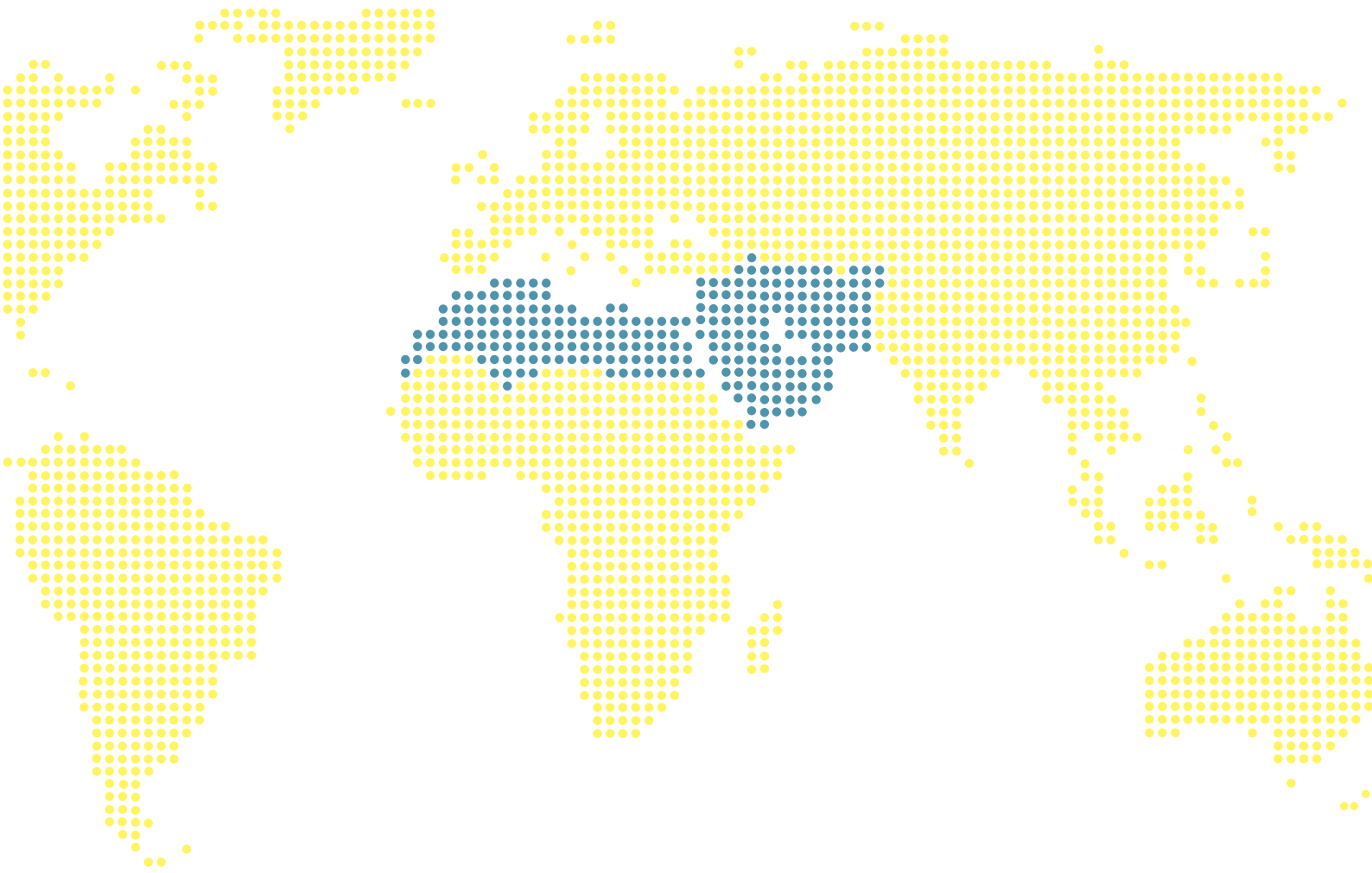




ASSESSMENT OF SITUATION AND RESPONSE OF DRUG USE AND ITS HARMS IN THE MIDDLE EAST AND NORTH AFRICA 2021



MENAHRA



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MENA HRA

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MENAHR

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FOREWORD

Dear readers, with great pleasure I represent to you, once again, the MENAHRA Regional Situation Assessment to the public health sector in general, and the harm reduction community in specific. This is the fourth assessment of the situation of HIV and response of drug use and its harms in twenty countries in the Middle East and North Africa (MENA) for the past ten years as it is a contribution to regional literature, and has been conducted as part of the information and knowledge building services that MENAHRA aspires to offer to civil society and the scientific community in the region. I invite you all to read and use the information of this report that proves new dimensions in a wide view of drug use related harms.

The report of this year was a challenge for us that we managed to overcome despite all the obstacles especially the ones linked to COVID19 pandemic and too many other difficulties that we are suffering from in the MENA and in Lebanon specifically.

I seize this opportunity to thank our enthusiastic consultants Professor Marie-Claire Van Hout and MS Patricia Haddad for their commitment and the astonishing work they have done.

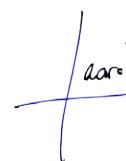
I extend my gratitude to our donor the Global Fund (GF) and the Principal Recipient (PR) our colleagues at Frontline Aids (FA) in Brighton and the members of the Project Management Unit (PMU) for their follow up and support. Last but not least, I would like to thank the MENAHRA team for the effort, they deployed in order to make this happens.

MENAHRA is proud to have been one of the key players in the region promoting and advocating for harm reduction. This evolution would not have been possible without the countless partnerships and tireless efforts of the entire harm reduction community in this region. However, despite all these efforts, people who use drugs are still criminalized and discriminated against in the region, limiting their access to life-saving services.

We look forward to building a more conducive environment to ensure a better quality of life for key populations and people who use drugs in MENA.

I hope that this regional report offers an added value to civil society organizations and decision makers in their efforts to scale up the harm reduction response.

Sincerely,
Elie Aaraj



Executive Director
MENAHRA

ABOUT MENAHRA

In 2007, the WHO, in partnership with HRI, initiated a five-year project for HIV/AIDS prevention and treatment targeted at PWIDs in the MENA region through the creation of MENAHRA. MENAHRA is the first network on injecting drugs harm reduction in the MENA, which aims to build capacity, availability, access and coverage of harm reduction services for PUD. In 2012, MENAHRA was established and registered as a regional NGO. It aims to improve the quality of life of PWUD through advocacy, capacity building, and technical assistance, and by serving as a resource centre in the region.

ACKNOWLEDGMENTS

This document was written by Dr. Marie-Claire Van Hout and Ms. Patricia Haddad. The authors wish to thank Ms. Joumana Hermez (World Health Organization, Regional Office for the Eastern Mediterranean), and Dr. Mohammad Tariq Sonnan (United Nations Office on Drugs and Crime, Regional Office for the Middle East and North Africa) for their kind contribution to the development of this document. The authors also gratefully acknowledge the kind cooperation of the following experts in providing information and input: Algeria: Mr. Othmane Bourouba (ONG AIDS ALGERIE), Mr. Abdelaziz Tadjeddine (APCS Algeria), El Hayet des PVIH organization; Bahrain: Mr. Hasan Taraif (Addicts Friends Society/Bader Support Group of/for PLHIV; Egypt: Ms. Seham Zaki (Friends Association), Caritas Alexandria; Iran: Dr. Alireza Noroozi (INCAS), Mr. Abbas Deilamizade (Rebirth Charity Society); Jordan: Mr. Abdallah Hanatleh (FOCCEC); Lebanon: Mr. Majed Hamatto (Civil Council Against Addiction), Dr. Marie-Therese Matar & Dr. Zeinab Abbas (Ministry of Public Health), Dr. Mostafa El Nakib (NAP), Ms. Nadia Badran (SIDC); Morocco: ALCS (Mr. Mohammed El Khammas, Mr. Moulay Ahmed Douraidi, Mr. Lahoucine Ouarsas, Ms. Naoual Laaziz, Mr. Mehdi Karkouri), Dr. Fatima Asouab (national expert), Ms. Faouzia Bouzzitoun (APCS), Mr. Mohammed Bentaouite (AHSUD & MENANPUD focal point); Dr. Salman Ul-Qureshi (Nai Zindagi), Mr. Zeeshan Ayyaz (Amitiel Welfare Society); Palestine: Dr. Saed Bilbeisi (Palestinian Ministry of Health), Issam Jweihan (Maqdessi Association); Syria: Dr. Jamal Khamis (Ministry of Health); Tunisia: Dr. Mohamed Chakroun (CCM Chair); Yemen: Ms. Rasena Abdallah (Social Service Organization); UN agencies: Ms. Joumana Hermez (WHO-EMRO), Dr. Tariq Sonnan (UNODC ROMENA); Khaldoun Oweis (UNODC POPSE).

NOTE ON COUNTRY COVERAGE AND REPORTED FIGURES

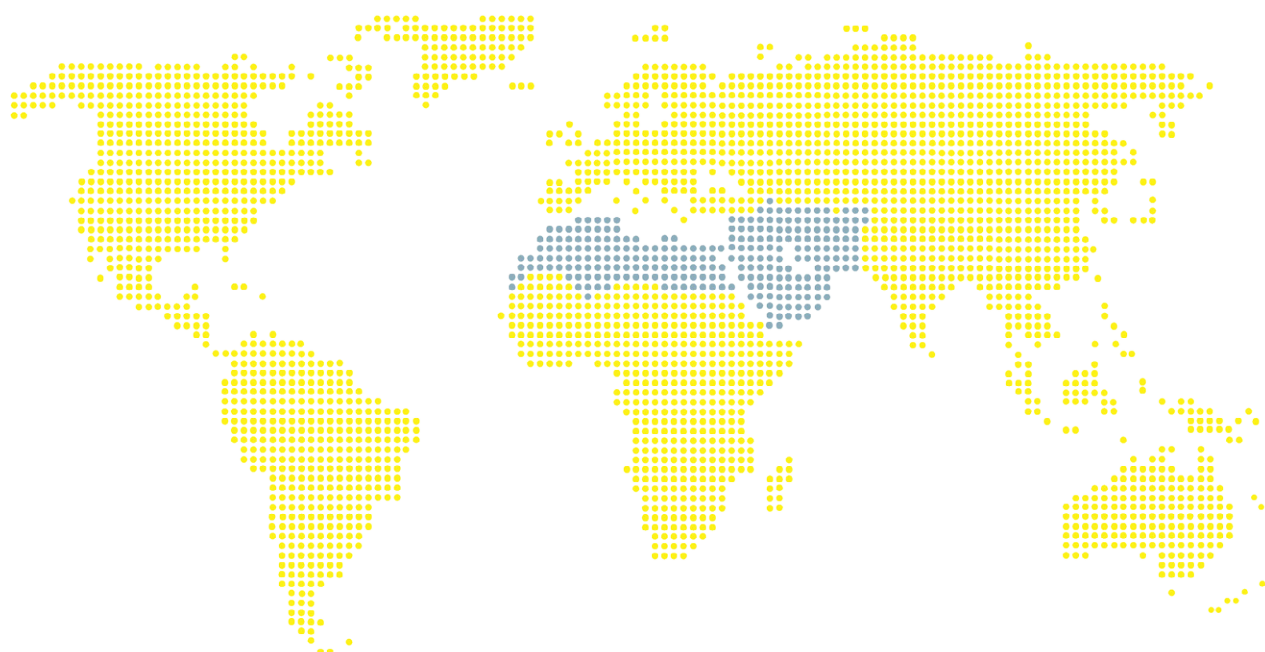
It is important to state that estimated figures for PLHIV and PWID in the MENA region reported by UNAIDS and UNODC are not to be used in comparison or as denominators with estimated numbers of PWID living with HIV reported in the current report. This is due to the difference in regional country coverage among the two organizations and MENAHRA. The 20 MENA countries covered by MENAHRA differ from the 20 countries covered by UNAIDS and UNODC for the region. The current report includes Afghanistan, Pakistan, and Palestine; while UNAIDS estimations include Djibouti, Somalia, and Sudan and UNODC estimations include Sudan instead. This difference in country coverage largely affects the profile of injecting drug use and related HIV/AIDS epidemiology and creates a discrepancy in the related estimations between different organizations. Moreover, a number of recent peer reviewed regional and global reviews in the literature have different size estimations of the PWID in the MENA region, this report discusses these size estimations and references the different studies. The different estimations are therefore not intended to be used in comparison and reflect the need of further evidence and large scale studies in this field. It is important to note that all size estimates discussed in this situation assessment have not been generated by this report. All data available is presented for the readers to inform them of the different and variable estimates available for the MENA region.

ACRONYMS AND ABBREVIATIONS

AIDS	Acquired Immunodeficiency Syndrome	MOH	Ministry of Health
ART	Antiretroviral Therapy	MOPH	Ministry of Public Health
AAS	Anabolic Androgenic Steroid	MSM	Men who have Sex with Men
ATS	Amphetamine-Type Stimulant	MSW	Male Sex Worker
BBS	Bio-Behavioral Survey	NA	Not Available
BBSS	Bio-Behavioral Surveillance Survey	NACC	National AIDS Control Committee
BBV	Blood-Borne Virus	NACP	National AIDS Control Program
BMT	Buprenorphine Maintenance Treatment	NAP	National AIDS Program
CI	Confidence Interval	NASP	National AIDS Strategic plan
COVID-19	Corona Virus Disease 2019	NGO	Non-Governmental Organization
CSO	Civil Society Organization	NPS	Novel Psychoactive Substance
CSW	Commercial Sex Worker	NRC	National Rehabilitation Center
DCR	Drug Consumption Room	NSP	Needle/ Syringe Program
EMRO	Eastern Mediterranean Regional Office (World Health Organization)	OAT	Opioid Agonist Treatment
FSW	Female Sex Worker	OST	Opioid Substitution Therapy
GARPR	Global AIDS Response Progress Report	OTC	Over The Counter
GBV	Gender based violence	PLHIV	People Living with HIV
GCC	Gulf Cooperation Countries	PMTCT	Prevention of Mother to Child Transmission
GF	The Global Fund	PREP	Pre-Exposure Prophylaxis
GINAD	Global International Network About Drugs	PWID	People Who Inject Drugs
GNI	Gross National Income	PWUD	People Who Use Drugs
HBV	Hepatitis B Virus	ROMENA	Regional Office for Middle East and North Africa - UNODC
HCV	Hepatitis C Virus	SBIRT	Screening Brief Intervention and Referral for Treatment
HDI	Human Development Index	SOP	Standard Operating Procedures
HIV	Human Immunodeficiency Virus	STI	Sexually Transmitted Infection
HR	Harm Reduction	TB	Tuberculosis
HRI	Harm Reduction International	TC	Therapeutic Community
HTS	HIV Testing Services	TG	Transgender
IBBS	Integrated Bio-Behavioral Survey	TGSW	Transgender Sex Worker
IDU	Injecting Drug Use	UAE	United Arab Emirates
IEC	Information Education Communication	UN	United Nations
INCB	International Narcotics Control Board	UNAIDS	Joint United Nations Programme on HIV/AIDS
KAP	Knowledge, Attitudes, and Practices	UNDP	United Nations Development Programme
KP	Key Population	UNESCO	United Nations Educational, Scientific and Cultural Organization
LGBT	Lesbian, Gay, Bisexual, Transsexual	UNFPA	United Nations Population Fund
MDMA	3,4-methylenedioxyamphetamine (ecstasy)	UNODC	United Nations Office on Drugs and Crime
MENA	Middle East and North Africa	UNRWA	United Nations Relief and Work Agency
MENAHRA	Middle East and North Africa Harm Reduction Association	WHO	World Health Organization
MMT	Methadone Maintenance Treatment	WLHIV	Women Living with HIV

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EXECUTIVE SUMMARY

We report here on the 2020 assessment of situation and response of drug use and its harms in the twenty countries of the MENA region. They included Afghanistan, Algeria, Bahrain, Egypt, Iraq, Iran, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Pakistan, Palestine, Qatar, Saudi Arabia, Syria, Tunisia, UAE and Yemen. There have been three previous situation assessments (Rahimi-Movaghar et al., 2008; 2012; 2017).

METHOD

We utilized a scoping review methodology, and applied similar search methods of scientific bibliographic databases as the previous situation assessments (Rahimi-Movaghar et al, 2008; 2012; 2017) for comparative purposes. We expanded the scope to include all empirical and grey literature retrieved in the English, Arab and French languages for the time frame 2010-2020. The search was complimented with a circulated excel data sheet sent to relevant regional experts and all country level focal points in the MENA countries so as to receive where possible an updated baseline on the situation of harm reduction in the MENA region. We also requested programmatic published and unpublished data on HIV and viral hepatitis prevention, treatment and care services for PWID, and the provision of NSP, OAT and ART services to PWID. The information was mapped, and using a narrative review of countries with a regional meta- summary approach, we provide a regional overview in tables and extant profile detail at country level.

KEY FINDINGS

Data availability

In comparison to the previous three assessments where no change in quantity or quality of information was recorded, by broadening the scope of the search, additional literature has been retrieved in this situation assessment consisting of literature since 2010 which were previously omitted, resulting in an increased depth and quality of information. It is also indicative of increased academic activity in the MENA region on the topics of drug use, key populations and BBV prevalence in community and prison settings. This widened focus reflects the changing aspects of key populations who use drugs (PWID/PWUD; MSM; CSW; FSW; migrants) in the MENA region, in terms of displacement of populations, geographies of high risk behaviours and key populations, drug types used, sexual risk, gender, age and vulnerabilities; convergence of BBV spread spanning drug and sexual networks, and the related current harm reduction response (OAT, NSP, condom provision, overdose prevention and reversal, and testing and treatment for BBV) spanning city, community and prisons.

Surveillance and academic activity on drug use trends, key populations and treatment characteristics, size estimates and BBV prevalence in community and prison settings differ per MENA country and in some MENA countries remains scant. There is limited comparative data. Most countries continue to face problems with the availability of resources for conducting comprehensive and regular drug abuse (and related risk behaviours) surveys, making it difficult to assess the extent and trends in drug abuse in the MENA region. This hampers advocacy for harm reduction and the development of effective drug and public health policies at country and regional level.

Drug Production and Transit Trends

Tackling drug production, trafficking and consumption in many MENA countries is challenged by political and economic instability, protracted conflict in some countries, security issues, weak cross border cooperation, migration and displacement of almost 11 million in the region, the relationship between weapons, human and drug trafficking, and the absence of alternative livelihoods for drug producers. Although MENA is primarily a drug trafficking and transit region, there are also notable production trends in Captagon (commonly fenethylamine), opium, heroin, cannabis, ATS and Khat.

Law Enforcement Responses

Repressive and punitive approaches to drugs, criminalization, coercive treatment by the courts and aggressive policing continue to discourage health care seeking by PWUD, reinforces marginalisation and stigmatisation of PWUD/PWID and perpetuates unsafe/high risk use of drugs in the region. Iran, Libya, Qatar, Saudi Arabia, the UAE and Yemen traditionally use judicial corporal punishment for drug use, purchase or possession. The death penalty for drug offences continues to be prescribed in many MENA countries, including Bahrain, Egypt, Iran, Iraq, Kuwait, Libya, Oman¹, Qatar, Saudi Arabia, Syria, the UAE, Palestine, Gaza and Yemen. Countries reporting death sentencing for drug offences in 2018 include Bahrain, Egypt, Iraq and Oman. Some countries now give precedence to court mandated prevention and treatment over punishment, however it is unclear as to when and for how long these are applied (for example Lebanon, Algeria, Libya, Yemen, Morocco, Tunisia, Qatar).

Alcohol and Drug use Trends

Alcohol consumption is permissible in all MENA countries except Iran, Libya, Saudi Arabia and Yemen. Patterns of consumption in MENA have remained stable, with the exception of Qatar and the UAE, where consumption has risen, and Bahrain and Syria, where consumption has fallen. Cannabis remains most commonly used in the general population across the MENA region. In 2020, the trafficking and non-medical use of pharmaceutical opioids (Tramadol) and amphetamine (Captagon) represent a key challenge in the MENA region². There are concerning trends in the rising use of synthetic cannabinoids (Jordan, Kuwait, Egypt, Palestine), ATS (Kuwait, Afghanistan, Iran, Iraq, Lebanon, Palestine) and pharmaceutical drugs such as buprenorphine (Subutex®), benzodiazepines, Tramadol (counterfeit and diverted) and Captagon (Syria, Saudi Arabia, Egypt, Algeria, Afghanistan, Iraq, Jordan, Tunisia, Kuwait, Iran, Palestine, Pakistan, Yemen, the UAE, Qatar). Pharmaceutical drug availability in community pharmacy also strongly contributes to misuse, abuse and dependence on over the counter and prescription drugs (opioids, gabapentinoids) (Jordan, Libya, Egypt, Iraq, Lebanon, Yemen, Pakistan, Saudi Arabia, the UAE, Morocco). Opioids (opium, heroin) remain the main drugs of use in Afghanistan and Iran, and Khat in Yemen, Saudi Arabia, the UAE and Oman. Increased prevalence of Salvia use among problematic drug users is also reported in Lebanon.

There is some data available on substance use (smoking, alcohol, cannabis, ATS, opioids) among school aged and university students, with some contrasting studies indicating low substance use among university students in Libya; with a trauma related rise in early initiation of use (Iraq, Kuwait, Palestine), general rise in prevalence (Lebanon, Libya, Oman, Morocco, Palestine) and a specific rise in water pipe smoking in both genders (Jordan). Studies are primarily on male young people.

Harmful drug use and drug treatment

The previous 2017 situation assessment estimated 887,000 PWID. Although data are relatively limited, there are several 2020 global estimates of the size of PWID in the MENA region, which however used different methods and different definitions of the MENA region in terms of the collective countries. Estimations of number of PWID were available through two recent global reviews tackling PWID age profiles and HCV prevalence respectively^{3,4}. One presented PWID size estimates for only 5 of the 20 countries, while the other presented size estimates for all 20 countries (see regional overview chapter). In countries where data were available from both global reviews (Afghanistan, Iran, Libya, Morocco, Pakistan), large discrepancies in size estimations were noted in Afghanistan and Pakistan. Based on data reported in Mahmud et al in 2020, the average number of PWID in all 20 countries is estimated to be 592,045 (428,479 – 1,207,853)⁵. However, size estimates for Afghanistan and Pakistan reported by Hines et al in 2020 were more consistent with another 2020 review reporting on the frequency of IDU by Colledge et al. (2020). Taking into consideration these discrepancies, if size estimates for Afghanistan and Pakistan from the Hines et al review (2020) were considered, the average estimated number of PWID in all 20 countries may increase up to 1,017,593 (777,544-1,347,853).

1 Girelli (2018)

2 UNODC (2020)

3 Hines et al., (2020)

4 Mahmud et al., (2020)

5 Mahmud et al., (2020)

In terms of age profile, globally, the lowest % of PWID aged 25 years or younger reside in the MENA region (6.9%, 5.1-8.8), with average age of 33.5 years (27–43), age of onset of injecting 28.9 (20–29) and a median duration of injecting 10.0 (3–14) years⁶. PWID age profile information was available for 12 of the 20 countries⁷. Many MENA countries also identify minors as a gap in harm reduction and treatment structures due to parental consent requirements (for example, Lebanon, Algeria, Morocco, Saudi Arabia, Palestine, Tunisia).

Women continue to represent a gap in harm reduction and treatment structures. Iran provides gender sensitive drug treatment and harm reduction programming for women. Pakistan, Palestine and Lebanon identify women drug users as a key vulnerable group requiring treatment and supports. There are groups such as MENA-Rosa (a regional network of women living with HIV that provides peer-led support in Algeria, Egypt, Lebanon, Morocco, Tunisia and elsewhere) who are working to overcome stigma, raise HIV awareness, improve access to HIV services for women living with and affected by HIV, and protect gendered human rights⁸.

Opioids are the primary drugs of use in patients in drug treatment centres, and usually within poly drug taking repertoires. Use and injecting use of heroin, amphetamines/ATS, cocaine, morphine and buprenorphine (Subutex®) are common in drug treatment populations in MENA. Co-morbidity with mental illness is of rising concern (for example in Afghanistan, Oman, Saudi Arabia, Lebanon). Approaches to opioid use disorder treatment vary from detoxification using methadone (most common; Bahrain, Saudi Arabia) to OAT (both MMT and BMT available) in the MENA region.

Overlapping Key populations and their characteristics

Key populations who are most affected by HIV and HCV are the marginalised and criminalised populations of MSM and PWID. Others include FSW/CSW, prisoners, transgender CSW and refugee populations from Syria, Palestine, Afghanistan and North Africa.

Drivers of HIV and HCV among key populations include IDU, partially intersecting with multiple and concurrent sexual partnerships, gender inequalities and violence, displacement, stigma and discrimination.

Identified PWID characteristics include injecting use of buprenorphine (Subutex®), heroin, morphine and ATS, poly use of drugs, and high rates of history of incarceration. Re-using of needles and difficulties in sourcing clean needles underpins their risk (for example as reported in Algeria, Egypt). Low levels of education, low HIV transmission knowledge, and stigma and discrimination compounds their situation. Closed small networks among PWID appear to somewhat confine transmission (Lebanon). Open networks of PWID, public injecting and use of street injectors fuel transmission (Pakistan).

There is a dearth of information on women who use or inject drugs in the MENA region. They continue to constitute a hidden PWUD population affected by stigma and unique risk characteristics particularly relating to IDU (for example, GBV, secondary use of the needle, engagement in transactional sex). Some countries have reported on particular trends among women; opioid use (Afghanistan), inhalants use (Saudi Arabia), ATS use (Iran); sex work and drug use (Afghanistan, Algeria, Egypt; Iran, Libya); rises in women using drugs (Libya), and rises in women seeking treatment (Lebanon, Oman, the UAE). One study reported on the characteristics on drug use in transgender women in Iran.

Some MENA countries are identifying MSM as a BBV-high risk group due to high risk sexual behaviour (anal sex and multiple sex partners), and due to the overlap with IDU/commercial sex work (Afghanistan, Algeria, Egypt, Jordan, Kuwait, Lebanon, Pakistan, Yemen). Some studies have underscored the transmission of BBV, particularly HIV among MSM, as well as from MSM to their female sexual partners (Egypt, Pakistan). Others have illustrated the overlap between sexual and injecting risk behaviours in MSM and refugee populations/ those with a history of migration (Lebanon, Libya, Tunisia).

Conflict and economic migration and internal/external displacement of large populations in the MENA region, has significantly compounded the migration of disease (particularly HBV and HCV), and harmful patterns of drug use, and sexual risk behaviours (Afghanistan, Jordan, Iraq, Lebanon, Libya, Palestine, Qatar). Lebanon

⁶ Hines et al., (2020)

⁷ Hines et al., (2020)

⁸ UNAIDS, (2019)

recognises refugees as an at risk population due to their marginalisation, significant traumas of conflict and displacement, and adverse socio economic situation. Efforts to provide integrated HIV and other health services for refugees and other displaced persons are being boosted by a grant from the Global Fund to Fight AIDS, Tuberculosis and Malaria (the Global Fund) of a US\$ 36.4 million Middle East Response Grant in December 2018 (Iraq, Jordan, Lebanon, Syria and Yemen). . and economic migration and internal/external displacement of large populations in the MENA region, has significantly compounded the migration of disease (particularly HBV and HCV), and harmful patterns of drug use, and sexual risk behaviours (Afghanistan, Jordan, Iraq, Lebanon, Libya, Palestine, Qatar). Lebanon recognises refugees as an at risk population due to their marginalisation, significant traumas of conflict and displacement, and adverse socio economic situation. Efforts to provide integrated HIV and other health services for refugees and other displaced persons are being boosted by a grant from the Global Fund to Fight AIDS, Tuberculosis and Malaria (the Global Fund) of a US\$ 36.4 million Middle East Response Grant in December 2018 (Iraq, Jordan, Lebanon, Syria and Yemen)⁹.

Prisoners are an identified key population in the MENA region. It has previously been estimated that over 600,000 people are deprived of their liberty in the MENA region, the vast majority of whom are male and detained on drug related charges¹⁰. Current estimates of prison populations are not available given the COVID-19 early release schemes and amnesties in the MENA region. The number of women in prison is lower than the number of men (approximately 5% of the prison population). Prison data on BBV is insufficient. Whilst BBV rates generally are low in MENA prisons where recorded (some countries have no prison related data: Bahrain, Algeria, the UAE), transmission risks among prisoners are high due to introduction to and continuation of intravenous injecting during incarceration, unsafe injecting practices, use of non-sterile toiletries (brushes and razors), tattooing and sexual activity between men (Afghanistan, Bahrain, Egypt, Iran, Iraq, Lebanon, Libya, Morocco, Pakistan, Oman)¹². These risks are often exacerbated by the rising incarceration rates (very often drug related), repeated incarceration of PWUD and prison congestion. Hidden HIV and HCV clusters cannot be ruled out¹³. Whilst prisoners are most at risk, prison staff share the same high-risk environment.

HIV and Viral Hepatitis

Many MENA countries lack sufficient current evidence to determine population size and BBV prevalence in key populations. This reflects the incompleteness of HIV and HCV surveillance and strategic information systems in the MENA region¹⁴.

Given that almost all new HIV infections are associated with key populations and the rise in the HCV epidemic, this deficiency must be addressed so that more effective and focused programmes can be put into action. There is a strong possibility for hidden epidemics in the MENA region among key populations, and convergence into the general population via sexual transmission.

Strengthened political commitment is evident in a few countries, such as Algeria and Morocco, but the region's overall HIV response is well off-track and far from reaching the 90–90–90 targets¹⁵. In 2018, domestic resources available for HIV programmes were 19% lower than in 2017 (in 2016 constant US dollars), but with an increase in Global Fund funding. All other international donor funding decreased by 10%¹⁶. Efforts to respond are compounded by humanitarian emergencies due to the protracted emergencies in Libya, Syria, Yemen, and elsewhere.

We have included all of the 2019 and 2020 AIDS info. In terms of reports at country level, updated Global AIDS Monitoring reports were available on aidsinfo for 2018 (Afghanistan, Algeria, Egypt, Iran, Kuwait, Lebanon, Pakistan, Saudi Arabia, Tunisia, the UAE) and 2019 (Afghanistan, Egypt, Kuwait, Lebanon, Pakistan, Saudi Arabia, Tunisia, the UAE). There is no updated 2018 or 2019 Global AIDS Monitoring report available for Libya, Bahrain, Iraq, Jordan, Morocco, Palestine, Qatar, Syria, Yemen or Oman.

9 Global AIDS report (2019)

10 Van Hout and Aaraj (2020)

11 Al-Shazly and Tinasti (2016)

12 Heijnen et al. (2016)

13 Van Hout and Aaraj (2020)

14 Global AIDS report (2019)

15 UNAIDS (2019)

16 UNAIDS (2019)

According to the current UNAIDS (2020) report, the HIV epidemic in the MENA region is still growing¹⁷. The estimated 20 000 [11 000–38 000] new infections in 2019 marked a 25% increase from 2010¹⁸. PWID accounted for 43% of new HIV infections in 2019; however, the response has not been appropriate for the size of the problem¹⁹.

Key populations and their sexual partners accounted for approximately 97% of all new HIV infections in the MENA region²⁰. Distribution of new HIV infections among key populations in the region in 2019 were estimated to be 43% among PWID, 23% among MSM, 19% among clients of sex workers and sex partners of other key populations, 12% among sex workers, and 3% among the general population²¹.

The Global AIDS report (2020) also reflects this rising trend relating to the HIV epidemic in the MENA region, and reports on increases in new HIV infections of more than 20% since 2010 have occurred, including in Afghanistan (116%), Algeria (83%), Egypt (421%), Lebanon (44%), Pakistan (75%), Tunisia (29%), Yemen (26%). In contrast, Iran, Libya, and Morocco reported that annual new HIV infections have declined by more than 10% since 2010 .

In 2020 access to HIV testing, treatment and care in the MENA region is well below the global average, with 52% of PLHIV aware of their serostatus, 38% accessing ART, and less than one-third virally suppressed-see regional overview for tables. Prevention and treatment programmes in many MENA countries are not reaching sufficient numbers of key populations at high risk of HIV infection in both the community and in prisons.

Egypt and Pakistan are facing generalized HCV epidemics, and host close to 80% of all HCV exposed and chronically infected individuals in the MENA region²². Estimates indicate that half the PWID (estimated at 630,000) have been infected with HCV, but with great variation in antibody prevalence across specific MENA countries²³. High rates of HCV of >35% are reported in PWID in Afghanistan, Egypt, Libya, Oman, Iran, Pakistan, Saudi Arabia, Palestine and Lebanon. Largest numbers of chronically infected PWID are found in Iran at 68,526 and in Pakistan at 46, 554²⁴. At the MENA regional level, pooled mean HCV prevalence among PWID is 49.3% (44.4–54.1); with an estimated number of HCV antibody-positive among current PWID of 314,831 (203,949–687,125) and estimated number of HCV chronically infected current PWID of 221,704 (143,621–483,873)²⁵.

HBV prevalence is a concern among risk groups, particularly PWID in Afghanistan, Iran, Kuwait and Lebanon. High prevalence of HBV among the refugees/migrant populations is observed in Iraq, Afghanistan and Libya.

Several countries had little or dated detail on key populations size estimates or recent prevalence of BBV; or relied on case finding among key populations (Afghanistan, Bahrain, Iraq, Kuwait, Egypt, Saudi Arabia, Syria, Qatar, Tunisia).

At country levels, this situation assessment indicates the presence of concerning rates of HIV and viral hepatitis transmission among PWID populations in Afghanistan, Algeria, Egypt, Lebanon, Iraq, Morocco, Palestine, Pakistan, Tunisia and Libya (extremely high at 87%); in MSM populations in Afghanistan, Algeria, Egypt, Lebanon, Iraq, Morocco, Yemen (no HCV data available), Pakistan, Tunisia and Libya; in FSW/CSW populations in Algeria, Iran, Lebanon, Iraq, Morocco, Pakistan and Libya; and in refugee populations in Afghanistan, Iraq, Lebanon and Libya (particularly HBV).

17 UNAIDS (2020)

18 Global AIDS Update (2020)

19 Global AIDS Update (2020)

20 UNAIDS (2020)

21 UNAIDS (2020)

22 Chemaitelly et al. (2019)

23 Mahmud et al. (2019)

24 Mahmud et al. (2020)

25 Mahmud et al. (2020)

Harm Reduction

The ongoing humanitarian emergencies in the MENA region and the associated large-scale movements of people present massive challenges for public health systems in general, and HIV, harm reduction and drug use prevention, treatment and care programmes in particular.

Many countries would benefit from up to date IBBS surveys with key populations and their sexual partners to improve their geographic, contextual, gendered and risk characteristics knowledge, in order to advocate, target and scale up their harm reduction and public health response. Low political commitment, low prioritization of the HIV response, reduced funding and restrictions on the functions of NGO in some MENA countries is observed to hamper the harm reduction response.

Despite receiving a larger proportion of spend in the 2014-2016 allocation period, harm reduction accounted for 17% of the HIV Global Fund allocation in MENA, reflecting the relatively large harm reduction investment in Iran and strong civil society in some parts of the region. There has been some positive change in harm reduction policy visibility, provision and coverage since 2016. Only four countries have implemented both essential harm reduction services in the form of combined OAT and NSP services (Afghanistan, Iran, Lebanon, and Morocco).

Fourteen countries have mention of harm reduction/PWID in national policy documents: countries adopting harm reduction policies in their NASP include Afghanistan, Egypt, Iran, Lebanon, Morocco, Oman, and Palestine; countries in which PWID are noted as important key populations in their national plans include Algeria, Bahrain, Jordan, Libya, Oman, Syria, Pakistan and Tunisia.

Drug detoxification and abstinence treatment is most common (Afghanistan, Bahrain, Egypt, Saudi Arabia, Oman, Algeria, Tunisia). OAT exists in seven out of 20 countries (Afghanistan, Iran, Kuwait, Lebanon, Morocco, the UAE and Palestine); MMT in five countries (Afghanistan, Iran, Morocco, the UAE and Palestine); and BMT in four countries (Iran, Kuwait, Lebanon, the UAE). Iran uses opium tincture for substitution treatment²⁶. Five countries that remain in the planning phase for OAT are Egypt, Algeria, Oman, Tunisia and Pakistan. OAT is available in prisons in Afghanistan, Iran, Lebanon, Palestine and Morocco. In some countries (for example Lebanon) OAT is only available in prisons to those who were enrolled prior to committal.

Ten countries provide NSPs (Afghanistan, Algeria, Egypt, Jordan, Iran, Lebanon, Morocco, Palestine, Tunisia and Pakistan). Regarding prisons NSP is limited to released prisoners and their families in Egypt, and no longer available in Iran. Condom programming is reported in Iran, Egyptian and Algerian prisons.

Two countries provide take home naloxone through community distribution (Afghanistan and Iran). No country provides DCRs.

HIV testing services (HTS) was reported to available in 20 countries of the region. Coverage of ART varies across countries.

Harm reduction services in the region continue to warrant advocacy and support to plan, implement and scale up to target and support identified and overlapping key populations (PWUD/PWID; MSM; women who use drugs; CSW/FSW; prisoners, transgender and refugees/migrants). This is imperative given the geographic spread of BBV risk behaviors, both sexual and drug related within overlapping key populations and their sexual networks. There is an emergent need to consider harm reduction and BBV prevention among internally and externally displaced refugees in domestic primary health care provisions.

The lack of HIV & Harm Reduction Services funding plays a major role in the absence of services which has a direct impact on the risks, morbidity, mortality rate & the HIV/ Hepatitis C spread. It is recommended that MENAHRA, the UN family, the NGOs including the community led organizations to develop and implement a regional advocacy strategy to mobilize domestic resources precisely in national budgets.

²⁶ El Kashef et al (2019)

The current harm reduction response in MENA prisons has been very low (with exception of Iran, Lebanon, and more recently some capacity building initiatives have taken place in Egypt, Tunisia and Morocco)²⁷.

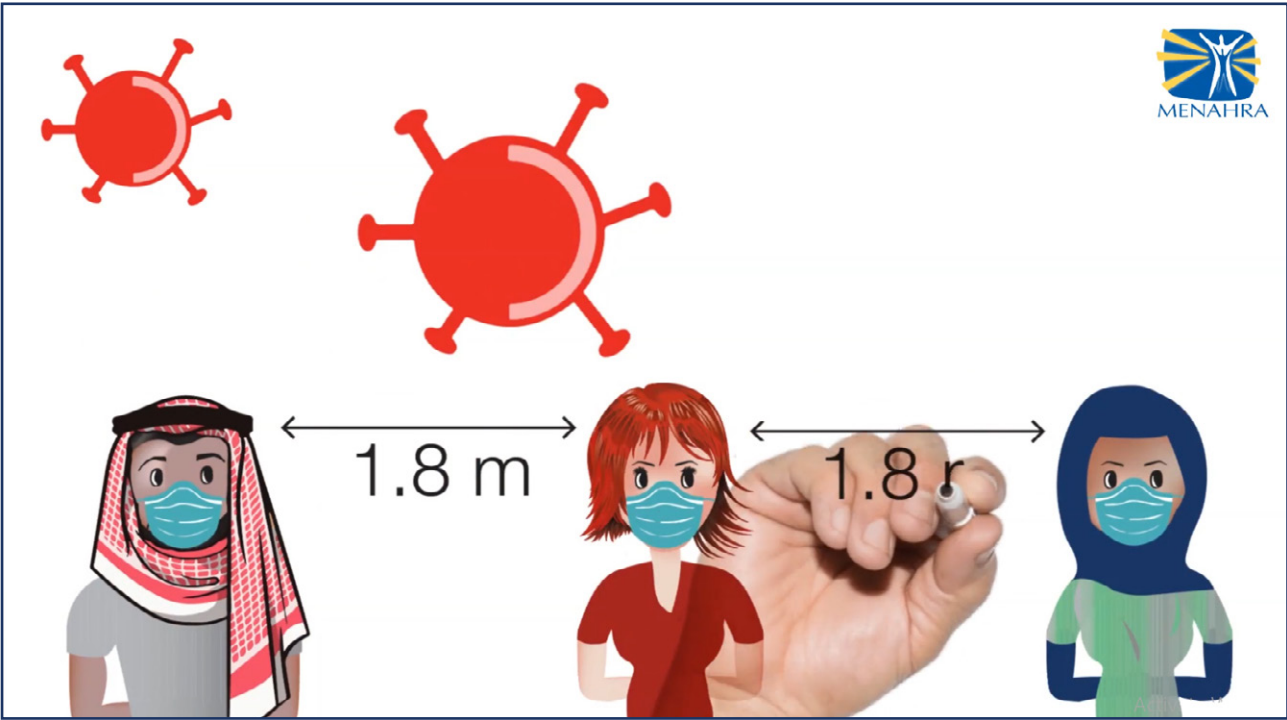
Some countries have reported the rise in private drug treatment and rehabilitation centres using methods which are not evidence based (Libya).

Civil Society

There is no doubt that NGOs that are at the forefront of advocacy initiatives and service provision in the fields of HIV, harm reduction, and key populations. There is a need to advocate for, scale-up their role and provide support among countries in which their involvement and engagement is weak.

COVID-19

There is growing concern in 2020²⁸ of an increase in harmful patterns of drug use, whether through a switch to injecting, sharing of injecting equipment as a result of drug shortages or safe injecting material shortages, or through more frequent injecting among users, as a result of the COVID-19 pandemic. PWID are particularly vulnerable to increased risk of contracting COVID-19, as well as BBV (HIV and HCV). They may find it difficult to social distance and practice hand sanitation, and they also experience stigma and discrimination which impacts on their access to housing, employment, health care and social support.



A screenshot from an awareness infographic online video produced by Menahra to spread awareness about Covid-19 to Key populations. © Menahra 2020

27 Van Hout and Aaraj (2020)
28 UNODC (2020)

BACKGROUND

Global Situation on Drugs

The global drug market is expanding and becoming more complex. Globally, opium production and cocaine manufacture remain at record levels (despite declines observed in some regions), with synthetic opioids and their analogues (for example fentanyl, Tramadol) continuing to pose a serious threat to health (UNODC Global Drug Report, 2019; 2020). Heroin continues to reach the market despite declining opium production in 2018 in Afghanistan and record levels of seizures (UNODC Global Drug Report, 2019; 2020). Methamphetamine use and related harms are of rising concern across several regions (South East Asia, North America). There has been observed diversification of cannabis products (with increased potency) consumed in some jurisdictions that permit the non-medical use of cannabis.

Previously, in 2017, an estimated 271 million people aged 15–64 years, had used drugs in the previous year indicative of a 30% increase on 2009 (UNODC Global Drug Report, 2019). In 2018, an estimated 269 million people aged 15–64 years, had used drugs in the previous year indicative of a 28% increase on 2009 (UNODC Global Drug Report, 2020). The most updated UNODC World Drug Report (2020), has reported that adolescents and young adults made up the majority of people who use drugs in 2018. An estimated 192 million people used cannabis in 2018, making it the most used drug globally. In comparison, 58 million people used opioids in 2018. Despite this lower proportion, harms associated with opioids are well evidenced, with the opioid group accounting for 66 per cent of the estimated 167,000 deaths related to drug use disorders in 2017 and 50 per cent of the 42 million years (or 21 million years) lost due to disability or early death attributed to drug use. (UNODC Global Drug Report, 2019; 2020). Most recent reports indicate that globally it is estimated that 35.6 million people, an increase from an earlier estimate of 30.5 million, suffer from drug use disorders and require treatment services (UNODC Global Drug Report, 2020).

IDU continues to represent a key global public health issue of importance due to the associated elevated risks of drug overdose, dependence, and BBV transmission (Degenhardt et al., 2016; Larney et al., 2020; Hines et al., 2020). An estimated 15.6 million people aged 15–64 years inject drugs (Degenhardt et al., 2017). Untreated chronic HCV and opioid use disorders are responsible for most of the deaths and disability attributed to the use of drugs (UNODC Global Drug Report, 2019). Of those injecting drugs, some 1.4 million live with HIV and 5.6 million live with HCV. Patterns of HIV infection among PWID also have wide regional variations (UNODC Global Drugs Report, 2019). In 2017, 40.5 million people were dependent on opioids and 109 500 people died from opioid overdose (Degenhardt et al., 2019).

Global Response

Harm reduction approaches are underpinned by the principles of pragmatism and public health, alongside dignity and human rights and focus on reducing the health, social, and economic harms associated with drug use (Harm Reduction International, 2019; Sander et al., 2019). The provision of harm reduction both in community and in prison is widely recognized as a legally binding human rights obligation (Puras, 2015).

Harm reduction measures such as OAT and NSP can be highly effective in improving multiple health and social outcomes by reducing illicit opioid use, overdose, suicide, BBV and other injuries (Degenhardt et al., 2019). Whilst effective interventions to prevent HIV among PWID include OAT and NSP, these are often not implemented to sufficient scale and with access to ART for PWID often characterised by systemic and social barriers to access (Larney et al., 2020). This represents a major impediment to achieving the 2030 Agenda for Sustainable Development to “ensure that no one is left behind” and to “reach the furthest behind first” (UNODC Global Drugs Report, 2019). The gap in prevention and treatment serving the needs of those using drugs, including those who are incarcerated and significantly vulnerable to drug use and BBV transmission continues to warrant attention in many parts of the world (UNODC Global Drug Report, 2019; 2020). The age and gender aspect of patterns of drug use and treatments continue to warrant attention with women disproportionately affected by the non-medical use of prescription drugs (tranquillizers and sedatives) (UNODC Global Drug Report, 2019). The highest percentage of young PWID aged under 25 years reside in eastern Europe and the lowest percentage reside in the MENA region (Hines et al., 2020).

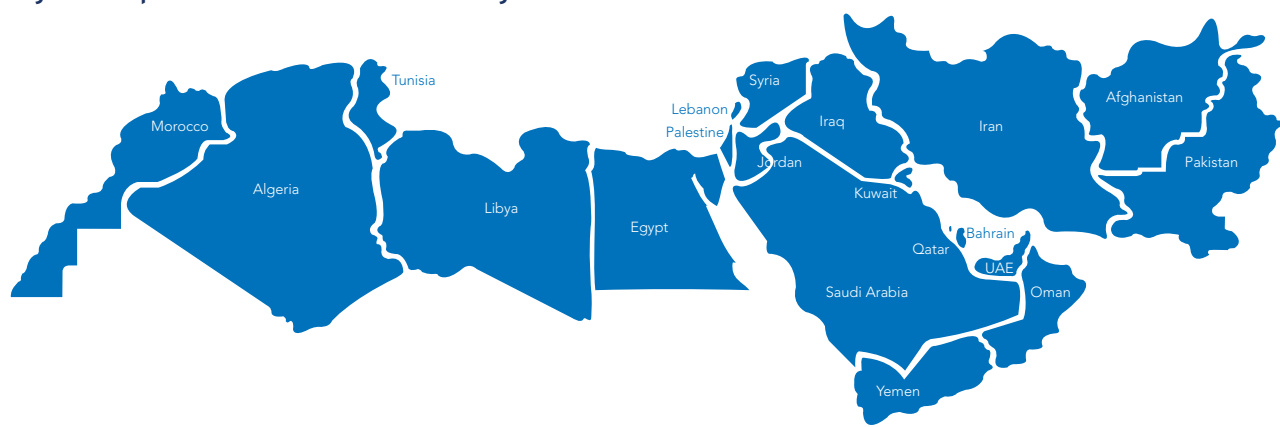
Rationale for the 2020 Situation Assessment

We report here on the 2020 assessment of situation and response of drug use and its harms in the MENA region for MENAHRA. These countries are diverse in terms of geography, population size and demographics, characteristics of key populations, nature and extent of the BBV problem, and scale of harm reduction implementation. They included Afghanistan, Algeria, Bahrain, Egypt, Iraq, Iran, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Pakistan, Palestine, Qatar, Saudi Arabia, Syria, Tunisia, UAE and Yemen. The map of the region, as well as data on selected indicators is presented in Table 1 and Figure 1.

Table 1 General characteristics of countries in the MENA region

Countries	Total Population (1000s) (2019) (UN population division 2019)	Population living in urban areas % (2019) (UN Population division 2019)	Adult literacy rate (%) (UNESCO Institute for Statistics 2020)	Income Group (The World Bank 2020)	GNI per capita (Int\$) (The World Bank 2020)	HDI rank (2019) (UNDP 2020)
Afghanistan	38042	25.8	43.0 (2018)	Low	2,229 (2017)	170
Algeria	43053	73.2	81.4 (2018)	Lower middle	11,372 (2017)	82
Bahrain	1641	89.4	97.5 (2018)	High	43,671 (2018)	45
Egypt	100388	42.7	71.2 (2017)	Lower middle	11,079 (2018)	116
Iran	82914	75.4	85.5 (2016)	Upper middle	14,563 (2017)	65
Iraq	39310	70.7	85.6 (2017)	Upper middle	10,891 (2017)	120
Jordan	10102	91.2	98.2 (2018)	Upper middle	9,807 (2018)	102
Kuwait	4207	100.0	96.1 (2018)	High	59,333 (2018)	57
Lebanon	6856	88.8	95.1 (2018)	Upper middle	14,655 (2019)	93
Libya	6777	80.4	48.3 (2017)	Upper middle	13,686 (2017)	110
Morocco	36472	63.0	73.8 (2018)	Lower middle	7,368 (2019)	121
Oman	4975	85.4	95.7 (2018)	High	26,593 (2018)	47
Pakistan	216565	36.9	59.1 (2017)	Lower middle	5,005 (2019)	152
Palestine	4981	76.4	97.2 (2018)	Lower middle	6,582 (2018)	119
Qatar	2832	99.2	93.5 (2017)	High	94,820 (2017)	41
Saudi Arabia	34269	84.1	95.3 (2017)	High	47,494 (2019)	36
Syria	17070	54.8	NA	Low	NA	154
Tunisia	11695	69.3	79.0 (2014)	Lower middle	10,269 (2017)	91
UAE	9771	86.8	93.2 (2015)	High	67,462 (2019)	35
Yemen	29162	37.3	NA	Low	NA	177

Figure 1 Map of the 20 countries of the region



This is the 4th assessment and builds on previous situation assessments (Rahimi-Movaghar et al, 2008; 2012; 2017), which covered the following areas: drug use situation including injecting drug use, HIV, HCV, and HBV among PWIDs, risk behaviors, policies that support evidence based HIV prevention programming among PWIDs, services available for harm reduction, and priority areas for future planning. This 2020 assessment has broadened to include literature in the Arab and French languages (2010-2020) and widen its focus to reflect the changing aspects of key populations, in terms of drug types used, sexuality, gender, age and migration patterns in the region; and the related harm reduction response (OAT, MMT, BMT, NSP, overdose prevention and reversal, and testing and treatment for BBV) spanning community and closed setting.

Regional Situation on Drug Use

Despite the MENA region having harsh penalties for drug related crimes, tackling drug production, trafficking and consumption is challenged by instability, security issues, weak cross border cooperation, displacement of populations due to conflict, the relationship between weapons, human and drug trafficking, and absence of alternative livelihoods for producers (Robins, 2016; Barzoukas, 2017; Ghiabi, 2018; Ardovini, 2019). The INCB continues to report that although MENA is primarily a drug trafficking and consumption region, there are also notable production trends in cannabis, ATS and Khat, and concerning trends in the use of synthetic cannabinoids and pharmaceutical drugs (Tramadol, Captagon) in some MENA countries. Repressive and punitive approaches to drugs, criminalisation and aggressive policing continues to discourage health care seeking, reinforces marginalisation and stigmatisation and perpetuates unsafe use of drugs in the MENA region (Joint United Nations Programme on HIV/AIDS, 2016; Al-Shazly and Tinasti, 2016; Sander et al., 2019). This has also created mass incarceration rates of PWUD, with those who are incarcerated continuing to be vulnerable to drug use, with drug injecting/introduction to injecting recorded in many prisons, and remaining underserved by harm reduction, prevention and treatment services for infectious diseases (Dolan et al., 2015; Heijnen et al., 2016; Moazen et al., 2018; Sander et al., 2019; Van Hout and Aaraj, 2020). It also emphasises the disproportionate impact on vulnerable and marginalized groups including women, racial and ethnic minorities, indigenous people, and foreign nationals (Sander et al., 2019).

According to HRI (2014), the marginalised and criminalised populations of MSM and PWID are most affected by HIV in the MENA region. IDU is fueling HIV and HCV epidemics in Iran, Bahrain and Libya (Mumtaz et al., 2018). MENA is also the region most affected by HCV worldwide (Chemaitelly et al, 2019). Previous MENA HRA situation assessments have highlighted the concerning rise in problematic drug use in many MENA countries, with an estimated 570,000 PWID in the region; and a concerning related rise in HIV epidemics driven by sexual transmission (primarily MSM) and unsafe IDU (Rahimi-Movaghar et al, 2008; 2012; 2017). Concentrated HIV epidemics were observed among PWID in Afghanistan, Algeria, Egypt, Iran, Morocco, Oman, Pakistan and Saudi Arabia, with 90,000 PWID estimated to be living with HIV/ AIDS in the region (corresponding to a HIV prevalence of over 15%) (Rahimi-Movaghar et al, 2017). Knowledge around BBV transmission and prevention of acquisition among PWID were observed to be insufficient (Rahimi-Movaghar et al, 2017).

The previous 2017 situation assessment reported that six countries of the region (Afghanistan, Iran, Lebanon, Morocco, Palestine and Pakistan) had adopted harm reduction policies within their NASP; OAT existed in five countries (Afghanistan, Iran, Kuwait, Lebanon, Morocco, Palestine, UAE) with two planned (Oman and Pakistan), nine countries had NSPs (Afghanistan, Egypt, Jordan, Iran, Lebanon, Morocco, Palestine, Tunisia and Pakistan); and at the time OAT and NSP was only available in prisons in Iran (Rahimi-Movaghar et al, 2017). Approaches to opioid use disorder treatment vary from detoxification (most common) to substitution (BMT most common) in the MENA region (Elkashef et al., 2019).

Harm reduction services were observed to have low coverage, and warranted scale up. Despite receiving a larger proportion of spend in the 2014-2016 allocation period, harm reduction accounted for 17% of the HIV Global Fund allocation in MENA, reflecting the relatively large harm reduction investment in Iran (HRI, 2018), strong civil society in parts of the region, restrictions on the functions of NGO in some MENA countries were observed to hamper the harm reduction response (Aaraj and Abou-Chrouh, 2016). HTS was reported to widely available in 14 countries of the region; however, the coverage was low.

In 2019, the progressive "Beirut Declaration" based on the Third Consultation Meeting on Law Enforcement and the Rights of People Living with and Affected by HIV was signed and aims to promote the positive engagement of law enforcement agents in the HIV response in selected countries in the MENA region, and to create a common understanding and agreement between partners and participants on strategic human rights-based HIV programming and a roadmap to improve the legal environment in the region.

Situation Assessment Method

We utilized similar search methods as the previous situation assessments (Rahimi-Movaghar et al, 2008; 2012; 2017) for comparative purposes on the MENA countries (Afghanistan, Algeria, Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Palestine, Pakistan, Qatar, Saudi Arabia, Syria, Tunisia, United Arab Emirates (UAE), and Yemen) and we expanded the scope to include the following:

1. We conducted searches on empirical and grey literature retrieved in the English, Arab and French languages for the time frame 2010-2020.
2. We broadened the assessment to seek further situation detail on
 - Characteristics of key most at risk populations (PWID, MSM, CSW/FSW, women who use drugs, youth, older drug users; refugee/migrants) (*'leaving no one behind'*)
 - Emergent MENA drug trends, for example, injecting and non-injecting ATS, trafficking, production and use of synthetic drugs, prescription pharmaceuticals
 - Harm reduction strategic frameworks at country levels and regionally
 - Donor investment in harm reduction at country levels and regionally
 - Expansion of harm reduction programming detail to include overdose prevention (naloxone), condom provision, NSP, type of detoxification, OAT (MMT, BMT)
 - Continuum of care across refugee camp, community and prison settings
 - Updated information from implemented studies of IBBS surveys and estimation of population size

An in-depth team review was conducted of the previous 2008, 2012 and 2017 situation assessments. We then utilised a scoping review methodology for this situation assessment. Scoping review methodology is a research synthesis which maps literature on a particular topic or research area and provides an opportunity to identify key concepts and evidence to inform practice, policymaking, and technical guidance (Levac et al., 2010). They are particularly useful as they include a wide range of data across identified sources and designs, and are used to raise awareness, and inform policy and practice (Levac et al., 2010; Daudt et al., 2013).

Scoping review methods are deemed rigorous and transparent in terms of its step by step protocol to identify and analyse all relevant available sources of information (Levac et al., 2010; Daudt et al., 2013). The six-stage iterative process was closely adhered to and consisted of (1) identifying the research question, (2) identifying relevant studies, (3) study selection, (4) mapping the data and (5) collating, summarizing and reporting the results at country and regional levels (Arksey and O'Malley, 2005). The underpinning research question for this 2020 MENAHRA situation assessment was; *"What is known in the literature about the situation and development of the harm reduction response of drug use and its harms in the Middle East and North African region during the timeframe 2010-2020?"*

We conducted an extensive search in order to access data and documents on identified areas.

1. Overall drug situation, including common drugs of use and the prevalence of drug use in the general population, as well as problem drug use;
2. Law enforcement
3. Specific MENA drug trends, for example, use of ATS, NPS, and prescription pharmaceuticals.
4. Injecting drug use consisting of latest size estimations, drugs of injection and main characteristics of PWID (for example age, gender, socio-economic profile);
5. HIV epidemic in the general population covering identified number of cases, estimations for number of PLHIV, main at risk groups for HIV infection, the pattern of HIV transmission, and HIV/AIDS cases attributable to IDU;
6. Prevalence of HIV infections among PWID;
7. Prevalence of viral Hepatitis (HCV; HBV) infections among PWID;
8. Risk behaviours of PWID, including unsafe injection, unsafe sexual behaviour, as well as HIV transmission knowledge;

9. Characteristics of key most at risk populations (PWID, MSM, CSW/FSW, women who use drugs, youth, older drug users; refugee/migrants) (*'leaving no one behind'*)
10. Policies toward HIV and HCV prevention among PWID, as presented in national policy documents;
11. Services available for harm reduction, including availability and coverage of NSPs, condom programming, naloxone, and OAT;
12. Availability and take up of HTS by PWID;
13. Main studies related to the above-mentioned areas carried out in the country, including (I)BBS on PWID;
14. NGOs involvement in harm reduction implementation and advocacy;
15. Expansion of harm reduction programming detail to include overdose prevention (naloxone), condom provision, NSP, type of detoxification, OAT (MMT, BMT)
16. Main challenges in policy-making and implementation of harm reduction strategies, and steps forward at country and regional level.
17. Harm reduction frameworks at country levels and regionally
18. Donor investment in harm reduction at country levels and regionally
19. Continuum of care across community and prison settings (incl healthcare provider capacity)
20. The work of multilaterals
21. Lessons learned and best practices in the MENA region.

Detailed MESH search terms were generated by the team, in close consultation with MENAHRA and other identified key experts. Inclusion criteria were based on the below;

- Date range of empirical published/grey literature 2010-2020.
- Languages English, French and Arabic.
- We expanded on the prior MESH terms used in the previous situation assessments.

- #1. Afghan* OR Afghanistan [mesh] OR Algeria* OR Algeria [mesh] OR Bahrain* OR Bahrain [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 Syria* OR Syria [mesh] OR Tunis* OR Tunisia [mesh] Emirates OR UAE OR " United Arab Emirates" [mesh] OR Yemen* OR Yemen [mesh] OR "Middle East" OR "Middle East" [mesh] "Arabian Peninsula" OR "East Mediterranean" OR "Eastern Mediterranean" OR "North African" OR "North Africa" OR Arabs
- #2. "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 suboxane OR OST OR MMT OR BMT 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" OR "prison"
- #3. HIV OR AIDS OR "human immunodeficiency virus" OR HCV OR HBV OR hepatitis
- #4. #1 AND (#2 OR #3)

A comprehensive search in English, Arabic and French accessed related information from the region using the relevant MESH terms matched with the MENA country. Electronic searches of scientific bibliographic databases, as well as electronic and manual searches of UN related publications and websites were conducted. Moreover, reference lists of identified documents were extensively searched:

- Academic data bases at the Liverpool John Moores University. Pubmed Medline through Ovid, EMBASE, Index Medicus EMRO (IMEMR) Web of Science, PsycINFO, Google and CINAHL
- Web and hand searches of UN related publications and web sites: UNAIDS, WHO-EMRO, UNODC, World Bank (Headquarters, regional and country offices)
- International and regional NGOs: HRI, MENAHRA
- Reference lists in 2008, 2012 and 2017 Situation Assessments, and other identified documents
- Conference Abstracts
- Web sites of related bodies in the countries
- Subject specific searches in Google and Google Scholar
- Personal communications at country level programme offices/focal points (UNAIDS, National AIDS councils, UNODC and WHO regional and country offices, Ministries of Health, key academic experts)
- Latest AIDS reports, organizations as well as seminars and international meetings on the topic of IDU, viral Hepatitis and HIV.

All records were organized at the country level. Those not meeting the inclusion criteria or duplicates were removed by the team. All documents and data were extensively reviewed, and 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, as well as the definition of the populations studied. We included all relevant global and country level reports.

We supported the scoping review method with a circulated excel data sheet sent to all country level focal points in the MENA countries (for example UNODC, UNAIDS, NAP), so as to receive where possible an updated baseline on the situation of HIV and viral Hepatitis prevalence and harm reduction in the MENA region, as well as a country prioritization exercise. Focal points were asked to provide a contact network of experts on HIV and IDU for these countries who were able to assist with providing estimates using data collection sheet. We also requested programmatic published and unpublished data on HIV and viral Hepatitis prevention, treatment and care services for PWID, and the provision of NSP, OAT and ART services to PWID.

Indicators centred on significance of the IDU problem (IDU prevalence, key risk groups, HIV/HCV, HBV prevalence among IDUs, HIV/AIDS/HCV cases attributable to IDU, quality of HIV, HCV,HBV surveillance in IDUs; high prevalence spots); the use of injecting and non-injecting opiates, and if applicable ATS, synthetic drugs/NPS, prescription pharmaceuticals ; sentinel sites where IDUs present for services (detoxification, NSP, OAT, OST and ART), and preparedness to dealing with the IDU problem (donors, harm reduction policy, drug treatment policy, approaches to HIV/HCV/HBV prevention and NGO structure).

The information was mapped, and using a narrative review with meta-summary approach, we provide general profile detail at *country level*, and *regional overview* in tables.

In comparison to the previous three assessments where no change in quantity or quality of information was recorded, by broadening the scope of the search, additional literature has been retrieved in this situation assessment consisting of literature since 2010 which were previously omitted, resulting in an increased depth and quality of information. It is also indicative of increased academic activity in the MENA region on the topics of drug use, key populations and blood borne virus prevalence (HIV, HBV, HCV) in community and prison settings. This widened focus also reflects the changing aspects of key populations (PWID/PWUD; MSM; CSW;FSW; migrants) in the MENA region, in terms of displacement of populations, geographies of high risk behaviours and key populations, drug types used, sexual risk, gender, age and vulnerabilities; convergence of blood borne virus spread spanning drug and sexual networks, and the related current harm reduction response (OAT, MMT, BMT, NSP, overdose prevention and reversal, and testing and treatment for blood borne viruses) spanning city, community and closed setting.

We present the Regional Overview for comparative purposes, followed by detailed country level profiles.

REGIONAL OVERVIEW

DRUG USE: EXTENT AND PATTERNS

The global drug market is expanding and becoming more complex. Worldwide, it was estimated that 269 million used drugs in 2018, which translates into a 28% increase since 2009 (UNODC, 2020). The most updated World Drug Report (2020), has reported that adolescents and young adults made up the majority of people who use drugs in 2018.

In countries of the MENA region, cannabis remains the most commonly used substance. Increased use of synthetic cannabinoids, ATS, and pharmaceutical drugs in a number of countries in the region has been noticed through shifting trends of drug use. A concerning rise in synthetic cannabinoid use has been noted in Jordan, Kuwait, Egypt, and Palestine. ATS use has increased in Afghanistan, Kuwait, Iran, Iraq, Lebanon and Palestine. The rise in pharmaceutical drug use however, was the most widespread and was noted among 15 of the 20 countries that are reviewed in this report (Afghanistan, Algeria, Egypt, Iran, Iraq, Jordan, Kuwait, Pakistan, Palestine, Qatar, Saudi Arabia, Syria, Tunisia, UAE, Yemen). Pharmaceutical drug availability in community pharmacies strongly contributes to misuse, abuse and dependence on over the counter and prescription drugs in several MENA countries (for example Jordan, Libya, Egypt, Iraq, Lebanon, Yemen, Pakistan, Saudi Arabia, UAE, Morocco). Pharmaceutical drugs reported on include buprenorphine, benzodiazepines, pharmaceutical opioids (Tramadol), and amphetamines (Captagon). The World Drug Report has identified the trafficking and non-medical use of Tramadol and Captagon as one of the key challenges faced within the region. Moreover, in Lebanon, a rising trend in Salvia use among drug users has been noted. In the Golden Crescent (Afghanistan, Iran, and Pakistan), opioids (opium and heroin) remain the main drugs used. Khat also remains a main drug of use in countries of the Gulf (Oman, Saudi Arabia, UAE, and Yemen). There is limited information on non-injecting drug use in Bahrain. Common drugs that are injected have been reported in eight countries of the region (Algeria, Bahrain, Jordan, Morocco, Oman, Pakistan, Palestine, Syria,) and include heroin primarily, as well as buprenorphine (Subutex®), amphetamines, cocaine, morphine, and AVIL. The details of data available on extent and patterns of drug use are presented in Table 2.

The most recent World Drug Report (2020), estimates that 35.6 million people have drug use disorders, and only 1 out of 8 people who are in need of related treatments receive them. Information related to drug dependence in the MENA mainly extracted from treatment related settings. In MENA, opioids are the primary drugs of use among clients that present to drug treatment centers, often in poly-drug use situations. Information on drugs of use among clients of treatment centers is available for 11 countries (see Table 2), ten out of which have listed opioids as main drugs of abuse for people treated for drug problems in the World Drug Report (2020). Main opioids include heroin, opium, and pharmaceutical opioids such as buprenorphine and Tramadol. Other drugs of dependence include cannabis, amphetamines, ATS, tranquilizers, benzodiazepines, and cocaine. Use and injecting use of heroin, amphetamines, cocaine, morphine and buprenorphine are common in drug treatment patient populations in MENA. Co-morbidity with mental illness is of rising concern (for example in Afghanistan, Lebanon, Oman, Saudi Arabia). Approaches to opioid use disorder treatment vary from detoxification using methadone (most common; Bahrain, Saudi Arabia) to OAT (with BMT most common form of OAT) in the MENA region. Only Afghanistan, Iran, Kuwait, Lebanon, Morocco, Palestine, UAE currently provide OAT.

Table 2. Main drugs used, injected and treated in the region/country

Countries	Main drugs used	Common drugs injected	Primary drugs of abuse among persons treated for drug problems*
Afghanistan	Cannabis among men Opioids (opium, codeine, & heroin) among women and children Benzodiazepines	-	Opioids (heroin, opium) and cannabis

Countries	Main drugs used	Common drugs injected	Primary drugs of abuse among persons treated for drug problems*
Algeria	Cannabis Psychotropic drugs (mainly sedatives) Opium	Subutex® and heroin	Cannabis and amphetamines
Bahrain		Heroin, amphetamines, cocaine	NA
Egypt	Captagon, pharmaceutical opioids (tramadol), heroin		Cannabis, opioids, and ATS
Iran	Opioids, cannabis, ATS, methamphetamine, pharmaceutical opioids (tramadol)		NA
Iraq	Prescription drugs, alcohol, cannabis		NA
Jordan	Synthetic cannabinoids, gabapentinoid, pregabalin	Heroin	Amphetamines, opioids (heroin, pharmaceutical opioids), LSD
Kuwait	Captagon, synthetic cannabinoids, methamphetamine, tramadol, heroin, ketamine, substances producing alcoholic effects		Opioids, cannabis, ATS, tranquilizers and sedatives, solvents and inhalers, cocaine
Lebanon	Marijuana, hashish, heroin, cocaine, ATS, synthetic drugs such as Captagon, Salvia		Opioids (heroin, pharmaceutical opioids), cannabis, cocaine, ATS, benzodiazepines and other**
Libya	Hashish, hallucinogens (ecstasy), Artane (trihexyphenidyl), Clonazepam, sleeping pills and Tramadol		NA
Morocco	Cannabis, amphetamines, ecstasy, psychotropic drugs	Heroin	Cannabis, opioids, and other**
Oman	Khat, opiates, stimulants, cannabis, benzodiazepines, sedatives	Heroin and morphine	Opioids, cannabis, tranquilizers and sedatives, amphetamines, solvents and inhalants, hallucinogens
Pakistan	Opioids (heroin, pharmaceutical), cannabis	Heroin, AVIL	NA
Palestine	Synthetic drugs, cannabis, heroin, cocaine, prescription drugs such as Tramadol	Heroin, cocaine	NA
Qatar	Opioids, cannabis		NA
Saudi Arabia	Cannabis, amphetamines		ATS, cannabis, benzodiazepines, opioids, other**, solvents and inhalants
Syria	Heroin, prescription opioids, captagon Fenethylamine (militant groups)	Heroin, cocaine	Opioids, tranquilizers, cocaine, cannabis
Tunisia	Alcohol, psychotropic drugs, cannabis and cocaine		NA
UAE	Alcohol, cannabis, heroin, Captagon, anticholinergics, benzodiazepines, opioid analgesics/syrups, barbiturates, and crystal methamphetamine, synthetic cannabinoids and prescription medications		Opioids, cannabis
Yemen	Khat, pharmaceutical drugs (Tramadol, Alprazolam, Ketoprofen)		NA

*Source: World Drug Report, UNODC 2020

**"other drugs" that include unspecified drugs and substances not under international control

INJECTING DRUG USE

Globally, it is estimated that 11.3 million people have injected drugs in 2018, and more than 1 million PWID are estimated to be living with HIV, while 5.5 million are estimated to be living with HCV (UNODC, 2020). In 2017, deaths related to drug use amounted to around 585,000, of which half were reported to be due to liver diseases attributed to HCV among untreated PWID (GBD, 2017).

The previous regional situation assessment (2017) estimated 887,000 PWID. Although data are relatively limited, there are several 2020 global estimates of the size of PWID in the MENA region, which however used different methods, and different definitions of the MENA region. In the MENA region, estimations of number of PWID were available through two recent global reviews tackling PWID age profiles and HCV prevalence respectively (Hines et al., 2020; Mahmud et al, 2020). One of the reviews presented PWID size estimates for only 5 of the 20 countries, while the other presented size estimates for all 20 countries. Estimates from both reviews, as well as age profiles of PWID, are presented in Table 3 *on the following page*.

In countries where data were available from both global reviews (Afghanistan, Iran, Libya, Morocco, Pakistan), the large discrepancies in size estimations was noted in Afghanistan and Pakistan. Based on data reported in Mahmud et al., (2020), the average number of PWID in all 20 countries is estimated to be 592,045 (428,479 – 1,207,853). However, size estimates for Afghanistan and Pakistan reported by Hines et al (2020) were more consistent with another review reporting on frequency of IDU (Colledge et al., 2020). Taking into consideration these discrepancies, if the size estimates for Afghanistan and Pakistan were to be substituted for those from the Hines et al review (2020), the average estimated number of PWID in all 20 countries consisting of the MENA region may increase up to 1,017,593 (777,544-1,347,853). It is reported that the lowest percentage of PWID aged 25 years or younger residing in the MENA region (Hines et al., 2020). PWID age profile information was available for 12 of the 20 countries, with an average age of 33.2 years (range 28-40.6).

It is important to note that all size estimates discussed in this situation assessment are cited from published meta-analyses available and have not been generated by this report. All data available is presented for the readers to inform them of the different and variable estimates available for the MENA region.



Using heroin may not be legal, but monitored and safe spaces where drug addicts can use are saving lives, reducing overdoses and encouraging treatment. © CNN 2017

Table 3. 2019/2020 estimates and age profile of PWID in the MENA region per country

Countries	Estimated number of PWID	Source	Average age of PWID in years*
Afghanistan	139000 (88000 – 190500) 18820 (12435 – 23000)	(Hines et al_2020) (Mahmud et al_2020)	28.3 (21 – 32)
Algeria	40961 (26333 – 55590)	(Mahmud et al_2020)	30.0 (30 – 30)
Bahrain	1937 (1369 – 15506)	(Mahmud et al_2020)	-
Egypt	90809 (71485 – 119633)	(Mahmud et al_2020)	-
Iran	158000 (107000 – 209000) 185000 (135000 – 300000)	(Hines et al_2020) (Mahmud et al_2020)	32.7 (27 – 44)
Iraq	34673 (23115 – 46230)	(Mahmud et al_2020)	28.0 (28 – 28)
Jordan	4850 (3200 – 6500)	(Mahmud et al_2020)	-
Kuwait	4050 (1850 – 8750)	(Mahmud et al_2020)	-
Lebanon	3207 (1506 – 4908)	(Mahmud et al_2020)	29.5 (29 – 30)
Libya	2000 (1000 – 3000) 4446 (2948 – 5943)	(Hines et al_2020) (Mahmud et al_2020)	39.0 (39 – 39)
Morocco	30500 (15500 – 45500) 18000 (13500 – 22500)	(Hines et al_2020) (Mahmud et al_2020)	33.2 (31 – 39)
Oman	4250 (2800 – 5700)	(Mahmud et al_2020)	-
Pakistan	423000 (363000 – 482500) 117632 (89500 – 510000)	(Hines et al_2020) (Mahmud et al_2020)	30.5 (28 – 34)
Palestine	1850 (1200 – 2500)	(Mahmud et al_2020)	40.6 (39 – 43)
Qatar	1190 (780 – 1600)	(Mahmud et al_2020)	-
Saudi Arabia	16800 (11336 – 22264)	(Mahmud et al_2020)	40.0 (40 – 40)
Syria	8000 (5750 – 10250)	(Mahmud et al_2020)	32.0 (32 – 32)
Tunisia	11000 (8462 – 13750)	(Mahmud et al_2020)	34.6 (33 – 36)
UAE	4800 (3200 – 6400)	(Mahmud et al_2020)	-
Yemen	19770 (12710 – 26830)	(Mahmud et al_2020)	-

*** Average age profile as per Hines et al., 2020**

According to another review by Colledge et al. (2020) focusing on injecting frequencies, data was available for only 8 countries. Yet another estimate is generated from this review, indicating the different estimates available for the region and emphasizing the need for a comprehensive and exhaustive size estimation study. In eight of the 20 countries (Afghanistan, Iran, Lebanon, Libya, Morocco, Pakistan, Palestine, Syria) that fall within the MENAHRA identified MENA region that are reported on in this document, an estimated number of 726,000 (range 561,000-905,500) PWID were found to be injecting at least once daily, while an estimated number of 47,000 (range 20,000-80,500) PWID were found to inject less than once daily (Colledge et al., 2020). The high number of PWID injecting on a daily or more frequency is largely attributed to the figures estimated for Pakistan, Iran, and Afghanistan, three countries that have some of the largest populations of PWID in the region.

Table 4 *on the following page* presents frequency of injection by country, as well as other risk behaviors such as use of sterile injecting equipment from the available literature.

Table 4. PWID risk behaviors

Countries	Prevalence of injecting drug use % (95% CI) (meta analyses) *	Estimated number of PWID injecting daily or more (UI) (meta analyses) **	Estimated number of PWID injecting less than daily (UI) (meta analyses) **	Use of sterile injecting equipment at last injection % ***	Sexual risk behavior: percentage of PWID reporting condom use in last sexual intercourse ***
Afghanistan	0.80 (0.50-1.09)	109500 (68500-156500)	29500 (11500-53000)	94 (year unavailable)	23.4
Algeria	-	-	-	-	-
Bahrain	-	-	-	-	-
Egypt	-	-	-	31.5 (2015)	2.3
Iran	0.28 (0.19-0.37)	156000 (108500-208000)	1000 (<500-3000)	73.4 (2019)	35.4
Iraq	-	-	-	-	-
Jordan	-	-	-	-	-
Kuwait	-	-	-	-	-
Lebanon	-	2500 (1500-4000)	2500 (1000-3500)	98.5 (2014)	-
Libya	0.05 (0.01-0.10)	1000 (500-1500)	1000 (500-1500)	-	-
Morocco	0.13 (0.07-0.20)	28000 (14500-42500)	2500 (1000-4500)	92.1 (2017)	44.6
Oman	-	-	-	-	-
Pakistan	0.37 (0.32-0.42)	422500 (364000-483500)	<500 (<500-500)	72.5 (2016)	15.3
Palestine	-	2000 (1000-2500)	1500 (500-2000)	-	-
Qatar	-	-	-	-	-
Saudi Arabia	-	-	-	-	-
Syria	-	4500 (2500-7000)	8500 (4500-12500)	-	-
Tunisia	-	-	-	90.9 (2017)	46.7
UAE	-	-	-	-	-
Yemen	-	-	-	-	-

*Source: Larney et al., 2020

**Source: Colledge et al., 2020

***Source: UNAIDS Info – data year most recent as of 2019 (aidsinfo.unaids.org)

Data for seven countries (Afghanistan, Egypt, Iran, Lebanon, Morocco, Pakistan, Tunisia) on use of sterile injecting equipment at last injection was reported by the UNAIDS through their AIDSINFO online platform. Reporting years ranged from 2014 to 2019. High risk was found in Egypt with only 31.5% PWID reporting use of sterile injecting equipment at last injection in 2015. Increased risk may have followed in later years due to halting of some NSPs in the country. Afghanistan, Lebanon, Morocco, and Tunisia reported good figures of over 90% use of sterile injecting equipment at last injection, all of which still currently having running NSPs. However, these figures do not necessarily reflect that risk of contraction of HIV and HCV is decreased as they only report on “last injection”. Risky sexual behaviour among PWID was reported by only six countries, on condom use in last sexual intercourse. All six countries reported that less than 50% of PWID used condoms during last sexual intercourse.

There is growing concern highlighted in the most recent World Drug Report (UNODC, 2020) of an increase in harmful patterns of drug use, whether through a switch to injecting or through more frequent injecting among users, as a result of the COVID-19 pandemic. Shortages of opioids due to COVID-19 restrictions, as well as a deteriorating financial situation as a result of these restrictions were among the concerns highlighted that may impact PWID. An increased risk of contracting COVID-19, as well as other diseases such as HIV and HCV, is presented with expected increases in IDU and sharing of injecting equipment as a result of drug shortages or safe injecting material shortages (UNODC, 2020). Civil society response to the pandemic in terms of maintaining harm reduction services has been very active. With lockdowns rendering closure of HTS, treatment and harm reduction service centers, the difficulty in reaching PWUD to ensure services are maintained increased. As a result, countries with available services swiftly adapted their services to ensure continuity. This included shifting counselling services to online platforms for psychosocial counselling, extending validity of OAT prescriptions, distribution of hygiene and personal protective equipment to PWUD and healthcare workers, distribution of harm reduction and safe injecting materials in larger quantities to decrease frequency of visits, as well as meeting other emergent needs (communications with focal points).



Afghan boy collects resin from poppies in an opium poppy field. © Rahmat Gul 2007

HIV AND VIRAL HEPATITIS EPIDEMICS IN THE REGION

Globally, an estimated 38 million people were living with HIV in 2019, with a reported 1.7 million (1.2 million - 2.2 million) new HIV infections worldwide during that same year (UNAIDS, 2020). HIV prevalence remains low among the general population in countries of the MENA region. HIV prevalence for 14 out of 20 countries (see Table 5) was reported by the latest UNAIDS figures, with the highest prevalence at 0.2%. UNAIDS reports an estimate of 20,000 (range 11,000-38,000) newly reported infections for 2019 in the region, figures that are 25% higher than new infections in 2010 (UNAIDS, 2020).

According to the current UNAIDS (2020) report, the HIV epidemic in the MENA region is still growing; however, the response has not been appropriate for the size of the problem (Global AIDS Update, 2020). The Global AIDS report (2020) reflects a rising trend relating to the HIV epidemic in the MENA region, with a 22% increase in new infections between 2010 and 2019, while AIDS-related deaths remain stable. Increases in new HIV infections of more than 20% since 2010 have occurred, including in Afghanistan (116%), Algeria (83%), Egypt (421%), Lebanon (44%), Pakistan (75%), Tunisia (29%), Yemen (26%). In contrast, Iran, Libya, and Morocco report that annual new HIV infections have declined by more than 10% since 2010. In 2020 access to HIV testing, treatment and care in the MENA region is well below the global average, with 52% of PLHIV aware of their serostatus, 38% accessing ART, and less than one-third virally suppressed (UNAIDS, 2020).

Previous Global AIDS reports in 2019 also reported that the HIV epidemic in the MENA region was increasing, with a 10% increase in new infections and a 9% increase in the annual number of AIDS-related deaths between 2010 and 2018 (Global AIDS Report, 2019). Increases in HIV incidence of more than 20% were observed to have occurred, including in Algeria (29%), Yemen (35%), Jordan (53%) and Egypt (196%). In contrast, Iran and Morocco reported that annual new HIV infections had declined by more than 10% since 2010 (UNAIDS, 2019). Access to HIV testing, treatment and care in the MENA region was reported to be well below the global average, with less than half of PLHIV aware of their serostatus.

In terms of available updated country level reports, only ten countries have an updated 2018/2019 Global AIDS Monitoring Report (Iran, Afghanistan, Algeria, Egypt, Kuwait, Lebanon, Pakistan, Saudi Arabia, Tunisia, UAE). There are no updated 2018/2019 Global AIDS Monitoring reports available for Libya, Bahrain, Iraq, Jordan, Morocco, Palestine, Qatar, Syria, Yemen or Oman.

Globally, an estimated 325 million people are living with chronic viral hepatitis infections (HBV: 257 million; HCV: 71 million). In the MENA region, 36 million people (HBV: 21 million; HCV: 15 million) are estimated to have chronic viral hepatitis infections (WHO, 2017). The WHO Eastern Mediterranean region, which comprises more or less the same countries as those covered by MENAHRA (with the exception Algeria and the inclusion of Sudan, Somalia and Djibouti) is reported to have the highest prevalence of HCV infection (2.3%) with incidence rates of 62.5 per 100,000 population. Main modes of transmission in the region have been identified as unsafe healthcare procedures followed by injecting drug use (WHO, 2017).

Table 5. HIV, HCV and HBV rates in the general population per country

Countries	HIV prevalence (15-49 years)*	Number of PLHIV (all ages)*	Total population living with HCV (UI)**	Estimated HBsAg prevalence % (95% CI) ***	Estimated number of chronic HBV infection (95%CI) ***
Afghanistan	<0.1 (<0.1-0.2)	7200 (4100-11000)	183000 (85000-258000)	1.1 (0.7-1.6)	362000 (235000-524000)
Algeria	<0.1 (<0.1 - 0.1)	16000 (15000-17000)	388000 (140000-674000)	1.8 (1.2-2.4)	695000 (487000-962000)
Bahrain	-	-	17000 (11000-17500)	0.6 (0.5-0.7)	8000 (6000-9000)
Egypt	<0.1 (<0.1 - <0.1)	22000 (20000-24000)	5625000 (4007000-6044000)	2 (1.6-2.4)	1794000 (1433000-2222000)
Iran	0.1 (<0.1 – 0.2)	61000 (34000-120000)	199000 (129000-226000)	0.2 (0.1-0.2)	116000 (86000-153000)
Iraq	-	-	85500 (60500-96500)	0.1 (0.1-0.2)	49000 (38000-64000)
Jordan	<0.1 (<0.1 - <0.1)	<500 (<500 - <500)	24500 (10500-29000)	2.6 (1.6-3.9)	197000 (124000-293000)
Kuwait	<0.1 (<0.1 - <0.1)	640 (580-700)	-	0.9 (0.1-12.3)	33000 (2000-479000)
Lebanon	<0.1 (<0.1 - <0.1)	2500 (2200-2800)	7500 (3000-18000)	1.3 (1-1.6)	77000 (61000-95000)
Libya	0.2 (0.2-0.3)	9200 (8300 – 10000)	41500 (32000-43000)	1.8 (1.5-2.3)	116000 (96000-141000)
Morocco	<0.1 (<0.1 – 0.1)	21000 (17000-28000)	263000 (190000-328000)	1.5 (1.2-1.9)	523000 (422000-642000)
Oman	<0.1 (<0.1 – 0.1)	3200 (2900-3600)	15500 (12000-17500)	3.2 (2.2-4.5)	144000 (100000-201000)
Pakistan	0.1 (0.1 – 0.2)	160000 (140000-190000)	7172000 (5363000-7487000)	5.6 (4.4-7.3)	10634000 (8381000-13819000)
Palestine	-	-	-	-	-
Qatar	-	-	37500 (29500-40000)	1.4 (0.9-2.2)	32000 (19000-49000)
Saudi Arabia	-	-	106000 (78500-190000)	2.1 (1.7-2.5)	646000 (519000-791000)
Syria	<0.1 (<0.1 - <0.1)	660 (590-720)	554000 (245000-653000)	1.1 (0.8-1.5)	207000 (147000-284000)
Tunisia	<0.1 (<0.1 - 0.1)	2800 (1700-4400)	108000 (25000-123000)	4.9 (4-6.2)	552000 (451000-692000)
UAE	-	-	131000 (50000-159000)	0.6 (0.3-1)	52000 (27000-90000)
Yemen	<0.1 (<0.1 – 0.1)	11000 (6500-18000)	211000 (143000-258000)	4.9 (3.9-6.2)	1312000 (1051000-1671000)

*Source: UNAIDS Info – data year most recent as of 2019 (aidsinfo.unaids.org)

**Source: Grebley et al., 2018

***Source: WHO HBV Country Profiles – Country Demographics 2015 (<http://whohbsagdashboard.com/#hbv-country-profiles>)

HIV AND VIRAL HEPATITIS AMONG PWID AND OTHER CONVERGING KEY POPULATIONS

PWID

More than one third of HIV infections in 2019 were among PWID, and key populations and their sexual partners accounted for approximately 97% of all new infections in the MENA region. Prevention and treatment programmes in many MENA countries are not reaching sufficient numbers of key populations at high risk of HIV infection. Almost all new HIV infections are among key populations and their sexual partners (UNAIDS, 2020). Patterns of new infections have changed between 2014 and 2019 and have seen an increase of new infections among PWID (28% of new infections in 2014 versus 43% of new infections in 2019) (UNAIDS, 2019; UNAIDS, 2020).

There is considerable HIV incidence among PWID in the MENA region. The estimated HIV incidence rate for 2017 among PWID ranged between 0.7% per person-year (ppy) in Tunisia and 7.8% ppy in Pakistan, with Libya being an outlier (24.8% ppy) (Mumtaz et al., 2018). According to a global systematic review by Larney et al. (2020), the highest HIV prevalence among PWID was reported in Libya (89.6%), Pakistan (32.3%), Iran (14%), and Oman (11.8%). Countries in which HIV prevalence among PWID was reported to be between 5 and 10% included Saudi Arabia (9.8%) and Morocco (9.6%). Countries with a prevalence of less than 5% included Bahrain (4.6%), Afghanistan (4%), Tunisia (3.5%), Egypt (2.6%), and Algeria (1.1%); while 2 countries that reported zero HIV prevalence among PWID included Lebanon and Palestine (*see* Table 6).

Global estimates of HCV in people with recent injecting drug use in the MENA region are 36.1 (29.2- 43.2), with the number of people living with HCV with recent injecting drug use are 126,000 (65,000 – 199,500) (Grebely et al., 2018). Pooled estimates of HCV in PWID stratified by populations' risk of exposure to HCV infection across MENA are 49.0 (range 43.8–54.3) and 6.6 (range 5.7–7.6) among populations of intermediate risk includes in prisoners (Chemaitelly et al., 2019)

Estimates in the region indicate that half the PWID have been infected with HCV, but with great variation in antibody prevalence across specific MENA countries (Mahmud et al., 2019). There is no community level data on people who no longer inject drugs, but who have contracted HCV. High rates of HCV of >35% are reported in PWID in Afghanistan, Egypt, Libya, Oman, Iran, Pakistan, Saudi Arabia, Palestine and Lebanon. Largest numbers of chronic HCV infection among PWID are found in Iran at 68,526 (45,252-121,475), and in Pakistan at 46,554 (22,815-168,797) (Mahmud et al., 2020). Egypt and Pakistan are facing generalized HCV epidemics, and host close to 80% of all HCV exposed and chronically infected individuals in the MENA region (Chemaitelly et al., 2019). HCV genotypes vary in the region, with genotype 3 most common in PWUD in Afghanistan, Iran and Lebanon; genotype 1, largely found in the Maghreb countries (Algeria, Morocco, Tunisia, and to some extent Libya); and genotype 4 in Libya, where extremely high rates are observed (up to 96% in the PWID population).

HBV prevalence is a concern among risk groups, particularly PWID in Afghanistan, Iran, Kuwait and Lebanon. High prevalence of HBV among the refugees is observed in Iraq, Afghanistan and Libya.

Table 6 below provides prevalence rates and estimated number of PWID that are living with HIV, HCV, or HBV according to the most recent systematic reviews and global reports available. In countries such as Iraq, Jordan, Qatar, UAE and Yemen, the only data found was related to the estimated number of PWID chronically infected with HCV through the Mahmud et al., (2020) review.

Table 6. HIV, HCV, and HBV in PWID

Countries	HIV Prevalence among PWID % (%95CI)*	Number of current PWID living with HIV (%95 UI)*	HCV Prevalence among PWID % (UI)**	Number of PWID living with HCV (UI)**	HCV Exposure in PWID % (%95 CI) ***	Estimated number of PWID chronically infected with HCV ****	Estimated HBV Prevalence among PWID % (year of study cited) *****
Afghanistan	5.8-2.2) 4.0)	9000-3000) 5500)	36.3-20.7) 28.4)	60000-23000) 39500)	41.07-25.17) 32.87)	6657-2207) 4360)	2012) 6.6)
Algeria	5.7-0.0) 1.1)	-	-	-	-	21178-8233) 14220)	2018) 1.4)
Bahrain	9.3-1.9) 4.6)	-	-	-	-	5907-428) 672)	2018) 0)
Egypt	4.5-0.6) 2.6)	-	47.5-26.7) 37.1)	-	72.44-52.76) 63.00)*	61499-15102) 32997)	2014) 2.6)
Iran	18.7-9.2) 14.0)	33500-13000) 22000)	45.2-21.4) 33.1)	81000-29500) 52000)	57.43-46.88) 52.17)	121475-45252) 68526)	2011) 3.6)
Iraq	-	-	-	-	-	17612-7227) 12037)	-
Jordan	-	-	-	-	-	2476-1001) 1684)	-
Kuwait	-	-	-	-	-	3334-578) 1406)	2017) 0.38)
Lebanon	0.1-0.0) 0.0)	-	25.2-10.5) 17.6)	-	54.51-4.40) 25.03)	1884-47) 565)	2015) 2)
Libya	92.7-85.8) 89.6)	2500-1000) 2000)	75.2-66.4) 70.9)	2000-500) 1500)	96.72-91.46) 94.20)*	4047-1885) 2949)	2010) 4.5)
Morocco	20.6-0.0) 9.6)	6500-500) 3000)	55.8-25.4) 40.4)	21000-5500) 12500)	72.35-33.11) 52.97)	11471-3147) 6718)	-
Oman	18.6-5.0) 11.8)	-	-	-	52.47-43.64) 48.05)*	2103-864) 1440)	2016) 4.82)
Pakistan	39.1-25.5) 32.3)	172500-103500) 136500)	60.6-0.0) 27.4)	173500-500>) 116000)	70.62-36.21) 53.63)	168797-22815) 46554)	2007) 27)
Palestine	0.1> - 0.0) 0.0)	-	36.2-26.3) 31.2)	-	47.02-36.24) 41.58)	1234-350) 542)	2010) 0.6)
Qatar	-	-	-	-	-	610-244) 413)	-
Saudi Arabia	13.2-7.0) 9.8)	-	63.0-53.7) 58.3)	-	93.10-18.17) 58.67)	13734-1636) 6566)	-
Syria	0.1> - 0.0) 0.0)	-	4.3-0.9) 2.5)	-	78.46-7.03) 39.62)	3738-283) 2231)	2014) 0.5)
Tunisia	4.4-2.6) 3.5)	-	24.7-19.0) 21.8)	-	91.11-78.44) 85.61) δ	3738-292) 1681)	2016) 3.0)
UAE	-	-	-	-	-	2438-1001) 1666)	-
Yemen	-	-	-	-	-	10221-3974) 6864)	-

*Source: Larney et al., 2020

**Source: Grebeley et al., 2018

***Source: Chemiatelly et al., 2019

****Source: Mahmud et al., 2020

*****Source: UNODC, 2020 – World Drug Report

δ Estimate based on a single study

OTHER KEY POPULATIONS WITH OVERLAPPING RISK BEHAVIOUR

This section briefly reviews available evidence on converging key populations other than PWID due to the overlap and intersections present among these populations, and the importance of addressing the gaps in evidence to potentially inform future programming. Drivers of HIV and HCV among key populations include IDU, partially intersecting with multiple and concurrent sexual partnerships, gender inequalities and violence, displacement, stigma and discrimination. Distribution of new HIV infections among key populations in the region in 2019 were estimated to be 43% among PWID, 23% among MSM, 19% among clients of sex workers and sex partners of other key populations, 12% among sex workers, and 3% among the general population. Patterns of new infections have changed between 2014 and 2019 and have seen an increase of new infections among PWID (28% of new infections in 2014), MSM (18% of new infections in 2014), CSW (9% of new infections in 2014); while there was a decrease of new infections among clients of CSW and sex partners of other key populations (41% of new infections in 2014), and the general population (4% of new infections in 2014) (UNAIDS, 2019; UNAIDS, 2020).

Many MENA countries lack sufficient current evidence to determine size of key populations and BBV prevalence in key populations. This reflects the incompleteness of HIV and HCV strategic information systems in the MENA region (Global AIDS Report, 2019). Given that almost all new HIV infections are associated with key populations, this deficiency must be addressed so that more effective and focused programmes can be put into action. There is a strong possibility for hidden HIV epidemics in the MENA region among key populations. Table 7 presents prevalence rates and estimated number of key populations that are living with HIV and HCV according to the most recent systematic reviews and global reports available. It is to note that data is not available for a number of countries in the MENA, a reflection of the aforementioned lack of evidence.

There is a complete lack of data on key populations other than PWID for four countries (Bahrain, Iraq, Palestine, Qatar). Transgender information is almost non-existent, with size estimate and HIV prevalence available for only Pakistan, and HIV prevalence available for Iran. In terms of HCV prevalence among key populations other than PWID, no data was available. Only available prevalence estimations related to prevalence of HCV and co-infection with HIV from UNAIDS (2020), and even that platform had available prevalence rates for only sex worker and MSM populations from Afghanistan and Algeria; no data was available for transgender populations from any country.

Prisoners are an identified key population in the MENA region, however data, where available, is scant with low rates of HIV (0.6%-3.5%) in Afghanistan, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Pakistan, Palestine, Saudi Arabia, Syria, Tunisia, and Yemen), and HCV (1.7% -37.8%) in Afghanistan, Egypt, Lebanon, Pakistan, Iran, Syria and Libya) (Heijnen et al., 2016). Some countries are reporting a concern in the rise of BBV in prisons coinciding with a rise in incarceration (Afghanistan).

Table 7. HIV and HCV prevalence among other Key Populations

Countries	Estimated number				HIV Prevalence (%) - Percentage of KPs living with HIV				HCV Prevalence (%)			
	Sex Workers	MSM	Transgender	Prisoners	Sex Workers	MSM	Transgender	Prisoners	Sex Workers (Co-infection with HIV)	MSM (Co-infection with HIV)	Transgender (Co-infection with HIV)	Prisoners*
Afghanistan	11000	10000	-	2800	0.3	0.5	-	-	0	0	-	1.7 (1.0-4.6)
Algeria	-	-	-	-	3.5	2.4	-	-	1.7	0.1	-	-
Bahrain	-	-	-	-	-	-	-	-	-	-	-	-
Egypt	23000	64300	-	-	2.8	6.7	-	-	-	-	-	23.6 (15.8-31.4)
Iran	90000	243300	-	190000	2.1	-	1.9	0.82	-	-	-	37.8 (2.7-80.5)
Iraq	-	-	-	-	-	-	-	-	-	-	-	-
Jordan	-	-	-	-	0.5	0.2	-	0.0	-	-	-	-
Kuwait	-	-	-	5200	-	-	-	0.1	-	-	-	-
Lebanon	4300	16500	-	-	0.0	12	-	0.1	-	-	-	28.1 (3.4-52.8)
Libya	-	-	-	-	-	3.1	-	-	-	-	-	23.7
Morocco	72000	42000	-	83800	1.3	5.9	-	0.3	-	-	-	-
Oman	-	-	-	6000	-	-	-	0.2	-	-	-	-
Pakistan	228800	832200	52400	80500	3.8	3.7	5.5	2	-	-	-	15.6 (12.8-18.4)
Palestine	-	-	-	-	-	-	-	-	-	-	-	-
Qatar	-	-	-	-	-	-	-	-	-	-	-	-
Saudi Arabia	-	-	-	-	-	-	-	0.2	-	-	-	-
Syria	25000	10000	-	-	-	-	-	0.0	-	-	-	1.5
Tunisia	25000	28000	-	22000	1.2	9.1	-	-	-	-	-	-
UAE	-	-	-	-	-	-	-	1.5	-	-	-	-
Yemen	54000	44000	-	-	0.0	5.9	-	-	-	-	-	-

Source: UNAIDS Info – data year most recent as of 2019 (aidsinfo.unaids.org)

*Source: Heijnen et al., 2016 (data from 2008-2012)

Drivers of HIV and HCV among key populations include injecting drug use, partially intersecting with multiple and concurrent sexual partnerships, gender inequalities and violence, displacement, stigma and discrimination. Several countries had little or dated detail on key populations size estimates or recent prevalence of BBV; or relied on case finding among key populations (Afghanistan, Bahrain, Iraq, Kuwait, Egypt, Saudi Arabia, Syria, Qatar, Tunisia).

At country levels, this situation assessment indicates the presence of concerning rates of HIV and viral hepatitis transmission among PWID populations in Afghanistan, Algeria, Egypt, Lebanon, Iraq, Morocco, Palestine, Pakistan, Tunisia and Libya (extremely high at 87%); in MSM populations in Afghanistan, Algeria, Egypt, Lebanon, Iraq, Morocco, Yemen (no HCV data available), Pakistan, Tunisia and Libya; in FSW/CSW populations in Algeria, Iran, Lebanon, Iraq, Morocco, Pakistan and Libya; and in refugee populations in Afghanistan, Iraq, Lebanon and Libya (particularly HBV).

HIV TESTING AND TREATMENT CASCADE

HIV testing is currently available in 20 countries of the region, with HTS services reported to be available, including for PWUD (communications with focal points). However, the number of PLHIV who know their status in the region remains low. UNAIDS (2020) have reported on a large gap in the first 90 of the cascade of PLHIV unaware of their status among countries of region. HIV surveillance systems are not effective in most countries and data is lacking. Data regarding PWID who know their HIV status is scant with information available for only 8 countries (Algeria, Egypt, Iran, Kuwait, Morocco, Pakistan, Saudi Arabia, Tunisia) with rates of less than 50% PWID who know their status reported in 3 of those countries (Morocco, Pakistan, Tunisia).

Moreover, the region is reported to have the lowest treatment coverage in the world, with more than 100,000 PLHIV in need of treatment but that are unable to access it (UNAIDS, 2020). Although ART is available free of charge for PLHIV in countries of the region, there is limited data regarding PWID receiving ART. To date, only Iran and Morocco have integrated ART within OAT services (communication with focal points).

Taking into consideration the gaps in the HIV testing and treatment cascade in the region in general, there are further barriers affecting PWUD, among other key populations, in terms of their access to HIV testing and treatment. Focal points in different countries that were consulted with have indicated that main barriers to HTS include stigma and discrimination, centralization of HTS services, difficulty in reaching PWUD, and confidentiality issues (communications with focal points).

Strengthened political commitment is evident in a few countries, such as Algeria and Morocco, but the region's overall HIV response is well off-track and far from reaching the 90–90–90 targets (UNAIDS, 2019). Efforts are compounded by humanitarian emergencies due to the protracted emergencies in Libya, the Syrian Arab Republic, Yemen and elsewhere.

Table 8. HIV testing and treatment MENA

Countries	PLHIV who know their status % *	PLHIV on treatment % *	PLHIV who are virally suppressed % *	PWID who know their HIV status % **
Afghanistan	27 (11-92)	10 (4-33) N=1044	-	-
Algeria	76 (36-100)	67 (31-100) N=14390	50 (24-75)	63.2
Bahrain	-	-	-	-
Egypt	-	32 (24-42) N=8401	-	95.4
Iran	37 (20-79)	25 (14-52) N=14685	21 (12-45)	98.3
Iraq	-	-	-	-
Jordan	-	84 (76-95) N=310	-	-
Kuwait	67 (60-73)	62 (55-67) N=400	60 (54-65)	100
Lebanon	91 (51-100)	63 (36-100) N=1717	58 (33-92)	-
Libya	-	34 (26-43) N=3241	-	-
Morocco	77 (64-100)	70 (58-92) N=15049	64 (54-84)	36.1
Oman	69 (53-84)	61 (47-74) N=1494	55 (42-67)	-
Pakistan	21 (19-24)	12 (11-14) N=22947	-	47.1
Palestine	-	-	-	-
Qatar	-	N=150	-	-
Saudi Arabia	-	N=6300	-	100
Syria	-	41 (17-79) N=254	-	-
Tunisia	20 (14-29)	20 (14-28) N=1287	-	28.6
UAE	-	-	-	-
Yemen	-	24 (14-39) N=2669	-	-

*Source: UNAIDS Global AIDS Update 2019 & 2020

**Source: UNAIDS Info – data year most recent as of 2019 (aidsinfo.unaids.org)

HARM REDUCTION RESPONSE

The MENA region has witnessed a slow but steady increase in the harm reduction response among countries of the region in general, with some positive changes since 2016. Only four countries have implemented both essential harm reduction services in the form of combined OAT and NSP services (Afghanistan, Iran, Lebanon, and Morocco).

Harm reduction policies

- Six out of 20 countries in the region (Iraq, Kuwait, Qatar, Saudi Arabia, UAE, Yemen) do not have explicit harm reduction policies within their NASP or noted PWID as an important key population in their national plans.
- Fourteen countries have mention of harm reduction/PWID in national policy documents: countries adopting harm reduction policies in their NASP include Afghanistan, Egypt, Iran, Lebanon, Morocco, Oman, and Palestine; countries in which PWID are noted as important key populations in their national plans include Algeria, Bahrain, Jordan, Libya, Oman, Syria, Tunisia and Pakistan.

NSPs

- NSPs are available in 10 countries of the region (Afghanistan, Algeria, Egypt, Jordan, Iran, Lebanon, Morocco, Palestine, Tunisia, and Pakistan), with the recent addition of Algeria to the list of 9 countries reported in 2016. It has been reported that an NSP was set up in 2 regions of Algeria (Algiers and Annaba) in 2018-2019 as part of the implementation of the combined HIV prevention program with support from the Global Fund. There is also a planned scale-up to a third region (Oran) for 2020-2022.
- NSPs in some countries of the region (Egypt, Jordan, Lebanon) have been reduced due to changes in funding priorities and although services are still available, there has been a decrease in coverage since 2016.
- Although the number of countries providing NSP has increased, coverage remains insufficient. According to WHO EMRO, NSP coverage in the region (estimated to be around 25 syringes/PWID/year) remains below the Global 2020 and 2030 targets (200 syringes/PWID/year and 300 syringes/PWID/year respectively). Moreover, out of 7 countries for which data was available, the highest reported distribution of syringes/PWID is in Afghanistan with a reported number of 112 syringes/PWID in 2019 (UNAIDS, 2020). Therefore, current coverage is unlikely to have an impact on HIV and HCV incidence among PWID.

OAT

- Drug detoxification and abstinence treatment is most common (Afghanistan, Algeria, Bahrain, Egypt, Oman, Saudi Arabia, Tunisia).
- OAT exists in seven out of 20 countries (Afghanistan, Iran, Kuwait, Lebanon, Morocco, Palestine, UAE). MMT in five countries (Afghanistan, Iran, Morocco, Palestine, UAE); and BMT in four countries (Iran, Kuwait, Lebanon, UAE). Iran uses opium tincture for substitution treatment.
- OAT developments since 2016 include the scaling up of services in Lebanon through two new dispensing units (Bekaa and Mount Lebanon governorates) and two additional centers offering OAT (Bekaa and Mount Lebanon governorates). Moreover, suboxone was recently introduced in an effort to limit injecting practices among beneficiaries of OAT that are using buprenorphine. Morocco is also scaling up OAT through the opening of three new centers to improve coverage and geographical distribution, however more efforts are needed in this area. Whereas in Iran, insurance coverage for OAT was expanded to include selected private sector clinics in addition to the previously covered governmental centers, in addition to the introduction of a national registration database for OAT to improve data management and quality.
- Five countries remain in the planning phase for OAT: Algeria, Egypt, Oman, Pakistan, and Tunisia.
 - Endorsement of OAT in Pakistan by the Drug Regulatory Authority and Anti-Narcotic Forces and steps towards registering Methadone and Buprenorphine reached advanced stages during 2020
 - In Egypt, the government has requested support from WHO and UNODC to review the OAT feasibility study conducted by UNODC with the support of MENAHRA in 2014, as part of the plan for elimination of hepatitis C in Egypt

Prisons

- OAT is available in prisons in Afghanistan, Iran, Lebanon, Morocco, and Palestine. In some countries for example as in Lebanon OAT is only available in prisons to those who were enrolled before entering prison.
- NSP is not available in prisons in any country of the region. Iran used to provide NSP services in prisons, however these programs have been halted.
- In Egypt, the UNODC Prison HIV project provided HIV, HBV and HCV counseling and testing services to inmates. The project also distributed needles, syringes and condoms to released inmates and their families. Therefore although NSP is not technically available in prisons in Egypt, this step can be seen as an improvement in the provision of services for key populations.
- Condom programming is reported in Iran, Egyptian and Algerian prisons

Overdose prevention programs

- Two countries provide naloxone through community distribution (Afghanistan and Iran). Morocco has implemented an international consultation in 2018 on overdose prevention and trained community workers on naloxone use, however, community distribution has not been initiated yet.
- DCR/Drug Consumption Rooms are not available in any country of the region to date.



Outreach for youth in the Lebanese capital about harm reduction topics, and drug users rights. © SIDC 2019

See Table 9 on the following page.

Table 9. Harm Reduction Response in MENA countries

Countries	Mention of harm reduction/PWID in national policy documents	Availability of needle and syringe program	Needles and Syringes distributed per person who injected *	Availability of opioid agonist treatment
Afghanistan	HR policy adopted in NASP	Yes	112	MMT
Algeria	PWID noted as important KP in national plan	Yes	-	No
Bahrain	PWID noted as important KP in national plan	No	-	No
Egypt	HR policy adopted in NASP	Yes	1	No
Iran	HR policy adopted in NASP	Yes	43	MMT & BMT
Iraq	-	No	-	No
Jordan	PWID noted as important KP in national plan	Yes	-	No
Kuwait	-	No	-	BMT (integrated treatment program)
Lebanon	HR policy adopted in NASP	Yes	9	BMT
Libya	PWID noted as important KP in national plan	No	-	No
Morocco	HR policy adopted in NASP	Yes	109 (2018)	MMT
Oman	HR policy adopted in NASP & PWID noted as important KP in national plan	No	-	No
Pakistan	PWID noted as important KP in national plan	Yes	46 (2018)	No~
Palestine	HR policy adopted in NASP	Yes (limited)	-	MMT
Qatar	-	No	-	No
Saudi Arabia	-	No	-	No
Syria	PWID noted as important KP in national plan	No	-	No
Tunisia	PWID noted as important KP in national plan	Yes	49	No
UAE	-	No	-	MMT & BMT(integrated treatment program)
Yemen	-	No	-	No

Countries	Coverage of OAT % (year) *	Availability of drug consumption rooms	Availability of naloxone through community/ peer distribution	Availability of OAT in prisons	Availability of NSP in prisons
Afghanistan	4.8 (2019)	No	Yes	Yes (1 prison)	No
Algeria	-	No	No	No	No
Bahrain	-	No	No	No	No
Egypt	-	No	No	No	Limited to released inmates & families
Iran	13.4 (2019)	No	Yes	Yes	No
Iraq	-	No	No	No	No
Jordan	-	No	No	No	No
Kuwait	-	No	No	No	No
Lebanon	49.7 (2015)	No	No	Yes	No
Libya	-	No	No	No	No
Morocco	42.3 (2018)	No	No	Yes	No
Oman	-	No	No	No	No
Pakistan	-	No	No	No	No
Palestine	-	No	No	Yes	No
Qatar	-	No	No	No	No
Saudi Arabia	-	No	No	No	No
Syria	-	No	No	No	No
Tunisia	-	No	No	No	No
UAE	-	No	No	No	No
Yemen	-	No	No	No	No

*Source: UNAIDS Info – data year most recent as of 2019 (aidsinfo.unaids.org)
~ Progress towards introducing OAT in 2020

LAWS AND POLICIES

Over 600,000 people are deprived of their liberty in the MENA region, the vast majority of whom are male and detained on drug related charges (Al-Shazly and Tinasti, 2016).

Repressive and punitive approaches to drugs, criminalization, coercive treatment by the courts, and aggressive policing continue to discourage health care seeking by PWUD, reinforces marginalization and stigmatization of PWUD/PWID and perpetuates unsafe use of drugs in the region.

Iran, Libya, Qatar, Saudi Arabia, the UAE and Yemen traditionally use judicial corporal punishment (i.e. state-sanctioned beating, caning, or whipping of a person) for drug use, purchase or possession. The death penalty for drug offences continues to be prescribed in many MENA countries, including Bahrain, Egypt, Iran, Iraq, Kuwait, Libya, Oman, Qatar, Saudi Arabia, Syria, the UAE, Palestine, Gaza and Yemen. Countries reporting death sentencing for drug offences in 2018 include Bahrain, Egypt, Iraq and Oman (Girelli, 2018).

In 2019, the progressive *“Beirut Declaration”* based on the Third Consultation Meeting on Law Enforcement and the Rights of People Living with and Affected by HIV was signed and aims to promote the positive engagement of law enforcement agents in the HIV response in selected countries in the MENA region, and to create a common understanding and agreement between partners and participants on strategic human rights-based HIV programming and a roadmap to improve the legal environment in the region.

Table 10 presents the main punitive legislations against drug use in countries of the region, identifies countries that impose mandatory treatment as well as those with legislation protecting PWUD confidentiality.

Eight out of 20 countries (Algeria, Jordan, Lebanon, Libya, Morocco, Qatar, Tunisia, UAE) in the region have legislation that sanctions drug consumption, while 6 countries (Bahrain, Egypt, Iraq, Kuwait, Saudi Arabia, Yemen) have legislation that focuses on drug possession for the purpose of consumption and does not sanction consumption itself. In only 4 countries (Afghanistan, Iran, Oman, Pakistan), the law allows possession of a specified amount of drugs, or classifies consumption as a non-criminal offense. Some countries now give precedence to prevention and treatment over punishment, however it is unclear as to when and for how long these are applied (for example Lebanon, Algeria, Libya, Yemen, Morocco, Tunisia, Qatar). *See* Table 10.

Table 10. Drug use legislation and mandatory treatment per country

Key	Law focus on possession for purpose of consumption and not on consumption		
	Law punishes consumption		
Countries	Punitive legislation against drug use	Mandatory treatment	Legislation protecting PWUD confidentiality
Afghanistan	Law allows possession of specified amount of drugs*	-	
Algeria	Law differentiates between possession and consumption. Punishable by imprisonment between 2 months-2 years and a fine.	Law states prevention and treatment before penal measures making treatment basis of legal response to drug use. Sanctions are not enforced if and until treatment, which may include detoxification and rehabilitation, is refused.	
Bahrain	Law does not sanction personal consumption but possession, procurement, or purchase of drugs for personal use is punishable with imprisonment of at least 6 months and a fine	Court may order admittance to hospital for treatment in addition to sanctions for possession. Completing treatment does not exempt offenders from their sentence and they are sent to prison after release from treatment	

Egypt	Law against possession, procurement, or purchase of drug, and cultivation of plants from which drugs can be extracted punishable by imprisonment between 3 to 15 years and a fine. Law does not include punishing PWUD if in possession of any quantity	Law states alternative of commitment to treatment instead of imprisonment and a fine. If treatment is not successful, remaining sentence time is served in custody	Law specifies confidentiality of data to workers in drug treatment centers. Any disclosure is punishable
Iran	Drug possession for personal use and consumption classified as non-criminal offenses*	-	
Iraq	Law does not sanction consumption but possession is punishable with imprisonment up to 15 years, or 3 years and a fine	Court may impose mandatory treatment up to 6 months in a health center assigned by the ministry as an alternative to custody if drug dependence caused by a medical condition. If drug use is not a result of a medical condition, admission into treatment can be ordered but criminal sanctions will also be imposed	
Jordan	Law punishes consumption, possession, or procurement for consumption, in addition to planting or purchasing any plant that produces drugs with imprisonment of 1-2 years and a fine	Law requires PWUD to voluntarily inform official authorities of a request for treatment before being caught by illegal activity	Drug law specifies confidentiality of identity and information related to PWUD in treatment
Kuwait	Law against possession, procurement, or purchase for personal consumption with imprisonment up to 10 years and a fine. No sanctions on PWUD who are not in possession of substances	-	Drug law specifies professional confidentiality for people in addiction treatment
Lebanon	Law punishes possession, procurement, or purchase of drugs for consumption with imprisonment between 3 months and 3 years and a fine. Punishment with same sanction for people that do not abide by court-imposed treatment procedures.	Offender may ask for referral to the Drug Addiction Committee for follow-up and referral to treatment in lieu of penal measures** (update)	
Libya	Law differentiates between possession and consumption. Both punished by imprisonment up to 2 years and a fine	Court may order admission to treatment centers instead of criminal sanctions. Mandated treatment period is 6 months to one year	

Morocco	Law punishes drug consumption with imprisonment between 2 months and 1 year with a fine. In some cases of drug consumption, only a fine is imposed	Court may order treatment instead of sanctions. Treatment period not specified but follows doctor recommendations	
Oman	Law allows possession of specified amount of drugs*	Treatment period not specified	Drug law protects confidentiality of people in dependence treatment centers
Pakistan	Drug use or possession for personal use is not an offense*	-	
Palestine	-	-	
Qatar	Law differentiates between possession and consumption. Consumption punished with imprisonment of 1-3 years and a fine Judge may avoid imprisonment under law and impose minimum fine for consumption.	Court may order admission to treatment centers instead of criminal sanctions. Mandated treatment period is 3 months to one year	
Saudi Arabia	Law against drug possession for personal consumption punishable by imprisonment of 6 months to 2 years	-	Anti-drug law specifies confidential treatment of identity and information related to convicted PWUD
Syria	-	-	
Tunisia	Law punishes consumption or possession of drugs with imprisonment between 1 and 5 years and a fine. Law also prohibits use of mitigating factors in sentencing	Court may order detoxification at a public hospital. If refused, offender can be forced by the court. Treatment period not specified by court – follows expert committee decision	
UAE	Law punishes consumption of drugs and sanctions vary according to drug type with imprisonment between 1-4 years and a fine. Criminalization of consumption of medical drugs without prescription	Voluntary request for treatment terminates criminal lawsuit, but mandated rehabilitation treatment is specified for a period of maximum of 3 years	
Yemen	Law punishes possession, purchase, procurement or purchase of drugs for personal consumption with imprisonment for 5 years	Voluntary request for treatment terminates criminal lawsuit. Period of stay at treatment center specified between 6 months and 2 years	

Source: Al-Shazly & Tinasti, 2016

NGO INVOLVEMENT

Civil society engagement and the work of NGOs is often the one of the drivers of the HIV and harm reduction response. In the MENA, it is often NGOs that are at the forefront of advocacy initiatives and service provision in the fields of HIV, harm reduction, and key populations. Moreover, PWID and other key populations are known to be more comfortable accessing services through non-governmental structures, as they remain to be criminalized populations in most countries of the region.

Table 11 describes the availability and involvement of NGOs in countries of the region. In 6 countries out of the 20 (Iraq, Kuwait, Libya, Oman, Qatar, UAE), there is a non-existent to very limited role that NGOs play in the HIV and harm reduction response. Coincidentally, these countries do not provide comprehensive harm reduction programs that are tailored for key populations. There is no doubt that NGOs are the main actors in the implementation of HIV and harm reduction programs in the region, and therefore, there is a need to scale-up their role and provide support among countries in which their involvement and engagement is weak. Countries with the best examples of HIV and harm reduction responses in the region (such as Iran, Lebanon, Morocco, Pakistan, Tunisia) have an active number of NGOs who are primarily providing services to key populations and are involved in scaling up the response in coordination with governmental and other national stakeholders.

Table 11. NGO involvement in HIV and HR Response per country

Countries	NGO involvement
Afghanistan	Harm reduction funded by NGOs (such as OHRA) who are involved in advocating for vulnerable populations by screening, preventing, and treating HIV/AIDS
Algeria	Essential partners - able to carry out a significant number of structured activities (screening, orientation and accompanying of PLHIV, psychosocial support, promotion and distribution of condoms, local prevention among populations exposed to HIV risk)
Bahrain	There are several active NGOs; Addicts Friends Society, Reproductive Health Association and Bader Group (PLHIV Support Group) mainly for HIV
Egypt	Several NGOs are providing condom promotion, HIV testing and counselling and NSP for PWID in large cities. NGOs are active in advocating for harm reduction and drug user rights
Iran	Large number of NGOs are active in the harm reduction and HIV response
Iraq	Very limited role
Jordan	NGOs active in HIV response and Key Populations. One NGO is specifically providing HTS to PWID for HIV, HCV and HBV and NSP when possible
Kuwait	Not active in HIV and Key Populations
Lebanon	More than 50% of HIV programs for PWID are estimated to be provided by NGOs. NGOs active in provision of harm reduction services, including OAT support services, and advocacy. NSP is provided by one NGO (SIDC) through a drop in center
Libya	Very limited role
Morocco	NGOs highly active in comprehensive harm reduction response. thematic NGOs working on harm reduction, human rights NGOs, representatives of PWUD in Morocco and self-help. Newly established network of all national actors involved in drug addiction field (REMAD)
Oman	No role
Pakistan	NGOs highly active in HIV and harm reduction response. Nai Zindagi is PR of the GF grant. The first drug user network in Pakistan (DUNE) was launched in 2015 and is part of the Association of People Living with HIV (APLHIV) in Pakistan. Ongoing advocacy efforts by Nai Zindagi to introduce OAT in the country as well as harm reduction interventions into prisons
Palestine	NGOs are the main providers of treatment and rehabilitation (Al Huda, Al Sadeq al Tayeb, Maqdese, SARC, Caritas). NSP and condom provision was initiated in the West Bank by local NGOs, but is currently not provided for
Qatar	No role
Saudi Arabia	NGOs and CSOs contribute relatively strongly to IEC prevention programmes and operate half-way houses for drug treatment and support.
Syria	NGOs active in awareness raising and advocacy (updating of national plans) related to HIV/AIDS prevention
Tunisia	A few NGOs (ATL MST/SIDA, ATIOST, ATUPRET) provide HIV prevention services to key populations, including PWID, but with low capacity and inadequate political support
UAE	No role
Yemen	The role and support needs of CSO in their engagement with Key Populations must be scaled up



COUNTRY PROFILES*

- * Surveillance and academic research activity differ per MENA country, hence each country presents a narrative scoping review which maps and describes extant published and focal point information available (2010-2020). Contextual detail was further provided by data collection with key informants listed in the Acknowledgements. Hence it was not consistently possible to present countries using comparative structures.
- * Where possible 2020 meta-analyses and systematic reviews with pooled country estimates using extant data (including that of before 2010) are provided in the text and were also presented in the previous regional overview tables to illustrate country characteristics.

It is important to note that all size estimates discussed in this situation assessment have not been generated by this report. All data available is presented for the readers to inform them of the different and variable estimates available for the MENA region.



Afghanistan is a low income country which has been affected by political and economic instability, protracted conflict, dire socio-economic conditions, refugee influx and displacement, and terrorism in the past three decades. This situation has facilitated active production and trafficking in opium and heroin, and the associated consequences of addiction throughout the MENA region (Ruiseñor-Escudero et al., 2015; Farooq et al., 2017). Afghanistan is part of the Golden Crescent (along with Iran and Pakistan) and is the world's largest producer of opium. In 2016, the total area under opium poppy cultivation was estimated at 201,000 hectares and country production of opium was estimated at 4,800 tons (4,000 - 5,600) (Afghanistan Ministry of Counter Narcotics, 2016). Despite an observed decline in opium yield due to drought, in 2018, the total area cultivated was 263,000 hectares (UNODC World Drug Report, 2019; 2020). Afghanistan is also the second largest producer of cannabis resin after Morocco (UNODC, 2016). Clandestine manufacture of methamphetamine has been reported in recent years by Afghanistan (UNODC World Drug Report, 2020).

Drug Use

Illegal drug use (opium, heroin, and most recently methamphetamine), alcohol and prescription drug use (pharmaceutical opioids) have become a major and increasing problem in Afghanistan since 2001 (Khan and Attaullah, 2011; Cottler et al., 2014). Cannabis is the common drug of use among men and opioids (opium, codeine and heroin) most commonly used by women and children. Benzodiazepines are also commonly misused (Afghanistan Ministry of Counter Narcotics, 2013).

There are an estimated 1.6 million Afghans who use drugs (mostly opium and heroin), and are majority male (Rasekh et al., 2019). Poor socio-economic conditions, external displacement to neighboring Iran and Pakistan, which host higher numbers of drug user populations (with consequent greater prevalence of HBV and HCV, and HIV among PWID), and their subsequent return to Afghanistan a high-opium producer and trafficking zone compound the issue (World Bank/ UNHCR; 2011; Todd et al., 2012; Rasekh et al., 2019). This has coincided with an observed increase in mental illness in native and repatriating Afghans (Abidi et al., 2012).

In Afghanistan the estimated number of PWID is 139,000 (88,000–190,500), with young PWID under the age of 25 years constituting 25.3% (19.8–31.1), average age 28.3 years (21–32); average age of onset of injecting 26.2 years (24–28.5) and with a median duration of injecting of 2.5 years (1–4) (Hines et al., 2020). An estimated 78.8% (65.8–91.8) of PWID inject daily or more (estimated number 109,500; 68,500–156,500) and 21.1% (8.0–34.1) inject less than daily (estimated number 29,500; 11,500–53,00) (Colledge et al., 2020).

Unsafe injecting (shared needles and other injecting paraphernalia) is the main transmission route of BBV. IDU prevalence was estimated at 0.80% (0.50–1.09); with HIV prevalence of 4.0% (2.2–5.8) among PWID; and number of current PWID living with HIV estimated to be 5,500 (3,000–9,000) (Larney et al., 2020). IDU (heroin) has increased alongside BBV rates (HIV, HBV, HCV) (UNOCHA, 2011; Todd et al., 2011; Farooq et al., 2017).

Risk characteristics of PWUD in Afghanistan include homelessness, poor hygiene, close contact, shared needles, skin popping, and unsafe extra-marital sexual contact (Rakesh et al., 2019). These risk behaviours have public health implications for BBV transmission from PWID to their partners and to other high risk populations, and are of increasing governmental concern (Afghanistan Ministry of Counter Narcotics Islamic Republic of Afghanistan, 2011; 2012). There are an estimated 12,541 PWUD living in Kabul (NACP, 2014).

BBV

Based on available data, the HIV epidemic in Afghanistan seems to be low/early stage and HIV affects mainly PWUD (NACP, 2014; Global AIDS Monitoring Report for Afghanistan, 2019). Most recent estimates of HIV in the general Afghan population were <0.1% (UNAIDS, 2013), but with rising incidence in PWID, FSW, MSM and prisoners (Joint United Nations Programme on HIV/AIDS, 2012; UNGASS, 2010; UNAIDS, 2013). Drivers of HIV among key populations include IDU, partially intersecting with multiple and concurrent sexual partnerships,

gender inequalities and violence, and stigma and discrimination (Afghanistan Global AIDS Monitoring report, 2019). Cross cutting determinants of vulnerability include drug cultivation, trade and use; high level of tuberculosis and sexually transmitted infections; low literacy level and poverty; poor HIV-related knowledge; and limited access to sexual and reproductive education (Afghanistan Global AIDS Monitoring report, 2019). There is very little information on women who use or inject drugs.

Concentrated epidemics of HIV, HBV and HCV are observed in Afghan refugees (Khanani et al., 2010), and also in PWID populations in several cities in Afghanistan (Nasir et al., 2011; Ruiseñor-Escudero et al., 2014). A nascent localised HIV epidemic is observed among PWID in Afghanistan (Mumtaz, et al., 2014; Todd et al., 2015; Mumtaz et al., 2018), and was estimated in 2012 to be an overall 4.4% of HIV prevalence among PWID. Rasekh et al., (2019) in their study in Kabul report that out of 410 PWUD, 15 (3.7%) were positive for the HBV surface antigen (HBsAg), 45 (11%) were HCV positive, and one (0.2%) was HIV positive. The prevalence of HCV and HBV was higher among these PWUD compared to the general Afghan population, and drug use via injection was an identified important risk factor for transmitting BBV. According to the 2012 IBBS, the percentage of FSWs living with HIV in Afghanistan was 0.3%. Afghan MSM are also an under reported high risk group (IBBS estimates of HIV, 0.5%) (NACP, 2014).

Prisoners are also an identified key population due to unsafe injecting practices, with rates of incarceration in Afghanistan rising (NACP, 2014). The median HIV prevalence among incarcerated populations was 0.6% in Afghanistan (0.2-11.0) (Heijnen et al., 2016).

Mahmud et al., (2020) reported on pooled mean HCV prevalence among PWID in Afghanistan of 32.9% (25.2–41.1); with estimated population size of 18,820 (12,435–23,000); estimated number of HCV antibody-positive among current PWID of 6,192 (3,134–9,453) and estimated number of HCV chronically infected current PWID of 4360 (2207–6657). Pooled estimates in % for risk of exposure to HCV in the general population is 0.74 (0.57-0.93); in PWID are 32.87 (25.17-41.07); and in populations of intermediate risk (includes prisoners) are 2.34 (1.29-3.67) (Chemiatelly et al., 2019). HCV antibody prevalence among drug users has shown sub-national variation in Afghanistan (Bautista et al., 2010; Chemiatelly et al., 2015; Mahmud et al., 2020), with high prevalence observed in some drug user groups, of up to 70% (mean estimates of 30-40%) (NACP, 2012). A 2005 to 2010 study which covered 1,696 PWUD from some provinces of Afghanistan including Kabul, showed a range of 36.0% - 36.6% sero-prevalence of HCV and 5.8% - 6.5% HBV resp (Nasir et al., 2011). Genotype 3 is reported to be the major circulating strain in Afghanistan and among Afghan PWID (similar to the global association between IDU and this genotype) (Mahmud et al., 2020). The median HCV prevalence among Afghan prisoners was 1.7% (1.0-4.6) (Heijnen et al., 2016). Todd et al., (2015) reported on high HCV incidence among male IDUS in Kabul, and have recommended programming to awareness of HCV transmission and overdose risks, prepare clients for harm reduction needs during conflict or other causes of displacement, and continue efforts to engage community and police force support. Given the high prevalence and spread of viral hepatitis among PWUD in Kabul, Afghanistan, Rasekh et al., (2019) recommend scale up of active preventive programs focusing on youth educational campaigns, and further research on PWUD living without shelter in Kabul and other major cities of Afghanistan.

Harm Reduction

The Organization for Harm Reduction in Afghanistan (OHRA) exists since 2011 and advocate for vulnerable populations by screening, preventing, and treating HIV/AIDS (OHRA, 2017). The current state of harm reduction may be roughly assessed via the ease of access to two essential harm reduction services, as defined by UN guidelines: NSPs and OAT. Afghanistan is one of only three countries in the MENA region which has implemented this effective combination of services. The others are Iran (2000) and Morocco (2010). Harm reduction is explicitly mentioned in the national strategy. HR programmes have increased since 2010 and are funded by government and NGOs, and provide drug abstinence based treatment (Maguet and Majeed, 2010; Farooq et al., 2017). In February 2010, Medecins du Monde (MdM), with support from the Afghan MoPH and the World Bank, implemented the first OAT pilot program in Kabul, Afghanistan (Rasekh et al., 2019). There are 108 drug treatment centres reported in 2013, treating a capacity of 27,000 drug users (Todd et al., 2012; UNODC, 2013). NSP have been scaled up. UNAIDS Data (2019) reported that in Afghanistan, 52 needles and syringes were distributed in 2018 per person who injects, coverage of OAT was 3.2%, naloxone was available (2019). One prison provides OAT (Sander et al., 2019). The 2020 UNAIDS report has indicated that 112 needles and syringes were distributed per person who injected in 2019, with OST coverage of 4.8% and naloxone available in 2019. No DCR is provided.

Overall challenges in the Afghanistan country HIV response identified by the Global AIDS Monitoring Report for Afghanistan in 2019; include *'insufficient targeting of prevention; limited capacities for prevention, implementation and management; weak strategic information management, including absence of a comprehensive surveillance system on HIV and sexually transmitted infections and current reliance on data which is only available for key affected populations; inadequate communication strategies; insufficient scale up of treatment, care, and support; weak community ownership and participation, the security and humanitarian environment and poor infrastructure in Afghanistan'*. The National AIDS Strategic Plan for 2016-2020 supports HIV testing, treatment and care. ART is available, currently provided in five sites (Kabul, Herat, Mazar, Nangarhar and Khost) and in six extension sites in existing HTSCs but coverage is low (Afghanistan MoPH, 2014). The 2020 UNAIDS report has indicated that AIDS related mortality is rising in Afghanistan. HTS is available throughout the country in six extension sites (Afghanistan MoPH, 2014); HIV prevention services are provided to all key populations in twelve provinces of the country in a combination format of harm reduction and NSP, condom distribution services; scale up of PMTCT, particularly in female prisons; rights based approaches to protect vulnerable children; effective reach out to all PLHIV, with care, support and treatment services.



Algeria, along with Libya, Mauritania, Morocco and Tunisia form part of the Arab Maghreb Union, and are currently at the crux of drug, human trafficking and terrorism in the MENA region (Tinasti, 2016). Algeria is one of the largest producers of amphetamines in the Maghreb, and is a transit country for cannabis produced in Morocco. Cocaine seizures were reported in 2019, including 0.3 tons seized by navy forces in Skikda, Algeria in January 2019 (UNODC World Drug Report, 2020). The Algerian narcotics law differs from many MENA countries, since it gives precedence to prevention and treatment over punishment (Tinasti, 2016). This emphasis on public health however is complicated by mandatory drug treatment by court order. Heroin injecting has not recognised as a public health issue until recently, with the focus mainly on addressing trafficking and production of drugs.

Drug Use

Increased consumption of cannabis and other psychotropic substances have been observed in recent years, including amphetamine (Abdennouri, 2014; UNODC 2014). The UNODC World Drug Report (2019) also reported on the non-medical use of tranquilizers in Algeria in 2010 (population aged 12 and older (0.6 %) and which was at a comparable level to that of cannabis (0.5 %). The 2010 national epidemiological survey on the prevalence of drugs in Algeria reported that cannabis and psychotropic drugs (mainly sedatives) are the primary drugs of use, followed by opium. Estimates on numbers of PWUD vary with the National Office on Drugs and Addiction (Office national de lutte contre la drogue et la toxicomanie) estimating 250,000 in 2014; and the FOREM (Fondation nationale pour la promotion de la santé et le développement de la recherche), an NGO, estimating one million PWUD in the country. Other estimates indicate that 302,000 Algerians over the age of 12 years use drugs (UNODC 2013, Abdennouri, 2014).

In Algeria, the situation of PWUD and PWID is generally undocumented (Tinasti, 2016). Official data on drug prevalence is lacking, however cannabis appears to be most commonly consumed (*Contribution de la Commission Nationale Consultative de Promotion et de Protection des Droits de l'Homme* (CNCPPDH) – Algérie, 2016). In 2012, the Frantz Fanon detoxification center in Blida - the oldest and largest center in Algeria with around 1,000 cases per year reported that the primary drugs for treatment demands were cannabis, opiates and psychotropic drugs. Findings from a study by the *Association de Protection Contre le Sida* (APCS) reported on drug injecting characteristics in Algiers, with buprenorphine (Subutex®) and heroin commonly injected, poly use of drugs, and high rates of history of incarceration observed among PWID (Tinasti, 2016). This study by APCS also reported on the difficulties by PWID in sourcing clean needles. There is no data on frequency of injecting or size of PWID who inject daily (more or less) in Algeria (Colledge et al., 2020). Young PWID aged under 25 years account for 36.8% (27.2–47.4) of the population with average age of 30.0 years (30–30) (Hines et al., 2020).

BBV

HIV prevalence among the general population has remained low in Algeria, with a domestic prevalence rate of less than 0.1% (UNAIDS, 2014). According to estimates from the Spectrum 2017, calculated on the basis of data from the National Reference Laboratory in charge of notification of HIV/AIDS, the number of PL HIV is estimated at 14,000 (6,200 women and 7,400 men) and 400 children in Algeria. The estimated number of new HIV infections in 2017 was 1,300 people (700 men and 600 women) including 60 cases for those under 15 years of age. The pattern of HIV transmission has not changed over the years; more than 90% are infected via a heterosexual transmission (Algeria Global AIDS Monitoring report, 2018).

Despite the commitment to fight HIV and HCV, there is very little data on the size of key populations at risk of acquisition in Algeria (Tadjeddine, 2019). The Global AIDS Monitoring report for Algeria (2018) indicates that the prevalence of HIV among key populations is calculated on the basis of data from HTS centers (FSW 4.2% ;MSM 4.7%; PWID 3.4%), and indicates that the epidemic is concentrated in these groups. Hence MSM, FSW and PWID are considered to be key populations (Algeria MoH 2014). Previously a 2014 HTS report indicated HIV sero-prevalence of 1.1% among PWID (Algeria MoH, 2014). In Algeria, there is no detail on prevalence of IDU or number of current PWID living with HIV, but HIV prevalence is estimated to be 1.1% (0.0–5.7) among PWID (Larney et al., 2020).

HCV Genotype 1 is largely dominant (Mahmud et al., 2018). Mahmud et al., (2020) reported on estimated population size of 40,961 PWID (26,333–55,590); with an estimated number of HCV antibody-positive among current PWID of 20,194 (11,692–30,074) and an estimated number of HCV chronically infected current PWID of 14,220 (8,233–21,178). No prevalence studies on HCV rates in PWID are available for Algeria (Chemiatelly et al., 2019; Mahmud et al., 2020). Pooled estimates in % for risk of exposure to HCV in the general population were 0.13% (0.03-0.29); and in populations of intermediate risk (includes prisoners) were 4.96% (0.00-17.31) (Chemiatelly et al., 2019).

In terms of prisons, very little data exists. A recent review by Heijnen et al (2016) reported that no data on HIV prevalence in prison was available in Algeria. There is however evidence of condom provision in Algerian prisons (Stoever and Moazen, 2019). CSOs do not have access to prison services. Prisoners have access to HIV testing and ARV treatment if they are seropositive.

Harm Reduction

In the current National Strategic Plan (2016-2020), the PWID population was identified as a vulnerable group for HIV (Tadjeddine, 2019). Harm reduction is however not explicitly referred to in the national strategy(UNAIDS, 2019). Harm reduction has, however advanced in the country by the inclusion of CSO in the delivery of services, the dispensing of harm reduction training, and the delivery of services during the night hours (Aaraj and Abou-Chrouh, 2016). The Global Fund remains the sole funder of the combined prevention program for PWID. (US \$ 430,000 for 2018-2019), however, this amount has been reduced to US \$ 114,000 for the 2020-2022 transition period. As part of the Global Fund program, a package of services including information, support for screening and treatment services, condoms, lubricant and harm reduction equipment for IDUs is provided to the most vulnerable populations exposed to HIV risks (The Global AIDS Monitoring report for Algeria, 2018). Hence important developments include the implementation of the combined HIV prevention program among IDUs in three regions (Algiers, Oran and Annaba) in 2018-2019, as part of the Global Fund grant; in 2019 84% of IDUs targeted by the program had access to the defined service package; the IDU size estimates in 2019 at the national level were defined to be 17020; with prevalence of HIV among IDUs as 2.2%; and the integration of IDUs as a priority population for HIV prevention services in the NASP 2020-2024. There is an identified gap in services supporting minors and migrants.

Outpatient and inpatient drug treatment settings are available in Algeria (Abdennouri, 2014). To date, 37 intermediate (outpatient) care centers in addictology (CISA) out of the 53 planned (Algerian Ministry of Health, Population and Hospital Reform), and 2 of the 15 programmed treatment centers are completed by the Algerian government. OAT is still not available. This is despite the 2016 Algerian National Strategic Plan authorization of MMT provision in 5 pilot CISA. The announcement of this MMT service has been recurrent without details on the location or the conditions required to enroll PWID in need of this service (Tinasti, 2016). Methadone is included in the drug nomenclature but is not available to date.

NGOs are essential partners and have been able to carry out a significant number of structured activities (screening, orientation and accompanying of PLHIV, psychosocial support, promotion and distribution of condoms, local prevention among populations exposed to HIV risk). HIV testing and ART are widely available (Algeria MoH, 2014). The supply and distribution of condoms, syringes and needles are organized in and public sector health structures by the Central Hospital Pharmacy (PCH) (The Global AIDS Monitoring Report for Algeria, 2018). There is however no detail in the UNAIDS 2020 report on harm reduction (OST coverage, naloxone and DCR availability, number of needles and syringes distributed per person).

Due to the criminalization of PWID there are small advances in the field. The legislative obstacles have not changed but on the ground there is greater flexibility and facilities to work with IDUs on risk reduction. There has been greater tolerance of PWUDs for access to care and prevention through CSOs and institutional mental health centers. There is however no noticeable improvement in their human rights. Some efforts are reported. In 2018 a national dialogue workshop was held in Algiers bringing together all the NGOs fighting against HIV and the institutional sector, a risk reduction workshop was facilitated as part of the MENA platform in partnership with ALCS Morocco and Coalition plus.



Bahrain is a small high-income country. It has experienced internal conflict since 2011. This may have affected health systems and the reporting of health related data. The UNODC World Drug Reports 2019 and 2020 do not report on seizure, the extent or nature of drug use in Bahrain. On 31 December 2018, two individuals (one a foreign national), were sentenced to death for drug trafficking and smuggling. These were the first two drug-related death sentences confirmed in the past ten years (Girelli, 2018).

Drug Use

In 2012, Bahrain was estimated to have highest estimated drug consumption defined as daily doses per million inhabitants in 12 Arab speaking countries (Lebanon, Jordan, Syria, Qatar, United Arab Emirates, Saudi Arabia, Oman, Bahrain, Kuwait, Iraq, Egypt, and Yemen) (Wilby and Wilbur, 2016). At the country level, heroin is reported as the primary drug of injection, followed by amphetamines and cocaine (Bahrain MoH, 2014).

BBV

HIV prevalence remains low in Bahrain, and most common among PWID (Bahrain MoH, 2014). In Bahrain there is no strategic detail on prevalence of IDU or number of current PWID living with HIV, but HIV prevalence is estimated to be 4.6% (1.9–9.3) among PWID (Larney et al., 2020). There is no data to provide pooled estimates in % for risk of exposure to HCV in the general population, among PWID or prisoners (Chemiatelly et al., 2019). There is no characteristic level data on risk behaviours, frequency of injecting or size of PWID who inject daily (more or less) in Bahrain (Colledge et al., 2020; Hines et al., 2020). Mahmud et al., (2020) reported on an estimated PWID population size of 1,937 (1,369–15,506); estimated number of HCV antibody-positive among current PWID of 955 (608–8,388) and estimated number of HCV chronically infected current PWID of 672 (range 428–5,907) in Bahrain.

Government reports indicate that mandatory screening for PWID admitted to drug rehabilitation has showed a HIV prevalence of 3.3% in 2010 (in 181 cases) and 4.6% in 2011 (in 151 cases) (Bahrain MoH, 2014). There is a specialized drug rehabilitation center at a psychiatric hospital in Manama. The abstinence approach using detoxification remains the common drug treatment approach (Elkashef, et al., 2019).

There is no data on HIV prevalence in prison in Bahrain (Heijnen et al., 2016). Prisons are reported to be overcrowded with PLHIV isolated in separate wings.

Janahi et al (2016) assessed the public's knowledge, risk perceptions, and attitudes towards HIV/AIDS in

Bahrain (n=1038 Bahraini adults). This study revealed average general awareness in the public was good (63%), but with some misconceptions and erroneous beliefs pertaining to knowledge of mode of transmission and high risk groups. Attitudes towards HIV/AIDS patients were generally negative; 60% agreed to isolating HIV/AIDS patients in workplaces and schools, and 52.4% thought that HIV was a divine punishment. The vast majority (84.4%) believed in the role of religion in limiting the spread of the disease. The general opinion on the role of Bahraini government agencies and organizations in combating HIV/AIDS was positive.

Harm Reduction

There is no Global AIDS Monitoring Report for Bahrain. Bahrain has not renewed its National AIDS Strategy (2008-2010). Harm reduction was not referred to in the Bahrain national strategy. There is no UNAIDS 2019 or 2020 update on harm reduction. There are no harm reduction services or programmes in Bahrain. Needle sharing is reported anecdotally along with diversion of needles from hospital waste, emergency departments and purchasing from people with diabetes. Mandatory HIV and viral hepatitis testing is available at the addiction treatment hospital and for prisoners. HIV treatments, CD4 and Viral load tests are also provided, and they are free of charge. Since 2018, ART has been provided, but there is a waiting list.

There was an increased focus by multi laterals on harm reduction in 2019 (UNODC, UNAIDS, WHO, UNDP and GF). There are several active NGOs; *Addicts Friends Society*, *Reproductive Health Association* and *Bader Group* (PLHIV Support Group).

There are no treatment or NSP programmes in prisons.



Egypt has witnessed significant economic and political instability and deteriorating security in recent years. Whilst drug use remains a problem in Egypt, publication of data on this issue is scarce. According to the UNODC World Drug reports in 2019 and 2020, cannabis, heroin and crystal methamphetamine seizures have been reported by Egyptian authorities in 2018 and 2019. Captagon is a reported emerging concern (Herbert, 2014; Al-Imam et al., 2107). In 2017 the Egyptian government requested the UN Commission of Narcotic Drugs to put Tramadol under international control. Similar in terms of Captagon's properties, the non-medical Tramadol use for intoxication and increased alertness/sexual enhancement has been widely reported in Egypt (Klein, 2019). There were 23 death sentences pronounced for drug offences in 2018, including at least one against a foreign national (Girelli, 2018).

Drug Use

In terms of drug consumption, cannabis and alcohol are reported to be used by both the general population, and identified in the university student population. Non-medical use of synthetic opioids continues to be an issue, with Tramadol consistently reported among the general population, university students (particularly males), and those referred for treatment (Egypt Independent, 2013, Bassiony et al., 2015:2018, Loffredo et al., 2015, Zaki et al., 2016; Egypt MoH, 2017; MedSPAD, 2016: 2017; El Magd et al., 2018; UNODC World Drug Report, 2019). Low rates of cocaine use are reported in young people (MedSPAD, 2016: 2017). There is a considerable relationship between Tramadol use, smoking, and use of other substances in Egypt (Bassiony et al., 2018). Alsirafy et al., (2014) reported that government controls on Tramadol have not impeded access to trafficked counterfeit Tramadol. The Egyptian substitution therapy feasibility study (INCB, 2016) has further indicated the failure of controls, as out of 100,000 problematic opiate users, half were reportedly dependent on Tramadol and the other half on heroin (Klein, 2019). El-Shahawy et al., (2018) reported on dual use of cigarettes and hookah in pregnant Egyptian women.

BBV

Public health challenges in Egypt were centred on tackling HCV, with Egypt reporting the highest prevalence

rate (15-20%) in the world (Gaber, 2014; Elgharably et al., 2016). Egypt had, proportionally, the largest HCV RNA positive asymptomatic population in the world (El Kassas et al., 2018; Mohamoud et al., 2013; Chemaitelly et al., 2019). The epidemic in the general population in Egypt is largely dominated by genotype 4 (Mohamoud et al., 2013; El-Akel et al., 2017; Mohsen et al., 2015; Omran et al., 2018; Mahmud et al., 2020). Characteristics appear to be changing with Soliman et al., (2019) reporting on unanticipated patterns in the Luxor area of anti-HCV and HBsAg by age and gender in contrast to previous reports on this unique HCV epidemic in Egypt. To tackle this problem, Egypt conducted an outstanding campaign within the framework of a Presidential Initiative to eliminate viral hepatitis C. By the end of 2019 Egypt screened over 60 million of its adult population and provided treatment to over 3.2 million who were found to be HCV positive.

Egypt has a low HIV prevalence in the general population, with some evidence of concentrated epidemics among PWID and MSM (Global AIDS Monitoring Report for Egypt, 2019). Numbers may be low due to late diagnosis and significant stigma (UNAIDS, 2014; 2015; Abdelrahman et al., 2015; Lohiniva et al., 2016).

While Egypt identifies PWIDs, MSM, and FSW as key populations, the evidence is considered outdated with an urgent need for a new IBSS (Egypt Global AIDS Monitoring report, 2019). Before 2014, HIV transmission was mainly through sexual transmission (Egypt MoHP, 2014). Previously, the 2010 BBS in Cairo and Alexandria indicated HIV prevalence of over 6% in both cities (FHI/Egypt MoHP, 2010). By the end of 2018, the total number of PL HIV was estimated to be 16,000 in Egypt, while 1,806 new cases out of about 2300 newly detected in 2018 were introduced to ART in 2018, bringing the total to about 6,500 individuals on treatment, a significant two-fold increase compared to 2016 (Egypt Global AIDS Monitoring report, 2019).

In Egypt there is no detail on prevalence of IDU or number of current PWID living with HIV, but HIV prevalence is estimated to be 2.6% (0.6–4.5) among PWID (Larney et al., 2020). Reuse of syringes has been observed to contribute to HIV and HCV increases in Egypt (Talaat et al., 2010). Mumtaz et al., (2019) have reported on the proportion of injections that are shared among PWID in Egypt (0.62). In 2015, the injecting use of drugs in males predominates as HIV transmission route, consisting 36.5% of HIV infected cases (WHO Eastern Mediterranean Region 2016). A 2014 PWID size estimation reported that nationally there were 93,314 male PWID (range: 86,142 - 119,412) in Egypt, which comprises 0.37 % (0.35- 0.48) of the male population aged 18-59 years (Egypt MoHP, 2014). This is close to the previous estimation provided in the year 2010.

There is a concentrated HIV epidemic among PWID in Egypt (Egypt Global AIDS Monitoring report, 2019). The BBSS -2010 was used to determine HIV prevalence among PWID whose numbers increased between the two rounds of surveillance in 2006 and 2010, estimated at 6.8% in Cairo and 6.5% in Alexandria. According to the national estimates in 2014, there were estimated 30,000 people who inject drugs in Greater Cairo (Cairo and Giza) and Alexandria with a further 1,000 in Menia, out of total 93,400 (Egypt Global AIDS Monitoring report, 2019). The BBSS -2010 used to determine HIV prevalence among the MSM population estimated HIV rates of 5.7% in Cairo and 5.9% in Alexandria (Egypt Global AIDS Monitoring report, 2019). There is no data on age profile, duration and frequency of injecting or size of PWID population who inject daily (more or less) in Egypt (Colledge et al., 2020; Hines et al., 2020).

The 2010 BBSS showed that approximately one-fifth of MSM and one-half of male PWID were ever married to female partners (FHI/MOHP Egypt 2010). This has been identified by MENAHRA in previous years. Case studies of WLHIV in Egypt report that women who have husbands that are involved in high-risk behaviors (extramarital sex, homosexuality, or IDU) were reported to be hesitant to seek support from their community for fear of stigmatization (Khattab et al., 2007:2010, Khattab and El-Geneidy, 2014). A survey of PLHIV who had regular follow-up visits with the NAP in Egypt in 2010 indicated that 66% of the married men in the sample had not informed their wives of their HIV status (Khattab et al., 2010). Some Egyptian studies further report on low knowledge among WLHIV around HIV prior to testing positive (Oraby and Abdel-Tawab, 2016). FSWs are also now identified as key populations in Egypt, but there are difficulties in defining and accessing this population due to the absence of a definite structure and the prevalence of high levels of stigma.

Viral hepatitis is a common co-infection among PLHIV in Egypt, due to the extremely high background of HCV prevalence in the general population, and also due to unsafe injecting practices (Global AIDS Monitoring Report for Egypt, 2019). All people newly diagnosed with HIV are routinely tested for co-infection. Mahmud et al., (2020) reported on pooled mean HCV prevalence among PWID of 51.6% (30.0–73.0) with estimated population size of 90,809 (71 485–119 633); estimated number of HCV antibody-positive among current PWID of 46,857 (21,446–87,332) and estimated number of HCV chronically infected current PWID of 32,997 (15,102–

61,499). Pooled estimates in % for risk of exposure to HCV in the general population in Egypt were 11.83 (11.14-12.53); in PWID were 63.00 (52.76-72.44); and in populations of intermediate risk (includes prisoners) were 13.99 (10.09-18.38) (Chemiatelly et al., 2019). There has been a domestically-funded free treatment programme for HCV. PLHIV who have a HCV co-infection are entered into the national registry for treatment, with a special regimen for co-infection. TB co-infection is also an issue among PLHIV. NAP guidelines recommend routine TB screening for all HIV patients (Mahmoud, et al., 2013; Egypt Global AIDS Monitoring report, 2019).

In Egypt, there are at least 106,000 prisoners, including 3.7% female and as many as 10,494 pretrial detainees. The number of detainees in Egypt is expected to be higher due to the various violent incidents that took place over the past years. The quality of health services varies across Egyptian prisons concerning infrastructure and facilities, as does the qualification of physicians in clinics. Heijnen et al (2016) report on a 0.01% median prevalence rate of HIV and 23.6% median HCV rate among prisoners in Egypt. Sexual risk behaviours, IDU, unsafe injecting practices use of non-sterile toiletries (brushes and razors) and tattooing are identified risk factors in Egyptian prisons (Elshimi et al., 2004; Mohamed et al., 2013; Heijnen et al., 2016).

In 2018, Egypt has revised its National strategic plan 2015-2020 through a multi stakeholder consultative process, to assess its national programme and building on findings of the most recent emerging evidence. Consequently, a 2018-2022 national strategy was developed linked with a three year operational plan and monitoring and evaluation framework. The Egyptian MoHP has adopted the *"Test and Treat"* approach in dispensing treatment since July 2017. The UN Joint team has implemented a jointly supported National AIDS Program to build a Government-CSO model in key strategic governorates (Cairo, Alexandria and Gharbya) where CSOs roll out outreach services, and have built a referral pathway to government led and supported HTSs, while ensuring they are user friendly to key populations through constant capacity building and monitoring. Hence HTS is widely available throughout the country (Egypt MoHP, 2015). ART has been expanded in recent years (Egypt MoHP, 2013). 2018 has also seen the scaling-up of adherence services to PL HIV through the efforts of PL HIV networks supported by the National AIDS program and the UN joint team through designing service packages that specifically tackle the issue of adherence to treatment.

Stigma and discrimination against PLHIV and key populations (MSM, FSW, PWID) are observed (Morrow and Nabih, 2011; Egypt MoHP 2013, 2014). In order to address continued stigma, national policies, events and campaigns, and health worker trainings were initiated in 2018 (Kabbash et al., 2016; Khalil et al., 2018; Global AIDS Monitoring Report for Egypt, 2019). A consultation meeting with CSO was held in 2018 to reach consensus on the minimum service package for key populations. Gender sensitive services targeted to enhance the sexual and reproductive health of WL HIV have been expanded in 2018 through the technical support of UNAIDS and currently cover three Egyptian governorates.

Harm Reduction

The 2020 UNAIDS report indicates no change in harm reduction since 2019. Harm reduction is explicitly referred to in the Egyptian NASP, with PWID identified as a target group for HIV prevention. According to UNAIDS (2019), the use of sterile injecting equipment at last injection (2015) was 31.5%, with no detail on needles and syringes distributed per person who inject, coverage of OAT, naloxone or DCR.

Significant improvement is however observed in the tolerance of the government to the harm reduction concept and intervention. NSP has been scaled up (MENAHR, 2012). A wide range of other services are offered through a drop-in center, including health, legal services, psychosocial support, referral for health services, and HTS. Prevention activities for key populations include targeted education, comprehensive condom promotion, HTS, but with no systematic tracking of care (Egypt Global AIDS Monitoring report, 2019). Several NGOs are providing condom promotion, HIV testing and counselling and NSP for PWID in large cities (Egypt MoHP, 2015). NSP was previously made widely available within the governorate of Minya in 2014 to 2016 by two local NGOs, through funding from MENAHR. These programs were halted since mid-2016 due to sudden governmental disapprovals (MENAHR, 2016).

A variety of drug treatment services including inpatient and outpatient detoxification and residential rehabilitation are available, mainly in large cities (WHO 2013, Zaki et al., 2016). Detoxification is most common in Egypt (Elkashef et al 2019). A National Task Force for implementing OAT strategy was established in 2013 and UNODC supported development of a detailed plan and protocol for MMT/BMT (UNODC, 2015). A feasibility study for introduction of OAT was carried out in 2013 (UNODC, 2015), but the lack of effective medical drug

distribution systems and fears of drug diversion have hampered efforts. Service providers were trained and the plan was to establish OAT services in six governorates by an NGO (Egypt MoHP, 2014b). However, final official approval for the establishment of OAT centers has yet to be provided by the government.

Strong capacity building has taken place in recent years with focus on national authorities and CSO to provide HIV, HBV and HCV prevention, treatment and care programmes for prisoners and also people who use stimulant drugs. UNODC ROMENA implemented the first-ever prison health project with the support of Drosos Foundation from 2016-2020 in Egypt. The UNODC Prison HIV project was officially opened by H.E. Assistant Minister of Interior of Egypt on 25th February 2019. This programme providing HTS and aftercare services since 2016 was expanded from three prisons to seven (*Borg-Al-Arab, Wadi Natroon, Fayoom, Gamasa, El-Marg, Minya*), including to the first-ever female prison (*El Qanater*) reaching over 27,000 prisoners. As a result, prisoners in *Fayoum, Wadi Natroon, and Borg Al-Arab* have free access to a voluntary, anonymous and confidential HIV, HBV and HCV testing and counseling services in each prison, and prisoners eligible as per national guidelines are provided with free HBV vaccine. 2,600 needle and syringes, as well as 5,000 condoms were distributed to released inmates and their families as per national needle and syringe and condom distribution guidelines.

The project also engaged in BBV screening, awareness raising and capacity building of staff and inmates. It developed a National Prison Health Strategy with national guidelines, SOP and training manual for the provision of HIV, HTS, STI, and HBV & HCV services in prison based on international standards and scientific evidence, with guidelines shared and used by national consultants; and supported provision of HIV, Viral Hepatitis, TB and psychosocial services for released prisoners in the three governorates of Egypt (Cairo, Fayoum, and Alexandria). There was a strong focus on gender sensitive training and prison based supports for women.



Iran is in the Golden Crescent region of South Asia, a principal global site for opium production and distribution (Farooq et al 2017). Opioids have a long history in Iran, partly due to the long and porous border with Afghanistan. The UNODC World Drug Report (2020) reported that largest quantities of both opium and morphine seized were reported by the Islamic Republic of Iran.

Drug Use

Iran reports a high prevalence of opioid use and dependence (Khazae-Pool et al., 2018). In 2013, 1.6 million of Iranians had used drugs in the previous year; opium, shireh (refined product of opium, usually smoked or ingested), and crystal methamphetamine were the most common types of used drugs, followed by heroin. ATS are an emerging concern in recent years (Amin-Esmaili et al., 2016). Amin-Esmaili et al, (2016) reported in the national household survey, that last year prevalence of any illicit drug use disorder except alcohol was 2.44% (1.56% drug dependence), accounting for approximately 1.12 million Iranians (15- 64 years). Amongst the illicit drugs, opioids were the most prevalent one with prevalence of 2.23% (95% CI; 1.83%, 2.62%), following by cannabis (0.56%) and ATS (0.39%). Nasiri et al., (2019) have also reported on high prevalence of Tramadol misuse in urban populations.

In Iran, recreational use of ATS, particularly crystal methamphetamine has increased over the past two decades (Mehrpour, 2012; Shariatirad et al., 2013), with an estimated 440,000 individuals using crystal methamphetamine in 2013 (Nikfarjam et al., 2016). Sharifi et al., (2017) also report that methamphetamine use is a concerning health problem among Iranian youth. ATS prevalence is also reported to be very high in transit drivers and women (Narenjiha et al., 2009; Tavakoli et al., 2014). Moradi et al., (2019) report on ATS use, with smoking most common, and with observed rates of injecting and sexual risk behaviours, HIV infection and HCV exposure among those using as primary drug. In terms of awareness, Mohebbi et al (2019) have reported that while the attitude of Iranian adults toward opioid and stimulant use was generally negative, their awareness is insufficient to prevent use, particularly among men, young people and those in lower socio-economic groups. Hence,

targeted screening and harm reduction programs for ATS user populations in Iran are required.

In Iran the estimated number of PWID is 158,000 (107,000–209,000), with young PWID under the age of 25 years constituting 14.9% (11.6–18.4), average age of 32.7 years (27–44); average age of onset of 24.3 years (19–29) and median duration of injecting of 8.2 years (3–19) years (Hines et al., 2020). IDU is increasing in Iran, including in FSW (Zafarghandi et al., 2015; Karamouzian et al., 2017). An estimated 12.5% of the Iranian population had injected drugs in the past year (Nikfarjam et al., 2016). In Iran, an estimated 98.7% (96.9–100.0) of PWID inject daily or more (estimated number 156,000; 108,500–208,000); and 0.6% (0.0–1.9) inject less than daily (estimated number <500–3000) (Colledge et al., 2020). Noroozi et al (2019) reported that among men who inject drugs and who reported increased access to NSP, were less likely to report HIV risk behavior.

The prevalence of IDU among FSWs in Iran is concerning (Karamouzian et al., 2017). FSW in Iran are now a significant risk group due to the identified overlap with IDU (Kassaian et al, 2011; Mirzazadeh et al., 2014; Sajadi et al., 2013; Kazerooni et al., 2014; Navadeh et al., 2012; Taghizadeh et al., 2015). Some studies have been undertaken with drug using women in Iran and also FSW, with viral transmission risks identified via injecting and sexual routes (Karamouzian et al., 2017; Hamzeh et al., 2019). Drug use in FSW ranges from over 55% (Kassaian et al., 2011) to 70% (Kazerooni et al., 2014), while IDU estimates range from 1.1% (Taghizadeh et al., 2015) to 18% (Navadeh et al., 2012). HIV prevalence among FSW-IDUs is estimated to be 11.2% (Mirzazadeh et al., 2014; Sajadi et al., 2013). Most FSWs in Iran commence drug use before sex work (Karamouzian et al., 2017). Of interest is that a current study in Tehran also presented a 1.9% prevalence rate of HIV among transgender women (Moayedi-Nia et al., 2019). HIV prevalence among working and street children in Tehran was reported to be 4.5% in 2016 (Foroughi et al., 2017).

In recent years, more than 80% of recognized drug-treatment seekers in Iran were primarily dependent on opioids (Pashaei et al., 2014; Khazee et al., 2016).

BBV

Khodayari-Zarnaq et al. (2019) have underscored in their policy analyses of HIV/AIDS policy in Iran the importance of facilitating the increased participation of NGO/CSO actors in the policy process. Until recently, Iran was classified among the countries with a low prevalence of HIV/AIDS (Tagi-Zadel, et al 2014), with larger HIV epidemics observed in prison populations (Heijnen et al., 2016). Iran now has a concentrated epidemic, the largest epidemic of HIV in the Middle East (Gökengin et al., 2016). HIV prevalence among the general Iranian population is 0.14% (Karamouzian et al., 2016). The epidemic is driven by IDU and sexual transmission (Alipour et al., 2013; Fahimfar et al., 2013; Khajehkazemi et al., 2013; Sajadi et al., 2013; Fahimfar et al, 2013; Karamouzian et al, 2014). It has an estimated HIV prevalence of 13.8% (2014) to 15.4% (2010) (Khajehkazemi et al., 2013; Haghdoost et al., 2014) among PWID; 2.1% (2015) to 4.5% (2010) among FSW (Sajadi et al., 2013; Mirzazadeh et al., 2015); and 2.1% (2009) to 1.4% (2013) among prisoners (Navadeh et al., 2013; Haghdoost et al., 2013). Iran has provided a nationwide sero-surveillance data system and has identified its key populations (Massah et al., 2016). 30,183 people with HIV were identified at the end of 2015 (Shokoohi et al., 2016), with 80,000 to 120,000 PLHIV in Iran in 2016 (Gökengin et al., 2016). Sharifi et al (2018) suggest that after an increase in the 2000s, the HIV incidence may have been decreased and stabilized among key populations in Iran. A recent positive shift in decrease in the prevalence rate of HIV among three key populations of PWID, FSW and prisoners has been observed (Sharifi et al., 2018). In Iran, prevalence of injecting drug use was estimated at 0.28% (0.19–0.37); HIV prevalence of 14.0% (9.2–18.7) among PWID; and number of current PWID living with HIV 22,000 (13,000–33,500) (Larney et al., 2020).

In terms of HCV, at the country-level, meta-analyses of all available prevalence data indicate a mean HCV prevalence of 50–60% in Iran (Mumtaz et al., 2014; Chemaitelly et al., 2019). Mahmud et al., (2020) reported on pooled mean HCV prevalence among PWID in Iran of 52.6% (47.6–57.5) with estimated population size of 185,000 (135,000–300,000); estimated number of HCV antibody-positive among current PWID of 97,310 (64,260–172,500) and estimated number of HCV chronically infected current PWID of 68,526 (45,252–121,475). Pooled estimates in % for risk of exposure to HCV in the general population in Iran were 0.29 (0.21–0.37); in PWID were 52.17 (46.88–57.43); and in populations of intermediate risk (includes prisoners) were 6.17 (3.44–9.58) (Chemaitelly et al., 2019). Several studies in Iran have reported a shift in the HCV genotype distribution toward genotype 3, particularly observed in young people and is apparently linked to IDU increasingly becoming the main route of HCV transmission in Iran (Jahanbakhsh Sefidi et al., 2013; Taherkhani and Farshadpour, 2015). Mahmud et al., (2020) report on an estimated 68,526 PWID chronically HCV infected in Iran. Behzadifar et al., (2020) in their systematic review and meta-analysis of the prevalence of HCV virus infection in PWID in Iran,

assessed 15,072 PWID to determine the prevalence of HCV. The overall prevalence of HCV was computed to be 47% (CI 95: 39–56).

The high coverage of harm reduction is currently not considered sufficient to prevent HCV transmission in Iran (Larney et al., 2017). Untreated HCV has been reported among many Iranian female methadone patients (Massah et al., 2017). This study reports that individual barriers to HCV treatment included the perception that untreated HCV infection was not a serious health concern, family responsibilities, and self-perceived discrimination against HCV-infected women. System-related factors included the lack of referral from methadone treatment staff, and a long distance between HCV treatment centers and methadone treatment centers. Alavia et al., (2019) report on the *ENHANCE TRIAL* designed to improve HCV testing, linkage to care, and treatment among people who use drugs in Tehran, Iran. This trial reports on a HCV antibody prevalence of 27%; 62% and 15% among those with and without a history of IDU. Following on-site HCV testing and linkage to care, HCV treatment uptake was extremely high among PWUD, with exception of those in the homeless reception population. In an earlier study history of HCV diagnosis was lower than previous estimates (28% vs. 35%) (Hajarizadeh et al., 2016). Recent attempts at creating universal health coverage, including HCV diagnosis and treatment, have not been successful (Hajarizadeh, 2017; Alavia et al., 2019).

Prevalence of HBV infection among high risk groups has been reported to be high with significant heterogeneity in prevalence of HBV infection among high risk groups from different geographical areas of Iran. A pooled prevalence of HBV infection among high risk groups in Iran was 4.8% (3.6%-6.1%), with the highest prevalence among in prisoners (5%; 3%-6%), and in central regions of Iran (7%; 4%-11%) (Almasi-Hashiani et al., 2018).

Harm Reduction

Since the late 1990s, given the emergence of HIV epidemic among people who inject drugs, Iran has gradually shifted from the “*supply-reduction only*” policies that criminalised any type of drug use, to establishing an extensive network of drug treatment and harm reduction (Alam-mehrjerdi et al., 2015). Harm reduction measures included promotion of de-stigmatisation and legalisation, research into virus transmission in prisons and communities, establishment of addiction centres, HIV testing and counselling, sexually transmitted infection services, and provision of OAT and NSP in prisons (Ekhtiari et al., 2019). Iran was seen as the forerunner of a scaled up ‘*top down*’ HR programming approach in the MENA region (Ekhtiari et al., 2019). Unfortunately this approach was restrained by budget cuts during the term of President Ahmadinejad (2005-2013), resulting in a rise in HIV and hepatitis C prevalence in prisons and communities (Van Hout and Aaraj, 2020).

According to UNAIDS (2019), use of sterile injecting equipment at last injection (2014) was 81.6%; number of needles and syringes distributed per person who injects (2018) was 48; coverage of OAT (2018) was 11.7%; naloxone is available, and DCR are not. In 2020, some changes were visible, with the UNAIDS update reported use of sterile injecting equipment at last injection (2019) was 73.4%; number of needles and syringes distributed per person who injects (2019) was 43; coverage of OAT (2019) was 13.4%; naloxone remains available in Iran, and DCR are not.

Although BMT is now available in Iran, MMT programs are the most frequently used therapy (Malekinejad and Vazirian, 2012). By 2010, there were approximately 16,000 clinical sites established by the Ministry of Health nationwide that provided MMT program services for 159,000 opioid-dependent patients according to treatment Protocols (Malekinejad and Vazirian, 2012). By 2014, OAT and NSP were available in more than 5000 clinics and nearly 500 centres, resp (National AIDS Committee Secretariat, Ministry of Health & Medical Education, 2015). Khazae-Pool et al., (2018) have identified barriers to MMT in Iran relating to financial barriers, lack of awareness about MMT, negative attitudes regarding MMT, worries about methadone’s side effects, social stigma ascribed to MMT, and systemic barriers to MMT. The Iranian Drug Abuse Treatment Information System (IDATIS) was launched by the Ministry of Health for the purpose of surveillance of harm reduction medication service provision. Establishment of the integrated national data base for registration of all OAT patients in Iran has helped in the reduction of opioid drug diversion from the clinics. Rezapour and Ekhtiari (2019) reported on that adding cognitive rehabilitation treatment for Iranian patients with opioid use disorder in MMT can improve cognitive performance and abstinence from both opiates and stimulants.

There are specific centers for vulnerable women in Iran which provide harm reduction services for socially marginalized women who use drugs. 10% of people seeking drug treatment are women (Tavakoli et al., 2014). There are an increasing number of women-only drug treatment centers (*e.g.*, *Persepolis*, *Khaneye Khorshid*,

Chitgar, Atabak, Parniyan, Nader, Mikhak) (Alam-Mehrjerdi et al., 2016). Zarghami et al (2018) report on the need for women-specific educational programs related to HIV in Iran. There are also harm reduction programs located in migrant populated area (e.g. southeast of Tehran, suburb area in Mashhad) with primary aim of providing harm reduction services for migrants who use drugs.

With regard to prisoners, in Iran, HIV prevalence in prisons varies but is higher than in most MENA countries with a high rate of intravenous drug users (Akbari et al. 2016). About half all prisoners are drug dependent with many introduced to intravenous injecting during incarceration (Iran Drug Control Headquarters, 2010). In 1990, a serious HIV outbreak in Iranian prisons resulted from unsafe drug injecting which stimulated a progressive and rapid shift towards HR measures and government endorsement of HR. Heijnen et al., (2016) have reported on HIV mean prevalence of 2.5% and median prevalence of 37.8%. Karamouzian et al., (2017) reported that the prevalence of HCV among Iranian prisoners was 28% (CI 95% 21–36). Behzadifar et al., (2018) also reported that prevalence of HCV among Iranian prisoners (n=18,693 prisoners) is dramatically high. Risk factors for BBV acquisition in prisoners include the history of traditional phlebotomy, blood transfusions, tattooing, razor sharing, surgery, history of dental operations, sharing a syringe/needle, drug use, unprotected sex, sexually transmitted infections, alcohol consumption, piercings, IDU, history of cupping, dialysis, and abortion. Jafari et al., 2020 in their study of 11,988 prisoners reported prevalence of tattooing in a lifetime and in prisons was 44.7% and 31.1% respectively. Seyed Alinaghi et al., (2017) have reported that HIV prevalence and risk factors of infection should be recognized by Iranian policy makers for intensifying harm reduction programs and reforming the guidelines in prisons.

Currently, national harm reduction funding has been affected in Iran due to the economic sanctions and international funding has not been sufficient. Global Fund has ceased funding harm reduction and HIV programs in Iran. *Rebirth Charity Society DCR* as requested by Ministry of Welfare drafted a document on feasibility and the issue is being discussed among experts and officials. Current harm reduction initiatives are not sufficient for the response to *shireh* related violence and sexual activity. Some activity on ATS/methamphetamine harm reduction has been initiated. Given the potential of the FSW sub-population in bridging HIV into the general population, gender-sensitive and peer-led harm reduction programs should also be scaled up to meet this gender sensitive need (Karamouzian et al., 2017). Narouee et al., (2019) also recommend an increase in outreach teams and harm reduction services for PWID.



Iraq has experienced severe challenges in the past few decades, resulting in significant public health challenges, population displacement and a fragile health system (Levy and Sidel 2013). The impact of conflict and war on substance use in Iraq cannot be underestimated (Ezard, 2012; Al-Diwan et al., 2015). Clandestine manufacture of methamphetamine has been reported in recent years by Iraq (UNODC World Drug Report, 2020). Due to its largely uncontrolled country borders, Iraq is also a transit country for drug trafficking (Al-Gburi et al., 2020). There were four death sentences imposed for drug offences in 2017 (Girelli, 2019).

Drug Use

Prescription drugs, alcohol, and cannabis are the primary drugs used in Iraq. Captagon production is a reported concern (EMCDDA, 2011; Herbert, 2014; Al-Imam et al., 2017). The Iraqi Community Epidemiology Work Group have indicated that there has been increased use of alcohol and prescription and illicit drugs in Iraq since 2009, especially among adolescents (Al-Hemiary et al., 2014). There is a concerning trend of emergent use of Tramadol, opium, and amphetamines (Al-Hemiary et al. 2014; 2015, Iraq MoH 2016). Some studies have focused on synthetic drugs (for example Captagon, Haloperidol) trends in Iraq (Herbert, 2014; Al-Imam et al., 2016; 2017). Al-Imam et al., (2017) reported that there was some degree of knowledge about NPS amongst medical students in Iraq.

2010 estimates reported by the WHO for life-time alcohol use in Iraq reported 7.2% among men and 3.9% among women (WHO, 2010). In Iraq (including Kurdistan Region), according to the final report of the Iraq

National Household Survey on Alcohol and Drug Use (INHSAD), the lifetime prevalence rates of tobacco use, alcohol consumption, nonmedical use of prescription drugs, and use of illicit drugs were 28.8%, 8.1%, 2.9%, and 0.7%, respectively (Al-Hemiary et al., 2017). Iraqi women report significantly less substance use than Iraqi men. There was an identified discrepancy between self-report and *‘knowing someone who uses a substance’* which indicated some level of under-reporting. Cultural sensitivities are likely to contribute to under reporting of drug use among young people (Al-Hemiary et al., 2017; Al-Gburi et al 2020). Early initiation of use is identified as a risk factor (Bassiony, 2013).

Mahmood et al (2019) reported on high prevalence of cigarette smoking and waterpipe use among young people. Peltzer and Pengpid (2017) reported on cannabis use correlated to parental smoking habits and current cigarette smoking, and amphetamine use correlated to history of victimisation among young people in Iraq. Dabbagh (2017) found that Muslim men in Iraq reported past-year prescription drug misuse (1.9%, 1.18, 3.16) more frequently than illicit drug use (0.35%, 0.15, 0.82). Al-Hemiary et al., (2015) reported on substance use in Baghdad with life-time prevalence of use of any illicit drug use at 7%. Habeeb et al (2012) reported on the high rate of use of anabolic androgenic steroids in male body builders. Al-Gburi et al (2020) observed a rise in prevalence of drug use in Iraq compared to an earlier study by Al-Hemiary et al., (2015) who reported 1.1% , with a 9.5% prevalence of drug use among secondary school students (predominantly male) and identified trauma related risk factors for drug use initiation among young people. Alcohol use among Syrian refugees is indicative of a rise in alcohol consumption in Iraq (Berns, 2014).

Drug treatment is provided in five hospitals (total of 40 beds) in Baghdad, Basra, Erbil and Sulaymaniyah, providing both inpatient and outpatient services (Iraq MoH, 2016). Albermany (2019) reported on the socio demographic profile of 150 drug dependent patients attending *Al Dewanyea* teaching hospital. Procyclidine, benzodiazepines and Tramadol were reported to be the most commonly used drugs, and patients with psychiatric comorbidity were identified to be at risk of developing drug dependence introduced to them via a doctor prescription. Poly drug use was common amongst the treatment population. Psychiatrists in Iraq have observed the abuse of benzodiazepines and Benzhexol (Al-Hemiary et al., 2014). High levels of suspected drug dependence (meth/amphetamine, antidepressant, benzodiazepines, phencyclidine, tetrahydrocannabinol, buprenorphine) are also reported among those detained in police stations (Al-Wataify and Al Dahmoshi, 2019).

BBV

The country response to HIV is compromised by conflict, war and domestic instability (Iraq MoH, 2012). There is no Global AIDS Monitoring Report for Iraq. There is no evidence of renewing the National AIDS Strategy in Iraq. Detecting HIV prevalence has been limited to case-finding in Iraq (Massah et al., 2016). HIV prevalence is low in Iraq (MoH, 2012). There is no information on the extent of HIV risk among key populations, and the country has not provided any updated narrative report on monitoring of HIV/AIDS. There is no detail on the extent, nature or prevalence of IDU, HIV prevalence among PWID or number of current PWID living with HIV (Larney et al., 2020).

Heterosexual transmission accounts for more than half of the new HIV cases in Iraq (WHO Eastern Mediterranean Region, 2016), and no case of HIV transmission due to IDU has been reported (Iraq MoH, 2012). There is no data on frequency or duration of injecting of PWID (average age 28.0 years (range 28–28) years) in Iraq (Colledge et al., 2020; Hines et al., 2020). No IBBS study has been conducted on PWID.

In Iraq, Mahmud et al., (2020) reported on estimated population size of PWID of 34,673 (23,115–46,230); estimated number of HCV antibody-positive among current PWID of 17,094 (10,263–25,010) and estimated number of HCV chronically infected current PWID of 12,037 (7,227–17, 612) in Iraq. Pooled estimates in % for risk of exposure to HCV in the general population in Iraq were 0.18% (0.13-0.25) and in populations of intermediate risk (includes prisoners) were 1.26% (0.68-1.98) (Chemiatelly et al., 2019). There is no data to provide pooled estimates in % for risk of exposure to HCV in PWID (Chemiatelly et al., 2019), nor is there PWID data available regarding HCV prevalence (Mahmud et al., 2020).

Of note given the influx of displaced populations, is that Hussein et al (2016) in their study on prevalence of HBV, HCV and HIV among Syrian refugees in Iraq compared to native Iraqis; found that prevalence rates of HCV and HIV are generally low and almost the same, but with the prevalence of HBV among the refugees nearly fourfold higher than that found in indigenous population. In 2016 there was no data available on HIV among incarcerated populations in Iraq (Heijnen et al. 2016). Suhail (2019) examined the prevalence and associated

risk factors for HBV and HCV infections among a sample of prison inmates in Iraq. This study reported on 190 prisoners with prevalence of HBV and HCV infection was 7.8% and 10.5%, respectively; with drug abuse and history of traditional phlebotomy associated risk factors for HBV infection, and history of drug injection associated with HCV infection.

No surveillance and preventive measures are provided to key populations. HTS is widely available in the country and is providing services to a growing number of clients. HIV education, knowledge and support, and condom promotion and voluntary HIV counselling and testing requires development (Iraq MoH, 2012; UNDP; 2015; Massah et al., 2016). ART is available (Iraq MoH, 2012), but low coverage remains a critical gap (Massah et al., 2016), with 59 patients reported to be in treatment in 2012.

Harm Reduction

There is no UNAIDS 2019 or 2020 update on harm reduction. There is a complete lack of OAT (MMT/BMT) for drug dependents and PWID in Iraq (Iraq MoH, 2012; Massah et al., 2016). NSP does not exist. The role of NGOs is also very limited (Iraq MoH, 2012; 2016).



The conflict in Syria has placed a severe burden on its neighbouring countries. Jordan has received more than 1 million refugees in the past 7 years. This has placed significant pressures on its financial, human and natural resources, and particularly on its health systems. Large-scale trafficking of Captagon from Jordan to other MENA countries is reported (UNODC World Drug Report, 2020).

Drug Use

Data regarding substance use in Jordan is limited with no national epidemiological data collection system for either alcohol or drugs (WHO, 2010). Mauseth et al. (2016) have reported on a shift intolerance among the Jordanian population toward substance use (specifically alcohol and hashish). This has contributed to expansion of smoke shops and the use of hookahs or *"hubblly bubblys"* by both genders in restaurants (Haddad et al., 2010). The 2018 UNODC World Drug Report indicates that 0.4% of the Jordanian population in 2016 suffered alcohol use disorders including alcohol dependence and harmful use of alcohol. Abuse of synthetic (for example Captagon) and prescription drugs in Jordan are an emerging concern (UNODC, 2010, 2012; Herbert, 2014; Al-Imam et al., 2017).

Al-Omari et al. (2014) report on a 29 % increase in cases of reported drug use from 2011 to October 2013, and with increasingly younger demographics of users (below 30 years). Haddad et al., (2010) have described a lack of awareness among adolescents around substance abuse, and a spread of substance use into rural areas. The majority of substance abusers are male between the ages of 20 and 35 years (Haddad et al., 2010). There is a rise of water pipe smoking in middle and high school students (Alzyoud et al. 2013; Mzayek et al. 2012). Of note is Alzyoud's (2013) finding that girls were more likely to be water pipe users than boys (among 993 participants aged 11–17 years). A study on substance use among Jordanian university students found alcohol to be the most prevalent substance used (Hamaideh et al., 2010). The impact of substance use and abuse in the UNRWA refugee camps in Jordan, where Palestinian refugees live have been documented in a recent study by Wazaify et al., (2020).

Drug availability in community pharmacy strongly contributes to a wide range of misuse, abuse and dependence on over the counter and prescription drugs in Jordan (Albsoul-Younes et al., 2010; Wazaify et al., 2017). Drug treatment studies report on changing patterns of substance with synthetic cannabinoids an emerging concern (with heroin use reducing), and underscoring the role of community pharmacies in the supply of pharmaceutical drugs of abuse (Yasin et al., 2020). The prevalence of self-medication in Jordan is alarmingly high contributing to inappropriate use of pharmaceutical drugs (Mukattash et al., 2019). Use of the gabapentinoid drug, pregabalin within poly drug taking repertoires (Tramadol, Captagon, synthetic cannabinoids, and marijuana) among male

treatment patients, and suspected cases by community pharmacists is reported (Al-Husseini et al., 2018; 2019). Other studies report on the suspected abuse of ophthalmic anticholinergic drugs obtained in community pharmacies for intoxication purposes (Al-Khalaileh et al., 2019; 2020). Kalbani and Wazaify (2017) in their study of drug related overdoses in Jordan have earlier recommended increased pharmacovigilance among medical prescribers, pharmacists, and the public.

Heroin is the main drug of injection, with a reported rise in treatment demand for cannabis and psychotropic drug dependence, and a reduction in injecting trends in recent years (Jordan MoH, 2012). A study on psychiatric patients found that 72.9% of the patients were smokers, 22.2% used alcohol, and 11.1% used cannabis (Hamdan-Mansour et al., 2018). Ghaferi (2013) has reported that 98% of drug treatment patients in their study were smokers, 41.2% used alcohol, 27.2% used drugs other than heroin or alcohol, 18.8% reported using heroin and other drugs (but not alcohol), 9.2% used alcohol with other drugs (but not heroin), and 3.6% used alcohol with heroin. Given the rise in co-morbidities observed Hamdan-Mansour et al., (2017) have recommended increased training for Jordanian mental health professionals to manage a dual diagnosis of substance use among patients with psychiatric disorders.

There are two large drug treatment centers in Amman - the Ministry of Health National Centre for Rehabilitation of Addicts (NCRA) and the Public Security Department- Substance Abuse Treatment Centre (SATC) - which provide inpatient medical detoxification and outpatient medical services. There is also compulsory treatment for people with drug addiction (WHO, 2013). There is no OAT available in Jordan due to a strong resistance to introducing drug substitution treatment, especially by the Anti-Narcotics Department (Jordan MoH, 2014).

BBV

There is no current Global AIDS Monitoring Report for Jordan. Jordan is considered as a low HIV epidemic country with an estimated prevalence rate of 0.02% among the general population. Non-Jordanians except UN agencies and diplomatic corps are exposed for HIV testing before giving them a residence permit where those tested positive are deported from the country. Sexual transmission accounts for 71% of HIV/AIDS cases identified in 2012-2013 (Jordan MoH, 2014). There is no detail on the prevalence of IDU, HIV prevalence among PWID or number of current PWID living with HIV in Jordan (Larney et al., 2020). The 2008 IBBS among PWID (Jordan MoH, 2012), and a 2011 KAP study on PWID, indicated that unsafe injection and unsafe sex are frequent risk behaviors, and HIV knowledge is poor among PWID (Shahroury, 2011). As of December 2017, the cumulative number of detected HIV/AIDS cases is 1,408 including 383 Jordanians of whom 129 (34%) died (NAP records) (Rahhal, 2018). The average prevalence rate of about 0.05% among the key populations (CSW, MSM, PWID) is reported according to the last IBBS implemented in 2012-2013 in three major cities, Amman, Irbid and Zarq (Jordan MoH, 2014; Rahhal, 2018). This IBBS involved 680 CSW who were tested for HIV, three of whom were infected, while 644 MSM participated and one was infected. The study also showed a high percentage of risky behaviors between the two groups. NAP planned for the third study in 2017; but due to administrative barriers, lack of funding and qualified human resources was not carried out. Lifetime sharing prevalence among Jordanian PWID is over 70% (Mumtaz et al., 2014). Studies on HIV rates among PWID have however revealed no HIV positive case (Mumtaz et al., 2018). In prisons, the median prevalence of HIV was estimated to be 0.1% in Jordan (Heijnen et al., 2016). There is no data on age profile or duration or frequency of injecting in PWID populations in Jordan (Colledge et al., 2020; Hines et al., 2020).

In Jordan, Mahmud et al., (2020) reported on estimated population size of 4,850 PWID (3,200–6,500); estimated number of HCV antibody-positive among current PWID of 2,391 (1,421–3,517) and estimated number of HCV chronically infected current PWID of 1,684 (1,001–2,476) in Jordan. Pooled estimates in % for risk of exposure to HCV in the general population in Jordan were 0.15% (0.07-0.25) and in populations of intermediate risk (includes prisoners) were 0.66% (0.02-3.61) (Chemiatelly et al., 2019). There is no data to provide pooled estimates in % for risk of exposure to HCV in PWID in Jordan (Chemiatelly et al., 2019). Migration dynamics further underpin the spread in infectious disease, particularly HCV genotype 4 in Jordan (Chemiatelly et al., 2019).

Measures taken by the Jordanian MOH to reduce the spread of HIV/AIDS during 2004-2012 included screening of all blood donors; Health education through various means; prevention, care and treatment for PLHIV, their families and contacts; HIV counseling and testing services in Amman center and other governorates; HIV testing for expatriates who intend to stay in Jordan for more than one month; home based care programs for patients and their families; psychological, social and financial support for people living with HIV; implementation of

programs to reduce stigma and discrimination towards PLHIV and KPs; provision of first aid kits containing antiseptics disinfectants, gauze, medical cotton, scissors, adhesives ...etc. to be used in case of household injuries, and were distributed for PLHIV for household use; engagement of PLHIV in the community by engaging them in various activities; programs aimed at youth groups within and outside schools and universities; mass media campaigns and distribution of IEC materials; capacity building for health professionals and civil society organizations in the field of HIV/AIDS; and establishment of HIV surveillance system as well as a monitoring and evaluation system (Rahhal, 2018)

There has been a decline in importance of some health programmes, particularly the national AIDS programme, and focus on redirection of resources to refugee support initiatives (Rahhal, 2018). Syrian refugees living with HIV are provided with ART, with the cost supported by UNHCR. There is a need to strengthen HIV prevention for key populations in Jordan, including PWID who are identified in the NASP. The Jordanian Ministry conducted preventive programs for key populations in collaboration with NGOs and CBOs during the implementation of the Global Fund grants in the period 2004-2012. These programmes were discontinued due to lack of funding (Rahhal, 2018). In 2017 the HTS staff referred 231 clients for HIV testing, 14 tested positive for HIV, 9 males and 5 females.

Two outreach programs, including the first NSP in the country, were initiated and implemented by national NGOs in the five main governorates of Amman, Zarqa, Irbid, Jerash and Al Mafraq through support from MENAHRA (Jordan MoH, 2014).

Harm Reduction

There is no UNAIDS 2019 or 2020 update on harm reduction. Condom programming, HTS services, and targeted information on risk reduction and HIV education are provided (Jordan MoH 2013; Rahhal, 2018). One NGO is specifically providing HTS to PWID for HIV, HCV and HBV as part of its program with MENAHRA (MENAHRA 2015b, 2016). ART is mainly available in Amman (Jordan MoH 2014; Rahhal, 2018).



Kuwait is a small high-income country. It is one of the GCC, which include Saudi Arabia, Oman, United Arab Emirates, Qatar and Bahrain.

Drug Use

Common substances abused in Kuwait include not only cigarette products (cigarette, cigar and shisha) but also substances that produce alcoholic effects including drinking of perfume/cologne, sniffing solvents like glue and petrol, and the ingestion of over-the-counter legal medications, including cough mixtures and antihistamine drugs (Omu et al., 2017). Captagon is a reported concern (Herbert, 2014; Al-Imam et al., 2107). Synthetic cannabinoids are increasingly seized, consumed and associated with deaths in Kuwait, with the most common combination FUB-AMB with 5F-ADB, and generally consumed within other drugs such as methamphetamine, tramadol, heroin, D9THC, and ketamine (Alsoud et al., 2015; Alqallaf et al., 2019) Mortality caused by poly substance use is highest among abusers of heroin–benzodiazepines, cannabis–benzodiazepines, and cannabis–amphetamines (Al-Matrouk et al., 2020).

In 2011, the Kuwait Global School-based Health Survey (GSHS) Kuwait for 13- to 15-year-olds in Grades 8-10 in government secondary schools reported that 18.7% of students admitted smoking cigarettes within 30 days before the survey; 26% of them were male students, and 8.2% were female students (Al-Baho and Badr, 2011). This study also reported on the consumption of amphetamines (Al-Baho and Badr, 2011). The 2013 Kuwait Global School-Based Student Health Survey of 1310 boys revealed a reported prevalence of: smoking, ever drug use, and both smoking and drug use were 26.6% (24.2–29.1%) and 7.4% (6.1–9.0%) and 5.5% (4.4–6.9%) respectively (Badra and Francis, 2018). Logistic regression model analysis in this study revealed that adolescents whose parents smoke, suffered from insomnia, were victims of bullying, and had negative social

school environment, were more likely than others to be smokers, drug users or both (Badra and Francis, 2018). Omu et al., (2017) in their study on 190 Kuwaiti teenagers (15-18 years) reported that tobacco was the most commonly used substance by these teenagers; 8.4% were current smokers, and 50% had experimented. Age of initiation for 21% was before 14 years old. Hashish (marijuana) was the most commonly used illicit drug, with 3.7% current users and 5.3% claiming to have used it. More male than female teenagers in Grade 9 were using tobacco products. Peltzer and Pengpid (2017) have reported that cannabis use among school children in Kuwait is predicted by parental smoking habits and current cigarette smoking. There is one study on university students, with cannabis, followed by stimulants and cocaine most common drugs used by male university students (Bajwa et al., 2013).

Heroin and methamphetamine are the main drugs of abuse for those in treatment (Kuwait MoH, 2015). The Kuwait Center for Drug and Alcohol Rehabilitation services is the main addiction treatment body and provides a variety of treatment services to approximately 6,700 PWUD, of which 60% are PWID (Fattahova, 2015). It is estimated that the size of the PWUD population may be three times higher than those coming for treatment (20,000 PWUD, and 12,000 PWID) (Kuwait MoH, 2015). IDU is on the increase in Kuwait (Kuwait MoH, 2015). In 2017 at the Kuwait center for Drug and Alcohol Rehabilitation services, 135 patients are receiving BMT (Al-Zayed, 2017).

BBV

Kuwait has a low HIV prevalence among the general population. Heterosexual transmission is the primary route of transmission (WHO Eastern Mediterranean Region, 2016). In Kuwait, there is no detail on prevalence of IDU, HIV prevalence among PWID or number of current PWID living with HIV (Larney et al., 2020). No IBBS study has been conducted among key populations.

There is mass HIV testing, especially for expatriates. From 2012 to 2014, HIV testing for injecting and non-injecting PWUD (n=1,740) was conducted in the treatment centre with no positive results (Kuwait MoH, 2015). High rates of injection equipment sharing were then reported by experts in the field, along with high risk sexual activity by stimulant users. HCV is common among PWID (Kuwait MoH, 2015). Altawalrah et al., (2019) is the first study in Kuwait which assessed sero-prevalence rates of HBV, HCV and HIV in PWID in Kuwait. They conducted a cross-sectional study of 521 consecutive subjects, admitted at Al-Sabah Hospital. The mean age of the participants was 32.26 yrs, and the sex ratio (Male/Female) was 15.28. The results indicate high rates of HBV, HCV, and HIV infections among PWID compared to the general population. Prevalence rates of HBsAg, anti-HCV, and anti-HIV antibodies were 0.38% (0.07–1.53%), 12.28% (9.65–15.48), and 0.77% (0.25–2.23%), respectively. HCV-RNA was evident in 51.72% (38.34–64.87) among anti-HCV positive participants. Multivariate analysis showed that the high prevalence of HCV infection amongst PWID is associated with age, but no significant associations with age and gender regarding HIV and HBV infections. There is a low prevalence of HIV, HBV and co-infections among PWID in Kuwait.

In Kuwait, Mahmud et al., (2020) reported on estimated population size of 4,050 PWID (1,850–8,750); estimated number of HCV antibody-positive among current PWID of 1,997 (821–4,734) and estimated number of HCV chronically infected current PWID of 1,406 (578–3,334). There is no data to provide pooled estimates in % for risk of exposure to HCV in PWID (Chemiatelly et al., 2019). Pooled estimates in % for risk of exposure to HCV in the general population in Kuwait were 1.37% (0.05-4.05) and in populations of intermediate risk (includes prisoners) were 5.34% (0.52-14.33) (Chemiatelly et al., 2019). There is no data on size, age profile, frequency of injecting or duration of injecting of PWID in Kuwait (Hines et al., 2020; Colledge et al., 2020).

According to the Global AIDS Monitoring Report for Kuwait (2019), the national response to HIV in Kuwait is mainly by the active engagement of National AIDS Control Committee (NACC) in policy and programme discussions and overall policy guidance. NACC has a firm commitment to implement, support and update the national strategic plan for HIV/AIDS in Kuwait 2017-2021.

2018 has however been an important year in the HIV response in Kuwait. At national level, there has been significant increase in the number of HIV tests conducted on 2018 compared to all previous years and progressive real steps toward increased targeting of key populations. ART is available and coverage is high for Kuwaitis (Kuwait MoH, 2015). There is increasing access to integrated treatment programs with OAT in Kuwait (Elkashef et al., 2019). There has been scale up in the following initiatives; introduction of HTS services, for the first time ever in Kuwait; providing anonymous rapid 4th generation HIV tests plus other counselling

and online services; ongoing year around awareness campaign for vulnerable populations like senior high school students, residents at correctional facilities etc; steps for implementation of NSP; extension of OAT using BMT (currently more than 130 patients benefit); continueing to provide ART, to improve adherence & continue having undetectable viral load in more than 90% of people who are on ART; and scale up of Pre Exposure & post exposure program; adding more categories for PrEP is being evaluated; and condom use is being promoted in all HIV awareness activities. Condom distribution is still a very sensitive issue. It is planned to conduct size surveillance studies by 2021 regarding key populations in Kuwait (MSM, transgender people, CSW and their clients)

Harm Reduction

There is no UNAIDS 2019 or 2020 update on harm reduction.



Lebanon due to its geographical proximity to the Syrian conflict has experienced a significant influx of refugees in the past few years (Thorleifsson, 2016). Refugees now make up 30% of Lebanon's population, the highest concentration per capita of refugees in the world. It is estimated that around 1.5 million Syrian refugees are in Lebanon. The UNHCR also currently estimate there are over 504,000 registered Palestinian refugees and 75,000 non-registered/non ID Palestinians in the country. Migration has created security and health system challenges (Lebanon MoPH, 2016). Lebanon has been affected by financial crisis and countrywide anti-establishment protests, with refugees placing further severe pressure on its economy, infrastructure and health and education services (Shibli 2014). Refugee numbers have stretched the country's capacity to respond to mental health, substance/drug use and related infectious diseases (WHO, 2014).

Lebanon is a drug transit country, with its geographic location on the border with Syria, its domestic economic and political crisis, and significant cross border security and terrorist threats facing the Lebanese government, compounding difficulties in government prioritisation in tackling the organisation of cross border-criminal networks and trade in drugs (Global Initiative against Transnational Organized Crime, 2017). Drugs available in Lebanon include marijuana, hashish, heroin, cocaine, ATS, synthetic drugs such as Captagon and more recently Salvia (Kerbage and Haddad, 2014; United States Department of State, Bureau for International Narcotics and Law Enforcement Affairs, 2014; Lebanon MOPH, 2017). Cannabis is the main drug produced in the Bekaa Region and increasing amounts of heroin are also being illegally cultivated there (Afsaghi et al., 2016; UNODC World Drug Report, 2020). Captagon is manufactured in Lebanon (UNODC World Drug Report, 2020).

Drug Use

Substance abuse is a rising public health concern in Lebanon. Evidence on substance use shows a high prevalence, early age of initiation, high treatment gap, and increased burden of disease relating to substance use (Lebanon MoPH, 2015; Karam et al., 2010). In 2014, the primary diagnostic categories of admissions to mental hospitals in Lebanon were mental and behavioural disorders related to substance use (24% of admissions) (WHO and Lebanon MoPH, 2015).

The Lebanese Epidemiologic Survey on Alcohol study showed that alcohol use disorders are highly prevalent among the Lebanese general population (Yazbek et al., 2014). Lebanon has the highest smoking prevalence of all MENA countries including the highest prevalence of water pipe tobacco smoking (Jawad et al., 2015). In 2011, prescription opioids were reported by university students to be very accessible without a prescription (Ghandour et al., 2011). A large survey on university students in 2012 indicated that cannabis, followed by ATS and opioids are the most common drugs of use among university students (Salameh, Rachidi et al. 2015). There is an observed increased misuse of licit substances including anxiolytics and tranquilisers among the Lebanese population in general, and among adolescents in particular, especially among the 15-25 age group (IGSPS, 2012). El Halabi and Salameh (2019) have further highlighted concern for the rise in adolescent substance use in Lebanese schools.

In 2010, it was estimated that patients suffering from substance use disorders in Lebanon ranged from 10,000 to 15,000, with heroin users accounting for 59% (Lebanon MoPH, 2012). Heroin use in 2010 accounted for almost 50% of treated patients, with a high rate of relapse (Karam et al., 2010). Around half of the persons using substances, and of those institutionalised or who were seeking treatment also commonly injected drugs, with high rates of needle sharing observed (Karam et al., 2010). According to 2012 estimates, there were 2,000 to 4,000 PWID in Lebanon (UNAIDS, 2012). Of the 1,373 admissions in 2012-2013 to eight Lebanese rehabilitation and detoxification centres 70% of those in treatment were PWID (Lebanon Ministry of Public Health, Lebanon Ministry of Education and Higher Education et al., 2016). A PWID population size estimation conducted in 2015 confirmed the previous estimation of 2,000 to 4,000 (MENAHRRA 2015). Most PWID are single, with low levels of education (MENAHRRA 2015, Merabi et al., 2016). Heroin (31%), followed by cocaine (20%) and cannabis (17%) were the most commonly used drugs in those seeking treatment for addiction in 2012 (El-Khoury et al., 2016).

During 2015, in Greater Beirut, non-fatal opioid overdoses were reported by more than half of 390 PWID (MENAHRRA, 2015). Between December 2011 and December 2016, 1712 persons with drug use disorders were enrolled in the OAT programme MoPH (Lebanon MOPH, 2017). 2595 persons with drug use disorders were reported to be admitted in 10 treatment facilities (for rehabilitation, detoxification or outpatient treatment). Most of the persons on treatment (82%) were between 18 to 38 years old (Lebanon MoPH, 2017). Of note is an observed rise in the prevalence of use of Salvia in those seeking treatment. Karam et al., (2019) report on the prevalence of 66% of use of Salvia among heavy drug users admitted for detoxification in a psychiatric hospital in Lebanon. Another study also reports on the high risk of suicide among Lebanese heroin dependent inpatients who engage in multiple drug use and who have a family history of suicide (Kavzour et al., 2016).

Women with substance use disorders and persons from the LGBT community using drugs are identified as key populations requiring additional supports (Lebanon MOPH et al., 2016; 2019). The underlying gender-specific determinants of womens drug use, stigma, sexual coercion and risk behaviours such as needle sharing compound their risk of BBV acquisition in women receiving the syringe after their partners, and using contaminated needles. In 2016, women in detention centers who were arrested for drug use constituted about 2% of the total number of persons arrested for drug use (Lebanon MOIM, 2016). For the same period, about 8% of the persons who received drug-related treatment were women (MOPH, 2016). The number of women in treatment from 2014 till 2016 increased by 38% (Lebanon MOPH, 2017). 10% of the total number of reported beds for the treatment of substance use disorders are dedicated to women (Lebanon MOPH, 2017).

Lebanon is unique in having a special ruling stipulated in Article 151, which authorizes the court to combine sanction and compulsory treatment. (Al-Shazly and Tinasti, 2016). The Lebanese Internal Security Forces (LISF) reported in the period 2014 and 2016, a yearly average mean of 3,053 individuals with a substance use disorder (cannabis, cocaine and heroin) (LISF, 2014/2015/2016). According to Khalaf et al (2019), there has been a reported significant decrease (around 49 percent) of heroin users arrested compared to a previous study by El-Khoury et al., (2016). Khalaf et al., (2019) speculate that this could be due to several factors; scaled up OAT implementation in the Lebanese community, including greater awareness about the importance of OAT as an evidence-based treatment; a possible decrease in use of opiates and related criminal activities; and the decision by the involved legal authorities to refer addicts to treatment rather than to prison (Khalaf et al., 2018).

A variety of residential, inpatient and outpatient detoxification and rehabilitation services are operating in the country and are mainly provided by non-governmental sectors. Detoxification services are provided in public and private hospitals, and in some facilities, services for mental health and other comorbidities are included in the treatment plan. One public hospital (Dahr El Bacheh Government University Hospital – (DGUH) offers detoxification for persons with substance use disorders with a 15 bed capacity. There are 5 other private residential facilities specifically for persons with substance (alcohol and drugs) use disorders totalling 90 beds. However, these facilities are mainly located at central level (in the governorates of Beirut and Mount-Lebanon) and the detoxification services they provide are reported to be fairly expensive. Only few NGOs offer rehabilitation services for minors.

In May 2015, the Ministry of Public Health launched the *“Mental Health and Substance Use Prevention, Promotion, and Treatment Strategy for Lebanon 2015-2020”* and is currently moving forward in successfully implementing it through the National Mental Health Programme and all its partners (Hajal et al., 2017). Several groups are identified as vulnerable by the *Inter-Ministerial Substance Use Response Strategy for Lebanon 2016-2021* (Ministry of Public Health, Ministry of Education and Higher Education, Ministry of Interior and Municipalities, Ministry of Justice, and Ministry of Social Affairs, 2016). These are PWID living with a

communicable disease, women with substance use disorders, and persons from the LGBT community using drugs (*Group 1*) and persons living in a context that further limits the accessibility to substance use response services. This category includes children living in adverse circumstances, youth and adolescents, Palestinian refugees, displaced populations and persons in prison (*Group 2*). The 2016-2021 Inter-ministerial Substance Use Response Strategy for Lebanon (MoPH, 2015; Ministry of Public Health, Ministry of Education and Higher Education, Ministry of Interior and Municipalities, Ministry of Justice, and Ministry of Social Affairs 2016) and the UNODC Programme on Drug Control, Crime Prevention and Criminal Justice Reform in the Arab States particularly recognize refugees as an at risk population due to their marginalisation, significant traumas of conflict and displacement, and adverse socio economic situation.

BBV

Lebanon has a low endemicity profile for HIV and HCV (Mumtaz et al., 2014; Abu Rached et al., 2016; Mahmud et al. 2018; Chemaitelly et al., 2019). The NAP and UNAIDS (2012) reported 1,455 cumulative cases of HIV through 2011, with 109 cases reported in the previous year mostly through sexual transmission. Later, the NAP of the Lebanese MOPH reported a cumulative of 2366 PLHIV (Lebanon MoPH, 2017). In 2014, for the first time, the NAP and UNAIDS reports indicated an increasing national prevalence and the presence of clearly defined pockets of concentrated epidemic within key populations, which include MSM, PWID, and CSW (UNAIDS, 2014). Less than 3% of the HIV epidemic is attributed to IDU (Lebanon MoPH, 2016). In Lebanon, there is no accurate detail on the prevalence of IDU, HIV prevalence among PWID or number of current PWID living with HIV (Larney et al., 2020). Closed small networks among Lebanese PWID appear to reduce transmission risks (Mahmud et al., 2020). In Lebanon, an estimated 51.9% (40.5–63.1) of PWID inject daily or more (estimated number 2500; 1500–4000) and 48.2% (36.9–59.5) inject less than daily (estimated number 2500; 1000–3500) (Colledge et al., 2020). Young PWID under the age of 25 years constitutes 17.3% (9.8–27.3) of the total population with an average age of 29.5 years (29–30) (Hines et al., 2020). In Lebanon, Mahmud et al., (2020) reported on pooled mean HCV prevalence among PWID of 25.0 years (4.4–54.5); with estimated population size of 3,207 (1,506–4,908) estimated number of HCV antibody-positive among current PWID of 802 (66–2,675) and estimated number of HCV chronically infected current PWID of 565 (47–1,884).

Lebanon has a concentrated HIV epidemic among MSMs. Kassak et al., (2011) previously reported on HIV prevalence of 3.7% in Lebanese MSM. A later 2012 study by Wagner and colleagues (2014) estimated HIV prevalence at 1.5% in a sample of MSM (3 of 198). More recent national-level surveillance has suggested an increase in HIV prevalence concentrated among MSM in Lebanon (Heimer et al., 2017). The IBBS (2014-2015) conducted by Heimer and colleagues on 292 MSM, identified 36 cases of HIV (12.3%) (Heimer et al., 2017). This study revealed that a quarter of the MSM were born in Syria and had recently arrived in Lebanon. Condomless sex was common, and group sex was reported by 22% of participants. Heimer et al., (2017) reported on the higher HIV-1 prevalence than in any previous study, the existence of a large number of Syrian-born recently arrived MSM, and HIV risk behaviors concentrated among HIV-negative MSM that are centered around the use of social media for partner acquisition and participation in group sexual encounters. Sexualised drug use was also reported. This study highlighted the need to control future increases by reducing specific risk behaviors and experience of stigma and abuse, especially among Syrian refugees. The most recent IBBS in 2018 that showed a rate of 12% HIV among Lebanese MSMs (Lebanon Global AIDS Monitoring report, 2019). Assi et al., (2019) in their study of 2238 MSM attending a sexual health clinic in Lebanon between 2015–2018 reported a HIV prevalence rate of 5.6%. Risk behaviours included high rates of inconsistent condom use and multiple partners. Assi et al., (2019) underscore the urgent need for accurate and comprehensive sexual health and harm reduction education and promotion in Lebanon; and making PrEP available for free to key populations to contain the epidemics at an early stage.

Systematic reviews have reported on a 2.5–5% HBV prevalence and more than 50% for HCV in PWID in Lebanon (Nelson et al., 2011). HBV prevalence in Lebanon has been reported among other high risk groups to show a prevalence of 1.6% in haemodialysis patients (Abou Rached et al., 2016), 0.99% in MSM (Kassak et al., 2011), 0.28% in thalassaemic patients (Othman et al., 2014), 2.4% among prisoners secondary to unprotected sexual intercourse and tattooing as well as PWIDs (Mahfoud et al., 2010), and 6.9% in HIV patients (Ramia et al., 2008). The Lebanese Ministry of Public Health has reported that HCV prevalence reduced from 27% to 16% in 2014 (El-Khoury et al., 2016). The IBBS study conducted in 2014-2015 in the Greater Beirut area among current PWID reported a HIV prevalence of 0.26% and an HCV prevalence of 27.6% (MENAHRRA, 2015). Nakhoul et al.,

2018 in their prospective cross-sectional study between June 2015 and June 2016 on PWIDs (n=250) reported a prevalence of HBV and HCV among PWID was 1.2% and 15.6%, respectively. Older age, longer duration of drug use, and the lack of awareness were found to be significantly correlated with a higher rate of HCV infection. They identified a relatively high rate of sharing needles among PWIDs without significantly affecting the prevalence of both viruses.

Mahfoud et al (2010) has previously reported on HCV prevalence of 52.8% in 106 Lebanese PWID. HCV genotype 3 is the most prevalent genotype in the Lebanese PWID population followed by genotype 1 (Abou Rached et al., 2017). In 2020, Abou Rached et al., (2020) also indicated higher rates of HCV among Lebanese PWIDs than the general Lebanese population, haemodialysis patients and prisoners, making PWID the population group most affected. They reported a prevalence of HBV and HCV among PWIDs was 1.2% and 15.6%, respectively in their study on 250 (98% male) PWID. Older age, longer duration of drug use and lack of awareness were significantly correlated with a higher rate of HCV infection. High rate of needle sharing significantly affected HCV prevalence. Of note was that the association between MSM, sex working, living with someone infected with HBV/ HCV, sex with a person infected with HBV/HCV, history of blood transfusion, history of tattoos or piercings and that the frequency of HBV and HCV in their sample was not significantly related to prevalence of either infection (Abou Rached et al., 2020). Pooled estimates in % for risk of exposure to HCV in the general population in Lebanon were 0.15% (0.06-0.25); in PWID were 25.03% (r4.40-54.51); and in populations of intermediate risk (includes prisoners) were 2.16% (0.26-5.36) (Chemiatelly et al., 2019). Nakhoul et al (2018) underscore the need for appropriate screening strategies, targeted educational programs and that adequate HBV vaccination are of extreme importance for further viral prevention among high-risk PWID in Lebanon.

The country has launched the 2016-2020 NASP. HIV prevention for PWID is included in the program. NGOs are active members of the national multi-sectoral coordination body (Lebanon MoPH, 2014). Lebanon is one of five MENA countries providing a NSP programme (along with Egypt, Morocco, Palestine and Tunisia) (El-Khoury et al., 2016). Currently, only SIDC provides NSP in Lebanon. Skoun stopped the service due to funding issues. There is one DIC in which NSP is provided at SIDC in Mount Lebanon. All other sites are reached throughout SIDC's outreach program (mobile unit) and sites are mainly limited currently to 2 governorates: Beirut and Mount Lebanon. In the recent years, about 200 PWIDs were reached and about 50,000 syringes were distributed, annually, by support received from MENAHRA. Syringes are provided in pharmacies, but with Ghaddar et al (2017) reporting on the frequent denial of access to clean syringes by pharmacists, and contributing to increased stigma and intimidation of PWIDs.

A national HBV vaccination campaign was initiated in 2015, and continues to run to ensure provision of HBV as well as HBV/HCV testing for PWID. One hundred HTS centers are operating throughout the country (Lebanon MoPH, 2016). More than 50% of HIV programs for PWID are estimated to be provided by NGOs (Lebanon MoPH, 2013). 87% of facilities provide on-site testing for viral hepatitis. The National Aids Programme at the MOPH provides ART free of charge. The MOPH is providing high quality, 100% free of charge treatment to all the Lebanese PLHIV but also it is providing the same quality of treatment and free of charge to all HIV patients residing in Lebanon, being Syrian, Palestinian or other settled refugees in the countries and for those on temporary status awaiting their resettlement in other countries. Under the treatment for all strategy, Lebanon is providing treatment to 64% of people who know their status (Lebanon Global AIDS Monitoring report, 2019). On-site ART for HIV/AIDS is provided by 29% of substance use treatment services (Lebanon MoPH, 2017).

Data on prisons in Lebanon are scant. Heijnen et al., (2016) have reported on the HIV prevalence rate of 0.7% and 28.1% of HCV in Lebanese incarcerated populations, with high rates of drug related offences (30.2%) among PWID (UNAIDS, 2012). Repeated incarceration was significantly associated with HCV infection among Lebanese prisoners (Mahfoud et al., 2010). 2.6% reported anal sex with another prisoner in Lebanon (Mahfoud et al., 2010). Prison-based testing for HIV, HCV and TB, and the provision of ART are reported to be available in Lebanon (UNAIDS, 2014; Ataya, 2016; Stone, 2016). OAT is available in prisons in Lebanon but only available to people who were enrolled before entering prison (Brandt, 2018; EMCDDA, 2018; UNAIDS, 2018). This remains a major gap in the OAT program. Khalaf et al., (2019) have reported on significantly lower satisfaction in those accessing in prison OAT compared to the community in Lebanon.

Harm Reduction

According to UNAIDS (2019), use of sterile injecting equipment at last injection (2014) in Lebanon was 98.5%;

there was no detail on number of needles and syringes distributed per person who injects; coverage of OAT (2015) was 49.7%; and naloxone and DCR are not available. The 2020 UNAIDS report did not report any change. There is a harm reduction policy on OAT in Lebanon, with actions mainly conducted by CSO (Aaraj and Abou-Chrouh 2016). In 2011, Lebanon adopted an OAT take-home buprenorphine (BMT) pilot program only provided by authorized psychiatrists working within pre-registered treatment settings. A small-scale take-home pilot has been in implementation ever since, with around 1800 enrolled patients (800 of which are currently active) (Ghaddar et al 2018). OAT is provided by facilities in two governorates: Beirut and Mount Lebanon; however, dispensing of the medication is available in Mount Lebanon governorate only (MoPH, 2017). BMT was initiated in January 2012. The country reports that by the end 2016, the number of people who had received BMT was over 1,700; from which 6% were female. An evaluation showed that 71% of those enrolled were still in treatment at six months follow-up. Nevertheless, access to BMT is centralized and expensive; it is provided under the strict supervision of a psychiatrist (El-Khoury, Abbas et al. 2016, Lebanon Ministry of Public Health, Lebanon Ministry of Education and Higher Education, 2016, Abbas 2017). The country had planned for initiating a pilot project on MMT for 2019 (Lebanon Ministry of Public Health, Lebanon Ministry of Education and Higher Education, 2016). Recent 2020 updates include the scale up of existing services: a new delivering OAT services were open in Bekaa and in Safra (Byblos) areas and two new dispensing centers in Bekaa area (Zahleh) and in Mount Lebanon (Tannourine). Three new psychiatrists joined the OAT program and started providing OAT services to patients in need.

The provision of psychosocial support is a basic component of the treatment (Ghaddar et al., 2017). Ghaddar et al (2017) conducted a study to evaluate OAT in improving health of patients at SKOUN Lebanese Addiction Centre between January 2013 and December 2014. This study revealed significance improvements were observed three months after treatment in quality of life, anxiety, substance dependence, overdose, employment, and injecting behavior. A qualitative study by Ghaddar in 2018 reported on inequalities in access to OAT as one important gap to be tackled in the management of OAT in Lebanon.

Overdose prevention efforts included advocacy for policy change which required hospitals receiving overdose cases to report to the police; this policy was removed in order to allow encourage PWUD to seek help in cases of overdose (MENAHRRA 2015, 2016). On March 22nd, 2016, in view of protecting persons who struggle with drug use disorders from arrests while seeking medical assistance, the Lebanese MoPH issued Circular 461 requesting that hospital administrations and medical personnel refrain from reporting cases of overdose to police officers. *Skoun* (2018) however reported that 101 hospitals denied ever receiving the Ministry's circular, in some cases, the administration had received the Circular but had not communicated it to the ER staff, and that Lebanese hospitals are hesitant to perform their duty without reporting the "crime" of drug use to the authorities, fearing legal repercussions on the hospital and on the staff. There was also a very recent update during COVID-19 regarding OAT in which the MOH (through an official circular) has allowed the dispensing of buprenorphine for 2 week intervals for people on OAT as one of the measures for COVID-19. This was not possible previously (there was only dispensing at one-week intervals). The launching of the national observatory for drug abuse and addiction is currently on hold for financial and logistic reasons.



Libya is located in North Africa, and is one of the largest in the MENA region. In recent times it has experienced a significant influx of migrants (Aaraj and Abou-Chrouh, 2016; Mangan, 2020). It is the crux of the trans-Saharan human, weapons and drug-trafficking routes, and is a transit zone for hashish, heroin and cocaine. Diversification into new psychoactive drug markets is observed, and more recently it is considered a major player in ATS (MDMA, methamphetamine) trafficking from West Africa, and in large scale trafficking of pharmaceutical psychotropic products (Tramadol, to a lesser extent Captagon) smuggled from neighbouring countries (Shaw and Mangan, 2014; Mangan, 2020; UNODC World Drug Report, 2020). Libya is facing a rapidly growing epidemic of illicit drug use and related BBV epidemics, fuelled by the consequences of political instability, loss of control over its extensive national borders, military turmoil, violence and armed conflict (The National AIDS Control Program-Libya, 2015; Elamouri et al., 2018). There is significant overlap between drugs, fuel, human and weapons smuggling (Mangan, 2020).

In Libya the courts are entitled, to order admission into a treatment center as an alternative to criminal sanction (Al Shazly and Tinast, 2016). There is no current information available on the imposition of the death penalty for drug related offences in Libya since Colonel Muammar Gaddafi was deposed in 2011 (Girelli, 2019).

Drug Use

Drugs are widely available and sold at low prices in many cities in Libya (Burke, 2014; Micallef, 2017; Shaw and Mangan, 2014; Mangan, 2020). There is an established market for hashish, and identified emerging markets for heroin and cocaine in Libya's large cities, including Tripoli, Misurata, and Benghazi (Elamouri et al., 2018; Mangan, 2020). Most commonly used drugs were hashish, MDMA and pharmaceutical drugs; trihexyphenidyl, clonazepam, sleeping pills and Tramadol (UNODC 2014; Elamouri et al., 2018; Mangan, 2020). The role of community pharmacies in fuelling community patterns of drug abuse and addiction in Libya is also important to highlight where products are easily secured without prescription (Mangan, 2020). Access to drugs in prison is also reported to be relatively easy, through visitors, other inmates, or prison officers (Elamouri et al., 2018).

There is a distinct lack of data on drug abuse and addiction in Libya, despite the recognition that it is becoming a salient issue in Libyan society (Shaw and Mangan, 2014). Identified risk groups for drug abuse and addiction have widened in Libya to include not only young men, but more increasingly women, children in middle and high school ages, and militia (Mangan, 2020). In contrast, El Ansari et al (2019) have reported on the low consumption of alcohol and illicit drugs among university students in Libya.

BBV

Despite being a priority group for harm reduction and HIV prevention, there is a dearth of information related to HIV and drug substance use among young people in Libya (Degenhardt et al., 2016). Identified risk factors for drug use among young people in Libya centre on the increased availability and affordability of drugs, peer influences, the disruption of social life and healthy recreational activities, and traumas of war (Elamouri et al., 2018). This Elamouri et al., 2018 study also identified risk factors for BBV acquisition, particularly HIV pertaining to inadequate knowledge related to HIV transmission routes and unsafe injection practices. This has heightened Libyan youth vulnerabilities to drug use and BBV infection. Religious beliefs and parent-child connectedness enhance resilience and are protective factors.

Increasing data points to a concentrated HIV epidemic driven by IDU (Daw et al., 2014), compared to a relatively low HIV prevalence recorded in the general population (Mirzoyan et al., 2013). The National Center of Disease Control reported that PWID account for 90% of reported HIV cases in Libya (Ministry of Health, 2014). In Libya, % prevalence of injecting drug use was estimated at 0.05 (0.01, 0.10); HIV prevalence of 89.6% (range 85.8–92.7) among PWID; and number of current PWID living with HIV is 2000 (1000–2500) (Larney et al., 2020). An estimated 54.3 (48.7–59.8) % of PWID inject daily or more (estimated number 1000; 500–1500); and 45.7% (40.3–51.3) inject less than daily (estimated number 1000; 500–1500) (Colledge et al., 2020). In Libya the estimated number of PWID is also 2,000 (1,000–3,000), with average age 32.7 years (range 27–44) (Hines et al., 2020). There is no detail available on age of onset of injecting or duration of injecting of PWID (Hines et al., 2020).

Sexual transmission however is increasingly identified as a driver of the national HIV incidence rate (The National AIDS Control Program-Libya, 2015). Previously the 2010 BBS conducted by Mirzoyan et al., (2013) among 328 PWID in Tripoli, found an HIV prevalence of 87%; HCV prevalence of 94% and HBV prevalence of 5%. Buprenorphine was the main drug of injection, followed by heroin. Other risk groups such as MSM and FSW reported 3.1% and 15.7% resp in this BBS. The majority of PWID were at least 35 years old, with around 43% less than 25 years old when they first injected drugs (Mirzoyan et al., 2013). In a later study in 2011 among the Tripoli's general population, the prevalence of HIV, HCV, and HBV was respectively 0.15%, 0.9%, and 3.7% (Daw et al., 2014). The estimated HIV incidence rate for 2017 among PWID in Libya was 24.8% ppy, however this data is observed to be an outlier, and was confined to one study in Tripoli (Mirzoyan et al., 2013; Mumtaz et al., 2018). The mean prevalence of HCV among Libyan PWID is reported to be 94.2% (range 90.8–96.7%) (Mahmud et al., 2020).

Mahmud et al., (2020) reported on pooled mean HCV prevalence among PWID of 94.2% (90.8–96.7); with estimated population size of 4,446 (2,948–5,943), estimated number of HCV antibody-positive among current PWID of 4,188 (2,677–5,747) and an estimated number of HCV chronically infected current PWID of 2,949

(1,885–4,047) in Libya. Pooled estimates in % for risk of exposure to HCV in the general population in Libya were 1.59% (1.44-1.76); in PWID were 94.20% (91.46-96.72) and in populations of intermediate risk (includes prisoners) were 5.38% (1.74-10.73) (Chemiatelly et al., 2019).

The effect of migration through Libya cannot be underestimated in terms of BBV spread. Daw et al (2019) conducted a disease mapping and spatial analysis using geographic information data available on all documented cases of HCV infections in Libya between 2007 and 2016 (114,928 HCV infection cases). HCV prevalence has previously been reported to be relatively moderate at 1.2% (Daw et al., 2014). HCV infection was unevenly distributed in Libya, and its incidence increased steadily over the 10 years. Genotype 4 is predominant, with a higher level in the eastern region, followed by genotypes 1 and 2, common in the western part of Libya (Daw et al., 2015). Ages ranged between 16 and 50 years and the male to female ratio was 2:1. HCV infection was also unevenly distributed. Daw et al., (2019) conducted a similar study on HIV clusters, and reported that in the timeframe 1993-2017 HIV cases steadily increased within the Libyan population, particularly among those aged < 27 years. Geographic and temporal variation of HIV infection was observed, particularly during 2005–2012.

Daw et al., (2016) have reported in their recent study carried out on African immigrants residing in Tripoli a prevalence of HCV ranging from 2 to 26%, with the highest rate was among those from Egypt (18.7%) and West Africa (14.1%), followed by immigrants from the Horn of Africa and sub-Saharan countries. Abdoarrahem et al., (2019), have reported on their 2016 study in BaniWalid on 1511 immigrants, and found high prevalence of HBV, with 6.68%, 3.51% and 0.967% positive for HBV, HCV and HIV respectively. The study underscores the need for Libyan authorities to respond and educate the local community on BBV risks and transmission.

There is no current Global AIDS Monitoring report available for Libya. The first National AIDS Strategy was drafted for 2012-2014 (Libya MoH, 2013), but has yet to be adopted (Libya National Centre for Disease Control, 2015). The domestic instability and conflict has hindered the country response to tackle the drug/BBV epidemics, particularly HIV, with the discontinuation of HIV and drug projects, and deterioration of services for PWID. There is no updated information on harm reduction according to UNAIDS (2019). Some HIV prevention strategies were envisaged for key populations, which included HTC, STI prevention and treatment, addressing stigma, targeted information on risk reduction, and HIV education.

HIV testing is widely available but only few HTS facilities exist. ART is available in several cities and in one prison (Libya National Centre for Disease Control, 2015). Services are interrupted due to the domestic situation. Community and prison surveillance of BBV and key population characteristics is a general challenge (Libya National Centre for Disease Control, 2015; Mangan and Murray, 2016).

Prison-based testing for HIV and the provision of ART is reported to be available in Libya (UNAIDS, 2015). HIV and HCV among incarcerated populations is reported to be 18% and 23.7% (resp) (Heijnen et al 2016).

Harm Reduction

The National AIDS strategy did not include NSP and OAT (Libya National Centre for Disease Control, 2015). There is no UNAIDS 2020 update on harm reduction.

There is very limited availability of quality services for drug treatment, rehabilitation, and harm reduction (Elamouri et al., 2018). The only two Libyan rehabilitation centers (Tripoli and Benghazi), are closed due to the domestic situation (The National AIDS Control Program-Libya, 2015). This has contributed to a rise in established community-based, informal, re-education and rehabilitation centers run by militia, which are not evidence based with no defined rules for length of stay or provision of drug treatment supports (Finucci, 2014; Sifaw and Plaza, 2017; Elamouri et al., 2018).



Morocco remains the world's largest producer of cannabis resin (hashish) (INCB, 2014; UNODC, 2016; Afsaghi et al., 2015:2016; Blickman, 2017; Tingman, 2019, Global Drug Report, 2019). In the past 50 years, Moroccan cannabis growers have adapted to international market conditions and have resisted government attempts to reduce or eradicate cannabis cultivation (Afsahi, 2015; Blickman, 2017). The Moroccan government has practiced a policy of containment of cannabis cultivation, whereby no new areas are permitted, whilst permitting maintenance of existing areas in the Rif (Afsahi, 2015; Blickman, 2017). There was an observed decline in cannabis resin trafficking in Morocco in 2017 based on seizures and qualitative reporting (UNODC World Drug Report, 2019; 2020). For the first time, Morocco reported the seizure of 40 million units of Tramadol in 2017 (Origin India) destined for Guinea and other countries in West Africa (UNODC World Drug Report, 2019). Ecstasy seizures were also reported (UNODC, World Drug Report, 2020). Morocco also reported cocaine seizures of 120 kg in 2015, 1.6 tons in 2016 and of 2.8 tons in 2017, including a single shipment of 2.6 tons of cocaine from Brazil seized in October 2017; and 1 ton of cocaine paste seized in El Jadida, Morocco, in December 2018 in transit from Latin America to Europe (UNODC World Drug Report, 2019).

Drug Use

A recent study by El-Omari et al (2015) concluded that young adults' involvement in substance use in Morocco was substantially lower than the corresponding rates in Europe or the USA. In Morocco, school based surveys have however indicated increased prevalence of use of tobacco, cannabis, psychoactive substances cocaine and non medical use of tranquilizers among young people aged 11-23 years, and with concerning early age of onset (Centers for Disease Control and Prevention, 2010:2016; El Omari and Toufiq, 2015; Zarrouq et al., 2016; Toufiq et al., 2017). El Kazdouh et al., (2018) conducted a qualitative study to investigate risk and protective factors of substance use with adolescents (boys and girls, aged 14-16 years, parents and teachers) at two middle schools in Taza city, Morocco, and identified factors based on perceived benefits of substance use, awareness and beliefs, family influence, peer influence, easy accessibility of substances, and social norms. They recommended multilevel prevention programs and school based health education to promoting awareness and reducing risky behaviours of Moroccan adolescents. Zarrouq et al.,(2018) also investigated the prevalence and the determinants of psychoactive substances use among middle and high school students aged 11–23 years (n=3020) in the North Central Region of Morocco. They found that overall lifetime smoking prevalence was 16.1 %; with lifetime, annual and past month rates of any psychoactive substance use 9.3%, 7.5%, and 6.3 % respectively. Cannabis was recorded the highest lifetime prevalence of 8.1 %, followed by alcohol 4.3 %, inhalants 1.7 %, psychotropic substances without medical prescription 1.0% , cocaine 0.7%, heroine 0.3%, and amphetamine 0.2 %. Psychoactive substance use was associated with males more than females. Risk factors identified by the multivariate stepwise logistic regression analyses by Zarrouq et al., (2018) were being male, studying in secondary school level, smoking tobacco, living with a family member who uses tobacco, and feeling insecure within the family.

The average prevalence of illicit drug use is between 4% and 5% of the adult Moroccan population (approximately 800,000 PWUD) (Toufiq et al., 2014). Cannabis remains the most common drug used in Morocco, particularly among youth (*L'Observatoire National des Drogues et Addictions* (ONDA), 2014). Amphetamines and ecstasy are common club drugs (Toufiq et al., 2014). Approximately 20,000 Moroccans use heroin, of which two thirds inject. Increased use of cocaine and opiates is reported in recent times (UNODC, 2013). There is very little population level information. Karjouh et al., (2018) profiled prescription and usage patterns of psychotropic drugs in the City of Tiflet using a pharmacy based study with patterns of psychotropic drugs use (primarily anxiolytics (52.0%), neuroleptics (29.0%) and anti-depressants (19.0%), with some concern around poor monitoring of treatment by psychiatrists compared to general practitioners, and potential for abuse and addiction observed.

Sfendla et al (2018) analysed data from the "*Mental and Somatic Health without borders*" (MeSHe) survey which assessed somatic and mental health parameters by self-report from prison inmates (n = 177) and outpatients from an addiction institution (n = 54). A multivariable regression model revealed that the presence

of depression diagnosis constitutes a significant risk factor, while a higher level of education, having a child, and being employed are protective factors from drug dependence in Morocco. Azekour et al., (2019) reported on an epidemiological study of 180 cases of medicinal poisoning registered with the Provincial Delegation of Health in Errachidia (South East Morocco) between January 2004 and December 2016., with benzodiazepine derivatives commonly implicated, and with high rates of intentional overdose among women.

Increasing opiate use in Morocco is associated with the geographical location of Morocco, adjacent to Europe and affordability (Himmich and Madani, 2016). Drug injecting has increased in the past twenty years, particularly in the north of Morocco (Moroccan MoH, 2015). Poly drug use is common, with heroin most commonly smoked with cannabis, alcohol and benzodiazepines (Himmich and Madani, 2016). Estimations on number of PWID in Morocco are unreliable and range from 1,500 up to 18,500 (Sabir and Toufiq 2014, Shaw et al. 2016, Morocco MoH, 2015; WHO Eastern Mediterranean Region 2016; Himmich and Madani, 2016). IDU is concentrated in the North and East of the country, in the transit regions that export cannabis to Algeria and Spain, and import amphetamines (mainly from Algeria) and heroin (mainly from Spain) (Tinasit, 2016). Heroin is the most common drug of injection (Morocco MoH, 2014). PWID are generally male, aged between 36 and 39 year, unmarried, unemployed, and with high rates of incarceration (Morocco MoH, 2012:2014: 2015).

The estimated number of PWID is 30,500 (15,500–45,500), with young PWID under the age of 25 years constituting 6.9% (5.1–8.8), average age 33.2 (31–39) years; average age of onset of 29 years and median duration of injecting of 10-years (Hines et al., 2020). Prevalence of injecting drug use was estimated at 0.13% (0.07–0.20); HIV prevalence of 9.6% (0.0–20.6) among PWID; and number of current PWID living with HIV estimated to be 3,000 (500–6,500) (Larney et al., 2020). An estimated 91.5% (86.9–94.9) of PWID inject daily or more (estimated number 28,000; 14,500–42,500) and 8.5% (5.1–13.1) inject less than daily (estimated number 2500; 1000–4500) (Colledge et al., 2020).

Women who use drugs account for 1 in 10 of PWID studied (Maguet & Calderon, 2011; Moroccan MoH, 2012: 2014; Kouyoumjian et al., 2013). Sfindla et al (2017) have validated the Arabic version of DUDIT tool in Morocco for screening for drug use in Arabic-speaking countries. In 2014 prevention programs reached approximately 1400 PWIDs and over 2500 PWUD (Moroccan MoH, 2015).

Moroccan law promotes rehabilitative measures of treatment and education, and alternatives to incarceration exists in Morocco which at the courts discretion implements medical detoxification instead of imprisonment (Himmich and Madani, 2016; Al Shazly and Tinasit 2016; Bridge and Goretti-Loglo, 2017). However such alternatives are rarely applied (Ounir, 2011). High rates of previous incarcerations are reported among PWUD (Maguet and Calderon, 2011). There are several residential and several outpatient centers for drug treatment (Sabir and Toufiq 2014, Toufiq et al. 2014). OAT using MMT is received positively according to an evaluation in Tangier (101 drug addicted patients) and reported an improvement in the somatic state including weight, sleep, nutritional status and socio-occupational and relational status after inclusion in treatment (Idrissi et al., 2018).

BBV

HIV/AIDS prevalence in the general Moroccan population remains as low as 0.14% but concentrated among key populations, which include MSM (5.12%), CSW (1.98%) and PWID (10.17%) (Moroccan MoH, 2015; WHO Eastern Mediterranean Region, 2016). The HIV epidemic in Morocco is mainly focused among MSM and commercial sex networks respectively (Mumtaz et al., 2010:2014; Bennani et al., 2014; Kouyoumjian et al., 2013). These identified key populations account for 67% of new HIV infections in Morocco (Mumtaz et al., 2013). Morocco has conducted IBBS among FSWs in Agadir, Fes, Rabat, and Tanger (Johnston, 2011), MSM in Agadir and Marrakech (Johnston, 2011), and PWID in Tanger and Nador (Johnston, 2012), using state-of-the-art respondent-driven sampling methodologies for hidden and hard-to-reach populations (Kouyoumjian et al., 2018). Kouyoumjian et al., (2018) assessed HIV modes of exposure in Morocco at the national level and also for Souss-Massa-Drâa, the region most affected by HIV. They also assessed the impact of different scenarios of select intervention packages. They reported that nationally in 2013, the largest number of new infections occurred among clients of FSWs (25%); followed by MSM (22%), HIV serodiscordant couples (22%), FSWs (11%) and PWID (5%). A similar pattern of results was observed in Souss- Massa-Drâa, but with a four-fold HIV incidence rate compared to the national level. Both men and women contribute nearly equally to HIV incidence, but with most women acquiring the infection from their partners (Moroccan MoH, 2013; Kouyoumjian et al., 2018).

The epidemic in commercial heterosexual sex networks and MSM appears to be concentrated in the south of Morocco, and especially in Souss-Massa-Drâa with the most IDU transmission in the north of Morocco (Johnston, 2012). Different scenarios of feasible intervention packages reduced HIV incidence by 8–44%. Kouyoumjian et al (2018) observed that commercial heterosexual sex networks were the leading driver of the HIV epidemic, with half of HIV incidence but with a growing contribution for MSM. A quarter of new infections occurred among MSM, a third of which in Souss-Massa- Drâa. They report that feasible expanded coverage of interventions could lead to large reductions in incidence in targeted key populations.

The unreliable size estimates of PWID affect estimations regarding the prevalence of BBV among PWIDs, despite Morocco having one of the most developed surveillance system in the MENA region (Kouyoumjian et al., 2013; Himmich and Madani, 2016). There is observed geographic discrepancy in the burden of HIV and HCV among PWIDs. Three IBBS conducted between 2010 and 2013 in three Northern cities indicate that HIV prevalence ranges from 0.4% in Tangiers; 3.7% in Tetouan and 25.1% in Nador; HCV prevalence is much higher with 41% in Tangiers, 45.4% in Tetouan and 90% in Nador (Moroccan MoH, UNAIDS and Global Fund unit, 2012: 2014). IDU represents 7% of HIV infections in Morocco (Ghaddar et al 2017). Most recently, Mumtaz et al., (2018) however reported that the estimated number of annual new infections among PWID in the MENA region was lowest in Morocco (n = 99).

Mahmud et al., (2020) reported on pooled mean HCV prevalence among PWID of 53.0% (33.1–72.4); with estimated population size of 18,000 (13,500–22,500), estimated number of HCV antibody-positive among current PWID of 9,540 (4,469–16,290) and an estimated number of HCV chronically infected current PWID of 6,718 (3,147–11,471) in Morocco. Pooled estimates in % for risk of exposure to HCV in the general population in Morocco were 0.65% (0.47-0.86); in PWID were 52.97% (33.11-72.35) and in populations of intermediate risk (includes prisoners) were 3.88% (2.32-5.79) (Chemiatelly et al., 2019). There is very little data on rates of HCV among key populations. There is mean HCV prevalence of just over 60% in Morocco among PWID, with the dominant presence of genotype 1 (Trimbilas et al., 2014, Ramia et al 2012Mumtaz et al. 2014; Mahmud et al. 2018; Chemaitelly et al. 2019). Trimbilas et al (2016) have described HCV genetic heterogeneity related to global migratory flow of genotypes in high-risk IDU in the Tangier region of Morocco.

There was no updated Global AIDS monitoring report for Morocco. In 2012, there were 5301 HIV-infected people on ART out of an estimated 30 000 PLHIV (Morocco Ministry of Health/National AIDS Program, 2013). HIV testing is widely available in the country. Despite establishing and expanding ART access and coverage, coverage is still low (Kouyoumjian et al., 2018).

In Morocco, the country has a prison capacity of 40,000 prisoners, the total prison population is now 83,757, including 40.2% pre-trial detainees/remand prisoners and 2.4% female prisoners (2.4% of the prison population) housed in over crowded conditions (US State Department Human Rights Country Report 2013: Morocco Prison Studies Morocco; 2020). IDU in prison has been documented in Morocco. There is little available data on HIV (0.7%) and no data on HCV rates and risk behaviours in Moroccan prisons (Heijnen et al., 2016).

Harm Reduction

There is no update on harm reduction in the 2020 UNAIDS report. According to UNAIDS (2019), use of sterile injecting equipment at last injection (2017) in Morocco was 92.1%; number of needles and syringes distributed per person who injects (2018) was 109; coverage of OAT (2018) was 42.3%; naloxone is available (2019) and DCR is not available.

Morocco is a flagship country in the MENA region in confronting the epidemic through an evidence-informed and comprehensive response (Mumtaz et al., 2013, 2018; Kouyoumjian et al., 2013; Bennani et al., 2014; Tinasti, 2016). Morocco was the second MENA country after Iran to implement a harm reduction strategy (Himmich and Madani, 2016). It is one of only three of the 20 countries of the MENA region who have implemented effective combination of harm reduction (OAT and NSP) services: Iran (2000), Morocco (2010), and Afghanistan (2010) (Himmich and Madani, 2016). PWIDs have access to the other components of the UN comprehensive package of harm reduction services throughout existing harm reduction centers and routine HIV/AIDS facilities (Himmich and Madani, 2016). In 2014, four NSPs and six OAT centers provided 238,946 syringes (80 syringes per PWID per year) and enrolled 628 methadone patients (Salhi, 2010; Moroccan MoH, 2015). The main developments since 2018 in Morocco are:

- The development of a national protocol, a kit for the prevention and management of overdoses among PWUD, with a training module for community teams on prevention and care methods;
- Expansion of the geographic coverage of the harm reduction package of services for PWUD to other sites.
- The development and implementation of a professional qualification and socio-professional reintegration project dedicated to PWUD who are on MMT;
- Development of a structured advocacy plan for the benefit of different stakeholders (parliamentarians, judges, prosecutors, lawyers, judicial police, gendarmerie, etc.) which was put in place before 2018 in the Tangier - Tetouan region - El Hoceima and extended after 2018 to the Oriental region in the cities of Nador, Berkane, Oujda.
- Community mobilization around the issue of drug use: thematic NGOs working on harm reduction, human rights NGOs, representatives of PWUD in Morocco and self-help.
- Strengthening the community's structured capacity on the following themes: HIV / HCV, human rights, appeal system, etc.
- A network called REMAD was created in 2019. It is a network that brings together all the national actors (medical and community), who work in the field of drug addiction. It is a new communication platform between the actors on all issues related to the comprehensive and quality care of drug addiction
- An overdose prevention guide established and training of actors made in 2019.

The Global Fund, which will remain at least until 2023 is the most important donor for harm reduction programmes in Morocco. There is a strategic work plan including a full harm reduction program 2018-2022 adopted by the Ministry of Health At the legislative level, there has been no change or development in favour of PWUD or other key populations. Laws still criminalize drug use, homosexuality and sex work and impose severe penalties. Despite the existence of criminal laws, Morocco has a national strategy to fight AIDS and a strategy to reduce the risks associated with drug use. These strategies bring together CSO and institutional partners.

CSOs play a key role in promoting, implementing and disseminating harm reduction initiatives in Morocco (for example *ALCS; AHSUD; RdR Maroc*) (Himmich and Madani, 2016; Aaraj and Abou-Chrouh, 2016). There is strong collaboration between these CSO and government. There is political endorsement from government and the head of State – King Mohammed VI of Morocco has funded harm reduction buildings through Mohammed V Foundation. The Global Fund and DROSOS foundation have played a key role in supporting harm reduction activities.

A range of HR services are promoted for drug users (distribution of injecting and inhalation kits, syphilis and HIV rapid testing, referrals to HIV care centers where ART is available, and referrals to methadone treatment centers, mobile outreach, self-support groups, recreational activities) (Himmich and Madani, 2016). Continued scale up is warranted, particularly regarding geographic coverage for OAT where long waiting lists continue and scale up in prisons; peer based naloxone, providing services for minors, and addressing critical constraints which impede access to OAT; lack of high dosage buprenorphine; prescription and delivery regulations for methadone (Himmich and Madani, 2016). Lessons learnt from the '*bottom up*' Moroccan experience underpinned by CSO commitment, advocacy, collaboration and implementation cognisant of the risk environment of PWIDs, should be shared across the MENA region (Himmich and Madani, 2016). The '*Rabat Declaration*' where drug policy was based on health and human rights remains a critical milestone (ALCS, 2011).

Whilst Morocco has planned for MMT in prisons (Moroccan MoH, 2014), OAT is reported to be largely inaccessible (Sander, 2019). The DROSOS funded project implemented by UNODC (2017-2020) focused on improving access to prison populations to comprehensive STIs/HIV, HBV, HCV, and TB prevention, medical treatment and care services and supporting overall prevention strategies by building on, strengthening and ensuring continuity of HIV prevention, medical treatment, and care services to the prison populations in Morocco namely *Casablanca, Tangier, Tetouan, Salé and Nador*. There was a specific focus on women, given the rise in the female prisoner population. Achievements included one voluntary, anonymous and confidential syphilis, HIV, HBV and HCV testing and counselling services established in each prison and eligible prisoners as per national guidelines provided with free HBV vaccine; development of comprehensive guidelines for drug treatment and rehabilitation including access to OAT for drug users in prisons and closed settings; training of prison managers, prison welfare officers, CSO partners and medical professionals in the UNODC comprehensive package of services in prison and closed settings; delivery of HTS services, HBV vaccination

campaign and development of SOP and training manual on TB, STIs/HIV, HBV and HCV in prisons and closed settings. Since 2017, 409 inmates benefited from the OAT programme in closed settings in Morocco, including 167 in 2018. The programme was exclusively reserved for patients who were on OAT before incarceration. Continuity of care services was ensured for all released prisoners. There are plans to strengthen the programme by initiating drug treatment centers in prisons including OAT. As part of the National Programme for Addiction Control, at the Directorate of Epidemiology and Disease Control of the Ministry of Health, a national reference guide for OAT: *“Practical Guide to Methadone Maintenance Therapy in Morocco”* was developed and made available to healthcare providers in 2018.



The Sultanate of Oman is situated in the south-eastern corner of the Arabian Peninsula, bordering the United Arab Emirates, Yemen, and the Kingdom of Saudi Arabia. There is a zero tolerance policy toward substance use and strict drug trafficking laws up to and including the death penalty (Girelli, 2018). The last executions in Oman were reported in 2015 (Girelli, 2018). Proximity to the UAE, however and particularly in the heavily populated Al-Dhahirah Governorate has influenced a rise in substance use trends. The shift to acceptance of substance consumption can be attributed to economic development and sociocultural changes in recent years (Alzoon, 2017).

Drug Use

Prevalence of substance abuse is an increasing concern (Jayakrishnan et al., 2012; Oman WHO Country Profile, 2016: WHO 2016; Al-Alawi and Hamed, 2018). There is also an increasing pattern of Khat use in Oman (Odenwald and Al Absi, 2017; Alzoon, 2017).

Al-Alawi and Hamed, (2018) undertook a study during 2015-2016 on substance abuse among school students (n=614) in Al-Dhahirah Governorate in Sultanate of Oman. One-fifth (20.7%) of the respondents reported abusing substance (stimulants followed by stimulants). Poly substance use was common and included tobacco, paint, glue and alcohol. A doctoral study by Alzoon published in 2017 reported on 30-day prevalence rates of 3.2% and lifetime prevalence rates of 15.9% for alcohol and/or substance use among Omani college students. Oman has several inpatient and outpatient treatment facilities for drug dependence. Treatment data revealed that a total number of 5,345 admitted cases were admitted for the years 2004-2015, from which 99% were male (Ben Zaher et al., 2016). Female admissions are on the increase. Opiates (69%), followed by cannabis (57%), and sedatives (36%) are the most common drugs of abuse among the treatment-seeking population. 55% are PWID (Ben Zaher et al., 2016), and heroin and morphine are primary injected drugs (Oman MoH 2012). Al Wahaibi et al (2019) report on an increase in treatment uptake for alcohol and substance use. This study reported on the high rate of polysubstance use (alcohol, cannabis, benzodiazepines), IDU, and co-morbidities (HCV and psychiatric disorders). Oman has been given permission to trial an OAT service on a small scale, however the provision of MMT/BMT has not been reported on to date. Opioid detoxification is available using methadone (Oman MoH, 2012; 2014; ElKashef et al., 2019). There is increasing access to integrated treatment programs with OAT in Oman (Elkashef et al 2019). Maintenance prescribing was halted in Oman due to limited resources for patient supervision and concerns for drug diversion (Elkahsef et al., 2019)

BBV

There is no Global AIDS Monitoring Report for Oman. The HIV epidemic remains of low prevalence in Oman (Elgalib et al., 2020). Tackling HIV/AIDS and sexually transmitted infections remains one of the key health programmes in Oman under the vision three *“Alleviation of Risks Threatening the Public Health”* (Oman MoH, 2018). Al-Waidy and Sharanya (2019) assessed the epidemiological situation of HIV in Oman and the ongoing impact of the program established in 1987 using data collected from national health reports between 1984 and 2015. They report that since the first AIDS case in Oman in 1984, the numbers have steadily increased. Eighty percent of the HIV cases were reported between 1996 and 2015. By the end of 2015, there were 2879 PLHIV, a prevalence of < 1%. More males were affected than females ($p < 0.001$); 69.7% of affected males and 73.1% of

females were aged 20–49 years. The highest HIV rate was in the Musandam governorate. Sexual transmission was the predominant route, followed by mother to child, IDU, blood transfusion and unknown causes. More recent data indicates 1,566 Omani PLHIV according to sex and their current age at the end of 2017. At the end of 2018, 1,317 PLHIV are on ART, 882 were males and representing 67% of male PLHIV and 435 females representing 33 % of female PLHIV (Oman MoH, 2018).

Later, Elgalib et al., (2020) evaluated the cascade of HIV care in Oman in 2018 and the longitudinal change in each step from 2015 to 2018. As of December 31, 2018, the estimated number of PL HIV in Oman was 3030; with 1532 (50.6%) aware of their infection. In 2015, 67.6% of PLHIV knew their HIV status, 65.0% were on ART, and 48.0% achieved virological suppression. In prisons Heijnen et al., (2016) report on the median HIV prevalence in incarcerated populations of 0.3% in Oman, and median HCV prevalence of 0.3%. There are reported high rates of incarceration for drug related offences, continued use of drugs including IDU and unsafe injecting practices whilst in prison, and evidence of sexual acts between male PWID, mostly unprotected.

Data from the National Narcotics and Psychoactive Registry suggested a concentrated HIV epidemic among drug users (Al-Waidy and Sharanya, 2019). Estimates of HIV prevalence among PWID range between 0.5%-0.7% in the timeframe 2013-2015 (WHO Eastern Mediterranean Region 2016). There is no updated data on high risk behaviors of PWID. There is no data on age profile, injecting duration or frequency of injecting or size of PWID who inject daily (more or less) in Oman (Colledge et al., 2020; Hines et al., 2020). HIV prevalence among PWID is estimated as 11.8% (5.0–18.6), and there is no detail on prevalence of IDU, or number of current PWID living with HIV (Larney et al., 2020). Up until the end of 2014, 4% of all Omani HIV cases that were still alive reported unsafe injection as the mode of transmission (Oman MoH 2015). 4% HIV prevalence among registered cases has been reported by a drug treatment center (Ben Zaher et al., 2016).

Mahmud et al., (2020) reported on pooled mean HCV prevalence among PWID of 48.1% (43.8–52.4); with estimated population size of 4,250 (2,800–5,700), estimated number of HCV antibody-positive among current PWID of 2,044 (1,226–2,987) and estimated number of HCV chronically infected current PWID of 1,440 (864–2103) in Oman. Pooled estimates in % for risk of exposure to HCV in the general population in Oman were 0.75% (0.60-0.92); in PWID were 48.05% (43.64-52.47) and is not known in populations of intermediate risk (includes prisoners) (Chemiatelly et al., 2019). HCV prevalence among PWID has been reported to range from 24.1% to 52.2%, while HBV prevalence has been reported to be around 6% (Ben Zaher et al., 2016). There was a small outreach and NSP provided in Muscat (Oman MoH 2012) which is reported seems to be inactive in recent years (Oman MoH, 2014).

Oman has adopted treatment for all, irrespective of CD4 cell count, in December 2015 (Elgalib et al, 2020). There are currently 14 public treatment centres offering free ART (Elgalib et al., 2020). PLHIV on ART increased 57.0% by the end of 2015 ($p < 0.0001$). A 23.0% reduction in mortality due to HIV was observed ($p < 0.0001$). Elgalib et al (2020) have reported on a sustained improvement in linkage to care, retention in care, ART coverage, and viral suppression in PLHIV in Oman in 2015–2018. Capacity building for HIV teams, development of clinical care pathways, and enhanced linkage to and retention in care is reported (Elgalib et al., 2018; 2020). Al-Waidy and Sharanya, (2019) have also reported on the important achievements and successes in Oman. Best practices include adopting a comprehensive national response HIV strategic plan, free access to comprehensive treatment, care for PLHIV, and strong infrastructure to support laboratory and staff. The wide availability of ART across the country, despite challenges in tackling stigma and ensuring adherence has potentially contributed to the declining rate of HIV-related mortality. Changes in youth sexual behaviour in recent times are observed and a hotline is in place.

With regard to key populations at risk, initiation of anonymous testing and HTS is a significant improvement towards early diagnosis. There are plans by the Omani NAP to expand it to more areas in the near future. Monitoring and evaluation data is improving in order to provide estimates going forward, which are required in order to secure sustained political support in the HIV response. Increasing collaboration between the NAP and civil society organizations is observed and will assist in conducting studies on PWID. Promotion of substance abuse harm reduction is identified by the Oman MoH and centres on controlling HIV and other blood-borne infections in PWID, MSM and CSW via establishment of improved biological and behavioral surveillance, and encouraging social behavioural research. This is vital as high risk behaviours such as sex work, IDU, and MSM are not only socially disapproved of but are often illegal (Egalib et al., 2020). Fear of repatriation among non-nationals is a further barrier to uptake (Egalib et al., 2020). TB and HCV diagnosis and treatment is available in prisons in Oman (Ataya, 2016; Stone, 2016).

Harm Reduction

There is no detail on harm reduction in the 2019 UNAIDS report. The 2020 UNAIDS reports indicates that naloxone and DCR are not available in 2019.



Pakistan, the MENA region's most populated country is a major illicit drug producing and drug-transit country due to its geographic location next to Afghanistan, the world's largest producer of illicit opium. This has situated the country in a vulnerable position and contributed to both a rise in seizures of cannabis, heroin and morphine, and rising drug abuse (Kayani et al., 2019; Ghazal, 2019; UNODC World Drug Report 2019; 2020). Refugee populations in Pakistan further constitute a main structural constraint, affecting national, regional and global priorities in tackling drug trafficking, production and consumption (Himmich and Madani, 2016). Recent data indicates that out of 133 capital cases prosecuted under the Pakistani Control of Narcotic Substances Act, every single death sentence was pronounced primarily for possession-based offences, rather than trafficking or management of drug syndicates (Girelli, 2019).

Drug Use

Drug consumption patterns in Pakistan centre on cannabis, opioids; both opiates and pharmaceutical opioids). It is the highest consumer of heroin in the South West Asia region. UNODC has estimated there were 6.7 million PWUD in Pakistan, with 4.25 million deemed drug dependent (UNODC, 2013). This report indicated that PWUD have easy access to opiates in Pakistan, with nearly 1.6 million people reporting misuse of pharmaceutical opioids for non-medical use (UNODC, 2013). The Ministry of Narcotics Control Pakistan has reported that annually at least 50,000 new people become dependent different kinds of illegal drugs in Pakistan, adding to the 6.9 million dependent users (Kayani et al., 2019). Currently, there is a concern in Pakistan regarding the rising prescription/pharmaceutical opioid epidemic, caused by easy accessibility and pharmacists not complying with Schedule G (Mahili et al., 2019; Maji et al., 2019). Medicines sold by unlicensed medical providers (clinics and pharmacies) are increasingly reported to constitute risk and abuse potential in Pakistan (Ali et al, 2020).

Ghazal et al (2019) has reported on the early onset of drug use among drug treatment patients attending the drug rehabilitation centres of the Islamabad/Rawalpindi, with heroin the primary drug of abuse, followed by cannabis. Batool et al., (2017) in their study observed that patient relapse in several centres in Lahore was underpinned by association with former addicts, negative reactions from family, and difficulties in managing cravings and stress. The burden of poisoning cases in Karachi have risen steeply (Amir et al., 2019).

Pakistan's regional context and drug trafficking routes create a conducive environment for IDU (UNODC, 2017; Al Kanaani et al., 2018). There are previous estimates of PWID in Pakistan which ranged from 104,804 to 420,000, with great geographic variation (Archibald et al., 2013; Emmanuel et al., 2010; 2013). There is currently an estimated 423,000 PWID in Pakistan (Hines et al., 2020). Due to its large share of the population; Punjab has the highest number of drug users with approximately 260,000 PWID (Mahili et al., 2019). Preferred drugs of choice for PWID in Pakistan are AVIL® (injection containing antihistamine pheneramine maleate) and heroin, and use of several pharmaceutical products including Valium® (Diazepam), Phenergan® (Promethazine) and Restoril® (Temazepam) (NACD, 2017; Mansoori et al., 2018). Heroin and Advil injecting is common (Mansha et al., 2017). There are also reports of methamphetamine use (*'Ice drugs'*) (Khan and Fahad, 2019). PWID are commonly male, unmarried, in their early thirties, and have low levels of education (AP Consultancies and Bridge Consultants Foundation 2014). Low HIV knowledge of transmission and unsafe injecting practices compound the spread of BBV (Islam et al., 2015; Akram and Ilyas, 2017; Samo et al., 2017). It is reported that there are 96 drug treatment centers and 34 low-threshold facilities in the country (Pakistan's Ministry of Interior and Narcotics Control and UNODC 2013).

BBV

With 20,000 new HIV infections in 2017, Pakistan has the second fastest growing HIV epidemic in Asia Pacific (UNAIDS, 2018). Whilst HIV prevalence is low among general population (less than 0.1%) (Pakistan Global AIDS Monitoring, 2019), several Lancet articles have underscored the presence of various contributory factors to the unprecedented HIV outbreaks in the Sindh and Punjab provinces in Pakistan in 2019 (Arif et al., 2019; Ahmed et al., 2019; Green et al., 2019). The most recent outbreak was reported in April 2019 in Larkana, with at least 186 newly diagnosed (Malik et al., 2019). Healthcare exposure to BBV (HIV, HCV) appears to be a major driver of transmission in Pakistan, followed by IDU (Janjua et al., 2010; Al Kanaani et al., 2018; Altaf, 2018; Altaf et al., 2019). Larkana, Jalalpur Jattan and Kot Imrana have all experienced several large HIV outbreaks mostly caused by healthcare exposure and by IDU (Salman et al., 2013; Altaf et al., 2016; Altaf, 2018; Altaf et al., 2019). Untrained healthcare providers (*Quacks*) are a significant problem in the tackling BBV spread (Altaf et al., 2019).

The National AIDS Control Programme, in their National HIV Surveillance Round of 2016-17 reported HIV among key populations (PWIDs 16.2%, transgender CSW 18.2%, MSW 5.0% and FSW 4.1%) (NACP, 2017). Other IBBS have reported on HIV prevalence of 38.4% among PWIDs, 7.1% among transgender (TG) (known as *Hijra*), 3.5% among MSM and 2.2% among FSW in Pakistan (NACP, 2015; National AIDS Control Program Pakistan, 2017; NACP, 2017).

Pakistan has an estimated 165,884 people living with HIV (PLHIV) (Pakistan Global AIDS Monitoring, 2019). The Pakistan Global AIDS Monitoring report in 2019 reports that the HIV epidemic is concentrated in key populations namely: PWID, MSW, FSW & TG, MSM and TG. HIV epidemics in Pakistan are now primarily concentrated in PWID, approximately 38% of currently registered patients (NACP; 2019).

IDU represents a major cause of HIV transmission, and with HIV highly prevalent among PWID (Mumtaz et al., 2011; 2014; 2014; Akram and Ilyas, 2017). In 2017, a population-based survey estimated HIV prevalence among PWID was 38.4%, compared to 0.1% in the general population, with only 39.3% tested in the past 12 months (NACP, 2017; UNAIDS, 2018). In Pakistan, % prevalence of injecting drug use was estimated at 0.37% (0.32–0.42); HIV prevalence of 32.3% (25.5–39.1) among PWID; and number of current PWID living with HIV of 136,500 (103,500–172,500) (Larney et al., 2020). In 2016, UNODC reported that 24 thousand PWUD in Karachi were HIV positive. There is a weighted HIV prevalence in PWID of 36.8% among ten cities of Punjab, with prevalence steadily increasing from 10.8% in 2005 to 27.2% in 2011, and with several cities reporting HIV prevalence >40% in several cities, including Faisalabad (52.5%), D.G. Khan (49.6%), Gujrat (46.2%), Karachi (42.2%) and Sargodha (40.6%) respectively (APLHIV, 2014; NACD, 2017). Akram and Ilyas (2017) conducted a correlational, cross-sectional study on male IDU aged 18-60 years in two Pakistani cities of Gujrat and Jhelum from October 2015 to March 2016, and comprised male injecting-drug users aged 18-60 years. They reported on a HIV prevalence rate of 47%, and that psychological distress and HIV status were predictors of suicidal behaviour. Asif et al (2019) reported on a prevalence of HIV virus was 21.1%, HCV 34.3% and HBV 3.2% in 402 PWUD (84.7% were HIV positive PWID), attending a tertiary care hospital. 11.4% had previous history of blood transfusion.

HIV is concentrated among PWID in part due to the injecting use of pharmaceutical products sold in pharmacies and clinics (Mahili et al. 2019). In Pakistan, an estimated 100.0 (99.7–100.0) % of PWID inject daily or more (estimated number 422,500; 364,000–483,500); 0.0 (0.0–0.2) inject less than daily (estimated number <500 ; <500–500) (Colledge et al., 2020). The estimated number of PWID is 423 000 (363 000–482 500), with young PWID under the age of 25 years constituting 22.9% (19.4–26.6), average age 30.5 years (28–34); average age of onset of 26.9 years (22–29) and median duration of injecting of 5.1 years (5–8) (Hines et al., 2020). The fifth IBBS Round conducted in 2016 revealed a steady increase in the weighted prevalence of HIV among the key populations namely; PWID = 38.4%, TG, MSW = 7.5%, TGs = 7.1%, MSW = 5.6%, MSM = 5.4%, and FSW = 2.2% (Pakistan Global AIDS Monitoring report, 2019). According to the latest epidemiological evidence 28% of the new infections occurred in PWID, 12% in MSM, 3% in TGs and 2% in FSW. A significant percentage of low-risk males, females, and clients of KPs were newly infected suggesting an increase in HIV transmission to bridging populations (spouses, partners, and clients) of key populations.

Latest evidence has suggested a shift from key populations through transmission via needle-sharing by PWID to sexual transmission via multiple sexual partners, and further transmission to their intimate partners is increasing (NACP, 2013; 2014; Ahmad et al., 2011 National AIDS Control Programme Pakistan, 2017; Pakistan

Global AIDS Monitoring report, 2019). There are concerns regarding the heterogeneity in overlapping HIV risk behaviors among CSW in Pakistan; in terms of the degree to which CSWs interact with PWID through sex and/or needle sharing, as well as to the general population through sexual networks of CSWs and their clients (Ahmad et al., 2011; Mishra et al. 2013; National AIDS Control Program, 2014; Melesse et al., 2016; 2018). Public injecting and use of street injectors reusing equipment is of significant concern (NACP, 2011; 2017). PWID and CSW particularly TG experience significant stigma in Pakistan which drives injecting and transactional sex underground, and heightens risk of assault (HASP, 2011; Siddiqui et al., 2011; Samo et al., 2013; Mishra et al., 2013; Thompson et al., 2013; de Lind van Wijngaarden et al., 2013; Rez et al., 2013; Singh, 2014; NACP, 2014; Melesse et al., 2016;2018; Saeed and Ahemd, 2018).

Pakistan is currently experiencing a HCV epidemic of historical proportions, with one in every 20 Pakistanis is infected (Qureshi et al., 2010; Khan and Khan, 2010; Emmanuel et al 2011:2013; Blanchard et al, 2013; Al Kanaani et al., 2018). The country had a pooled estimate for the risk of having been exposed to HCV of 4.9% (4.7-5.1) (Qureshi et al., 2010; Umar et al., 2010). Mahmud et al., (2020) reported on pooled mean HCV prevalence among PWID of 56.2% (41.4–70.1) with estimated population size of 117,632 (89,500–510,000), estimated number of HCV antibody-positive among current PWID of 66,109 (32,399–239,700) and an estimated number of HCV chronically infected current PWID of 46,554 (22,815–168,797). More recent pooled estimates in % for risk of exposure to HCV in the general population in Pakistan were 6.15% (5.68-6.65); in PWID were 53.63% (36.21-70.62) and in populations of intermediate risk (includes prisoners) were 12.94% (10.85-15.18) (Chemiatelly et al., 2019).

Characterizations of HCV epidemiology in Pakistan in different risk populations (1998-2016) using meta – analyses have estimated a pooled mean HCV prevalence of 6.2% among the general population, 34.5% among high-risk clinical populations, 12.8% among populations at intermediate risk (includes prisoners), 16.9% among special clinical populations, 55.9% among populations with liver related conditions and 53.6% among PWID (Al-Kanaani et al., 2018). Among PWID HCV prevalence ranged from 8.0 to 94.3%, with a median of 44.7% (Al Kanaani et al., 2018).

Among prisoners HCV prevalence ranged from 8.7 to 18.2%, with a median of 13.1% (Al Kanaani et al., 2018). Risk factors for HCV acquisition among PWID and prisoners include IDU, sex work and transactional sex for drugs (Kazi et al., 2010; Ahmed et al 2012; Maan et al., 2014). Al Kanaani et al (2018) have estimated there are 104,804 active PWID in Pakistan (Pakistan Global AIDS Response Progress Report, 2015 Mumtaz et al., 2014:2017), making the relative contribution of IDU to HCV incidence significantly less than of healthcare.

Heijnen et al (2016) reported on HIV among incarcerated populations in Pakistan with a median prevalence of 1.1% in Pakistan and a median HCV prevalence of 15.6%. Continued use of drugs while in prison was reported by 59.2% incarcerated drug users; use of non-sterile injecting equipment in prisons by 46%; sex with another male by 19.3% in Pakistan and a previous history of incarceration by 84%. High frequency of BBV among prisoners and to a less degree staff in prisons in Pakistan is reported (Kazi et al., 2010; Gorar et al., 2010; Pervaiz et al., 2015; USDL, 2016; Aziz et al., 2018; Wali et al., 2019). Most studies on prisoners in Pakistan have indicated HIV prevalence of about 2%, higher than the domestic population (Kazi et al., 2010; Ikram et al., 2011; Nafees et al., 2011; Iqbal et al., 2012; Shah et al., 2013; Ali et al., 2017; Waheed et al., 2017; Khan et al., 2019). The high prevalence of HIV in prisons of Balochistan (n=2084) is reported by Khan et al., (2019), underpinned by extra marital sex, sex between men and history of needle sharing. A study of HIV-positive prisoners in five jails in Sindh, Pakistan reported that 12.3% have ever used drugs by injection in the jails (Bergstrom et al., 2015).

There is a revised Pakistan AIDS Strategy III, developed in 2017 by the NACP to guide Pakistan's overall national response for HIV and AIDS till 2020 (Pakistan MoH, 2015). PWID are acknowledged as a priority key population, and has envisaged harm reduction services for this group.

In light of the up-to-date epidemiological evidence which illustrates diverse transmission dynamics, Pakistan has designed its HIV response using a high impact focussed targeted approach to increasing coverage of HIV prevention, treatment, care, and support services (Pakistan Global AIDS Monitoring report, 2019). HIV testing is conducted in the field through field and mobile units with a trained psychologist. Finger-print is used as a unique identifier and for tracking service coverage for PWID.

Khalid et al., (2020) has indicated that progress toward universal health coverage in Pakistan is possible despite relatively low public expenditure. Post devolution the HIV response has been hindered by its donor

dependence, weak coordination, inadequate inter-provincial information sharing and surveillance, limited key population specific and geographic coverage, variations in HIV interventions and lack of effective community engagement (Pakistan Global AIDS report, 2019). Khalid and Fox (2019) identified several political challenges in implementing HIV programmes in Pakistan which included, low and heterogeneous political commitment for HIV and a conservative legal environment contributing towards a ban on OAT, creating low treatment coverage.

Pakistan has an estimated 165,884 PLHIV living in the four main provinces of Punjab, Sindh, Khyber Pakhtunkhwa and Baluchistan and two autonomous states: Azad Jammu Kashmir, Gilgit-Baltistan, Federally Administered Tribal Areas and the Islamabad Capital Territory (Pakistan Global AIDS Monitoring report, 2019). It is currently estimated that only 15.0% of PLHIV have been diagnosed and only 8.0% are receiving treatment (UNAIDS, 2018). In 2019, coverage rates remain extremely low, with no more than 12 % of the total estimated population of PL HIV on treatment (with key populations even lower at 4%) (Pakistan Global AIDS Monitoring report, 2019). Shahid et al.(2016) reported that home and community-based HTC was effective in identifying undiagnosed HIV among spouses of PWID, the majority of whom reported low rates of prior HIV testing and low HIV-related knowledge.

Koirala et al (2019) identified barriers to HIV care between testing and treatment, which included young age, sex work, imprisonment, transgender identity, illiteracy, rural residence, alcohol/ injecting drug use, perceived poor health status, lack of health insurance, fear of confidentiality breach, self-referral for HIV testing, and public hospital as the place of HIV diagnosis. Adherence to ART among PWID is low, with family cohesion and family support crucial in supporting patients (Ali et al., 2018). Samo et al., (2016) have underscored the need for programme supports to prevent lost to follow up in male PWIDs. Expansion of HIV prevention services and linkages to treatment and care including PMTCT are urgently needed. PrEP, has been included in the consolidated guidelines for the prevention and treatment of HIV in Pakistan (Pakistan Global AIDS Monitoring report, 2019).

Harm Reduction

With the withdrawal of the World Bank in 2010, the Global Fund has the main financier of HIV prevention activities targeting IDUs, with NGOs are the forefront of the harm reduction response (NSP roll out) (Aaraj and Abou-Chrouh, 2016). According to UNAIDS (2019), use of sterile injecting equipment at last injection (2016) in Pakistan was 72.5%; the number of needles and syringes distributed per person who injects (2018) was 46; with no coverage of OAT, naloxone or DCR. The 2020 UNAIDS report indicates no change.

However despite HR services available in every district with drug use, more needs to be done to support harm reduction services for PWID (Al Kanaani et al., 2018). Whilst 7,500 people are reached every day with clean needles through NSP services (in 5 districts of Pakistan), efforts to reach PWID and their partners are hindered by stigma, discrimination and policies which criminalize drug use and possession (UNAIDS, 2018).

Whilst OAT is in the planning, to date this has not been achieved despite official endorsement of OAT by the Drug Regulatory Authority and Anti-Narcotic Forces and steps towards registering Methadone and Buprenorphine reaching advanced stages (HRI. 2019). The residential treatment services ART adherence unit was established in 2014 and provides detox to those testing positive for HIV (covering 365 individuals per month, with a treatment of 5 weeks). There is a women who use drugs programme in development in Lahore and Faisalabad, alongside an existing spouses programme. There is no take home naloxone. HCV testing and treatment is also neglected (with exception of those co-infected with HIV) despite the severely high rates of exposure. In 5 May 2015 the launch of the first drug user network called DUNE in Pakistan was celebrated and is part of the Association of People Living with HIV (APLHIV) in Pakistan.

There is no HIV testing, OAT or NSP in prisons, and ART is provided by Nai Zindagi for clients who become incarcerated. There is some early stage planning of a testing programming in prisons, with a donor identified. HIV prevention treatment and care services are provided in two female prisons of Karachi and Hyderabad in Sindh province, around 347 females prisoners got registered for the services in 2017 (Pakistan Global AIDS Monitoring report, 2019).



Palestine consists of the non-contiguous densely populated West Bank (including East Jerusalem) and Gaza Strip. Five million Palestinians live in Palestine (Gaza Strip: 66.2% live in eight United Nations Relief Works Agency for Palestinian Refugees UNRWA camps; West Bank: 26.6% live in 19 UNRWA camps). 40% of Palestinian refugees are children (Waterston and Nasser, 2017). Palestinian communities have a significant health burden caused by their unique socio-economic and political situation (WHO, 2015). In Gaza Strip, the frequent wars and escalations have contributed to a high number of casualties, fatalities, trauma fear, and related mental health disorders (Al-Afifi et al., 2015). High unemployment and poverty prevail in both areas, particularly in the Gaza Strip (PCBS, 2018).

Drug related cases are often presented to the courts (Council of The European Union 2012, GINAD 2017). The death penalty can be imposed for drug offences only in the Gaza Strip (Girelli, 2019). None of the 13 death sentences pronounced in 2018 were for drug offences (Girelli, 2019).

Drug Use

Substance use occurs even in socially conservative communities where it remains hidden due to stigma, religious, legal and cultural constraints (Massad et al., 2016; Palestinian National Institute of Public Health / UNODC 2017a;b; Thabet, and Dajani., 2012; UNODC, 2019; Van Hout et al., 2019; Al –Afifi et al., 2019). Use and abuse of synthetic drugs, cannabis, heroin and cocaine, and counterfeit and diverted prescription drugs such as Tramadol is now a significant concern, amidst a rise in cultivation, trafficking and supply of drugs into Palestine (particularly the Gaza Strip, and West Bank, Area C) (Progler, 2010; Thabet, and Dajani., 2012; Massad et al., 2016; Palestinian National Institute of Public Health /UNODC 2017; Damiri et al 2018; Van Hout et al., 2019; Al –Afifi et al., 2019). There are increasing concerns on the use of and large seizures of Tramadol, and an increase in consumption of heroin in Palestine (Council of The European Union 2016, INCB 2016; GINAD 2017). Cannabis is produced in areas of Palestine and is easily available (GINAD 2017).

A study by Diab et al., (2020) has emphasised the factors contributing to emergent harmful use of Tramadol underpinned by critical environmental and living conditions, such as severe political and military violence, unemployment, poverty, stress, health, and related mental health-related determinants. They also report that disrupted and weak social services in Palestine are unprepared to manage widespread substance use, and particularly during conflict, people are especially affected by poor mental health. Stigma, fragmented health services and travel restrictions for Palestinians impede help-seeking for substance use issues (Massad et al., 2016; Palestinian National Institute of Public Health /UNODC, 2017).

Situational assessments conducted in 2017 reported that drug trends include marijuana, prescription medications (anti-depressants, Z-hypnotics, benzodiazepines and analgesics) and NPS (*'Sintetique Marijuana'*), with reported high dose use of methadone, morphine, phencyclidine, barbiturates, benzodiazepines and synthetic opioids such as Tramadol, and gabapentinoid drugs such as Pregabalin (Palestinian National Institute of Public Health UNODC /2017; UNODC World Drug report 2019). Damiri et al., (2018) has reported on the rise since 2013 of trafficking and use of NPS, particularly synthetic cannabinoids, the manufacture of liquid amphetamine and the cultivation of marijuana in Palestine. Most commonly seized and used substances among arrestees were cannabis, hashish (74.3%) and marijuana (15.2%), followed by synthetic cannabinoids, hydro (26.6%). MDMA (Ecstasy) (3.6%) LSD (3.1%) and heroin and cocaine combined (3.3%). Liquid methamphetamine emerged as a new homemade yellow substance (*street name GG*) used for improving libido (Damiri et al., 2018). Most arrestees (99%) were males, (55.9%) aged 18- < 30, (48.8%) singles, (56.7%) with a primary level of education, and (81.8%) had used drugs for a year or more.

There have been some recent empirical studies conducted on substance use and Palestinian young people. Children and young people are particularly at risk of substance abuse and are vulnerable to physical and sexual abuse, exploitation in drug trafficking and at risk of becoming addicts themselves (Defense for Children International/Palestine Section 2006; Palestinian National Institute of Public Health/UNODC, 2017; Damiri et

al. 2018; Van Hout et al., 2019). There has been a sharp increase in familial poverty, children dropping out of school and becoming caregivers, becoming street children by either begging or working with little income, and are at high risk of exploitation by drug dealers and users (Van Hout et al., 2019).

Damiri et al (2018) reported on a cross-sectional study in 10th grade students in 16 schools in 2016 (n=877). Common substances used by school children were tobacco (40.6%), alcohol (3.2%) and illicit drugs (2.0%). Around 59.7, 7.9, and 2.9% of the schoolchildren had tried, at least once in their lifetime, tobacco, alcohol, and illicit drugs, respectively. Curiosity and experience were motivating factors. The mean age of initiation was 12 years for smoking and 14 years for drinking alcohol or using illicit drugs. Most engaged in poly substance use (Cannabis, synthetic cannabinoids, amphetamines). Students reported easy access to substances. Glick et al (2018) also reported the tendency among Palestinian youth to overestimate prevalence of risk taking behaviours in the peers (alcohol, drugs, sexual activity). This exacerbates risk taking.

Damiri (2019) also reported on a cross-sectional study conducted in 2016 to investigate the prevalence of and risk factors associated with psychoactive substance use among 950 teenagers in different conflict zones in the West Bank. She reported that Palestinian refugee youth are especially vulnerable due to available of psychoactive drugs, use of these substances to help with coping, and social/peer pressure. This study has underscored the need for refugee targeted detection and early prevention strategies to reduce harm. In terms of university students, Damiri et al. (2019) conducted a study on the extent and the pattern of psychoactive substance use among students in four main universities in the West Bank, Palestine. They reported lifetime use rates of smoking tobacco (41.6% for cigarettes and 50% for hookah), drinking alcohol (5.4%), and using illicit drugs (3.0%). Cannabis, synthetic cannabinoids, and amphetamines were the most common used illicit drugs. Frequency of use was higher among males, those with higher income, orphans, or whose parents experienced more conflict in their relationship. Risk of use of psychoactive substance was underpinned by the initiation age, availability of money and substances, types and frequency of use, and poly substance use. Common motives were to escape from problems and peer pressure. Students who manifested a history of violence were significantly more likely being substance users independent of substance type.

Exposure to political and inter-personal violence, economic hardship, trauma and stress across the life course underpins increasing high-risk drug use in Palestine (Progler, 2010; UNODC 2017; Thabet, and Dajani., 2012; DCI, 2017; UNODC, 2019; Van Hout et al., 2019; Al –Afifi et al., 2019). There is significant risk for drug exposed and traumatised Palestinian children and youth to use drugs, become dependent and their risk of overdose, psychiatric events and HIV/hepatitis C acquisition (Van Hout et al., 2019). The Palestinian Central Bureau of Statistics recently estimate there are over 80,000 HDU's of which 26,500 are high-risk drug users (1.8% of the male population aged over 15 years) (Palestinian National Institute of Public Health/UNODC 2017). An earlier IBBS on PWID was conducted in West Bank in 2013 and showed that most PWID were married and had low levels of education. Heroin was the most popular drug of injection, followed by cocaine (Jwehan et al., 2014).

BBV

There is no current Global AIDS Monitoring report for Palestine. Hamarsheh (2020) analysed the incidence of HIV/AIDS in Palestine between 1988 and 2017 as reported by the Palestinian MOH (2017). A total of 98 cases were reported (79 AIDS patients and 19 HIV positives). Surveillance data is poor and available information does not reflect the actual status of HIV/AIDS. Sexual transmission accounts for the majority of cases. 3.6% of HIV identified cases were attributed to injecting drug use (Palestine MoH, 2015). The WHO Palestine country profile reports whilst HIV prevalence is low (Abu-Raddad et al., 2010; Palestinian Health Information Center, 2015), little strategic information or routine surveillance exists concerning key populations. These are HDU, particularly those who inject, prisoners, women who use drugs, and sexual partners of key populations. Prevalence of BBV (HIV/HCV/HBV) infection and BBV related risk-taking behaviours among drug users has notably increased among males, older youth, in urban areas and in UNRWA camps (Stulhofer et al., 2012; Massad et al., 2013; Nazzal et al., 2014; UNODC, 2017). Injecting patterns differ (West Bank: mostly heroin, Gaza Strip: mostly cocaine). Risk behaviours include very young first injecting age; sharing of needles and other drug paraphernalia at last injection; multiple sex partners (over five); low condom use, condomless anal sex; sex transactions for food, money or drugs; poor awareness of harm reduction, and low viral screening uptake (UNODC, 2017a;b; 2019). In Palestine, an estimated 55.6% (51.3–60.0) of PWID inject daily or more (estimated number 2000; 1000–2500) and 44.4% (40.0–48.7) inject less than daily (estimated number 1500; 500–2000) (Colledge et al., 2020). Whilst there is no current size estimate in Palestine, the average age of PWID is 40.6 years (39–43) with average age of onset of 29.0 years (29–29) and median duration of injecting of

14.0-years (14–14) (Hines et al., 2020). In Palestine, HIV prevalence among PWID is estimated as 0.0% (0.0–<0.1), and there is no detail on prevalence of IDU, or number of current PWID living with HIV (Larney et al., 2020).

A 2010 study a respondent-driven sampling study was conducted with 199 Palestinian IDUs in the East Jerusalem Governorate reported no HIV-positive cases but found that a substantial proportion of participants (40%) were infected with HCV (Štulhofer et al, 2012). Štulhofer et al., (2016) conducted a BBS, on HIV and HCV infection rates among IDUs in the West Bank using time-location sampling in the Ramallah, Hebron, and Bethlehem governorates in 2013. 288 Palestinian IDUs ages 16–64 years took part, with no HIV cases diagnosed but with 41% testing positive for HCV. 83% reported experience of incarceration. Incarceration was shown to increase the odds of being infected with HCV and ever tested for HIV. This indicates the need for harm reduction and BBV prevention in Palestinian prisons, and for alternatives to imprisonment to be considered.

There is very little BBV or contextual behavioural risk data available from Palestinian prisons (Heijnen et al., 2016). Whilst OAT is provided in prisons in Palestine, daily journeys are reportedly made by prison authorities to take a small number of prisoners to receive methadone (Brandt, 2018).

Mahmud et al., (2020) reported on pooled mean HCV prevalence among PWID of 41.6% (36.2–47.0) with estimated population size of 1,850 (1,200–2,500), estimated number of HCV antibody-positive among current PWID of 770 (497–1,753) and estimated number of HCV chronically infected current PWID of 542 (350–1,234) in Palestine. Pooled estimates in % for risk of exposure to HCV in the general population in Palestine were 0.24% (0.18–0.30) and in PWID were 41.58% (36.24–47.02) and with no detail regarding populations of intermediate risk (includes prisoners) (Chemiatelly et al., 2019).

In terms of the national HIV response (National HIV and AIDS Strategy 2010–2015), HIV prevention and care services used to be quite limited in Palestine, but after the implementation of the Global Fund grant (2009–2014) voluntary counselling and testing services were available in the West Bank, in addition to access to ART for PLHIV. HTS is widely available in all districts and two centers provide ART inside Palestine (WHO 2016). The mortality rate among HIV/AIDS patients in Palestine is very high (Hamarsheh, 2020). Palestinian patients are referred to the AIDS clinic at the Palestinian MoH, where they received free diagnosis, ART, and psycho-social support. Uptake however is compromised by stigma of the condition (Hamarsheh, 2020).

Harm Reduction

There is no updated information on harm reduction for Palestine in the UNAIDS 2019 and 2020 reports. The Palestinian National High Committee for the Prevention of Drugs and Psychotropic Substances recognises drug dependence as a multi-factorial health disorder and addressing drug dependence as a disease is highlighted in the past two Palestinian National Health Strategies. There is an annex (2012) in the National HIV and AIDS Strategy 2010–2015 to address HIV Prevention, Treatment and Care among Drug Users and in Prison Settings including Harm reduction Comprehensive Package. The right to health was included in the current Palestinian Drug Law since 2015 which states the drug addict is a patient and should have the opportunity to access treatment services. The National High Committee for the Prevention of Drugs and Psychotropic Substances recognizes drug dependence as a multi-factorial health disorder and has been actively engaged in the development and coordination of the national response.

NGOs are the main providers of treatment and rehabilitation in Palestine (Council of The European Union 2012). Drug dependence treatment (limited to detoxification) has been provided by a limited number of centres operated by NGOs (*Al Huda, Al Sadeq al Tayeb, Maqdese, SARC, Caritas*) geographically scattered across the West Bank and Gaza. Psychosocial rehabilitation is offered by these NGOs and limited outpatient clinics are operated by the Palestinian MoH. Numbers reached by NGOs and UNRWA is low, with little specialist addiction provision for women and minors (UNODC, 2017, UNODC, 2019; Van Hout et al., 2019; Al –Afifi et al., 2019). In 2019, the Palestinian MoH with technical support from UNODC established the Palestinian National Rehabilitation Centre in Bethlehem, West Bank (UNODC, 2019). This centre has catered for over 250 patients since opening. Due to the strong demand and capacity constraints, there is a significant gap in the West Bank for a primary care referral and support system to provide referral, rehabilitation and aftercare in the community. Gaza Strip is left behind, without a treatment facility and struggling to deal with the societal issue of drug abuse in Palestinian families.

NSP and condom provision was initiated in the West Bank by local NGOs, but is currently not provided for, with exception of a small programme in East Jerusalem (estimated 1000 needles per month).



QATAR

Qatar is a small high-income country with high migration dynamics (Mahmud et al. 2018). There is some reporting on the trafficking of heroin via Qatar (UNODC World Drug Report 2019; 2020). According to amphetamine seizure information in the period 2013-2017, Qatar was one of several MENA countries identified as a destination market for amphetamine trafficked into the MENA region. There is also diffusion of Captagon in Qatar (Al Imam et al., (2017). Qatar is a symbolic state for application of the death penalty for drug offences (Aaraj and Abou-Chrouch, 2016). Courts are entitled to order admission into a treatment center as an alternative to criminal sanction, with a period of mandated treatment of three months to one year (Al-Shazly and Tinasti, 2016).

Drug Use

There is very little data on substance use, drug use or drug injecting in the country. Where data is reported, opioid related mortality and morbidity is most common (Health Grove by Graphiq, 2017). In the ATLAS drug prevention and treatment assessment in 2016, alcohol was reported to be the primary substance prior to treatment uptake (Ghering and Saeed, 2017). Over half of those seeking treatment for opioid and/or cannabis dependence received it (Ghering and Saeed, 2017). The Social Rehabilitation Centre provides inpatient detoxification and psycho-social aftercare plans for drug addicts (Olayiwola, 2013).

BBV

There is no current Global AIDS Monitoring report for Qatar. The influx of expatriates into Qatar poses a risk in terms of BBV, particularly when originating from high burden countries (Mahmud et al., 2018; Derbala et al., 2019). Qatar has a low HIV prevalence less than 0.1% among the general population (Al-Soub et al., 2018). Previous data indicates that the dominant mode of transmission is sexual (primarily heterosexual, followed by same-sex relations among MSM) (Qatar MoH, 2013). Al-Soub et al., (2018) conducted a review of all cases of HIV infection diagnosed in Qatar between 1984 and October 2014. Case files were only available for 148 patients, almost all were Qatari. Sexual transmission was most common, followed by blood transfusion. More non-Qataris have been diagnosed in this time frame. In 2015, no newly identified cases of HIV were attributed to IDU (WHO Eastern Mediterranean Region 2016).

There is no up to date IBBS on key populations (WHO Eastern Mediterranean Region 2016). There is no current detail on prevalence of IDU, HIV prevalence among PWID or number of PWID living with HIV (Larney et al., 2020). There is no data on frequency of injecting or size of PWID who inject daily (more or less) in Qatar (Colledge et al., 2020). There is no age profile or duration of injecting of PWID in Oman (Hines et al., 2020). There are no targeted HIV prevention in place or planned for PWID, and there are no NGOs involved in HIV prevention and care programs for key populations. One center provides voluntary HTS and ART (Qataris and non-Qataris)(Qatar MoH, 2013).

Qatar also has a low prevalence of HCV. In Qatar, Mahmud et al., (2020) reported on estimated population size of 1,190 PWIDs (780–1,600); estimated number of HCV antibody-positive among current PWID of 9,324 (2,324–19,503) and estimated number of HCV chronically infected current PWID of 6,566 (1,636–13,734). Pooled estimates in % for risk of exposure to HCV in the general population in Qatar 1.90% (1.09-2.93) and with no detail regarding populations of intermediate risk (includes prisoners) or PWID (Chemiatelly et al., 2019). The Qatar National plan for HCV control was launched in December 2014 to prioritize and proactively manage HCV with the ultimate aim of eliminating viral hepatitis (Derbala et al., 2019). Challenges in implementing HCV control include addressing key populations such as PWUD and prisoners (Derbala et al., 2019). There is no data available on HCV rates among PWID in Qatar (Mahmud et al., 2020). There is availability of HCV testing and free treatment for all patients in Qatar including expatriates, and made possible by Qatar Red Crescent. There was no data available on HIV or HCV prevalence in prisons in Qatar (Heijnen et al., 2016).

Harm Reduction

There is no explicit support reference to harm reduction in national policy, and no harm reduction programming in Qatar (NSP, OAT, DCR, naloxone, prison OAT/NSP) (Harm Reduction International, 2019). There is no updated information on harm reduction in the UNAIDS 2019 and 2020 reports.



Saudi Arabia is a high income Islamic country, with societal norms and values deeply rooted in religion (Abualola and Rahamathulla, 2017; Saquib et al., 2020). It has experienced rapid social change in recent years (Abualola and Rahamathulla, 2017; Saquib et al., 2020). The Saudi drug policy approach has changed significant in recent years, by shifting from zero tolerance to harm minimisation for PWUD (Abualola and Rahamathulla, 2017). Death penalty continues to be applied for drug manufacture and trafficking (Abualola and Rahamathulla, 2017). Saudi Arabia was responsible for the most confirmed drug-related executions globally in 2018 (at least 59, of which 29 were foreign nationals) (Girelli, 2019).

Drug Use

Saudi Arabia is both a transit country and consumer country, with reported seizures of ATS, cocaine and heroin (UNODC Global Drug Report 2019;2020). A rise in drug consumption is observed, exacerbated by its porous land borders and proximity to drug-producing regions such as Afghanistan, Yemen, Pakistan, Syria and Turkey, and the influx of guest workers and ex patriates (Abualola and Rahamathulla, 2017).

The government of Saudi Arabia has ramped up substance awareness raising as substance use rates rise amid rapid societal change (Bassiony 2013; Sweilah et al., 2014; Siddiqui and Salim, 2016). Despite both religious and legal prohibitions against possession and consumption of alcohol and narcotics, a low proportion of Saudis commonly youth aged 12-22 years consume alcohol and use drugs (khat, cannabis, inhalants, amphetamines) (Alsanusy and El-Setouhy, 2013; Alsanusy et al., 2013; Bassiony, 2013; Al-Musa and Al-Montashri, 2016; El-Setouhy et al., 2016; Bamofleh et al., 2017; Saquib et al., 2020). Saudi Arabia is the number one consumer of Captagon (Kravitz and Nochols, 2016; Al Imman et al., 2017). Use of cannabis and amphetamine has increased in recent years, coinciding with a reduction in heroin and inhalants (Al-Haqwi, 2010; Bassiony, 2013; WHO 2013; Sweilah et al., 2014; Alsraihah, 2014; Abomughaid et al., 2018; Alhazmi et al., 2020). Common names of amphetamines in Saudi Arabia are *Alabyad* (white), *Abu mlaf*, *Lajah*, *Al qeshtah*, *Al asfaar* (yellow) (Bamofleh et al., 2017). In general, there is low reported use of opium and cocaine (Abualola and Rahamathulla, 2017).

Despite the conservative nature of Saudi society and strict gender segregation, women are also reported to use drugs, commonly inhalants (glue, gasoline) and shisha (Khalawi et al., 2017). There is also some reporting on use of performance enhancement drugs in athletes and use of anabolic androgenic steroids in gyms (Al-Bishi and Afify, 2017; Al-Ghobain et al., 2016:2017; Al-Harbi et al., 2020). Pharmacy routes to access drugs with abuse potential is of concern (Alibrahim et al., 2012; Al-Mohamadi et al., 2013; AlKhamees et al., 2018). Mobrad et al., (2020) reported that the majority of community pharmacists are trained in recognizing drug abuse or dependence during their pharmacy college education, provide warnings and counselling to patients.

In drug treatment populations, commonly abused substances are amphetamines, heroin, alcohol, and cannabis, generally consumed in poly substance taking repertoires (Al-Harbi et al., 2016; Ibrahim et al., 2018). Ibrahim et al., (2018) reported on a sample of 612 patients in rehabilitation in the year 2016, with amphetamine (24%) and poly substance use very common (60%) in the majority population of 20-40 year olds. Katselou et al (2016) reported that three out of four Saudis in drug treatment were dependent on amphetamines (commonly Captagon). Opioid use was most prevalent, commonly along with other substances (Alshomrani et al., 2017). Non-medical use of pregabalin is also reported in drug treatment populations in Saudi Arabia (Global Drugs Report, 2019). There is a growing recognition of the rise in chronic drug use and related co-morbidities in Saudi Arabia (Ehab et al., 2011; Saquib et al., 2020).

The Saudi Committee for Combating Drugs has developed drug treatment, rehabilitation, and monitoring to help support those affected (Stoicescu, 2012). Investment in drug treatment and rehabilitation has increased with more centres established in large cities, particularly in the Al Amal hospitals (Alshomrani 2016, Saudi Arabia National Committee for Narcotics Control, 2016; Squib et al., 2020). Religion and various bio-psychosocial modalities to encourage behaviour modification are applied in both drug policy and treatment programming (Mahmoud et al., 2013; Abualola and Rahamathulla, 2017; Mahmoud, 2020). These are three governmental and two non-governmental enterprises in Dammam, Riyadh, Jeddah, and Taif with a total population of 2023 residents (Alshomrani et al., 2016:2017). There are no therapeutic communities for minors or women in Saudi Arabia (Alshomrani et al., 2017).

BBV

HIV prevalence is low in Saudi Arabia. Whilst heterosexual transmission is the dominant HIV transmission mode (Massah et al., 2016), studies have reported on IDU associated with sexual risk taking (Bassiony et al., 2013; Filemban et al., 2015). By the end of 2015, there were 22,952 cases of AIDS, with two thirds in non –Saudi populations, and 1191 newly detected (MoH Saudi Arabia, 2016). In 2016, there were an estimated 8000 PLHIV, 72.5% male (UNAIDS, 2018). There is a conservative approach to HIV prevention and response. Population level attitudes toward HIV/AIDS is generally negative toward PLHIV (Alwafi et al., 2018). Medical professional and medical student HIV related knowledge in Saudi Arabia is also poor, particularly regarding transmission (Memish et al., 2015; Zaini et al., 2016). Alawad et al., (2019) conducted a cross-sectional study on 204 male medical students about HIV KAPs which revealed low knowledge on transmission modes, and concerning high rates of prejudice toward both HIV infected family members and provision of care to those infected.

The Global AIDS Monitoring report for Saudi Arabia (2018) reveals that Saudi Arabia has made substantial progress towards achieving or exceeding the 90-90-90 targets. In end 2018, there were 6,744 PL HIV and knew their status; more than 94% who were aware of their status were accessing ART, and more than 93% of people on treatment had suppressed viral loads.

The WHO EMRO (2011) observed that IDU contributed to 5.7% of the HIV epidemic in Saudi Arabia. 9.8% prevalence of HIV in PWID was reported from 2006-2012, with HCV prevalence of 77.8% (Alshomrani, 2015). HIV prevalence among PWID is estimated as 9.8% (range 7.0–13.2) and there is no detail on prevalence of IDU, or number of current PWID living with HIV (Larney et al., 2020). There is, no updated IBBS data available on the extent and nature of drug use and IDU from Saudi Arabia. This is potentially due to stigma and fear of disclosure (Saqib et al., 2020). There is no data on frequency of injecting among PWID in Saudi Arabia (Colledge et al., 2020). It is reported by HRI that there are close to 10, 000 Saudi PWID (Stone et al., 2018). Hines et al., (2020) reported on the age profile of PWID in Saudi Arabia with average age of 40.0 years, despite no extant detail on size estimates. Other studies report that both PWUD and PWID are generally young <28 years, and at high risk of transmitting BBV to their sexual partners and other PWIDs (Alshomrani, 2015; Bamofleh et al., 2017; Abomughaid et al., 2018).

Mahmud et al., (2020) reported on estimated population size of 16,800 PWIDs (11, 336–22, 264); with no mean estimates of HCV prevalence, and no estimated number of HCV antibody-positive among current PWID or estimated number of HCV chronically infected current PWID. Pooled estimates in % for risk of exposure to HCV in the general population in Saudi Arabia were 0.75% (0.68-0.82); in PWID were 58.67% (18.17-93.10); and in populations of intermediate risk (includes prisoners) were 8.95% (4.01-15.49) (Chemiatelly et al., 2019).

Prevalence of HCV among people with recent injecting drug use in Saudi Arabia was estimated to be 58.3% (range 53.7, 63.0) in another study (Grebely, 2018). Alibrahim et al., (2018) reported on an overall HCV prevalence of 42.7% among IDUs (n=300) accessing care at Al-Amal Hospital. Higher prevalence of HCV was associated with low education, single marital status, unemployment and early onset of IDU after age of 15 years. Heijnen et al., (2016) reported on a median HIV prevalence among incarcerated populations of 1.2% in Saudi Arabia, and with no available data on HCV. Some studies have reported on the co-morbidities of BBV (HIV, HCV) and mental health conditions (anxiety, depression and suicidal ideation among Saudi PWUD (Alshomrani, 2015; Alzarhani et al., 2015; Youssef et al., 2016; AlHarbi, 2017; Almarhabi et al., 2018; Alibrahim et al., 2018; Alkhalaf et al., 2019).

Percentage of prisoners who are living with HIV in 2018 was 0.2% (n = 46,943); percentage of PWID who tested for HIV in 2018 was 0.04% (n=7367) (Global AIDS Monitoring report for Saudi Arabia, 2018). No key populations

however have been recognised (Aaraj and Abou-Chrouch, 2016). Sex work and sex between men is highly stigmatised.

Stigma and discrimination constitute a major obstacle to the HIV response in Saudi Arabia. Early in 2018, the Council of Ministers approved National Act on HIV/AIDS Prevention and Protection of Rights and Responsibilities of People Living with HIV. The Act consisting of 29 articles, insures the preservation of the rights of PLHIV and their relatives, the statement of their duties, the necessary care and support for PLHIV and their right to continue education and work. NAP has supported a 24-hour hotline call-center system for HIV (Massah et al., 2016). Routine HIV testing occurs in STI patients, prisoners and PWID in drug rehabilitation centres (Joint United Nations Programme on HIV/AIDS, 2015f; Sander et al., 2019). ART is available.

Harm Reduction

Despite the risks associated with IDU and government funded treatment and rehabilitation for PWUD, Saudi Arabia does not implement harm reduction programmes (OAT, NSP, naloxone, DCR) in the community or in prisons (Stone et al., 2018; HRI, 2019; UNAIDS DATA 2019; Saquib et al., 2020). There is no updated information on harm reduction in the UNAIDS (2019 and 2020 reports. There is a complete lack of OAT for PWUD/PWID in Saudi Arabia (Massah et al., 2016). Detoxification is the treatment approach (Elkashef et al 2019). There is limited use of methadone (Abualola and Rahamathulla, 2017). Naltrexone is currently available for use (Abualola and Rahamathulla, 2017). Surveillance warrants improvement. NGOs and CSOs contribute relatively strongly to IEC prevention programmes and operate half-way houses for drug treatment and support.



Syria has been severely affected in the past decade by the consequences of war (Taleb, Bahelah et al. 2015, Editorial 2016, WHO Syrian Arab Republic 2016). The destabilization of Syria, chemical warfare, indiscriminate killing of civilians, rise in militants and humanitarian crisis has created an environment uniquely suited for cultivation of production and trafficking of drugs (Kravitz and Nicholls, 2016). Estimates in 2016 indicated that 6.6 million Syrians were displaced internally (IDP, 2016; UNHCR, 2016).

Increased production, transit and trafficking of drugs into bordering countries is observed, potentially leading to increased consumption in Syria (Al-Hemiary et al., 2014; Arslan et al., 2015; Global Drug Report 2019). Whilst Syria was traditionally a producer, exporter and consumer of ATS, Captagon production, trafficking and use has emerged to play a central role in the Syrian conflict (Nichols and Kravitz, 2015; Katselou et al., 2016; Van Hout and Wells, 2016; UNODC Global Drug Report 2019; 2020). Captagon is an illegal amphetamine stimulant sometimes referred to in Arabic as '*Abu Hilalain*', and is now almost exclusively produced in Syria (Kravitz and Nicholls, 2016). Captagon or fenethylline, a synthetic stimulant, has emerged as a significant concern in the Syrian conflict, particularly amongst those fighting (UNHCR, 2015; El-Khoury, 2018; Global Drug Report 2019). Although illegal, it continues to be available among militant groups in Syria, and trafficked (UNODC, 2011;2013; Katselou et al., 2016; Al Imman et al 2017). Anecdotally, Captagon pills are produced for different effects, containing different combinations of amphetamine with heroin or Viagra (Kravitz and Nicholls, 2016). In 2013, 12.3 million Captagon® pills were seized near the border between Lebanon and Syria, with large seizures reported in the Gulf in the years thereafter (Van Hout and Wells, 2016).

There is insufficient data on death penalty for drug offences in Syria (Al Shazly and Tinasi 2016; Girelli, 2019).

Drug Use

There is also very little data on illicit drug use in Syria in terms of academic work or reliable estimates (Abazid et a., 2020). Alcohol consumption in Syria is traditionally low (WHO, 2014), however a history of use of opioids is high among young Syrian male refugees (Meyer-Thompson, 2017). The Syrian of Interior Ministry (2017) has estimated that about 2,000 Syrians have a drug use disorder, mostly young people. UNODC has reported that heroin and prescription opioids were the primary substances of use, followed by sedatives and cocaine by PWUD seeking treatment (UNODC, 2011).

In terms of injecting, heroin is the primary drug, followed by cocaine (Kobeissi 2014). In Syria, an estimated 36.1% (31.3–41.1) of PWID inject daily or more (estimated number 4500; 2500–7000) and 63.9% (58.9–68.7) inject less than daily (estimated number 8500; 4500–12,500) (Colledge et al., 2020). The average age profile of PWID in Syria is estimated to be 32 years, with 24.4% (20.2–28.9) aged under 25 years (Hines et al., 2020).

A descriptive cross-sectional survey-based study on prisoners detained for drug consumption (n=50) was conducted in two main civil prisons (Damascus and Garz) in Syria (Abazid et al., 2020). Most reported using hashish, frequent relapses, and use of drugs for euphoria. The majority believed that it was possible to cease use at any time, and that drug use did not result in dependence. In 2012, the main drug-rehabilitation center was located in Damascus, with smaller ones in Homs and two private psychiatric hospitals in Damascus (Syria Ministry of Health, 2012).

BBV

There is very little data on HIV and HCV, despite the increases in BBV observed in the MENA region. Most recent data indicates that HIV/AIDS prevalence in Syria remains low in the general population and in key populations (650 cases in 2016) (Syria MoH, 2012; WHO Eastern Mediterranean Region, 2016; Khamis and Ghaddar, 2018). The primary mode of transmission is heterosexual relation outside marriage (51%), followed by heterosexual sexual relation between married couples (15%) and MSM (10%). IDU represented 3% of cases. HIV prevalence among PWID in Syria is estimated as 0.0 (0.0–<0.1) and there is no detail on prevalence of IDU, or number of current PWID living with HIV (Larney et al., 2020). In 2011, no cases among PWID were reported among newly identified HIV cases (Bozicevic et al., 2014). In spite of the conflict situation, the Global Fund supported an IBBS that was conducted in four cities in 2013–2014 for key populations, which reported low HIV prevalence among all groups. 394 PWID were included, and despite high risk sexual activity and needle sharing, all tested negative for HIV. HIV knowledge was inadequate among PWID (Kobeissi, 2014).

Mahmud et al., (2020) reported on pooled mean HCV prevalence among PWID of 39.6% (7.0–78.5) with estimated population size of 8,000 (5,750–10,250); estimated number of HCV antibody-positive among current PWID of 3,168 (403–8,046) and estimated number of HCV chronically infected current PWID of 2,231 (283–3,738) in Syria. Prevalence of HCV among PWID has more recently been estimated to be 60.5% in Syria (O' Keeffe et al., 2017). Pooled estimates in % for risk of exposure to HCV in the general population in Syria were 0.41% (0.36–0.47); in PWID were 39.62% (7.03–78.46) and in populations of intermediate risk (includes prisoners) were 2.98% (1.77–4.45) (Chemiatelly et al., 2019). Other studies have estimated mean weighted average prevalence of HCV among PWID in Syria to be 39.6% (Chemiatelly et al., 2015; 2019; Mahmud et al., 2020).

Due to conditions, health surveillance has reduced in the community risk settings (nightlife, PWID) and in prisons (Khamis and Ghaddar, 2018). Access to functioning HTS is compromised, with the number of provinces with HTS centres reduced from 14 testing laboratories to 7 and 14 counselling centres to 5 (Khamis and Ghaddar, 2018). The main districts affected were located in conflict zones (*Rif Dimashq, Daraa, Qounaitra, Idlib, Raqqqa, Hasaka, Deir al-Zour*). Significant scale up is warranted in both health surveillance and in HTS, particularly in opposition controlled areas (Khamis and Ghaddar, 2018).

In terms of prisons, HIV and TB testing is provided. Heijnen et al., (2016) have reported on HIV among incarcerated populations in the MENA region with a median prevalence of 0.04% in Syria and one data source on HCV prevalence in Syria in prisons (1.5%). A large majority of prisoners in Syria were incarcerated for drug-related offences (Heijnen et al., 2016), with continued use of drugs while in prison was reported by 22%; injecting whilst incarcerated by 11% with 80% using non-sterile injecting equipment (Kobeissi, 2014). Kobeissi (2014) has also reported that 21% reported selling sex and 10% having experience of sexual abuse/forced sex.

Ismail et al (2016) in their rapid review (2005 to 2015) described the trends in major communicable diseases in Syria during the ongoing conflict, and the public health threats and challenges to communicable disease surveillance and control in the context of dynamic, large-scale population displacement, dynamic and indiscriminate nature of the conflict, the lack of regard for civilian safety, healthcare workers, and health facilities by warring parties, unplanned mass gatherings, and disruption to critical infrastructure. Many, especially besieged populations are left without access to basic healthcare (UNOCH, 2016). The combination of infrastructure damage, loss of healthcare personnel, equipment shortages and lack of donor funding have significantly affected Syrian health systems, and increased health vulnerability (for example HIV) (Abbara et al., 2015; Ben Taleb et al., 2015; Ismail et al., 2016; Khamis and Ghaddar, 2018). The Global AIDS update in 2019

has reported that efforts to provide integrated HIV and other health services for displaced populations have been enhanced by the 2018 Global Fund grant to support HIV, TB and malaria services in humanitarian setting Syria (and Iraq, Jordan, Lebanon, Yemen).

There is no updated Global AIDS Monitoring report for Syria. Syria has not updated its last National AIDS Strategy (2011-2015). The conflict, overall low HIV prevalence rate, significant stigma and discrimination of key populations; and interrupted health services represent significant barriers for planning for harm reduction in Syria. The funding for the AIDS program was mainly focused on HIV surveillance and treatment (Syria MoH 2012).

Harm Reduction

Syria received a grant from the Global Fund for HIV prevention in Round 10, which included planning of new harm reduction activity and services for PWID (extensive sensitization and advocacy for harm reduction, OAT; capacity building for drug-treatment professionals and NGOs; recruitment and training of peer outreach workers; NSP pilot services and condom distribution for key populations (Syria CCM 2011). Whilst Syria included PWID as a target group for HIV prevention in their NASP (HRI, 2015; Aaraj and Abou-Chrouh, 2016), currently, there is no harm reduction programming (OAT, NSP, naloxone, DCR) implemented in Syria (HRI, 2019; UNAIDS data, 2019). Efforts currently centre on NGO awareness raising, updating of the national strategy and specific policies pertaining to HIV/AIDS preventions. There is no updated information on harm reduction in the UNAIDS 2019 and 2020 reports.



Tunisia has experienced significant political and social change since the 2011 revolution, alongside a parallel increase in insecurity, violence and illicit substances trade. Trafficking and use of diverted buprenorphine (Subutex®) is emerged since 2011 in Tunisia (Ben Mosbah, 2013; Belarbi et al., 2014; Derbell et al., 2016; Moslah et al., 2018). Of note is that high dose use of burprenorphine is strongly associated with migration history (Robbana et al., 2013; Mosbah et al., 2018). There is no detail on seizures or drug demand for Tunisia in the UNODC World Drug report 2019/2020.

Drug use and injection are extremely criminalized by Tunisian law and PWID are marginalised and stigmatised (Rahimi Movaghar et al., 2012). Tunisian law punishes possession for the purpose of consumption and for the actual consumption even if there is no possession involved (Al Shazly and Tinasti, 2016). Of the 25,000 people incarcerated in the country, 8000 are for drug-related offenses (Amraoui, 2015). The court may also force the convicted person to undergo detoxification for an unspecified period by a specialized doctor at a public hospital until the expert committee decides to release him. Jmii et al., (2016) have highlighted the need for reform regarding punitive approaches to drug users and legislation regarding substitution treatment in Tunisia. There has been an amendment to an old law known as Law 53 which gives judges the opportunity to reduce/to minimize the sentence for the new cannabis users. With this law 53, the number of drug users in prisons has decreased significantly.

Drug Use

Alcohol, psychotropic drugs, cannabis and cocaine are the most common drugs of use among youth (Mabrouk et al., 2011; Aounallah-Skhiri et al., 2014, Tunisia MoH and Pompidou Group, 2014). Chekib et al., (2017) conducted a cross-sectional study in five colleges in the region of Sousse, Tunisia in the 2012–2013 school year (n=556; 51.8% female). 5.6% reported ever using an illicit substance, with cannabis mainly consumed. Average age of initiation for illicit substances was 19 years. In treatment populations, high dose buprenorphine known as "Souba", alcohol, and psychotropic drugs (for example benzodiazepines such as Lorazepam) have been the main drugs of abuse (Aounallah – Skhiri et al., 2014, Sellami et al., 2016; Derbell et al., 2016; Ben Mosbah et al., 2018).

Tunisia has few epidemiological studies on drug addiction, making it impossible to estimate the real extent of the issue (Moslah et al., 2018). There are very few inpatient and outpatient detoxification facilities in Tunisia (Aounallah-Skhiri et al. 2014, Tunisia MoPH 2014; Ben Mosbah et al., 2018). There is a residential rehabilitation centre (*'Thyna'*) operated by the Tunisian Association for the Prevention of Drug Use "ATUPRET" (Aounallah-Skhiri et al., 2014; Ben Mosbah et al., 2018). Ben Mosbah et al., 2018 reported on patient characteristics at the *'Thyna'* centre in 2013; with the main demographic characteristics using illegal high dose buprenorphine were single men, unemployed and from low-income urban areas. The intravenous use and incarceration recurrences ($p < 0.05$), alcoholism ($p < 0.01$) and migration ($p < 0.01$) were associated with daily dosage of high dose buprenorphine. Dropout was high often within the first month. Derbell et al., (2016) reported on buprenorphine withdrawal in 32 subjects (30 males) attending detoxification treatment, 27 of whom were PWID. 84.4% administered buprenorphine intravenously, and HCV infection was found in 53.1% of the patients, 3.1% were HBV positive; and 18.6% were HIV positive. Almost half were unemployed, and poly substance use (alcohol, cannabis, lorazepam). Similar demographics have been reported in other studies on PWID in Tunisia (Belarbi et al., 2013; Robbana et al 2013; Ben Salah and Hamouda, 2013). Smaoui et al., (2017) reported on the widespread dependence on psychoactive substances, particularly benzodiazepines among elderly Tunisian psychiatric patients.

The average age of PWID in Tunisia was estimated by Hines et al., (2020) to be 34.6 years (33–36). There is no detail on frequency of injecting among PWID in Tunisia or on characteristics of IDU among Tunisian PWID (Degenhardt et al., 2017; Colledge et al., 2020). The average age profile of PWID in Tunisia is estimated to be 34.6 years (range 33–36), with 14.6% (12.2–17.2) aged under 25 years (Hines et al., 2020). Mumtaz et al., (2018) estimated 79% HIV incidence among Tunisian PWID. There is little information on women despite their unique risk characteristics and vulnerabilities to exploitation and violence, and minors (MENAHRRA, 2013; Ben Mosbah, 2016).

BBV

According to the UNAIDS (2019) in 2018, there were less than 500 new HIV infections across all ages in Tunisia, domestic rate of $< 0.1\%$ and with 2800 PL HIV. There were an estimated 22,000 prisoners, with no reliable size estimations of CSF, MSM, TG or PWID. HIV prevalence of 1.2%, 9.1% and 6.0% are reported in CSW, MSM and PWID (resp). Social stigma is significant. Previously, there were around 2,300 - 3,800 PLHIV and around 9,000 PWID in Tunisia (Tunisia MoH, 2012). Concentrated HIV epidemics have consistently been reported among MSM and PWID (Tunisia MoH, 2015). The primary transmission route is heterosexual.

Several size estimations of 9,500, 11,000, and 20,000 exist for PWID in Tunisia (Tunisia MoPH 2014, GINAD, 2016; Shaw et al., 2016; Mumtaz et al., 2018). In 2014, an IBBS in two regions of the country revealed an HIV prevalence of 3.9% among PWID (Bouarrouj, 2015). IDU accounts for 21.1% of the identified HIV cases (WHO Eastern Mediterranean Region, 2016), with unsafe sex and IDU practices compounding risk (Tunisia MoPH, 2014, Bouarrouj, 2015). In 2011, in Tunis, as estimated 25% of HIV infections related to IDU and 2.4% of PWID were HIV positive (Rahimi Movaghar et al, 2012). A later estimate of 3% was reported by O'Keeffe et al., (2017). In another systematic analysis, HIV prevalence among PWID is estimated as 3.5% (2.6–4.4) and there is no detail on prevalence of IDU, or number of current PWID living with HIV in Tunisia (Larney et al., 2020).

Mahmud et al., (2020) reported on pooled mean HCV prevalence among PWID of 21.7% (4.9–38.6) with estimated population size of 11,000 (8,462–13,750); estimated number of HCV antibody-positive among current PWID of 2,387 (415–5,308) and estimated number of HCV chronically infected current PWID of 1,681 (292–3,738) in Tunisia. Pooled estimates in % for risk of exposure to HCV in the general population in Tunisia were 0.60% (0.44–0.79); in PWID were 85.61% (78.44–91.11) and in populations of intermediate risk (includes prisoners) were 6.30% (1.31–14.38) (Chemiatelly et al., 2019). The country-specific pooled mean of HCV among PWID in Tunisia is estimated to be 21.7% (4.9–38.6%) (Mahmud et al., 2020). Prevalence of HCV viraemic infection among people with recent injecting drug use in Tunisia was estimated to be 21.8% (Grebely et al., 2018).

With regard to PWID, the Tunisian 2018-2022 NASP advises the need to strengthen the provision of counselling and testing to key populations through the diversification of interventions, mainly mobile campaigns, community testing through NGOs, systematic proposal of screening during prevention interventions, improve the quality of services in CCDAG and capacity building of peer educators; support and refer people who test positive for HIV to a care service to confirm the test and start the care and access to ARVs; develop risk reduction interventions, including OAT and viral hepatitis screening for PWID, and strengthen combined prevention for

key populations and youth. The FM-funded 2018 Response Acceleration Plan focused on combined prevention interventions implemented by civil society associations. HTS centers are widely distributed throughout the country and ART is provided through four centers (Tunisia MoPH 2014).

A few NGOs (ATL MST/SIDA: *Association Tunisienne de Lutte contre les Maladies sexuellement transmissibles et le SIDA*: Tunisian association for the fight against sexually transmitted diseases and AIDS; 2. ATIOST: *Association Tunisienne d'Information et Orientation SIDA*: Tunisian association for information and orientation on AIDS) provide HIV prevention services to key populations, including PWID, but with low capacity and inadequate political support. HIV and HCV testing are integrated for drug users, however initial lab testing requires payment prior to free treatment. There are no barriers for access to ART but some physicians require that drug use be stopped to provide ART. There was the development of a strategy for prevention, treatment of drug dependence and risk reduction in the community and in prison in 2019. However, this strategy is not yet implemented.

As of October 2017, there were 20,755 prisoners and detainees, including 2.8% women, of which 52% were in pretrial detention in Tunisia. Women's conditions of detention are reportedly better than men. In the 2014 report from the Office of the High Commissioner for Human Rights, statistics indicate that 53% of Tunisian prisoners are accused of drug-related crimes, including holding, consuming or dealing narcotics. Penal Reform International (2014) has indicated that 19% of female prisoners in Tunisia have been imprisoned following a drug-related offense, 12% declared suffering from drug addiction, with only 2% of them benefitting from treatment in prison. There is very little reliable data on BBV rates in prisons in Tunisia (Golrokhi et al., 2018). HIV among incarcerated populations in Tunisia was estimated by Heijnen et al., (2016) to be a median prevalence of 0.05% in Tunisia, with no data on HCV. A recent DROSOS funded project achieved capacity building on the comprehensive package of services for HIV, HBV, HCV, and TB prevention in 2017, establishment of HTS centres in six prisons, prisoner awareness raising, and development of a draft drug prevention and HR strategy in 2019.

Harm Reduction

There are no explicit supportive reference to harm reduction in national policy documents, despite operating NSP, and few concrete actions in HR in Tunisia with activities are strongly underfunded (HRI, 2019). Although NSPs have been implemented for several years, coverage and number of syringes distributed is low (Tunisia MoPH, 2014). According to UNAIDS (2019), use of sterile injecting equipment at last injection (2017) in Tunisia was 90.9%; number of needles and syringes distributed per person who injects (2017) was 41; with no coverage of OAT, naloxone or DCR. The UNAIDS 2020 report indicate use of sterile injecting equipment at last injection (2017) in Tunisia was 90.9%; number of needles and syringes distributed per person who injects (2019) was 49; with no coverage of OAT, naloxone or DCR.

There is limited treatment options and inadequate prevention (Mosbah et al., 2018). Maintenance treatment is not available (Aounallah-Skhiri et al, 2014).



The UAE is a high-income country and has experienced rapid social change and significant transitioning from poverty to affluence in recent years, alongside Westernisation, globalisation, and the cultural and societal impact of the influx of a large contingent of multi-national workforce (Al Nahyan, 2014; Doran, 2016).

Increases in substance use and seizures are deemed due to the geographic location of UAE bordering South West Asia, and its prime position as transit country for air-trafficking (NRC, 2014; Alblooshi et al, 2016; UNODC Global Drug Report, 2019;2020). In the period 2013-2017, the main heroin trans-shipment countries on the Arabian Peninsula, both globally and for countries in Africa, were the UAE and Qatar (World Drug Report, 2019). Large quantities of Tramadol have been intercepted in the UAE (2017; 175 million tablets, 9 tons in weight equivalents) alongside Captagon (2017; 45 million tablets) (World Drug Report, 2019).

No conclusive detail is available on the number of death sentences imposed for drug offences in 2018 (Girelli 2019). During the latest cycle of Universal Periodic Review in January 2018, the UAE received 16 recommendations on the issue of the death penalty including two specifically advising commutation of sentences for drug and other nonviolent offences. It did not accept any of them.

Drug Use

In general the prevalence of substance misuse in the UAE is low, with high reported abstinence rates due to strong religious censure, cultural disapproval and adherence to Islam, and harsh judicial penalties for illegal drug use (UNODC, 2011; Overseas Security Advisory Council, 2013; Sweileh et al., 2014; WHO, 2014; Al Shazly and Tinasti, 2016; Alblooshi et al., 2016).

Islamic religion, strong bonds with parents, pro-social activities and monitoring, and female gender were observed to protect youth from engaging in substance use. Observed gender difference in youth substance use, knowledge and attitude are observed, with peer pressure, boredom, poor parental monitoring and conflict, parents from different nationalities, lack of awareness around harms and availability of funds constituting risk factors (Alhyas et al., 2015). El Magd et al., (2018) reported on the non medical use of Tramadol in young Emiratis. Overdosage of non prescription drugs among Emirati university students is identified as a serious public health issue (Al-Kubaisi et al., 2018).

Whilst the UAE has an adequate health infrastructure, it has observed an increase in treatment demand. The UAE national drug program "*Siraj*" strategy has four main pillars: primary prevention, early identification and intervention (Alhyas, 2018). The National Rehabilitation Centre (NRC) was established in 2002 as a centre of excellence in terms of its operations as a treatment and rehabilitation centre (in patient 169 beds, outpatient and continuum of care) and drug and alcohol demand response centre (Al Ghaferi et al., 2017). The centre serves both Emirati nationals and expatriates. It provides detoxification and OAT using BMT (Elarabi et al., 2014; 2019; Elkashef et al., 2019). It also engages in surveillance, professional training and capacity building, public and school based drug prevention and overdose prevention campaigning, policy and legislative development, international research and advocacy (Elarabi et al., 2013; 2014; Al Ghaferi et al., 2017; Ali, 2018). The performance of the NRC based on 2013 data files was conducted by Elkashef et al (2017) and revealed some gaps in operations and records (for example dealing with high rates of no-shows; family non attendances, understanding patient barriers to adherence).

Integrated programs with opioid agonist therapy (OAT) most commonly BMT and detoxification are available in the UAE (Elkashef et al., 2019). A retrospective 10 year study conducted by the NRC in 2013 observed that alcohol followed by heroin were most commonly used by patients (Elkashef et al., 2013). A 2015 cohort study on two hundred and fifty male patients at the NRC revealed majority poly substance use with opioids and alcohol most common, pharmaceutical opioids among younger patients (particularly Tramadol, in contrast to heroin use among older patients), use of prescribed medication (pregabalin, procyclidin and carisoprodol) in younger patient groups below 30 years (Alblooshi et al., 2016). Trends are changing. Patient substance use in later years centres on alcohol, cannabis, heroin, Captagon, anticholinergics, benzodiazepines, opioid analgesics/syrups, barbiturates, and crystal methamphetamine, synthetic cannabinoids and prescription medications (e.g. tramadol, pregabalin and gabapentin) (Al Ghaferi et al., 2017). Occasionally, misuse of solvents, Khat and cocaine are observed (Elkashef et al., 2013; Alblooshi et al., 2016). Trends indicate how Tramadol ranked as primary drug of abuse in 2013 and 2014, to be replaced by pregabalin, and a surge in crystal methamphetamine and heroin use since 2015 (Dhaheri et al., 2018; Alblooshi et al., 2018). Patient demographics centre on unemployment and single marital status (Elkashef et al., 2013; Alblooshi et al., 2016; Al Ghaferi et al., 2017).

There is little detail on IDU among treatment patients, but with previous reports indicating that this is rare among treatment cohorts (United Arab Emirates MoH, 2014). There is also very little detail on women's substance use, with the majority receiving treatment for substance use disorder in psychiatric wards in hospitals (Alblooshi et al., 2016). Al Mamari et al., (2018) reported on 8 female patients in the NRC, majority were single and poly drug users.

Doran (2016) has observed the difficulties in estimating the economic cost of addiction and informing of

an appropriate response in the UAE due to its limited surveillance of drug indicators, harm and treatment evaluation. Efforts to expand into primary care to support the substance use response in the community are reported (Marzouqi et al., 2011; Pflanz-Sinclair et al., 2017). Matheson et al., (2018) evaluated the effectiveness of screening brief intervention and referral for treatment (SBIRT) in primary care in Abu Dhabi to manage patients with problematic substance use. Physician attitude toward SBIRT was generally positive but compromised by poor patient attendance. Some activity is reported to increase pharmacovigilance in the UAE (Barakat-Haddad and Siidqua, 2017; Alkhalidi et al., 2019).

BBV

The UAE has a low prevalence HIV epidemic (United Arab Emirates MoH, 2014). There is no current detail on HIV rates, HCV rates, characteristics, prevalence, duration or frequency of injecting, age or size estimates of PWID and other key populations such as MSM, CSW or prisoners in the UAE (Mohamoud et al., 2016; Heijnen et al 2016; Grebely et al 2018; Chemiatelly et al 2019; Hines et al., 2020; Larney et al., 2017: 2020; Mahmud et al., 2020; Colledge et al., 2020).

Mahmud et al., (2020) reported on estimated population size of 4800 PWIDs (3,200–6,400), estimated number of HCV antibody-positive among current PWID of 2366 (1,421–3,462) and estimated number of HCV chronically infected current PWID of 1,666 (1,001–2,438) in the UAE. Pooled estimates in % for risk of exposure to HCV in the general population in UAE were 2.02% (1.25-2.96); and in populations of intermediate risk (includes prisoners) were 15.74 (3.58-33.94) (Chemiatelly et al., 2019). There is no data to provide pooled estimates in % for risk of exposure to HCV in PWID in the UAE (Chemiatelly et al., 2019). There is reliance on case finding in PWID when arrested, on intake to prison or drug treatment.

The Country Progress Report-UAE (UAE Global AIDS Monitoring Report, 2018) has reported that the NAP in UAE is providing several preventive activities to reduce and eliminate the HIV infection for both the general population and those at risk. ART is available throughout the country

Harm Reduction

There is no updated information on harm reduction in the UNAIDS 2019 and 2020 reports. There is no explicit support reference to HR in national policy documents, NSP, OAT, DCR, or prison based NSP and OAT (HRI, 2019).



Yemen is a low income country situated in the southwest corner of the Arabian Peninsula (Hadden, 2012; Bashir et al., 2019). It has been severely affected by civil and political unrests, affecting an already fragile health system, poverty and the cessation of Global Fund support. 60% of Yemeni's have required humanitarian assistance (by the end of 2014) due to poverty, under-development, and environmental decline (UNOCHA, 2016).

There is very little information regarding drug production, trafficking and use in Yemen. The increase in drug abuse, in Aden in particular is related to increased violence and crime since 2010 (UNOCHA, 2014). Yemeni law specifies the termination of a criminal lawsuit for anyone who voluntarily undergoes drug treatment and remains there until release is decided (six months to two years) (Al- Shazly and Tinasti, 2016). There is insufficient detail on death penalty for drug offences in Yemen (Aaraj and Abou-Chrouh, 2016). Progressive rights based laws regarding key populations have been enacted by the Yemeni Parliament in 2009 (Patterson et al., 2014).

Drug Use

Studies about drug abuse and misuse in Yemen are still scarce (Abood et al., 2018). Khat and pharmaceutical drugs (Tramadol, opioid analgesics, alprazolam) are most common (Al-Juhaishi et al., 2012; El-Zaemey et al.

2014, El-Menyar et al., 2015, Nicholls et al., 2015; Abdel-Aleem et al., 2015; Abood and Wazaify 2016; Al-Akhali et al., 2017; Odenwald and Al-Absi, 2017; Nakajima et al., 2017; Ahmed et al., 2020). Poor pharmacovigilance in Yemen contributes to the problematic use of prescription medications with known abuse potential such as Tramadol (Al-Hamdi et al., 2013; Al-Worafi, 2014; Abood et al., 2018). A community pharmacy based study conducted in 200 pharmacies in the city of Aden (n=170 pharmacists) reported an increasing pattern of abuse/misuse of medications, and that the top four suspected medications of abuse were Alprazolam, Ketoprofen (used to treat mouth pain from Khat chewing), Tramadol, and antibiotics (Abood and Wazaify, 2016). This study noted the central role of Khat, whereby the majority of suspect customers of prescription and non-prescription drug abuse (64.1%) were either chewing Khat or carrying it while buying the drug from the pharmacists.

A qualitative study was conducted by Abood et al., (2018) who interviewed known or suspected drug misusers (aged 21-40 years, 11 males 3 females), recruited through community pharmacies. Findings illustrated poly substance use where OTC and prescription drugs, and Khat were used together to heighten intoxication or deal with pain. Nakajima et al., (2017) examined socio-demographic and psychosocial correlates of adult khat dependence in 270 khat users (129 women) in Yemen, with Khat users, on average, using khat for 5.2 hours a day for 5.7 days a week, and those screening positive for khat dependence reporting longer duration of khat sessions per day, higher frequency of khat use per week, greater levels of negative mood and sleep disturbances, and were more likely to endorse physical symptoms after khat use.

There is only one rehabilitation program in Yemen (Abood et al., 2018). Kassim and Farsalinos (2016), discuss how e-cigarettes could potentially reduce the health risks of tobacco smoking khat chewers and the second and third-hand exposure of people living around them.

BBV

There is no current Global AIDs Monitoring report for Yemen. The country's most recent National AIDS Strategy covers 2009 to 2015 (Yemen MoPH and Population 2014), and focuses mainly health care and treatment services for PLHIV. Despite some observed progress in surveillance systems in Yemen, data is scant (Bashir et al., 2019). Yemen is identified as having a partially functioning HIV surveillance system (Bozicevic et al., 2013). Notification of new HIV cases has been affected by political insecurity and war (OHCHR, 2011; IPC, 2016; Bashir et al., 2019). According to the 2011 HIV estimates of NAP, Yemen had a low prevalence of HIV (0.2%) (Degenhardt et al., 2016). A total of 3995 HIV cases were reported during the years 1987-2013 (Yemen MoPH and Population 2014).

HIV is driven mainly through sexual transmission in high-risk populations, especially FSW and their clients, and MSM (Nabih et al., 2018). There is an identified concentrated HIV epidemic among MSM (6%) (Yemen MoPH and Population 2014). Poor levels of HIV knowledge relating to risk behaviours and transmission are reported among MSM in Yemen (Mirzazadel et al., 2011). PWID are not indicated as a priority. IDU was reported to account for 1% of HIV cases in 2009-2011. No major studies, including IBBS, have been undertaken and no information is available on nature and extent of IDU, size of PWID, age profile, duration or frequency of injecting, HIV prevalence and risk behaviours of PWID (prevalence of IDU, HIV prevalence among PWID or number of PWID living with HIV) in Yemen (O Keffe et al., 2017; Larney et al., 2020; Colledge et al., 2020; Hines et al., 2020).

Mahmud et al (2020) reported on the estimated population size of 19,770 PWIDs (12,710– 26, 830) estimated number of HCV antibody-positive among current PWID of 9,747 (5,643–14,515) and an estimated number of HCV chronically infected current PWID of 6864 (3974–10 221) in Yemen. There is no current data available on HCV rates among PWID in Yemen (Chaabna et al., 2016; Grebley et al 2018; Mahmud et al., 2020). Pooled estimates in % for risk of exposure to HCV in the general population in Yemen were 1.61% (1.12-2.20); and in populations of intermediate risk (includes prisoners) were 1.63% (0.39-3.61) (Chemiatelly et al., 2019). There is no data to provide pooled estimates in % for risk of exposure to HCV in PWID in Yemen (Chemiatelly et al., 2019). Heijnen et al., (2016) have reported that HIV among incarcerated populations in Yemen was 3.5%, with no data on HCV rates in prisons.

Yemen has also witnessed a significant rise in AIDS-related deaths in recent times due to very poor access to ART and the current war situation (Abdulrazzak et al., 2019). Nabih et al., (2018) conducted a retrospective descriptive study of health service data implemented in all sites in Yemen that provided HIV treatment and care services from 2007-2012 (n=1,586 PLHIV registered at pre-antiretroviral (pre-ART) clinics and 995 under antiretroviral (ART) clinics with the exclusion of transfers and deaths). They aimed to examine demographic

data of PLHIV who are lost to follow-up during HIV treatment and care, in order to develop rapid and effective interventions to improve access to services in Yemen. Most of those lost to follow up were at pre-ART and ART clinics during the conflict and among Yemeni young males at age 25-49 years, especially at governorates that experienced political conflicts.

The National AIDS Program (NAP) runs in all 22 governorates, but services vary and are concentrated in specific locations (Bashir et al., 2019). It provides ART in 5 governorates (Sana'a, Aden, Taiz, Hodeida, and Mukalla), provides HTS and initiates testing and counseling services at 36 sites in several governorates, and PMTCT. Whilst coverage of HTS and ART has been increased in recent years, many HIV/AIDS interventions have been terminated, and the majority of the country's expenditure has been redirected to relieve the humanitarian crisis (Yemen MoPH and Population, 2014; Bashir et al., 2019). Remaining HIV prevention activities since 2011 have been largely funded by the Global Fund (75% of total HIV funding) (Global AIDS update, 2019). Increased financial support for HIV prevention in Yemen is urgently needed, alongside sensitisation, advocacy, de-stigmatisation and support legislation for PLHIV (Bashir et al., 2019). Stigma of HIV/AIDS is high, and underpinned by its link to practices deemed prohibited and unacceptable to cultural and religious norms in the MENA region affecting prevention and harm reduction tactics (Kamarulzaman and Saifuddeen, 2010; McFarland et al., 2010; Bashir et al., 2019).

Harm Reduction

There is no updated information on harm reduction in the 2019 and 2020 UNAIDS reports. There is no explicit supportive reference to harm reduction in national policy documents, no harm reduction programming in the community (NSP, OAT, DCR, naloxone) or in the prison (OAT, NSP). The role and support needs of CSO in their engagement with key populations in Yemen must be scaled up (Bashir et al., 2019).

Concluding Remarks and Strategic and Operational Areas for Prioritisation

This 2020 situation assessment has presented a comprehensive and detailed scoping review at regional and MENA country level of the past decade of information available on the situation and development of the harm reduction response of drug use and its harms in the Middle East and North African region during the timeframe 2010-2020. The current situation of drug production, trafficking and consumption (including harmful use) is exacerbated by political and economic instability, protracted conflict in some countries, security issues, weak cross border cooperation, the relationship between weapons, human and drug trafficking, and the absence of alternative livelihoods for drug producers, and migration and displacement of almost 11 million in the region. These key situational facts hamper the BBV and harm reduction prioritisation and response in the region. Although MENA is primarily a drug trafficking and transit region, here are notable production and consumption trends in Captagon (commonly fenethylamine), opium, heroin, cannabis, ATS and Khat. There is also a concerning rise in pharmaceutical availability of drugs in community pharmacies leading to harmful drug use and dependence. A vigilant and reactive domestic and regional cooperative approach is warranted.

Repressive and punitive approaches to drugs including corporal punishment and death penalty, criminalization, coercive drug treatment mandated by the courts and aggressive policing continue to discourage health care seeking by PWUD. Some countries have reported the rise in private drug treatment and rehabilitation centres using methods which are not evidence based. This reinforces marginalisation and stigmatisation of PWUD/PWID and perpetuates unsafe/high risk use of drugs in the region. There have however been some encouraging shifts, for example in 2019, the progressive "Beirut Declaration" based on the Third Consultation Meeting on Law Enforcement and the Rights of People Living with and Affected by HIV was signed and aims to promote the positive engagement of law enforcement agents in the HIV response in selected countries in the MENA region, and to create a common understanding and agreement between partners and participants on strategic human rights-based HIV programming and a roadmap to improve the legal environment in the region.

Priority Area 1: Law and Security: It is recommended for MENAHRA and international organisations to continue to support efforts for a revision of policies and legislation regarding the penalisation of drug abuse and promotion of regional and national drug demand reduction and harm reduction strategies in communities and prisons, and with a strong coalition of national NGOs/CSOs to advocate on revisions of the penalisation of drug abuse.

Surveillance and academic activity on drug use trends, size estimates of key populations and treatment characteristics, and BBV prevalence in community and prison settings differ per MENA country and in some countries remains scant or dated, making it difficult to assess extent and trends in the MENA region. This hampers advocacy for harm reduction and the development of effective drug and public health policies at country and regional level.

Priority Area 2: Evidence in the MENA region: It is recommended for MENAHRA to support countries in ensuring that BBS, rapid assessment and service needs assessments are implemented regularly to provide regular routine monitoring of drug type and risk characteristics, BBV, STIs trends across overlapping key populations. This work can be supported via a collaborative approach between community and prison health clinics, health ministries and NGOs/CSOS in addressing issues of PWUD health by centralising data collection, improving referral systems and data surveillance in the community, in prisons and in humanitarian settings.

This 2020 situation assessment reports that the MENA region has witnessed a slow but steady increase in the harm reduction response among countries of the region in general, with some positive changes in harm reduction policy visibility, provision and coverage since 2016. The previous situation assessment in 2017 reported that harm reduction services were observed to have low coverage, and warranted scale up. Low political commitment, low prioritization of the HIV response, reduced funding and restrictions on the functions of NGO in some MENA countries hampers the harm reduction response.

Priority Area 3 Strategic Change in the Harm Reduction Response: With technical assistance from MENAHRA and international organisations such as UNAIDS, WHO EMRO, UNODC, MENA Member States should build on the successes achieved to date and develop sustainable models which include harm reduction as a human right, and to cascade the efforts into the future by targeting HIV, viral hepatitis, risk behaviors and migration. There is a need to advocate for, scale-up the role of NGOs and provide support among countries in which their involvement and engagement is weak.

The lack of HIV & Harm Reduction Services funding plays a major role in the absence of services which has a direct impact on the risks, morbidity, mortality rate & the HIV/ Hepatitis C spread. It is recommended that MENAHRA, the UN family, the NGOs including the community led organizations to develop and implement a regional advocacy strategy to mobilize domestic resources precisely in national budgets.

This 2020 situation assessment shows that fourteen countries have mention of harm reduction/PWID in national policy documents: seven countries adopting harm reduction policies in their NASP include Afghanistan, Egypt, Iran, Lebanon, Morocco, Oman, and Palestine; and seven countries in which PWID are noted as important key populations in their national plans include Algeria, Bahrain, Jordan, Libya, Syria, Tunisia and Pakistan. This is an improvement since the previous situation assessment in 2016 which reported that six countries of the region (Afghanistan, Iran, Lebanon, Morocco, Palestine and Pakistan) had adopted harm reduction policies within their NASP. Six countries in the region (Iraq, Kuwait, Qatar, Saudi Arabia, UAE, Yemen) have not yet adopted harm reduction policies within their NASP or noted PWID as an important key population in their national plans.

Priority Area 4 National Strategies and Policies Priority: It is recommended for MENAHRA to intensify advocacy and sensitization efforts with government partners, international organisations (UNAIDS, UNODC) and NGOs in Iraq, Kuwait, Qatar, Saudi Arabia, UAE, Yemen in order to achieve visibility of harm reduction and explicit reference to PWID/PWUD as key population in national HR/NASP strategies. MENA countries are to be encouraged and supported to regularly update their Global AIDS reporting.

The ongoing humanitarian emergencies in the MENA region, conflict and economic migration and internal/external displacement of large populations and the geographies of high risk behaviours and key populations in the MENA region, present massive challenges for public health systems in general, and HIV and drug use prevention, treatment and care programmes in particular. This situation assessment reports that strengthened political commitment is evident in a few countries, such as Algeria and Morocco, but the region's overall HIV response is well off-track and far from reaching the 90–90–90 targets (UNAIDS, 2019). Efforts are compounded by humanitarian emergencies due to the protracted emergencies in Libya, the Syrian Arab Republic, Yemen and elsewhere. The previous situation assessment in 2017 reported that HTS was reported to widely available in 14 countries of the region; however, the coverage was low. In 2020, HIV testing is currently available in 18 countries of the region, with HTS services reported to be available, including for PWUD (communications with focal points). However, the number of PLHIV who know their status in the region remains low. UNAIDS (2020) have reported on a large gap in the first 90 of the cascade of PLHIV unaware of their status in countries of the region. HIV surveillance systems are not effective in most countries and data is lacking. Data regarding PWID who know their HIV status is scant with information available for only 8 countries (Algeria, Egypt, Iran, Kuwait, Morocco, Pakistan, Saudi Arabia, Tunisia) with rates of less than 50% PWID who know their status reported in 3 of those countries (Morocco, Pakistan, Tunisia). Moreover, the region is reported to have the lowest treatment coverage in the world, with more than 100,000 PLHIV in need of treatment but that are unable to access it (UNAIDS, 2020). Although ART is available free of charge for PLHIV in countries of the region, there is limited data regarding PWID receiving ART. To date, only Iran and Morocco have integrated ART within OAT services (communication with focal points). Taking into consideration the gaps in the HIV testing and treatment cascade in the region in general, there are further barriers affecting PWUD, among other key populations, in terms of their access to HIV testing and treatment. Focal points in different countries that were consulted with have indicated that main barriers to HTS include stigma and discrimination, centralization of HTS services, difficulty in reaching PWUD, and confidentiality issues (communications with focal points). There is a strong possibility for hidden HIV and HCV epidemics in the MENA region among key populations, particularly PWID, MSM and CSW, and in prisons, with convergence into the general population via sexual transmission. High prevalence of HBV among the refugees/migrant populations from Syria, Palestine, Afghanistan and North Africa is also observed. Low levels of education, low BBV transmission knowledge, and stigma and discrimination compound their risk. Emerging trends in co-morbidity with trauma related mental illness are observed, particularly in displaced populations and humanitarian settings. Prevention and treatment programmes in many MENA countries are not reaching sufficient numbers of key populations at high risk of BBV infection. Access to HIV testing, treatment and care in the MENA region in 2020 is reported to be well below the global average, with less than half of PL HIV aware of their serostatus. Women and minors also represent a gap in the evidence, and are not sufficiently supported in community level harm reduction and treatment structures or in prisons.

Priority Area 5: Leaving No-one Behind in the harm reduction and BBV response: It is recommended for MENAHR and international organisations that when planning or during scale up of harm reduction programmes to include not only PWID/PWUD but also those most vulnerable for example women, juveniles, MSM, CSW and refugees to achieve equitable utilization of non-stigmatizing non-discriminatory services to all as part of human rights and right to health, and with equivalence of testing, treatment and care spanning community, humanitarian setting and prisons.

In terms of operationalisation of HR programmes, this 2020 situation assessment shows that NSPs in the community are available in 10 countries of the region (Afghanistan, Algeria, Egypt, Jordan, Iran, Lebanon, Morocco, Palestine, Tunisia, and Pakistan), with the recent addition of Algeria to the list of 9 countries reported in 2016. It has been reported that an NSP was set up in 2 regions of Algeria (Algiers and Annaba) in 2018-2019 as part of the implementation of the combined HIV prevention program with support from the Global Fund. There is also a planned scale-up to a third region (Oran) for 2020-2022. NSPs in some countries of the region (Egypt, Jordan, Lebanon) have been reduced due to changes in funding priorities and although services are still available, there has been a decrease in coverage since 2016 where it was reported that nine countries had NSPs (Afghanistan, Egypt, Jordan, Iran, Lebanon, Morocco, Palestine, Tunisia and Pakistan); and at the time OAT and NSP was only available in prisons in Iran.

Current 2020 UNAIDS reports that although the number of countries providing NSP has increased, coverage remains insufficient. According to WHO EMRO, NSP coverage in the region (estimated to be around 25 syringes/PWID/year) remains below the Global 2020 and 2030 targets (200 syringes/PWID/year and 300 syringes/PWID/year respectively). Moreover, out of 7 countries for which data was available, the highest reported distribution of syringes/PWID is in Afghanistan with a reported number of 112 syringes/PWID in 2019 (UNAIDS, 2020). Therefore, current coverage is unlikely to have an impact on HIV and HCV incidence among PWID.

The previous situation assessment (2017) and this 2020 assessment reports that NSP is not available in prisons in any country of the region. Iran has halted its NSP programs in prisons. In Egypt, however the UNODC Prison HIV project provided HIV, HBV and HCV counseling and testing services to inmates. The project also distributed needles, syringes and condoms to released inmates and their families. Therefore although NSP is not technically available in prisons in Egypt, this step can be seen as an improvement in the provision of services for key populations. Also the previous situation assessment (2017) did not explicitly refer to condom programming in prisons, but did refer to condom programming in the community in Afghanistan, Egypt, Iran, Syria, Palestine, Morocco, Lebanon and Jordan. This 2020 assessment reports on progress in this setting with condom programming is reported in Iran, Egyptian and Algerian prisons.

Priority Area 6: NSP and Condom programming: It is recommended for MENAHRA and local partners to continue to lobby for initiation of NSP in Bahrain, Iraq, Kuwait, Libya, Oman, Qatar, Saudi Arabia, Syria, UAE and Yemen, and with increased operationalisation with increased coverage, particularly in known hotspots, geographic areas containing converging key populations of PWID, CSW, MSM and migrants, and in prisons in Afghanistan, Algeria, Egypt, Jordan, Iran, Lebanon, Morocco, Palestine, Tunisia, and Pakistan. It is encouraging to see condom programming is reported in Iran, Egyptian and Algerian prisons with lessons learnt applicable to other MENA countries.

This 2020 situation assessment reports that OAT exists in seven out of 20 countries (Afghanistan, Iran, Kuwait, Lebanon, Morocco, Palestine, UAE). MMT in five countries (Afghanistan, Iran, Morocco, Palestine, UAE); and BMT in four countries (Iran, Kuwait, Lebanon, UAE). Iran uses opium tincture for substitution treatment. Five countries remain in the planning phase for OAT: Algeria, Egypt, Oman, Pakistan, and Tunisia. Drug detoxification and abstinence treatment is most common (Afghanistan, Algeria, Bahrain, Egypt, Oman, Saudi Arabia, Tunisia). OAT developments since 2016 include the scaling up of services in Lebanon, Morocco and Iran, and endorsement of OAT in Pakistan, and a feasibility study in Egypt. This indicates progress since the previous situation assessment (2017) which reported that OAT existed in five countries (Afghanistan, Iran, Kuwait, Lebanon, Morocco, Palestine, UAE) with two planned (Oman and Pakistan). This 2020 situation assessment however shows that no change has been noted in terms of countries have implemented both essential harm reduction services in the form of combined OAT and NSP services since 2016, where the four countries implementing them remain the same since the previous assessment (Afghanistan, Iran, Morocco and Lebanon). There has been progress in the prison setting, with this 2020 situation assessment reporting that OAT is available in prisons in Afghanistan, Iran, Lebanon, Morocco, and Palestine. In some countries for example as in Lebanon OAT is only available in prisons to those who were enrolled before entering prison. The previous assessment 2016 reported only on Iran providing OAT in prisons.

Priority Area 7: OAT programming: It is recommended for MENAHRA and international organisations to continue to support countries in the OAT planning phase; Algeria, Egypt, Oman, Pakistan, and Tunisia to progress into community operationalization with strong monitoring, clinical audit and after care supports, in addition to supporting continued expansion for those countries actively providing OAT (Afghanistan, Iran, Kuwait, Lebanon, Morocco, Palestine, UAE). Consideration of MMT and BMT as treatment options is warranted, alongside prison and community continuum of care. Efforts to stimulate feasibility studies to support planning of OAT in the remainder countries is warranted (Bahrain, Iraq, Jordan, Libya, Qatar, Saudi Arabia, Syria, Yemen) to increase knowledge on evidence, efficacy and tackle concerns around diversion.

This 2020 situation assessment reports that two countries provide naloxone through community distribution (Afghanistan and Iran), with Morocco in the planning phases for community distribution. The previous situation assessment 2016 did not report on naloxone, and only referred to policy change in overdose prevention protocols in hospitals in Lebanon. Similarly, this 2020 situation assessment reports that DCR/Drug Consumption Rooms are not available in any country of the region to date. There has been no progress regarding DCR since the last situation assessment.

Priority Area 8: Overdose Prevention: It is recommended for MENAHRA and international organisations to continue to support countries in the planning of overdose prevention programming, and continued scale up in the existing three countries. Sensitisation efforts are warranted to support initiation of DCR in the MENA region.

There is no doubt that NGOs are the main actors in the implementation of HIV and harm reduction programs in the region. Countries with the best examples of HIV and harm reduction responses in the region (such as Iran, Lebanon, Morocco, Pakistan, Tunisia) have an active number of NGOs who are primarily providing services to key populations and are involved in scaling up the response in coordination with governmental and other national stakeholders. This 2020 situation assessment reports that in six countries out of the 20 (Iraq, Kuwait, Libya, Oman, Qatar, UAE), there is a non-existent to very limited role that NGOs play in the HIV and harm reduction response. Coincidentally, these countries do not provide comprehensive harm reduction programs that are tailored for key populations. The situation assessment in 2016 referred to NGOs working in HIV prevention and illustrated the range in involvement from none to drivers of the HIV response across MENA countries.

Priority Area 9: NGO as key drivers of the harm reduction response: It is recommended for MENAHRA and international organisations to support collaboration with government partners, and to scale-up the role of NGOs in the HIV and harm reduction response in all countries, and to provide support among countries in which their involvement and engagement is weak. MENAHRA should strengthen further the coordination of existing collaborations and partnerships formed and explore new opportunities for collaboration and networking including collaborations, partnerships with key stakeholders in countries, the Global Fund, Regional CSOs, UNAIDS, UNODC and WHO.

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