ASSESSMENT OF SITUATION AND RESPONSE
OF DRUG USE AND ITS HARMS
IN THE MIDDLE EAST AND NORTH AFRICA

2012

MENAHRA

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ACRONYMS AND ABBREVIATIONS

AIDS	Acquired immunodeficiency syndrome
AOR	Adjusted odds ratio
ARQ	Annual reports questionnaire
ART	Antiretroviral therapy
ATS	Amphetamine-type stimulant
BBS	Bio-behavioral survey
BMT	Buprenorphine maintenance treatment
CBO	Community-based organization
CCM	Country Coordinating Mechanism
CI	Confidence interval
CSO	Civil society organization
Cu	Cumulative
DIC	Drop-in-center
DTC	Drug treatment center
DU	Drug user
EJG	East Jerusalem Governorate
EMRO	Eastern Mediterranean Regional Office (World Health Organization)
Eq	Equipment
FHI	Family Health International
FSW	Female sex worker
GDP	Gross domestic product
GFATM	Global Fund to Fight AIDS, Tuberculosis, and Malaria
GNI	Gross national income
GP	General population
HBV	Hepatitis B Virus
HCV	Hepatitis C Virus
HDI	Human Development Index
HIV	Human Immunodeficiency Virus
HR	Harm reduction
HRI	Harm Reduction International
HSW	Hjira sex worker
HCT	HIV counseling and testing
Hx	History
IBBS	Integrated bio-behavioral survey
IDU	Injecting drug user
KAP	Knowledge attitudes and practices
L12M	Last 12 months
L2M	Last 2 months
L6M	Last 6 months
LM	Last month

ACRONYMS AND ABBREVIATIONS

LT	Lifetime
MARP	Most at risk population
MENA	Middle East and North Africa
MENAHRA	Middle East and North African Harm Reduction Association
MeSH	Medical subheading
MMT	Methadone maintenance treatment
MOH	Ministry of Health
MoPH	Ministry of Public Health
MSM	Men who have sex with men
MSW	Male sex worker
N/S	Needle or syringes
NA	Not available
NASP	National AIDS strategic plan
NGO	Non-governmental organization
NK	Not known
non-IDUs	Non-injecting drug users
NRC	National rehabilitation center
NSP	Needle and syringe program
OST	Opioid substitution therapy
PLHIV	People living with HIV
PWIDs	People who inject drugs
RDS	Respondent driven sampling
RSA	Rapid situation assessment
SCH	Supreme Council of Health
SIDC	Soins Infirmiers et Développement Communautaire
STD	Sexually transmitted disease
STI	Sexually transmitted infection
Sy	Syringe
TB	Tuberculosis
UAE	United Arab Emirates
UN	United Nations
UNAIDS	Joint United Nations Program on HIV/AIDS
UNDP	United Nations Development Program
UNFPA	United Nations Population Fund
UNGASS	United Nations General Assembly Special Session
UNICEF	United Nations Children's Fund
UNODC	United Nations Office on Drugs and Crime
USAID	United States Agency for International Development
VCT	Voluntary counseling and testing
WHO	World Health Organization

DISCLAIMER

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FOREWORD

Ever since its foundation in 2007, the Middle East and North Africa Harm Reduction Association (MENAHRA) has worked to support harm reduction based on scientific data. Unfortunately, in our region, there are a limited number of empirical studies available besides the bio-behavioral studies conducted by individual countries. There is an apparent weakness in the epidemic surveillance systems for the proportions of HIV prevalence. This gap reflects a lack of priority in the region in providing harm reduction services. It also confirms that sharing needles is the second cause for HIV/AIDS transmission in the MENA region.

This study arises from within MENAHRA's course of work to search for the reality of the situation with an empirical approach in order to increase the level of response to HIV/AIDS in the region.

This report should allow decision-makers and civil society organizations to expand their knowledge in regards to the needs and weaknesses of available services by guiding programs in becoming more focused on harm reduction in the region. Therefore, this report shall assist stakeholders in providing a wider scope of HIV/AIDS prevention services among people who inject drugs.

To compile this study, we contacted the managers and members of the National AIDS Programs in the region, the Ministries of Health, partner civil society organizations, and the partner UN agencies. This study was built based on national and regional reports, studies, and field work reports from the different partners and aforementioned organizations.

With the launching of this regional report, I would like to thank everyone who contributed in providing information or feedback to allow us to finalize and validate this study. As we place this report in the hands of stakeholders and decision-makers, we hope that they will benefit from its contents and utilize its results to support and meet harm reduction needs in the region. We sincerely hope that this will expand the services and the well being of our beneficiaries.

On this occasion, I cannot but offer this report to people who use drugs, people living with HIV, their families, and their communities hoping that they will be able to participate more actively in drawing their policy needs and rights as well as preventing HIV/AIDS epidemics.

Sincerely,

Mr. Elie Aaraj

Executive Director
MENAHRA

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1 EXECUTIVE SUMMARY

This is the second assessment conducted on injecting drug use and with the risk of contracting the Human Immunodeficiency Virus (HIV) in the twenty countries of the Middle East and North Africa (MENA) region. The first assessment was conducted in 2008 (Rahimi-Movaghar, 2008). The current assessment covers the following areas: drug use situation including injecting drug use, HIV and Hepatitis C and B infection among people who inject drugs (PWIDs), risk behaviors, policies that support evidence-based HIV prevention programming among this group, services available for harm reduction (HR) and main challenges for policy making and service provision. The HIV/injecting drug use situation in specific populations, such as female drug users, sex partners of PWIDs and prison inmates are also presented and discussed.

Broad research was executed in order to access data and documents pertaining to the related areas. Electronic search of scientific bibliographic databases, electronic and manual search of UN related publications and web sites, and reference lists of identified documents were extensively searched. In addition, key people, mainly representatives from UNAIDS offices, representatives from the World Health Organization's (WHO) offices, Ministries of Health and researchers in the field were contacted for access to documents or missing data. All information produced before the year 2005 was not included in this report.

In comparison to the similar assessment done in 2008, the quantity, as well as the quality of available information, has considerably improved. Upon availability, the original reports of studies and country reports were used. Despite these improvements, it is evident that there remains scant data on PWIDs in several countries.

Existing information on drug use shows that in most countries of the region, Cannabis is the most common drug used by the adult populations. The highest rate of opioid use in the adult populations has been reported from Afghanistan, Egypt, Iran, and Pakistan. In recent years, an increase in drug use has been reported from many countries. Estimates on the prevalence of injecting drug use among population aged 15-64 are available from eight countries and range from 0.09% in Morocco to 0.38% in Iran. Other extrapolations were made in other countries of the region from the information available among the eight countries. The total number of people who inject drugs from the 20 countries is estimated to be around 570,000. The highest numbers of PWIDs are found in Iran, Pakistan and Egypt.

Heroin is the main drug of injection reported from most countries of the region. Other drugs of injection include prescription drugs, antihistamines, other Opioids, such as Opium, Morphine, Methadone and Norgesic, other tranquilizers, amphetamine-type stimulant (ATS) and Cocaine. Information on the socio-demographic characteristics of PWIDs illustrates that they are predominantly male and in their early 30s. Around one third are currently married and one- to two-thirds of PWIDs are either uneducated or have an education of less than 5 years. PWIDs are an extremely criminalized and marginalized population throughout the MENA region.

The HIV epidemic has stabilized in most parts of the world in the last decade. However, in the MENA region, HIV rates continue to increase. Unprotected sex (mainly between men) and unsafe injection drug use are the primary drivers of the HIV epidemic in the region. From 2,790 newly identified cases of HIV/AIDS with known route of transmission reported from 15 countries in year 2010, half were injecting drug users (IDUs).

Existing data shows that Pakistan has the highest HIV prevalence among PWIDs, followed by Iran and six other countries with reports of concentrated HIV epidemic (prevalence of over 5%) at least in parts of the country. These countries include Afghanistan, Algeria, Egypt, Morocco, Oman and Saudi Arabia. Countries with an HIV prevalence ranging from 1% to 5% include Bahrain and Tunisia. Prevalence of HIV among people who inject drugs is below 1% in five other countries, Jordan, Kuwait, Lebanon, Palestine and Syria. Information on five remaining countries – Iraq, Libya, Qatar, UAE and Yemen – is lacking or insufficient to arrive at any conclusions. Overall, an estimated 90,000 people who inject drugs are living with HIV/AIDS in the region, which shows an HIV prevalence of over 15% in this population. There is also sufficient evidence showing that injecting drug use contributes significantly to Hepatitis C Virus (HCV) epidemic in the region; most of the studies have shown an HCV prevalence of 36% to 48% among PWIDs.

Risk behaviors are common among PWIDs. However, there are large differences between countries. In some countries, for example Afghanistan, there are large differences among findings from separate studies. In addition, many studies to date have shown high variations in risk behaviors among cities within the same country. Overall, the data shows that about 20% of injections are unsafe. Moreover, sex with female sex workers (FSWs) and having intercourse with the same sex are not rare PWIDs. Condom use in these relationships is uncommon. Many PWIDs do not have sufficient knowledge on HIV, its risk behaviors, and possible preventive measures.

Five countries of the region have adopted harm reduction policies within their National AIDS Strategic Plan (NASP). These countries are Afghanistan, Iran, Lebanon, Morocco and Pakistan. Opioid Substitution Treatment (OST) exists in five out of 20 countries, Afghanistan, Iran, Lebanon, Morocco and UAE. Iran is the only country in the region that has made OST widely available, mainly through private clinics. The service is also available in medium to large-size prisons. Nine countries of the region have Needle and Syringe Programs (NSP). Five countries, Afghanistan, Iran, Morocco, Pakistan and Tunisia are expanding distribution of needles and Syringes to PWIDs. However, all of these countries still have low coverage. Egypt, Lebanon, Palestine and Oman are providing NSP through a limited number of sites and in small scale. The available data shows that the coverage of HIV testing and counseling is low in the region.

There have been several developments in the MENA region during the last four years, since MENAHRA first assessed the situation and response in early 2008. Morocco and Lebanon adopted harm reduction policy on OST; four countries, Bahrain, Egypt, Jordan and Syria included PWIDs as a target group for HIV prevention in their NASP; OST was started in Afghanistan and Morocco and scaled up in Iran; NSP scaled up in ten countries, i.e. Afghanistan, Egypt, Iran, Jordan, Lebanon, Morocco, Oman, Pakistan, Palestine and Tunisia.

The information on women who inject drugs is scarce. Pooled HIV prevalence for a limited number of women who inject drugs tested in bio-behavioral surveys (BBS) in four countries is 6.7%. In the year 2010, 2% of identified HIV cases by injecting drug use transmission were reported in women. High-risk sexual behaviors are common among women who inject drugs. Compared with male IDUs, female injecting drug users suffer from lower socio-economic statuses. There is also evidence showing that female sex partners of PWIDs are at a high risk of HIV infection. In parallel with the HIV preventive measures planned for men who inject drugs, it is also important to include women who inject drugs and spouses and female partners of PWIDs as target groups of these interventions.

Drug use and injecting drugs are not rare in prisons within the region. In these settings, injecting drug use is commonly associated with unsafe injection. Despite evidence of high HIV risk in prisons, the overall response in the region has been weak.

Generally, countries in the MENA region are experiencing different levels of HIV epidemics among IDUs, as well as varying levels of supportive policies and service provision. At each level, countries are facing different challenges in understanding the situation, planning and service provision. There are four main elements that influence the progression of the countries in harm reduction policy making and provision of interventions:

- A strong and committed national body responsible for HIV/AIDS;
- Active civil society organizations (CSOs) involved in HIV prevention for key at risk populations;
- Competent academic bodies and research centers collaborating with national bodies;
- External financial and technical support to accommodate each country's plans.

For serious and coherent action, these four elements need to all be strengthened. However, an increase in the capacity of one element would influence the strengthening of the others. The main functions of these elements are: data and evidence production, advocacy, policy making and service development. These functions can also affect and reinforce the capacities and resources of the four elements.

As in the last decade, the HIV epidemic has increased in the Middle East and North Africa region; it is highly probable that the region may face a greater epidemic in the future. People who inject drugs are greatly at risk and might play an important role in the worsening of the situation. Efforts among the countries, as well as those actions planned at the regional level, should be intensified in order to undertake effective measures.

2 BACKGROUND

Injecting drug use is a global health and social issue. However, the prevalence, pattern and severity shows great variation from place to place and changes with time. Worldwide, it is estimated that there are between 11 and 21 million people who inject drugs (Mathers, et al., 2008). Injecting drug use may induce various harms from which health problems, including HIV/AIDS and viral hepatitis, and social problems, such as crime, are more prominent and socially discussed. Harm reduction measures have been shown to be successful in reducing risk behaviors associated with injecting drug use. These measures mainly aim to provide access to clean needles and syringes and substitute the drugs with less harmful medically provided agents. However, coverage of harm reduction programs for people who inject drugs is limited (WHO, et al., 2011).

In many countries of the MENA region, injecting drug use is contributing significantly to the HIV/AIDS epidemic. However, the response has not been appropriate to the size of the problem. In 2007, WHO, in partnership with the Harm Reduction International (HRI) initiated a five-year project for networking, capacity building, and developing model programs for HIV/AIDS prevention and treatment targeted at PWIDs in the MENA region. The project was called MENAHRA. In this framework, several years of collaboration between the pioneers of harm reduction in the region with the support received from WHO and HRI, resulted in the establishment of a regional non-governmental organization (NGO), MENAHRA, "Middle East and North African Harm Reduction Association" that aims to develop harm reduction in the region.

In 2008, when a structured effort was made to enhance HIV prevention among PWIDs in the region, the first assessment of MENAHRA's project on the "Situation and Response to Drug Use and its Harms" was carried out. The assessment shed light on the path of the project and led to target-setting for the next three and five years.

This document is the second assessment of the epidemiology of injecting drug use and HIV/AIDS among PWIDs as well as the response covering twenty countries of the region. These countries include Afghanistan, Algeria, Bahrain, Egypt, Iraq, Iran, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Pakistan, Palestine, Qatar, Saudi Arabia, Syria, Tunisia, UAE and Yemen. The countries are diverse in terms of area, population size, level of income and industrialization, as well as human development index (HDI). The map of the region, as well as data on selected indicators is presented in Table 1 and Figure 1.

The method used for carrying out the assessment of injecting drug use and HIV situation and response is based on evidence produced and presented from the countries and is largely based on government reports, civil society information and other sources of data. While there is limited data available on some aspects in a number of countries, there is adequate data for a reasonable analysis in other countries. Only information produced since 2005 is included in this document. This assessment reviews changes in drug use and HIV epidemiology and harm reduction service provision since the previous assessment

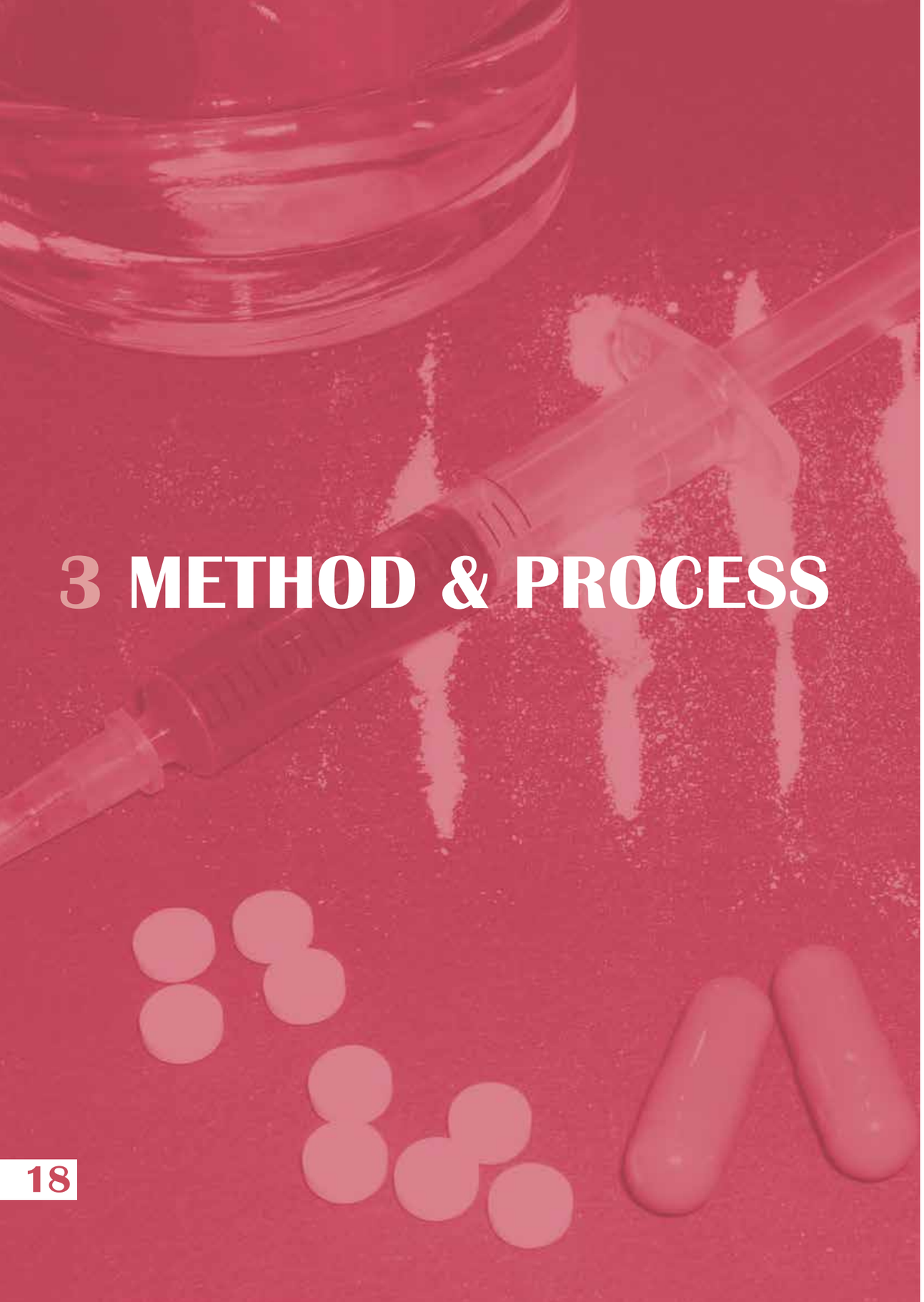
was conducted in 2008, and highlights developments and achievements in the last years. It covers main indicators in the epidemiology of HIV/IDU, as well as policies and services. It also provides a framework for comparing the situation among countries in the region. Some of the indicators are adapted and modified in such a way as to cover as much information as is available from the countries of the region.

MENAHRA has received a grant from the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM) for strengthening the role of civil society organizations on harm reduction in the region. This review prepares a basis for monitoring the progress made through the support received from GFATM.

Figure 1 Map of the 20 countries of the region

Table 1 General characteristics of the countries of MENA region

Country	Total population (1000s) (2010) (UN Population Division, 2011)	Population living in urban areas (%) (2010) (UN Population Division, 2011)	Adult literacy rate (%) (2005-9) (UNESCO Institute for Statistics, 2012)		GNI per capita (US$) (2007-10) (The World Bank, 2012)	HDI (ranking) (2011) (UNDP, 2011b)
Afghanistan	31,412	23.5	-		410 (2010)	172
Algeria	35,468	73	72.6 (2006)		4450 (2010)	96
Bahrain	1262	88.7	91.4 (2009)		18730 (2008)	42
Egypt	81,121	43.5	66.4 (2006)		2420 (2010)	113
Iran	73,974	69.1	85 (2008)		4520 (2009)	88
Iraq	31,672	66.5	78.1 (2009)		2340 (2010)	132
Jordan	6187	82.7	92.2 (2007)		4340 (2010)	95
Kuwait	2737	98.3	93.9 (2008)		47790 (2007)	63
Lebanon	4228	87.2	89.6 (2007)		8880 (2010)	71
Libya	6355	77.7	88.9 (2009)		12320 (2009)	64
Morocco	31,951	57	56.1 (2009)		2850 (2010)	130
Oman	2782	73.4	86.6 (2008)		18200 (2009)	89
Pakistan	173,593	36.2	55.5 (2008)		1050 (2010)	145
Palestine	4039	74.3	94.6 (2009)		-	-
Qatar	1759	98.8	94.7 (2009)		GDP 55898 (2010)	37
Saudi Arabia	27,448	82.3	86.1 (2009)		16190 (2009)	56
Syria	20,411	56.1	84.2 (2009)		2750 (2010)	119
Tunisia	10,481	66.3	77.6 (2008)		4160 (2010)	94
UAE	7512	84.4	90 (2005)		41930 (2009)	30
Yemen	24,053	32.3	62.4 (2009)		1070 (2009)	154



3 METHOD & PROCESS

The following steps were undertaken for assessing the HIV/IDU situation and response in the countries of MENA region:

3.1 Determining main areas of assessment and the indicators

The areas selected to be covered in the current assessment are as follows:

- Overall drug situation, including common drugs of use and the prevalence of drug use in the general population;
- Injecting drug use consisting of size, drugs of injection and main characteristics of people who inject drugs;
- HIV epidemic in the general population covering items such as identified number of cases, estimations for number of people living with HIV/AIDS (PLHIV), main at risk groups for HIV infection, the pattern of HIV transmission, HIV/AIDS cases attributable to injecting drug use;
- Prevalence of HIV infection among PWIDs;
- Prevalence of Hepatitis C and B infection among PWIDs;
- Risk behaviors of people who inject drugs, including sharing injection equipment, sexual risk behaviors, as well as HIV knowledge;
- Policies toward HIV prevention in PWIDs, as presented in national policy documents;
- Services available for harm reduction, mainly availability and coverage of NSP and OST;
- Availability and take up of HIV testing and counseling by PWIDs;
- The situation among specific populations, such as women who inject drugs, female sex partners of PWIDs and drug using prisoners;
- Main studies related to the above-mentioned areas carried out in the country, including BBSs on PWIDs;
- Main challenges in policy-making and implementation of HR strategies, and the steps needed to move forward.

3.2 Extensive search for documents and data

The process of searching and identifying the related sources was done from April to June 2012. We used time limitations for our searches. We have not included studies conducted before 2005. As a similar situation analysis was done in 2008 and included documents released prior to 2008. In the new situation assessment, we intended to understand the new trends and developments in the timeframe between the two assessments. Therefore, we limited the search to the documents that have been published since 2009. However, we found that many studies were released years after their implementation and had not been included in the previous review. For that reason, we included data and information that has been produced since 2005. Additional indicative searches were conducted to identify documents published in the period 2005 to 2008. For information related to policies and services, the most recent available information is presented.

We used the following sources and strategies to identify and retrieve relevant publications, documents and data from the region:

- Electronic searches of scientific bibliographic databases:
    - o Web of Science (ISI)
    - o Medline through Pubmed
    - o EMBASE
    - o PsycINFO
    - o Index Medicus EMRO (IMEMR)
- Electronic and manual searches of UN related publications and web sites, such as UNAIDS, WHO, UNODC, World Bank (Headquarters, regional and country offices) and global, regional and country reports
- International and regional NGOs, such as HRI and MENAHRA
- Websites of related bodies in the countries
- Conference Abstracts
- Review of the reference lists of identified documents
- Subject-specific searches in Google and Google Scholar
- Personal communications with key people, mainly at the UNAIDS and WHO offices, Ministries of Health and researchers in the field
- Archives of the research team

For searching bibliographic databases, a combination of the following three sets of key words was used. The format was modified for each scientific database or website.

I- Drug related key words:

("drug use" OR "drug misuse" OR "drug abuse" OR "drug dependence" OR "drug dependent" "substance use disorder" OR "Substance use related disorders" OR "harmful use" OR "substance use related disorders"[mesh] OR addict* OR IDU* OR "intravenous drug injection" OR narcotic* OR Opium OR opioid OR opiate OR Heroin OR alcohol OR ecstasy OR hallucinogen* OR stimulant* OR *amphetamine* OR Cocaine OR "substance withdrawal syndrome"[mesh] OR "drug treatment" OR "drug abuse treatment" OR "Harm reduction" OR "harm minimization" OR methadone OR buprenorphine OR subutex OR suboxone OR OST OR MMT OR "opioid substitution" OR "opioid maintenance" OR "needle exchange" OR "needle and syringe" OR "Substance Abuse Treatment Centers"[mesh] OR "therapeutic community" OR "drug supply" OR "drug law" OR "drug legislation" OR "drug policy" OR "drug overdose")

II- HIV/AIDS or Hepatitis key words:

(HIV OR AIDS OR "human immunodeficiency virus" OR HCV OR HBV OR hepatitis)

III- Key words of the countries of the MENA region:

(Afghan* OR Afghanistan[mesh] OR Algeria* OR Algeria[mesh] OR Bahrain* OR Bahrain[mesh] OR djibouti OR Djibouti[mesh] OR Egypt* OR Egypt[mesh] OR Iran* OR Persia* OR Iran[mesh] OR Iraq* OR Iraq[mesh] OR Jordan* OR Jordan[mesh] OR Kuwait* OR Kuwait[mesh] OR Leban* OR Lebanon[mesh] OR Liby* OR Libya[mesh] OR Moroc* OR Morocco[mesh] OR Oman* OR Oman[mesh] OR Pakistan* OR Pakistan[mesh] OR Palestin* OR Qatar* OR Qatar[mesh] OR "Saudi Arabia" OR KSA OR "Saudi Arabia"[mesh] OR Somali* OR Somalia[mesh] Sudan* OR Sudan[mesh] OR Syria* OR Syria[mesh] OR Tunis* OR Tunisia[mesh] emirates OR UAE OR "United arab emirates"[mesh] OR Yemen* OR Yemen[mesh] OR "Arabian Peninsula" OR "middle east" OR "middle east"[mesh] OR "East Mediterranean" OR "Eastern Mediterranean" OR "North African" OR "North Africa" OR arab)

IV- (#1 OR# 2) AND #3

3.3 Extensive review of the retrieved documents, data extraction and analysis

All documents were extensively reviewed. The data was extracted on each indicator or area on a country basis. Specific attention was paid to identify the year and method of data production and the definition of the populations studied to reach a better understanding of the situation and trends. Despite limiting the data to a specific duration, both the extent and the quality of the data was significantly better than the data that was available during the 2008 assessment. In the previous assessment, most of the data gathered came from the global reviews that had provided only a number with or without the study year regarding a country indicator. As in most occasions, it was impossible to find the origin of the data and no other feature was available, we had to rely on the information presented in those global reviews. Since the 2008 assessment, several developments have occurred:

1. Two rounds of country progress reports on HIV/AIDS have been released, i.e. 2010 and 2012. The quality of these country reports has considerably improved. The reports include a summary of main studies, policies and interventions and require data on main indicators. A group of stakeholders collaborated on the development of the report. This group consisted of managers and technical staff of National AIDS Programs, members of national AIDS Committees and members from organizations working on social welfare and drug control. NGOs and groups of PLHIV, where available, participated in the development of the report. Moreover, in most occasions, the country had received considerable technical assistance from UNAIDS and WHO. This collaborative effort increased the amount of information available and the precision needed for such a comprehensive document. In addition, as a result of repetitive efforts that went into preparing the report, the knowledge and experience of those engaged in developing the report increased.

2. Several countries have received grants from the Global Fund (GFATM). In almost all cases, investigations and/or HIV prevention activities for PWIDs have been included as beneficiaries of the grants. Some countries have allocated other sources for assessments of PWIDs. Therefore a number of studies on PWIDs have been carried out and, as a requirement, the results are published and available.

3. The increased knowledge and expertise in the countries has resulted in an improvement in realizing the risk of undermining the HIV threat. Therefore, the efforts to increase continuous monitoring of the situation in key at risk populations have enhanced.

Due to all the above developments, in most cases, we have relied on country reports which are more accurate and have documented the details of study characteristics and findings. These studies have also led to a more precise analysis of the available evidence. In addition, in our review, we found multiple errors, misinterpretations and missed data in the global reports, when compared with the original study reports.

Limitations

There were limitations to the existing information. In many occasions, several reports presented information based on a single study and provided contradictory data. In such a case, the following steps were taken:

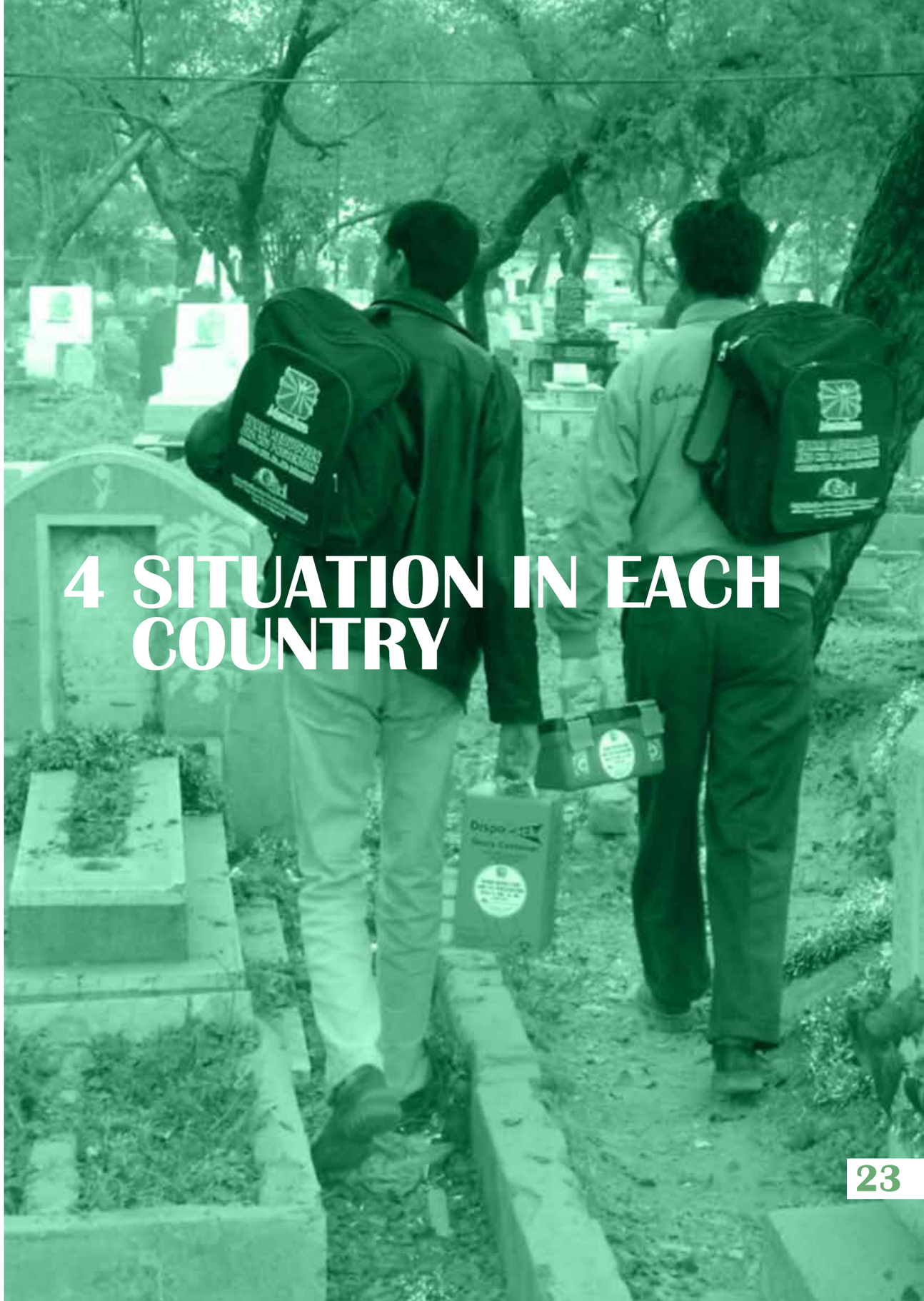
- If one of the documents was the original complete study report, we relied on data provided in that report. However, in some cases, other documents provided additional information produced by secondary analysis. In such a case, all the data and sources were utilized.

- If a complete study report as well as a published paper on that study were available, the published paper was the basis of the extracted data.

- Many times, the complete study report was not available and the data was fragmented and scattered in various sources. In such cases, several sources were used to bring together all the pieces of data.

Despite all the improvements, data remains scarce in several countries. Areas where information is especially lacking are highlighted throughout this review.

The results of the review are described in the following two chapters. In the first chapter, a summary of the HIV/injecting drug use situation and response is presented for each of the 20 countries in the region. In the second chapter, the regional overview is presented for the main aspects covered in this review. The information, including what is not given in detail in the main body of this report, is presented in the tables in the Annex. In describing each subject, we have given special attention to the main indicators in that area.



4 SITUATION IN EACH COUNTRY

Afghanistan

Afghanistan is a low-income country (UNDP, 2011a) which has suffered from war and instability for over two decades. The country has been the largest producer of world's Opium for years (UNODC, 2011). Production and trafficking of Opioids, linked with political events, has been a focus of the international community. However, there has not been enough attention given to drug use and its related problems inside Afghanistan (Maguet, et al., 2010). People suffer from poverty, insecurity and multiple traumas as well as the wide availability of drugs. Expectedly, a considerable rise in drug use, including injecting drug use, has been documented in recent years. According to the 2009 National Drug Use Survey (UNODC, et al., 2009), there are up to 940,000 drug users (DUs) in the country, which makes up of 8% of adult population. Cannabis, followed by Opium and Heroin are main drugs used. There are 120,000 Heroin users and the size of PWIDs has been estimated at 20,000. Many Afghan PWIDs have been residing in Iran and Pakistan for years (Afghanistan MoPH, 2012; Todd, et al., 2011).

Afghanistan is considered a low prevalence country for HIV/AIDS (Afghanistan MoPH, 2012). Several studies on HIV prevalence among PWIDs have been carried out since 2005. Almost all studies have shown a prevalence of less than 5% (Nasir, et al., 2011; Todd, et al., 2007; Todd, et al., 2011), except one from Herat, which indicated a prevalence of 18.2% in 2009 (Johns Hopkins University; HIV surveillance project, 2010). Among PWIDs, HIV knowledge is low; sharing needles and syringes is common, high risk sexual behavior is widespread and condom use is low (Johns Hopkins University; HIV surveillance project, 2010; Nasir, et al., 2011; Todd, et al., 2010; UNODC, et al., 2009). HCV infection is also relatively high among PWIDs (Johns Hopkins University; HIV surveillance project, 2010; Nasir, et al., 2011; Todd, et al., 2007; Todd, et al., 2011). However, a diverse profile of risk behaviors and HIV and viral hepatitis is evident which might be a result of cultural and geopolitical differences.

Since 2005, Afghanistan has adopted a harm reduction strategy as part of its National AIDS Program control as well as National Drug Control Program. (Afghanistan MoPH, 2012). In its second AIDS program (2011-2015), Afghanistan has a provision of large scale up in interventions for key affected populations, including PWIDs and their partners. For the time being, many programs are in place, and are increasing each year, to provide a package of harm reduction services, including condoms and needles and syringes. Millions of needles have been distributed to thousands of PWIDs (Afghanistan MoPH, 2012), however, the number of NSP sites, coverage and the number of syringes distributed per IDU is still low. OST was adopted in 2010. Implementation of Methadone Maintenance Treatment (MMT) is in its pilot phase. Currently, 71 cases are under treatment (Afghanistan MoPH, 2012; Moszynski, 2011). The country has stopped entering new cases to maintenance treatment (Maguet, 2012). Afghanistan is also considering provision of Opium Tincture as a substitution treatment (Maguet, et al., 2010). The number of sites providing HIV testing and counseling is increasing, but the percentage of PWIDs tested for HIV in the past 12 months remains low (Afghanistan MoPH, 2012). Antiretroviral therapy (ART) is available in two centers (Afghanistan MoPH, 2012), but there is no information available regarding the inclusion of PWIDs in need of ART. NGOs have been active in providing services from the start of the country's harm reduction response. Above 75% of services available to PWIDs are provided by NGOs (Afghanistan MoPH, 2012). Afghanistan is currently receiving funds from multiple sources and donors for HIV programs (Afghanistan MoPH, 2012). Guidelines, tools and procedures for HIV prevention, treatment, care and support have been developed to provide guidance for the implementation and adherence to quality standards (Afghanistan MoPH, 2012).

There is evidence from Kabul showing that HIV knowledge is increasing and sharing behavior is declining. This has been regarded as a reason for the stability of HIV prevalence among PWIDs (Todd, et al., 2011). However, there is an urgent need to expand the harm reduction interventions to all provinces, bring them into the prisons and reach women who inject drugs and sex partners of PWIDs.

Algeria

There are reports showing that drug use is considerable among youth in Algeria (Walid Ramzi Magharebia reporter, 2010). However, as drug treatment facilities are not well developed in the country, limited information is available on the various aspects of drug use, including injecting drug use. The bulk of the available information comes from a rapid assessment conducted in 2004-5 in three cities on drug users, from which 55% were injecting drug users. Buprenorphine followed by Heroin were the main drugs of injection. The study showed that HIV knowledge is inadequate and risk behaviors are common (Moutassem-Mimouni, et al., 2006).

In Algeria, HIV prevalence among the general population (GP) is low (Algeria MoH, 2012). It seems that the HIV epidemic is concentrated in men who have sex with men (MSMs) and is in a high level in FSWs. The data on HIV prevalence among PWIDs is insufficient. The notion of high HIV prevalence (Abu-Raddad, Hilmi, et al., 2010) comes from the above-mentioned study indicating that a small proportion of drug users reported ever being tested for HIV and 11% had a positive result. The study also suggests higher HIV infection and risk behaviors among female drug users (Moutassem-Mimouni, et al., 2006). Another report from voluntary counseling and testing (VCT) in 2011, showed a 6.9% HIV prevalence

among PWIDs (Algeria MoH, 2012). Up until now, 2.3% of HIV/AIDS identified cases in the country have been attributed to injecting drug use (Algeria MoH, 2012).

Algeria is implementing the 2008-2012 National Strategy Plan and is providing extensive HIV preventive interventions to FSWs and MSMs, including outreach, peer education services and condom distribution. Several NGOs including PLHIV are actively engaged in providing these services. VCT and ART are also widely available (Algeria MoH, 2012). However, the country has not developed appropriate HIV surveillance among PWIDs and is not providing the main HIV prevention strategies for PWIDs, such as OST and NSP.

Improvement of the existing surveillance mechanisms and conducting studies on PWIDs are highly recommended in order to reach to a better understanding of the nature and the extent of the problem as well as to assess the needs for treatment and care.

Bahrain

Bahrain is a small high-income country. There is insufficient updated information on drug use pattern. It is estimated that there are 20,000 to 30,000 drug users in Bahrain (UNDP & Bahrain MoI, 2006). There is a primary drug rehabilitation center at a psychiatric hospital in Manama that provides drug treatment services as well as ART. The center produces information about drug users' profiles, risk behaviors and HIV prevalence through mandatory testing. A report has mentioned that two thirds of the 3,200 registered drug users are injecting (Bahrain MoH, 2010). Heroin, followed by Amphetamines and Cocaine are the major drugs of injection (Bahrain MoH, 2012).

Bahrain has a low HIV prevalence in its general population. Around 80% of identified HIV cases have been non-citizens and were deported. It is evident that heterosexual transmission has been increasing in recent years (Bahrain MoH, 2012). However, injecting drug use is the dominant mode of transmission. Up until the end of 2011, 58.1% of Bahraini HIV infections were attributed to injecting drug use (Bahrain MoH, 2012). Nevertheless, according to the results of the mandatory testing of all PWIDs in the rehabilitation center, the HIV prevalence among PWIDs has remained below 5% (Bahrain MoH, 2012). There were only two reports from the years 1989 and 1991, showing that 8% and 21.1% of PWIDs were HIV positive, respectively (Al-Haddad, et al., 1994; UNAIDS, et al., 2004); the findings that were never replicated. A knowledge, attitudes and practices study (KAP) among PWIDs in 2006 showed that HIV knowledge is moderate and use of new syringes, as well as condom use is common, nonetheless, sharing and unsafe sex are not rare (Al-Jowder, et al., 2007; Bahrain MoH, 2010).

The National Strategy for AIDS Prevention (2008-2010) is the first and most recent national strategy. It will be updated for 2012-2016 (Bahrain MoH, 2012). Overall, the country's response to HIV followed a conservative approach and NGOs have not been active in HIV prevention. However, Bahrain's prison program has been a best practice since 2009 in the region. It includes peer education and support groups (Bahrain MoH, 2012). The first national strategy had recognized PWIDs as a high risk group, but a harm reduction strategy has not been adopted. OST is not available, although Methadone has been available and utilized for detoxification for several years. NSP is not available in Bahrain. Buying needles and syringes from pharmacies requires a prescription, and drug users are arrested for possession of syringes (Bahrain MoH, 2012). VCT is not available in the country and the proportion of PWIDs tested for HIV is not known. ART is provided in one center (the rehabilitation center for drug users).

At this time, HIV prevention is not a national commitment and priority; there has been a higher shift of priorities towards political issues in 2011. The National AIDS Program has suffered from structural and human resource limitations. Cultural and social barriers prevent the development of outreach program and condom distribution (Bahrain MoH, 2012). In addition, there is a need to study the size of PWIDs and update the current knowledge on risk behaviors of PWIDs. Development of a second National program for AIDS prevention will bring a golden opportunity for discussion and inclusion of harm reduction interventions in the country.

Egypt

Reportedly, Egypt has a high rate of drug use in comparison to neighboring countries. Cannabis and Opioids are the main drugs of use (UNODC, 2011). There is a variety of treatment approaches and services addressing drug use provided by governmental, non-governmental and private sectors. In-patient and out-patient detoxification, residential rehabilitation and self-help groups are available, mainly in larger cities. It is estimated that there are between 57,000 and 120,000 PWIDs in the country (Egypt MoH, 2010).

In Egypt, HIV prevalence is low in the general population. It seems that there are concentrated epidemics among MSMs and PWIDs. Sexual transmission is the main drive of the spread of HIV transmission in the country. Up until 2010, PWIDs were contributing to 28.3% of HIV cases (Egypt MoH, 2012). In the years 2006 and 2010, BBSs have been conducted on PWIDs (Egypt MoH, 2012; Soliman, et al., 2010) and provided key information on the characteristics of PWIDs, HIV knowledge, risk behaviors and HIV prevalence. HIV prevalence increased from 0.6% in 2006 to over 6% in 2010. Unsafe injecting, as well as

unprotected sex, were common in both studies. In addition, Egypt has one of the highest HCV prevalence rates in the general population in the world. Needle sharing has contributed significantly to this epidemic (Sievert, et al., 2011).

Egypt is developing its fourth National Strategic Plan for HIV/AIDS for the years 2012-2016. It is a comprehensive prevention, treatment and care program and has envisaged increasing coverage of prevention interventions for most at risk populations (MARPs) as a priority (Egypt MoH, 2012). HIV prevention interventions for PWIDs were begun in the country in 2010. The interventions include drop–in-centers (DICs) and outreach with free rapid testing as well as condom and syringe package distribution provided by NGOs. More than 3,000 PWIDs were reached in Cairo and Alexandria, in the years 2010 and 2011 (Egypt MoH, 2012). OST is not available in the country. VCT is provided all over the country through fixed or mobile units. However, less than 10% of PWIDs have ever been tested for HIV (Egypt MoH, 2012). VCT and HIV prevention have been made available in several prisons. ART is also available and offered in six cities (Egypt MoH, 2012).

Egypt needs to scale-up services to cover tens of thousands of PWIDs in various areas of the country. NGOs should be strengthened considerably to be capable of taking responsibility for the expanded task. According to the high number of drug users attending treatment services, provision of OST should be discussed. Various external partners are significantly supporting the National Strategic Plan and this provides an opportunity for capacity building, both at a national level as well as at the service level.

Iran

Until thirty years ago, Iran had a long history of Opium production. Iran has a major drug market, as well as a transit route of Opioids from the neighboring country, Afghanistan, to other regions, including Europe. Opioids, including Opium and Heroin, followed by Cannabis and stimulants are the main drugs used in the country (Daneshmandan, et al., 2011; Rahimi-Movaghar, et al., 2012). Iran is one of the countries with the highest proportion of Opioid users in the world (UNODC, 2011). In recent years, a sudden rise in stimulant use has occurred and has been associated with new mental health problems, such as stimulant psychosis (Hemmati, et al., 2011). In the last decade, injecting drug use has been a vast health problem. Currently, the estimations on the size of PWIDs range from 200,000 (Iran MoH, 2012) to 260,000 (Rahimi-Movaghar, Amin-Esmaeili, et al., 2011). Heroin is the most common drug of injection (Narenjiha, et al., 2009; Rahimi-Movaghar, et al., 2008). In Iran, treatment centers for drug users have been well developed. There are thousands of treatment centers for DUs all over the country, including outpatient, inpatient and residential centers providing a range of services, such as various types of detoxification, maintenance treatment, psychosocial interventions, self-help groups and mandatory treatment. However, quality of services and mechanisms of health sector supervision have remained the main challenges.

Iran has a low HIV prevalence in the general population. However, PWIDs are the main at risk group, followed by non-IDUs and FSWs. About 70% of all identified HIV positive cases are attributed to injecting drug use. Since 2005, numerous studies with thousands of samples have assessed HIV prevalence among PWIDs in various parts of the country. (Ghanbarzadeh, et al., 2006; Haghdoost, Osouli, et al., 2012; Haghdoost, Sadjadi, et al., 2012; Ilami, et al., 2012; Iran MoH, 2010a; Jahani, et al., 2009; Malekinejad, 2008; Mathers, et al., 2011; Mirahmadizadeh, et al., 2009; Rahimi-Movaghar, et al., 2010; Zamani, 2008; Zamani, Radfar, et al., 2010). Overall, the estimation is in a range of 10% to 20%. A systematic review on HIV prevalence among PWIDs in Iran (Rahimi-Movaghar, Amin-Esmaeili, et al., 2011) showed that the prevalence has increased significantly in recent years, from 8.7% before 2005 to 18.4% from 2005 to 2007. Another systematic review has shown that HIV prevalence among non-IDUs has increased to 5.4% in Tehran after 2005 to the year 2007 (Amin-Esmaeili, Rahimi-Movaghar, Haghdoost, et al., 2012). HIV prevalence has also been reported to be high in the primary sex partners of PWIDs (Haghdoost, Sadjadi, et al., 2012). In addition, since 2007, studies on HCV prevalence among PWIDs have also reported a range of 34% to 80%(Haghdoost, Sadjadi, et al., 2012; Kheirandish, et al., 2009; Rahimi-Movaghar, et al., 2010; Sarkari, et al., 2011; Zamani, Radfar, et al., 2010).

In Iran, massive developments have occurred in response to drug use. Drug treatment services were developed 15 years ago. Harm reduction interventions started in the last 10 years and expanded in a short period of time. Both the National Strategic Plan (2010-2014) and National Drug Control Program acknowledge harm reduction as a main HIV response strategy. In mid-2011, hundreds of sites were providing needles and syringes, as well as condoms. In a one year period, millions of syringes were distributed (Iran MoH, 2012). Thousands of Methadone clinics, mainly in the private sector, are providing MMT. Iran reports that in a one year period, about 500,000 drug users received MMT. Moreover, tens of thousands of prisoners are receiving MMT (Iran MoH, 2012). In 2010, integrated bio-behavioral survey (IBBS) in 10 provinces showed that more than 40% of PWIDs had received MMT during the previous year (Haghdoost, Osouli, et al., 2012). Buprenorphine as well as Tincture of Opium are provided in some of the treatment centers. VCT and ART are widely available all through the country, including in prisons (Iran MoH, 2012). A large number of NGOs, PLHIV, self-help groups and the private sector are engaged in providing harm reduction services.

The provision of the extensive number of services available has resulted in a fall with a slight slope in the number of the identified cases since 2005. Nevertheless, the greatest number of new cases of HIV infection remains among PWIDs and their sex partners (Iran

MoH, 2012). The coverage and the number of syringes distributed are low. The emergence of the use of amphetamine-type stimulants has also brought a new challenge and needs for the development of new interventions to control and reduce their harms. Budget constraint is a major barrier for expanding services. The capacity of NGOs still needs to be expanded considerably. In the last decade, international contributions for expansion and improvement of current services have been considerable and discontinuance of the assistances will place all the developments at risk.

Iraq

Iraq reports that no major drug problem exists in the country. Substance-related disorders are reported to be rare and prescription drugs have been the most common drugs of choice (Alhasnawi, et al., 2009; Iraq MoH, 2012). Prescription drugs are the main drugs of injection. However, the country reports that the number of narcotic drug addicts is slowly increasing (Iraq MoH, 2012). Evidence, including hospital records and observations of the experts, suggests that drug use has increased in recent years. Smoking of Opium is fairly common near the Iran-Iraq border in Najaf and Karbala (Aqrawi, et al., 2009). In-patient and out-patient detoxification is available in several centers, mainly in the public sector, but most drug users prefer to be treated by psychiatrists in the private sector (Iraq MoH, 2012).

Iraq has a low HIV prevalence in the general population. Key at risk populations are not screened and have not been studied (Iraq MoH, 2012). HIV surveillance does not include DUs or PWIDs. The country reports that no case of HIV positive injecting drug user has been found. From identified HIV cases, 66% have been hemophilic patients (Iraq MoH, 2012).

In 2005, the NASP was developed, but never implemented. The program had not foreseen targeted HIV prevention for at risk groups (Iraq MoH, 2012). NGOs are not involved in providing such services. Working on stigma and discrimination against at risk groups and PLHIV remains a priority and is crucial for developing policies and allowing them to reach targeted interventions. There are no OST and NSP services in the country. However, almost 100 centers are providing HIV testing all over the country and the number of these centers is constantly increasing (Iraq MoH, 2012). ART is available and the country reports coverage of all identified PLHIV in need (Iraq MoH, 2012). Iraq has gone through major conflicts, political changes and socioeconomic problems in last decade. The country has not received major support from external bodies for the development of HIV prevention, treatment and care services. The country is currently updating the National AIDS Strategy and acknowledges that many factors may contribute to an increased spread of HIV in the near future (Iraq MoH, 2012).

Jordan

In recent years a significant increase in drug use has been noted (Jordan MoH, 2012; UNODC, 2011). Cannabis and stimulants are the main drugs of use in the country. Heroin is the most common drug of injection. In-patient and out-patient detoxification, particularly in the public sector, are the main drug treatment services. Counseling, psychotherapy and self-help groups, as well as compulsory treatment, are also provided.

Jordan has a low prevalence HIV epidemic. In an IBBS conducted in four cities in 2008, no PWIDs and FSWs were HIV positive and the prevalence was very low in MSMs (Jordan MoH, 2012). Up to the end of 2011, injection drug use has contributed to 2.4% of HIV epidemic (Jordan MoH, 2012). However, the IBBS study, as well as a KAP study in 2011 showed that sharing injection equipment and unsafe sex is quite frequent among PWIDs and their HIV knowledge is inadequate (Jordan MoH, 2012; Shahroury, 2011).

Jordan is starting the second NASP (2012-2016). Although PWIDs have been included as a key at risk population in the country's plans, such as the GFATM Round 6 plan, key HIV prevention services, such as NSP and OST, have not been planned. However, community-based organizations (CBOs) have started HIV education and condom distribution for FSWs, MSMs and PWIDs. Around 1,300 PWIDs received these services in 2010-11 (Jordan MoH, 2012). VCT and ART are available mainly in Amman (Jordan MoH, 2012).

Overall, HIV has not received adequate national attention. HIV surveillance in at risk groups is weak and VCT is not widely available (Jordan MoH, 2012). As risk behaviors are common among PWIDs, the risk of an HIV epidemic is high among this group. Harm reduction strategies should be discussed clearly. In recent years, NGOs have been empowered to get to hard-to-reach people. This should be continued and reinforced.

Kuwait

Kuwait has medical and health services infrastructure. Drug treatment is provided mainly through the Addiction and Psychiatric Hospital (APH), which also provides the anecdotal information regarding national drug use. However, many drug dependents travel to other countries for treatment. Opioids are accounted as the main drugs for treatment demand and injecting drug use is also prominent in the drug treatment setting (Kuwait MoH, 2012; UNODC, 2011).

Kuwait has a low-prevalence HIV epidemic. Although mass HIV screening exists, the pattern of HIV transmission is highly unknown. PWIDs are screened when arrested, imprisoned or admitted for treatment. From around 750 HIV testing among PWIDs in 2009 and 2010, only one was positive (Kuwait MoH, 2012). Nevertheless, unprotected sex, as well as the sharing of injection equipment, have been mentioned as common, both in communities and in prisons. A high HCV infection rate has also been reported among PWIDs (UNODC, 2011).

The country lacks a National Strategy for HIV control. There has been no specific targeted HIV education and prevention for MARPs. The main focus has been on HIV testing, particularly testing of expatriates, who will be deported if the result is positive. However, VCT is not available. ART is available and the country reports a good coverage of ARV therapy for Kuwaitis. OST and NSP have not been made available in the country (Kuwait MoH, 2012).

The country reports that the re-establishment of the National AIDS Committee and development of National Strategy Plan for HIV will be a priority for the year 2012 (Kuwait MoH, 2012). Limited political support for HIV/AIDS and limited allocation of human and financial resources, as well as a lack of evidence on susceptibility of the country to an HIV outbreak have resulted in poor HIV prevention planning and implementation. Stigma and criminalization of MARPs and weakness of CSOs in this field have additionally hampered the possibility of an effective HIV response. Moreover, the country has not received any external support for conducting research, increasing capacity or mobilization of resources (Kuwait MoH, 2012).

Lebanon

Lebanon is a small middle-income country that has been faced with war and internal and external conflicts in the last three decades. No clear information is available to reflect the drug scene in Lebanon. Cannabis, Cocaine, and Opioids are the main drugs used in the country, but Opioids followed by Cocaine constitute the principal drugs of use in those who attend treatment. There is evidence showing that a considerable number of prisoners are sentenced due to drug-related offences (Skoun Lebanese Addictions Center, et al., 2011). From 30% to 60% of drug users use drugs by injection (Skoun Lebanese Addictions Center, et al., 2011). It is estimated that there are 2,000 to 3,000 PWIDs in Lebanon (Lebanon MoPH, 2012). Heroin appears to be the most commonly used drug by injection (Skoun Lebanese Addictions Center, et al., 2011). Most PWIDs are young and single with low levels of education and a history of imprisonment (Mahfoud, Afifi, et al., 2010; Skoun Lebanese Addictions Center, et al., 2011).

Lebanon has a low HIV prevalence in the general population (Lebanon MoPH, 2012). MSMs, FSWs, PWIDs and prisoners are considered as the main at risk groups for HIV/AIDS. Less than 6% of the HIV epidemic is attributed to injecting drug use (Lebanon MoPH, 2012). HIV sero-prevalence studies among PWIDs have not found any HIV positive cases (Lebanon MoPH, 2012; Mahfoud, Afifi, et al., 2010). However, sharing injection practice and unsafe sex have been reported to be common among PWIDs (Lebanon MoPH, 2010a; Mahfoud, Afifi, et al., 2010). Moreover, studies have shown a high HCV prevalence among PWIDs (Mahfoud, Kassak, et al., 2010a). Drug use, injecting drug use and needle-syringe sharing have been reported within prisons as well as in the community (Lebanon MoPH, 2012).

The first National AIDS Program was planned and implemented for 2004-2009. It has been updated for 2012. HIV prevention for PWIDs, including OST, is also planned (Lebanon MoPH, 2012). A decree on OST implementation was signed by the Minister of Public Health in 2010; however, Buprenorphine is the only medicine used for OST in the country. As of March 2012, about 120 clients were receiving Buprenorphine maintenance treatment (BMT) in two hospitals in Beirut (Lebanon MoPH, 2012). It should be noted that a considerable number of NGOs, general practitioners and psychiatrists are providing out-patient, in-patient and community treatment services for drug dependence in the country (Skoun Lebanese Addictions Center, et al., 2011). NSP and condom distribution for PWIDs were begun in the country many years ago. SIDC, the NGO providing social and health care services to drug users, the only NGO providing NSP in the country, reports that the number of syringes distributed for each IDU in one year has been very low (Badran, 2012; Lebanon MoPH, 2012; SIDC, 2011). VCT is available throughout the country and MARPs are using the service. However, the available information indicates that the proportion of PWIDs tested for HIV in the last 12 months is low (Mahfoud, Afifi, et al., 2010). ART is provided for Lebanese citizens and Palestinian refugees (Lebanon MoPH, 2012). ART coverage is increasing and PWIDs are also receiving treatment at one site (UNAIDS, 2011a). CSOs are active in providing harm reduction services. More than 75% of HIV interventions for PWIDs are estimated to be provided by CSOs (Lebanon MoPH, 2010b). The secretariat of a regional NGO (MENAHRA) is in Lebanon and another NGO (SIDC) is the WHO-recognized knowledge hub for harm reduction in the region.

The AIDS program faces a shortage in financial and human resources and inadequate surveillance systems. Stigmatization of MARPs and PLHIV, prejudiced personal views of religious leaders toward PLHIV and the criminalization of PWIDs and MSMs are among other limiting factors for expansion of the HIV prevention services. External assistance has been received from several UN organizations to strengthen the country's capacities for HIV response (Lebanon MoPH, 2012). However, a mapping of PWIDs and considerable expansion of the services are needed to reach a significant number of PWIDs and to provide a range of important harm reduction services. Moreover, current information on HIV prevalence, risk behaviors and received services are slight and require updating.

Libya

No updated information is available on drug use and injecting drug use for recent years in Libya. The level of the HIV epidemic in the general population is not clearly known. There are several reports and estimations, from 0.13% resulted from population survey in 2005 up to the 2008 estimation of 1.13% (Libya MoH, 2012; The Telegraph, 2011). Two outbreaks of HIV, one in children in Benghazi (1998), and the other among PWIDs in detention have brought HIV into political attention. PWIDs have been recognized as the main at risk group for HIV infection. However a report of high HIV prevalence among PWIDs in detention (Dolan, et al., 2007; Groterath, et al., 2002) and a high proportion of PWIDs in newly identified HIV cases in 2001 (The World Bank, 2005) have been the source of this assumption. Moreover, a 2003-4 study in Tripoli had revealed a high prevalence of unsafe injection among PWIDs (Libya MoH, 2010). Recently, a BBS was conducted in Tripoli and included PWIDs. The study showed that within a sample of 328 PWIDs tested, 87% have HIV (Libya MoH, 2012). The case report statistics, before the political conflicts, were indicating an increasing a trend toward sexual transmission (Libya MoH, 2012).

Libya still does not have an approved National program for HIV/AIDS. A draft program was developed in 2010, but not adopted (Libya MoH, 2012). CSOs working for the fight against HIV exist in the country. There is an AIDS NGO Network in Libya, in addition to other active NGOs working on HIV/AIDS, especially on the health and discrimination faced by children infected with HIV. A PLHIV group also exists (Libya MoH, 2012). Despite a relatively active civil society in Libya, the engagement of NGOs in prevention, treatment and care remains limited and their potential is not yet fully realized (Libya MoH, 2010). Only one VCT center is available in Tripoli (Libya MoH, 2012). ART is available in three cities (Libya MoH, 2012).

The country reports that a national strategic plan on harm reduction has been developed and approved (Libya MoH, 2012). In addition, a project to improve drug treatment and support civil society in outreach services is planned in cooperation with UNODC (Libya MoH, 2012). In the past, introducing condom and needle exchange programs in prisons was intended (Butler, 2008), however, for the time being, there is no NSP and OST in the country.

Libya has been faced with civil war since February 2011 and in the post-conflict situation struggles with security and competing priorities. The primary HIV preventive mechanisms, such as blood safety, are disrupted and the country is highly susceptible to an HIV outbreak (Libya MoH, 2012). Development of NASP and active implementation with serious involvement of CSOs should be a high priority for the country.

Morocco

Although Cannabis followed by sedatives are the most common drugs used in Morocco, in relation to HIV transmission, Heroin and Cocaine are the main drugs that are used by injection (Morocco MoH, 2005; WHO Website). According to the 2004-5 National survey, the current prevalence of substance-related disorders was 2.8% of the population aged more than 15 years (Kadri, et al., 2010) . Various types of treatment services, including out-patient, in-patient and rehabilitation services run by governmental (WHO Website), public and university centers where non-governmental organizations are deeply implicated as management partners of the National Program (CCM Morocco).

In Morocco, HIV prevalence in the general population has remained low, but there are reports of concentrated epidemics among FSWs, MSMs and PWIDs in parts of Morocco (Morocco MoH, 2012). It has been estimated that injecting drug use contributes to less than 6% of HIV epidemics (Morocco MoH, 2012). Studies have been conducted on samples of PWIDs from 2005 to 2011. In recent years, almost all reported high rates of HIV among PWIDs have been from Nador (Morocco MoH, 2012; UNAIDS, 2011a). However, risk behaviors seem to be equally common in all studied areas with low and high HIV prevalence among PWIDs (Morocco MoH, 2012). A modeling study on HIV modes of transmission estimated the national rate of HIV prevalence among PWIDs to be 2%. The incidence rate is predicted to be at 1.07% per person-year, which may result in a future increase in the HIV prevalence to levels as high as 11.3% among PWIDs (Mumtaz, et al., 2010).

The country has recently launched the new 2012-2016 National AIDS Program. Harm reduction strategies have been adopted since 2007 and include NSP as well as condom distribution (Morocco MoH, 2012). Other national plans on drug use and the approved GFATM program also include harm reduction strategies (Morocco MoH, 2006; WHO, et al., 2011; WHO Website). The national plan on harm reduction for PWIDs is part of the national strategic plan on drug use which consists of four main axes: prevention, treatment, harm reduction and rehabilitation. The prevention axis is sustained intensively by WHO. The harm reduction plan, which is also a part of the national strategic plan on HIV, receives assistance from the GFATM, as well as from UNAIDS and UNODC. There are several NSP sites in the country managed by NGOs which are providing PWIDs with hundreds of thousands of needles and syringes per year (Mathers, et al., 2011; Morocco MoH, 2012). However, the coverage and the number of syringes distributed per IDU are very low (Morocco MoH, 2012). MMT was included in GFATM Round 6 proposal which was launched in 2010. Currently three centers, in Tangier, Casablanca and Sale, are providing MMT (Morocco MoH, 2012); This program was evaluated in 2012, and is currently being extended to other sites. The program is expected to spread to 5 other sites before the end of 2016. Centers for Counseling and Testing are widely distributed in the country.

These centers provide services to tens of thousands of people every year (Morocco MoH, 2012; WHO, et al., 2011). Several ART centers are also providing services to thousands of PLHIV in need (Mathers, et al., 2011; Morocco MoH, 2012). Arrazi hospital in Rabat has been appointed by WHO as a knowledge hub for promoting harm reduction in the sub-region and has held multiple training workshops on the related subjects(MENAHRA, 2010a). Currently, the centre of Tangiers remains the principal training site for outreach practice and for research on PWIDs (CCM Morocco).

Although Morocco has made significant progress in developing policies and implementing programs for MARPs including PWIDs, coverage still needs to be expanded. The budget available for harm reduction services is highly dependent on external resources, which jeopardizes the sustainability of the services. NGOs need to improve their infrastructure and strengthen their capacities. The services should be widely available and accessible in the country. The areas with low prevalence of HIV among IDU population are susceptible to an outbreak in the future.

Oman

Oman is a high income country with adequate medical infrastructure. However, no updated information is available on drug use. Almost all the available information on PWIDs of the country comes from a study conducted in late 2006 with a total of 184 drug users including PWIDs recruited from three settings in Muscat (Oman MoH, 2007). The study showed that PWIDs are mainly male, single, with high rate of imprisonment, and high mobility in and outside of Oman (Abu-Raddad, Ayodeji Akala, et al., 2010). Heroin, Morphine or combinations were the primary drugs of injection (Oman MoH, 2012).

Oman has a low HIV prevalence in the general population (Oman MoH, 2012). There have been reports that the country has faced a concentrated epidemic of HIV among PWIDs from several years ago (WHO, 2007). The 2006 study on PWIDs, as well as surveillance data from the years 2005 and 2006, presented a range of HIV prevalence from 7.7% to higher rates; however, no such evidence is available for the last five years (WHO, 2007). Although PWIDs are unsystematically tested when arrested and when entering prisons and drug-treatment facilities (Oman MoH, 2012). These results are not published in country reports. Despite good HIV knowledge among PWIDs, sharing injection equipment and unsafe sex were common risk behaviors and were reported from prisons (Abu-Raddad, Ayodeji Akala, et al., 2010; WHO, 2007). To date, it is reported that 4.2% of identified HIV cases are attributed to injecting drug use (Oman MoH, 2012). Oman is planning for a new BBS on approximately 400 PWIDs in Muscat through the respondent driven sampling (RDS) method (Oman MoH, 2010).

Implementation of the last AIDS National Strategic Plan (2007-2011) was mainly focused on screening of expatriates and ART (Oman MoH, 2012). NASP is being revised and includes a comprehensive response to HIV. For the time being, in Muscat, a very small HIV prevention for PWIDs is in place and is providing needles and syringes through outreach (Oman MoH, 2012). The program has not been scaled up for years. Pharmacies do not sell syringes without prescriptions (WHO, 2007). Twenty years ago, MMT was provided, but because of the low quality and insufficient supervision, it was stopped after only a few years. Methadone has been used for detoxification since 2003 in Ibn Sina hospital, the main psychiatric hospital treating drug addiction in Muscat (WHO, 2004). Recently, permission was given to start an OST pilot project (Oman MoH, 2012). VCT service is not functional; however in 2006, a considerable proportion of PWIDs reported that they have been tested for HIV and they knew the result (WHO, 2007); this was most likely done through mandatory testing. ART is widely available in Oman (Oman MoH, 2012).

The National AIDS Program faces inadequate institutional support, understaffing and constraints in resource allocation. Criminalization and high levels of stigma and discrimination of key populations have hampered effective HIV prevention. The role of NGOs in the national response is also limited (Oman MoH, 2012). Studies on various aspects of injecting drug use are needed. Establishment of HIV testing and counseling services, OST, and rapid expansion of outreach and harm reduction interventions are necessary and should be included in the next National AIDS Program.

Pakistan

Pakistan is the country with the highest population in the region. It is neighboring Afghanistan and is in the transit root of trafficking Opioids to other countries. Several studies have been conducted on drug use. Four rounds of integrated bio-behavioral surveillance on injecting drug use have been carried out. The studies have provided valuable information for policy making and service planning (Pakistan Ministry of Narcotics Control, 2007; Pakistan National AIDS Control Program, 2005, 2006-7, 2008, 2012). In the year 2006, the country estimated the number of Opioid users to be 628,000 from which 77% were Heroin users (Pakistan Ministry of Narcotics Control, 2007; UNODC, 2011). Estimations for the number of PWIDs vary between 84,000 (Khan, A. A., et al., 2011) to 125,000 (Pakistan Ministry of Narcotics Control, 2007). Karachi, Faisalabad and Lahore have the highest proportion of PWIDs (Pakistan MoH, 2012). Common drugs of injection are Avil (injection containing the antihistamine Pheniramine) in most cities, and Heroin in other cities followed by Temgesic and Benzodiazepines (Pakistan National AIDS Control Program, 2012). PWIDs are highly concentrated in large cities, and typically are men, with a very low level of education and

are homeless (Pakistan National AIDS Control Program, 2012). Treatment for drug abuse is available through private clinics and NGOs. The program consists of detoxification and rehabilitation. In 2006, 17% of Opioid users were treated for Opioid use in the last year. The majority of DUs had considered access to treatment as difficult (Pakistan Ministry of Narcotics Control, 2007).

Pakistan has a low HIV prevalence in the general population (Pakistan MoH, 2012). Repeated IBBS done on several MARPs have showed that HIV is most prevalent in PWIDs, followed by Hijra (transgender) sex workers (HSWs). The 2011 IBBS conducted on around 5000 PWIDs in 16 cities showed a 37.8% weighted HIV prevalence, which was highest in Faisalabad and Karachi (Pakistan National AIDS Control Program, 2012). Most of the previous studies also showed a range of 11% to 51% (Achakzai, et al., 2007; Altaf, et al., 2009; Bokhari, et al., 2007; Pakistan National AIDS Control Program, 2005, 2006-7, 2008; Platt, et al., 2009). Unsafe injection practices are high and HIV knowledge is moderate among PWIDs. There is a large variation between cities on risk behaviors (Pakistan National AIDS Control Program, 2008, 2012). In 2008, a study in Punjab showed a 15% HIV prevalence among spouses and female partners of men who inject drugs (Pakistan MoH, 2012).

Pakistan is developing its third program (2012-2016). It explicitly addresses PWIDs as the main at risk group and acknowledges harm reduction strategies. However, OST is not planned. Pakistan is the first country of the region that started needle and syringe distribution. In 2011, almost 4 million syringes have been distributed to close to 20,000 PWIDs (Pakistan MoH, 2012). The 2011 IBBS showed that 45% of PWIDs had received free syringes in the previous month (Pakistan National AIDS Control Program, 2012). Another study provided evidence for good coverage, effectiveness and impact of Pakistan's NSP, but it showed that the overall cost is high compared to regional and international experiences (Khan, A. A., et al., 2011). The number of centers providing VCT and their uptake is low. There are 17 centers providing ART and the country has planned to increase those receiving ART (Pakistan MoH, 2012). Since the beginning of the HIV response; NGOs and CSOs have been actively engaged in providing services. There are over 50 AIDS organizations. NGOs are also involved in decision-making and are recipients of a GFATM grant (Pakistan MoH, 2012).

The country reports a decrease in coverage of HIV prevention services for PWIDs in the last two years (Pakistan MoH, 2012). As the country is in need of a nationwide scale-up of HIV prevention, treatment and care over the long-term, mobilizing internal and external resources have been major challenges for the health sector. The country is currently receiving a GFATM Round 9 grant, which was designed to assist Pakistan’s transition towards a more comprehensive coverage of HIV services. HIV prevention for PWIDs, as well as engagement of HIV positive PWIDs in treatment is envisaged as a priority for the country. There is a need to manage expenditures in more cost-effective means. VCT needs to be expanded, improved and utilized effectively. There is also a major benefit in improving drug abuse treatment services and provision of OST. Such a treatment demand exists currently, as it is being provided unofficially and without a standard protocol in private practice (Khan, 2012; Khan, A. A., et al., 2011).

Palestine

The Palestinian population has been facing on-going political and social struggles for decades. This has resulted in serious barriers to basic health service access (Horton, 2012). The Palestinian Drug Control Directorate (DCD) estimated that the number of drug users in the Palestinian Territories ranges between 32,000 and 45,000; excluding Jerusalem where the estimated number reaches 12,000 to 15,000 drug users (UNAIDS, 2007). There have been reports regarding a notable increase in drug use, including Heroin use (Progler, 2010; Štulhofer, et al., 2010; UNAIDS, 2007; USAID, 2010). In 2006, it was estimated that there are 900 to 1,400 Heroin users in the West Bank and Gaza (Abu-Raddad, Ayodeji Akala, et al., 2010). Heroin followed by Cocaine are reported to be the main drugs of injection (UNODC, et al., 2011). NGO-based rehabilitation is the most commonly used service for drug treatment (Štulhofer, et al., 2010).

There is a low prevalence HIV epidemic in Palestine. From the 66 identified cases of HIV, only two were attributed to injecting drug use. The main transmission route was heterosexual (UNAIDS, et al., 2012). There is only one study on HIV prevalence among PWIDs, conducted in part of East Jerusalem in 2010. None of the 199 PWIDs were HIV positive (Štulhofer, et al., 2010). However, high risk behaviors among PWIDs are common (Štulhofer, et al., 2010; UNODC, et al., 2011).

PWIDs are included in the National Strategic Program for HIV (2010-2015) as a main target group. It has been reported that two drop-in centers, one in Gaza and one in the West Bank are providing outreach services with condom and needle and syringe distribution programs. Hundreds of DUs have been reached and more than 1,000 sterile needles or syringes and condoms were distributed (UNAIDS, et al., 2012). About one fifth of DUs surveyed reported receiving free injection equipment and condoms during the previous year (Štulhofer, et al., 2010; UNODC, et al., 2011).

OST is not available in Palestine, but it has been reported that Palestinians in East Jerusalem are able to access an Israeli OST program (UN IDU Reference Group, 2010). Four labs in

the West Bank and Gaza, a VCT center in Jerusalem and HIV clinics in Israeli hospitals provide testing services (Rosenthal, et al., 2011). However, access to VCT is not easy for MARPs. Four ART centers inside Palestine are providing treatment and care to HIV patients (UNAIDS, 2011a).

Political instability, daily struggles with security regulations, poverty, competing priorities for survival and economical development as well as fragmented health services in the West Bank and Gaza, and the increased restrictions in movement and access to services are strong barriers for health sector development (Štulhofer, et al., 2010; UNAIDS, 2007; UNAIDS, et al., 2012). As a result, existing HIV prevention and care services are disrupted and HIV surveillance in MARPs is lacking. However, the overall response to the HIV epidemic has improved in recent years, but the number of high-risk groups reached with interventions remains low (UNAIDS, et al., 2012).

Qatar

Qatar is a small high-income country. Immigrants constitute a considerable proportion of the population. There is no significant information available regarding the nature and extent of drug use in the country. No information was found about HIV prevalence or risk behaviors among drug users in last decade.

In Qatar, HIV prevalence is low in the general population (Qatar SCH, et al., 2012). The country considers unsafe heterosexual sex abroad as the main route of HIV transmission. From identified HIV positive cases in the last two years, none were injecting drug users (Qatar SCH, et al., 2012). It is unclear whether an active HIV surveillance mechanism for PWIDs or for prison inmates exists in the country.

Qatar has no specific strategic plan for HIV/AIDS, but the National Health Strategy 2011 to 2016 includes HIV (Qatar SCH, et al., 2012). The main approach has been extensive HIV testing in the population. The vast majority of the population has been tested for HIV at least once in the past few years. HIV treatment and care is also provided. The country reports that all Qataris and non-Qataris in need are receiving ART (Qatar SCH, et al., 2012). However, the HIV strategy has not identified PWIDs as a target group for HIV prevention. An active plan does not exist for HIV prevention in other at risk groups. NGOs are not working on this issue in the country. At risk populations are not yet identified and studied.

Saudi Arabia

Saudi Arabia reports that Amphetamines are the main drugs used in the country. Opioid abuse also exists and accounts for around 8% of treatment demand (UNODC, 2011). No reports are available on the size and patterns of injecting drug use in the country. Residential rehabilitation and inpatient detoxification are the main treatment services for drug use disorders in the country (Saudi Arabia MoH, 2010, 2012). Halfway Houses also exist in three cities and provide support after patients are released from rehabilitation centers (Saudi Arabia MoH, 2012).

Saudi Arabia has a low HIV prevalence in the general population. Almost all the information available on HIV surveillance on accessible at risk groups, including sexually transmitted infections (STI) clinic attendees, prisoners and PWIDs in rehabilitation centers has also showed a low prevalence (Saudi Arabia MoH, 2012). Most infections are identified as being sexually transmitted. In 2008, 9% of HIV identified cases were injecting drug users (Saudi Arabia MoH, 2010). In recent years, HIV testing on thousands of PWIDs in treatment facilities have been carried out and have showed a prevalence of less than 1% (Saudi Arabia MoH, 2010, 2012), excluding a study on 111 PWIDs in a large detoxification center in the years 2010-11, in which a prevalence of 8.1% was found (Saudi Arabia MoH, 2012). No data is available on risk behaviors of drug users, but a qualitative study is being planned on this issue (Saudi Arabia MoH, 2012).

The country is improving the HIV prevention, treatment and care services. VCT has been expanded through static and mobile clinics over the country, the service has been integrated in the different types of health facilities and ongoing training is provided to health care workers on testing and counseling (Saudi Arabia MoH, 2012). Almost all detected cases that are eligible for treatment are receiving ART (Saudi Arabia MoH, 2012). NGOs, CSOs and PLHIV support groups are actively providing social and financial support for PLHIV (Saudi Arabia MoH, 2012). However, specific HIV prevention for MARPs is not available as sex work and sex with same sex are extremely hidden behaviors and very hard to access. These behaviors are criminalized and a very high stigma is attached to MARPs. NSP and condom distribution are not available, neither is oral substitution therapy. Although legal obstacles to OST for PWIDs were removed several years ago (Saudi Arabia MoH, 2012). HIV prevention interventions for drug users in treatment facilities are not reported. According to the overall conservative socio-cultural atmosphere and policy in the country, accessing, assessing and addressing most at risk groups remains a major challenge for the National AIDS Program.

Syria

In Syria, the size of drug use and injecting drug use is not well known. Heroin is the most common drug used by PWIDs. Treatment for drug dependence is mainly available in Damascus and only a small proportion has been treated for their drug problems (Syria Mental Health Directorate, 2008).

Syria has a low-prevalence HIV epidemic (Syria MoH, 2012). It appears that the epidemic has remained low in most at risk groups. However, HIV trend shows a slow but steady increase of new cases over time and heterosexual relationships are known as the main route of HIV transmission. Up until June 2010, injecting drug use had contributed to 4.85% of HIV epidemics. Testing of PWIDs is included in the national HIV surveillance, mostly among those arrested or incarcerated. A positive case has rarely been found (Syria MoH, 2012). A bio-behavioral survey conducted on drug users in 2006 in Greater Damascus showed a low HIV prevalence. Nevertheless, unsafe injection and unsafe sex were highly common in the recruited sample (Syria Mental Health Directorate, 2008).

A comprehensive National AIDS Strategy has been developed for 2011-15. It constitutes a pilot project of harm reduction, including NSP, but the project has not yet begun (Syria MoH, 2012). OST is not planned. VCT and ART are provided in many centers (Syria MoH, 2012; UNAIDS, 2011a; WHO, et al., 2011). In 2011, NGOs were not actively involved in HIV prevention. Severe social stigma and criminalization of MARPs exist. The National AIDS Program has been slowly implemented and NAP cooperation with the GFATM involves NGOs in HIV prevention programs. Political support should be strengthened and studies should be carried out to assess the size and risk behaviors of PWIDs. HIV prevention activities should be launched rapidly, as envisaged in the National Program.

Tunisia

Cannabis and psychotropic drugs are the most common drugs used in Tunisia. Heroin and Cocaine are also available and used (WHO Website). The country estimates that there are 9,000 PWIDs in Tunisia (Tunisia MoH, 2012). Drug treatment services are not well developed.

HIV prevalence is low in the general population. There are reports of concentrated epidemics in MSMs. PWIDs and FSWs are other most at risk groups in Tunisia (Tunisia MoH, 2012). Injecting drug use accounts for 23.9% of HIV infections. Transmission through injecting drug use was relatively high at the beginning of the epidemic. In recent years, a few cases of infection have been reported among PWIDs (Tunisia MoH, 2012). In the years 2009 and 2011, two studies were carried out among PWIDs in Tunis and Bizert which provided the primary information about HIV prevalence and the extent of risk behaviors. HIV prevalence was 3.1% and 2.4% in 2009 and 2011, respectively. Sharing injection equipment and unsafe sex was not rare (Mathers, et al., 2011; Tunisia MoH, 2012).

The seventh National AIDS Strategy (2006-2010) was extended to 2011 due to the political crisis in the country. The new National Strategy has been developed for 2012-2016 (Tunisia MoH, 2012). The strategy includes PWIDs as an important target group and envisages outreach services for education and condom distribution (Tunisia MoH, 2012). The implemented GFATM Round 6 program included similar strategies (Tunisia MoH, 2006). NSP, although, not included in the National Strategy, is provided through three sites. In 2011, more than 100,000 syringes were distributed. VCTs are widely available in the country, and around 20% of PWIDs had been tested in the past 12 months and knew their results (Tunisia MoH, 2012). Only four centers are providing ART, which is also available for PWIDs (Tunisia MoH, 2012; WHO, et al., 2011). OST is not available in the country.

A few NGOs are providing HIV prevention for PWIDs (Tunisia MoH, 2012) and the coverage is very low (Tunisia MoH, 2012; UNAIDS, 2011a). Their capacity is limited and the services are highly dependent on external financial sources. The political change has slowed down the process of decision making and expansion of the facilities. HIV programs need political support and should be considered as a priority for the country.

United Arab Emirates (UAE)

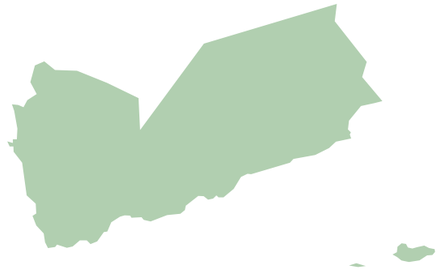
UAE is a high-income country with good medical infrastructure (United Arab Emirates MoH, 2012). However, the information available about drug use situation of the country is lacking. Three centers provide drug treatment services. Most of data about drug use comes from reports of National Rehabilitation Centre (NRC) in Abu Dhabi that provides detoxification and rehabilitation services (United Arab Emirates MoH, 2012). The center has reported that the number of clients is increasing (United Arab Emirates MoH, 2012). Heroin and prescription Opioids are the main drugs of abuse in patients treated for drug problems (UNODC, 2011). Injecting drug use represents a relatively small proportion of overall drug use (United Arab Emirates MoH, 2012).

HIV epidemic remains low in the country. UAE has no information about size, risk behaviors and HIV prevalence among MARPs (United Arab Emirates MoH, 2012). Few HIV cases are identified in PWIDs. All patients who enter drug treatment, either voluntarily or referred by the police are tested for HIV, Hepatitis B Virus (HBV) and HCV. At the NRC, only two HIV cases have been reported (United Arab Emirates MoH, 2012).

The AIDS National Strategic Plan was drafted in 2006-2007, but never endorsed. Recently, it has been considered for revision and update in the NASP in 2012 (United Arab Emirates MoH, 2012). The country has not yet received considerable technical assistance from UN agencies and other development partners for this purpose. There is a general weakness of national AIDS structure. There is no plan, inadequate commitment, inadequate human resources at the national and operational level, and a lack of accurate data. No active NGO structure is available for HIV prevention among MARPs. Stigma, discrimination and criminalization of MARPs are considerable. Nevertheless, an important achievement in 2010-2011 has been the official endorsement of a bylaw for the protection of the legal (health, employment, education) rights of PLHIV (United Arab Emirates MoH, 2012).

To date, very limited HIV prevention interventions have been implemented. Ninety-six percent of all HIV-related expenditure is allocated towards HIV screening, predominantly of expatriates in the context of residency permits. Three percent is spent on ART and care (United Arab Emirates MoH, 2012). VCT is not available in the country, but ART is widely available and non-citizens can also receive the treatment. There are no harm reduction interventions for PWIDs. However, country has recently reported that in NRC, eight patients are receiving Buprenorphine maintenance (United Arab Emirates MoH, 2012). Although there is no evidence for a significant HIV epidemic in the country, UAE remains susceptible to a rise in HIV incidence. In this context, providing technical assistance for development of the National AIDS Strategy is crucial. A multi-sectoral collaboration for strategy development might increase commitment in responsible bodies and provide a national support for program implementation.

Yemen



Yemen is among the world's least developed countries with high levels of poverty (Yemen MoPH&P, 2012). In recent years it has faced internal conflicts. Limited information is available on the extent and patterns of drug use. Khat has been reported as the main drug of use in Yemen (Laswar, et al., 2009).

Yemen has a low HIV prevalence in the general population. MSM and FSWs are the main at risk groups for contracting HIV. Injecting drug use accounts for 1% of HIV cases (MoPHP, 2012). An appropriate surveillance of drug users is not in place. No information is available about size, HIV prevalence and risk behaviors of PWIDs.

There has been a significant effort to mobilize an effective health response through the current NASP (2009-2015). NGOs and PLHIV have been mobilized to strengthen the existing HIV related systems in the country. Centers providing VCT and ART are widely available and serve a considerable number of clients. The program although seeming to be comprehensive, has not included injecting drug users as an at risk group. There is no plan to conduct mapping and studies on PWIDs. Harm reduction has not been planned. Moreover, pharmacies do not sell needles and syringes without prescriptions (Harm Reduction International, 2012).

With the support of UN agencies, the National AIDS Program has been able to strengthen the capacities and develop prevention and treatment interventions. However, the weakness of political support, shortage in national financial resources, stigma and discrimination against PLHIV and MARPs have limited wide implementation of the strategic plan (MoPHP, 2012). As there is evidence from years ago showing that use of Opioids, as well as injecting drug use exist in the country (UNODC, 2007), carrying out studies to understand the extent and patterns of drug use and HIV related behaviors is crucial and should be planned.

5 REGIONAL OVERVIEW

5.1 Drug use, extent and patterns

The information available regarding drug use in the countries of the region is mainly based on the observations and opinions of experts and authorities. In a few countries, national household surveys have been carried out on the prevalence of substance use and/or substance use disorders in recent years. These countries are Iran (Rahimi-Movaghar, et al., 2012), Iraq (Alhasnawi, et al., 2009) and Morocco (Kadri, et al., 2010). In some countries, estimations on prevalence of drug use originate from studies conducted in schools, as in Algeria and Lebanon (UNODC, 2011). A few countries have conducted assessments on drug users; Afghanistan (UNODC, et al., 2009), Algeria (Moutassem-Mimouni, et al., 2006), Bahrain (Bahrain MoH, 2012), Iran (Narenjiha, et al., 2009), Lebanon (Skoun Lebanese Addictions Center, et al., 2011), Pakistan (Pakistan Ministry of Narcotics Control, 2007), Palestine (UNODC, et al., 2011) and Syria (Syria Mental Health Directorate, 2008). These assessments provide valuable information on the patterns of more severe forms of drug use. However, the reports of some of these studies could not be accessed for this review. UNODC provides country reports on the extent and patterns of drug use in its annual reports. The 2011 World Drug Report (UNODC, 2011) was used for the purpose of this review.

Overall, in most countries of the region, Cannabis is the most common drug used by adult populations. In the majority of the countries that have reported to UNODC, the annual prevalence of Cannabis use in the population aged 15 to 64, is higher than 2% (UNODC, 2011). However, Opioids in Iran (Narenjiha, et al., 2009; Rahimi-Movaghar, et al., 2012), prescription drugs in Iraq (Iraq MoH, 2012), and Khat in Yemen (Laswar, et al., 2009) have been reported as the most common drugs used. In Saudi Arabia, both Amphetamines and Cannabis are used equally (UNODC, 2009, 2011).

The highest rate of opioid use in adult populations has been reported from Afghanistan (2.9%), Iran (2.3%), Pakistan (0.7%) and Egypt (0.4%) (UNODC, 2011). In Iran (Narenjiha, et al., 2009; Rahimi-Movaghar, et al., 2012) and Afghanistan (UNODC, et al., 2009) Opium is the most common Opioid used in the country, followed by Heroin. In other countries, Heroin is the most commonly used Opioid. Prescription Opioids including Codeine and Temgesic (Subutex) are other Opioids used in the MENA region. In addition, in majority of the countries, Opioids are the main drugs used among persons treated for drug use disorders. The details of data that are available on extent and patterns of drug use are presented in Table A1 and Table A2 in the Annex.

In recent years, an increase in drug use has been reported from many countries, including Afghanistan (UNODC, et al., 2009), Iraq (Aqrawi, et al., 2009), Jordan (Jordan MoH, 2012), Morocco (UNODC, 2011), Palestine (Progler, 2010; Štulhofer, et al., 2010; UNAIDS, 2007), Qatar (UNODC, 2011) and UAE (United Arab Emirates MoH, 2012). Drug use has been associated with significant social, economic and health consequences. There is evidence of increased crime and consequent arrests among drug users (APMG, 2008; Lebanon MoPH, 2012; Narenjiha, et al., 2009; Syria Mental Health Directorate, 2008; UNAIDS, et al., 2012; UNODC, et al., 2009), which lead to considerable costs to the countries (Rahimi-Movaghar, et al., 2012; UNODC, et al., 2009) as a result of drug use. Drug-related mortality has been reported from 4.6 per million adult populations in UAE to 91 per million in Iran. Opioids are the main drugs reported as primary cause of death (UNODC, 2011).

5.2 Injecting drug use

Estimations on the size of the injecting drug use is available for eight out of the 20 countries of the region; Afghanistan, Bahrain, Egypt, Iran, Lebanon, Morocco, Pakistan and Tunisia. The estimations provided by the eight countries range from 0.09% of the population ages 15 to 64 in Morocco to 0.38% in Iran. The details of the estimations are presented in Table A3 in the Annex.

Extrapolations were made regarding other countries of the region from the information available for the eight countries. The estimations for all the countries of the region are provided in Table 2. The total number of people who inject drugs for the 20 countries is estimated to be around 570,000. The highest number of PWIDs are residing in Iran, Pakistan and Egypt: 57.5% of the total number of people who inject drugs live in these three highest populated countries; 73% of PWIDs belong to these three countries.

Table 2 Average estimates for the number of people who inject drugs

COUNTRY	POPULATION AGED 15-64[1]	PROPORTION OF PWIDS[2]	ESTIMATED MIDPOINT NUMBER OF PWIDS[2]
Afghanistan	16,119,000	0.0012	20,000
Algeria	24,246,000	(0.0009)	(21,820)
Bahrain	983,000	0.0020	2000
Egypt	51,460,000	0.0017	90,000
Iran	53,132,000	0.0038	200,000
Iraq	16,967,000	(0.0009)	(15,270)
Jordan	3,624,000	(0.0010)	(3,620)
Kuwait	1,937,000	(0.0010)	(1,940)
Lebanon	2,871,000	0.0010	3,000
Libya	4,148,000	(0.0010)	(4,150)
Morocco	21,247,000	0.0009	18,500
Oman	1,956,000	(0.0010)	(1,960)
Pakistan	104,724,000	0.0012	125,000
Palestine	2,212,000	(0.0010)	(2,210)
Qatar	1,503,000	(0.0010)	(1,500)
Saudi Arabia	18,306,000	(0.0010)	(18,300)
Syria	12,073,000	(0.0010)	(12,070)
Tunisia	7,294,000	0.0012	9,000
UAE	6,200,000	(0.0010)	(6,200)
Yemen	12,800,000	(0.0010)	(12,800)
TOTAL	**363,802,000**	**0.0016**	**569,470**

1 The data is for the year 2010 (UN Population Division, 2011)

2 The proportions in the parentheses are estimations made according to the similarities with other countries in which national estimations were available.

3 Although higher estimations were available from year 2007, after a huge scale up in MMT, the BBS in PWIDs in 2010 showed that 43% of PWIDs i.e. those with a history of drug injection during last 12 months were under MMT and had not injected during the last month (Haghdoost, Osouli, et al., 2012), therefore, we preferred to use the lower estimations.

It is perceived in at least two countries, Jordan (Jordan MoH, 2012) and UAE (United Arab Emirates MoH, 2012), that injecting drug use is decreasing in parallel with a perceived increase in use of stimulants.

One of the indicators that can support the size estimations of PWIDs is the "proportion of drug users who inject". This data can be produced from the information system of drug treatment services, police arrests, prisons, or studies conducted on samples of drug users. If a country has estimations of the total number of each population in the country, making an indirect estimation is possible. This method has been used for size estimation of PWIDs in Iran (Rahimi-Movaghar, Amin-Esmaeili, et al., 2011). In addition, this indicator can help in monitoring the trend of injecting drug use in a community. Monitoring this indicator in Pakistan has shown that proportions of Opioid users who have ever injected has increased from an average of 5% in the 1990's to 15% in 2000 and to 29% in 2006 (Pakistan Ministry of Narcotics Control, 2007). Such an increase was also reported in Iran. Injection, as the predominant route of drug administration, was reported in 9.8% of drug users in 1998 (Razaghi, et al., 1999), and increased to 12.2% in 2004 (Narenjiha, et al., 2005) and 18.7% in 2007 (Narenjiha, et al., 2009).

However, the definition used for the nominator and the denominator of this indicator is so diverse that making comparisons between countries is not possible. The available information from the countries of the region for this indicator is presented in Table A4 in the Annex.

Information on drugs of injection is available from a majority of the countries (Table A5 in the Annex). Heroin is the main drug of injection reported from most countries of the region. Iraq reported that prescription drugs are likely the main drug of injection(Iraq MoH, 2012). Pakistan reports Antihistamines as the primary drugs of injection (Pakistan National AIDS Control Program, 2012). In Algeria, the injection form of Buprenorphine was reported to be the most injected drug in 2004-5 (Moutassem-Mimouni, et al., 2006). Other drugs injected in the region are other Opioids, such as Opium, Morphine, Methadone and Norgesic, other tranquilizers, ATS and Cocaine.

Information on characteristics of PWIDs is available from 10 countries since 2005. These countries are Afghanistan, Egypt, Iran, Jordan, Lebanon, Morocco, Oman, Pakistan, Palestine and Tunisia. All the information comes from the bio-behavioral or KAP studies conducted on PWIDs from 2005 to 2011. In the reports from each study, some aspects of socio-demographic characteristics have been described. A summary of these characteristics is described below. The detailed information and the references are provided in Table 6 in the Annex.

- Age: Most of the PWIDs are in the early 30s.

- Marital status: Being married was reported from 3% in Oman to 66.5% in Palestine. Approximately one third of PWIDs are currently married. A considerable proportion are divorced/widowed.

- Education: The reported illiteracy rate is lowest in Iran and Palestine (around 5%) and highest in Pakistan (more than 50%). Being illiterate or educated up to 5 years is reported at a range of 30.8% in Iran to 79.2% in Pakistan and 85.9% in Palestine. Overall, one-third to two-thirds of PWIDs have an education of less than five years.

- Employment: The reported rate of unemployment is from 12.6% in Iran to 88.3% in a study in Afghanistan. It should be noted that the definitions used for unemployment may not be identical in the studies. In Iran and Jordan, an additional 40 to 50% of the participants are reported to have temporary jobs.

- Homelessness: A considerable number of PWIDs have reported to be homeless. The rate is from 22.4% to 47.6%, both from Pakistan. It seems that around one-third of PWIDs do not have stable residences.

- Incarceration: The history of incarceration in lifetime is reported from 61% in Oman up to 93.4% in Palestine. At least three-fourth of PWIDs have been incarcerated.

- Mobility: In some countries, like Afghanistan, Oman, Pakistan and Palestine, a high rate of migration and mobility is reported among PWIDs. Many PWIDs started injecting drugs when they migrated out of their countries. Such experiences are consistently reported from Afghanistan, where up to two-thirds of PWIDs report initiating drug injection in Iran or Pakistan.

- Sex work and MSM: There are reports of sex work and MSM among PWIDs from Iran (Rahimi-Movaghar, et al., 2008), Lebanon (Mahfoud, Afifi, et al., 2010), Pakistan (Pakistan National AIDS Control Program, 2012) and Palestine (Štulhofer, et al., 2010). There is also information on injecting drug use in sex workers and MSM in Egypt and Yemen (Abu-Raddad, Ayodeji Akala, et al., 2010; FHI/MOH Egypt, 2006; Yemen MoPH&P, 2012).

Overall, PWIDs are an extremely criminalized and marginalized population throughout the MENA region.

5.3 HIV epidemics

In the 20 countries of the MENA region, the first HIV cases were reported before2000. In the last decade, while the HIV epidemic has been stabilized in most parts of the world, it is increasing in the Middle East and North Africa (WHO, et al., 2011). To date, all 20 countries of the region have low HIV epidemics in the general population (Table A8 in the Annex). However, in many countries, the number of newly identified cases is increasing, which is partly a result of improvements in case identification. Unprotected sex (mainly between men) and unsafe injection drug use are the primary drivers of the HIV epidemics in the region.

Table 3 HIV epidemics in key populations

COUNTRY	POPULATIONS WITH AT LEAST ONE REPORTED HIV PREVALENCE OF >5%	POPULATIONS WITH AT LEAST ONE REPORTED HIV PREVALENCE OF 3 TO 5% AND NOT >5%
Afghanistan	PWIDs	
Algeria		FSWs
Bahrain		PWIDs
Egypt		
Iran	PWIDs, non-IDUs	Sexual Partners of PWIDs, FSWs, Street children
Iraq		
Jordan		
Kuwait		
Lebanon		
Libya		
Morocco	PWIDs, MSMs, FSWs	
Oman		
Pakistan	PWIDs, transgender SWs, female partners of men who inject drugs	
Palestine		
Qatar		
Saudi Arabia	PWIDs	
Syria		
Tunisia	MSMs	PWIDs
UAE		
Yemen	MSMs	

Table 4 presents the available data on HIV transmission by injecting drugs. There are reports of more than 20% contribution of injecting drug use to HIV epidemics from Iran, Afghanistan, Bahrain, Pakistan, Egypt and Tunisia, in order of percentage. Table A6 in the Annex shows that from all 3,623 reported cases in the year 2010 for 15 countries, 38.5% were PWIDs. If we subtract HIV cases with unknown route of transmission (833) from the total identified cases, then the proportion of injecting drug use to HIV identified cases with known route will be 50%. As Pakistan has not reported the profile of HIV cases for the year 2010, the actual figure for the whole region might be higher than calculated.

Table 4 HIV identified cases attributed to injecting drug use [1]

COUNTRY	YEAR	PWIDS AMONG HIV CASES (%)
Afghanistan	(2010)	44.4
Algeria	(End 2010, Cu)	2.3
Bahrain	(End 2011, Cu, in Bahrainis)	58.1
	(2010)	37.5
Egypt	(End 2010, Cu)	28.3
	(2010)	19.6
Iran	(Sep 2011, Cu)	69.8
	(2010)	68.6
	(2009)	66.1
Iraq	(End 2011, Cu)	Zero [2]
Jordan	(End 2011, Cu)	2.4
	(2010)	Zero
Kuwait	(2010)	Zero
Lebanon	(End 2011, In PLHIV)	5.7
	(2011)	1
	(2010)	Zero
Libya		NK
Morocco	(Modeling for 2010-11)	5.7
	(2010)	1.9
Oman	(End 2011, Cu)	4.2
	(2010)	0.8
Pakistan	(2008-9, in Karachi)	36.5 (Siddiqui, et al., 2009)
Palestine	(End 2006, Cu)	4.7 (UNAIDS, 2007)
Qatar	(2011-12)	Zero
	(2010)	Zero
Saudi Arabia	(2008, In Saudi Nationals)	9 (Saudi Arabia MoH, 2010)
	(2010)	5.7
Syria	(June 2010, Cu)	4.9
	(2010)	Zero
Tunisia	(2011, Cu)	23.9
UAE	(2010)	4
Yemen	(2009-2011)	1
	(2010)	0.4

1 Sources for all reports for the year 2010 is WHO surveillance data (WHO Eastern Mediterranean Region) Unless other source is specified, all other figures are collected from country progress reports in 2012.

2 Iraq reports that HIV surveillance does not include any drug users or injecting drug users.

5.4 Bio-behavioral surveys among people who inject drugs

Bio-behavioral surveys are known as the most informative studies on MARPs. To our knowledge, from 20 countries of the region, 24 BBSs on PWIDs have been conducted in 12 countries since 2005. These countries are Iran (6 studies), Pakistan (4 studies), Afghanistan (3 studies), Egypt and Tunisia (2 studies each) and one study in Algeria, Jordan, Lebanon, Libya, Morocco, Palestine and Syria. From 18 of these BBSs, a specific report was made available for this review. The report might be a full report, a summary report or a published paper in peer-reviewed journals. From the other six reports, little information was found in other available documents. Libya has recently carried out a BBS; however, the results have not yet been published. The characteristics and references of the 24 BBSs are presented in Table 5.

The sample size is known in 20 studies and ranges from 81 to 4,956. The overall sample of PWIDs is around 27,000. The definition used for PWIDs varied from ever injected drugs in lifetime, to injection during last month. In most studies, PWIDs have been recruited in community settings. At least seven studies have used respondent-driven sampling. Other recruitment settings used were drug treatment centers, harm reduction services and prisons. In six studies, it was intended to design a nationally representative sampling. In others, the sample was recruited either in several cities or from the capital city. All studies, that the details were available, included HIV testing and confirmatory tests. Almost all included assessments of socio-demographic characteristics of participants, patterns of drug use and injecting drug use, assessments on unsafe injection and unprotected sex, as well as their HIV knowledge and service use. However, the questions were not consistent across studies and the details provided in the reports varied considerably. Nevertheless, second to country progress reports, these reports were the most useful for this review.

Table 5 Bio-behavioral surveys on PWIDs conducted between 2005- 2012

COUNTRY	STUDY YEAR	PLACE	SAMPLE	FEMALE SAMPLE		METHOD	REPORT AVAILABLE [1]	SOURCE
Afghanistan	2009	Kabul, Herat, Mazar	548 PWIDs	Zero		Community, RDS	Yes	Community, RDS
	2007-9	Kabul	483 PWIDs (injection in LM)	Zero		Community and harm reduction program, Time location sampling	Yes	Community and HR program, Time location sampling
	2005-8	Herat, Jalalabad, Kabul, & Mazar	1,087 PWIDs (injection in L6M, >18)	9		Community	Yes	Community
Algeria	2004-5	Algiers, Oran, Annaba	285 problem DUs (PWIDs: 55%) (45 tested for HIV)	31		Prison, treatment setting and streets	Yes	Prison, treatment setting and streets
Bahrain								
Egypt	2010	Cairo & Alexandria	560 PWIDs	?		?	No	?
	2006	Cairo	429 PWIDs	16		Community, RDS	Yes	Community, RDS
Iran	2010-11	Tehran, Mashad, Shiraz	226 PWIDs (injection in L12M, >18)	–		Treatment centers and DICs	Yes	Treatment centers and DICs
	2010 (BBS II)	10 provinces	2,546 PWIDs (injection in L12M, > 18)	66		DICs and outreaches, treatment centers	Yes	DICs and outreaches, treatment centers
	2008	Foulad-shahr in Isfahan province	118 PWIDs (injected in LM)	3		Community, RDS	Yes	Community, RDS
	2006-7 (BBS I)	10 provinces	2,853 PWIDs	84		Community, DICs, treatment centers	Yes	Community, DICs, treatment centers
	2006-7	Tehran	549 PWIDs (injected in LM, > 18)	2		Community, RDS	Yes	Community, RDS
	2006-7	Tehran	904 PWIDs (injection in L2M)	38		Community, treatment centers, DICs	Yes	Community, treatment centers, DICs
Iraq								
Jordan	2008	Amman, Irbid, Zarqa, Aqaba	207 PWIDs	?		RDS	No	RDS
Kuwait								
Lebanon	2007-2008	Greater Beirut area	81 PWIDs (injection in L12M)	?		Community, RDS	Yes	Community, RDS
Libya	2011	Tripoli	?	?			No	
Morocco	2010-11	Nador & Tangier	?	?		?	No	?
Oman								
Pakistan	2011 (IBBS 4)	16 cities	4,956 PWIDs (regular injection in L6M, > 18)	39		Community, multistage cluster sampling	Yes	Community, multistage cluster sampling
	2008 (IBBS 3)	8 cities	2,979 PWIDs (regular injection in L6M, ≥ 18)	6		Community, multistage cluster sampling	Yes	Community, multistage cluster sampling
	2006-7 (IBBS 2)	12 cities	4,039 PWIDs (injected in L6M, ≥ 18)	?		Community, multistage cluster sampling	Yes	Community, multistage cluster sampling
	2005 (IBBS 1)	8 cities	2,432 PWIDs (injected in L6M, ≥ 18)	?		Time location sampling	Yes	Time location sampling
Palestine	2010	East Jerusalem Governorate (EJG)	199 PWIDs (injected in LM)	3		Community, RDS	Yes	Community, RDS
Qatar								
Saudi Arabia								
Syria	2006	Greater Damascus	336 DUs (51% ever injected)	13		Community, snowballing	Yes	Community, snowballing
Tunisia	2011	Tunis & Bizert	807 PWIDs	?		?	No	?
	2009	Tunis & Bizert	713 PWIDs	65		?	No	?
UAE								
Yemen								

1 A specific report from the study was made available for the authors of this review.

5.5 HIV prevalence among people who inject drugs

From 20 countries, no data was found on HIV prevalence among PWIDs in five countries (Iraq, Libya, Qatar, UAE and Yemen) since 2005. Results of BBSs on PWIDs were available from 11 countries of region (Afghanistan, Algeria, Egypt, Iran, Jordan, Lebanon, Morocco, Pakistan, Palestine, Syria and Tunisia). Many countries include drug users in routine surveillance. The sites for access to drug users are prisons, upon arrest, drug users admitted to rehabilitation centers or hospitals for drug treatment. However, recording someone as an IDU depends on their self-report. In some countries, only cross-sectional surveys have been conducted on a group of drug users to provide evidence on this issue. A summary of the results on HIV prevalence studies among PWIDs are presented in Table 6. The table presents those studies conducted since 2005 and a minimum data on characteristics of the studies including year of study, sample size and place/setting of the study was available. The studies that have relied on self-reports concerning HIV testing have been excluded. However, details of the studies are shown in Table A9 in the Annex. The table in the Annex also presents the other studies which relied on self-reports or medical records and include studies with inadequate information not included in Table 6.

Table 6 HIV prevalence among PWIDs in the MENA region [1]

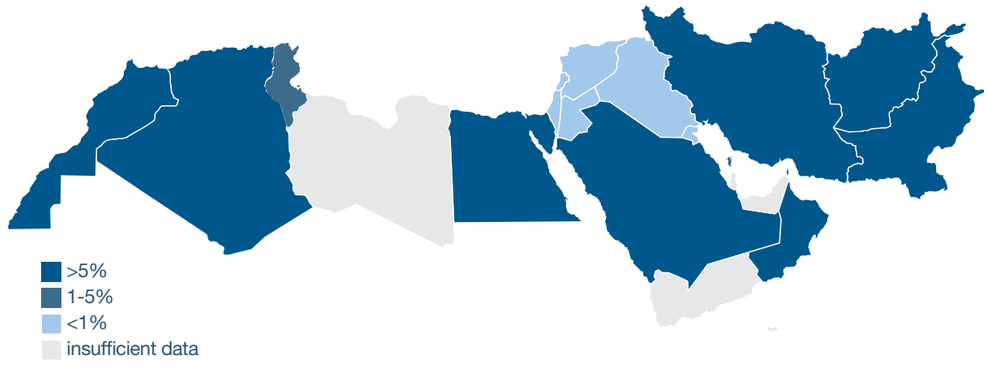
COUNTRY	NO. OF SOURCES	YEARS	GEOGRAPHICAL DISTRIBUTION	SETTINGS	NO. TESTED	% HIV PREVALENCE
Afghanistan	4	2005-9	4 cities	Settings	2118	1-18.2
Algeria	2	2005-11	National	Community & HR program	103	6.9-11
Bahrain	2	2010-11	Manama	VCTs, prison, treatment centers, streets	332	3.3-4.6
Egypt	2	2006-10	2 cities	Rehabilitation center	989	0.6-6.8
Iran	10	2005-11	Most parts of country	Community	7734	0.7-26.6
Iraq	-	-	-	Community, DICs, treatment centers, prisons	-	-
Jordan	1	2008	4 Governorates	-	201	0
Kuwait	2	2009-10		Community	≈750	0-0.2
Lebanon	1	2007-8	Greater Beirut	Prisons and treatment center	81	0
Libya	-	-	-	Community	-	-
Morocco [2]		2007-11		-		0-21.8
Oman	2	2005-6	National	Hospitals with psychiatric services	120	7.7-14.7
Pakistan	5	2005-11	Most parts of country	Community	13,178	0-37.8%
Palestine	1	2010	EJG	Community	199	0
Qatar	-	-	-	-	-	-
Saudi Arabia	5	2007-11	Several cities	Treatment and rehabilitation centers	7954	0.3-8.1
Syria	2	2009-11	National	Mainly arrested or in prison	864	0
Tunisia	2	2009-11	2 cities	Community	1520	2.4-3.1
UAE	-	-	-	-	-	-
Yemen	-	-	-	-	-	-

1 Studies are included that have been conducted since 2005, a minimum data on characteristics of the studies were available, and the sample size is over 40.

2 The missing data in the Morocco studies was significant.

The overall available data shows that Pakistan has the highest HIV prevalence among PWIDs, which is over 20%. This high prevalence has been shown in most of the cities in the recent years and has risen to 37.8% in 2011 (Pakistan National AIDS Control Program, 2012). Iran is the second country with high HIV prevalence in its PWIDs. The newest BBS showed that 15.1% of PWIDs studied in 10 provinces, were HIV positive (Haghdoost, Osouli, et al., 2012). There are six other countries in the region with reports of concentrated HIV epidemic (prevalence of over 5%), at least in parts of the country. These countries are Afghanistan, Algeria, Egypt, Morocco, Oman and Saudi Arabia. Countries with HIV prevalence of between 1% to 5% include Bahrain and Tunisia. Five other countries most probably have HIV prevalence of below 1% among PWIDs: Jordan, Kuwait, Lebanon, Palestine and Syria. The information on the remaining five countries is lacking or insufficient to make any conclusions. These countries are Iraq, Libya, Qatar, UAE and Yemen. Figure 2 shows the level of HIV prevalence among PWIDs in the countries of the region. Overall, an average estimation is that 90,000 PWIDs are living with HIV/AIDS in the region, which shows an HIV prevalence of over 15%.

Figure 2 HIV prevalence among PWIDs



5.6 Viral hepatitis among people who inject drugs

Injection drug use is a known risk factor for Hepatitis C and B infections. This is an under-investigated topic in the Middle East and North Africa (Nelson, et al., 2011; Ramia, et al., 2012). However, there is enough evidence showing that injecting drug use contributes significantly to HCV epidemics in the region. There are at least 14 studies available from six countries of the region assessing HCV prevalence among approximately 4,750 PWIDs since 2005 (Table 7). These countries include Afghanistan, Iran, Lebanon, Oman, Pakistan and Palestine. The reported HCV epidemic is in the range of 8% to 80%, but most of the results are between 36% and 48%. There are also reports from other countries like Kuwait and Egypt (UNODC, 2011) as well as UAE (United Arab Emirates MoH, 2012) that suggest a high level of HCV infection among PWIDs. In addition, several studies on the HCV infected patients have revealed that injecting drug use is an important risk factor for HCV epidemics (Jimenez, et al., 2009; Qureshi, et al., 2010).

Table 7 HCV prevalence among PWIDs in the MENA region

COUNTRY	NO. OF SOURCES	YEARS	GEOGRAPHICAL DISTRIBUTION	SETTING	NO. TESTED	PREVALENCE OF HCV (%)	SOURCES
Afghanistan	4	2005-9	4 cities	Community & HR program	2118	36-36.6	(Johns Hopkins University; HIV surveillance project, 2010; Nasir, et al., 2011; Todd, et al., 2007; Todd, et al., 2011)
Algeria	-	-	-	-	-	-	-
Bahrain	-	-	-	-	-	-	-
Egypt	-	-	-	-	-	-	-
Iran	5	2006-11	5 cities	Community, DICs, treatment centers, prisons	1850	34.5-80	(Amin-Esmaeili, Rahimi-Movaghar, Razaghi, et al., 2012; Haghdoost, Sadjadi, et al., 2012; Kheirandish, et al., 2009; Sarkari, et al., 2011; Zamani, Radfar, et al., 2010)
Iraq	-	-	-	-	-	-	-
Jordan	-	-	-	-	-	-	-
Kuwait	-	-	-	-	-	-	-
Lebanon	1	2007-8	Beirut	Community	106	52.8	(Mahfoud, Kassak, et al., 2010a)
Libya	-	-	-	-	-	-	-
Morocco	-	-	-	-	-	-	-
Oman	1	2011	Muscat	Inpatient drug treatment	?	48	(Oman MoH, 2012)
Pakistan	1	2007	3 cities	Community	454	8-60	(Achakzai, et al., 2007; Platt, et al., 2009)
Palestine	1	2010	EJG	Community	199	42	(Štulhofer, et al., 2010)
Qatar	-	-	-	-	-	-	-
Saudi Arabia	-	-	-	-	-	-	-
Syria	-	-	-	-	-	-	-
Tunisia	-	-	-	-	-	-	-
UAE	-	-	-	-	-	-	-
Yemen	-	-	-	-	-	-	-

Our review found ten studies from five countries on HBV infection among PWIDs since 2005 (Table 8). The reported HBV infection is in the range of 0.7% to 24.7%, but most of the results are between 3.6% and 6.5%, which is much higher than the prevalence among the general population. HBV infection in the general population has been reported to be 1.76% in Afghanistan (Khan, S., et al., 2011), 2.14% in Iran (Alavian, et al., 2008) and 2.6% in Pakistan (Bosan, et al., 2010).

Table 8 HBV prevalence among PWIDs in the MENA region

COUNTRY	NO. OF SOURCES	YEARS	GEOGRAPHICAL DISTRIBUTION	SETTING	NO. TESTED	PREVALENCE OF HBS-AG (%)	SOURCES
Afghanistan	4	2005-9	4 cities	Community & HR program	2118	4.6-8.8	(Johns Hopkins University; HIV surveillance project, 2010; Nasir, et al., 2011; Todd, et al., 2007; Todd, et al., 2011)
Algeria	-	-	-	-	-	-	-
Bahrain	-	-	-	-	-	-	-
Egypt	-	-	-	-	-	-	-
Iran	3	2007-11	4 cities	Community, DICs, treatment centers	1238	0.7-24.7	(Amin-Esmaeili, Rahimi-Movaghar, Razaghi, et al., 2012; Haghdoost, Sadjadi, et al., 2012; Zamani, Radfar, et al., 2010)
Iraq	-	-	-	-	-	-	-
Jordan	-	-	-	-	-	-	-
Kuwait	-	-	-	-	-	-	-
Lebanon	1	2007-8	Beirut	Community	81	5	(Mahfoud, Kassak, et al., 2010a)
Libya	-	-	-	-	-	-	-
Morocco	-	-	-	-	-	-	-
Oman	-	-	-	-	-	-	-
Pakistan	1	?	Quetta	?	50	6	(Achakzai, et al., 2007)
Palestine	1	2010	EJG	Community	199	5.3	(Štulhofer, et al., 2010)
Qatar	-	-	-	-	-	-	-
Saudi Arabia	-	-	-	-	-	-	-
Syria	-	-	-	-	-	-	-
Tunisia	-	-	-	-	-	-	-
UAE	-	-	-	-	-	-	-
Yemen	-	-	-	-	-	-	-

More details regarding the above studies on HCV and HBV infections, as well as other studies with missing data, have been provided in the Table A10 in the Annex. Overall, the results show that injecting drug use is contributing to both HCV and HBV infections in the region. The prevalence rates comparing to other parts of the world (Nelson, et al., 2011) is in an average rate.

HIV co-infection with HCV was reported in 8.7% to 24% in three studies from Iran and Pakistan (Achakzai, et al., 2007; Hosseini, et al., 2010; Rahimi-Movaghar, et al., 2010). The study from Iran showed that the rate of HCV infections among HIV-positive cases was significantly higher than in HIV-negative PWIDs (80.6% vs. 28.7%). In another study conducted in three Afghan cities (Nasir, et al., 2011), all PWIDs who were HIV-infected, were also co-infected with HCV. The high rate of co-infection is an indicator that HIV is more likely being transmitted via infected injection equipment than by the sexual route. One of the studies (Rahimi-Movaghar, et al., 2010) also showed a high co-infection of HIV with HBV. Overall, given the fact that co-infection of HIV with Hepatitis B and C Viruses increases the morbidity and mortality rates. It also changes the natural history of the infections. It is necessary to integrate preventive measures of HCV and HBV in HIV preventive programs and address all infections simultanously.

5.7 Prevalence of HIV risk behaviors among PWIDs

There is no information available about risk behaviors of PWIDs in seven countries of the region (Iraq, Kuwait, Libya, Qatar, Saudi Arabia, UAE and Yemen). Libya has recently conducted an assessment; the results have not been published yet. The assessments made by 13 countries are either bio-behavioral surveys described in Table 5 or only behavioral or KAP studies described in Table A11 in the Annex. The countries have used a variety of indicators; therefore, comparing the results across countries or over time is not possible. Table 9 shows only a sample of indicators used in various studies. The denominators utilized for providing the figures for many indicators are inconsistent. The details of the available information from the 13 countries are provided in Table A12 in the Annex.

Table 9 A sample of indicators presented in study reports of the countries in the region

SEXUAL RISK BEHAVIORS	UNSAFE INJECTING BEHAVIORS
Ever had sex Having had sex in L12M Sexually active in L6M Ever paid a woman for sex Sex with FSWs in LT Ever had sex with non-primary partner Ever sex with non-spouse Sex with non-regular non-commercial partners Sex with regular non commercial partners Ever used condom with non-regular non-commercial partner Ever used condom with regular non-commercial partner Ever used condom with primary sex partner Ever condom use with FSWs Always used condom with FSWs Ever used condom Condom used consistently Sex without exchanging money with non-spouse in L12M Sex with non-regular unpaid partner in L12M Sex with regular non-commercial partner in L12M Having commercial partner in L12M Had sex with FSW in L6M More than one sex partner in L12M Never used condom in LM Always used condom in LM Condom use in last sex Condom use in last sex with a commercial partner Condom use in last sex with a non-commercial regular partner Condom use in last sex with non-commercial non-regular partner (For male DUs) Ever sex with a man in LT Ever had sex with a man for money/goods Sex with a man in L12M Sex with a man in LM Ever used condom with male partner Always used condom in sex with a man Used condom in last sex with a man Ever had sex in prison without condoms	Ever shared N/S Ever shared other injecting equipment Ever used a shared cooker Ever shared any injecting equipment Usual frequency of sharing Shared N/S in L6M Any sharing behavior in L6M Shared N/S in L3M Shared other injecting equipment in L3M Injected with used needles in LM Frequency of sharing N/S in LM Proportion of injections with used N/S in LW Injected with a N/S already used by another one in LW Injected with a sterile N/S in last injection Injected with N/S of someone else in last injection Injected with a used injection equipment in last injection Any sharing in last injection Sharing N/S in last injection Ever injected in prison Injected with a used N/S in last injection in prison Ever sharing N/S in prison

The following indicator is related to unsafe injection as a main indicator for global reporting on AIDS (UNAIDS, 2009):

Indicator: Percentage of people who inject drugs who reported using sterile injecting equipment the last time they injected.

The numerator is the number of people who inject drugs who reported using sterile injecting equipment the last time they injected drugs. The denominator is the number of people who report injecting drugs in the last month.

Table 10 shows behaviors of PWIDs related to unsafe injection. In addition to the UNGASS indicator described above, two other indicators that have been used more frequently in the studies from the region are provided in the table. The features presented in the reports that seemed distorted or inaccurate are not presented in the Table 10.

Table 10 shows that there are large differences between countries in the sharing practices of PWIDs. In some countries, like Afghanistan, there are large differences between the findings from different studies. In addition, almost all studies that have been carried out in several cities have shown high variations in risk behaviors between cities. The information in Table 10 shows that unsafe injection is not rare and occurs in about 20% of injections.

In a few studies (Pakistan National AIDS Control Program, 2012; Rafiey, et al., 2009; Rahimi-Movaghar, et al., 2010; Todd, et al., 2007), PWIDs with history of sharing injection equipment were asked about their reason for sharing. Unavailability/difficulty in accessing new syringes at the time of need for a quick injection was the most common response. Another common response was the belief of the safety of shared injection. This confidence originated from either trusting the partner or from relying on the method of cleaning the syringe after the first use. Peer pressure was another reported reason.

Table 10 Behaviors of PWIDs related to safe injection

COUNTRY	EVER SHARED N/S	SHARED N/S IN LM	USED STERILE N/S IN LAST INJECTION
Afghanistan	(2009) 27.4% (Johns Hopkins University; HIV surveillance project, 2010) (2009) 87% (UNODC, et al., 2009) (2007-9) 16.9% (Todd, et al., 2011)		
Algeria	(2004-5) 41% (Moutassem-Mimouni, et al., 2006)		
Bahrain	(2006) About 25% (Bahrain MoH, 2010)		
Egypt		(2010) 31.8%1 (Egypt MoH, 2012)	
Iran	(2008) 31.2% (Zamani, Radfar, et al., 2010) (2007) 35.8% (Rafiey, et al., 2009) (2006-7) 36.7% (Malekinejad, 2008)	(2008) 8.2% (Zamani, Radfar, et al., 2010)	(2010) 91.7% (Haghdoost, Osouli, et al., 2012) (2006-7) 84.3%1 (Zamani, 2008)
Iraq			
Jordan		(2008) 69% (Jordan MoH, 2012)	
Kuwait			
Lebanon	(2009) 42.6% (Lebanon MoPH, 2010a) (2008) 27.5% (Lebanon MoPH, 2010a)		
Libya			
Morocco			(2011) 69.1%1 (Morocco MoH, 2012) (2010) 65.3%1 (Morocco MoH, 2012) (2005) 7.4%1 (Mathers, et al., 2011)
Oman	(2006-7) >90% (WHO, 2007)		
Pakistan			
Palestine	(2010) 47% (UNODC, et al., 2011)		(2010) 89% (Štulhofer, et al., 2010)
Qatar			
Saudi Arabia			
Syria	(2006) 46% (Syria MoH, et al., 2008)	(2006) 28% (Syria MoH, et al., 2008)	
Tunisia		(2011) 29.6%1 (Tunisia MoH, 2012) (2009) 46.1%1 (Tunisia MoH, 2012)	(2011) 87.7%[1] (Tunisia MoH, 2012) (2009) 78.3%[1] (Tunisia MoH, 2012)
UAE			
Yemen			

1 Denominator is the whole sample and defined as injected in L12M.

Unsafe sex is the second most important risk behavior contributing to HIV epidemic among PWIDs. The type of information provided from each country is diverse. Data on several selected indicators is presented in Table 11. The data for the indicators that were not defined precisely are not included in this table.

The following indicator is recommended to be assessed continuously for monitoring unsafe sex among PWIDs (UNAIDS, 2009):

Indicator: Percentage of people who inject drugs who report the use of a condom during their last sexual intercourse.

The numerator is the number of people who inject drugs who reported that a condom was used the last time they had sex. The denominator is the number of people who inject drugs who report having injected drugs and having had sexual intercourse in the last month.
The data on condom use during last sex is available from only three countries. However, the denominators are inconsistent and do not match the recommended definition. Overall, the existing information shows that sex with FSWs and having intercourse with the same sex are not rare and condom use in these relationships is uncommon.

Table 11 Sexual behaviors of PWIDs (Extracted from the original reports of the studies)

COUNTRY	STUDY YEAR	EVER HAD SEX (%)	CONDOM USE IN LAST SEX (%)	EVER SEX WITH FSWS (%) [1]	EVER CONDOM USE WITH FSWS (%) [2]	CONDOM USE IN LAST SEX WITH FSW (%)	EVER SEX WITH MEN (%) [1]	EVER CONDOM USE IN MSM (%) [3]	CONDOM USE IN LAST SEX WITH A MAN (%)	SOURCE
Afghanistan	2009	84-91	17-32 [4]	47-64			14-26			(Johns Hopkins University; HIV surveillance project, 2010)
	2007-9	91.7		37			10.1			(Todd, et al., 2011)
	2005-8	90.3		58.1	32.6		25.7	10.8		(Todd, et al., 2010)
Algeria	2004-5						20			(Moutassem-Mimouni, et al., 2006)
Bahrain	2006 [5]	90			75					(Bahrain MoH, 2010)
Egypt	2006	96.2								(FHI/MOH Egypt, 2006)
Iran	2010	85				53.3 [6]	12.2		41.5 [7]	(Haghdoost, Osouli, et al., 2012)
	2008						11.3			(Zamani, Radfar, et al., 2010)
	2006-7	86.9					14.6		9.6 [3]	(Zamani, 2008)
	2007-8	81.7					8			(Malekinejad, 2008)
	2006	76.5		23.3						(Kheirandish, et al., 2010)
Iraq										
Jordan	2011		7 [1]							(Shahroury, 2011)
Kuwait										
Lebanon				50						(Mahfoud, Afifi, et al., 2010)
Libya										
Morocco	2005 [5]						13.1			(Morocco MoH, 2005)
Oman										
Pakistan	2011	93.2				28.4 [8]			16.3 [9]	(Pakistan National AIDS Control Program, 2012)
	2008	95.4				31 [8]			13.8 [9]	(Pakistan National AIDS Control Program, 2008)
Palestine	2010		30.4 [1]							(Štulhofer, et al., 2010)
	2010 [5]	88								(UNODC, et al., 2011)
Qatar										
Saudi Arabia										
Syria	2006 [5]	90					6		Zero [7]	(Syria Mental Health Directorate, 2008)
Tunisia										
UAE										
Yemen										

Table 11 footnotes

1 From the whole sample
2 From those who had ever had sex with a FSW
3 From those men who ever had sex with a man
4 From those who have ever had sex
5 A sample of DUs, including PWIDs
6 From those who had sex with FSWs in L12M
7 From those men who had sex with men in L12M
8 From those who had sex with FSWs in L6M
9 From those men who had sex with men in L6M

5.8 HIV knowledge among people who inject drugs

Knowledge of PWIDs regarding HIV/AIDS has been assessed in 13 countries and the details have been provided in Table A12 in the Annex. Table 12 presents data on selected items. Below is a summary of the findings:

- The proportion of injecting drug users who have ever heard of HIV/AIDS was available from nine studies and the rate ranged between 66.5% and 99.6%.

- Data on identifying sharing injection equipment as an HIV transmission route was available from 13 studies and the rate was from 43% to 99.1%.

- Data on knowing that the condom is a mode of protection for HIV transmission was available in 14 studies and the reported rate was from 31% to 94.6%.

Overall, the findings show that many PWIDs do not have sufficient knowledge on HIV/AIDS, its risk behaviors and possible preventive measures. This poor knowledge predisposes PWIDs to risky behaviors and HIV infection.

Table 12 HIV knowledge among PWIDs in MENA[1]

COUNTRY	STUDY YEAR	EVER HEARD OF HIV/AIDS (%)	IDENTIFIED SHARING AS HIV TRANSMISSION ROUTE (%)	KNOWING CONDOM AS A PROTECTION FOR HIV TRANSMISSION (%)	SOURCE
Afghanistan	2009	83.3-96.9	81.2-97.2	85.6	(Johns Hopkins University; HIV surveillance project, 2010)
Algeria	2004-5	98	45	79	(Moutassem-Mimouni, et al., 2006)
Bahrain	2006 [1]	99.6	67	72	(Bahrain MoH, 2010)
Egypt					
Iran	2010-11		99.1	84	(Haghdoost, Sadjadi, et al., 2012)
	2010	96.9	98.6	94.6	(Haghdoost, Osouli, et al., 2012)
	2006-7	94.3	90.5	83.7	(Zamani, 2008)
	2006-7	80	64.7		(Rahimi-Movaghar, et al., 2008)
Iraq					
Jordan	2011		43		(Shahroury, 2011)
	2008		96	53	(Jordan MoH, 2012)
Kuwait					
Lebanon	2009			84	(Lebanon MoPH, 2010a)
	2007-8		97	86	(Mahfoud, Afifi, et al., 2010)
Libya					
Morocco	2005 [1]			75.3	(Morocco MoH, 2005)
Oman					
Pakistan	2011	86.7		68.8	(Pakistan National AIDS Control Program, 2012)
	2006-7	74		32.8	(Pakistan National AIDS Control Program, 2006-7)
	2005	66.5		31	(Pakistan National AIDS Control Program, 2005)
Palestine	2010		95.5		(Štulhofer, et al., 2010)
	2010 [1]		77		(UNODC, et al., 2011)
Qatar					
Saudi Arabia					
Syria	2006 [1]		47	38	(Syria Mental Health Directorate, 2008)
Tunisia					
UAE					
Yemen					

[1] The study participants were drug users including PWIDs

5.9 Harm Reduction Policy

Most countries of the region have a National AIDS Strategic Plan. Four countries either have not developed such a plan or the developed plan has not been operationalized. These countries are Iraq, Kuwait, Libya and UAE. In addition, Qatar has no specific strategic plan for HIV/AIDS, although the National Health Strategy does include HIV (Qatar SCH, et al., 2012).

Table 13 Policies toward HIV prevention in PWIDs

COUNTRY	POLICIES TOWARD IDU IN NASP	POLICIES TOWARD IDU IN OTHER NATIONAL DOCUMENTS
Afghanistan	HR in NASP	HR in National Drug Control Strategy National OST Policy GFATM R7 grant
Algeria	PWIDs in NASP	PWIDs in GFATM R3 grant
Bahrain	PWIDs in NASP	
Egypt	PWIDs in NASP	PWIDs in GF-R6 grant
Iran	HR in NASP	HR in National Drug Control Program GFATM R2 grant GFATM R8 grant
Iraq	-	
Jordan	PWIDs in NASP	PWIDs in GFATM R2 - GFATM R6 grant
Kuwait	-	
Lebanon	HR in NASP	Decree on OST implementation
Libya	-	
Morocco	HR in NASP	HR in National Plan for Harm reduction National Strategy on Drug Use GFATM R6 grant
Oman	PWIDs in NASP	
Pakistan	HR in NASP	HR in GFATM R9 grant
Palestine	PWIDs in NASP	HR in GFATM R7 grant
Qatar	-	
Saudi Arabia	NK	
Syria	PWIDs in NASP	PWIDs in GFATM R10 grant
Tunisia	PWIDs in NASP	PWIDs in GFATM R6 grant
UAE	-	
Yemen	-	

As Table 13 shows, five countries of the region have adopted harm reduction policies and included the policies and interventions in their NASP. These countries are Afghanistan, Iran, Lebanon, Morocco and Pakistan. In the NASP of Syria, a pilot of harm reduction interventions has been included. Afghanistan, Iran and Morocco have included harm reduction strategy in their National Drug Control Plan. Moreover, Palestine has included harm reduction policy and interventions in the approved GFATM Round 7 proposal .

Out of 20 countries of the region, 11 countries have had GFATM-supported AIDS programs from Rounds 1 to 10. These countries are Afghanistan, Algeria, Egypt, Iran (twice), Jordan (twice), Morocco (three times), Pakistan (twice), Palestine, Syria, Tunisia and Yemen. A summary of approved GFATM proposals of the countries on HIV/AIDS is presented in Table A13 in the Annex. Countries that have included establishing or scaling up OSTs and NSPs are Afghanistan, Morocco (In GFATM Round 6 proposal), Iran and Palestine. These four countries have included both approaches. Other countries mainly included behavioral surveillance and peer education by outreach. In addition, MENAHRA is currently a recipient of a GFATM Round 10 grant on harm reduction in the region. The thirteen countries covered in this grant are Afghanistan, Bahrain, Egypt, Iran, Jordan, Lebanon, Libya, Morocco, Oman, Palestine, Pakistan, Syria and Tunisia.

Several countries are developing their new NASP. Iraq, Libya and UAE are developing their first NASP for implementation. Algeria, Bahrain, Oman, Pakistan and Tunisia are developing new NASP. Jordan and Syria, although they have developed their new NASP, they have not begun implementation. The process of development of new NASP is a golden opportunity for the inclusion of appropriate measures for HIV prevention among PWIDs in the national plans.

Opioid Substitution Treatment

In the region, OST exists in five out of the 20 countries: Afghanistan, Iran, Lebanon, Morocco and UAE. The details are provided in Table 14. Iran is the only country that has made OST widely available, mainly through private clinics. The service is also available in medium to large-size prisons. Methadone is the main drug used for maintenance treatment, but Buprenorphine and Opium Tincture are also available (Iran MoH, 2012). However it seems that still the coverage of PWIDs is low.

In Lebanon, two sites are providing Buprenorphine for maintenance treatment. In March 2012, a total of 120 patients were on MMT (Lebanon MoPH, 2012). Morocco and Afghanistan both started MMT in 2010. In Afghanistan, there is currently one site in the capital city providing MMT. Recruitment of patients stopped after only a few months. There is some reluctance in parts of the government concerning MMT and has resulted in a shortage of methadone importation (Maguet, 2012). For now, 71 patients are receiving MMT (Moszynski, 2011). The program was evaluated as positive by World Health Organization (Afghanistan MoPH, 2012). In Morocco, three sites are providing MMT in three cities, Tangier, Casablanca and Sale (Morocco MoH, 2012). However, no other details about the service are available. UAE reports that Buprenorphine maintenance treatment has just started in National Rehabilitation Center and eight people are receiving the treatment (United Arab Emirates MoH, 2012).

Table 14 OST availability in the region

COUNTRY	OST
Afghanistan	MMT- Pilot phase-One site-71 patients
Algeria	NA
Bahrain	NA
Egypt	NA
Iran	MMT-BMT-Tincture of Opium-Expansion phase-3373 sites - 500,000 DUs on MMT
Iraq	NA
Jordan	NA
Kuwait	NA
Lebanon	BMT-Two sites-Expansion phase-120 patients
Libya	NA
Morocco	MMT-Three sites
Oman	NA
Pakistan	NA
Palestine	NA
Qatar	NA
Saudi Arabia	NA
Syria	NA
Tunisia	NA
UAE	BMT-Pilot phase-One site-8 patients
Yemen	NA

5.10 Needle and Syringe Program

Nine countries of the region have at least one Needle and Syringe Program. Five countries, Afghanistan, Iran, Morocco, Pakistan and Tunisia are expanding distribution of needles and syringes to PWIDs. However, all these countries still have a low coverage (<100 syringes per IDU per year). Egypt, Lebanon and Palestine are providing NSP through a limited number of sites and in small scale. In Oman, there is very small and unsystematic distribution in Muscat (Oman MoH, 2012) which has not been expanded for years. In addition, Syria has approved NSP and a pilot NSP is planned in the National AIDS Strategic Plan but it has not yet started (Syria MoH, 2012). Table 15 presents the quantitative aspects of NSP in the countries of the region. Moreover, in several countries, for example Bahrain and Oman, pharmacies do not sell syringes without prescriptions (Bahrain MoH, 2012; WHO, 2007).

Table 15 Needle and Syringe Program in the countries of the region

COUNTRY	ESTIMATED NO. OF PWIDS	NO. OF PWIDS RECIEVE FREE N&S	NO. OF NSP SITES	NO. OF N&S DISTRIBUTED	NO. OF SY/IDU/YEAR	% OF PWIDS RECEIVED SY.	SOURCE
Afghanistan	(2009) 20,000	(?) 5560		(?) 1,601,765	(?) 80	(2007-9, Kabul) 51.3% in L3M	(Afghanistan MoPH, 2012; Todd, et al., 2011)
Algeria	NK						
Bahrain							
Egypt	(<2007) 90,000	(2010-11) 3492					(Egypt MoH, 2010, 2012)
Iran	(2007) 200,000		(2011) 421	(2011) 6,022,834	(2011) 26-35	(2010) 52.7% in L12M	(Haghdoost, Osouli, et al., 2012; Iran MoH, 2012)
Iraq	NK						
Jordan	NK						
Kuwait	NK						
Lebanon	(?) 3000		(2012) 10	(2008-9) 1179			(Badran, 2012; Lebanon MoPH, 2010a, 2012)
Libya	NK						
Morocco	(?) 18,500	(End 2010) 2915		(2011, Nador) 224,040	(2011, Nador) 13		(GFATM, 2011; Morocco MoH, 2012; Mumtaz, et al., 2010)
Oman	NK		(2011) One				(Oman MoH, 2012)
Pakistan	(2007) 91,000	(2011) 18,488		(2011) 3,856,659	(?) 42	(2011) 45.1% in LM	(Pakistan MoH, 2012; Pakistan National AIDS Control Program, 2012)
Palestine	NK	(2009-10) 255	(2009-10) 2	(2009-10) 1500		(2010, EJ) 22.8%	(Štulhofer, et al., 2010; UNAIDS, et al., 2012)
Qatar	NK						
Saudi Arabia	NK						
Syria	NK						
Tunisia	(?) 9000		(2011) 3	(2011) 137,000	(2011) 15.2		(Tunisia MoH, 2012)
UAE	NK						
Yemen	NK						

Several countries report problems in providing needles and syringes to PWIDs. In the context of the criminal approach to drug use, PWIDS prefer to buy individual syringes immediately before their drug intake, rather than keeping the syringes for fear of being caught. Thus, it is not feasible for the outreach workers to distribute the expected quantity of syringes for each IDU daily (Badran, 2012). In the meantime, in several countries like Iran and Lebanon, syringes are affordable and accessible and no prescription is needed to buy needles from pharmacies.

There is evidence from Iran and Pakistan on the effectiveness of NSP through outreach in decreasing the risk behaviors and controlling the HIV epidemic.

In Iran, after initiation of outreach and Needle and Syringe Exchange Program in Tehran, a study conducted in 2004 indicated the effectiveness of NSP in decreasing risk behaviors (Vazirian, et al., 2005). It showed that shared use of needle/syringe in the past month was significantly lower among PWIDs who received estimated ≥ 7 syringes per week than those who did not [adjusted odds ratio (AOR) = 14.36]. In another study done in 2005 (Zamani, Vazirian, et al., 2010), two neighborhoods, one with and the other without NSP were compared. Needle and syringe sharing was significantly less common in the former one. There is also nation-wide evidence for the impact of harm reduction interventions in Iran. There was an increasing trend of HIV identified cases per year, until 2004, when the total number of identified cases reached its maximum. Then, there was a fall with a slight slope in the number of the identified cases, so that total registered cases in 2010, showed 18.2% decrease in comparison to 2005 (Iran MoH, 2012).

In Pakistan, analysis of surveillance, research and program data, showed that IDU interventions in Pakistan had reduced HIV risk and provided >50% coverage in the cities where they operated. It showed that the cost of providing the service by NGOs is high and there is considerable room to rationalize management costs and improve efficiency (Khan, A. A., et al., 2011). Pakistan also reports a constant decrease in risk behaviors and increase in HIV knowledge from Round 1 to Round 3 IBBS (Pakistan National AIDS Control Program, 2008) and relates it to the effects of HIV preventive interventions.

Figure 3 Harm reduction policy and services- early 2012

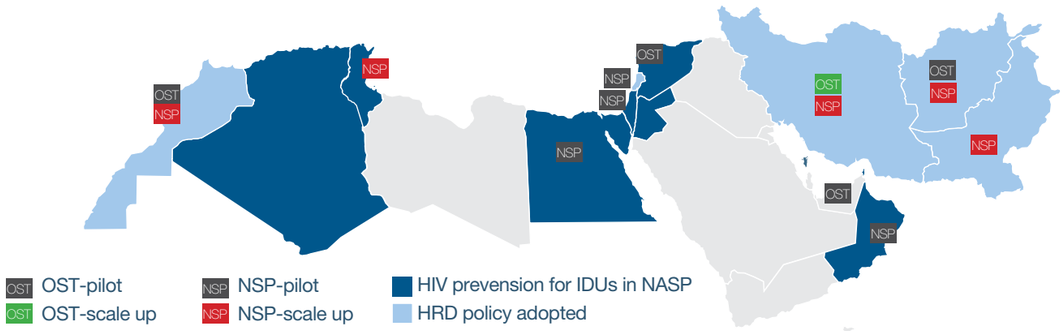


Figure 3 presents a summary of harm reduction policies and main services available in the countries of the MENA region. The following developments have taken place in the region during the last four years; since MENAHRA first assessed the situation and response in early 2008 (Rahimi- Movaghar, 2008).

- Adoption of harm reduction policy in Morocco and Lebanon;
- PWIDs included in NASP as target group for HIV prevention in Bahrain, Egypt, Jordan and Syria;
- OST started in Afghanistan and Morocco;
- OST scaled up in Iran;
- NSP scaled up in Afghanistan, Egypt, Iran, Lebanon, Morocco, Pakistan, Palestine and Tunisia.

5.11 HIV testing and counseling, and antiretroviral availability

Five countries report that VCT or a functional VCT is not available in the country. These countries are Bahrain, Kuwait, Libya, Oman and UAE. The number of reported VCT units in other countries varies from five in Palestine (Rosenthal, et al., 2011; UNAIDS, 2007) to 447 in Iran (Iran MoH, 2012). Egypt and Saudi Arabia have provided several mobile testing and counseling service programs. Moreover, in their 2012 AIDS country progress reports, several countries, Egypt, Iran, Iraq, and Tunisia, reported that VCT has been made available in prisons. Bahrain and Oman reported mandatory testing for arrested drug users.

Many countries report that the function of the centers needs to be improved in terms of providing a full service of HIV testing and counseling (Qatar SCH, et al., 2012), ensuring privacy and confidentiality (Jordan MoH, 2012; Kabbash, et al., 2010) and increasing their utilization (Pakistan MoH, 2012). Table A14 in the Annex presents the available information on the extent of HIV testing and counseling as well as its utilization in the countries of the region.

Knowing HIV status is essential for seeking care, treatment and the protection of others. This is why doing an HIV test every 12 months and knowing the result in the population of PWIDs is recommended as a core indicator for global AIDS response progress reporting in 2012 (UNAIDS, 2011b). From the 20 countries of the region, 12 have included assessments about the history of HIV testing in the 20 studies on PWIDs/drug users since 2005 and have made the findings available. However, most of them have used different indicators from those recommended by WHO and UNAIDS. The details of the available information are represented in Table 16. The findings are summarized below:

- In 12 studies, a history of HIV testing in lifetime was reported. The results vary from 8.9% to 80.3%.
- In 8 studies, the participants were questioned on whether or not they have ever been tested for HIV and know the results. The reports vary from 7.4% to 57.5%
- In 3 studies, whether or not they had been tested for HIV in the last 12 months was reported. The results were 20.3% to 70.3%.
- Seven studies have assessed the recommended indicator: "tested in last 12 month and know the result". The reports vary from 7.6% to 62.6%.

Overall, the available data shows that the coverage of HIV testing and counseling is low in the region.

Table 16 The history of having HIV testing among PWIDs

COUNTRY	STUDY CHARACTERISTICS	SAMPLE	EVER TESTED (%)	EVER TESTED AND KNOW THE RESULT (%)	TESTED IN L12M (%)	TESTED IN L12M AND KNOW THE RESULT (%)	SOURCE
Afghanistan	2009, three cities	584	23.5-32.5				(Johns Hopkins University; HIV surveillance project, 2010)
Algeria	2004-5, three cities [1]	285	15.8				(Moutassem-Mimouni, et al., 2006)
Bahrain							
Egypt	2010, two cities	560	9.5				(Egypt MoH, 2012)
Iran	2010, 10 provinces	2546	55.5	42.5		24.8	(Haghdoost, Osouli, et al., 2012)
	2010-11, three cities	226	39.6	34.2			(Haghdoost, Sadjadi, et al., 2012)
	2006-7, 10 provinces	2853	43.4	33.4	31.9		(Zamani, 2008)
	2006-7, Tehran	904	9.1	7.4			(Rahimi-Movaghar, et al., 2010)
Iraq							
Jordan	2011, four cities	214		12.6			(Shahroury, 2011)
	2008, 4 governorates	182	26.9				(Jordan MoH, 2012)
Kuwait							
Lebanon	2007-8, Beirut	79	61	43	20.3		(Mahfoud, Afifi, et al., 2010)
Libya							
Morocco	2011, Nador	?				10.9	(Morocco MoH, 2012)
	2010, Tangier	?					(Morocco MoH, 2012)
Oman	2006, Muscat [1]	184	80.3			7.6	(WHO, 2007)
Pakistan	2011, 16 cities	4956					(Pakistan MoH, 2012)
	2008, 8 cities	2979		11.8		9.1	(Pakistan National AIDS Control Program, 2008)
Palestine	2010, EJG	199	61.3	57.5			(Štulhofer, et al., 2010)
	2010, National [1]	352			70.3		(UNODC, et al., 2011)
Qatar						62.6	
Saudi Arabia							
Syria	2006, Greater Damascus [1]	336	36				(Syria Mental Health Directorate, 2008)
Tunisia	2011, two cities	807					(Tunisia MoH, 2012)
	2009, two cities	711				19.5	(Tunisia MoH, 2012)
UAE						20.8	
Yemen							

[1] The study population was drug users

Antiretroviral therapy is available in all 20 countries. Most countries report that all identified HIV/AIDS cases in need are receiving ART. However, in many countries, the centers providing ART are limited to large cities. In addition, some countries have faced political crisis which disrupts ARV supply and lead to emergency situations for PLHIV. Such a report officially exists from Libya (Libya MoH, 2012). In regards to the availability of ART for drug users, the information is too scarce and inconsistent to make any conclusions. The details on the number of ART centers and the beneficiaries are presented in Table A15 in the Annex.

5.12 Female drug users

Information on gender characteristics of PWIDs is available from nine countries since 2005. The PWIDs included in the studies were predominantly men. From 89.6% in Morocco to close to 100% of the sample in Afghanistan consisted of men (Table A7 in Annex). The actual proportion of women among the total number of PWIDs is unknown. However, there is consensus that women who inject drugs are a hidden population, face greater stigmatization, and utilize services less than male PWIDs. As a result they are harder-to-reach and are represented in lower proportions both in the studies and in the services provided (Abu-Raddad, Ayodeji Akala, et al., 2010; Day, et al., 2006; Rahimi Movaghar, et al., 2011).

Fifteen countries reported the number of identified HIV cases in year 2010 to WHO (WHO Eastern Mediterranean Region) (Table A6 in the Annex). The total number of cases from the 15 countries were 3,623, from which 791 (21.8%) were female.

From 954 HIV identified and reported cases attributed to injecting drug use in the year 2010, 20 cases were female (19 from Iran and one from Yemen). 2% of identified HIV cases by IDU transmission were reported in women. Comparing this rate (2%) with 21.8% presentation of women in total HIV identified cases; it becomes clear that HIV infection from injecting drugs is less prevalent than other routes of transmission in women compared to men.

Table 17 presents the studies on HIV prevalence among PWIDs, which included female sample and reported the sample size as well as the results for the women who inject drugs. The table shows that eight studies from four countries provided such information. Five of the eight studies were from Iran. From more than 9,000 total PWIDs tested, only 286 (3.2%) were female. Current information from Iran suggests that women who inject drugs constitute 3% to 4.7% of the country's IDU population (Narenjiha, et al., 2009; Rahimi-Movaghar, 2004), which is similar to the proportion of PWIDs included in HIV prevalence studies from the region.

Table 17 HIV prevalence in women who inject drugs

COUNTRY	STUDY YEAR	TOTAL TESTED	FEMALE SAMPLE	NO. OF HIV+ FEMALES	SOURCE
Afghanistan	2005-8	1078	9	0	(Nasir, et al., 2011; Todd, et al., 2007; Todd, 2012)
Egypt	2006	429	16	0	(FHI/MOH Egypt, 2006; Soliman, et al., 2010)
Iran	2010	2479	62	6	(Haghdoost, Osouli, et al., 2012)
	2006-7	2899	84	9	(Iran MoH, 2010b)
	2006-7	543	2	0	(Malekinejad, 2008)
	2006-7	899	38	4	(Rahimi-Movaghar, et al., 2010)
	2005	10	10	0	(Ghanbarzadeh, et al., 2006)
Tunisia	2009	713	65	1	(Tunisia MoH, 2012)
Pooled	**-**	**9040**	**286**	**20 (6.7%)**	

For the 286 women who inject drugs tested for HIV, pooled prevalence was 6.7% (95% Confidence Interval (CI): 4.3-10.6%). If we disaggregate the results from Iran, 9.7% (95% CI: 5.9-14.7%) of the 196 women who inject drugs from Iran tested positive for HIV, while only one case [1.1% (95% CI: 0.03-6.04%)] of the 90 women who inject drugs from other countries was HIV infected.

In addition, a systematic review was done on non-IDUs, which included studies conducted in Iran from 1998 to 2007 (Amin-Esmaeili, Rahimi-Movaghar, Haghdoost, et al., 2012). Pooled HIV prevalence in 1,931 male samples (from 6 studies) was 3% (95% CI: 2.3–3.9). Among 204 female samples (from 6 studies) prevalence was 1% (95% CI: 0.1–3.5), which was lower than that of males; however, the difference was not significant. The authors had concluded that the female sample size was too small to reach any conclusions on HIV prevalence in the female non-IDU population.

Generally, female drug users suffer from lower socio-economic status compared with males. Their drug use is highly associated with poverty, human right violations, mental health problems, crime and sex work. This has been documented in multiple researches recently conducted on female drug users and their needs (Abadi, et al., 2012; Ashouri, et al., 2010; Dolan, Salimi, Nassirimanesh, Mohsenifar, Allsop, et al., 2011; El-Sawy, et al., 2010; Rahimi-Movaghar, Malayerikhah Langroodim, et al., 2011).

High-risk sexual behaviors are also common in drug-using females. There are several reports of even higher risk behaviors among women who inject drugs than men who inject drugs (Morocco MoH, 2005; Moutassem-Mimouni, et al., 2006; Pakistan National AIDS Control Program, 2012). Although the female/male ratio of drug use is low, female drug users need greater attention because of the high rate of sex work and low level of health and social conditions (Amin-Esmaeili, Rahimi-Movaghar, Haghdoost, et al., 2012). A study in ten sites in developing countries around the world showed that gender differences in risk behaviors among PWIDs depended on the relational contexts in which risk behaviors occurred (Cleland, et al., 2007). This suggests that different kinds of prevention interventions, which are sensitive to these contexts, are necessary. An experience of establishing women-only facilities for providing MMT as well as other harm reduction services does exist in Iran. Several such facilities were established since 2007 and were evaluated as successful (Dolan, Salimi, Nassirimanesh, Mohsenifar, Allsop, et al., 2011; Dolan, Salimi, Nassirimanesh, Mohsenifar, & Mokri, 2011; Dolan, et al., 2012). Iran is attempting to expand such facilities for women.

5.13 Female partners of PWIDs

It is has been more than 10 years that high HIV prevalence among PWIDs has been reported from the region. However, although facing a similar epidemic in spouses and female partners of men who inject drugs is possible, it has never been observed and studied until recent years. The main HIV epidemic in this group has been reported from Punjab, Pakistan in 2008. HIV prevalence in spouses and female partners of men who inject drugs was reported to be 15% (Pakistan MoH, 2012). The study also reported that transmission of HIV from PWIDs to their wives was enhanced by the fact that around 80% of the PWIDs engaged in unprotected sex. In Iran, a bio-behavioral survey was conducted on PWIDs and their primary sex partners in 2010-11 in three cities, Tehran, Mashhad and Shiraz. While HIV prevalence among PWIDs was reported to be 9.4%, the prevalence was 3.7% in their female partners. The prevalence of HCV and HBV were also high in the later group (Haghdoost, Sadjadi, et al., 2012). Morocco also reports that the majority of women are being infected through their spouses (Morocco MoH, 2012).

However, high risk behaviors are also reported to be common in the female partners of PWIDs. In the above mentioned three cities in Iran, 17.7% of female partners of PWIDs had a history of injecting drug use in their lifetime (Haghdoost, Sadjadi, et al., 2012). In Lahore and Faisalabad in Pakistan, almost a quarter (23%) used drugs, 19% injected drugs and a small portion (4%) also reported selling sex (Ahmad, et al., 2011).

In Iran, it was estimated that the greatest number of new cases of HIV infection is among PWIDs (56%), followed by their sex partners (12%) (Iran MoH, 2012). Overall, in parallel with the HIV preventive measures planned for PWIDs, it is also needed to include spouses and female partners of PWIDs as target groups for interventions. Such services have already been planned in NASPs as well as in other plans in Iran and Pakistan (Iran MoH, 2012; Pakistan MoH, 2012). These plans need to be expanded in these countries and other countries of the region.

5.14 Drug use and its harms in prison

There is information available on HIV prevalence among general prison inmates from 12 countries of the region. Iraq, Jordan and Palestine, to date, have reported zero prevalence (Jordan MoH, 2012; WHO Eastern Mediterranean Region). According to the 2012 country progress reports on HIV/AIDS and WHO surveillance data, in the other seven countries, Afghanistan, Egypt, Lebanon, Morocco, Oman, Saudi Arabia and Syria, HIV prevalence has been less than 2%. An HIV prevalence of 2 to 3 percent has been reported from Pakistan (Kazi, et al., 2010; Nafees, et al., 2011) and higher than 3% from Iran (Shahbazi, Farnia, Moradi, et al., 2010). In Lebanon and Pakistan, HCV is reported to be higher in prison inmates (Gorar, et al., 2010; Mahfoud, Kassak, et al., 2010b). The information shows that HIV prevalence is still low in prisoners. However, prisons have characteristics that can increase the risk of HIV transmission. Injecting drug use and unsafe sex are over-represented in the prisons and contribute to the HIV epidemic inside prison (Dolan, et al., 2007; Niveau, 2006).

A high rate of drug use in prisons was reported in a national survey from Iran, 62% in male and 44% in female prisoners (Iran MoH, 2010a). A report of 20% prevalence of drug use inside prisons is available from Lebanon as well (Mahfoud, Kassak, et al., 2010b). Injecting drug use also takes place inside prisons. Among PWIDs who have been incarcerated, 29.2% in Palestine (Štulhofer, et al., 2010), 8.2% to 26.3% in Iran (Haghdoost, Osouli, et al., 2012; Kheirandish, et al., 2010), 17.2% in Afghanistan (Todd, et al., 2010), 11% in Syria (Syria Mental Health Directorate, 2008) and 5% in Lebanon (Mahfoud, Afifi, et al., 2010) have reported injecting drug use inside prisons. Noticing a high rate of incarceration, in at least three-fourth of PWIDs (see Table A7 in the Annex) it is clear that injecting drug use in prisons occurs with a significant number of PWIDs in their lifetimes.

Information from at least seven countries is available on unsafe injection in prisons. In Iran, in a national sampling from the prisons (Iran MoH, 2010a), from those who reported injection in the last month in prison, 79.8% utilized unsafe injection methods in their last injection. The rate was much lower before incarceration. In another national survey on PWIDs in Iran (Haghdoost, Osouli, et al., 2012), from those who ever injected in prison, 72.7% had injected with a used needle and 62.5% with other previously used injection equipment in their last injection. In Oman, as discovered through the KAP study on PWIDs, all those who injected drugs in prison had shared syringes and needles while incarcerated (WHO, 2007). The figures were 80% in Syria (Syria Mental Health Directorate, 2008) and 22% in Palestine (UNODC, et al., 2011). In Morocco, 12% of incarcerated PWIDs reported sharing needles and syringes in prison (Morocco MoH, 2005). In Lebanon, sharing injection equipment was reported in 7% of adult men in Roumieh prison (Lebanon MoPH, 2012). Kuwait also reports that sharing of injection equipment is common in prisons (Kuwait MoH, 2012).

Sexual activity of PWIDs inside prison has been assessed and reported in studies from Lebanon and Syria (Mahfoud, Kassak, et al., 2010b; Syria Mental Health Directorate, 2008). In Syria, none of the people in the survey used condoms. The number of in-prison sexual partners ranged from one to eight (Syria Mental Health Directorate, 2008).

Despite all the evidence for risk for HIV in prisons, the overall response in the region has been weak. In 2012 country progress reports, Iran, Egypt, Iraq and Tunisia have reported VCT availability in several sites in prisons. Afghanistan, Bahrain, Egypt, Iran and Tunisia provide HIV preventive education for prison inmates. In Bahrain, peer education and support groups are available. In Tunisia, HIV prevention for prisoners is provided by an NGO, which also provides drug detoxification, psychosocial care, condom distribution and VCT.

The largest HIV prevention service is provided in Iran, which was begun in 2003 after a large study showed high risk behaviors to be common in the prisons (Bolhari J, et al., 2002). For the time being, all prisons with 300 inmates or more are providing VCT. Methadone Maintenance Treatment, HIV education and, in limited number of prisons, needle and syringe exchange programs are also provided (Iran MoH, 2012). In recent years, Iran evaluated the effectiveness of HIV prevention interventions. In 2006, a qualitative study, in a large prison in Iran (Zamani, Farnia, et al., 2010), showed that drug injecting had decreased drastically since introducing the MMT program and had positive effects on the socio-economic status of prisoners' families. However, staff shortages, some degree of methadone diversion, and the stigma attached to methadone treatment were reported as the barriers that should be addressed. The positive results of the evaluations resulted in a rapid scale-up of MMT program in prisons. In 2009, the national survey in prisoners (Iran MoH, 2010a) showed that about 56% of all drug using men and 89% of drug using women were on MMT. The rate was much lower before incarceration. By February 2012, more than 38,000 inmates were receiving MMT (Iran MoH, 2012).

Iran has also introduced distributing sterile syringes among the PWIDs in several prisons. In 2008-9, in an evaluation study in three prisons before starting the program, it was found that using shared syringes was common among volunteer PWIDs. The program constituted of giving sterile needles and syringes to PWIDs weekly and collecting the used ones regularly, as well as education on blood-borne infections. At the end of the program, prevalence of using shared syringes among volunteers declined to zero (Shahbazi, Farnia, & Keramati, 2010). Overall, the interventions were successful in controlling HIV epidemics in prisons of Iran. HIV prevalence among prisoners has decreased constantly from 4.9% in 2005 to 2% in 2009 (Iran MoH, 2010a; Shahbazi, Farnia, Moradi, et al., 2010).

5.15 Major barriers and steps forward

Countries of the region are in different levels of HIV epidemics among injecting drug users, as well as the level of policy making and service development. At each level, countries are facing different challenges for understanding the situation, planning and service provision.

In one extreme are the countries that have an overall weak HIV planning. These countries include Iraq, Kuwait, Libya, Qatar and UAE, which lack HIV preventive interventions for MARPs. Generally, these countries spend most of their available budget for HIV, on testing (which in many cases is mandatory and in some cases they also provide VCT) as well as provision of ART for PLHIV in need. None of these countries have received considerable external financial or technical support for HIV planning and service development. With the exception of Libya, countries in this group do not recognize HIV/AIDS as a national health priority. An appropriate structure has not been developed at the national as well as operational levels. High risk behaviors are extremely stigmatized and criminalized. This has jeopardized any recognition of the importance of these groups in the overall planning. NGOs and CBOs are not actively involved in the health needs of the MARPs and self-help groups are not present to call for action. A proper surveillance mechanism is not in place for HIV monitoring and there is no assessment of the size, risk behaviors as well as the needs of MARPs. Accordingly, injecting drug use is not recognized as a significant threat to the health of drug users, as well as the community. Therefore, there are no HIV prevention measures in place for the people who inject drugs.

In another part of the spectrum are countries of the region that have recognized injecting drug use and its associated harms as a major threat to the national health and have adopted the harm reduction policy in order to minimize health consequences of drug injection for the injectors and the community. These countries are Afghanistan, Iran, Pakistan, and Morocco. Although each of these countries is in a different level of response, they are all facing a serious challenge in scaling-up the services they provide, especially in the countries with a large number of injecting drug users. Although all four countries have received considerable support from external bodies, in the long-term, they mostly need to rely on their national resources and advocate continuously in this regard. The majority of the services are provided by NGOs. However, most of the NGOs are new, fragile and in need for strengthening their infrastructure and capacities. A constant effort on training, human resources and monitoring the interventions is necessary to ensure the quality of the provided services at an extended level. Several academic bodies and research and training centers are actively involved in conducting repeated surveys, mappings, and evaluations of programs in these countries. However, the countries should strengthen their research capacities in order to provide the information and evidence needed for advocacy, planning, service development and quality improvement.

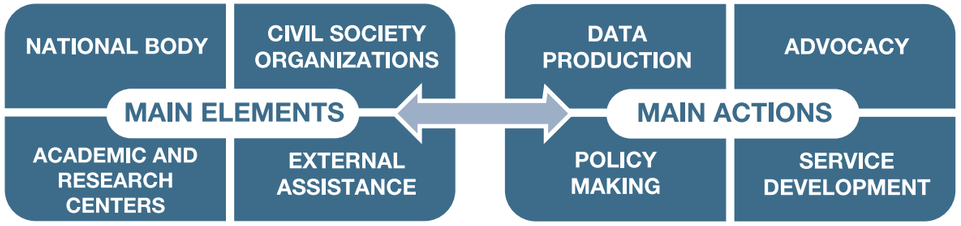
The third group consists of the remaining 11 countries that are in between the two groups of countries described above. In Algeria and Yemen, although FSWs and MSMs are accessible and are provided with services, interventions targeting people who inject drugs are still lacking. In Bahrain, Jordan, Oman and Syria, although PWIDs are acknowledged as an important target group, key HIV prevention programs have not yet been implemented. In Egypt, Lebanon, Palestine and Tunisia needle and syringe distribution has started, but scale up is necessary to adequately prevent HIV and viral hepatitis transmission among this group.

These countries are also facing major following barriers: inadequate political support within the health sector, in drug-control structures, and in other policy-making bodies; inadequate human resources and understaffing of national bodies responsible for HIV; constraints in securing financial resources from health budget and difficulties for mobilizing resources from other sectors; inappropriate resource allocation, focusing mainly on HIV screening and antiretroviral therapies; stigma, discrimination and criminalization towards PWIDs ; limited role of the civil societies in the national response, poor collaboration between different sectors and NGOs and a lack of coordination between NGOs; inadequate surveillance systems, lack of size estimations and mapping for PWIDs, and limited biological or behavioral studies conducted on PWIDs.

The capacity of NGOs in implementing harm reduction is directly correlated with the extent of harm reduction services in the countries. In eight countries of the region, NGOs are actively involved in HIV prevention among PWIDs (Table A16 the Annex). These are the countries with at least some harm reduction services in place: Afghanistan, Egypt, Iran, Lebanon, Morocco, Palestine, Pakistan and Tunisia.

Generally, we found four essential elements that influence the progress of the countries in harm reduction policy making and provision of interventions, i.e. a strong and committed national body responsible for HIV/AIDS, active civil society organizations involved in HIV prevention for MARPs, competent academic bodies and research centers collaborated with national bodies and external financial and technical support to the country's plans. For serious and coherent action, these four elements need to all be strengthened. However, an increase in the capacity of one element would influence the strengthening of the others. The main functions of these elements are: data and evidence production, advocacy, policy making, and service development. These functions can also affect and reinforce the capacities and resources of the four elements. The matrix of essential elements and functions necessary for improvement of responses for HIV among PWIDs is presented in Figure 4.

Figure 4 **Diagram of the essential elements and actions for development of harm reduction policy and services**



Countries of the MENA region practice government that is deeply rooted in religious tradition. Among these laws, risk behaviors are still, in most places, considered immoral. Many Muslim countries have continuously attached to moral-religious preventive measures that have focused on abstinence and faithfulness (Madani, et al., 2004). Many people believe that lack of religious and moral commitments could cause HIV infection (Montazeri, 2005) and this results in a very high stigma and discrimination against people living with HIV/AIDS (Hasnain, 2005). However, a few countries, as described throughout this report, have taken initiative to amend the laws of their states to better accommodate MARPs. Some Islamic countries, like Iran, Afghanistan and Pakistan have adopted a harm reduction policy, in parallel to religious teaching.

In 2012, MENAHRA organized a Religious Leaders Meeting which included prominent figures from varying religious backgrounds within the MENA region. During the meeting, MENAHRA introduced harm reduction to the religious leaders. They also encouraged the participants to empathize with key populations in their areas and to sensitize their communities to these issues. The meeting ended with the religious leaders putting together a declaration to support drug users' rights in the MENA region.

Public statements from religious leaders emphasizing the importance of public health approach to decrease the harm to people which is crucial for influencing the current beliefs and policies of the people, community leaders and policy makers.

ANNEXES

Table A1 Annual prevalence of drug use among population aged 15-64, country reports to UNODC since 2005 (UNODC, 2011)

COUNTRY	YEAR AND SOURCE OF THE REPORT	CANNABIS (%)	OPIOIDS (%)	ATS (%)	COCAINE
Afghanistan	2009, National	4.3 (3.4-5.2)	2.9 (2.7-3.2)	<0.1	<0.1
Algeria	2006, extrapolated from school survey	5.7 (5.2-6.4)			
Bahrain					
Egypt	2006	6.2 (2.9-9.6)	0.4 (0.1-0.7)	0.5 (0.4-0.5)	<0.1
Iran	2010, 2008		2.3 (1.8-2.8)	0.1 (0.1-0.2)	<0.1
Iraq					
Jordan					
Kuwait	2005	3.1		0.3	<0.1
Lebanon	2009, estimated from school survey	1.9 (0.7-4)		(Ecstasy) 1 (0.3-1.7)	
Libya					
Morocco					
Oman					
Pakistan	2006, National		0.7		
Palestine					
Qatar					
Saudi Arabia	2006	0.3	0.06	0.4	
Syria	2005		0.02		<0.1
Tunisia	2006		0.09		
UAE	2006	5.4			
Yemen					

Table A2 Drugs of use in the countries of the region

COUNTRY	MAIN DRUGS USED [1] - IN ORDER OF PREVALENCE	PRIMARY DRUGS OF ABUSE AMONG PERSONS TREATED FOR DRUG PROBLEMS
Afghanistan	Cannabis, Opium, Heroin (UNODC, et al., 2009)	(2010, 3 DTCs) In women: Opium, followed by Crystal (potent Heroin) (Abadi, et al., 2012)
Algeria	Cannabis, Psychotropics (APMG, 2008; Ramzi, 2010)	(2004-5, three cities, 285 problematic drug users) Psychotropics (96%), hashish (93%), Temgesic or Subutex (44%), Heroin (36%), Cocaine (35%), Opium (23%), amphetmaines (12%), poly-drug use was most common (Moutassem-Mimouni, et al., 2006)
Bahrain	Cannabis, Opioids	Heroin and prescribed Opioids (UNODC, 2011)
Egypt	Cannabis, ATS, Opioids (UNODC, 2011)	(2007, Annual Reports Questionnaire (ARQ) Cannabis (50.1%), Opioids (42.7%), ATS (7.2%) (UNODC, 2011)
Iran		(Two years, Cairo, private hospital) Heroin (78.4%) (Hasan, et al., 2009)
Iraq	(2011, National) Opioids, Cannabis, ATS (Rahimi-Movaghar, et al., 2012)	(2008, ARQ) Opioids (83.4%), ATS (2.6%) Cannabis (1.7%) (UNODC, 2011)
Jordan	(2007, RSA) Opium (46.4%), Cannabis (23.5%) (Daneshmandan, et al., 2011)	
Kuwait	Prescription drugs (Iraq MoH, 2012)	Alcohol or prescription drugs (Iraq MoH, 2012)
Lebanon	Cannabis, ATS, Opioids (UNODC, 2011)	(2010-2011, two main public DTCs) Heroin constitutes 23% of all drug abuse admissions in the past two years (Jordan MoH, 2012)
Libya	Cannabis, Opioids, ATS	(2009) Opioids (31.2%), Cannabis (28.4%), ATS (21.8%), sedatives (16.1%) (UNODC, 2011)
Morocco	(Drug user community?) Cannabis, Cocaine, Opioids (Skoun Lebanese Addictions Center, et al., 2011)	(2009) Opioids, Cocaine, Cannabis (Skoun Lebanese Addictions Center, et al., 2011)
Oman	Cannabis, Opioids	
Pakistan	Cannabis, Opioids	
Palestine	Cannabis, Opioids	Heroin and prescription Opioids (UNODC, 2011)
Qatar	Cannabis, Opioids	(2006, National) Heroin, followed by Opium and Cannabis (Pakistan Ministry of Narcotics Control, 2007)
Saudi Arabia		(2006-7, ARQ) Opioids (44%), Cannabis (40.7%) (UNODC, 2011)
Syria	Cannabis, Heroin and ATS (UNAIDS, 2007)	
Tunisia	Synthetic opiates, such as tramadol is increasing in youth (Progler, 2010; UNAIDS, et al., 2012)	
UAE	Cannabis, Opioids	
Yemen	Amphetamine pill (Captagone) and Cannabis (UNODC, 2009, 2011)	(2005-6, ARQ) ATS (72.8%), Cannabis (55.8%), Opioids (7.5%), sedatives (5.5%) (UNODC, 2011)

1 The underlined drug is the predominant drug used in the country

Table A3 Estimations on the size of people who inject drugs

COUNTRY	YEAR	ESTIMATION	SOURCE
Afghanistan	2009	20,000 (18,000 - 23,000) [1]	From 2009 Drug Use Survey [2] (Afghanistan MoPH, 2012)
Algeria	2006	16,000	(Afghanistan MoPH, 2010)
Bahrain			
Egypt	?	2000 [3]	(Bahrain MoH, 2010)
Iran	?	57,000 - 120,000	From APMG, 2007 [4] (Egypt MoH, 2010)
Iraq	2007	200,000 (170,000-230,000)	(Iran MoH, 2012)
Jordan	?	250,000	(WHO, et al., 2011)
Kuwait	2007	260,000	(Rahimi-Movaghar, Amin-Esmaeili, et al., 2011)
Lebanon			
Libya			
Morocco			
Oman	?	2000 - 4000	(Lebanon MoPH, 2012)
Pakistan			
Palestine		18,500	Accepting estimation of Aceijas, et al, 2006 [5] (Mumtaz, et al., 2010)
Qatar			
Saudi Arabia	2007	91,000	(Pakistan MoH, 2012)
Syria	2007	84,000	(Khan, A. A., et al., 2011)
Tunisia	2006	125,000	(Pakistan Ministry of Narcotics Control, 2007)
UAE			
Yemen			

1 Two-thirds are current and regular injectors.

2 UNAIDS, MoCN, et al. (2009). Drug Use in Afghanistan: 2009 survey, United Nations Office on Drugs and Crime, Ministry of Counter Narcotics, Ministry of Public Health.

3 Registered number of injecting drug users

4 APMG, Recommendation for interventions addressing IDU and related HIV infections in Egypt, 2007.

5 Aceijas C, Friedman SR, Cooper HL, Wiessing L, Stimson GV, Hickman M. Estimates of injecting drug users at the national and local level in developing and transitional countries, and gender and age distribution. Sex Transm Infect. 2006 Jun; 82 Suppl 3:iii10-7.

Table A4 Proportion of injecting drug users among drug user population

COUNTRY	PROPORTION OF PWIDS AMONG DUS	SOURCE
Afghanistan	(2009, National) All drug users: 6% injected in LT, 3% current injecting	(UNODC, ET AL., 2009)
	Regular Opium users: 6% injected in LT	
	Regular Heroin users: 15% injected in LM	
Algeria	(2004-5, n=285) drug users: 55% inject	(Moutassem-Mimouni, et al., 2006)
Bahrain	Registered DUs: two-third are PWIDs (2000 from 3000)	(Bahrain MoH, 2010)
Egypt	(2006-9, Tanta, outpatient DTCs, n=457) Injection drug use in women (n=138): 62% (more than men)	(EL-SAWY, ET AL., 2010)
	(Two years, Cairo, private hospital) Proportion of Heroin users using by injection: 84.6%	(Hasan, et al., 2009)
	(2007, 80 male Heroin dependents in two inpatient DICs) Proportion of PWIDs: 81.3%	(ELMAHDY, ET AL., 2010)
Iran	(2007, National RSA, n= 7769) Injected in LT: 26.6%	(Narenjiha, et al., 2009)
	Injected in L12M: 22.6%	
	Injected in LM: 19.6%	
	Injection as the predominant route of drug use: 18.7%	
	(2011, general adult population) From those with daily opioid use, injected in L12M: 5.1%	(Rahimi-Movaghar, et al., 2012)
Iraq		
Jordan	(2010-2011, two main public DTCs) Heroin users: 58% inject	(Jordan MoH, 2012)
Kuwait	Heroin users: 80% inject (Kuwait MoH, 2012)	
Lebanon	(2009) (75 cases in DTCs) Current injecting: 60%	(Skoun Lebanese Addictions Center, et al., 2011)
	(319 cases in outreach) Current injecting: 30%	
Libya		
Morocco	(2005, Problem drug users, n=424) 75% inject	(APMG, 2008)
	Heroin users: 50% injected in LM, 69% in L12M, 77% in LT	
	Cocaine users, 28.6% inject in LM, 60.4% in L12M, 73.2% in LT	
Oman		
Pakistan	(2006, National) Opioid users: 29% injected in LT	(Pakistan Ministry of Narcotics Control, 2007)
Palestine	(2010, 352 DUs) 42% inject, 24% injected in LM	(UNODC, et al., 2011)
Qatar		
Saudi Arabia		
Syria	(2006, Greater Damascus, 336 hard DUs) Injecting in LM: 47%	(Syria Mental Health Directorate, 2008)
	Injected in LT: 51%	
Tunisia		
UAE	(Key informant report) Relatively small proportion of the drug users inject	(United Arab Emirates MoH, 2012)
	PWIDs are a minority group at NRC	
Yemen		

Table A5 Main drugs of injection

COUNTRY	MAIN DRUGS OF INJECTION	SOURCE
Afghanistan	(2009) Heroin and Opium	(UNODC, et al., 2009)
	(2007-9) Heroin	(Todd, et al., 2011)
Algeria	(2004-5) Temgesic and subutex, Heroin, Cocaine, prescription drugs, ATS	(Moutassem-Mimouni, et al., 2006)
Bahrain	Heroin, followed by ATS and Cocaine	(Bahrain MoH, 2012)
Egypt		
Iran	(2007) Heroin followed by Norgesic, ATS and Opium	(Narenjiha, et al., 2009)
	(2007, Tehran) Heroin (80.3%), Opium (25%), tranquilizers (16.5%) and Temgesic (11.8%)	(Rahimi-Movaghar, et al., 2008)
Iraq	Probably prescription drugs	(Iraq MoH, 2012)
Jordan	(2010-2011, two main public DTCs) Heroin	(Jordan MoH, 2012; Skoun Lebanese Addictions Center, et al., 2011)
Kuwait	Heroin	(Kuwait MoH, 2012)
Lebanon	(2009, SIDC) Heroin	(Skoun Lebanese Addictions Center, et al., 2011)
Libya		
Morocco	Heroin and Cocaine	(APMG, 2008)
Oman	Heroin, Morphine or combination	(Oman MoH, 2012)
Pakistan	(2011, National) Avil (containing antihistamine Pheniramine) in most cities: Heroin, in others: Temgesic & Benzodiazepines	(Pakistan National AIDS Control Program, 2005, 2006-7, 2008, 2012)
	(2006-7, Sargodha) Heroin (>80%)	(Emmanuel, et al., 2009)
	(2006) Heroin, other opiates, Benzodiazepines or a combination	(Pakistan Ministry of Narcotics Control, 2007)
Palestine	(2010, National) Heroin (81%), Cocaine (71%), Morphine (26%), Methadone (15%), ATS (12%) and Opium (10%)	(UNODC, et al., 2011)
Qatar		
Saudi Arabia		
Syria	Mainly Heroin, followed by Cocaine	(Syria Mental Health Directorate, 2008)
Tunisia		
UAE	Heroin	(United Arab Emirates MoH, 2012)
Yemen		

Table A6 HIV surveillance data for the year 2010 (WHO Eastern Mediterranean Region)

COUNTRY	IDENTIFIED CASES	FEMALE CASES		TRANSMISSION BY INJECTING DRUG USE	
		NO.	%	NO	%
Afghanistan	342			152	44.4
Algeria					
Bahrain	16	2	12.5	6	37.5
Egypt	409	83	20.3	80	19.6
Iran	1635	291	17.8	11211	68.6 (1.7)
Iraq					
Jordan	12	3	25	0	0
Kuwait	10	2	20	0	0
Lebanon	21	3	14.3	0	0
Libya					
Morocco	319	161	50.5	6	1.9
Oman	119	50	42	1	0.8
Pakistan					
Palestine					
Qatar	1	0	0	0	0
Saudi Arabia	386	77	19.9	22	5.7
Syria	46	25	54.3	0	0
Tunisia	45	18	40	5	11.1
UAE	25	4	16	1	4
Yemen	237	72	30.4	11	0.4
TOTAL	**3623**	**791**	**21.8**	**1395**	**38.5**

Table A7 Socio-demographic characteristics of injecting drug users

COUNTRIES	STUDY CHARACTERISTICS	SAMPLE	MALE SAMPLE	AGE	CURRENTLY MARRIED	EDUCATION		EMPLOYMENT	HOMELESSNESS	EVER INCARCERATED	SOURCE
Afghanistan	(2009) Three cities	548	100%	Median: 30	35%	Uneducated: 23% Up to 5 years: 52%				63-74%	(Johns Hopkins University; HIV surveillance project, 2010)
	(2007-9) Kabul	483	100%	Mean age: 29.6	Almost half	Mean years of education: 5.3		Unemployed: 88.3%	Homeless: 22.5%	63.10%	(Todd, et al., 2011)
	(2006-8) Three cities	623	98.70%	<26: 43.1%	Ever married: 49.8%	Up to 5 years: 64.9%		Currently employed: 83.7%		62.90%	(Nasir, et al., 2011)
Egypt	(2010) Two cities	560			29.3% & 48.70%						(Egypt MoH, 2010)
	(2006) Cairo	429	96.30%		39.20%	Not completed secondary school: 62.1%					(FHI/MOH Egypt, 2006)
Iran	(2010-11) Three cities	226	100%	Mean age: 37 ± 1.1	60.60%	Uneducated: 3.1%					(Haghdoost, Sadjadi, et al., 2012)
	(2010) 10 provinces	2,546	97.90%	Mean age: 34	30.50%	Uneducated: 6% Up to 5 years: 30.8%		Unemployed: 12.6% Temporary jobs: 39.1%		77.90% (In last 10 years)	(Haghdoost, Osouli, et al., 2012)
	(2008) National	1,531	96.10%	Mean age: 33.1 ± 9	35.10%						(Mirahmadizadeh, et al., 2009)
	(2007) National	2,091		Mean age: 31.3 ± 8.3							(Rafiey, et al., 2009)
	(2006-7) Tehran	904	95%	Mean age: 33.9 ± 9.4	28.20%	Uneducated: 4.5% Mean year of full-time education: 7.7±3.5		Unemployed: 64.1%	Homeless or resided in a room rented on a daily basis: 39.1%	70.90%	(Amin-Esmaeili, Rahimi-Movaghar, Haghdoost, et al., 2012; Rahimi-Movaghar, et al., 2008; Rahimi-Movaghar, et al., 2010))
	(2006-7) Tehran	549	99.80%	Most age group: 30-39	8.40%	Uneducated: 5.7%, Most level of middle school		Unemployed: 53.1%		85%	(Malekinejad, 2008)
	(2006-7) 10 provinces	2,853	97.30%	Mean age: 33.4 ± 9.2	Married living with spouse: 32.1%	Primary school or less: 33.5%		Unemployed: 67.5%	Not have a stable place for living: 25.1%		(Zamani, 2008)
	(2006) Tehran	459	100%	Most age group: 25-34	39.40%	Uneducated: 7.2 %					(Kheirandish, et al., 2010)
Jordan	(2011) 4 cities (2008) 4 Governorates	214 207	97%	Most age group: 25-30 Majority >35	36%	Uneducated: 19%		Unemployed: 14% Temporary jobs: 48%			(Shahroury, 2011) (Jordan MoH, 2012)
Lebanon	(2009) National	1,701	96%	Most 21 to 30 Y/o	18%	Uneducated: 9% Up to 5 years: 61.6%					(Skoun Lebanese Addictions Center, et al., 2011)
	(2007-8) Beirut	81		Age 16-24: 17%	21%	Uneducated/elementary education: 53%				85%	(Mahfoud, Afifi, et al., 2010)
Morocco	(2005) 4 cities	366	89.60%					Unemployed: 60%			(Mumtaz, et al., 2010)
Oman	(2006) Mascut				3-28%					61 to 83%	(Abu-Raddad, Ayodeji Akala, et al., 2010)
Pakistan	(2011) 16 cities	4,956	98.40%	Mean age: 30.4 ± 8	33.80%	Uneducated: 57.1% Up to 5 years: 75.6%			Living in street: 47.6%		(Pakistan National AIDS Control Program, 2012)
	(2008) 8 cities	2,979	99.80%	Mean age: 33.2 ± 8.9	41.10%	Uneducated: 59.7% Up to 5 years: 79.2%			Living in street: 22.4%		(Pakistan National AIDS Control Program, 2008)
	(2006-7) 12 cities	4,039		Mean age: 32.3 ± 7.6	45.20%	Uneducated: 56.7% Up to 5 years: 79.8%			Living in street: 17.9%		(Pakistan National AIDS Control Program, 2006-7)
	(2005) 7 cities	2,432		Mean age: 33.8	44.70%	Uneducated: 53.5%			Living in open spaces: 77.7%		(Pakistan National AIDS Control Program, 2005)
	-2005 Two cities	800		Mean age: 36.5 & 34.6							(Altaf, et al., 2009)
Palestine	(2010) EJ	199	98.50%	Mean age: 41.3 ± 8.1	66.50%	Uneducated: 5% Up to 5 years: 85.9%		Employed: 7.5% Part time job: 19.1%		93.40%	(Štulhofer, et al., 2010)
Tunisia	(2009) Two cities	713	90.90%								(Tunisia MoH, 2012)

Table A8 HIV profile of the countries

COUNTRIES	HIV IN GP OR ADULT RATE, EPIDEMICS	CUMULATED HIV IDENTIFIED CASES		CASES OF HIV	HIV TRANSMISSION ROUTES OTHER THAN INJECTING DRUG USE [1]	SOURCE
Afghanistan	HIV prevalence in GP: <0.5% (2008)	(End 2009) 636		No. of deaths <10		(Afghanistan MoPH, 2010)
Algeria	HIV prevalence in GP: 0.1% Concentrated epidemic	(End 2011) 6,797		Average identified/year: 600-700 cases, Men: 51.3% (End 2009) Estimated No. of PLHIV: 18,000 (13,000-24,000)	Heterosexual: 22.7% Homosexual: 1.2% Unknown: 69.6%	(Algeria MoH, 2012; UNAIDS, 2011a; USAID, 2010)
Bahrain	HIV prevalence in GP: <0.1% In young people: <0.1	(End 2011) 1,856 Bahrainis: 21.5%		New Bahraini cases/ year identified: 15-20 (Stable in recent years)	Heterosexual route is increasing, (end 2011) 29.8%	(Bahrain MoH, 2012)
Egypt	HIV prevalence in GP: <0.02% Concentrated epidemics	(End 2011) 4,781 Egyptians: 73%		No. of death: 1275 Egyptians (End 2010) Men: 79.6%	Heterosexual: 46.2% Homosexual: 20.6%	(Egypt MoH, 2010, 2012)
Iran	Low prevalence in GP, concentrated in PWIDs	(Sep 2011) 23,497 Men: 91.3%		Cu. identified AIDS cases: 3,168 (2011) Estimated No. of PLHIV: 93,250 (For 2015) Estimated No. of PLHIV: 126,300	(Sep 2011) Sexual route: 10.1% Unknown: 18.2% (2009) Newly identified cases: Sexual: 20.8%, unknown: 10.6%	(Iran MoH, 2012)
Iraq	Low prevalence	(End 2011) 615 Iraqi citizens: 309 (50%)		No. of PLHIV: 59 Men: 85%	Hemophilic by parental route: 66% Heterosexual: 17%	(Iraq MoH, 2012)
Jordan	Low prevalence	(End 2011) 847 Jordanians: 29%		HIV identified in 2010 and 2011: 36 Men: 78% (End 2011) No. of death in Jordanian PLHIV: 99	(End 2011) Heterosexual: 56.3% MSM: 8.5%	(Jordan MoH, 2012)
Kuwait	Low prevalence	(End 2011) 206 Kuwaiti Men: 72%		(2011) New cases: 25 Kuwaiti and 97 expatriates The number has remained very low in last 25 years		(Kuwait MoH, 2012)
Lebanon	Low prevalence (2009) Adult prevalence: 0.1%	(Nov 2011) 1,455		Estimated No. of PLHIV: 3,600 (2,700-4,800)	Unspecified: 49% Sex: 51%: heterosexual: 27.5%, MSM: 22%, Bisexual: 0.9%)	(Lebanon MoPH, 2012; UNAIDS, 2011a)
Libya	Low prevalence in GP (2011: 0.3% in blood donors) (Libya MoH, 2012) (2008) Estimation: 1.13% in GP (2005) In population survey: 0.13% Concentrated prevalence in PWIDs	(Nov 2011) 11,910		(2008) Estimated No. of PLHIV: 70,000	Increasing trend toward sexual transmission	(Libya MoH, 2012; The Telegraph, 2011)
Morocco	Low prevalence in GP (2011) Adult prevalence: 0.14% Concentrated in FSWs, MSM, PWIDs in some regions	(End 2011) 6,453 men: 50%		(2011) Estimated No. of PLHIV: 29,000	(2007-11) Sexual route: 93.5% Heterosexual: 89% Homosexual: 13.5%	(Morocco MoH, 2012)
Oman	Low prevalence	(End 2011) 2,164 Omani		(End 2011) No. of PLHIV: 1,371 Men: 72.2%	(End 2011) Heterosexual: 50.2% Homosexual: 14.1% Unknown: 26%	(Oman MoH, 2012)
Pakistan	Low prevalence in GP: <0.1% Concentrated in PWIDs	(End 2011) Cu. Registered in ART centers: 5,256 Adult men: 77%		(2009) Estimated No. of PLHIV: 98,000		(Pakistan MoH, 2012)
Palestine	Low prevalence	(2011) 66		(2012) No. of PLHIV: 21	(End 2006) heterosexual: 52% homosexual: 1%	(Abu-Raddad, Ayodeji Akala, et al., 2010; Štulhofer, et al., 2010; UNAIDS, et al., 2012; USAID, 2010)
Qatar	Low prevalence in GP: <0.2%	(End 2011) 261		(2010-11) New cases: 14 No. of PLHIV: 88	(2010-11) From 14 new cases: Heterosexual: 13 Homosexual: 1	(Qatar SCH, et al., 2012)
Saudi Arabia	Low prevalence (2011) Adult prevalence:0.03%	(End 2008) 13,926 Nationals: 3,538 (25.4%)		(Past ten years) Men: 80%	(2008, Saudi Nationals) Heterosexual: 88%	(Saudi Arabia MoH, 2010, 2012)
Syria	Low prevalence	(End 2011) 762 Syrian: 58%		Estimated No. of PLHIV in 2008: 1,150 (Cu to June 2010) Men: 75.7%	(Cu to June 2010) Heterosexual: 62.8% Homosexual: 10.5%	(Syria MoH, 2012)
Tunisia	Low prevalence in GP: <0.1% Concentrated in MSMs	(End 2011) 1736 Tunisians		No. of PLHIV: 1,166 AIDS cases: 982 (with a downward trend) New cases/year is relatively stable. (2010): 65, (2011): 73 Men: 70% (2011) Estimated No. of PLHIV: 3800 (0.036%)	(Cu to 2011) heterosexual: 42.5% MSM or Bisexual: 4.8% Sexual route is increasing	(Tunisia MoH, 2012)
UAE	Low prevalence			(End 2011) No. of PLHIV: 726		(United Arab Emirates MoH, 2012)
Yemen	Low prevalence (2011, HIV size estimate) 0.2% in GP	(End 2011) 3502		(2011) Newly registered cases: 266, men: 63% Estimated No. of PLHIV: 30,000	(2011, new cases) Heterosexual: 83% Homosexual: 9%	(Yemen MoPH&P, 2012)

Table A9 HIV prevalence among people who use drugs since 2005

COUNTRIES	YEAR	PLACE	NO TESTED	SETTING AND METHOD		DEFINITION OF DUS	HIV PREVALENCE (%)	SOURCE
Afghanistan	2009[1]	Kabul, Heart & Mazar	548 (no female)	RDS, community		PWIDs	1-18.2 (Average 7.1)	(Johns Hopkins University; HIV surveillance project, 2010)
	2007-9[1]	Kabul	483 (no female)	Time-location sampling, community and HR program		PWIDs (injection in LM)	2.1 (95% CI: 1.0-3.8)	(Todd, et al., 2011)
	2006-8[1]	Herat, Jalalabad & Mazar	623 (8 females)	Community		PWIDs (Injection in L6M)	1.8 (95% CI: 0.88–3.2) Herat: 3.24, Others: 0	(Nasir, et al., 2011)
	2005-6[1]	Kabul	464 (1 Female)	Community		PWIDs (injected in L6M)	3 (1.7-5.1)	(Todd, et al., 2007)
Algeria	2011[1]	National	58	VCT		PWIDs referred for HIV testing	6.9	(Algeria MoH, 2012)
	2004-5[1]	Algiers, Oran & Annaba	45 tested (from 285)	In prison, DTCs, streets		Problem DUs (55% PWIDs)	11	(APMG, 2008; Moutassem-Mimouni, et al., 2006)
Bahrain	2011[1]	Manama	151	Mandatory testing on admission to rehabilitation program		PWIDs	4.6	(Bahrain MoH, 2012)
	2010[1]	Manama	181	Mandatory testing on admission to rehabilitation program		PWIDs	3.3	(Bahrain MoH, 2012)
Egypt	2010[1]	Cairo & Alexandria	560 (275 & 285)	?		PWIDs	6.8 & 6.5	(Egypt MoH, 2012)
	2006[1]	Cairo	429 (16 females)	RDS		PWIDs	Men: 0.6, Women: 0	(FHI/MOH Egypt, 2006; Soliman, et al., 2010)
	2006	?	?	?		?	2.6 (0.6-4.5)	(Mathers, et al., 2008)
Iran	2010-11[1]	Tehran, Mashhad, Shiraz	226 (No female)	DICs and DTCs		PWIDs (injected in L12M)	9.4	(Haghdoost, Sadjadi, et al., 2012)
	2010[1]	10 provinces	2479 tested (62 females)	DICs and outreaches, DTCs		PWIDs (injecting in L12M)	Weighted: 15.1 (9.5-22.9) Higher in Tehran, Fars & Lorestan	(Haghdoost, Osouli, et al., 2012)
	2009-10[1]	Kohgiloyeh and boyerahmad province	158	?		LT Hx of IDU	9.9	(Ilami, et al., 2012)
	2009	National	(No. of PWIDs tested not mentioned)	Prisons		PWIDs (ever injected)	8.1 (4.7-13.8)	(Iran MoH, 2010a)
	2008[1]	Foulad-shahr in Isfahan province	118 (3 females)	RDS		PWIDs (injected in LM)	1	(Zamani, Radfar, et al., 2010)
	2008	National	61.7% of 1531 (From lab records)	DICs		PWIDs	20.5	(Mirahmadizadeh, et al., 2009)
	2006-7[1]	10 provinces	2853 (77 females)	Community, DICs, DTCs		PWIDs	15.3 <25 y/o: 9.4, ≥25: 15.06	(Zamani, 2008)
	2006-7[1]	Tehran	543 (2 females)	RDS, community		Current PWIDs	26.6 (21.3-32.1)	(Malekinejad, 2008)
	2006-7[1]	Tehran	158 (7 females)	One MMT center		Current PWIDs (L2M)	1.3 (0.1-4.5)	(Rahimi-Movaghar, et al., 2010)
	2006-7[1]	Tehran	291 (15 females)	Four DICs		Current PWIDs (L2M)	14.4 (10.6-19.0)	(Rahimi-Movaghar, et al., 2010)
	2006-7[1]	Tehran	449 (16 females)	Community		Current PWIDs (L2M)	11.6 (8.7-14.9)	(Rahimi-Movaghar, et al., 2010)
	2006[1]	Tehran	459 (no female)	Compulsory residential center		Current PWIDs	24.4 (20.5-28.6)	(Jahani, et al., 2009)
	2005	South Khorasan	102 female	Prison		92 non-IDUs & 10 PWIDs	0	(Ghanbarzadeh, et al., 2006)
	2007-8	Tehran	532 (44 females)	Community, RDS		Current non-IDUs (no injection in LT)	6.4 (4.5-8.8)	(Mohraz, et al., 2008)
Jordan	2011	?	?	VCT data		PWIDs	one case	(Jordan MoH, 2012)
	2010-2011	?	?	Of all Heroin injectors admitted, 22% tested for HIV at MoH (NCRA), & all admitted to the PSD (SATC)			Zero	(Jordan MoH, 2012)
	2008[1]	Four Governorates	201	RDS		PWIDs	Zero	(Jordan MoH, 2012)
Kuwait	2010[1]	?	454 or 545?	On admission to prisons or treatment in APH		PWIDs	0.2	(Kuwait MoH, 2012)
	2009[1]	?	255	On admission to prisons or treatment in APH		PWIDs	Zero	(Kuwait MoH, 2012)
Lebanon	?	?	37	?		PWIDs	Zero	(Lebanon MoPH, 2012)
	2007-8[1]	Greater Beirut Area	81	RDS		PWIDs (injected in L12M)	Zero	(Mahfoud, Afifi, et al., 2010)

<- Table A9

COUNTRIES	YEAR	PLACE	NO TESTED	SETTING AND METHOD		DEFINITION OF DUS	HIV PREVALENCE (%)	SOURCE
Morocco	2011	Nador	?	RDS		PWIDs	21.8	(Morocco MoH, 2012)
	2010	Tangier	?	RDS		PWIDs	0.4	(Morocco MoH, 2012)
	2010	?	?	?		PWIDs	14	(WHO, et al., 2011)
	2010	Nador	?	?		PWIDs	17.9	(UNAIDS, 2011a)
	2009	Rabat	146	?		non-IDUs	2.1	(Mathers, et al., 2011; UNAIDS, 2010)
	2009	?	66	Sentinel surveillance		PWIDs	0	(Mumtaz, et al., 2010)
	2008	?	95	?		non-IDUs		(Mumtaz, et al., 2010)
	2008	?	77	Sentinel surveillance		PWIDs	1.3	(Mumtaz, et al., 2010)
	2008	?	?	?		PWIDs	1.6	(Abu-Raddad, Ayodeji Akala, et al., 2010)
	2007	?	30	Sentinel surveillance		PWIDs	0	(Mumtaz, et al., 2010)
	2006	?	147	Sentinel surveillance		PWIDs	0	(Mumtaz, et al., 2010)
Oman	2006-7	Muscat	184 (143 tested & knew the results	Community, incarcerated, DTCs		Problem drug users	20 (Self-report)	(WHO, 2007)
	2006[1]	National	52	All hospitals with psychiatric & mental health service		PWIDs	7.7	(WHO, 2007)
	2006	National	94	All hospitals with psychiatric & mental health service		DUs (all types of drugs)	5.3	(WHO, 2007)
	2005[1]	National	68	All hospitals with psychiatric & mental health service		PWIDs	14.7	(WHO, 2007)
	2005	National	190	All hospitals with psychiatric & mental health service		DUs (all types of drugs)	8.4	(WHO, 2007)
	?	?	929	?		PWIDs	1.4	(Oman MoH, 2012)
	?	?	?	?		PWIDs	2	(UNAIDS, 2011a; WHO, et al., 2011)
Pakistan	2011[1]	16 cities (National estimation)	4,956 (39 females)	(IBBS 4) Community, multistage cluster sampling		PWIDs (regular injecting in L6M, age over 18)	Weighted: 37.8 Higher in Faisalabad and Karachi	(Pakistan National AIDS Control Program, 2012)
	2008[1]	8 cities	2,979 (6 females)	(IBBS III) Community, multistage cluster sampling		PWIDs (Injected in L6M, age over 18)	21 - Highest in Hyderabad (30.5)	(Pakistan National AIDS Control Program, 2008)
	2007[1]	Rawalpindi & Abbottabad	302 and 102	Community		PWIDs	2.6 and 0	(Platt, et al., 2009)
	2006-7[1]	12 cities	4,039	(IBBS II) Time location, cluster sampling		PWIDs (Injected in L6M, age over 18)	15.8 (From 0 to 51.8)	(Pakistan National AIDS Control Program, 2006-7)
	2005[1]	Hydarabad & Sukkar	800	Community (time location sampling)		PWIDs	25.4 and 19.2	(Altaf, et al., 2009)
	2005[1]	7 cities	1,779	(IBBS I) Community (time location sampling)		PWIDs (Injected in L6M, age over 18)	10.8 (From 0.3 to 25.4)	(Pakistan National AIDS Control Program, 2005)
	?	Karachi	200	Community (outreach, peer referral)		PWIDs	23	(Bokhari, et al., 2007)
	?	Quetta	50	?		PWIDs	24	(Achakzai, et al., 2007)
Palestine	2010	EJG	199	RDS		PWIDs (injected in LM)	0	(Štulhofer, et al., 2010)
Saudi Arabia	2010-11[1]	?	111	The largest DTC		PWIDs	8.1	(Saudi Arabia MoH, 2012)
	2010-11	Riyadh	3,441	Admissions to AL Amal Hospital		Drug users	0.6	(Saudi Arabia MoH, 2012)
	2010[1]	?	2,925	Routine testing		PWIDs	0.4	(Saudi Arabia MoH, 2012)
	2009[1]	?	2,668	Routine testing		PWIDs	0.26	(WHO Eastern Mediterranean Region)
	2007[1]	Six cities	1,500	Drug rehabilitation centers		PWIDs	0.27	(Saudi Arabia MoH, 2010)
	2007[1]	?	750	Sentinel Surveillance		PWIDs	0.8	(Saudi Arabia MoH, 2012)
Syria	2011[1]	National surveillance data	478	Mostly arrested or in prison		PWIDs	Zero	(Syria MoH, 2012)
	2009[1]	National surveillance data	386	Mostly arrested or in prison		PWIDs	Zero	(Syria MoH, 2010)
	2006	Greater Damascus	336 DUs (168 ever injected) 204 tested			DUs (Injected in LM or used Heroin, Cocaine, or ATS in LM, over age 18)	0.5 (Rapid test)	(Syria Mental Health Directorate, 2008)
Tunisia	2011[1]	Tunis and Bizert	807	RDS		PWIDs	2.4 (1.1-3.7)	(Tunisia MoH, 2012)
	2009[1]	Tunis and Bizert	713 (65 females)	RDS		PWIDs	3.1	(Tunisia MoH, 2012)

1 Studies that are included in Table 6.

2 For those studies that the number of female cases is not mentioned, the information on gender distribution of the sample was not available.

Table A10 Studies from countries of the region on the prevalence of HCV and HBV infections among drug users since 2005

COUNTRY	YEAR	PLACE	NO TESTED	SETTING	DEFINITION OF DUS	TESTS	PREVALENCE (%)	SOURCE
Afghanistan	2009	Kabul, Herat & Mazar	548 male	RDS, community	PWIDs	HCV HBV	25.5-57.9 5.9-8.8	(Johns Hopkins University; HIV surveillance project, 2010)
	2007-9	Kabul	483 male	Time-location sampling, community and HR program	PWIDs (injection in LM)	HCV-Ab HBS-Ag	36.1 (95% CI: 31.8-40.4) 4.6(95% CI: 2.9-6.9)	(Todd, et al., 2011)
	2006-8	Herat, Jalalabad & Mazar	623 (8 females)	Community	PWIDs (Injection in L6M)	HCV-Ab HBS-Ag	36.0 (95% CI: 33–41) 5.8(95% CI: 3.9–7.6)	(Nasir, et al., 2011)
	2005-6	Kabul	464 (One Female)	Community	PWIDs (injected in L6M)	HCV-Ab HBS-Ag	36.6 (32.2–41.0) 6.5 (4.2–8.7)	(Todd, et al., 2007)
Iran	2009-10	Kohgiloyeh& boyerahmad province	158	?	Ever injected	HCV	42.4	(Sarkari, et al., 2011)
	2010-11	Tehran, Mashad, Shiraz	226	PWIDs in DTCs or DICs	PWIDs (injected in L12M)	HCV HBV	38.6 3.6	(Haghdoost, Sadjadi, et al., 2012)
	2008	Fooladshahr in Isfahan province	117 (3 females)	RDS	IDU in LM	HCV HBS-Ag	59.4 0.7	(Zamani, Radfar, et al., 2010)
	2007	Tehran	895 (38 females)	Community, DTCs, DICs	PWIDs (injecting in L2M)	HCV-Ab HBS-Ag	34.5 (95% CI: 31.4-37.7) 24.7	(Rahimi-Movaghar, et al., 2010)
	2006	Tehran	454 men	Mandatory rehabilitation center	Current PWIDs	HCV	80.0 (95% CI: 76.2-83.6)	(Kheirandish, et al., 2009)
Lebanon	2007-8	Beirut	106 81	RDS	PWIDs	HCV HBV	52.8 5	(Mahfoud, Kassak, et al., 2010a, 2010b)
Oman	2011			Hospital-based DTCs	PWIDs	HCV	48	(Oman MoH, 2012)
Pakistan	2007	Rawalpindi& Abbottabad	302 and 102	Community	PWIDs	HCV	17.3 and 8	(Platt, et al., 2009)
	?	Quetta	50		PWIDs	HCV HBV	60 6	(Achakzai, et al., 2007)
Palestine	2010	EJG	199 (3 females)	RDS	PWIDs	HCV HBS-Ag	42 5.3	(Štulhofer, et al., 2010)
Saudi Arabia	2003-6		344	In a local rehabilitation center	Problem DUs	HCV-RNA HBV-DNA	38 12	(Alzahrani, 2008; Alzahrani, et al., 2009)

Table A11 Main Researches on drug use since 2005 [1]

COUNTRY	STUDY YEAR	OBJECTIVE	SAMPLE	PLACE	REPORT AVAILABLE[2]	SOURCE
Afghanistan	2006-7	Mapping of high risk populations	?	Kabul, Jalalabad, Mazar	No	(Afghanistan MoPH, 2010)
	2009	National drug use survey	2614 regular drug users & 2614 key informants	All provinces	Yes	(UNODC, et al., 2009)
Algeria	2010?	National survey on drugs in Algeria	?	?	No	(Kingsley K. African News reporter, 2010)
Bahrain	2006	KAP study of PWIDs in a rehabilitation center	523 DUs included 421 PWIDs (225 IDU in LM)	Manama	No	(Bahrain MoH, 2012)
Egypt	2005-6	National survey on drug use	40,083	National	No	(WHO Website)
Iran	2011	Iranian national mental health survey (IranMHS)	7,900	National	Yes	(Rahimi-Movaghar, et al., 2012)
	2007	RSA of drug users	Including 2091 PWIDs	National	Yes	(Narenjiha, et al., 2009)
	1998-2007	SR on HIV prevalence of PWIDs and non-IDUs	3,916 PWIDs, 2,275 non-IDUs	National	Yes	(Amin-Esmaeili, Rahimi-Movaghar, Haghdoost, et al., 2012; Rahimi-Movaghar, Amin-Esmaeili, et al., 2011)
Iraq	2007-8	National mental health survey	4,322	National	Yes	(Alhasnawi, et al., 2009)
Jordan	2011	KAP study of PWIDs	214 Heroin PWIDs	Four governorates	Yes	(Shahroury, 2011)
Lebanon	2010	Situational needs assessment	319 from outreach & 75 DTCs	Six governorates	Yes	(Skoun Lebanese Addictions Center, et al., 2011)
	2009	Data collection through outreach activity	1701	Five governorates	No	(Skoun Lebanese Addictions Center, et al., 2011)
Morocco	2005	Rapid assessment of HIV in drug users	495 (street, prisons, hospitals)	Five cities	Yes	(Morocco MoH, 2005)
	2004-5	Moroccan national study on mental disorders	5,498	National	Yes	(Kadri, et al., 2010)
	2006	Survey in prison on drug use	234	?	No	(WHO Website)(WHO website, EN, 132)
Oman	2006	HIV risk behaviors in drug users	184 (three groups)	Muscat	No	(APMG, 2008)
Pakistan	2006	Drug use survey	4000 drug users	National	Yes	(Pakistan Ministry of Narcotics Control, 2007)
Palestine	2006	Assessment of the drug demand and supply status	?	West Bank and Gaza	No	(UNAIDS, 2007)
	2009	Situation assessment on drug use and HIV vulnerability in prison settings	196 (7 females)	7 prisons in OPT	No	(UNAIDS, et al., 2012)
	2010	Assessment of drug use and HIV among drug users	352 DUs (42% IDU)	West Bank, Gaza & EJ	Yes	(UNODC, et al., 2011)

1 This table does not include bio-behavioral surveys presented in Table 5.

2 A specific report from the study was made available for the authors of this review.

Table A12 Risk behaviors [1]

[1] The differences between data provided in this table and tables 10 to 12 are because of the differences in the denominators.

COUNTRIES	YEAR	PLACE	SAMPLE SIZE	SEXUAL RISK BEHAVIORS		SHARING RISK BEHAVIORS	HIV KNOWLEDGE	SOURCE
Afghanistan	2009 (Drug survey)	National	2614 DUs	Ever had sexual intercourse: 6%, average 2 partners Never used condom in LM: Most		Sharing N/S: 87% , 60% of them after use of 2 to 5 people, No cleaning: most	HIV Knowledge: low	(UNODC, et al., 2009)
	2009 (IBBS)	3 cities	548 men	Condom use during last sex: 17-32% Ever had sex with another man: 14-26% Ever paid for sex from FSWs: 47-64%		Ever shared N/S: 10.9-33.6% Sterile needle use in last injection: 86-98% (average: 94%) (Might be due to sampling bias, samples recruited from intervention sites)	Ever heard of HIV: 83.3-96.9% Identified needle sharing as HIV transmission route: 81.2-97.2% Knowing condom as a protection for HIV: 85.6%	(Johns Hopkins University; HIV surveillance project, 2010)
	2007-9	Kabul	483 men	(From 443 PWIDs with Hx of sex) Ever paid woman for sex: 40.4% Ever had sex with another male: 11.1% Ever used a condom: 11.1% Prevalence of syphilis: 1.2% (95% CI: 0.5-2.7)		Ever shared N/S: 16.9% Shared N/S in L3M: 6.4% Ever shared other injecting equipment: 38.4% Shared other injecting equipment in L3M: 27.3%		(Todd, et al., 2011)
	2005-8	4 cities	1078 men	Prior sexual experience: most (90.3%), of whom any condom use: 27.6% Sex with FSWs in LT: 58.1% Sex with men or boys in LT: 25.7% Prior condom use with FSWs: 32.6% Prior condom use with male partners: 10.8% STI diagnosis in LT: Few (6.3%) STI symptoms in L6M: 10.4% Prevalence of syphilis: 3.7% to 13.9%		Ever imprisoned: 62.9% of whom 17.2% (n = 66) injected in prison Needle sharing in the L6M: 30.2%	Aware of condoms: Two-thirds (62.9%), of whom just 268 (39.6% of those aware, 27.6% of those ever sexually active) had ever used a condom.	(Todd, et al., 2010)
Algeria	2004-5	3 cities	285 DUs	Unsafe sex: two-thirds Exchange sex for money: 43% More than one sexual partner in L12M: almost half Sex with same sex: 20%		Ever shared N/S: 41% High rate of sharing behavior	Ever heard of HIV: 98% Identified sharing as HIV transmission route: 45% Knowing condom as a protection for HIV: 79%	(APMG, 2008; Moutassem-Mimouni, et al., 2006)
Bahrain	2006 (KAP)	Manama	523 DUs	Sexually active: 90%, only one-quarter had ever used a condom Condom used consistently: 50% Ever used condom with a commercial sex partner: three-quarter of those with such a sex, of whom 85% used it regularly in L12M Condom use in last sex: (Only 61 responded): 80%		(N=421 PWIDs) Access to new N/S: 84% Able to buy syringes from a pharmacy: 35% Ever shared N/S: One quarter Among those who ever shared N/S, 31.8% share regularly and 30% sometimes. Only one third of those who shared, share a needle with just one partner	(N=522 DUs) Ever heard of HIV: 99.6% Had a friend or relative who is infected with HIV or has died of AIDS: 52.6 %. Knowing sharing N/S as a route of HIV transmission: 67% Knowing condom use as a HIV preventive measure: 72 % Knowing that a healthy person can have HIV: 86%	(Bahrain MoH, 2010)
Egypt	2010	Two governorates	560	Condom use at last sex with a commercial partner: 24.6% Condom use at last sex with a non-commercial regular partner: 4.8% Condom use at last sex with non-commercial non regular partner: 14.3% Exchanged sex for money: 13.1% and 10.8% in Cairo and Alex MSM activity: 14.3% and 7.7% in Cairo and Alex		Sharing N/S in LM: 22.9% and 40.5% in Cairo and Alexandria	Ever heard of HIV: almost all	(Egypt MoH, 2012)
	2006	Cairo	413 men	Ever had sex: 96.2 Having had sex in L12M: 67.8% From the above, having sex with FSW: 13.3% Sex with non regular non-commercial partners: 28.7% Sex with regular non-commercial partners: 88.2% Sex with men: 9.4% of the sexually active men who inject drugs Condom use at least once with FSW: 11.8% Ever condom use with non-regular non-commercial partner: 34.1% Ever condom use with regular non-commercial partner: 12.8%		Injected with used needles in LM: 53% Shared N/S with one or more persons in LM: 32.2%	Ever heard of HIV: almost all Able to report modes of transmission and prevention: majority	(FHI/MOH Egypt, 2006)
Iran	2010-2011	3 cities	226	Ever used condom with primary sex partner: 55.8% From the above, used condom in last sex: 63.8% Ever had sex with non-primary partner: 69.5% From the above: condom use in last sex with the above partner: 51.6% Sex with a man in LM: 19.5%			Knowing shared injection as HIV transmission route: 99.1% Knowing condom as a HIV prevention mode: 84%	(Haghdoost, Sadjadi, et al., 2012)
	2010	10 provinces	2546	Ever had sex: 85% Married cases: Sex with wife in L12M: 58.9% From the above: used condom in last sex with wife: 34.1% From those ever had sex, sex without exchanging money with non-spouse in L12M: 29% From the above, used condom in last sex with the above: 43.1% From those ever had sex, sex with paid partner in L12M: 22.4% From the above, used condom in last sex with above: 53.3% No. of paid partner more than one in L12M: 71.1% From men ever had sex, ever had sex with a man: 14.4% From men ever had sex, had sex with a man in L12M: 3.1% From the above, used condom in last sex with a man: 41.5% From men ever had sex, ever had sex with a man for money/goods: 7.6% From men ever had sex, sex with a man for money/goods in L12M: 1.8%		Using non-sterile syringe in last injection: 9% Shared N/S in LM: 8% Shared other injection equipment in LM: 12% Ever incarcerated: 77.9% From those incarcerated, ever injected in prison: 26.3% From those ever injected in prison, injected with a used N/S in last injection: 72.7% , injected with a used other injection equipment in last injection: 62.5%	Ever heard of HIV: 96.9% Knowing shared injection as HIV transmission route: 98.6% Knowing condom as a HIV prevention mode: 94.6%	(Haghdoost, Osouli, et al., 2012)
	2008	Foulad-shahr	118	(Men) Ever sex with men: 11.3%		Ever used a shared N/S: 31.2% Ever used a shared cooker: 43% Shared N/S in LM: 8.2%		(Zamani, Radfar, et al., 2010)
	2008	National from DICs	1531	Sex with same sex in LM: 19.4% Sex with someone other than spouse: 47.4%		Percent of injections with used N/S in past week: 20%		(Mirahmadizadeh, et al., 2009)

<- Table A12

COUNTRIES	YEAR	PLACE	SAMPLE SIZE	SEXUAL RISK BEHAVIORS		SHARING RISK BEHAVIORS	HIV KNOWLEDGE	SOURCE
Iran	2006-7	10 provinces	2853	Ever had sex: 86.9% From those ever had sex, had sex with a regular partner in last 12M: 51.8% From those ever had sex, had exchanged sex in last 12M: 21.8% From those ever had sex, sex with non-regular unpaid partner in last 12M: 30.1% Used condom in last sex (from those who had sex in the condition): Regular: 40.7% sex exchange: 71.9% non-regular unpaid:55.3% (n=2776) Ever had sex with a man: 14.6% Men had sex with another men in L12M: 7.4% Condom use in last sex in men ever had sex with a man: 9.6%		Used sterile N/S in last injection: 84.3% Injected with N/S of someone else's in last injection: 3.9%	Ever heard about HIV: 94.3% Knowing that sharing needles is a way HIV transmission: 90.5% Knowing condom use for HIV prevention: 83.7% Good HIV Knowledge: 24%	(UNAIDS, 2010; Zamani, 2008)
	2007	All provinces	2091			Ever shared N/S: 35.8%		(Rafiey, et al., 2009)
	2006-7	Tehran	904	Sexually active in L6M: 50.4% Any sexual relationship with non-spouse: 30.3% (n=866) Men sex with men: 10% Always used condom with FSWs from those with sex with FSWs: 28.7% Always used condom with MSMs from those with sex with MSMs: 4.4%		Any sharing behavior in L6M: 76.6% Any sharing in last injection: 25.2% Hx of sharing N/S in prison: 15.2% (From those injected in prison: 73.7%)	Ever heard of AIDS: 80% Knowing that sharing needles is a way HIV transmission: 64.7%	(Rahimi-Movaghar, et al., 2008)
	2006-7	Tehran	549	Ever had sex: 81.7% Ever sex with men: 8% Ever exchanges sex for money or drugs: 9%		Ever shared N/S: 36.7%		(Malekinejad, 2008)
	2006	Tehran	459 men	Ever had sex: 76.5% Ever sex with FSWs: 23.3%		Ever incarcerated: 74.3%, from whom injected in prison: 8.2%		(Kheirandish, et al., 2010)
Iraq								
Jordan	2011	4 Governorates	214	Condom use in last sex: 7%		used a syringe already used by another addict in last week: 63%	HIV knowledge: inadequate Knowing that sharing needles can lead to HIV and HCV transmission: 43% and 24% Knowing that sexual contact with an HIV positive person can transmit HIV: 65%	(Shahroury, 2011)
	2008	4 Governorates	203	Sexually active in L12M: Two thirds (64%) More than one sex partner in L12M: almost half [15% (2-3), 24% (4-9) and 8% 10 or more sex partners]. Having commercial sex partner in L12M: one third (only 6% one partner) MSM in L12M: 12% of 53% who responded. “Never” using a condom with commercial and non-regular partners in L12M: 35% and 42%		Sharing N/S in last injection: 61.1% Sharing N/S in LM: 4% sharing half the time, 15% always sharing, 23% most times, 27% occasionally and 31% have never shared. Sharing of other injecting equipment: almost three-quarters of participants (25% always, 16% almost every time and 35% sometimes).	HIV knowledge: inadequate Knowing that sharing needles can lead to HIV transmission: almost all (96%) Knowing that condom use is an HIV prevention method: almost half (53%)	(Jordan MoH, 2012)
Kuwait						It seems that sharing of injection equipment is common, both in community and in prison		(Kuwait MoH, 2012)
Lebanon	2009 2008-9 2008 2007-8 2005-7	Greater Beirut	1701 247 311 81 212	Used condom in last sex with regular partner: 7.4% Used condom in last sex with a non-regular sex partner: 22.7% Always used condoms: 55% (n=81) Ever bought sex: 50% Ever sold sex: 12% (n=15) Condom use in last sex with non-regular non-commercial partner: 45% Always used condom in LM: 31.4%		Ever shared a needle: 42.6% Ever shared a needle: 27.5% "Always" using a new N/S: 24% "Most of the times" using a new N/S: 30%	Knowing that unprotected sex can transmit HIV: 84% Knowing condom as a protection for HIV: 86% Identified sharing as HIV transmission route: 97%	(Lebanon MoPH, 2010a) (Lebanon MoPH, 2010a) (Lebanon MoPH, 2010a) (Lebanon MoPH, 2010a; Mahfoud, Afifi, et al., 2010) (Lebanon MoPH, 2012)
Libya								
Morocco	2011	Nador		Used condom in last sex:29.8%		Used sterile injection eq. in last injection: 69.1%		(Morocco MoH, 2012)
	2010	Tangier		Used condom in last sex:32.8%		Used sterile injection eq. in last injection: 65.3%		(Morocco MoH, 2012)
	2005	5 cities	495 DUs	Ever sex with same sex: 13.1% of men and 10.4% of women Involved in sex trade: Most women and two-third of all subjects Having multiple sex partner in L12M: 48.1% of men, 70.1% of women Not used condom: 75% Used condom in last sex: 13.1%		(n=366 PWIDs) Used sterile injection eq. in last injection: 7.4% Always shared: 5.3% Attempt to des-infect used N/S: three-Fourths, almost one-third des-infected with water Women are younger and more likely to share N/S than men. Sharing less in Casablanca than other cities	Knew sex as mode of HIV transmission: 80% Knowing condom as a protection for HIV: 75.3% Less knowledge about other routes	(Mathers, et al., 2011; Morocco MoH, 2005)
Oman	2006-7	Muscat	184 DUs	Sex with 2 to 8 sexual partners in LM: 91%–100% Engaged in sex work for drugs/money: 60-97% Ever condom use: 53%–69% Always condom use: 12%–25% Mean number of sexual partners of MSM PWIDs: 2		Ever shared: more than 90%, with an average of 2-4 times in LM. Used bleach when sharing: none Use of non-sterile N/S: 44%–70% An average of six reuse incidents/per month From community-based participants 7 individuals had injected drug inside prison and all had shared N/S inside prison	High HIV knowledge	(Abu-Raddad, Ayodeji Akala, et al., 2010; WHO, 2007)

<- Table A12

COUNTRIES	YEAR	PLACE	SAMPLE SIZE	SEXUAL RISK BEHAVIORS		SHARING RISK BEHAVIORS	HIV KNOWLEDGE	SOURCE
Pakistan	2011	16 cities	4956	Ever had sex: 93.2% Had sex with FSW in L6M: 13.9% From above, condom use in last sex with FSW: 28.4% Had sex with a MSW/HSW in L6M: 7.1% From above, condom use in last sex with MSM/HSW: 16.3% Sex for drugs or money in L6M: 15.3% High variations between cities		Sharing N/S at last injection: 39.2% Higher in women Always using new syringe in LM: 38.6% Never used new syringe in LM: 2.5% High variations between cities	Ever heard of HIV: 86.7% Know HIV can be transmitted by sharp instruments/needle: 75.6% Aware of sexual intercourse as mode of HIV transmission: 72.7% Know condom as a protection for HIV: 68.8%	(Pakistan National AIDS Control Program, 2012)
	2008	8 cities	2979	Ever had sex: 95.4% Had sex with FSW in L6M: 17.7% From above, condom use in last sex with FSW: 31.0% Had sex with a MSW/HSW in L6M: 13.9% From above, condom use in last sex with MSM/HSW: 13.8% sex for drugs or money in L6M: 16.8% High variations between cities		Injected with a needle used by another PWIDs at last injection: 22.5% High variations between cities	Know HIV can be transmitted by sharp instruments/needle: 74.5% Aware of sexual intercourse as mode of HIV transmission: 69.9%	(Pakistan National AIDS Control Program, 2008)
	2006-7	12 cities	4039	Ever had sex: 84% Condom use in last sex with regular partner: 16.5% Always use condom with regular partner: 9.9% Never used condom with regular partner: 40.7% Had sex with FSW in L6M: 26.6% Condom use in last sex with FSW: 20.9% Had sex with MSW/HSW in L6M: 13.2% Condom use in last sex with MSW/HSW: 12.9%		Always used a sterile syringe in LM: 41% Never used a new syringe in LM: 5.3% Injected with a used needle in last injection: 27.8% Shared injection paraphernalia in last injection: 36%	Ever heard about AIDS: 74% Know HIV can be transmitted by sharp instruments/needle: 50.1% Know clean N&S prevent HIV: 39.9% Know condom as a protection for HIV: 32.8%	(Pakistan National AIDS Control Program, 2006-7)
	2005	7 cities	2432	Ever had sex: 90% Always use condom with regular partner: 5.3% Never used condom with regular partner: 64.6% Had sex with FSW in L6M: 12.6% Condom use in last sex with FSW: 16.6% Had sex with MSW/HSW in L6M: 14.7% Condom use in last sex with MSW/HSW: 12.5%		Always used a sterile syringe in LM: 21.9% Never used a new syringe in LM: 12.7% Injected with a used needle in last injection: 35.2% Shared injection paraphernalia: 7.9%	Ever heard about AIDS: 66.6% Know HIV can be transmitted by sharp instruments/needle: 51% Knowing condom as a protection for HIV: 31%	(Pakistan National AIDS Control Program, 2005)
	2005	2 cities	800			Sharing in last injection: 8.5% in Heidarabad & 33.6% in Sukur		(Altaf, et al., 2009)
Palestine	2010	EJG	199	Had sex in LM: 63.3% Used condom consistently in LM: 22.9% Using condom at most recent sex: 30.4% More than one sexual partner in the past year: 29.2% Sold sex in the last 12 months: 7.9%, condom use at last sex with a client: 49.1% Bought sex in the last 12 months: 17.5%		Sterile syringe in last injection: 89% Shared in the last week: 31.7%	Correctly identifies ways of preventing HIV transmission and rejects major misconceptions about HIV transmission: 17.4% Correctly recognized HIV transmission by syringe sharing: 95.5%	(Štulhofer, et al., 2010)
	2010	National	352 DUs	(n=352) Ever had sex: 88%, 48% of them with more than one partner Among sexually active users, never or almost never used a condom: 55% Condom use in last sex: 28%		(n=148 PWIDs) Ever shared needles: 47%, higher in West Bank More sharing in those inject in shooting galleries, less sharing in refugee camp (n=352) Injected in prison: 19% from those were imprisoned, Among those who injected in prison, sharing in prison: 22%, sharing in prison highest in EJ	(n=352) Aware of sharing injection as HIV transmission route:77% Aware of vaginal sex as HIV transmission route: 85% Aware of anal sex as HIV transmission route: 76%	(UNODC, et al., 2011)
Qatar								
Saudi Arabia								
Syria	2006		336 DUs	(n=336) Ever had sex: 90% Had sex in L12M: 78% (From the above 254 DUs) Average sex partner: 7 (From the above 254 DUs) Always used condom in LM: 19% never used condom: 21% (n=336) Ever had sex for money/materials: 47% Had sex for money in LM: 40% from whom always used condom: 17% (n=336) Ever had sex with same sex: 6%, no condom use in L12M Inside prison: MSM: 5%, average sex partner: 3 Nobody used condom		(n=168, ever injectors) Ever sharing: 46% Ever sharing spoon: 69% From those shared, not cleaned the used syringe: 40% (n=157, injectors in LM) Shaing in LM: 28% (Sy-9)	Identified sharing as a root of HIV transmission: 47% Knowing condom as a protection for HIV transmission: 38%	(Syria Mental Health Directorate, 2008)
Tunisia	2011	2 cities	807	Used condom in last sex: 19.3% (in <25 y/o: 32.3%, in >25: 15.7%) Engaged in sex trade: 28.3%		Not shared in LM: 70.4% Used new N/S in last injection: 87.7% (in <25 y/o: 90.5%, in >25: 87%) Access to sterile N/S.: 96.1%	Good HIV knowledge: 49.7% (Poor knowledge was important risk factor for HIV infection)	(Tunisia MoH, 2012)
	2009	2 cities	713	Used condom in last sex: 35% (in last unpaid sex: 34%, in paid sex: 36.8%)		Not shared in LM: 53.9% Used new N/S in last injection: 78.3%		(Tunisia MoH, 2012)
UAE								
Yemen								

Table A13 Summary of proposals approved by GFATM on AIDS from the region (Round 1 to 10)

COUNTRIES	ROUND NO.	APPROVED GRANT AMOUNT	FIVE-YEAR MAX. AMOUNT		STRATEGIES RELATED TO DRUG USE
Afghanistan	7	1,007,000	6,316,000		Includes injecting drug users as main target group. – PWIDs in community (1,800); prisoners (3,520 IDU for OST and 4,790 total prisoners for VCT) – Establishment of four Provincial IDU Drop-in-Centers, with outreach capacity for harm reduction interventions and four OST centers. – Capacity development, with standard guidelines, on Needle-Syringe Programs including monitoring – To strengthen the health system as it relates to HIV – To create a supporting and enabling environment for an effective national response to HIV
Algeria	3	8,860,000	8,860,000		Includes drug users as vulnerable groups. Strategies: – To improve access to STI/HIV/AIDS risk prevention with and for vulnerable populations – Prevention activities (no details) and promotion of free voluntary anonymous testing among risk behavior groups; Proportion of risk behavior groups effectively reached until 2006: 40%
Egypt	6	5,320,000	11,527,000		Includes PWIDs as MARPs. Strategies: – Outreach to populations most-at-risk based on currently implemented outreach programs. Outreach teams will attract the target populations to drop-in centers with different services. – The outreach programs include the provision and distribution of condoms, referral to VCT, training on proper condom use, safe injection, participatory development and distribution of educational materials especially designed for this population, peer-based training and awareness rising for target populations on harm reduction according to cultural norms.
Iran	2	15,922,000	15,922,000		Include PWIDs. Outcome and impact indicators on PWIDs included. – Undertake Situation Assessments (including behavioral surveys) on PWIDs in 100% of Provinces by 2005 – Expand HIV/AIDS Surveillance System on vulnerable groups to Cover 100% of provinces and Prisons – To increase access of PWIDs to harm reduction and other HIV prevention services from 1% to 40% by end 2007 o Percent of PWIDs reporting utilization of any harm reduction program: 40% o Percent of eligible PWIDs requesting methadone treatment who are placed on methadone: 12.5% o Percent of PWIDs reporting utilization of needle-syringe programs: 20% o Percent of PWIDs reporting contact with outreach programs: 30% o Production and dissemination of harm reduction IEC materials o Training of health care providers on HIV/AIDS treatment and care and management of HIV infected drug users – To increase the percentage of prisoners who have access to dedicated HIV/AIDS prevention and care programs (triangular clinics) from 4% to 70% by 2007 o Bleach programs and methadone maintenance be introduced into selected prisons by the end of 2002. A pilot needle-syringe program is planned for one prison. STI prevention and treatment, and condom distribution as general strategies
	8	9,295,097	31,321,480		
Jordan	2	2,483,000	2,483,000		Includes drug users as vulnerable groups. Strategies: – Implementing STI and HIV prevalence studies on drug users – Implementing sustainable outreach for drug users (the type of interventions for outreach were not specified)
	6	3,000,000	6,800,000		Includes PWIDs as vulnerable groups. Strategies: – Behavioral surveys on PWIDs – Peer education programs for drug users in prisons and in drug treatment centers – The related drug treatment sectors recognized as partners
Morocco	1	9,238,000	9,238,000		(The English summary version was reviewed) Includes drug users as vulnerable groups. Strategies: – Prevention and care for drug users (Details not included in summary version)
	6	10,680,000	26,453,000		Includes PWIDs as MARPs. Strategies: – Advocacy – Design and support of adapted information and communication – Upgrading 6 advisory centers – Raising awareness and training of health staff and facilitators – Setting up a program of exchange of needles and substitution (Methadone) for more than 500 injecting drug users up to 2011 – Providing other drugs for withdrawal support – Implementing local interventions for 4,500 injecting drug users on site up to 2011 – Production of educational material and tools adapted to reducing risks to HIV – Studies and assessments in the context of the program for reducing risks in injecting drug users VCT, condom distribution, ART, Civil society strengthening as general strategies
	10	13,177,987	42,103,120		

<- Table A13

COUNTRIES	ROUND NO.	APPROVED GRANT AMOUNT	FIVE-YEAR MAX. AMOUNT		STRATEGIES RELATED TO DRUG USE
Pakistan	2	8,312,000	8,312,000		No specific intervention mentioned for drug users VCT and ART as general approach
	9	10,552,166	41,802,987		Title of the grant: Public Private Partnership to improve harm reduction, care & support services and implementation capacity
Palestine (West bank & Gaza)	7	5,014,000	10,832,000		Special focus on scaling up access to comprehensive services for drug users [DUs], with a particular focus on people who inject drugs [PWIDs] – Needle Syringe Exchange Program – Opiate Substitution and Drug Treatment Programs (including detoxification) – Two Drop In Centers that provide access to psycho-social support, counseling, livelihoods, life skills education, drug and HIV/AIDS prevention education, and harm reduction programs – Training of 560 injecting drug user peer educators
Syria	10	1,709,182	3,382,740		Includes drug users and prisoners as target groups for HIV prevention envisaging promotion of condom use Estimating population size of MARPs and mapping of risk and vulnerability factors
Tunisia	6	9,565,000	17,383,000		Includes PWIDs as Most-at-risk populations. Strategies: – 60% of PWIDs having had an anonymous VCT until year 5 of the program – 60% of PWIDs exposed to outreach programs (education by peers, risk reduction) until year 5. Roughly 1000 injecting drug users specially targeted and supported by outreach activities. – Condom distribution – Conducting two behavioral surveys on injecting drug users
Yemen	3	14,460,000	14,764,000		Drug users not included

Table A14 Availability of the HIV Counseling and Testing (HCT) and the beneficiaries

COUNTRY	HCT CENTERS	CLIENTS OF HCT CENTERS	SOURCE
Afghanistan	(end 2009) 13 centers - (2010) 11 centers	(2010) 22844 clients in one year	(Afghanistan MoPH, 2012; WHO, et al., 2011)
Algeria	(2011) 59 centers in 48 provinces	(2010-11) (Data from 43 centers) 87,678 clients	(Algeria MoH, 2012)
Bahrain	No VCT available		
Egypt	(Last 7 years, end 2011) 23 Governmental units of VCT in 17 governorates (14 fixed and 9 mobile), available in 4 prisons	(Last 7 years, end 2011) Cu.: 35,000 clients	(Egypt MoH, 2012)
Iran	(2010) 447 centers all over the country (in triangular clinics, in prisons and pure VCT facilities) (All prisons with over 300 inmates have VCT service)	(Oct 2009-Sep-2010) 52,802 clients over age 15	(Iran MoH, 2012)
Iraq	98 centers (18 of which in Baghdad) No. of centers are constantly increasing.	(end 2011) Cu. No. of clients: 3819	(Iraq MoH, 2012)
Jordan	12 centers, most in Amman	(2010) 134 clients in one year	(Jordan MoH, 2012; WHO, et al., 2011)
Kuwait	Not available		
Lebanon	(2010) 21 VCT facilities	(2008-9) 2700 clients	(Lebanon MoPH, 2012; WHO, et al., 2011)
Libya	One center (NCDC reference laboratory in Tripoli, used primarily for confirmatory testing from other laboratories)		(Libya MoH, 2012)
Morocco	(2010) 103 centers all over country	(2011) 60,446 clients over age 15 in year	(Morocco MoH, 2012; WHO, et al., 2011)
Oman	Absence of functional VCT		(Oman MoH, 2012)
Pakistan	16 sites		(Pakistan MoH, 2012)
Palestine	Five centers in WB, Gaza, and East Jerusalem		(Rosenthal, et al., 2011; UNAIDS, 2007)
Qatar	Available		(Qatar SCH, et al., 2012)
Saudi Arabia	A VCT center in every region, mainly in hospitals - 6 new mobile VCT units in 5 cities, 24 hours hotlines for HIV counseling services, website		(Saudi Arabia MoH, 2012)
Syria	23 VCT centers	(2011) 1541 clients	(Syria MoH, 2012; WHO, et al., 2011)
Tunisia	(2011) 19 or 25? Centers, VCT is available in prisons	(2011) 8573 clients	(Tunisia MoH, 2012)
UAE	Not available		(United Arab Emirates MoH, 2012)
Yemen	(End 2011) 27 sites	(2010) 5181 clients	(Yemen MoPH&P, 2012)

Table A15 ART availability [1]

COUNTRY	ART SITES	NUMBER OF PLHIV UNDER ART [2]
Afghanistan	2 centers	110
Algeria	9 centers	2680
Bahrain	One center (In Psychiatric hospital, Rehabilitation center for DUs)	39
Egypt	6 cities in 5 governorates	760
Iran	103 clinics and 134 centers in prisons	2752
Iraq		8
Jordan	Probably one center	108
Kuwait		186
Lebanon	One center (Badran, 2012)	412 (UNAIDS, 2011a)
Libya	5 sites in three cities	2000 to 2500
Morocco	Six cities	4047
Oman	15 sites throughout country	661
Pakistan	17 centers	2491
Palestine	4 centers (Štulhofer, et al., 2010)	11 (Štulhofer, et al., 2010)
Qatar	One center (HMC hospital)	
Saudi Arabia	8 centers throughout country	1850
Syria	14 centers (UNAIDS, 2011a)	131
Tunisia	Four centers in different cities	412 (WHO, et al., 2011)
UAE	11 Governmental centers throughout country	229
Yemen	5 centers in main cities	531

1 Source of the information is 2012 country progress reports on HIV/AIDS, unless other source is specified.

2 In some countries, it is unclear whether the reported number refers to those receiving medicine for antiretroviral therapy, or includes all PLHIV attending ART centers.

Table A16 NGOs working on HIV prevention

COUNTRY	NGO STRUCTURE
Afghanistan	Above 75 percent of services to PWIDs are provided by NGOs (Afghanistan MoPH, 2012).
Algeria	Active NGOs for HIV prevention: PLHIV Group: El Hayat, The Association for Protection Against AIDS (APCS), ANNIS association, AIDS Solidarity association (Algeria MoH, 2012; MENAHRA, 2010b; UNAIDS, 2011a).
Bahrain	Not active for high risk population.
Egypt	NGOS mainly involved for PWIDs and MARPs: National NGO “Youth Association for Population and Development” (YAPD) Freedom, Waey, Hayat, Befrienders, Caritas, Refugee Egypt (Egypt MoH, 2012).
Iran	Large number of NGOs, PLHIV, self-help groups and private sector are involved in harm reduction interventions.
Iraq	Not active for vulnerable groups and HIV prevention.
Jordan	57 CBOs and NGOs active in AIDS prevention including prevention in vulnerable groups (Jordan MoH, 2010) The main one is "Future Guardians".
Kuwait	Not active for vulnerable groups and HIV prevention
Lebanon	More than 75% of HIV interventions for PWIDs is estimated to be provided by CSOs (Lebanon MoPH, 2010b) SIDC is the only NGO providing NSP. The secretariat of Regional NGO (MENAHRA) is in Lebanon and another NGO (SIDC) is the regional knowledge hub for harm reduction.
Libya	AIDS NGO Network in Libya; active NGOs working on HIV: the Red Crescent, the Scouts Movement, the Libyan Youth Organization Al-Chabab Al Lybi, Attahadi and Weetasemu. The Association to Care for Infected Children: stigma and discrimination faced by children infected with HIV (Libya MoH, 2010). A PLHIV group (HOPE) exists.
Morocco	Most HIV prevention in PWIDs is carried out by NGOs. Active NGOs in HIV prevention for PWIDs in several cities: l’Association CMP Hasnouna (ASCMP), Association marocaine de lutte contre le SIDA (ALCS), TheL’association de réduction de risque (RDR) (Morocco MoH, 2012).
Oman	Small community based organizations have initiated outreach work with PWIDs and MSMs (Oman MoH, 2012). Al-Hayat, is the only NGO in Muscat that provides information about HIV prevention to PWIDs (WHO, 2010).
Pakistan	Since the beginning of the HIV response; NGOs and CSOs have been very active; over 50 dedicated AIDS organizations; involved in decision-making; NGOs are recepients of GF (Pakistan MoH, 2012)(Pak-1-28) An association of PLHIV exists (UNAIDS, 2011a).
Palestine	Three NGOs active in HR: Substance Abuse Research Center (SARC-Aman): Received Red Ribbon Award in 2010, HR activities, NSP and condom distribution in 2005-6 in entire Gaza (SARC-AMAN, 2010); Al Maqdese: NSP and condom distribution in Jerusalem and West Bank; Al Sadegh Al Taleb Association (East Jerusalem)
Qatar	No NGOs working directly with MARPs (Qatar SCH, et al., 2012).
Saudi Arabia	NGOs and CSOs are involved: Saudi Charity Association for AIDS Patients (SACA), an NGO in Jeddah covering few cities, PLHIV support groups, faith-based organizations such as “Egatha Foundation”.
Syria	Few active NGOs on HIV prevention (Syria MoH, 2012).
Tunisia	Three NGOs involved in NSP: Association Tunisienne de Lutte contre les MST et le SIDA (ATLMST), Association Tunisienne de Prévention de la Toxicomanie (ATUPRET), Association Tunisienne d’Information et d’Orientation sur le SIDA (ATIOS). There are also other NGOs working on HIV prevention for MARPs (Tunisia MoH, 2012)
UAE	No active NGO exists for vulnerable groups.
Yemen	20 NGOs have been involved in HIV prevention; four PLHIV Associations and Network involved in decision making, planning, training and monitoring (Yemen MoPH&P, 2012).

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