasing the number of tests for pregnant women from two to one) in the context of shifting the focus from extensive testing of all pregnant women to more targeted testing of the most at-risk groups; and
- the introduction of Life Skills Based Education at elementary and secondary schools and within the curriculum of the Azerbaijan Pedagogic University.

According to the US State Department (10), antidiscrimination laws exist but do not specifically enumerate lesbian, gay, bisexual, and transgender individuals. Societal intolerance, violence, and discrimination based on sexual orientation and gender identity remain a problem. In terms of prisons, the government undertook significant efforts to improve detention conditions by building new facilities and modernizing existing detention centres. The Ministry of Internal Affairs reported the opening of five new detention facilities and the renovation of eight facilities in 2013.

2.3 General health care

Government health expenditure accounts for 5.2% of the GDP (2011). According to the World Bank Group Azerbaijan Partnership Program Snapshot (11), the Government has made substantial progress in rationalizing public health facilities and health care staff, developing treatment protocols, training personnel, and introducing family doctors and a licensing system for health professionals. Improvements are also being made to health care facilities through the construction of new regional hospitals and upgrading rural health centres, with a focus on strengthening primary health care.

The health system structure in Azerbaijan is highly centralized and hierarchical, and most decisions about key health policy initiatives are made at the State level. The MoH has the ultimate responsibility for the management of the health system, but it has limited means to influence health care providers at the local level as they are financially dependent on the local district health authorities. Although efforts have been undertaken to shift the focus from hospital provision to primary care, progress has been slow. The main goal of the health system, “to provide universal access to health services for all citizens”, is hampered by a severe lack of...
funding and high out-of-pocket payments, resulting in limited access to services for large parts of the population.

The MoH has authority over the central institutions, the tertiary level (Republican) hospitals, research institutes, and the Sanitary-Epidemiological Service, while funding for these facilities comes from the Ministry of Finance. The MoH coordinates the district health authorities, and since 2006, it has been responsible for the direct management and financing of health services in Baku. District health authorities are subordinate to the MoH in matters of health policy, while the funding comes from the local governments. The Ministry of Finance defines the annual health budget (in collaboration with the President and National Assembly) and then allocates funds to the MoH for services under its control and to local governments for services provided at the district level.

3. Purpose and objectives

For 2014 and 2015, the WHO and the GFATM have signed a Cooperative Agreement on the provision of WHO technical assistance to applicant countries prior to submission of their concept notes for possible GFATM HIV Programme funding. Azerbaijan is in the process of preparing a GFATM HIV Programme concept note with expected disbursement for the period 2015-2018, and has requested the WHO Regional Office provide technical assistance. The WHO recruited external assistance to carry out a review of the current Azerbaijan HIV Programme to assess the achievements, strengths and shortcomings in the implementation of the Azerbaijan national programme on HIV/AIDS treatment and care; to generate strategic recommendations for improving key outcomes and impacts; and to provide recommendations on priority and target setting which are aligned with general WHO guidelines and recommendations.

The program review includes 4 key components:

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

The Terms of Reference for the review of the current Azerbaijan HIV Programme can be found in Annex 1, and review team members and list of informants in Annex 2.

4. Methods

The evaluation of the HIV/AIDS Programme in Azerbaijan was carried out through a desk review of available information regarding the epidemic, programmes, services, treatment, and care. The review covered national response and legislation currently in place, as well as reports from various local and international stakeholders. The desk review was followed by a country
mission which took place from 12-18 October 2014, in Baku and Shirvan Province. During the mission, APM Global Health experts held meetings with key health stakeholders and HIV/AIDS policy-makers.

The list of persons that met during the mission includes representatives of the WHO; the MoH; the Country Coordinating Mechanism; civil society organizations working with PLHIV, PWID, MSM, and FSW in Baku and Shirvan; the AIDS Centre in Baku (including MMT point); the ART Centre in Shirvan; the Prison Central Hospital; the TB Hospital, TB Dispensary and Narcological Dispensary (MMT point) in Baku; and the GFATM Project Implementation Unit.

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

5. Findings – strengths and achievements

Azerbaijan developed a system of HIV surveillance, prevention and HIV treatment and care within a short timeframe, implemented it countrywide and has since endeavoured to improve service delivery. Below are some of the major strengths and achievements of the national HIV programme.

5.1 HIV surveillance

Both HIV and AIDS cases are notifiable in Azerbaijan. The quality of HIV surveillance core variables is very good: transmission mode is reported as unknown for only 4% of cases, and age is reported for 100% of cases. HIV case-based reporting and patient monitoring is established and allows the tracing of epidemiological trends and relevant features of clinical manifestation. The RAC developed and maintains a name-based HIV registry. The database is updated retrospectively and it is expected that the system will be introduced in the ART sites in the rayons.

The MoH, with assistance from international donors, has taken significant steps to improve its knowledge of the situation regarding HIV among key populations in the country. Second generation behavioural surveillance was carried out by the RAC in Baku and Lankaran cities in 2003-2004, and a national integrated study in the form of serological, epidemiological and behavioural surveillance among vulnerable population groups, with the purpose of monitoring and evaluating the epidemiological situation of HIV infection in the Republic of Azerbaijan, was carried out in 2007-2008 (9). A study to determine the sizes of key populations was carried out in 2011 (6), and an IBBS survey (5) was conducted in 2011-2012 in seven cities (Baku, Lankaran, Ganja, Hajigabul, Sumgayit, Shirvan, and Masalli) in Azerbaijan.
5.2 HIV testing

The updated Guide to VCT was approved by the MoH in 2012. The Guide provides direction and a protocol for the organization of VCT, including minimum standards, pre-test and post-test counselling procedures, and important guidance for quality assurance and evaluation of VCT services.

In terms of HIV testing and counselling (HTC), the national policy addresses all population groups, including key populations and pregnant women, and recommends provider-initiated testing and counselling in all patient encounters. HIV testing is provided without any user fees for all persons in the country. Provider-initiated HTC is offered in all TB centres, primary health care centres and other facilities, including the penitentiary system. The policy also supports rapid testing with same day results in health care settings where invasive procedures are performed (surgery, gynaecological wards, and maternity homes).

Of the 553 717 HIV tests performed in 2013 through the hospital and public health system, 514 were HIV-positive. This translates to 1 positive result for every 1077 tests. Currently, 39 centres are providing VCT services for target populations. The total number of persons provided with VCT services through the GFATM HIV grant was 23 619 (15 078 males and 8541 females). Out of this total, 13 034 persons were tested through diagnostic laboratories; 7685 at narcological and venereal health facilities and tuberculosis dispensaries; and 5501 persons through mobile units.

The testing for key populations has increased dramatically since the introduction of mobile rapid testing, a method proven to be effective in reaching key populations. The number of mobile units has recently been increased to 12. Of the 6970 key population members tested in 2013, 5501 were through the rapid tests. Out of all tests provided, 32 were HIV+ (30 PWID and two MSM), all of whom were enrolled in appropriate treatment and care.

Table 2. HIV testing of key populations in 2013

<table>
<thead>
<tr>
<th>HIV Test</th>
<th>HIV+</th>
<th>% Tested of Estimated Population</th>
<th>% Tested of Those Reached</th>
</tr>
</thead>
<tbody>
<tr>
<td>PWID</td>
<td>5 484</td>
<td>38</td>
<td>7.7</td>
</tr>
<tr>
<td>FSW</td>
<td>880</td>
<td>0</td>
<td>3.5</td>
</tr>
<tr>
<td>MSM</td>
<td>606</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>Prisoners</td>
<td>16 500</td>
<td>70</td>
<td>97</td>
</tr>
<tr>
<td>Total KP</td>
<td>23 470</td>
<td>110</td>
<td>1 HIV+/213 tests</td>
</tr>
</tbody>
</table>
These figures are a significant improvement on the testing rates found in 2011-2012. For example, the 2011 Population Size Estimate Report found that only 1 in 20 PWID had been tested for HIV in the previous year. Also, the number of HIV-positive results per number of tests carried out shows that rapid testing of key populations may be up to five times more cost-effective than testing the general population.

5.3 ART and clinical guidelines

The number of people receiving antiretroviral therapy (ART) increased from seven in 2006, to 435 in 2010, to 1252 in 2013. The number of people enrolled in medical HIV care increased from 671 in 2006, to 910 in 2010, to 1569 in 2013, 49% of whom were receiving ART at the end of 2013.

Outpatient services for HIV-positive individuals are provided at the RAC in Baku. On average there are 30-50 visits per day. The patients are seen by doctors, and their conditions are registered on paper charts. Drug prescriptions are written on paper. The RAC keeps a central registry on all known HIV-positive patients in the country (an Excel database) which is updated by a central secretary/administrator who receives information by infectious disease doctors (i.e. they feed information on paper to the secretary/administrator). The data is colour-coded (e.g. pregnant women have their own colour code in the name cell, patients with HIV/TB have another colour, etc.). There is also another database which contains information on ART (drug combinations), as well as serial measurements of HIV RNA (viral load, VL) and CD4+ T-cell counts by predefined time intervals from the initiation of therapy. Response to therapy can therefore be monitored.

An inpatient service for HIV-positive patients is also provided at the RAC, which has 20 inpatient beds for sub-acute/chronic conditions. More acutely ill patients may be referred to another hospital. At the time of the visit, nine beds were occupied with HIV-positive patients.

Typically, patients are monitored every six months if they are not on ART, but every 3-4 months if they receive ART. Of the 1252 patients who are receiving ART in the country, 217 are being treated in the regional ART centres outside Baku. The regional centres were established in September 2012, and currently there are six such centres. However, they have not become fully established, since many patients do not want to go to these regional ART centres for their care. The AIDS Centre provides training for doctors who work in the regional centres. All regional centres submit a monthly report on the number of patients seen and treated for HIV to the RAC.

Adaptation of the WHO 2013 Guidelines on the Use of ARVs for the Prevention and Treatment of HIV Infection within national guidelines remains ongoing. For initiation of ART, Azerbaijan relies on a national protocol which is based on the WHO guidelines. Treatment initiation is recommended when the CD4 count falls below 350, or is recommended regardless of the CD4 cell count for children, during pregnancy, in patients with TB or HBV co-infection, and among serodiscordant couples. The recommended first line regimen is TDF/3TC(FTC)/EFV, in accordance with WHO guidelines.
Another success is the uninterrupted delivery of ART with no stock outs. To achieve a situation of zero stock outs requires that all elements, including the forecasting of needs, procurement processes, and supply chain, are working effectively together. Azerbaijan is also taking steps to provide services in closer proximity to patients with the establishment of six ART sites and 12 HIV laboratories in provinces outside Baku, and through the highly successful expansion of mobile units for HTC, particularly for key populations who are invited by NGOs for testing when these mobile clinics visit the NGO settings.

5.4 PMTCT

For the PMTCT of HIV, an ‘option B’ was adopted in 2010. The number of HIV tests in pregnant women is higher than the number of pregnant women (231 660 tests in 169 229 pregnant women in 2013). Following the implementation of new guidelines, ART is administered in 88.5% of all cases of HIV-positive pregnant women. The PMTCT programme in Azerbaijan has had considerable achievements, with few vertical transmissions reported.

5.5 Key populations

In the concentrated epidemic outlined in Section 5.1, it is recommended that the majority of activities in a National HIV Strategic Plan be directed towards prevention, testing, treatment, care and support of those with HIV among key populations. As seen in the table below, key populations are a predominant focus of HIV prevention in Azerbaijan:

<table>
<thead>
<tr>
<th></th>
<th>Reached</th>
<th>Target</th>
<th>Estimated population size</th>
<th>% Reached</th>
</tr>
</thead>
<tbody>
<tr>
<td>PWID</td>
<td>13 372</td>
<td>14 000</td>
<td>71 283</td>
<td>18.8</td>
</tr>
<tr>
<td>FSW</td>
<td>6189</td>
<td>6075</td>
<td>25 054</td>
<td>24.2</td>
</tr>
<tr>
<td>MSM</td>
<td>1750</td>
<td>2517</td>
<td>6572</td>
<td>25.2</td>
</tr>
<tr>
<td>Prisoners</td>
<td>12 698</td>
<td>10 200</td>
<td>17 000</td>
<td>74.7</td>
</tr>
</tbody>
</table>

The package of services made available by NGOs and government services to key populations appear to be suitable for each specific key population, although these are not being provided to effectively control and reduce the HIV epidemic in Azerbaijan. NGOs have proven to be the key link to HIV prevention, testing, treatment, care and support for key populations. However, even more can be done through closer collaboration between the NGOs and government services.
Azerbaijan has increased the number of NSP sites and has attained a high coverage of NSP. An extensive infrastructure to deliver NSP has been established over a relatively short time frame. In 2014 the country had 31 points where PWIDs could access a basic package of services (sterile injection kits, condoms, and information and education materials). However, the NSPs are implemented by NGOs only. In 2014, six NGOs provided harm reduction services.

The package of services for PWID includes distribution of needles and syringes, information-education-communication (IEC) materials, condoms, sterile water for injection, post-injection plasters, alcohol swabs, and containers for used syringes. Free legal, medical and psychosocial counselling is also available, as well as referrals to VCT services and the opioid substitution therapy (OST) programme. This package of services is similar to the comprehensive package recommended by the WHO for addressing HIV among PWID.

From October 2013 to March 2014, a total of 13 372 IDUs were covered by HIV preventative activities through the GFATM HIV grant. The sharp increase in the number of PWID reached through harm reduction activities in this period is attributed to the introduction of mobile VCT units and the expansion of services into new geographical areas. In addition, the number of clients per outreach worker increased, and outreach workers were trained in appropriate techniques.

The Behaviour Change Communication Strategy for HIV Prevention among the Most at Risk Populations in Azerbaijan for the period 2014 – 2018 (12) identifies key behaviour change goals for PWID:

- Injection only occurs with sterile equipment, or if none is available, then injection does not occur. Sharing of equipment also does not occur.
- Condoms are used every time for all forms of sex except for when with a mutually monogamous uninfected partner.
- HIV testing occurs if there have been unsafe injections or unprotected sex.
- OST services are accessed once they are more widely available.
- Referrals are sought out and followed up on for needed services such as psychologists and lawyers.

Visits to NGOs providing harm reduction services to PWID revealed a close connection between outreach workers dealing with PWID and PLHIV. In a country where the majority of PLHIV are PWID, this is appropriate. Unusually for the EECA region (and globally), the PWID NGOs saw their role as spanning HIV prevention, encouragement and accompaniment to HIV testing, and assistance with HIV treatment, as well as care and support of PLHIV and PWID. This holistic approach is likely to be highly effective for the clients of the program. Scale-up is needed to reach more PWID (at least 60% of the estimated PWIDs in Azerbaijan) but this must be done without sacrificing quality.

In both Baku and Shirvan, interviews with outreach workers and NGO management revealed a structured approach to outreach (including strong training and supervision, and a focus on expansion to new clients and new areas), a gender-balanced team approach (in which female outreach workers had specific roles in care and support of HIV-positive families that attracts
female PWID and female partners of male PWID to the services), and a strong understanding of the many medical, social, legal, and psychological difficulties faced particularly by HIV-positive drug users and their families.

There was excellent collaboration between the RAC and harm reduction NGOs, with outreach workers praising the mobile testing sites which have assisted the NGOs to ensure many more PWID get tested for HIV. In Shirvan the NGO drop-in centre is located close to the AIDS Centre and the NGO outreach workers have constant interaction with AIDS Centre staff in bringing newly diagnosed clients to the Centre, and in providing care and support to ART patients.

The most striking example of horizontal integration across the ‘silos’ that normally prevent collaborative health services integration in post-Soviet countries is the methadone maintenance treatment (MMT) clinic located at the RAC in Baku. This clinic is staffed by narcologists working for the Republican Institute of Narcology, and is supervised by the Institute. However, the area in which they work (close to the AIDS Centre and accessible to both inpatients and outpatients of the AIDS Centre), is provided by the AIDS Centre to ensure MMT is available for HIV-positive PWID who are accessing HIV services. This allows for integrated management of opioid dependence and HIV at the AIDS Centre.

Psychological services for prisoners are provided in 16 prisons and correctional facilities. The number of prisoners covered by the GFATM HIV grant is 12,968. Hygienic packages and IEC materials (including condoms) are distributed and information sessions are regularly held. VCT services are continuously available in all prisons and correctional facilities. Recently, the number of psychologists available for the provision of services to prisoners was increased from five to nine. All of these psychologists are recruited externally by NGOs and are under the Ministry of Justice supervision. Currently, discussions are underway to introduce a NSP in prison; however, there are no current plans to introduce OST in prison.

Through the GFATM HIV grant, a total of 5304 prisoners have been provided with HIV testing services, of whom 1062 received rapid tests by physicians and 3372 were tested through the HIV laboratory at the Central Prison Hospital. Testing services were provided to 870 prisoners by the regional diagnostic HIV laboratories of the RAC. Diagnostic and ARV treatment services for prisoners is under the responsibility of the Ministry of Justice and its Medical Commission is responsible for ARV selection and treatment regimens. The RAC performs confirmation tests and provides technical expertise for HIV treatment.

The package of services for the MSM population includes free STI treatment, drugs and referrals to VCT centres and mobile units for HIV testing. Distribution of condoms and lubricants are ensured along with IEC materials. Psychosocial, medical and legal consultations are also provided free of charge.

Through the GFATM HIV grant a total of 2517 MSM were reached by HIV prevention activities from October 2013 to March 2014. Similar to PWID, the significant increase in the number of MSM reached is due to an expansion of services into new geographical areas, recruitment of new outreach workers, and expansion of mobile VCT units.
The *Behaviour Change Communication Strategy for HIV Prevention among the Most at Risk Populations in Azerbaijan* for the period 2014 – 2018 identifies key behaviour change goals for MSM:

- Condoms are used for all forms of penetrative sex with both men and women.
- Lubricant is used with condoms for anal sex.
- Casual sexual relationships are reduced or eliminated.
- HIV testing occurs if there has been unsafe anal or vaginal sex.
- Timely treatment for STIs occurs, including anal exams and treatment.
- Public perception of MSM is normalized and there are decreases in stigma and discrimination.

The GFATM HIV grant reached a total of 6189 FSW with preventative activities from October 2013 to March 2014. Geographical expansion of services and an increase in the number of FSW per outreach worker is, similar to PWID and MSM, resulting in an increase in the total number of FSW reached. The package of services for FSW includes distribution of condoms and referrals to VCT services, STI and HIV treatment and care, distribution of IEC materials, and referrals to medical, legal and psychosocial counselling services.

The *Behaviour Change Communication Strategy for HIV Prevention among the Most at Risk Populations in Azerbaijan* for the period 2014 – 2018 identifies key behaviour change goals for FSW:

- Male or female condoms are used with all sexual partners for vaginal, oral and anal sex, and FSW insist on this occurring.
- Lubricant is used as needed to make condom use safe and comfortable.
- Treatment for STIs occurs.
- Regular HTC occurs, especially if pregnant.
- If injecting drugs, a sterile needle and syringe is used every time, and equipment is not shared with others.

*Community of PLHIV and NGOs working with HIV*

Three PLHIV organizations were functioning in 2014. They cover several geographical areas: Baku, Sumgait, Shirvan, Hajigabul, and Lenkoran. The NGO sector is an active part of the implementation of the harm reduction programme in Azerbaijan. NGO driven harm-reduction programmes are coordinated and financed by the GFATM.

### 5.6 HIV-TB co-infection

According to an agreement from 2009, HIV-positive patients with TB should be treated at the TB hospital. This facility serves 300 000 people, has 100 inpatient beds, 673 admissions and 41 615 inpatient bed-days annually. No negative pressure rooms are available at the facility. In total there are 69 TB facilities in the country. ART is administered under directly observed treatment (DOT) along with TB medications. Most commonly TDF/FTC/EFV is administered.
There is also a special hospital for prisoners with HIV-TB and STIs in Baku. This treatment facility is intended for prison inmates who have TB. HIV patients with active TB, confirmed via smear positivity, culture positivity or GeneXpert positivity, are isolated in an effort to control infection. The management of HIV-TB within prison settings seems to be well organized and functional. HIV-positive TB prisoners are not segregated from other patients with TB. They can have short visits and long (three day) visits during imprisonment. When a patient is identified as being HIV-positive and TB-positive a medical commission decides on ARV treatment recommendations or modifications to the current treatment regimen and communicates with the AIDS centre if changes are to be made to therapy.

There are separate guidelines for the treatment of TB in HIV infected patients. Everyone is screened for TB with a chest x-ray every six months. Courses of six month Isoniazid prevention therapy are administered to inmates every five years (if they stay in prison). All patients with HIV and TB receive TMP/SMZ during their TB treatment course and for three months after completion of TB therapy, and continue on TMP/SMZ if their CD4 count stays below 200.

HIV-HBV co-infection is very rare in prison. Among HIV-positive inmates with a history of injecting drug use, 70% are positive for HCV; however, only those with MDR-TB are tested. After discharge from prison, two NGOs are notified to ensure follow-up, both for the completion of TB treatment and ART at the RAC.

An example of HIV-TB integration is the strong post-release program for patients with HIV and TB run by NGOs. There is good linkage between these NGOs and the health and prison systems, which has led to successful community follow-up of prisoners being treated for HIV and/or TB while in prison.

5.7 Health system

Despite significant increases in public health expenditure in recent years, Azerbaijan is still characterized by relatively low levels of public health expenditure both in absolute terms and as a share of the GDP. The burden of financing health care is on the health care users, with out-of-pocket expenditure reaching almost 62% of total health spending (13). Public health funding comes primarily from general government revenues, which includes money from the State Oil Fund. Much of the public funding for health is under the control of district authorities, which finance the network of primary and secondary health facilities in their jurisdictions. The central budget is implemented by the MoH, which funds republican tertiary health facilities, vertical state health programmes (mainly covering the centralized purchase of drugs and equipment for certain health conditions such as diabetes, hereditary blood diseases, cancer and others), as well as the Sanitary-Epidemiological Service. Since 2007, all Baku city health facilities are also funded through the MoH.

The vast majority of health providers are state owned, although the private sector has been flourishing in recent years, providing a growing share of health services especially in the capital. The payment mechanisms for the state-owned providers are based on inputs (beds, staffing), which does not foster the efficient use of resources. Moreover, the government, through the treasury system, controls how the money is spent within the health facilities by applying strict
limitations for spending along budget line-items, which leaves health providers with little managerial and financial autonomy. Health reforms in recent years have ameliorated these problems, but the health system is in need of further reform (14).

The health infrastructure in Azerbaijan suffered significantly from a very low level of capital investment throughout the 1990s. The number of doctors per capita has fallen since gaining independence – most rapidly in the late 1990s – and there has been a significant reduction in the number of nurses per capita. The MoH has found it difficult to obtain the right mix of medical specialties in the state sector and an adequate geographical distribution of staff. Recruitment and retention of medical staff in rural areas are long-standing issues, and the flourishing private sector in Baku has also attracted many experienced health care professionals, thus draining the public sector.

While the health sector has sufficient resources to address HTC (in terms of AIDS Centers, medications, trained doctors and nurses) there is a lack of capacity in ensuring that medical and other needed services reach key populations.

6. Findings – weaknesses and challenges

Priority area 1: Increase diagnosis and enrolment into care of key populations

The HIV testing strategy in Azerbaijan remains overwhelmingly focused on the general public. This is unsuitable for a concentrated HIV epidemic. While there have been improvements in reaching and testing key populations, these efforts now need to be scaled up to reach 80% of key populations being tested each year. The national HIV testing policy does not support rapid testing done by lay or community workers. HIV testing is considered a medical procedure and can only be performed by educated health care professionals (doctors and medical nurses). To reach high coverage of HIV testing of key populations, changes to the national HIV testing policy that will allow trained community workers to perform rapid tests should be introduced. Outreach education and engagement with each key population needs to be increased, particularly in those cities which have high concentrations of key populations and few or no prevention projects working with them.

The need for greater testing of key populations is shown in the number of late presentations to HIV tests. In 2013, the largest number (126) of HIV cases identified was among those who were tested by clinical indications, meaning they were already very ill with the HIV disease. This should be a small minority of cases. Late presentation is confirmed by the fact that 38% of those who started ART in 2014 were at clinical stage III or IV of the HIV disease.

The Rules for Laboratory Diagnosis of HIV Infection were approved by the MoH in 2012. The diagnosis of HIV infection is based on the detection of antiviral antibodies, virus antigens and its genetic material. Antibodies against HIV are determined by the immune-ferment analysis (ELISA/EIA) method and immuno-blotting method, which is essentially a type of enzyme
immunoassay. HIV antigens (proteins) are determined by ELISA/EIA method. The virus’ genetic material can be detected by polymerase chain reaction. Laboratory diagnosis of HIV infection in adults is conducted as follows:

**Fig. 2. Algorithm for HIV testing in Azerbaijan**

The Scheme reflects the three main stages of initial laboratory diagnosis of HIV infection:

- Initial screening and testing (Stages I-II)
- Confirmatory testing

In the initial screening stage, antibodies for HIV (HIV-1 and HIV-2) in the blood of examined patients are detected using special ELISA/EIA test systems.
Interpretation criteria for immunoblotting results

Fig. 3. Expert/Confirmative Lab Diagnosis of HIV-infection

Stage III – confirmative testing with immunoblotting method

↓

Negative Result

↓

No stripes

Repeat testing after 1.5 – 2 months

↓

HIV-2 testing by immunoblot method

→

Uncertain result

↓

Negative result

↓

No HIV antibodies detected

Extra expert techniques for HIV infection diagnostics

↓

PCR method

↓

Initial negative result

Cancellation of registration

↓

Positive result

Confirmation of HIV infection

↓

Confirmation of HIV-1 infection

↓

Positive result

Registration, repeat Immunoblot after 3 – 6 months

→

Uncertain result

↓

Confirmation of HIV-2 infection

↓

Negative result

→

Confirmation of HIV-1 infection
The time to receive an HIV-positive result varies by location of testing from three days (in Baku) to up to one month (in the regions). Such a delay is linked to the existing algorithm of HIV testing. If the first ELISA test is positive, then another blood sample is taken for a second ELISA test, and if positive, a blood (serum) sample is sent to the RAC for confirmatory test by immunoblot. The results of the confirmatory immunoblot test are sent back to the original facility which initiated the HIV testing, and the patient receives their results from an epidemiologist. There is an obvious need to revise the HIV testing algorithm in order to shorten result waiting time and minimize risk of loss to follow up.

Priority area 2: Ensure timely initiation of ART and retention in care

The estimated number of PLHIV in Azerbaijan was 9159 by 2013 (Fig. 4). With a total of 4298 registered cases of HIV, about 53% of the estimated population of PLHIV in Azerbaijan have not yet been diagnosed. A total of 2540 people had been registered for HIV care; however, this represents only 60% of all people diagnosed with HIV (Fig. 2). Only 892 PLHIV on ART have a suppressed viral load (VL), which represents 10% of the estimated number of PLHIV. The national criteria used for suppression of VL (<5000 copies/ml) is based on outdated 2010 WHO recommendations and is much higher than internationally accepted recommendations of <50 copies/ml or 1000 copies/ml (WHO 2013 June recommendations). Insufficient HIV testing and enrolment into care following a positive HIV diagnosis, as well as the low number of PLHIV on ART (including those virally suppressed), are thus some of the most significant barriers to curbing the HIV epidemic in the country.

Data on ART in 2014 received from the RAC confirms late diagnosis and initiation of ART: of the 476 patients diagnosed with HIV infection, 297 had stage III-IV disease (62.4%), of whom 233 have been started on ART.

Fig. 4. Treatment cascade data for Azerbaijan, 1 January 2013 – 1 January 2014.
ART monitoring across the years (Table 4) shows that 70% of patients adhere to treatment. However, of the 650 patients with VL<1000 copies/ml, 461 achieved undetectable levels (<150 copies/ml cut-off), which is 26% of all patients started on ART. The low percentage of patients on second line treatment (3.8% of patients who continued on ART) raises some questions regarding the availability of second line drug regimens. The increase in the number of women who received ART to prevent MTCT in 2013 may suggest improved detection and vigilance in this key population. Furthermore, death rates and drop-out rates seem to have decreased in 2013, however, analysis over a longer time interval will determine if this is a lasting development.

Table 4. Overview of ART in Azerbaijan by year, 2006-2013

<table>
<thead>
<tr>
<th>Year</th>
<th>Initiated ART</th>
<th>Continued ART</th>
<th>Achieved VL&lt;1000</th>
<th>Achieved VL&lt;5000</th>
<th>ART 2nd line</th>
<th>Stopped ART</th>
<th>Lost to FU</th>
<th>Refused ART</th>
<th>Died</th>
<th>PMTCT</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>8</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2007</td>
<td>86</td>
<td>45</td>
<td>36</td>
<td>43</td>
<td>4</td>
<td>41</td>
<td>6</td>
<td>9</td>
<td>24</td>
<td>2</td>
</tr>
<tr>
<td>2008</td>
<td>103</td>
<td>52</td>
<td>41</td>
<td>45</td>
<td>5</td>
<td>51</td>
<td>15</td>
<td>7</td>
<td>20</td>
<td>4</td>
</tr>
<tr>
<td>2009</td>
<td>133</td>
<td>74</td>
<td>47</td>
<td>64</td>
<td>9</td>
<td>59</td>
<td>18</td>
<td>11</td>
<td>23</td>
<td>6</td>
</tr>
<tr>
<td>2010</td>
<td>257</td>
<td>156</td>
<td>90</td>
<td>140</td>
<td>9</td>
<td>101</td>
<td>38</td>
<td>21</td>
<td>27</td>
<td>7</td>
</tr>
<tr>
<td>2011</td>
<td>354</td>
<td>228</td>
<td>130</td>
<td>178</td>
<td>12</td>
<td>126</td>
<td>63</td>
<td>22</td>
<td>34</td>
<td>6</td>
</tr>
<tr>
<td>2012</td>
<td>360</td>
<td>268</td>
<td>146</td>
<td>202</td>
<td>7</td>
<td>92</td>
<td>42</td>
<td>18</td>
<td>24</td>
<td>5</td>
</tr>
<tr>
<td>2013</td>
<td>470</td>
<td>424</td>
<td>155</td>
<td>215</td>
<td>46</td>
<td>15</td>
<td>5</td>
<td>10</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1771</td>
<td>1252</td>
<td>650*</td>
<td>892</td>
<td>47</td>
<td>519</td>
<td>198</td>
<td>93</td>
<td>163</td>
<td>47</td>
</tr>
<tr>
<td>%</td>
<td>70.7</td>
<td>36.7</td>
<td>71.2</td>
<td>3.8</td>
<td>29.3</td>
<td>11.2</td>
<td>5.3</td>
<td>9.2</td>
<td>2.7</td>
<td></td>
</tr>
</tbody>
</table>

[Data provided by the Republican AIDS centre, Baku, October 2014.]

Within the 2006-2013 period the number of PLHIV who continued ART had increased from 60% to about 90%, however, the substantial decrease in the percentage of patients on ART who achieve adequate viral suppression (VL<1000 copies/ml) is concerning (Fig. 5)
Fig. 5. Proportion (%) of patients on ART with suppressed viral load from 2006-2013

Percentages were calculated from data in Table 4.

In 2013 UNAIDS estimated there were approximately 9200 PLHIV in Azerbaijan, of whom 1216 (13%) were receiving ART. Estimations from 2014-2015 of PLHIV who need ART are not available.

Through investigation of the database at the RAC, it was possible to compare the numbers of patients started on ART in 2013-2014 by mode of transmission categories. The results are shown in Table 5. The number of treatment initiations among patients who were infected by heterosexual contact, and among women to prevent MTCT, increased between 2013 and 2014 whereas it decreased among PWID. It should also be noted that the numbers do not match entirely with data provided in Table 4.

Table 5. The number of patients started on ART in 2013-2014 by mode of transmission categories

<table>
<thead>
<tr>
<th></th>
<th>2013 (n=369)*</th>
<th>2014 (n=415)**</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSM</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>PWID</td>
<td>143</td>
<td>133</td>
</tr>
<tr>
<td>Heterosexual</td>
<td>201</td>
<td>247</td>
</tr>
<tr>
<td>MTCT</td>
<td>12</td>
<td>19</td>
</tr>
<tr>
<td>Unknown</td>
<td>9</td>
<td>9</td>
</tr>
</tbody>
</table>

*Out of 369 patients who started ART, 323 continued.
**Out of 415 who started ART in 2014, 396 have continued as of 1st October 2014.

Given the fact that most PWID remain sexually active and may continue to share needles, it is important to discern whether the observed drop in treatment initiations in this group reflects a reduction in incidence (i.e. the size of the PWID population) or is accounted for by other factors.
The fact that treatment initiations due to HIV discordance has increased threefold is a good sign. The size of the at-risk population needs to be estimated (i.e. sexual contacts of HIV patients). The high number of patients who were diagnosed with HIV stage III-IV disease in 2014 is concerning. Similarly, the number of patients started on ART due to stage III-IV of the disease increased almost three-fold from 2013 to 2014. Diagnosis of HIV-infection late during the disease course (CD4<350) indicates the ineffectiveness of the current HIV testing policy and practices which need to refocus efforts from testing the general population to the most at-risk populations, where the HIV virus circulates.

**Choice of antiretroviral agents in adults**

Overall, 18 different regimens were used among adults, but the vast majority of patients on ART (79%) are on one of the three most common regimens: TDF/FTC/EFV, TDF/FTC/LPV/r, or AZT/3TC/EFV. Also, the most common nucleotide reverse transcriptase inhibitor backbone is TDF/FTC, used in 55.2% of patients on ART, followed by AZT/3TC (40.3%); d4T has not been in use since 2010. Given preference to TDF contained ART regimen, AZT is planned for 15% of new patients in 2014. Only 2.3% of patients are on triple nucleotide reverse transcriptase inhibitor therapy. A review of the third drug in the ART combinations reveals that EFV is used among 69.8% of patients as the preferred NNRTI, followed by NVP (9.7%). The most common protease inhibitor is LPV boosted by low-dose ritonavir (17.8%). DRV/r is used in only four patients and none of the patients were receiving integrase inhibitors (or other classes of antiretrovirals). Further details of all ART regimens used in Azerbaijan, by gender, are shown in Table 6.
Table 6. Overview of antiretroviral combinations used in adults in Azerbaijan 2014, by gender

<table>
<thead>
<tr>
<th>Combination</th>
<th>Males</th>
<th>Females</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>TDF/FTC/EFV</td>
<td>391</td>
<td>116</td>
<td>507</td>
</tr>
<tr>
<td>TDF/FTC/LPV/r</td>
<td>41</td>
<td>74</td>
<td>115</td>
</tr>
<tr>
<td>TDF/FTC/NVP</td>
<td>38</td>
<td>10</td>
<td>48</td>
</tr>
<tr>
<td>TDF/ddI/LPV/r</td>
<td>14</td>
<td>1</td>
<td>15</td>
</tr>
<tr>
<td>TDF/FTC/DRV/r</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>AZT/3TC/EFV</td>
<td>288</td>
<td>51</td>
<td>339</td>
</tr>
<tr>
<td>AZT/3TC/NVP</td>
<td>64</td>
<td>4</td>
<td>68</td>
</tr>
<tr>
<td>AZT/3TC/LPV/r</td>
<td>29</td>
<td>25</td>
<td>54</td>
</tr>
<tr>
<td>AZT/ddI/LPV/r</td>
<td>17</td>
<td>5</td>
<td>22</td>
</tr>
<tr>
<td>AZT/ddI/NVP</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>AZT/3TC/TDF</td>
<td>12</td>
<td>5</td>
<td>17</td>
</tr>
<tr>
<td>AZT/3TC/ABC</td>
<td>9</td>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>AZT/3TC/DRV/r</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>ABC/3TC/LPV/r</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>ABC/3TC/DRV/r</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>ABC/3TC/EFV</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>3TC/ddI/LPV/r</td>
<td>7</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>3TC/ddI/NVP</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Legends: TDF – tenofovir disoproxil; FTC – emtricitabine; EFV – efavirenz; NVP – nevirapine; LPV – lopinavir; DRV – darunavir; ddI – didanosine; AZT – azidothymidine; 3TC – lamivudine; ABC – abacavir; r – ritonavir boosting. [Data provided by the Republican AIDS centre, Baku, October 2014.]

Table 6 does not include ART regimens used for HIV-positive inmates in prisons, who are discussed separately. Through investigating the database at the RAC it was possible to compare the number of patients started on AZT-containing regimen in 2013 and 2014. In 2013, 143 patients out of 369 (38.8% of all treatment initiations) contained AZT, whereas in the first 10 months of 2014, 168 patients, or 40.5% of all treatment initiations, contained AZT. There is an opportunity to further optimize ART regimens by minimizing the number of regimens to those recommended in the WHO 2013 consolidated guidelines (15).
Choice of antiretroviral agents in children

According to data provided by the RAC, ART regimens in children (n=36, 20 boys and 16 girls) are less variable, with five different combinations in use. Most commonly, ABC/3TC/EFV is used (16/36 or 44%), followed by ABC/3TC/NVP (10/36 or 28%), ABC/3TC/LPV/r (8/36 or 22%) and two other regimens in one patient each.

AZT is still used as an alternative agent to TDF/FTC in the treatment of naïve patients as per WHO guidelines if TDF/FTC is contraindicated or not available, but the high proportion of patients who are started on AZT (40%) is concerning.

It should be stressed that AZT is more toxic and should be used sparingly. Re-evaluation of the treatment of patients receiving this drug is recommended.

Furthermore, given the low genetic barrier for resistance in the case of NVP and the toxicity associated with ddI it is suggested that patients on NVP and/or ddI could potentially benefit from re-evaluation of their treatment regimens.

Priority area 3: Optimize service delivery models, including integration of services

While some good examples exist of the integration of services, substantial gaps remain. Apart from the post-release programme for prisoners, there is a lack of integrated management of TB and HIV services for most patients. Tuberculosis contributes to at least 37.5% of AIDS mortality data. One of the concerns is late diagnosis of TB and reluctance of TB experts to confirm death due to TB in an HIV-positive person. Limited clinical knowledge exists outside each speciality (TB, HIV, narcology), resulting in difficulty providing most needed services at the primary health care level. There is an overdependence on external training combined with a lack of internal capacity building mechanisms across the spectrum of HIV services.

Within TB therapy, the management of HIV-positive TB patients should be communicated to managing HIV doctors at the RAC. A simple chart review revealed that an HIV diagnosis was not mentioned in a patient’s charts at the TB hospital, and no documentation was provided regarding any ART while they were receiving TB medications. It is also not clear if TB/HIV patients ever received HIV treatment during their hospitalization at the TB hospital. No monitoring is performed on most patients receiving therapy for TB, except for patients with MDR-TB, who are in a DOT-plus programme. In patients with HIV and TB, improved communication and documentation of important medical information is needed, such as the patient’s HIV serostatus and, if HIV-positive, the CD4 count and viral load level, presence of opportunistic infections, and the provision for ART.

There is a clear need to appoint a national TB/HIV coordinator, which was also recommended by the WHO TB evaluation mission in 2012.
Peer-based interventions are not yet utilized in prisons, yet they comprise one of the most effective methods of providing HIV prevention and support in closed settings (1).

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

While comprehensive packages are being developed for key populations, some crucial elements are missing, according to the *Consolidated Guidelines on HIV Prevention, Diagnosis, Treatment and Care for Key Populations* (16). The elements that are currently available need to reach greater proportions of each key population to control, and eventually reduce, the HIV epidemic.

For PWID, there are significant problems in scaling up opioid substitution treatment (OST) activities. In 2013, the OST programme involved 26 patients. By 3 April 2014, the OST programme involved four patients. Current enrolment of 155 PWID on OST is approximately 0.2% of the total number of PWID in Azerbaijan. The target recommended by WHO is 40%, or approximately 28 000. The level of services for PWID is far from ideal; 762 000 needles and syringes were distributed in 2013 (11 per PWID per year), while the target should be at least 144 per PWID per year. In addition, ART drop-out and loss to HIV care follow-up is generally greater among PWID.

The Consolidated Guidelines also recommend community-based overdose prevention programs using naloxone. These programs have been very effective in a range of countries, not only in saving the lives of PWID, but also in re-engaging PWID with harm reduction programs and outreach workers (17).

In addition, the BCC Strategy key messages need to be changed so that all PWID are encouraged to test for HIV at least once per year (preferably twice). The current message stipulates that PWID should seek an HIV test if they have used an unsterile needle/syringe or have had unsafe sex.

Priority area 5: Prevent sexual transmission of HIV and PMTCT

Similar to the above BCC Strategy, key messages need to be changed so that all MSM are encouraged to test for HIV at least once per year (preferably twice); under the current messaging, MSM are encouraged to test only if they have had unsafe sex. The messages for FSW are appropriate as they are.

At first glance, HIV testing coverage of pregnant women looks high. In 2013, 231 660 HIV screening tests were performed on 169 229 registered pregnant women. It appears that some women have been tested more than once, while there is no data on the number of women who were not tested at all. The available data does not allow for a proper assessment of national HIV testing coverage, as well as coverage in geographical areas (rayons).
Priority area 6: Improve management, coordination and strategic information

While there have been substantial steps taken to improve the country’s understanding of the epidemiology of HIV and related infections, particularly among key populations, there is a need for further work in Azerbaijan. Population size estimation needs to be revisited for MSM, as it appears that the current officially accepted figure is a major underestimate.

In addition, there is little evidence that the changes in epidemic development are driving planning and programmatic decisions. Simple calculations like those provided in Section 5.2 would allow planners to examine ways to improve programming for HIV-positive PWID, MSM, FSW, and their families. Mapping of key populations would also assist in ensuring that programme coverage is appropriate for the estimated size of the population in each city and rayon.

Additionally, the electronic management information service is insufficient for HIV services. TB-related data is fully paper-based which limits its analysis and reporting. Case studies are not documented, limiting opportunities for advocacy and program improvement.

7. Recommendations

Main recommendations Priority area 1: Increase diagnosis and enrolment into care of key populations

- Focus HIV testing strategically on the populations that are at highest risk for HIV, including hard-to-reach populations such as PWID.
- Revise the national HIV testing policy to allow NGOs working with key populations to perform community-based rapid HIV tests.
- Significantly scale up community-based rapid testing for key populations.
- Introduce and implement provider-initiated HTC in health care settings for patients with hepatitis B and C (clinical or laboratory markers).
- Urgent efforts to ensure linkage to care are needed (including social accompanying).
- Implement systematic follow up for those identified as HIV-positive but who are not enrolled into care.
- Shorten the time between taking the blood sample and delivering test results, for example through simplification of the diagnostic algorithm, and develop an algorithm to optimize information flow of test results. The algorithm should comprise either one ELISA + Immunoblot or two different 4th generation ELISA tests.

Suggested targets for priority area 1:

- HIV testing coverage of key populations: at least 50% in the first year and at least 60% in the second year of the carefully and reliably estimated key populations, and prioritize using rapid tests for key populations
- Enrolment into care: at least 80% of those diagnosed are enrolled into care
Main recommendations Priority area 2: Ensure timely initiation of ART and retention in care

- ART should start without any delay when a person with clinical symptoms has been identified.
- Ensure 100% access to ART for all eligible PWID.
- OST needs to be scaled up substantially to allow for increased adherence of PWID to ART.
- Implement strong internal and external quality control systems at major laboratories and at the reference laboratory, including systems for VL and CD4 monitoring.
- Minimize the number of visits before ART can be initiated (for example, by simplifying the HIV testing algorithm and by conducting epidemiological investigation later).
- Closely follow up patients who miss a visit (through peers, nurses or social workers) to locate lost to follow up patients in the RAC or regional ART clinics.
- Set up a system for clinic appointments and send reminders through SMS.
- Ensure the same doctor follows individual patients through therapy whenever possible.

Suggested targets for priority area 2:

- Increase the number of PLHIV on ART by 2051 in 2015, by 2534 in 2016, and by 3077 in 2017.
- The proportion of PLHIV on ART with VL below limit of detection (<50 copies/ml) should be 85% by 2016.

Main recommendations for Priority area 3: Optimize service delivery models, including integration of services

- Provide a clinical TB expert on the premises of the RAC, ART regional clinics and OST sites (e.g. part time/consultative visits) for diagnosis and treatment.
- Sputum collection should be available at ART regional clinics while the RAC will use GeneXpert (need to revise clinical protocols and algorithms).
- Ensure timely initiation of ART in TB/HIV co-infected patients and enter key HIV information into TB/HIV co-infected patient records.
- Dispense ARV drugs in TB hospitals by TB experts during hospitalization.
- Dispense ARV drugs on site in OST centres and expand OST for PWID in ART clinics.
- Provide OST in all hospitals by outreach OST providers to enable continuation of OST.
- The continuation of HIV treatment and care started in the RAC should be strengthened in particular for key populations (including social accompanying for key populations by peers/social workers, operational follow-up by ART centres in the regions, and by actively using community-based organizations to facilitate this linkage).
Main recommendations Priority area 4: Scale up harm reduction for PWID, including OST

- Significantly scale up OST coverage.
- Ensure quality of OST delivery:
  - Sufficient dosages of OST should be ensured through training and updated guidelines.
  - Restrictive inclusion/exclusion criteria for OST currently occurring in practice should be revised.
- Consider changes in legislation which would allow take-home dosages for 2-4 days of methadone for stable methadone users.
- Work towards removing drug user registration requirements in order to obtain narcology services.
- MoH to revise current financing model of narcology centres and include OST in results-based financing model.
- MoH to show governmental commitment by co-financing OST programmes.

Suggested targets for priority area 4:

1. Increase the number of OST clients to at least 10% of estimated PWIDs, including in prison populations, in 2016, and up to 40% (28 000) in 2017.
2. Scale up NSP to reach at least 60% coverage of estimated PWIDs, including prisoners.

Main recommendations Priority area 5: Prevent sexual transmission of HIV and PMTCT

Sexual transmission:

- Increase outreach to partners of key populations (behaviour change communication (BCC), condoms and HIV rapid testing).
- The apparent low efficiency of preventive programmes among sex workers should be thoroughly analysed and future programmes should be planned based on the results of such evaluations.
- Ensure access to ART regardless of CD4 cell count to HIV-infected partners in HIV serodiscordant couples.
- Regularly monitor VL in patients on ART and evaluate the proportion of patients with sustained VL suppression as they are low-risk for HIV sexual transmission.

Prevention of mother-to-child transmission (PMTCT):

- Address regional differences in HIV testing among pregnant women to ensure 95% testing coverage of pregnant women.
- Target HIV testing towards high risk pregnant women (key populations or the partner of persons from key populations).
- Early infant diagnosis must be implemented widely.
- Use social accompanying when needed.
Main recommendations Priority area 6: Improve management, coordination and strategic information

Management and coordination:

- Appoint a national HIV/TB coordinator, preferably at the MoH level.
- Use epidemiologists to analyse data collected and produce outputs for action and strategic planning.

Strategic information:

- Ensure future second generation surveillance (SGS) is conducted which can inform policy-making.
- Collect and analyse information on CD4 cell count at time of HIV diagnosis for all HIV identified people.
- Scrutinize the quality of the recent estimations of the size of key populations.
- Enhance geographical information of key populations (in particular PWIDs) and use modelling to estimate size. Capacity development to improve modelling of key populations should be considered.
- Strengthen the collection of national data on TB/HIV co-infection and include reporting MDR/XDR-TB co-infection data.
- Perform systematic quality control of data collection.
- Analyse key information on a regular basis, including the HIV treatment and care cascade, and use this information for policy development.
References

2. Republican Centre of the Struggle against AIDS (2011) Estimating the sizes and populations at risk for HIV and AIDS Azerbaijan
Evaluation of the HIV program review in Azerbaijan

13-17 October 2014

1. Background

By the end of 2012, Azerbaijan had reported a cumulative total of 3784 HIV cases, including 1130 that had progressed to AIDS and 333 deaths among AIDS cases, to the WHO Regional Office for Europe and the European Centre for Disease Prevention and Control (ECDC). In 2012 alone, 517 HIV cases, 235 AIDS cases, and 31 deaths among AIDS cases were reported. The rate of newly diagnosed HIV infections in 2012 was 5.6 per 100 000 population, almost unchanged compared with the rates for the previous five years. Of the newly reported cases with information about transmission mode in 2012 (93% of cases), 50% were infected through heterosexual contact, 44% through injecting drug use, 3% through male-to-male sexual contact and 3% through mother-to-child transmission. Azerbaijan has reported a cumulative total of 55 mother-to-child transmission cases, including 14 (25%) in 2012.

Taking undiagnosed infections into account, the Joint United Nations Programme on HIV/AIDS (UNAIDS) and the WHO estimate that 9200 (6700-12 000) people were living with HIV in Azerbaijan at the end of 2013, that 1200 people became newly infected, and that less than 1000 people died from AIDS-related causes during 2013. HIV prevalence in the adult population was estimated to be 0.2% (0.1-0.2%).

As reported to the WHO Regional Office for Europe and the European Centre for Disease Prevention and Control (ECDC), 514 434 HIV tests (55.7 per 1000 population) were performed in Azerbaijan in 2012, a 41% increase compared with the number of tests in 2011. As of 2010, HIV testing was free of charge and 19 facilities provided testing. According to national HIV testing policies, partner notification was voluntary and anonymous. Tests in relation to invasive medical interventions and imprisonment were carried out systematically. Moreover, tests were also systematically performed on military recruits, people seeking residence, blood donors, and STI patients. All tests were reported as having been conducted with informed consent.

A total of 1569 people were enrolled in medical HIV care at the end of 2013, including 1252 people who were receiving antiretroviral therapy (ART). Among the total estimated number of people living with HIV in the country, 13% (10-18%) were receiving ART at the end of the year.

The country’s response to the HIV epidemic is supported by the Global Fund (TGF) grant and the country is reliant on TGF in covering the cost of HIV treatment. The country is in the process of preparing an application for an HIV grant which requires external technical support in terms of reviewing the current situation and aligning with the WHO guidelines and recommendations.
The WHO and the Global Fund have a Cooperative Agreement regarding the provision of WHO technical assistance for applicants to the Global Fund prior to the submission of their concept notes. The contract is effective during the period from 1 January 2014 until 31 December 2015. Technical assistance is organized through external consultants and based on discussions with the countries, the Global Fund Portfolio Managers and formal Country Requests.

Azerbaijan is eligible for the Global Fund grant to support a national programme on HIV/AIDS. The country requested that the WHO Regional Office provide technical assistance to conduct an HIV Program review and review of the National Strategic Plan for development of the Concept Note.

### 2. Program review

The program review will include 4 key components:

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

#### A. Epidemiological analysis will focus on:

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

#### B. Review of HIV treatment and care program along cascade of services will include:

- HIV testing: for general population and key populations, including community-based testing and linkage to HIV treatment and care services, and 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 co-infections and co-morbidities, and integration of HIV/Viral hepatitis, HIV/TB, HIV/OST services;
- ART: estimated need and coverage, criteria for ART initiation, and adherence;
- ART regimens (1st line, 2nd line and 3rd line);
- Monitoring of ART response and diagnosis of treatment failure: VL, ARV toxicity, and HIVDR;
- Patient tracking system; and
- ART outcome: viral suppression.

Analysis of HIV treatment and care program will also include a review of the treatment and care policy and national clinical protocols.
C. Review of HIV services for key populations (PWID, SW, prisoners, labour migrants) will include:

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

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

D. Analysis of service delivery models for populations affected by the HIV epidemic from the perspective of the health system will focus on:

- Capacity of the national health system to provide effective human, financial and infrastructural resources to address health needs of populations affected by the HIV epidemic, including key populations which require a proactive approach in service delivery with strong social support and case management; and
- Health systems barriers and interventions needed to optimize and monitor HIV services along the continuum of care and to ensure high coverage of HIV testing, enrolment to HIV treatment and care, adherence to ART, and integration and linkage of services.

3. National Strategic Plan on HIV

The review of National Strategic Plan should focus on its components and ensure that:

- The National Strategic Plan defines and determines priorities and strategic directions over a period of time (for example five years, and is aligned with the national health plan)
- The National Strategic Plan provides a clear framework that specifies 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 subactivities inherent to each intervention are clearly specified, highlighting clear target(s) for each intervention and identifying where and when each activity or subactivity should be implemented and who will implement it.
- The National Strategic Plan specifies the budget needed to implement interventions and activities.
- It also 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.
- It provides information on the technical assistance needed to make this operationally effective.
4. Participants
Four external consultants:

- Dave Burrows, Team leader, Harm reduction expert, Director, APM Global Health, Australia
- Mirza Musa, Prevention, Policy and general Public Health expert, APM Global Health, Bosnia and Herzegovina
- Azibek Boltaev, Health Policy and Health systems expert, Human Research and Development Center, Uzbekistan
- Magnus Gottfredsson, clinical expert on HIV, professor of Landspitali University Hospital, Iceland

External consultants will be supported by two WHO staff members:

- Irina Eramova – senior medical officer from WHO Regional Office for Europe (Copenhagen)
- Javahir Suleymanova – national professional officer, WHO CO (Baku)

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

6. Time, duration and geographical sites of the mission
The mission is planned for 13-17 October, 2014. Additional days will be added for desk review and analysis of national background documents and report writing.

5 days mission (all)
5 days desk review and reporting (all)
9 days for desk review of HIV National Strategic Plan report writing (Dave)

Logistic support will be provided by the WHO and national health authorities.

7. Deliverables
- Key recommendations based on 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, e.g. ‘Consolidated guidelines
on the use of antiretroviral drugs for treating and preventing HIV infection’ 2013\(^1\) and ‘Consolidated guidelines on HIV prevention, diagnosis, treatment and care for key populations’ 2014\(^2\) will be ensured.

- All team members will provide their written contribution using the template (and will be delivered) to Dave Burrows by **25 October 2014**. The draft mission report will be shared with team members for comments. Key recommendations will be agreed on and finalized no later than **27 October 2014**, and will be shared with the stakeholders in Azerbaijan and will inform the final Concept Note version.

- Final report with findings and recommendations will be submitted to WHO Regional Office for Europe by **10 November 2014**.

- Report on the HIV National Strategic plan review with recommendations will be submitted to WHO Regional Office for Europe by **10 November 2014**.

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Annex 2: Review team and informants

**Review team members:**

From University of Island – Magnus Gotfriedsson

From APM Global Health – Dave Burrows, Azizbek Boltaev and Mirza Musa

**List of informants:**

**Republican AIDS Center**

Esmira Almammadova, Director of National AIDS Center
Afat Nazarli, Head, Epidemiological Surveillance and Prevention Department, Republican AIDS Centre
Natiq Zulfugarov, Head of M&E department, Republican AIDS Centre
Samira Veliyeva, Head of the outpatient department, Republican AIDS Centre
Elkin Babazarov, Infection disease doctor, Regional ART Center, Shirvan region

**Narcological dispensary:**

Telman Mammadgasanov, Head of the Narcological dispensary, Ministry of Health
Afet Mammadova, doctor, Narcological dispensary, Ministry of Health

**TB**

Esmira Yusifova – TB/HIV coordinator, NTP, Scientific and Research Institute of Lung Disease,

**MOJ**

Murad Suleymanov – deputy director, Main Medical Department, MoJ
Elnur Mammadov – MoJ, infection disease doctor

**NGOs**

Nolfer Sharifov, chair “Struggle with AIDS”
Etiram Pashayev, “Struggle with AIDS”
Sarvar Sharifov, “Struggle with AIDS”
Ogtay Abbasov, “Struggle with AIDS”
Ogtay Huseynov, “Struggle with AIDS”
Aliguli Abdullayev, “Struggle with AIDS”
Murad Dadashov, “Struggle with AIDS”, Shirvan region
Anar Dadashli, “Struggle with AIDS”, Shirvan region
Mehriban Zeynalova, “Healthy Lifestyle” PU, chair
Kamran Rzayev, “Gender and development”
Elkhan Bagirov, “Gender and development”
# List of HIV WG members

<table>
<thead>
<tr>
<th>Members</th>
<th>Alternate Members</th>
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<tbody>
<tr>
<td>1. Esmira Almammadova – Director, Republican AIDS Centre, Chair of WG</td>
<td>Afat Nazarli – RAC, Head of M&amp;E Department</td>
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<td>2. Rustam Huseynov – Republic Obstetrics and Gynecology Institute, Head of department</td>
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<td>3. Irada Akhundova – Deputy Director, RI of Lung Diseases</td>
<td>Esmira Yusifova – RI of Lung Disease, Representative</td>
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<td>4. Sevil Yusifova – Republic Skin Diseases Dispensary, Representative</td>
<td>Tahira Əsgərova – Republic Skin Diseases Dispensary, Representative</td>
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<td>5. Murad Suleymanov – Deputy Director, Main Medical Department, MoJ</td>
<td>Elnur Mammadov – MoJ, Infectious Diseases Doctor</td>
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<td>6. Narmin Bagirova – MoJY, Head of department</td>
<td>Fidan Rajabova – Representative, MoJY</td>
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<td>8. Sevinj Topchubashova – PIU, M&amp;E officer</td>
<td>Fuad Salmanov – PIU, Monitoring and Evaluation Specialist</td>
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<td>Mehriban Zeynalova</td>
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<td>Nofal Sharifov</td>
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<td>Kamran Rzayev</td>
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