HIV and AIDS in the Middle East & North Africa (MENA)

**KEY POINTS**

- There are major gaps in the treatment cascade that need to be strengthened if countries in the Middle East and North Africa are to meet the UNAIDS 90-90-90 Fast Track Targets.
- Half of the people living with HIV in the region are aware of their HIV status, around a quarter of HIV positive people are on treatment and around a fifth are virally suppressed.
- New HIV infections are increasing year-on-year. AIDS-related deaths have also been rising but appear to have stabilised since 2015.
- The production of opiate drugs in many Middle East and North African countries has led to an increase in the number of prisoners and people who inject drugs – groups particularly vulnerable to HIV infection.

Explore this page to read more about groups most affected by HIV, testing and counselling, prevention programmes, antiretroviral treatment availability, civil society’s role, HIV and TB, barriers to the response, funding and the future of HIV in the Middle East and North Africa.

The Middle East and North Africa (MENA) region has the lowest HIV prevalence in the world (less than 0.1%) with 220,000 people recorded to be living with HIV in 2017. This is in contrast to sub-Saharan Africa, which has the highest HIV prevalence of all regions (6.8%).

Despite its low prevalence, the MENA region is an area of increasing concern. Around 10,000 people died of an AIDS-related illness in 2017, an 11% rise from 2010, although the number of AIDS-related deaths has stabilised since 2015. This is a result of very poor access to antiretroviral treatment (ART), with only 29% of those needing ART having access – far below the global level of 59%.

HIV infections have also increased by 12% since 2010 and are concentrated among people from key population groups such as sex workers, people who inject drugs and men who have sex with men, all
of whom face harsh criminalisation, stigma and discrimination. Common routes of transmission in this region vary between countries. In Iran, Libya and Morocco, for example, there is a much higher prevalence of HIV transmission between people who inject drugs (also referred to as PWID) and their networks of sexual partners. By comparison, sex work is thought to drive HIV transmission in other countries such as Djibouti and parts of Somalia.

Although substantial progress has been made in understanding the global HIV epidemic in recent years, knowledge of this region’s epidemic is comparatively limited and is often perceived as a ‘black hole’ in terms of HIV and AIDS data. One study showed that only four of the 23 MENA countries assessed had effective HIV surveillance systems to enable them to track their epidemics.

As a result, the MENA region is far from reaching the UNAIDS 90-90-90 targets to end HIV by 2020. Across the region’s countries in 2017, just 50% of people living with HIV were aware of their status, 59% of people living with HIV who were aware of their status were on treatment, and 76% of people on treatment were achieving viral suppression. Overall, this equates to 29% of all people living with HIV in MENA on treatment and 22% being virally suppressed.

Populations most affected by HIV in the Middle East and North Africa

The mid-1980s saw the first reported cases of HIV and AIDS in this region. By 1990, every country had detected HIV in their populations. This was linked primarily to exposure abroad as well as contaminated blood transfusions and organ transplants. However, by the early 1990s, a new pattern of transmission had emerged among certain groups.

People who inject drugs (PWID)

The majority (80%) of the global supply of heroin is produced in Afghanistan, and over three-quarters
of this is trafficked through Iran and Pakistan. As a result, the MENA region faces intense drug-related pressures. The increased purity and ready availability of heroin at lower cost also causes people who inject drugs to be one of the most vulnerable groups to HIV infection within the region.\textsuperscript{10}

In 2017-18, between 349,500 and 437,000 people in MENA injected drugs.\textsuperscript{11} Iran is home to the largest population of people who inject drugs, estimated at around 200,000 people, followed by Egypt (93,000 people), while smaller populations are reported in Lebanon, Libya, Tunisia and Morocco (9,000 people or below). However, a lack of data and the hidden nature of this population makes size estimates particularly problematic.\textsuperscript{12}

In 2017, more than a third of new HIV infections in the region occurred among people who inject drugs.\textsuperscript{13} Injecting drug use is the major route of HIV transmission in Iran and accounts for an estimated 90\% of HIV cases in Libya.\textsuperscript{14}

HIV prevalence among people who inject drugs is highest in Iran (9.3\%), Morocco (7.1\%) and Tunisia (6\%), and lowest in Kuwait, Lebanon, Oman and Syria (around or below 1\%).\textsuperscript{15}

**Female sex workers**

The number of sex workers differs significantly between countries in the MENA region. Around 210,000 people are thought to be selling sex in Sudan, more than double the number of sex workers reported by every other country. Morocco and Yemen estimate that around 72,000 and 54,000 people, respectively, are engaged in commercial sex work, while all other countries report the number of people selling sex at 25,000 or below.\textsuperscript{16}

HIV prevalence among female sex workers (also referred to as FSW) in MENA is below 5\% in most countries reporting data. Djibouti is an exception to this, where around 13\% of female sex workers are living with HIV.\textsuperscript{17} Some urban areas are also thought to have higher HIV prevalence among sex workers. For example, a study from Tripoli in Libya found almost 16\% of female sex workers were living with HIV.\textsuperscript{18}

The sexual networks of female sex workers are a key driver of HIV epidemics in a number of countries. This is due to the size of the sex workers’ sexual networks, which are larger than those of people who inject drugs and men who have sex with men.\textsuperscript{19, 20} For example, in Morocco commercial sex networks account for roughly 50\% of all new infections, despite fewer than 2\% of female sex workers living with HIV.

**Men who have sex with men (MSM)**

Compared to the concentrated HIV epidemic seen among people who inject drugs, the epidemic among men who have sex with men (also referred to as MSM) in MENA is assumed not to have reached the same levels, although it affects a larger number of countries.

The lack of official acknowledgement of the existence of non-heterosexual groups in many countries means surveillance data has been difficult to get hold of, although a number of countries such as Egypt, Lebanon and Tunisia are now addressing this gap. This lack of data means many more men who have sex with men may be affected by HIV than is currently known.\textsuperscript{21, 22}

According to available data, more than one in four men who have sex with men in Lebanon are living with HIV, the highest HIV prevalence rate in the region (27.5\%). This is followed by Tunisia at 9.1\%
and Jordan at 7.5%. In Jordan, Egypt, Yemen and Morocco around 6% of men who have sex with men are estimated to be living with HIV. HIV prevalence is lowest in Algeria (4.7%), Libya (3.1%) and Sudan (1.4%).

**Migrants and mobile populations**

Large numbers of migrants are present in MENA. Many people travel through the region from North Africa to Europe, and from Egypt, Sudan, Jordan, and Yemen to the gulf countries in search of work. For example, 90% of the total labour force in Qatar and UAE are migrants. In addition, recent and continuing conflicts, such as in Syria, Sudan, Yemen and Libya, continue to displace people, creating huge numbers of refugees.

Migration puts people in vulnerable situations, increasing the risk of HIV transmission. Isolation, stress and a lack of resources can lead to unsafe, casual and commercial sex at a time when access to HIV prevention information and services is low. Most vulnerable are the victims of human trafficking (mostly women) whose numbers are rising in the MENA region, especially in Sudan, Syria, and Yemen.

**Women**

Although the number of men living with HIV in the MENA region is far greater than the number of women, new infections are increasing among women. Women are particularly at risk of HIV transmission as a result of sex within marriage. For example, three-quarters of women living with HIV in Iran acquired the virus from their husbands, many of whom are thought to have become HIV positive through injecting drug use. Gender inequality and gender-based violence, combined with a lack of comprehensive sexual and reproductive health services, including HIV testing, and very low access to treatment, all increase women’s vulnerability to HIV.

**HIV testing and counselling in the Middle East and North Africa**

In MENA, there is still very limited access to HIV testing and counselling even though the service is an integral component of HIV prevention programmes.
According to UNAIDS, Algeria was one of the few countries in the region close to achieving the first 90 target in 2017, with 84% of people living with HIV knowing their status. Figures across the other reporting countries remain disappointing - Tunisia and Morocco reported below 70% awareness, Egypt below 60%, and Iran and Sudan around 40% awareness of status. In part, this is linked to the fact that the people who could most benefit from HIV testing are often criminalised and face widespread stigma and discrimination.

A lack of confidentiality around HIV testing, coupled with a shortage of HIV testing and counselling healthcare workers who are trained in dealing with people from stigmatised populations, also act as barriers to testing. That said, particular efforts have been made to increase testing coverage within a human rights framework in some countries. Egypt, Iran and Sudan conducted community testing campaigns in 2015. That year testing coverage among sex workers and men who have sex with other men more than tripled from 2013 levels, reaching 29% and 17%, respectively.

Djibouti became the first country to ratify the Arab Convention on Preventing HIV and Protecting the Rights of People Living with HIV, providing a legal framework to apply human rights principles in HIV responses, as adopted by the Djibouti Parliament in 2012. With the help of more than 21,000 tests distributed in 2015, Djibouti reported that 71% of people living with HIV were aware of their status (the latest data available).

As a way to encourage more people to test for HIV, a number of countries in the region are looking to introduce HIV self-testing kits. The kits enable people to test for HIV at home, lifting some of the barriers that prevent many people from testing. As of 2018, HIV self-testing kits were available in Iran, while Morocco had a supportive policy in place and Libya, Algeria, Somalia and Sudan were developing self-testing policies.

### HIV prevention programmes in the Middle East and North Africa

In 2017, 18,000 people became newly infected with HIV in the MENA region, 2,000 more than in 2010. Around 11,000 of these new infections occurred among men, 6,100 among women and 1,300 among children (0-14 years). Almost two-thirds of these infections occurred in just three countries: Egypt, Iran and Sudan.

Annual new infections are rising because prevention programmes are not reaching those who need them. However, some countries such as Morocco are bucking this trend, implementing human rights-based HIV prevention programme targeted at people most affected by HIV. As a result, new infections fell by 42% between 2010 and 2018.

### Condom availability and use

Data on condom use among people most affected by HIV in MENA differs, both between high-risk groups and between countries. For example, 96% of sex workers in Lebanon report using condoms, compared to between 60% and 65% of sex workers in Algeria, Djibouti, Iran and Tunisia, less than 35% in Somalia and Sudan, and around 14% in Egypt.

Among men who have sex with men, condom use is also highest in Lebanon at 75%. In Algeria, Morocco and Tunisia, around half of men who have sex with men report using condoms, compared to a quarter in Libya, Sudan and Yemen. While data are extremely limited on condom use among
people who inject drugs, no country reports levels of use above 45%.39

Peer education on the need to use condoms to prevent HIV has proved effective. In Sudan, a study involving 1,000 men who paid for sex who were reached with peer-led HIV prevention information found 70% reported using condoms during the past six months and the last time they had sex.40

HIV prevention in MENA for men who have sex with men (MSM)

Between 2005 and 2015, Frontline AIDS (formerly the International HIV/AIDS Alliance) worked with civil society organisations (CSOs) in Algeria, Lebanon, Morocco, and Tunisia to implement a range of HIV prevention interventions for men who have sex with men.

The USAID-supported programme established community-based outreach programmes in various sites, where partner CSOs implemented a package of combination prevention, care, and support services specifically for men who have sex with men.

MSM peer educators implemented most activities, which included rapid HIV testing, pre- and post-test counselling, condom and lubricant distribution, and psychosocial and legal support. In parallel, the programme tried to challenge stigma and discrimination by conducting peer-led stigma-reduction activities, targeting healthcare workers and others in authority.

The CSOs involved in the programme have gone on to become key players in MENA’s HIV response. All work openly with men who have sex with men and people living with HIV and hire men who identify as gay or MSM as staff. Their presence is helping to improve HIV prevention services for men who have sex with men in the region considerably.41

HIV awareness, education and approach to sex education

Access to sex education is limited in the region. Where it does exist it tends to focus on the biology of reproduction with little or no focus on issues relating to sexuality, gender, sexual violence, consent or sexually transmitted infections. As a result, school-based education on HIV, and subsequent HIV awareness among young people, tends to be poor.

For example, in Somalia only 9% of young men and 13% of young women could correctly identify how HIV is transmitted. Similarly, a survey of young people in Jordan, Bahrain, and Kuwait found more than 75% were unaware that condoms reduce the risk of HIV. In Yemen, only a third of young people were aware that condoms lower HIV risk, and only 8% knew that a person’s HIV status is not evident in their appearance.42

Prevention of mother-to-child transmission (PMTCT)

In 2017, around 5,200 women living with HIV gave birth, yet only 1,100 received antiretroviral treatment, which prevents transmission to infants during pregnancy, childbirth and breastfeeding. As a result, around a quarter of pregnant women living with HIV transmitted HIV to their babies. Only 940 newborns were tested for HIV before eight weeks of age.43

Oman, UAE, Iran and Morocco have relatively high testing rates for pregnant women, although none of these countries have coverage levels higher than 65%.44 45 Other countries, such as Lebanon, have seen PMTCT programmes undermined by a lack of testing services, in combination with
expensive referral systems, fears around testing, a lack of awareness about HIV and HIV-related stigma.46

The level of new infections among children (aged 0-14 years) in the region overall remained fairly stable between 2010 and 2017.47 The biggest reduction in new infections among children in recent years has occurred in Djibouti (a 44% reduction between 2010 and 2017). This is due to the integration of PMTCT services into maternal and child health programmes.48 49

Harm reduction

Iran and Morocco are the only countries in the region with nationwide harm reduction strategies. Both offer needle and syringe programmes (NSPs) and opioid substitution therapy (OST).50 NSPs are also available in Egypt (9 sites), Israel (5 sites), Jordan (10 sites), Lebanon (2 sites), Palestine (2 sites) and Syria (25 sites), while OST is available in Bahrain, Israel, Kuwait, Lebanon and Palestine.51

Iran has been implementing harm reduction programmes since the mid-2000s, in an attempt to prevent the transmission of HIV among people who inject drugs. As a result, it has the most developed harm reduction programme of any country in the region, with 580 NSP sites and OST available from more than 7,000 places, including health centres and pharmacies.52

The most recent data from Iran suggest HIV prevalence among people who inject drugs in falling. The proportion of people who use drugs reporting safe injecting practices was more than 75% as of 2014.53

As the majority of people who inject drugs in Iran are incarcerated, the government has implemented a number of projects distributing free needles in prisons and providing OST. In 2016, this resulted in just under 50,000 people in prison in Iran receiving OST.54

Pre-exposure prophylaxis (PrEP)

In June 2017, Morocco became the first country in the region to adopt the use of pre-exposure prophylaxis (PrEP), a course of HIV drugs taken by HIV-negative people to reduce their risk of HIV infection. As of 2018, Algeria, Iran and Lebanon had initiated PrEP pilot studies or were planning to introduce PrEP as part of a comprehensive package of services for people most at risk of HIV.55

Antiretroviral treatment availability in the Middle East and North Africa

Since 2005, the number of people receiving antiretroviral treatment (ART) in MENA has increased dramatically. The World Health Organization’s promotion of the ‘treat all’ approach, whereby people testing positive for HIV are immediately offered treatment regardless of the level of virus in their body, has resulted in all MENA countries, except Egypt, adopting the policy and updating their national treatment guidelines.56

As of 2017, 59% of people living with HIV who were aware of their status were on ART. However, because diagnosis rates are low this equates to 29% of all people living with HIV in the region on treatment. Proportionally, women fare better than men, as 32% of HIV-positive women are on treatment, compared to 27% of HIV positive men. Around 35% of HIV-positive children (0-14 years) are on treatment.57
As in Eastern Europe and Central Asia, the increase in treatment coverage has been much too slow, and continues to be outpaced by the rate of new infections, highlighting the need for the scale-up of treatment services. Coverage varies greatly between countries. It is highest in Algeria, where 80% of people living with HIV are on ART, and stands at around 60% in Kuwait, Lebanon and Morocco.

There is an urgent need to expand and improve HIV testing and treatment in Iran and Sudan, where 60% of the region’s AIDS-related deaths took place in 2017. In the same year, treatment coverage stood at 19% and 15%, respectively.

In 2017, 76% of people who were diagnosed with HIV and on ART were virally suppressed (equivalent to 22% of all people living with HIV in the region), which if maintained means they will be unable to transmit HIV to others. Adherence levels (measured via retention in treatment after 12 months) are above 85% in most countries reporting data, with the exception of Sudan (76%), Jordan (44%) and Syria (37%). This retention rate is much better than other regions in the world, such as Western and Central Africa where only 77% are retained in care after 12 months.

Young people living with HIV find it particularly difficult to access treatment. This is due to their age, but also the criminalisation and discrimination they face as members of key population groups. Evidence on antiretroviral drug resistance in MENA is limited to a few studies. However, these suggest critically high rates of resistance to antiretroviral regimens in a number of countries.

Civil society’s role and HIV in the Middle East and North Africa

Civil society organisations (CSOs) have become integral to the region’s HIV response, and are heavily involved in advocacy around issues relating to HIV prevention, treatment and funding. Many CSOs are led by or involve people most affected by HIV and are therefore more effective in reaching key populations than health authorities, particularly in Morocco, Tunisia, Algeria and Lebanon.

A number of HIV-related platforms and networks have grown since the mid-2000s, such as the Regional/Arab Network Against AIDS (RANAA), the Middle East and North Africa Harm Reduction Association (MENAHRA) for people who inject drugs, ITPC MENA for treatment and prevention, MENARosa for women living with HIV, the Middle East and North Africa Network for People who use Drugs (MENAnpud) and the M-Coalition for men who have sex with men.

However, civil society space in the MENA region is problematic. A 2018 report by Civicus described civic space as ‘closed’ in eight MENA countries, ‘repressed’ in six and ‘obstructed’ in a further six countries.

Women especially have borne the brunt of closing civic space. Those defending women’s rights have become frequent targets of unjustified detention. Even in countries such as Saudi Arabia... women activists pushing for human rights and equality have been punished through systematic targeting and detention.
The knock-on effects of extreme restrictions on civil liberties continue to restrict access to prevention and treatment of HIV and integration with other healthcare services.

HIV and tuberculosis (TB) in the Middle East and North Africa

Tuberculosis is present, although the number of TB-related deaths among people living with HIV is falling year-on-year. In 2017, 690 people died of AIDS-related illnesses, compared to 1,400 in 2010. The proportion of people with active TB who start ART differs between countries but is highest in Tunisia and Sudan at around 11%, and lowest in Lebanon and Oman at around 1%. Country-specific studies highlight the urgent need to better integrate HIV and TB services and to address multi-drug resistant TB (MDR-TB). Due to high numbers of migrants from TB endemic areas, MDR-TB is a particular problem in Saudi Arabia. It is also an issue in Somalia, which reports the highest prevalence of MDR-TB in the region.

Barriers to the HIV response in the Middle East and North Africa

Cultural and socio-economic barriers

During the 1980s and 1990s, MENA governments relied on religious and cultural values that discourage pre-marital sex and encourage married people to be faithful to protect the general population from HIV transmission. Many denied the existence of HIV within their borders, although governments now acknowledge its presence. Some cultural practices in MENA exacerbate the spread of HIV, including child marriage, polygamy and bans on condom use. Prevailing social norms and attitudes perpetuate gender inequalities and gender-based violence, and continue to put the female partners of men who inject drugs and men who have sex with men at risk of HIV infection.

Stigma and discrimination

Those facing the greatest risk of HIV infection in the MENA region are often engaged in high-risk activities (such as sex work), which are condemned by religious doctrines and cultural values, and are often reinforced in law by criminalisation. As a result, these behaviours are highly stigmatised and people from key populations face widespread discrimination, violence and abuse. For example, a study of mental health issues among men who have sex with men in selected MENA countries found 33% had been physically assaulted because people knew/thought they had sex with men.

People living with HIV experience routine discrimination. More than 60% of women in Algeria and Sudan – and more than 70% in Egypt, Jordan and Yemen – said they would not buy vegetables from a shopkeeper who is living with HIV. More than 50% of surveyed people living with HIV in Algeria reporting being denied health services due to their HIV status.

These high levels of stigma and discrimination drive the HIV epidemic in the region, preventing those living with HIV, and those at high risk of HIV transmission, from seeking the HIV prevention, treatment
and support services they need.80

Structural and resource barriers

Since the start of this decade, political uprisings and conflicts in a number of countries such as Syria, Libya and Somalia have undermined efforts to tackle the HIV epidemic in this region. This has resulted in weakened health systems, which disrupt the implementation of HIV prevention programmes and acts as a barrier to service implementation (including the provision of antiretroviral treatment). Conflict also creates circumstances that exacerbate issues associated with HIV epidemics, and leads to an increase in refugees, who are particularly vulnerable to HIV.81 For example, the conflict in Syria has displaced millions of people, the majority of whom have fled to neighbouring countries including Egypt, Iraq, Jordan, Lebanon and Turkey.

Data barriers

A lack of data greatly impedes the HIV response in MENA. For example, as of 2016, only Djibouti, Iran, Morocco, and Pakistan had fully functioning HIV surveillance systems, while prevalence data for people most at risk of HIV were not available for Bahrain, Iraq, Kuwait, Libya, Oman, Qatar, Saudi Arabia, South Sudan, Syria and UAE.

Egypt, Lebanon and Tunisia are now addressing the data gap, and have conducted integrated bio-behavioural surveys with female sex workers, people who inject drugs and men who have sex with men.82

Legal barriers and punitive laws

Throughout many regions in the world, punitive laws and practices deter those most at risk of HIV from seeking the essential services they need. In MENA, eight countries (Qatar, Sudan, UAE, Iraq, Saudi Arabia, Yemen, Iran and Somalia), homosexual acts are subject to the death penalty. Algeria, Egypt, Libya, Kuwait, Morocco, Oman and Tunisia either criminalise homosexuality or have criminally prosecuted lesbian, gay, bisexual, and transgender people under other laws.83

Sex work, drug use and the possession of drugs are criminalised in most countries throughout the region.84 These types of laws fuel stigma and discrimination towards key affected populations and other people living with HIV. Also, in countries such as Lebanon, they have been used to justify illegal police conduct including torture.85

However, some progress has been made in gaining legal protection for those living with HIV in the region. In February 2016, a court in Cairo ruled that people living with HIV cannot be dismissed because of their HIV-positive status. This seminal ruling was applauded by civil society and activists engaged in the AIDS response in Egypt and across the region. The ruling sets an important legal precedent for future discrimination cases.86

Restrictions on entry, stay and residence

A number of countries in the MENA region have restrictions on entry, stay or residence for people living with HIV. These laws, and the ways they are implemented, often impinge upon the human rights of people living with HIV.

These restrictions have been adopted by Iran, Kuwait, Oman, Saudi Arabia, Sudan, Syria and UAE,
some of which are major destinations for migrant workers, particularly from Asia. They do not just affect people migrating from other parts of the world but also people living with HIV within the region. For example, Jordan has reported the use of restrictions on migrants from neighbouring countries (including Egypt, Iraq and Syria) and the impact of mandatory HIV screening policies on the estimated one million Jordanians working abroad in GCC countries.

The vast majority of countries also impose mandatory HIV testing in order to obtain marriage, work or residence permits or for certain groups.

### Funding for HIV in the Middle East and North Africa

Domestic funding for the HIV response has increased by 14% in the last decade, and countries in the region now fund 73% of their response. However, international funding has fallen by 30% over the same period. A key concern is the lack of budget allocated for HIV prevention programmes, especially for key populations. For example, in 2017, Algeria allocated just 3% of its HIV budget to prevention. If more innovative mechanisms to boost HIV funding are not found, UNAIDS has warned that the current resource levels are too small to close the region’s existing gaps in reaching both the fast-track targets by 2020 and ending AIDS as a public health threat by 2030.

### The future of HIV in the Middle East and North Africa

Although the number of people living with HIV in MENA is small compared with many other regions, a number of countries have fast-growing HIV epidemics. Significant gaps in HIV service provision need to be addressed as a result.

The scaling up of antiretroviral treatment coverage is key to this. UNAIDS states that an ‘intensified scale-up’ of at least 87,000 people living with HIV diagnosed and 112,000 people initiated on treatment is needed in order for MENA to reach the first and second fast-track targets of having 90% of people living with HIV aware of their status and on treatment. For HIV treatment to work, more people must be supported to adhere to it. UNAIDS has highlighted that those MENA countries that are marshalling community-based initiatives in getting people tested and linked to treatment are seeing the benefits of better retention in care. For example, in Morocco, this community-based approach has improved treatment retention from 75% to 95% over one year.

There is also a critical need for reliable and robust data, disaggregated by age, sex and population group, to strengthen the HIV response in the region.

Indeed, many MENA countries are putting significant effort into the scale-up of their response to the HIV epidemic, such as developing national strategies and implementing programmes for people most affected by HIV. But the response to HIV in other countries has been slower due to denial, stigma, and the marginalisation of key populations.

Creating and implementing culturally suitable programmes that address HIV-related stigma and discrimination and seek to address wider issues relating to gender inequality and gender-based violence, will be key to creating an effective response. For this, evidence-based, community-led advocacy to create supportive environments for key populations and those living with HIV will be essential.
Tools and resources:

HIV/AIDS: trends in the Middle East and North Africa region

1. UNAIDS 'AIDSinfo' (accessed February 2019)
2. UNAIDS 'AIDSinfo' (accessed February 2019)
8. UNAIDS 'AIDSinfo' (accessed February 2019)
12. UNAIDS 'AIDSinfo' (accessed February 2019)
14. UNAIDS (13 April, 2011) 'Feature story: Middle East and North Africa ready to scale up harm reduction services in its response to AIDS' (accessed February 2019)
15. UNAIDS 'AIDSinfo' (accessed February 2019)
16. UNAIDS 'AIDSinfo' (accessed February 2019)
17. UNAIDS ‘AIDSinfo’ (accessed February 2019)

23. UNAIDS 'AIDSinfo' (accessed February 2019)


28. UNAIDS 'AIDSinfo' (accessed February 2019)


33. UNAIDS 'AIDSinfo' (accessed February 2019)

34. UNAIDS 'AIDSinfo' (accessed February 2019)


37. UNAIDS 'AIDSinfo' (accessed February 2019)

38. Ibid.

39. Ibid


45. UNAIDS 'AIDSinfo' (accessed February 2019)


47. UNAIDS 'AIDSinfo' (accessed February 2019)


49. UNAIDS 'AIDSinfo' (accessed February 2019)


92. 110,000 more HIV positive people will need to become virally suppressed for MENA to reach the third fast-track target.UNAIDS (2018) ‘Miles to go: global AIDS update 2018’, p.237. [pdf]


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