Progress Report and Road Map for the

Triple Elimination of Mother-to-Child Transmission of HIV, Syphilis and Hepatitis B

in the Middle East and North Africa/ Eastern Mediterranean Region

World Health Organization
REGIONAL OFFICE FOR THE Eastern Mediterranean

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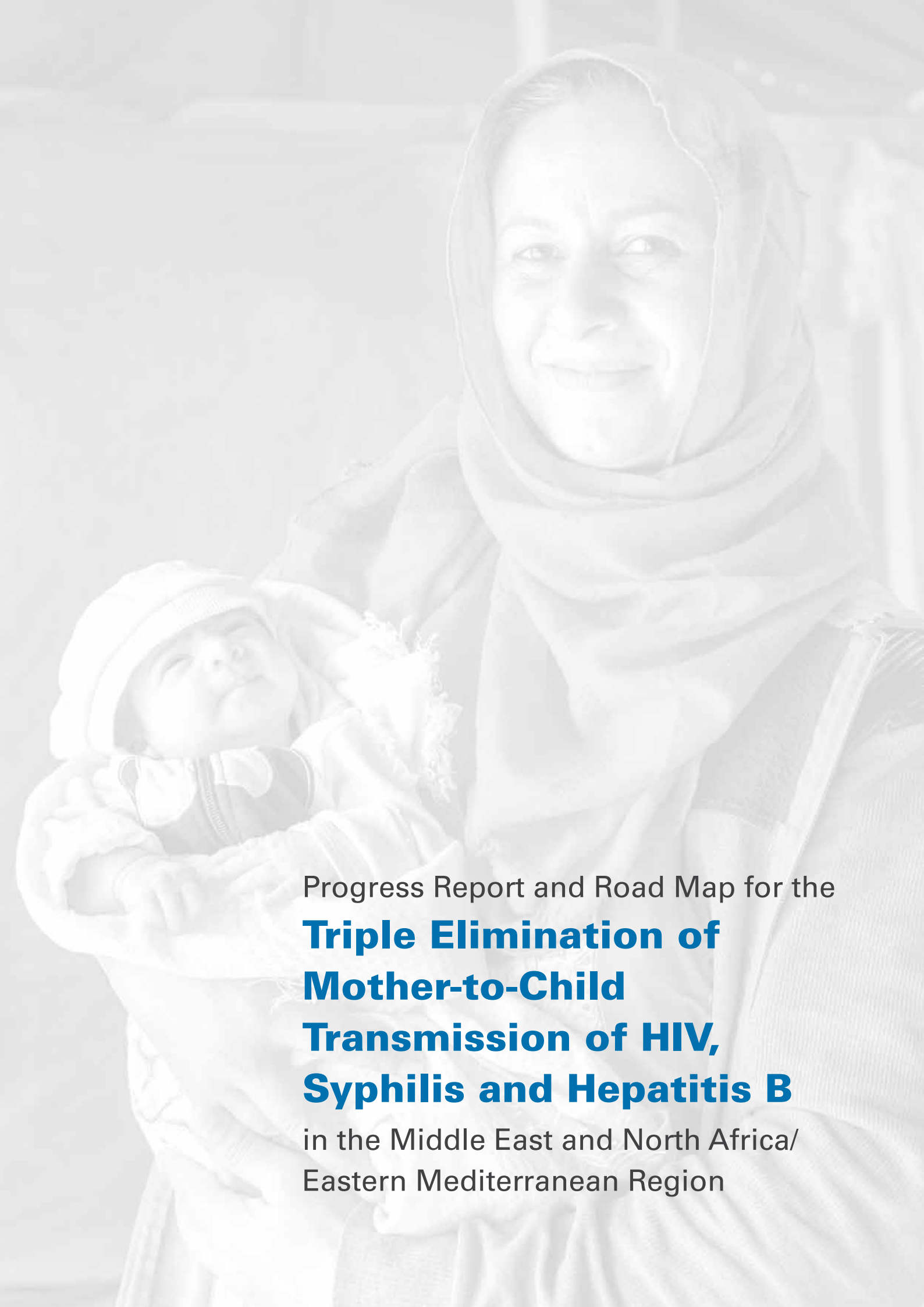

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Progress Report and Roadmap on Elimination of Mother-to-Child Transmission of HIV, Syphilis and Hepatitis B in the Middle East and North Africa/Eastern Mediterranean Region focuses on the progress towards the triple elimination of mother-to-child transmission (EMTCT) of HIV, syphilis and hepatitis B virus (HBV) across 23 countries in the Middle East and North Africa/Eastern Mediterranean (MENA/EM) region. The UNICEF Middle East and North Africa Regional Office (MENARO), as the lead partner in collaboration with WHO Eastern Mediterranean Regional Office (EMRO), embarked on this progress report and road map to collect and assess national policies and key indicators on EMTCT efforts against WHO criteria for validation of the EMTCT of HIV, syphilis and HBV. Based on analysis and consultations with national policymakers, the report provides recommendations for countries at different stages of readiness to follow towards triple elimination goals.

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ACRONYMS AND ABBREVIATIONS

ANC	antenatal care
ART	antiretroviral therapy
ARV	antiretroviral (medicine)
AZT	azidothymidine or zidovudine
BPG	benzathine penicillin G
CBO	community-based organization
CSO	civil society organization
EID	early infant HIV diagnosis
EMTCT	elimination of mother-to-child transmission
GDP	gross domestic product
GNI	gross national income
HBsAg	hepatitis B surface antigen
HBV	hepatitis B virus
HepB3	hepatitis B vaccine third dose
HepB-BD	hepatitis B vaccine birth dose
HIV	human immunodeficiency virus
IOM	International Organization for Migration
MENA	Middle East and North Africa
MNCAH	maternal, newborn, child and adolescent health
MTCT	mother-to-child transmission
NAT	nucleic acid test
PEP	post-exposure prophylaxis
PMTCT	prevention of mother-to-child transmission
RDT	rapid diagnostic tests
SRH	sexual and reproductive health
STI	sexual transmitted infection
TDF	tenofovir
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
WHO	World Health Organization

GLOSSARY

Term	Definition
Antenatal care first visit (ANC1)	Percentage of women (age 15–19 and 15–49) attended the first ANC visit by any provider.
Antenatal care four visits (ANC4)	Percentage of women (age 15–19 and 15–49) attended at least four times during pregnancy by any provider.
Maternal morbidity	Any health condition attributed to and/or complicating pregnancy and childbirth that has a negative impact on the woman's well-being and/or functioning.
Maternal mortality	The death of a woman while pregnant or within 42 days of the end of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes.
Maternal mortality ratio (MMR)	The number of maternal deaths during a given time period per 100,000 live births during the same time period.
Newborn death	A death within the first 28 days after birth of any live-born baby regardless of weight or gestational age.
Maternal postnatal care	Percentage of women (age 15–19 and 15–49) who received postnatal care; i.e., a health check while in facility or at home following delivery, or a postnatal care visit within two days after birth.
Newborn postnatal care	Percentage of newborns who received a postnatal contact with a health provider within 2 days of delivery; i.e., a health check while in facility or at home following delivery, or a postnatal care visit within 2 days after delivery.
Skilled attendant at birth	Percentage of deliveries attended by skilled health personnel (typically a doctor, nurse or midwife).
Universal health coverage	All people receiving quality health services that meet their needs without being exposed to financial hardship in paying for the services.

EXECUTIVE SUMMARY

This is the first report on progress towards the triple elimination of mother-to-child transmission (EMTCT) of HIV, syphilis and hepatitis B virus (HBV) across 23 countries in the Middle East and North Africa/ Eastern Mediterranean (MENA/EM) region. These infections cause significant morbidity and mortality in pregnant women and young children in the absence of treatment, as well as social, psychological and economic consequences for families.

Countries included in this report

Algeria, Afghanistan, Bahrain, Djibouti, Egypt, the Islamic Republic of Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Pakistan, Qatar, State of Palestine*, Saudi Arabia, Somalia, the Sudan, the Syrian Arab Republic, Tunisia, United Arab Emirates, Yemen.

* For WHO: Occupied Palestinian Territory

In the MENA/EM region, the regional prevalence of HIV, syphilis and HBV is comparatively lower than in some other regions of the world, pointing to a significant opportunity for governments to reach the goal of EMTCT for all three diseases. There are proven, cost-effective and scalable prevention, testing, and treatment and care strategies for the EMTCT of HIV, syphilis and HBV. Countries can achieve EMTCT goals more efficiently by further integrating EMTCT services into existing national maternal, newborn, child and adolescent health (MNCAH) services and systems. In addition, countries in the region can scale-up and accelerate their efforts by adapting best practices in EMTCT programme and service delivery, strengthening data quality and information management, improving laboratory quality, and enhancing consideration for human rights, gender equality and community engagement.

To support countries in the region to achieve triple elimination goals, this report collects and assesses national policies and key indicators on EMTCT efforts against WHO criteria for validation of the EMTCT of HIV, syphilis and HBV. The status of impact and process indicators for each country based on most recent data available* are summarized below:

	ANC	HIV		Syphilis		Hepatitis B		
	ANC-1 coverage ≥95%	HIV testing coverage among pregnant women ≥95%	ART coverage among pregnant women ≥95%	Syphilis testing coverage among pregnant women ≥95%	Adequate treatment coverage of syphilis seropositive pregnant women ≥95%	HepB testing coverage among pregnant women ≥95%	Hepatitis B vaccine birth dose (HepB-BD) vaccine coverage >90%	Hepatitis B vaccine third dose (HepB3) vaccine coverage >90%
Afghanistan	🔴	🔴	🔴	🔴	🟢	NA	NA	🔴
Algeria	🟢	🔴	🔴	🔴	🟢	NA	🟢	🟢
Bahrain	🟢	🔴	NA	🟢	NA	🟢	🟢	🟢
Djibouti	🔴	🔴	🔴	🔴	NA	NA	🔴	🔴
Egypt	🟠	🔴	🔴	NA	NA	NA	🟢	🟢
Iran (Islamic Republic of)	🟢	🔴	🔴	🔴	🟢	NA	🟢	🟢
Iraq	🔴	NA	NA	🔴	NA	NA	🔴	🔴
Jordan	🟢	NA	NA	🔴	NA	NA	NA	🔴
Kuwait	🟢	NA	NA	NA	NA	NA	🟢	🟢
Lebanon	🟢	NA	NA	NA	NA	NA	🟠	🔴
Libya	🟠	NA	🔴	NA	NA	NA	NA	🔴
Morocco	🟠	🔴	🔴	🔴	🟠	NA	🔴	🟢
Oman	🟢	🟢	🟢	🟢	🟢	NA	🟢	🟢
Pakistan	🟠	NA	🔴	NA	NA	NA	NA	🟠
State of Palestine	🟢	NA	NA	NA	NA	NA	🟢	🟢
Qatar	🟠	NA	NA	NA	NA	🟢	🟢	🟢

	ANC	HIV		Syphilis		Hepatitis B		
Saudi Arabia	🟢	🔴	🟢	🔴	🟢	🟢	🟢	🟢
Somalia	🔴	NA	🔴	🔴	🔴	NA	NA	🔴
Sudan (the)	🔴	🔴	🔴	🔴	NA	NA	NA	🟠
Syrian Arab Republic (the)	🟠	NA	NA	NA	NA	NA	NA	🔴
Tunisia	🟢	🔴	🔴	NA	NA	NA	🔴	🟢
United Arab Emirates	🟢	🟢	🟢	🔴	🟠	NA	🟢	🟢
Yemen	🔴	NA	NA	NA	NA	NA	NA	🔴
🟢	≥95 per cent or (>90 per cent for hep-B vaccine)		🟠	80-94.9 per cent (90 per cent for hep-B vaccine)		🔴	< 80 per cent	
	ANC-1 coverage ≥95%	HIV testing coverage among pregnant women ≥95%	ART coverage among pregnant women ≥95%	Syphilis testing coverage among pregnant women ≥95%	Adequate treatment coverage of syphilis seropositive pregnant women ≥95%	HepB testing coverage among pregnant women ≥95%	HepB-BD Vaccine Coverage >90%	HepB3 Vaccine Coverage >90%
Target achieved	11 (47.8%)	2 (8.6%)	3 (13%)	2 (8.6%)	5 (21.7%)	3 (13%)	10 (43.5%)	12 (52.2%)
Close to achieve targets	6 (26.1%)	0	0	0	2 (8.6%)	0	1 (4.3%)	2 (8.6%)
Far to achieve targets	6 (26.1%)	10 (43.5%)	11 (47.8%)	11 (47.8%)	1 (4.3%)	0	4 (17.4%)	9 (39.1%)
No reported data	0	11 (47.8%)	9 (39.1%)	10 (43.5%)	15 (65.2%)	20 (86.9%)	8 (34.8%)	0

NA: Not available data for HIV [GAM], syphilis, and hepatitis B reporting [WHO reporting]

* Please refer to corresponding tables for more information.

Based on analysis and consultations with national policymakers, the report provides a **Road Map** for countries at different stages of readiness to follow towards triple elimination goals. The report also provides a set of recommendations for all countries to prioritize EMTCT policy and programming actions over the short, medium, and long term.

Short-term recommendations (2024)

- Ensure strong advocacy to raise political leadership, commitment and government investment.
- Promote the integration of PMTCT interventions into reproductive health and MNCAH services and ensure that triple PMTCT interventions are included in essential health services packages.
- Strengthen the collaboration across different programmes in providing PMTCT interventions within MNCAH platforms.
- Improve the management of the health information system through implementation of digitalized and integrated national data collection systems, including connection with primary healthcare facilities, MNCAH facilities and laboratories, and collecting data from private sector healthcare providers.
- Update national guidelines on PMTCT services to recommend the implementation of triple EMTCT of HIV, syphilis, and hepatitis B, consistent across public and private health-care facilities, with a robust monitoring system.
- Ensure coordination and standardization of services between public and private sectors.
- Strengthen documentation of syphilis and HBV testing for pregnant women.
- Develop a national road map for the triple EMTCT of HIV, syphilis and hepatitis B.
- Establish a National Validation Committee with the appropriate expertise on triple elimination to support the development of a national roadmap.
- Build the capacity of health care workers through appropriate training on the triple EMTCT of HIV, syphilis and hepatitis B.
- Involve affected communities, including pregnant women and their families and people living with HIV and/or chronic hepatitis B, in planning, implementation, and monitoring and evaluation of EMTCT services.

Medium-term recommendations (2025–2026)

- For countries that have updated their national guidelines and developed a roadmap during the previous year, begin to implement the triple PMTCT policies.
- For countries that have already implemented PMTCT policies for one, two or three disease(s) for more than two years, take stock of progress and challenges.
- For countries that have made progress during the last three years, develop a readiness assessment for the validation of the vertical transmission for one, two or three disease(s). The checklist for preliminary assessment of EMTCT validation can be found at: https://www.who.int/initiatives/triple-elimination-initiative-of-mother-to-child-transmission-of-hivsyphilis-and-hepatitis-b/validation/process-and-tools.

Long-term recommendations (2027–2030)

- For countries that are ready, recommend to apply for WHO-led validation of EMTCT for one, two or three disease(s).
- Ensure the availability of adequate national funds to guarantee the sustainability of EMTCT services, strengthen monitoring and evaluation, and plan for a readiness assessment for the remaining disease(s).

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1. INTRODUCTION

The global community has committed to the elimination of mother-to-child transmission (EMTCT) of three infections caused by human immunodeficiency virus (HIV), *Treponema pallidum* (syphilis), and hepatitis B virus (HBV). These infections can be transmitted from mother to child during pregnancy or childbirth; HIV can also be transmitted during breastfeeding. These three infections cause significant morbidity and mortality in pregnant women and young children in the absence of treatment, as well as social, psychological and economic consequences for families.

This is the first report on progress towards EMTCT of HIV, syphilis and hepatitis B across 23 countries in the Middle East and North Africa/Eastern Mediterranean (MENA/EM) region.[1]

Countries included in this report

Algeria, Afghanistan, Bahrain, Djibouti, Egypt, the Islamic Republic of Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Pakistan, Qatar, State of Palestine*, Saudi Arabia, Somalia, the Sudan, the Syrian Arab Republic, Tunisia, United Arab Emirates, Yemen.

* For WHO: Occupied Palestinian Territory

According to WHO global HIV programme https://www.who.int/teams/global-hiv-hepatitis-and-stis-programmes/hiv/prevention/mother-to-child-transmission-of-hiv, every year, globally, an estimated 1.3 million women living with HIV become pregnant. Untreated, the risk of transmitting HIV to their children during pregnancy, labour, delivery or breastfeeding ranges from 15 per cent to 45 per cent. That risk drops to 1 per cent or less with the effective administration of antiretroviral therapy (ART).

1 The countries included in this report are part of UNICEF's Middle East and North Africa (MENA) region and WHO's Eastern Mediterranean (EM) region.

Thanks to significant efforts to end AIDS among children, 82 per cent of pregnant and breastfeeding women living with HIV globally were accessing ART in 2022. This has led to a 58 per cent reduction in new HIV infections among children from 2010 to 2022, and 3.4 million HIV infections in children averted since 2000. However, there is still a long way to go, with ART coverage stagnating globally and thousands of pregnant women living with HIV missing out completely on treatment and others initiating treatment and not retained in care. In 2022, an estimated 130,000 children (0–14 years) globally acquired HIV, and almost 70 per cent of new HIV infections among children were due to the mother not receiving ART or dropping off from ART during either pregnancy or breastfeeding.[2] There are differences by region, in the MENA/EM region, a lack of adequate HIV prevention, treatment and care services, limited integration of EMTCT services into maternal, newborn, child and adolescent health programmes, the presence of discriminatory laws and stigma, and low levels of community engagement on HIV have resulted in a growing epidemic. In 2022, only 38 per cent of pregnant and breastfeeding women in the region had access to ART.[3]

Syphilis is a preventable and curable sexually transmitted infection (STI) that can result in early fetal loss and stillbirth, neonatal death, low-birth-weight infants and serious neonatal infections. However, simple, cost-effective testing and treatment options during pregnancy can prevent most of these complications. Approximately 1 million pregnant women worldwide are infected with syphilis annually.[4] In the MENA/EM region, there were an estimated 2.4 million incident cases of syphilis in 2020.[5] However, data about the number of pregnant women in the region infected with syphilis, and the consequences for their infants, is largely unknown as syphilis testing is not yet well implemented in most countries.

Mother-to-child transmission (also called vertical transmission) of HBV is a major cause of chronic hepatitis B infection, which can lead to cirrhosis and liver cancer. In the MENA/EM region, rates of diagnosis and treatment for HBV are very low, and the coverage of hepatitis B vaccine for infants within 24 hours of birth (birth dose) is also very low.

In the MENA/EM region, the prevalence of HIV, syphilis and HBV is lower than in some other regions of the world, pointing to a significant opportunity for governments to reach the goal of EMTCT for all three diseases. In low-prevalence settings, the coverage of PMTCT services is generally lower than in higher-prevalence countries. In low prevalence settings, the three diseases often disproportionately affect key and vulnerable populations (female sex workers, females who inject drugs, female partners of males who inject drugs, displaced people, migrants, refugees, etc.), or certain locations or "hot spots".

As complement to recent 2023 and 2024 WHO and UNICEF publications[6] on experiences of countries that have been validated for EMTCT of HIV and syphilis in low prevalence settings, this report aims to collect and assess key national indicators on triple EMTCT in the MENA/EM region against WHO criteria for validation of EMTCT of HIV, syphilis, and HBV. The purpose of the report is also to outline and analyze progress and remaining challenges and to offer a roadmap to support countries in the region to move towards the triple EMTCT of HIV, syphilis, and HBV. Relevant EMTCT indicators were obtained from a desk review of data, report, and recent publications as well as from WHO, UNICEF and UNAIDS websites, and national health strategies, national strategic plans, and guidelines on HIV care and PMTCT. In addition, six countries (Djibouti, Egypt, Libya, Iraq, Kuwait and Tunisia) participated in consultations to discuss achievements, progress, and challenges on EMTCT. The interview questions are provided in **Annex 1.**

2 UNAIDS 2023 and UNICEF 2023.

3 UNICEF 2023.

4 WHO validates elimination of mother-to-child transmission of HIV and syphilis in Cuba. Press release, UNAIDS, 30 June 2015.

5 WHO estimate.

6 Key considerations for fast-tracking the elimination of mother-to-child transmission of HIV in lower-prevalence settings: lessons from validated countries. UNICEF and WHO 2023; Introducing a framework for implementing triple elimination of mother-to-child transmission of HIV, syphilis and hepatitis B virus, WHO 2023 https://iris.who.int/bitstream/handle/10665/375893/9789240086784-eng.pdf?sequence=1

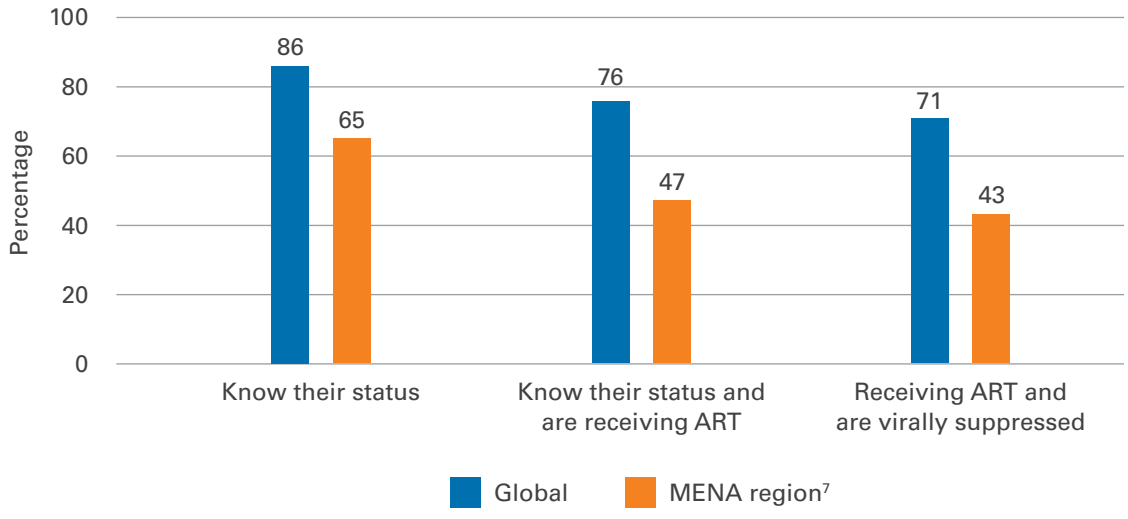
2. VERTICAL TRANSMISSION OF HIV, SYPHILIS AND HEPATITIS B IN THE REGION

Details of national estimated burdens of HIV, syphilis and HBV can be found in **Annex 2.**

2.1 HIV

Although HIV prevalence is low in the MENA/EM region – less than 0.1 per cent compared to the global prevalence of 0.7 per cent – challenges with HIV diagnosis, treatment and care (**Table 1**), stigma and discrimination, gender inequality and gender-based violence have led to a growing HIV epidemic.

TABLE 1: HIV CASCADE OF CARE, 2022 [GLOBAL AND MENA REGION]



7 UNAIDS Regional factsheet, MENA, 2022.

Approximately 15–30 per cent of infants born to untreated women living with HIV will acquire HIV during gestation and delivery, with a further 5–15 per cent acquiring HIV through breastfeeding. Without treatment, HIV infection in infants and young children results in early mortality for many, or creates a lifelong chronic condition that greatly increases morbidity, shortens life expectancy and imposes a great burden on children and families.

HIV disease burden in MENA/EM Region

- In 2022, in the 23 included countries from UNICEF/MENA/EM Regions, there were approximately 518,000 people living with HIV, 58,000 new HIV infections and an estimated 20,000 AIDS-related deaths – corresponding to an estimated 47 per cent increase in new HIV infections and 72 per cent increase in AIDS-related deaths compared to 2010.[8]

- At the country level, the estimated HIV prevalence in the general population is 0.2 per cent or below, except in Djibouti (0.7 per cent), and the total number of people living with HIV ranged from less than 500 to 270,000. The greatest burden of the epidemic is borne by seven countries where approximately 85 per cent of people living with HIV are estimated (Pakistan, the Islamic Republic of Iran, the Sudan, Egypt, Algeria, Morocco and Yemen).

- The number of women of childbearing age (15–49) newly infected with HIV, and the number of pregnant women living with HIV, are unknown. However, according to UNICEF SOWC 2023, 2,800 pregnant women were estimated in need of PMTCT interventions in 2022.[9] This data contrasts with those issued by WHO and UNAIDS, which estimate at least 8,000 pregnant women in need of PMTCT interventions in the same period. The number of new infections among adolescents aged 15–19 years was estimated at 860, of whom 44 per cent were adolescent girls. According to a recent UNICEF report on young people's health and well-being in the MENA region, the percentage of new HIV infections among young people aged 15–24 is concentrated in four countries (the Sudan, Egypt, the Islamic Republic of Iran, Algeria), which account for about 80 per cent of the reported cases in the region.[10]

- An estimated 5,200 children (0–14 years) were living with HIV in 2022. Among them, 760 were newly infected that year. The rate of new HIV infection in children under five years of age per 1,000 uninfected people ranged from 0.008 in Egypt to 0.366 in Djibouti in 2021. These low rates present a significant opportunity for elimination of HIV as a health threat through concerted action on EMTCT.

Despite the low HIV prevalence, pregnant women still face many challenges to access PMTCT services across the region. In 2022, only 28 per cent of HIV-infected pregnant women in UNICEF MENA countries received antiretroviral medicines to reduce the risk of vertical transmission, compared to 81 per cent of HIV-infected pregnant women globally. The coverage of pregnant women living with HIV receiving lifelong ART ranged from 6 per cent to 100 per cent for 14 countries, but was less than 80 per cent for 11 of these 14 countries. As a result, except for Oman with a rate of less than 2 per cent since 2017 (**Box 1**), the vertical transmission rate of HIV is still high, estimated at 32 per cent for the region, and ranging from 12 per cent in United Arab Emirates to 45.5 per cent in Afghanistan (for country details see **Annex 3**).[11]

8 UNAIDS Global AIDS Report 2023, Regional Factsheet MENA, WHO global indicators.

9 UNICEF Global Snapshot on HIV and AIDS 2023.

10 Young People's Health and Well-Being in the Middle East and North Africa; UNICEF 2023.

11 UNAIDS factsheets, 2022; who.int/data/gho/data/indicators

2.2 Syphilis

In 2020, 374 million new infections of STIs were reported globally, among them 36 million (9.6 per cent) in the MENA/EM region, including an estimated 2.4 million incident cases of syphilis. Globally, the female syphilis incidence rate per 1,000 person-years, was 1.7 and the female syphilis prevalence was 0.65 (approximately 1,200,000 cases) in 2020.[12]

In 2021, almost 1 million pregnant women were estimated to be infected with syphilis globally. The burden of morbidity and mortality due to congenital syphilis is high. In 2016, WHO estimated that there were 661,000 total congenital syphilis cases globally, including early fetal deaths and stillbirths, neonatal deaths, preterm or low-birthweight births, and infants with a clinical diagnosis of congenital syphilis. Of these adverse birth outcomes, 57 per cent occurred in pregnant women attending antenatal care (ANC) services, but who were not screened for syphilis, and 16 per cent occurred in mothers who were screened for syphilis but either did not receive treatment or received inadequate treatment. Congenital syphilis is also the second leading cause of preventable stillbirth globally, preceded only by malaria.[13] As a result, the global health sector strategy on STIs includes syphilis as an infection that requires immediate action for control, including ensuring the testing and treatment of all pregnant women to eliminate congenital syphilis, and control of syphilis in specific populations.

In the MENA/EM region, there is a scarcity of up-to-date and comprehensive data on the estimated number of women infected with syphilis, the number of new infections among women, the number of pregnant women receiving syphilis test at their first antenatal care visit, maternal syphilis infections and treatment.

Syphilis disease burden in the MENA/EM region, 2010 to 2019

- Of the 13 countries that provided data, the percentage of pregnant women receiving syphilis testing was greater than 50 per cent in only four countries (Algeria, Bahrain, Oman, Saudi Arabia).
- The prevalence of positive syphilis serology among women attending ANC ranged from 0 per cent in four countries (the Islamic Republic of Iran, Iraq, Jordan, Saudi Arabia) with reported data to 8.1 per cent in Djibouti (data from 2010).
- The percentage of pregnant women who had a positive syphilis test and who were treated adequately ranged from 100 per cent in five countries (Afghanistan, Algeria, the Islamic Republic of Iran, Oman, Saudi Arabia) to 46.1 per cent in Somalia (data from 2014).
- The number of congenital syphilis cases/100,000 live births in the 12 months reporting period was reported by only eight countries and ranged from 0 per cent in five countries (Bahrain, the Islamic Republic of Iran, Oman, Saudi Arabia, Tunisia) to 43 per cent in Qatar.

Throughout the region, syphilis testing among pregnant women attending ANC services is still insufficient, and the very limited data available do not give a reliable picture of the syphilis burden in pregnant women and its complications. Implementing syphilis testing and treatment for pregnant women in ANC settings will provide more comprehensive and higher quality of care and improve data collection.

12 Global health sector strategies 2016–2021, key data at glance.

13 WHO Mother-to-child-transmission of syphilis.

BOX 1. OMAN SUCCESS STORY ON EMTCT OF HIV AND SYPHILIS

In September 2022, WHO certified that Oman had eliminated vertical transmission of HIV and syphilis, becoming the first country in the WHO Eastern Mediterranean Region/MENA Region and the sixteenth country in the world to achieve this. This achievement was made possible under the strong political leadership, and through long-term planning and investment in comprehensive maternal and child health services and multi-sectoral coordination.

The main cornerstones of this achievement were a solid foundation of primary health care services, integration of testing for syphilis and HIV into ANC services with consistently good coverage over the past decade, and high quality of HIV and syphilis care for pregnant women tested positive and their infants. In addition, the hospital-based specialised multidisciplinary teams provide care for pregnant women who test positive for HIV or syphilis and their exposed infants.

This success should serve as good practice for others in the region in the same context and encourage them to do the same.

2.3 Hepatitis B

In 2019, an estimated 296 million people were living with chronic HBV infection worldwide and 1.5 million people were newly infected with HBV. Mother-to-child transmission of HBV is a major cause of chronic HBV infection, which can lead to cirrhosis and liver cancer. In 2020, globally, the prevalence of HBV infection among children under 5 years of age was 0.9 per cent, with an estimated 6.4 million children under five years of age living with chronic HBV infection.[14]

HBV disease burden in MENA/EM region, 2022

- An estimated 15 million people were living with hepatitis B in the Eastern Mediterranean Region with 85,661 new HBV infections, and 42,492 deaths attributed to HBV.
- The prevalence of HBV infection in the general population was estimated at 1.95 per cent.
- The prevalence of HBV infection among children under 5 years of age was 0.3 per cent. The highest prevalence of HBV infection among children in this age group (>0.5 per cent) was reported in Jordan, Pakistan, Somalia, the Sudan, the Syrian Arab Republic and Yemen.
- Of the people living with hepatitis B, 14.7 per cent have been diagnosed and, of these, 13.6 per cent have received treatment.

Coverage of timely HBV birth-dose vaccine (HepB BD) was 43 per cent globally, but only 33 per cent in the MENA/EM region. The coverage of HepB3 was 82 per cent globally and 81 per cent in the region.[15]

14 WHO Global progress report on HIV, viral hepatitis, and sexually transmitted infections, 2021.

15 WHO, Weekly epidemiological record, 2022, 30, 97: 345–352.

TABLE 2: SUMMARY OF INDICATORS FOR HIV, SYPHILIS AND HBV IN THE MENA/EM REGION

Disease	Indicators	Targets	Countries achieving the targets (N, %)	Comments
HIV	**Impact indicators**			
	HIV mother-to-child transmission (MTCT) rate	<2 per cent [non-breast-feeding] <5 per cent [breastfeeding]	1/16 (6.25%)	Oman has achieved this indicator and has been validated for EMTCT of HIV. For the other 15 countries ranged from 12% (UAE) to 45.5% (Afghanistan). *(Data from 2021-2022, see table 3).*
	HIV case rate per 100,000 live births	≤50	No data available, except for Oman	Oman has met the criteria for HIV case rate. Data are not available for the 22 countries.
	Programme indicators			
	ANC-1 coverage	≥95%	11/23 (47.8%)	Algeria, Bahrain, the Islamic Republic of Iran, Jordan, Kuwait, Lebanon, Oman, State of Palestine, Saudi Arabia, Tunisia and United Arab Emirates. (See table 4). *(Data from 2021-2022).*
	HIV testing coverage	≥95%	2/12 (16.7%)	Only Oman and United Arab Emirates have achieved the target. For the other 10 countries with available data, HIV testing has ranged from <1% (Afghanistan) to 73.2% (Iran) (See table 4). *(Data from 2021-2022).* Data are not available for 11 countries.
	Percentage of HIV positive mothers receiving ART	≥95%	3/14 (21.4%)	Oman, Saudi Arabia and United Arab Emirates have achieved the target. ART coverage ranged from 4% (Sudan) and 64% (Libya) in the 11 other countries with available data (See table 4). *(Data from 2021-2022).* Data are not available for 9 countries.

Disease	Indicators	Targets	Countries achieving the targets (N, %)	Comments
Syphilis	**Impact indicators**			
	Congenital syphilis cases per 100,000 live births	≤50	5/5 (100%)	Data available for only 5 countries. Congenital syphilis cases ranged from 0 to 11 per cent (Morocco). Saudi Arabia has reported no case of congenital syphilis in 2018.
	Programme indicators			
	ANC-1 coverage	≥95%	11/23 (47.8%)	Algeria, Bahrain, the Islamic Republic of Iran, Jordan, Kuwait, Lebanon, Oman, State of Palestine, Saudi Arabia, Tunisia, United Arab Emirates. *(Data from 2016- 2021).*
	Syphilis testing coverage in ANC	≥95%	2/13 (15.4%)	Bahrain and Oman have achieved the target. For the other 11 countries with available data (Afghanistan, Algeria, Djibouti, the Islamic Republic of Iran, Iraq, Jordan, Morocco, Saudi Arabia, Somalia, the Sudan, United Arab Emirates), syphilis testing rate ranged from 0 per cent (Jordan) to 64.1 per cent (Algeria). Data are not available for 10 countries.
	Percentage of serologic positive mothers receiving benzathine penicillin G (BPG)	≥95%	5/8 (62.5%)	Afghanistan, Algeria, the Islamic Republic of Iran, Oman, and Saudi Arabia have achieved the target (data from 2014 to 2019). For the other 3 countries with available data, the rate ranged from 48 per cent (Morocco) to 87.5 per cent (United Arab Emirates). (See table 4) Data are not available for 15 countries

Disease	Indicators	Targets	Countries achieving the targets (N, %)	Comments
HBV	**Impact indicators**			
	Hepatitis B surface antigen (HBsAg) prevalence in ≤5-year-olds	≤0.1%	8/22 (36.4%)	Algeria, Bahrain, the Islamic Republic of Iran, Kuwait, Lebanon, Qatar, Saudi Arabia and United Arab Emirates have achieved the target. Data from 2020 for all countries. Data is not available for State of Palestine.
	MTCT rate (targeted)	≤2%	No data available	Data are not available for the 23 countries.
	Programme indicators			
	Coverage of HepB3 infant vaccination	≥90%	12/23 (52.2%)	Algeria, Bahrain, Egypt, Iran, Kuwait, Morocco, Oman, State of Palestine, Qatar, Saudi Arabia, Tunisia, UAE, have achieved the target. Two countries are close to achieving the target: Sudan (84%) and Pakistan (83%).
	Coverage of universal timely HepB-BD (universal)	≥90%	10/23 (43.5%)	Algeria, Bahrain, Egypt, the Islamic Republic of Iran, Kuwait, Oman, State of Palestine, Qatar, Saudi Arabia and United Arab Emirates have achieved the target. Lebanon (80%) is close to achieving the target.
	Coverage of those infants at risk with targeted HepB-BD (targeted)	≥90%	No data available	Data are not available for the 23 countries.
	Coverage of maternal antenatal HBsAg testing (targeted)	≥90%	3/3 (100%)	Bahrain, Qatar and Saudi Arabia have achieved the target. Data are not available for 20 countries.
	Coverage of antivirals for those eligible (targeted)	≥90%	No data available	Data are not available for the 23 countries.

Sources: UNICEF State of the World's Children (SOWC) 2023; UNAIDS Global AIDS Monitoring (GAM) Report 2023, https://data.unicef.org/, https://rho.emro.who.int

3. TRIPLE EMTCT OF HIV, SYPHILIS AND HEPATITIS B

3.1 Essential services for triple EMTCT

The transmission of HIV, syphilis, and HBV infection from mother to child (also called vertical transmission) can be prevented by simple and effective biomedical and structural interventions before, during and after pregnancy. The similarity of the interventions also makes it possible to offer integrated and effective services with enhanced results. Success in all countries depends on the combined efforts of advocates, policymakers, health providers and community representatives. These stakeholders must help ensure that services are voluntary and that the human rights of women, children and families affected by the three conditions are protected.[16]

Essential triple PMTCT services include:[17]

- Primary prevention of incident HIV infection, especially for adolescent girls and women of childbearing age (15–49).
- Prevention of unintended pregnancy and provision of other SRH services.
- Testing for HIV, syphilis, and HBV for pregnant and breastfeeding women, at the first ANC visit or as soon as possible thereafter, including during the post-partum period for breastfeeding women who do not yet know their status.
- Early and efficient interventions to treat women who tested positive for the infection(s), and to prevent transmission to their children.
- Adherence support and counselling for women and their partners to reduce transmission risk and ensure appropriate treatment and retention in care.
- Appropriately attended, safe delivery practices.

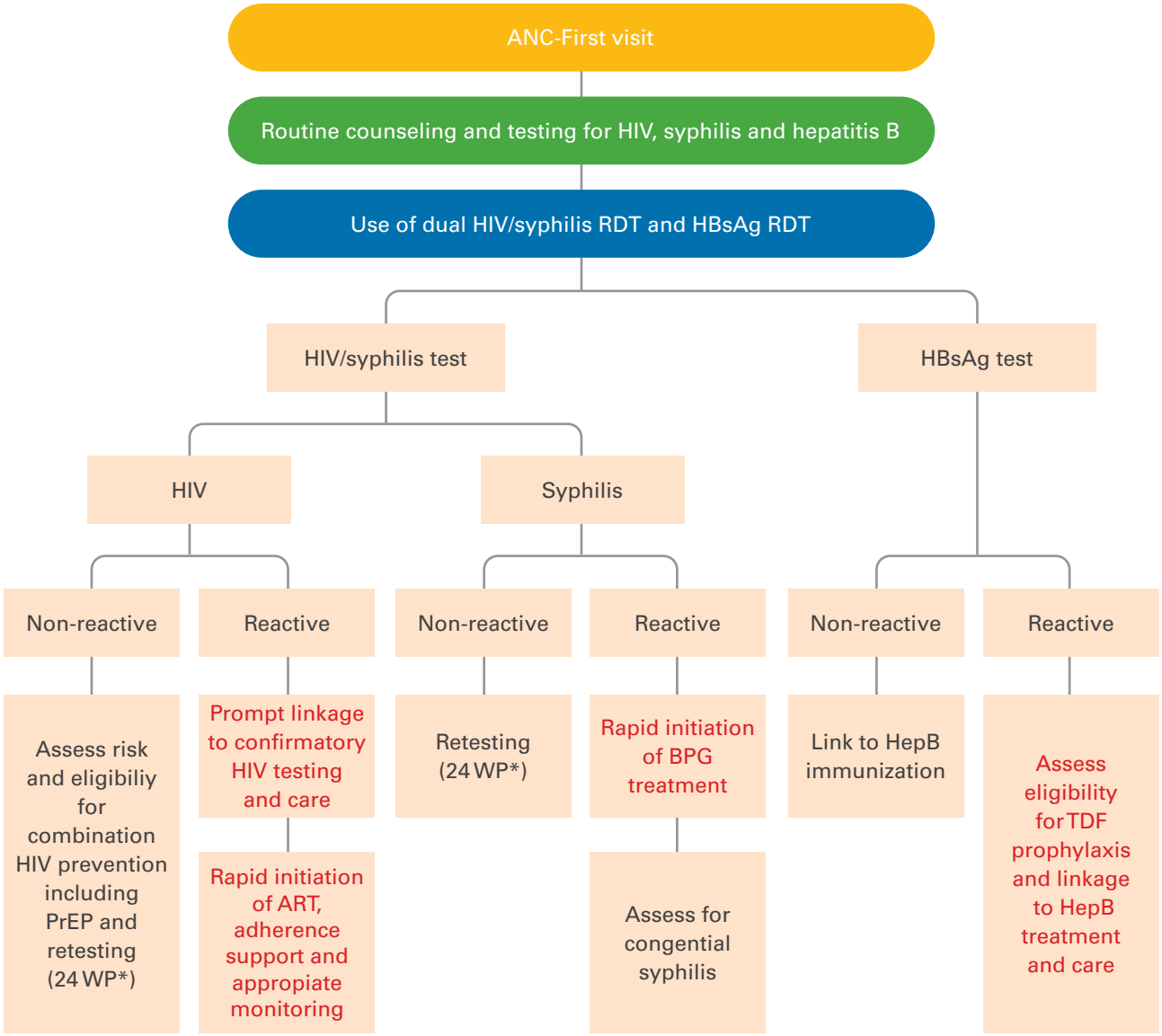
16 WHO Triple elimination initiative.

17 Introducing a framework for implementing triple elimination of mother-to-child transmission of HIV, syphilis, and hepatitis B virus. WHO, 2023

- Appropriate follow-up of exposed infants, including HBV vaccine birth dose.
- Optimal infant-feeding practices, Hepatitis B vaccine birth dose (within 24 hours of birth) and access to early infant HIV diagnosis (EID).
- Lifelong treatment and care for mothers living with HIV, or eligible for treatment for HBV or syphilis.

The cascade of EMTCT testing and treatment interventions is shown in **Figure 1**.

FIGURE 1: TESTING, TREATMENT, AND PREVENTION SERVICES[18]



*WP: Week of pregnancy.

18 Adapted from WHO Consolidated guidelines on HIV prevention, testing, treatment, service delivery and monitoring: Recommendations for a public health approach, July 2021; and WHO Prevention of mother-to-child transmission of Hepatitis B virus. Guidelines on antiviral prophylaxis in pregnancy, Policy brief, 2020.

For women who test positive for one or more infections, medication-based treatment is essential to reduce and prevent mother-to-child transmission. This includes rapid initiation of lifelong ART for pregnant women living with HIV, benzathine penicillin G (BPG) for women who test positive for syphilis, and tenofovir (TDF) prophylaxis for eligible pregnant women who test positive for HBV.

Pregnant women living with HIV should be supported to retain them in care and achieve viral suppression. In addition, offering safe delivery practices by skilled birth attendants and counselling for pregnant and breastfeeding women on optimal infant-feeding practices contribute to the reduction of transmission of HIV from mother to child. Infants exposed to HIV should be provided with access to postnatal antiretroviral prophylaxis, testing for EID and determination of final infant HIV status. ART should be promptly initiated for infants and young children diagnosed with HIV. To maximize the prevention of vertical transmission of HBV, infants should receive the hepatitis B-BD vaccine within 24 hours of birth.

3.2 Validation process for EMTCT of HIV, syphilis and HBV

The term validation is used to attest that a country has successfully met the criteria for EMTCT of HIV, syphilis, and HBV, where MTCT has been reduced to a level where it is no longer a public health problem. In 2014, WHO and key partners published global guidance on processes and criteria for validation of EMTCT of HIV and syphilis; the guidance was updated in 2017 with the addition of validation criteria for countries that are on the path to elimination and criteria for EMTCT of HBV was added to the guidance in 2021. This guidance provides requirements for validation in four major domains: (i) data quality assessment, (ii) laboratory quality assessment, (iii) programme assessment, and (iv) human rights, gender equality and community.[19]

At the end of 2023, 17 countries have been validated for the EMTCT of HIV and/or syphilis.[20] In the MENA/EM region, only Oman has been validated for the EMTCT of HIV and syphilis (September 2022). To monitor the impact and progress of EMTCT interventions, the global guidance on triple EMTCT provides recommended impact, process, and programmatic indicators (**Annex 4**). These have been reported against for the surveyed countries in Section 4 below.

19 WHO 2021, Global Guidance on Criteria and Processes for Validation: Elimination of Mother-to-Child Transmission of HIV, Syphilis and Hepatitis B Virus.

20 WHO 2023, Validation of EMTCT of HIV, syphilis and hepatis B.

4. NATIONAL POLICIES AND PROCESSES TO SUPPORT TRIPLE EMTCT

4.1 National policies

Health systems policies

Data from 17 available national guidelines for the diagnosis and treatment of HIV, syphilis and HBV were used to assess policies on testing, treatment, TDF prophylaxis and family planning. It should be noted that the availability of national guidelines does not necessarily mean that all interventions are fully implemented. HIV testing for pregnant women at the first ANC visit, or as early as possible during pregnancy thereafter, and early diagnosis for infants exposed to HIV, were recommended by all reporting countries. Syphilis testing and HBsAg testing for pregnant women were mentioned by respectively 14 and 13 national policies. TDF prophylaxis for pregnant women who tested positive for HBsAg and with a high Hepatitis B DNA viral load, or positive Hepatitis B e antigen (HBeAg), was noted in seven guidelines, and family planning interventions were mentioned in 11 guidelines (**Annex 5**). It should be noted that in March 2024 WHO released a new recommendation highlighting that in settings where neither HBV DNA nor HBeAg testing is available, prophylaxis with TDF for all pregnant women tested positive for HBsAg may be considered to prevent vertical transmission of HBV.[21]

HIV-related policies

Although most countries have policies in their national ART guidelines to promote and implement PMTCT of HIV, only five countries (Afghanistan, Egypt, Morocco, Oman and Saudi Arabia) reported having a national plan for EMTCT of HIV. Between 2019 and 2023, at least 12 countries in the region have updated their guidelines for HIV prevention, including:

- Rapid initiation of ART for all pregnant and breastfeeding women who test positive for HIV.

21 WHO. Guidelines for the prevention, diagnosis, care and treatment for people with chronic hepatitis B infection, March 2024.

- Safe delivery with prophylaxis based on intravenous zidovudine (AZT) during delivery for pregnant women with high risk of HIV transmission.
- Safe feeding and infant prophylaxis based on AZT or AZT/lamivudine for six weeks.
- Early infant diagnosis.
- Rapid initiation of ART for infants with confirmed HIV infection.

Syphilis-related policies

PMTCT of syphilis is relatively simple and cost-effective, even in areas with low syphilis prevalence. In the MENA/EM region, several countries have developed policies for syphilis testing and treatment for pregnant women, but have yet to consistently implement them. Only three countries (the Islamic Republic of Iran, Morocco and United Arab Emirates) reported data on syphilis testing in ANC settings.[22] Some interviewed countries mentioned the implementation of dual rapid test HIV/syphilis in ANC settings, but data collection and reporting are not yet carried out on a routine basis.

Hepatitis B-related policies

There is little data on hepatitis B-related policies, as shown by the absence of reporting on HBsAg testing in the first ANC visit. In the absence of integration of triple EMTCT services within MNCAH platforms, most national strategic plans focus on HIV/AIDS and do not mention interventions for hepatitis B testing and prophylaxis. Testing for hepatitis B is not yet provided routinely in ANC settings.

4.2 National EMTCT impact indicators

Data for only three of five impact indicators from the global guidance on triple EMTCT are available in the surveyed countries. Overall, 16 countries reported on the rate of MTCT of HIV, 5 countries on the congenital syphilis case rate, and 22 countries on HBV (HBsAg) prevalence among children under five years of age. Only four countries (Morocco, Oman, Saudi Arabia and United Arab Emirates) reported on all three of these indicators.

The rate of HIV vertical transmission is estimated at 32 per cent in the region, about three times higher than the global rate (11 per cent). Sixteen countries reported the percentage of children newly infected with HIV from MTCT in the past 12 months. Except Oman, this rate ranged from 12 per cent in United Arab Emirates to 45.5 per cent in Afghanistan (**Table 3**).

Data on congenital syphilis case rates per 100,000 lives births was reported by only five countries (21.7 per cent), the rate has ranged from 0 per cent in Saudi Arabia, to 11 per cent in Morocco. These data reflect the lack of universal testing of pregnant women for syphilis in ANC settings, and an absence of a clinical surveillance system to detect and investigate cases of congenital syphilis, as well as the absence of a data collection and reporting system in many countries (**Annex 6**).

HBsAg prevalence among children under five years of age was reported by 22 countries; among these countries, eight (Algeria, Bahrain, the Islamic Republic of Iran, Kuwait, Lebanon, Qatar, Saudi Arabia, United Arab Emirates) have achieved the target of less than 0.1 per cent prevalence.

22 UNAIDS Global AIDS Monitoring. Report 2023.

TABLE 3: EMTCT IMPACT INDICATORS, MENA/EM REGION, 2018–2022

Country	HIV MTCT rate		Congenital syphilis case rate***		HBsAg prevalence among children ≤ 5 years	
Data year range	2021–2022		2018–2021		2020	
	(%)	Data year	(%)	Data year	(%)	Data year
EMTCT target for 2030	<2 per cent for non-breastfeeding women or <5 per cent for breastfeeding women		Congenital syphilis cases per 100,000 live births ≤50		≤0.1%	
Afghanistan	45.5	2022	NA	NA	0.39	2020
Algeria	27.2	2022	NA	NA	0.08	2020
Bahrain	NA	2022	NA	2018	0.03	2020
Djibouti	16.4	2021	NA	NA	0.26	2020
Egypt	28.8*	2022	NA	NA	0.20	2020
Iran (Islamic Republic of)	33.0*	2022	NA	2018	0.05	2020
Iraq	NA	2022	NA	NA	0.29	2020
Jordan	NA	2022	NA	NA	0.56	2020
Kuwait	NA	2022	NA	NA	0.03	2020
Lebanon	26.3*	2022	NA	NA	0.07	2020
Libya	19.9*	2022	NA	NA	0.43	2020
Morocco	10.4**	2022	11**	2022	0.16	2020
Oman	<2.0	2021	1.18	2019	0.13	2020
Pakistan	44.8*	2022	NA	2018	0.91	2020
State of Palestine	NA	2021	NA	NA	NA	NA
Qatar	NA	2022	9	2021	0.05	2020
Saudi Arabia	24.9	2022	0	2018	0.00	2020
Somalia	28.0	2021	NA	NA	6.32	2020
Sudan	38.8	2022	NA	NA	1.66	2020
Syrian Arab Republic (the)	NA	2022	NA	NA	0.69	2020
Tunisia	28.8*	2022	NA	2018	0.12	2020
United Arab Emirates (United Arab Emirates)	12.0	2022	3.10	2019	0.02	2020
Yemen	34.0	2022	NA	NA	1.76	2020
Regional	**32**	**2022**	**NA**	**NA**	**0.8**	**2020**
					0.3	**2022**
Global	**11**	**2022**	**4.9**	**2014**	**0.9**	**2020**

Green	Target achieved
Orange	Target not achieved

Sources: UNICEF SOWC 2023, UNAIDS GAM 2023, * Data from final spectrum file ** Data from spectrum and national road map ***Number of congenital syphilis/100,000 live births in the 12-month reporting period.[23]

23 Sources: Global AIDS Monitoring (GAM) report 2023.

4.3 National EMTCT process indicators

Process indicators for EMTCT of HIV and syphilis

ANC coverage for at least one visit was more than 95 per cent in 11 of 23 countries, while coverage for four ANC visits was below 95 per cent in all countries except Bahrain and State of Palestine. There is low overall coverage of HIV and syphilis testing, and very little data on HBsAg testing in ANC settings (Bahrain, Qatar, Saudi Arabia). Only two countries (Oman and United Arab Emirates) have achieved the 95 per cent target for HIV testing in ANC settings; for the 10 other countries that reported on this indicator the rate has ranged from less than 1 per cent (Afghanistan) to 73.2 per cent (the Islamic Republic of Iran). Fourteen countries reported on ART coverage in pregnant women; only three countries (Oman, Saudi Arabia and United Arab Emirates) achieved the target; for the other 11 countries, the ART coverage ranged from 4 per cent (the Sudan) to 64 per cent (Libya).

Data on pregnant women attending ANC who received syphilis testing were available from 13 countries. Two countries achieved the target, Bahrain and Oman with respectively 100 per cent and 99.9 per cent. of pregnant women tested for syphilis in ANC, for the other 11 countries the rate has ranged from 0 per cent (Jordan) to 64.1 per cent (Algeria). More details are found below in **Table 4.**

TABLE 4: PROCESS INDICATORS FOR EMTCT OF HIV AND SYPHILIS, MENA/EM REGION 2021–2022

Countries	ANC coverage at least one visit	ANC coverage at least four visits[a]	HIV testing coverage in ANC		Percentage of HIV-positive mothers receiving ART		Syphilis testing coverage in ANC		Percentage of syphilis-positive mothers receiving BPG	
Data year range	2016–2021	2016–2021	2021–2022		2022		2010–2019		2014–2022	
	(%)	(%)	(%)	Data year	(%)	Data year	(%)	Data year	(%)	Data year
2030 EMTCT targets	≥ 95%	≥ 95%	≥ 95%		≥ 95%		≥ 95%		≥ 95%	
Afghanistan	65	28	<1	2022	16*	2022	14.3	2017	100	2017
Algeria	95	70	5.5	2021	16*	2022	64.1	2014	100	2014
Bahrain	100	100	10.9	2021	NA	2022	100	2018	NA	2019
Djibouti	88	23	0.2	2022	44*	2022	5.6	2014	NA	2019
Egypt	90	83	20.2	2022	18*	2022	NA	NA	NA	2019
Iran (Islamic Republic of)	97	94	73.2	2022	36*	2022	38.1	2019	100	2019
Iraq	88	68	NA	2022	NA	2021	27.2	2010	NA	2019
Jordan	98	92	NA	2022	NA	2021	0	2010	NA	2019
Kuwait	100	NA	NA	2022	NA	2022	NA	2019	NA	2019
Lebanon	96	NA	NA	2022	NA	2022	NA	2019	NA	2019

Countries	ANC coverage at least one visit	ANC coverage at least four visits[a]	HIV testing coverage in ANC		Percentage of HIV-positive mothers receiving ART		Syphilis testing coverage in ANC		Percentage of syphilis-positive mothers receiving BPG	
Data year range	2016–2021	2016–2021	2021–2022		2022		2010–2019		2014–2022	
	(%)	(%)	(%)	Data year	(%)	Data year	(%)	Data year	(%)	Data year
Libya	93	NA	NA	2022	64*	2022	NA	2019	NA	2019
Morocco	88.5	54	19***	2022	44*	2022	19***	2022	48***	2022
Oman	99	74	>95	2022	>95	2022	99.9	2019	100	2018
Pakistan	91	52	NA	2022	23*	2022	NA	2019	NA	2019
State of Palestine	99	95	NA	2022	NA	2022	NA	2019	NA	2019
Qatar	91	85	NA	2022	NA	2022	NA	2019	100	2022
Saudi Arabia	97	NA	71.4	2022	100**	2022	54.2	2019	100	2022
Somalia	26	6	NA	2022	42*	2022	10.6	2019	46.7	2014
Sudan (the)	79	51	3.2	2022	4*	2022	9.3	2014	NA	2019
Syrian Arab Republic (the)	88	64	NA	2022	NA	2022	NA	2022	NA	2019
Tunisia	95	84	7.2	2022	41*	2022	NA	2022	NA	2019
United Arab Emirates	100	NA	100	2022	100**	2022	33.3	2019	100	2022
Yemen	60	25	NA	NA	NA	NA	NA	NA	NA	2019
Regional	**NA**	**NA**	**28** (11 countries)	**NA**	**28**	**NA**	**NA**	**NA**	**NA**	**NA**
Global (SWC, 2023)	**88**	**65**	**NA**		**82**	**2007–2014**	**64**	**2007–2014**	**78**	**2005–2016**

Green	Coverage ≥95%	Yellow	Coverage ≥80% and <95%	Orange	Coverage <80%

*Data from SOWC 2023, ** Data from GAM 2023, ***Data from national road map 2023[24]

a. Indicator ANC4 is not assessed for validation.

Process indicators for EMTCT of hepatitis B

Reporting on hepatitis B vaccination indicators was more consistent. Coverage of hepatitis B-BD was greater than or equal to 90 per cent in 10 of 15 countries (66.7 per cent); the target of HepB3 coverage was achieved for 12 of 23 countries (52.2 per cent). More details are below in **Table 5.**

24 Sources: UNICEF State of the World's Children 2023; UNAIDS Global AIDS Monitoring (GAM) Report 2023, https://data.unicef.org/, https://rho.emro.who.int

TABLE 5: PROCESS INDICATORS FOR EMTCT OF HBV, MENA/EM REGION 2021

Country	HBsAg testing among pregnant women attending ANC services		HepB-BD coverage		HepB3 coverage	
Data year range	(%)	Data year	(%)	Data year	(%)	Data year
EMTCT target for 2030	≥95%	2018–2022 National data	≥90%	2021–2022 WUENIC	≥90%	2022-SWC
Afghanistan	NA	NA	NA	2021	66	2022
Algeria	NA	NA	99	2021	91	2022
Bahrain	100*	2018–2022	97	2022	98	2022
Djibouti	NA	NA	61	2021	59	2022
Egypt	NA	NA	93	2021	96	2022
Iran (Islamic Republic of)	NA	NA	96	2021	98	2022
Iraq	NA	NA	48	2021	78	2022
Jordan	NA	NA	NA	2021	77	2022
Kuwait	NA	NA	96	2022	94	2022
Lebanon	NA	NA	80	2021	67	2022
Libya	NA	NA	NA	2021	73	2022
Morocco	NA	NA	41	2021	99	2022
Oman	NA	NA	99	2021	99	2022
Pakistan	NA	NA	NA	2021	83	2022
State of Palestine	NA	NA	99	2021	95	2022
Qatar	100*	2018–2022	98	2022	98	2022
Saudi Arabia	100*	2018–2022	98	2022	97	2022
Somalia	NA	NA	NA	2021	42	2022
Sudan (the)	NA	NA	NA	2021	84	2022
Syrian Arab Republic (the)	NA	NA	NA	2021	48	2022
Tunisia	NA	NA	74	2021	95	2022
United Arab Emirates	NA	NA	95	2022	95	2022
Yemen	NA	NA	NA	2021	72	2022
Regional	**NA**	**NA**	**33**	**2021**	**88**	**2022**

Green	Coverage ≥90%	Yellow	Coverage ≥80% and <90%	Orange	Coverage <80%

* Data extracted from Am J Trop Med Hyg 2023, pp. 1–4. doi:10.4269/ajtmh.23–0587. [Reference 41].[25]

25 UNICEF State of the World's Children 2023. https://data.unicef.org/, https://rho.emro.who.int

5. REGIONAL PROGRESS ON TRIPLE EMTCT

In order to move towards validation for EMTCT for one, two or three infections, countries have to satisfy requirements in four areas: (i) programme and service delivery, (ii) data quality and information, (iii) laboratory information system, and (iv) human rights, gender equality and community engagement.

5.1 PMTCT programme and service delivery

Overall, PMTCT indicators (**Annexes 6 and 7**) are still weak throughout the region – six countries have not reported any data, eight countries reported on two indicators or less, and no country reported full data. Data on hepatitis B (6–10 countries) and syphilis (4 countries) indicators are less reported than data on PMTCT of HIV (8–14 countries). Only five countries out of 23 reported having a national plan for EMTCT of HIV; these countries are Afghanistan, Egypt, Morocco, Oman and Saudi Arabia.

A comprehensive strategic approach to the prevention of HIV infection in infants and young children includes the following four pillars:[26]

- Primary prevention of infection and vertical transmission: testing, case finding, treatment and primary prevention for HIV, syphilis and HBV infection in non-pregnant, pregnant and breastfeeding women and girls of childbearing age.
- Sexual and reproductive health (SRH) linkages and integration: appropriate counselling, care, support, and linkages for SRH services for women and girls living with HIV and/or HBV and/or seropositive for syphilis to (i) assess fertility intentions and support pregnancy planning and prevention and (ii) prevent, diagnose, and treat other sexually transmitted infections (STIs).
- Essential maternal EMTCT services: appropriate maternal testing, prophylaxis and treatment for women and girls living with HIV and/or HBV and/or sero-positive for syphilis for prevention of transmission to infants.

26 Introducing a framework for implementing triple elimination of mother-to-child transmission of HIV, syphilis and hepatitis B virus; WHO 2023.

- Infant, child, and partner services: timely testing, prevention, treatment, care and support for exposed infants, infected children, household contacts and partners of women and girls living with HIV and/or HBV and/or sero-positive for syphilis.

Primary prevention and access to family planning

Family planning services are still underdeveloped in the MENA/EM region. At the regional level, the percentage of women (aged 15–49) whose demand for family planning is satisfied and the coverage of MNCAH services are respectively 69 per cent and 70 per cent. It should be noted that 17 countries are below the regional rate for contraceptive provision for women aged 15–49 and 11 countries are below the regional average for MNCAH service coverage (**Annex 8**).

The level of comprehensive knowledge of HIV among adolescents aged 15–19 is very low in the 14 countries that reported on this indicator, for both men (0–23 per cent) and women (1–26 per cent). SRH services for adolescent girls aged 15–19 are also very weak. Eleven countries reported on the proportion of women of reproductive age (15–49 years), who are sexually active and who have their need for family planning satisfied with modern methods, with low coverage of these services (<70 per cent) in 10 countries. In addition, only one country reported on indicators for informed decisions regarding sexual relations, contraceptive use and reproductive health care (**Annex 9**).

Data about testing for HIV, syphilis and hepatitis B focused on girls and non-pregnant women, aged 15–49, as well as those for condom use among adolescents aged 15–19 with multiple partners, and the use of PrEP or PEP for young women are not available. It should be noted that parental consent is still a major issue for adolescents to access testing and contraception in almost all countries in the region.

Antenatal care

ANC visits: ANC visits are the main point of entry for HIV, syphilis and hepatitis B testing. Pregnant women should attend at least four ANC visits during the three trimesters of pregnancy; more visits may be required depending on co-morbidities and the occurrence of complications during pregnancy. From 2016 to 2021, 11 of 23 countries (47.8 per cent) achieved the target of 95 per cent coverage for at least one ANC visit. For the first ANC visit (ANC-1), eight countries are close to achieving the 95 per cent target, with a coverage ranging from 80 per cent to 94.9 per cent, whereas all countries except five (Egypt, the Islamic Republic of Iran, Jordan, Qatar, Tunisia) are far from reaching the 95 per cent target for four ANC visits. The drop-off from ANC-1 to ANC-4 is significant (≥20 per cent) in 11 of 18 countries (**Table 4**). It should be mentioned that only the ANC-1 coverage is required for the validation.

BOX 2: PMTCT SERVICE DELIVERY FOR VULNERABLE MIGRANT POPULATIONS

To achieve elimination and to protect the health of women and their infants, PMTCT services should be delivered to all pregnant women, especially those from vulnerable populations. In Libya, approximately 12 per cent of pregnant women living with HIV followed in Libya are from the migrant population. This finding highlights the importance of tailoring PMTCT interventions to address the specific needs of this population. Currently, PMTCT interventions are covered by the public sector or by international NGOs (IOM, MSF).

Testing for HIV, syphilis and HBV: A substantial number of countries do not have data available on testing of ANC attendees for the three diseases. Program indicators for triple EMTCT require testing coverage for pregnant women of at least 95 per cent for HIV, syphilis and hepatitis B. Only 12 countries reported data on the percentage of pregnant women who know their HIV status. This ranged from less than 1 per cent in Afghanistan to >95 per cent in Oman and 100 per cent in United Arab Emirates. Aside from Oman and United Arab Emirates, the highest percentages were reported by the Islamic Republic of Iran (73.1 per cent) and Saudi Arabia (71.4 per cent). For the other eight countries the percentage ranged from less than 1 per cent to 20.2 per cent, significantly below the target of 95 per cent HIV testing coverage at ANC visits (**Table 4, Annex 7**). The coverage of syphilis testing at ANC visits, during 2010–2019 in 13 countries has ranged from 0 per cent (Jordan) to 100 per cent (Bahrain and Oman).[27] Based on national data, only three countries (Bahrain, Qatar and Saudi Arabia) reported testing all pregnant women for HBsAg during ANC visits (**Table 5**), which might raise some questions about its availability as a routine test in ANC settings and/or the lack of data collection of the test.

Treatment for pregnant women

Treatment of HIV- and syphilis-infected pregnant women: A substantial number of countries do not have data available on treatment coverage for pregnant women found (or known) to be HIV-infected or to have a positive syphilis serology: 14/23 countries for ART, 9/23 countries for treatment of syphilis, and 8/23 countries for the treatment of both diseases. Despite the progress made on ART coverage for adults and adolescents in several countries, ART coverage for pregnant women living with HIV is estimated at only 28 per cent in the region. Data extracted for 14 countries showed only three countries (Oman, United Arab Emirates and Saudi Arabia) are achieving the target of 95 per cent ART coverage for pregnant women. For the other countries, the coverage ranged from 4.0 per cent in the Sudan to 64 per cent in Libya (**Table 4, Annex 7**).[28] The data are scarce and out of date about syphilis testing among pregnant women attending ANC services and treatment with benzathine penicillin G (BPG) for those who tested positive. Based on the most recent data (2022), only five countries (Morocco, Oman, Qatar, Saudi Arabia, United Arab Emirates) reported on treatment with BPG for pregnant women who tested positive for syphilis (**Table 4**). However, only four countries out of 23 reported a total number of 53 cases of congenital syphilis in 2022 (**Annex 7**).

Treatment of HBV-infected pregnant women: There is a major gap regarding the main interventions for pregnant women attending ANC to prevent vertical transmission of hepatitis B. In fact, only three countries (Bahrain, Qatar, Saudi Arabia) had a national reporting on HBsAg testing in ANC services (**Table 5**), but no country had reported on tenofovir prophylaxis for eligible pregnant women. In addition, information is lacking on referral of women tested positive for HBsAg for further investigation to identify women in need of antiviral therapy for HBV.

Delivery and postnatal care

Delivery care: Roughly half (12/22) of countries in the region have achieved the target of at least 95 per cent of pregnant women delivered by skilled health care providers; four other countries (Egypt, Iraq, Morocco, Tunisia) are close to doing so, with a percentage varying from 81 per cent to 91.5 per cent (**Annex 8**).[29]

27 Based on reporting from UNICEF and WHO 2010–2019.

28 UNICEF State of the World's Children 2023, UNAIDS Global AIDS Monitoring Report 2023.

29 UNICEF Maternal and Newborn Health Coverage Database December 2022, UNICEF State of the World's Children (SOWC), 2023.

Infant testing: The number of infants born to women with HIV who received a virological/nucleic acid test for HIV (NAT) within two months of birth was reported by 14 countries; 657 infants received the test in these 14 countries, a range of 5.0 per cent to 100 per cent of infants.[30] Except United Arab Emirates and Saudi Arabia, the percentage of infants who received a virological test for HIV within two months of birth was less than 50 per cent (**Annex 7**). An estimated 16,940 children need ART in 11 countries (**Annex 4**). According to UNICEF, the coverage of EID is estimated at 15 per cent in the MENA region.[31]

Infant HIV prophylaxis: Most countries' guidelines recommend PEP for newborns within 4–6 hours after birth, based on AZT alone if the risk of HIV transmission is estimated low, or combined with nevirapine where the risk of HIV transmission is estimated high.

Infant feeding: Since breastfeeding is one of the most effective ways to ensure child health and survival, WHO and UNICEF recommend that children initiate breastfeeding within the first hour of birth and be exclusively breastfed for the first six months of life. For most of national guidelines on the use of ART, comprehensive recommendations on PMTCT include safe feeding of newborns of mothers living with HIV. Some countries' guidance on safe feeding are in line with WHO and UNICEF recommendations for breastfeeding for women with low risk of HIV transmission (pregnant woman stable on ART with sustained viral suppression) and formula feeding for women with high risk of HIV transmission. Some other countries recommend formula feeding for all women living with HIV.

Hepatitis B immunization of infants: The two main vaccines administered at birth are the Bacille Calmette-Guérin (BCG) vaccine (in countries with moderate to high prevalence of tuberculosis) and the hepatitis B vaccine. The coverage of timely hepatitis B-BD vaccine is well below the global target of 90 per cent, or is not reported, in 13 of 23 countries (56.5 per cent) in the region. The remaining 10 counties (43.5 per cent) have achieved the global target. The coverage of the hepatitis B-birth-dose was between 80–89.9 per cent for one country (Lebanon) and less than 80 per cent for four countries (Djibouti, Iraq, Morocco, Tunisia). The coverage of hepatitis B third-dose is still low in almost half of all countries. A total of 12 countries (52.2 per cent) had at least 90 per cent coverage for hepatitis B third-dose; two countries had a coverage between 80–89.9 per cent (Pakistan, the Sudan), and nine countries had coverage of less than 80 per cent (**Table 5**).

Health system funding

To achieve triple EMTCT, countries must strive for PMTCT services that are easy to access, affordable and free of charge for all populations. Integration of ANC and EMTCT care into health insurance or other mechanisms (third-party payment) can make EMTCT services affordable to all.

Data on the cost of EMTCT interventions were not available for this report, as a result analysis was limited to collecting economic and financial indicators and assessing the capacity of countries to provide free PMTCT care for all populations (**Annex 10**). All interviewed countries stated that all PMTCT/EMTCT interventions are provided free of charge for all populations, including migrants, refugees and displaced people.

30 UNAIDS Global AIDS Monitoring Report 2023 and UNICEF State of the World's Children 2023.

31 UNICEF State of the World's Children 2023.

TABLE 6: SUMMARY OF PMTCT SERVICE COVERAGE IN MENA/EM REGION[32]

	HIV	Syphilis	Hepatitis B
Screening	Routine testing with dual HIV/Syphilis RDT at ANC-1 or as early as possible in pregnancy thereafter.		Routine testing with HBsAg RDT
Interventions	Rapid initiation of lifelong ART for pregnant women tested positive and confirmed HIV infection. HIV-exposed infant antiretroviral prophylaxis for 6–12 weeks.	Treatment of pregnant women tested positive for syphilis with BPG.	TDF prophylaxis for pregnant women tested positive with high HepB DNA viral load or positive hepatitis B e antigen (HBeAg). HepB vaccine at birth plus two or three additional doses in first year of life.
Coverage in the MENA/EM region	**28** per cent of pregnant women tested for HIV at ANC-1. **28** per cent to 48 per cent pregnant women living with HIV received lifelong ART. **15** per cent of infants born to women living with HIV received a virological test for HIV within 2 months of birth. **49** per cent of children living with HIV (0–14 years) received ART.	**38** per cent of pregnant women tested for syphilis at ANC-1. **90** per cent of pregnant women tested positive for syphilis and received BPG.	**33** per cent of children received timely HepB vaccine birth dose. **82** per cent of children received HepB3 in first year of life.

Data on GNI per capita in USD (2022) were available from 11 countries. Three countries can be classified as high-income countries (GNI per capita: >US$13,845), seven countries can be classified as upper middle-income countries (GNI per capita: US$4,466–13,865), and one country as low middle-income (GNI per capita: US$1,136–4,466).[33] Health expenditure total (per cent of GDP) was less than 10 per cent in 11 of 12 countries. In 2020, among 19 countries, only five Gulf Cooperation Council countries (Kuwait, Oman, Qatar, Saudi Arabia and United Arab Emirates) had a high government health expenditure and low out-of-pocket health spending. It is important to highlight that 16 countries of 23 (69.5 per cent) are dependent on Global Fund financing through country allocations or regional allocation (**Annex 10**). However, mobilizing domestic resources for PMTCT interventions helps to ensure the sustainability of the response and the efficient and cost-effective use of resources.

32 Data in this table is compiled from regional coverage estimates found in UNAIDS Global AIDS Monitoring Report 2023 and UNICEF State of the World's Children 2023.

33 https://cfs.hivci.org/, https://rho.emro.who.int/index.php/Indicator/TermID/66, https://apps.who.int/nha/database/country_profile/Index/en.

5.2 Data quality and information management

Overall, data and reporting on PMTCT interventions and related topics is weak across the MENA/EM region (**Box 3**). All countries reported on less than half of the 95 indicators used by the UNAIDS Global AIDS Monitoring (GAM) Report 2023. The maximum of indicators reported was 39 (41 per cent of indicators); seven countries reported on 25–41 per cent of indicators, nine countries reported on less than 25 per cent of indicators and six countries did not report on any indicator. The least reported indicators are on gender equality and stigma and discrimination. In some countries, women delivering at home without a skilled birth attendant are completely missed in data collection.

Concerning the cascade of care, only one country (Pakistan) reported on more than 75 per cent of indicators, and on PMTCT only three countries (the Islamic Republic of Iran, Saudi Arabia, United Arab Emirates) have done the same (**Annex 6**). The private sector plays a significant role in PMTCT service delivery in the region, and the sector should be included in national EMTCT strategies; however, data collection in this sector is still challenging. Data is also fragmented concerning the role of CSOs and communities in PMTCT interventions.

BOX 3: CHALLENGES WITH DATA COLLECTION ON PMTCT IN THE PRIVATE SECTOR

- Data on women accessing PMTCT interventions through the private sector are not captured in almost all countries, due to limited resources, lack of coordination and clear entry points, absence of electronic data collection.
- In six countries (Djibouti, Egypt, Iraq, Kuwait, Libya, Tunisia), data collection is still based on manual methods and does not include the private sector.
- Electronic data collection (DHIS-2) is available in Djibouti but not functional; its implementation is in progress in Kuwait and Tunisia, and it is not yet available in Egypt, Iraq and Libya. It is not clear how these platforms will involve the private sector.

5.3 Laboratory quality

Implementation of national EMTCT strategies requires an effective national laboratory system to ensure high-quality services to test for HIV, syphilis and HBV, and to provide support to lower-level laboratories. It is important that rapid diagnostic tests (RDT) for HIV, syphilis and hepatitis B are available in ANC settings, and high-quality NAT for EID is available at the most appropriate level of services. It is also essential that countries develop comprehensive standard operating procedures for ANC and EID testing, that define the roles and responsibilities of different levels of laboratories, including internal and external quality assurance. A reliable and affordable supply of tests and other commodities is also essential for the continuity of the testing interventions.

This report is not able to provide an accurate analysis of the laboratory system in the included countries. Available data can only inform on the capacities of testing. Tests for triage and confirming (RDTs and Elisa or chemiluminescence tests) as well as for monitoring of HIV infection in pregnant women (viral load) and for EID (NAT) are available in all interviewed countries. Based on their national guidelines or strategic plans, these tests are also available in most of other countries.

Repeated stock-outs of HIV RDTs were mentioned by two countries (Djibouti, Libya). Both syphilis and hepatitis B testing are not yet well documented. Tests for syphilis are available with some discontinuation in some countries where a duo test for HIV/syphilis is not available. The hepatitis B test (HBsAg) is implemented in only a few countries.

PCR machines are available in all countries, but there are occasional shortages of cartridges for HIV in some countries. Many countries have acquired GeneXpert machines through external (Global Fund) or domestic funds during the Covid-19 pandemic. These machines can be used to improve EID performance, subject to the regular availability of cartridges.

5.4 Human rights, gender equality and community engagement

There was a scarcity of data about human rights and gender equality aspects of EMTCT initiatives. Reducing human rights-related barriers to access HIV services is crucial in the region. In all interviewed countries, stigma and discrimination persist as significant barriers for access to PMTCT services, and for delivery in public health care centres. In a few countries, it is not clear whether HIV testing offered to pregnant women is voluntary and performed only after counselling and obtaining their informed consent.

National regulations in all countries provide the same quality of PMTCT services, at no cost, for non-national pregnant women (migrants, refugees, displaced people). Care for non-nationals is provided in public health care facilities, or via IOM or UNHCR centres, and is funded by domestic and international resources. In one country, only pregnant women refugees and those with permanent residency may receive PMTCT services free of charge. It was not clear whether people who tested positive for HIV would not be deported later.

In 2021, United Nations Member States adopted a political declaration[34] at the United Nations General Assembly High-Level Meeting on AIDS that recognizes the critical role communities play in service delivery. This included goals that, by 2025, community-based organizations (CBOs) should deliver 30 per cent of testing and treatment services, 80 per cent of HIV prevention services for populations at high risk of infection, and 60 per cent of programmes to support societal changes that enable an effective and sustainable HIV response including PMTCT interventions.

Data on community engagement are also scarce. Only six countries (Egypt, the Islamic Republic of Iran, Morocco, Oman, Pakistan and Saudi Arabia) reported on this topic, and only two countries (Morocco and the Islamic Republic of Iran) have a national policy promoting community delivery of ART. In five countries (Egypt, the Islamic Republic of Iran, Morocco, Pakistan and Saudi Arabia), HIV services can be provided by CBOs (**Annex 6**). In the interviewed countries, some CBOs are providing psychological and financial support for pregnant women, but it is not clear whether they are offering testing and treatment for PMTCT (**Box 4**).

34 Political Declaration on HIV and AIDS: Ending Inequalities and Getting on Track to End AIDS by 2030, UNAIDS 2021.

BOX 4. EXAMPLES OF BEST PRACTICE IN THE MENA/EM REGION

- **Djibouti:** "Solidarité féminine" is a CSO in Djibouti working in the field of HIV. The president is a pediatrician in the private sector. The organization supports PMTCT interventions by providing free care and follow-up for all infants exposed to HIV until defining the final status of infants at 18 months. "Solidarité féminine" also provides free formula milk for all newborns for the first six months.
- **Tunisia:** Only one CBO is involved in raising women's awareness of PMTCT and supporting pregnant women living with HIV and their children. It is engaged in referral of pregnant women who test positive for HIV for early ART initiation, and thereafter to MNCH services for delivery. Thanks to funding from the Global Fund, the CBO is also offering baby diapers and formula milk for six months.
- **Regional:** MENARosa is a regional network dedicated to women living with HIV in the MENA region based in Lebanon. In 2023, MENARosa, conducted with its partners in Egypt and Tunisia, 20 encounters between health care providers and women living with HIV who felt encouraged to share experiences in a safe space, to reduce stigma and discrimination in healthcare settings.

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6. SUMMARY OF CHALLENGES AND OPPORTUNITIES

Progress has been made in some countries towards achieving dual or triple EMTCT through universal access to improved quality reproductive and MNCAH services (**Box 5**). However, broadly across the region integration of PMTCT services into MNCAH services and healthcare systems remains varied, lacking or poorly documented. A lack of political commitment for EMTCT of HIV, inadequate domestic funding, and low levels of external financing for PMTCT interventions also present as challenges.

The major bottlenecks across the MENA/EM region, which vary amongst countries, include:

Programme service delivery

- Low coverage of family planning (≤60 per cent) in half of included countries.
- Low coverage of ANC services (ANC-1), and of testing for HIV (28 per cent) and syphilis (38 per cent). Very little data on HBsAg testing.
- High number of pregnant women presenting late to ANC.
- Gaps in linking pregnant women to treatment and retention in care, and weak supply chains, resulting in low coverage of treatment for HIV and syphilis.
- Lack of male partner involvement in counseling and testing.
- Challenges with HIV case finding pregnant women and their sexual partners from key and vulnerable population.
- Limited information on strategies for hard-to-reach pregnant women.
- Data on EID of HIV are not always available, and coverage is very low (15 per cent).

- Low coverage of timely hepatitis B birth-dose (33 per cent) and hepatitis B third-dose vaccine (82 per cent).

- Programmes are not sufficiently tailored to address the specific care, support and SRH needs of adolescents and young women who are pregnant.

- Absence of coordination and standardization of services between public and private sectors.

Data collection

- Very weak and fragmented data collection, resulting in data quality issues and weak reporting against PMTCT indicators.

- Limited data on syphilis testing and treatment with BPG.

- Very limited data on HBsAg testing and TDF prophylaxis.

- Absence of data collection and reporting from the private sector, and lack of coordination, on PMTCT service delivery.

Laboratory quality services

- Weak supply chains, causing shortages in rapid tests for HIV and syphilis, viral load cartridges for EID, and ART stock-outs.

- Uncertainty about the routine offer of syphilis and HBsAg rapid tests.

Community engagement, gender equality and human rights

- Persistence of HIV-related stigma and discrimination against people living with HIV, especially pregnant women, including in health care facilities and maternities.

- Punitive and other obstructive laws for key and vulnerable populations.

- Limited community engagement/lack of documentation of community-led approaches.

- Lack of funding for CSOs/CBOs, leading them to cease activities.

- Very limited access of adolescents to SRH services and PMTCT interventions; parental consent issues.

- In a few countries, uncertainty about the voluntary basis of the HIV test and obtaining consent after counselling.

BOX 5: PROGRESS TOWARDS PMTCT INTEGRATION

In Egypt, PMTCT interventions are partially integrated into MNCAH services. Currently, 40 per cent to 50 per cent of pregnant women attending ANC have access to testing services. A recent presidential initiative aims to integrate testing for HIV, syphilis and hepatitis B into ANC visits, and to increase routine testing and counselling in primary public health care facilities.

Opportunities for improvements in triple EMTCT efforts in the region include:

- Ensure high level political commitment to mobilize sufficient domestic funds to decentralize services and to expand the coverage of PMTCT interventions.
- Invest in integration of EMTCT services into health systems, including primary health care facilities and involving private sector healthcare providers.
- Improve supply chain management to ensure availability of different tests and medicines.
- Increase access to routine testing for HIV, syphilis and HBV for all pregnant women as part of routine ANC services.
- Invest in robust, digitalized and integrated national data collection systems, including good connection between primary health care facilities, linked laboratory systems to national information systems and collecting data from private sector.
- Empower and strengthen communities in PMTCT interventions.
- Tackle stigma and discrimination in health care facilities, especially for HIV.
- Facilitate access of migrant pregnant women to PMTCT interventions.

7.
ROAD MAP FOR COUNTRIES FOR TRIPLE EMTCT

The table below provides key actions that countries can take towards triple EMTCT goals.

Countries were divided into three groups according to their capacities to achieve the targets:

- Group 1 includes five countries at or near achieving targets,
- Group 2 includes eight countries on track to achieve the targets with some gaps, and
- Group 3 includes 10 countries with major gaps or low coverage of interventions (**Table 7**).


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TABLE 7: ROAD MAP FOR COUNTRIES

PMTCT programme and service delivery				Data quality and information management	Laboratory quality	Human rights, gender equality and community engagement
MNCAH services	HIV services	Syphilis and HBV services	Health systems financing			
All countries						
Reinforce and/ or implement integration of EMTCT interventions with MNCAH services.	Increase HIV testing during ANC first visit.	Implement HBsAg testing in ANC.	Advocate for stronger political commitment for EMTCT agenda.	Implement an electronic integrated Health Information System (HIS) including PMTCT services.	Guarantee the availability of different tests through an effective supply chain.	Collect evidence of community engagement in EMTCT interventions.
Improve ANC-4 coverage.	Improve coverage and collect data on pregnant women receiving ART and EID. (Exceptions: Saudi Arabia, EID target met 100%; UAE: all targets achieved).	Implement Syphilis testing in ANC.	Advocate for the mobilisation of domestic funds.	Improve GAM indicator reporting.		More evidence on human rights area and gender equality. Strengthen the fight against stigma and discrimination in health care facilities and maternity centres.
Group 1: At or near achieving targets (5 countries): Kuwait, Qatar, Oman*, Saudi Arabia and the United Arab Emirates *Oman has achieved EMTCT of HIV and syphilis.						
High quality of services, most or all targets are achieved, except ANC-4 coverage (lack of data). Bahrain included here.	Strive to improve HIV testing coverage in ANC-1 (except UAE).	Implement HBsAg testing in ANC-1 or strive to improve coverage in Kuwait, Oman and UAE. Implement syphilis testing in ANC-1 in Kuwait and Qatar. Improve coverage in Saudi Arabia and UAE.	Maintain and strengthen high domestic financial contribution with high government health expenditure and low out-of-pocket health spending.	Strengthen integration and data collection in public and private sector. Develop a readiness assessment for validation in the short term.	Strengthen laboratory capacities, improve EID coverage and reporting (Kuwait, Qatar).	Increase community engagement.

PMTCT programme and service delivery				Data quality and information management	Laboratory quality	Human rights, gender equality and community engagement
MNCAH services	HIV services	Syphilis and HBV services	Health systems financing			
Group 2: on track with some gaps (8): Algeria, Bahrain, Egypt, Iran, Lebanon, Libya, Morocco, Tunisia						
Medium quality of services; targets mainly achieved for ANC-1 and skilled attendant at delivery, not achieved for Hep-B vaccine. Improve ANC coverage, skilled attendant at delivery, HepB vaccine coverage.	Remove barriers to access ANC and testing.	Implement and/or improve coverage of HBsAg and syphilis testing in ANC-1.	Medium domestic contribution and Global Fund allocation for HIV. Need to increase domestic funding for EMTCT.	Implement policies for triple EMTCT with robust data collection system. Strengthen integration and data collection in public and private sector. Need for intensive support to develop and implement electronic data collection system.	Strengthen laboratory capacities, improve EID coverage and reporting.	Increase community engagement.
Group 3: major gaps or low coverage of interventions (10): Afghanistan, Djibouti, Iraq, Jordan, Pakistan, State of Palestine, Somalia, Sudan, Syria, Yemen						
Low quality of services, all targets are not yet achieved.	Implement HIV testing in ANC-1 and/ or remove barriers to access ANC and testing.	Implement and/or improve coverage of HBsAg and syphilis testing in ANC-1.	Low domestic contribution. Global Fund allocation for HIV. Need for intensive fund mobilization (external and domestic funding).	Develop and implement policies for triple EMTCT with robust data collection system. Implement integration and data collection in public and private sector. Need for intensive support to develop and implement electronic data collection system.	Strengthen laboratory capacities, implement and/ or improve viral load monitoring for pregnant women and EID coverage and reporting.	Increase community engagement.

8. RECOMMENDATIONS

This report has identified a number of short-term, medium-term and long-term recommendations for countries in the region to improve the effectiveness and to maximize the impact of interventions to eliminate the vertical transmission of HIV, syphilis and viral hepatitis.

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TABLE 8: KEY RECOMMENDATIONS FOR THE TRIPLE EMTCT OF HIV, SYPHILIS AND HEPATITIS B

Short-term recommendations (2024)

- Ensure strong advocacy for political leadership, commitment and government investment.
- Promote the integration of EMTCT interventions into reproductive health and MNCAH services and ensure that triple EMTCT interventions are included in essential health services packages.
- Strengthen the collaboration across different programmes in providing EMTCT interventions within MNCAH platforms.
- Improve the management of the health information system through the implementation of digitalized and integrated national data collection systems, including good connection with primary healthcare facilities, MNCAH facilities and laboratories, and collecting data from private sector healthcare providers.
- Update national guidelines on PMTCT services to recommend the implementation of triple elimination of HIV, syphilis and hepatitis B, consistent across public and private health-care facilities, with a robust monitoring system.
- Strengthen documentation of syphilis and HBV testing for pregnant women.
- Develop a national road map for the triple elimination of HIV, syphilis and hepatitis B.
- Build the capacity of health care workers through appropriate training on the triple elimination of HIV, syphilis and hepatitis B.
- Involve affected communities, including pregnant women and their families and people living with HIV and/or chronic hepatitis B, in planning, implementation and monitoring and evaluation of EMTCT services.

Medium-term recommendations (2025–2026)

- For countries that have updated their national guidelines and developed a roadmap during the previous year, begin to implement the triple PMTCT policies.
- For countries that have already implemented PMTCT policies for one, two or three disease(s) for more than two years, take stock of progress and challenges.
- For countries that have made progress during the last three years, develop a readiness assessment for the validation of the vertical transmission for one, two or three disease(s). The checklist for preliminary assessment of EMTCT validation can be found at: https://www.who.int/initiatives/triple-elimination-initiative-of-mother-to-child-transmission-of-hivsyphilis-and-hepatitis-b/validation/process-and-tools.

Long-term recommendations (2027–2030)

- For countries that are ready, it is recommended to apply for WHO-led validation of EMTCT for one, two or three disease(s).
- Ensure the availability of adequate national funds to guarantee the sustainability of EMTCT services, strengthen monitoring and evaluation and plan for a readiness assessment for the remaining disease(s).

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ANNEXES

ANNEX 1: Interview questions

1	Is EMTCT (HIV, Syphilis and Hepatitis B) integrated within the Maternal Newborn and Child Health (MNCH) programme? If so, when did the integration take place? If not, what is the current modality of EMTCT implementation and funding for the EMTCT programme?
2	Has there been an EMTCT (HIV, Syphilis and Hepatitis B) assessment conducted during the past three years? If so, what were the main findings and challenges? If no, is an assessment is planned in the near future?
3	Is there a policy/roadmap for PMTCT of HIV, of Syphilis, of Hepatitis B, of dual/triple EMTCT or is there a plan to develop a strategy? Could you please share a copy of the strategy, if available?
4	Has an effective P/EMTCT (dual/triple elimination) strategy been implemented in the country? If so, since which year? If so, what are the main interventions? and the relevant outcomes?
5	Is HIV testing offered at the first ANC? If yes, is it included in the MNCH benefit package?
6	Is syphilis testing offered at the first ANC? If yes, is it included in the MNCH benefit package?
7	Is the HBsAg testing offered at the first ANC? If yes, is it included in the MNCH benefit package?
8	Is there a policy for tenofovir (TDF) hep B prophylaxis for pregnant women?
9	Is there a policy for syphilis treatment (Benzathine penicillin G) of pregnant women tested positive for syphilis?
10	Are laboratory services (PCR, GeneXpert, POC, DBS samples, etc.) for Early Infant Diagnosis (EID) for HIV-exposed infants available and easily accessible? Is there a national algorithm for EID (birth testing, six-week testing, ETC.)?
11	Is there a policy of antiretroviral prophylaxis for infants exposed to HIV?
12	Is there a policy for hepatitis B vaccination for infants including a birth dose within 24 hours?
13	Is there a policy for antiretroviral treatment for infants infected with HIV?
14	What regulations/mechanisms currently exist to cover non-nationals? Is it free or out of pocket?
15	Is there a country relevant data on P/EMTCT? Is there a mechanism for coverage and utilization of antenatal and postnatal services, non-nationals/migrant, refugee and IDP populations data?
16	How are data collected for pregnant women and children? Is the data reported into the UNAIDS Global AIDS Monitoring system?
17	What are the strengths/best practices of the current strategy?
18	What are the current main challenges to improve or to develop and implement P/EMTCT strategy?
19	What are the opportunities for improvement? Specify areas (e.g: programme service delivery, data and information system, laboratory system, community engagement, etc.) that you planning/considering to improve over the next two years (2023 – 2025)
20	Are there any bottlenecks in the areas of: a) Programme and service delivery; b) Data and information system; c) Laboratory Management and information system and, d) Community engagement? If so, what are they?
21	Is the community engaged in the delivery of PMTCT services? If so, what are its areas of engagement? If not, what roles can the community play? How do you plan to engage them?
22	What are the countries urgent needs to develop and implement P/EMTCT strategy in coordination with the MNCH department?
23	Do you think that your country could consider moving towards being WHO certification/validation for EMTCT of HIV and/or Syphilis and Hepatitis B. If not, what specific actions are needed for the next two years (2023 – 2025)? What level of coordination with MNCH/other sectors or funding is required?
24	Could you please share the last National Strategic Plan for HIV/AIDS, STIs and Hepatitis?

ANNEX 2: Estimated burden of HIV, hepatitis B and syphilis, MENA/EM region

Countries	HIV prevalence among adults aged 15–49 years	Estimated number of people living with HIV	Pregnant women attending ANC who received syphilis testing (year).	Pregnant women attending ANC who received syphilis testing and who had a positive syphilis serology	Pregnant women attending ANC who had a positive syphilis serology and who were treated adequately	HBsAg prevalence in the general population (all ages)
	%	Numbers	% (year)	% (year)	% (year)	%
Data year*	2022	2022	2010–2019	2009–2021	2014–2019	2020
Afghanistan	<0.1	12,000	14.3 (2017)	0.3 (2019)	100 (2017)	0.3
Algeria	<0.1	28,000	64.1 (2014)	0.2 (2014)	100 (2014)	NA
Bahrain	0.1*	<500*	100 (2018)	NA	NA	0.02
Djibouti	0.7*	6,000*	5.6 (2014)	8.1 (2010)	NA	0.43
Egypt	<0.1	34,000	NA	NA	NA	0.15
Iran (Islamic Republic of)	<0.1	46,000	38.1 (2019)	0 (2019)	100 (2019)	0.02
Iraq	<0.1	4,000	27.2 (2010)	0 (2019)	NA	0.12
Jordan	<0.1	<1,000	0 (2010)	0 (2009)	NA	0.15
Kuwait	<0.1	<1,000	NA	NA	NA	0.02
Lebanon	<0.1	2,600	NA	NA	NA	0.05
Libya	0.2	7,900	NA	NA	NA	0.38
Morocco	<0.1	21,000	38.4 (2019)	0.3 (2019)	86.7 (2019)	0.11
Oman	<0.1	2,500	100 (2019)	0 (2018)	100 (2018)	0.11
Pakistan	0.2	270,000	NA	NA	NA	0.70
State of Palestine	ND*	NA*	NA	NA	NA	NA
Qatar	<0.1	<1,000	NA	NA	NA	0.04
Saudi Arabia	<0.1	11,000	54.2 (2019)	0 (2019)	100 (2019)	0
Somalia	<0.1*	7,700*	10.6 (2019)	4.1 (2019)	46.7 (2014)	5.68
Sudan (the)	0.1	41,000	9.3 (2014)	2.3 (2010)	NA	1.63
Syrian Arab Republic (the)	<0.1	<1,000	NA	NA	NA	1.14
Tunisia	<0.1	7,100	NA	NA	NA	0.09
United Arab Emirates	<0.1	1,600	33.3 (2019)	0.1 (2019)	87.5 (2019)	0.01
Yemen	<0.1	9,500	NA	0.35 (2010)	NA	2.25
Regional	**<0.1 [<0.1–0.7%] (23 countries)**	**586,000 (23 countries)**	**38 [0–100%] (13 countries)**	**1.2 [0–8.1%] (13 countries)**	**90 [46.7–100%] (8 countries)**	**0.6 [0–5.68%] (21 countries)**
Global	**0.7**	**39 million**	**NA**	**NA**	**NA**	**NA**

NA: Data not available. * Data of 2021. Source: Global HIV & AIDS statistics - UNAIDS fact sheet, 2022; who.int/data/gho/data/indicators

ANNEX 3: Estimated number of pregnant women and children needing and receiving ART in 2021–2022

Countries	Estimated number of people living with HIV	Estimate number of women living with HIV needing ART	Estimate number of women living with HIV receiving ART	Estimate number of children needing ART	Estimate number of children receiving ART
	Numbers	Numbers	%	Numbers	Numbers (%)
Data year*	2022	2021	2022	2022	2022
Afghanistan	12,000	<500 (<4.2%)	15.0	570	66 (11.6%)
Algeria	28,000	820 (<3%)	26.0	1,300	1,102 (84.7%)
Bahrain	<500*	NA	NA*	NA	NA
Djibouti	6,000*	NA	44.2*	NA	67
Egypt	34,000	520 (1.5%)	27.0	790	337 (42.6%)
Iran (Islamic Republic of)	46,000	<500 (<1.1%)	37.0	1,000	441 (44.1%)
Iraq	4,000	NA	NA	NA	24
Jordan	<1,000	NA	NA	NA	2
Kuwait	<1,000	NA	NA	NA	8
Lebanon	2,600	NA	NA	NA	4
Libya	7,900	<100 (1.2%)	67.7	<200	109
Morocco	21,000	<500 (<2.4%)	63.6	840	719 (85.6%)
Oman	2,500	NA	60.8*	NA	29
Pakistan	270,000	2,700 (1.0%)	12.0	6700	2,796 (41.7%)
State of Palestine	NA*	NA	NA*	NA	NA
Qatar	<1,000	NA	NA	NA	1
Saudi Arabia	11,000	<100 (1%)	100%	<200	85
Somalia	7,700*	NA	42.0*	NA	138
Sudan (the)	41,000	2,200 (5.4%)	4.0**	4600	654 (14.2%)
Syrian Arab Republic (the)	<1,000	NA	NA	NA	NA
Tunisia	7,100	<200 (<2.8%)	40.0%	<200	36
United Arab Emirates	1,600	NA	100%	NA	6
Yemen	9,500	<500 (<5.3%)	24.0%	540	157 (29.1%)
MENA/EM region (23 countries)	**514,300**	**8,640 (total of 11 countries)**	**48 per cent [6.0%-100%] (16 countries) 28 per cent (UNAIDS data)**	**16,940 (total of 11 countries)**	**6,789 (total of 11 countries)**
Global	**39.0 million**	**1.5 million in 2022**		**1.5 million in 2022**	

ND: No Data. * Data of 2021. ** Data from SOWC 2023. Source: UNAIDS factsheets, 2022; who.int/data/gho/data/indicators

ANNEX 4: Summary of impact and process/programmatic target indicators for EMTCT of HIV, syphilis, and HBV

EMTCT IMPACT TARGETS

(Must be the most recent verified data and must be achieved for at least one year)

- MTCT rate of HIV of <2% in non-breastfeeding populations OR <5% in breastfeeding populations (see section 6.2)
- a population case rate of new paediatric HIV infections due to MTCT of ≤50 cases per 100 000 live births
- a case rate of CS of ≤50 per 100 000 live births
- hepatitis B surface antigen (HBsAg) prevalence of ≤0.1% in the ≤5-year-old birth cohort (and older children)[a]
- In countries that provide targeted timely HepB-BD, an additional impact target of HBV MTCT rate of ≤2% should be utilized.

EMTCT PROCESS TARGETS

(Must be the most recent verified data and must be achieved for two consecutive years)
Maternal ANC and testing coverage

- ≥95% ANC coverage (at least one visit) (ANC-1)
- ≥95% coverage of HIV testing of pregnant women
- ≥95% coverage of syphilis testing of pregnant women in ANC
- ≥90% coverage of HBsAg antenatal testing among pregnant women.

MATERNAL TREATMENT

- ≥95% ART coverage of pregnant women living with HIV
- ≥95% adequate treatment of syphilis-seropositive pregnant women (see Box 3.6)
- ≥90% coverage with antivirals for eligible HBsAg-positive pregnant women with high viral loads (plus coverage of HBV-exposed babies with hepatitis B immune globulin (HBIg), where available).

INFANT HBV VACCINATION

- ≥90% coverage with three doses of HBV infant vaccinations (HepB3)[b]
- ≥90% HepB timely[c] birth dose coverage (with universal programme) or infants at-risk[d] (with targeted timely HepB-BD).

a Childhood prevalence is a proxy for HBV incidence. The ≤0.1% HBsAg prevalence can be measured among either 5-year-olds, 1-year-olds or those ages 1–5 years, according to existing country surveillance and data collection practices. For regions and countries with a long history of high hepatitis B vaccination coverage (for example, the WHO Region of the Americas) and those that already conduct school-based serosurveys, there could be flexibility to conduct serosurveys in older children, >5 years of age.

b Generally for vaccination, a five-year period of sustainability is required to be able to measure impact via serosurveys (39).

c Timely birth dose (HepB-BD) is defined as within 24 hours of birth.

d At-risk infants are neonates of HbsAg-positive mothers.

Source: WHO global guidance on criteria and processes for validation: Elimination of Mother-to-Child Transmission of HIV, syphilis and hepatitis B virus, 2021.

ANNEX 5: Policies for pregnant women testing and treatment in antenatal care

Countries	HIV testing and treatment	Syphilis testing	HBsAg testing	TDF pro-phylaxis	Early infant diagnosis	Family planning	Sources
Afghanistan	Yes, retesting if key popula-tions.	No	No	No	Yes	Yes	Consolidated Guidelines on use of Antiretroviral Drugs for Treating and Preventing HIV Infection, 2022. - National guidelines on HIV testing services, 2022. Hepatitis B Virus Prevention and management. National guideline, 2022.
Algeria	Yes	NA	NA	NA	NA	NA	National Strategy for elimination of mother to child transmission of HIV, 2013-2015. National Strategic Plans for HIV/AIDS and STIs, 2020-2024.
Bahrain	NA	NA	Yes	Yes	NA	NA	National policy for antenatal screening for HBsAg
Djibouti	Yes	Yes	Yes	Yes	Yes	Yes	National guidelines for the use of ARV for treatment and prevention, 2021. Strategy for triple EMTCT of HIV, syphilis, and hepatitis B, 2023.
Egypt	Yes	Yes	Yes	Yes	Yes	Yes	National guidelines for the use of antiretrovirals for treatment and prevention, 2021.
Iran	NA	NA	NA	NA	NA	NA	
Iraq	Yes	Yes	Yes	Yes	Yes	Yes	Consolidated Guidelines on use of Antiretroviral Drugs for Treating and Preventing HIV Infection, 2022.
Jordan	Yes	No	No	No	Yes	NA	Consolidated Guidelines on use of Antiretroviral Drugs for Treating and Preventing HIV Infection, 2018.
Kuwait	Yes	Yes	Yes	Yes	Yes	NA	National policy for HIV testing and treatment. National policy for antenatal screening for HBsAg.
Lebanon	Yes	NA	NA	NA	Yes	NA	National guidelines for diagnosis and management of PLHIV, 2016.

Countries	HIV testing and treatment	Syphilis testing	HBsAg testing	TDF pro-phylaxis	Early infant diagnosis	Family planning	Sources
Libya	Yes	Yes	Yes	No	Yes	NA	Consolidated Guidelines on use of Antiretroviral Drugs for Treating and Preventing HIV Infection, 2022.
Morocco	Yes	Yes	Yes	Yes	Yes	Yes	National guidelines for prevention of mother to child transmission of HIV, hepatitis and congenital syphilis, 2023.
Oman	NA	NA	NA	NA	NA	NA	
Pakistan	Yes	Yes	Yes	Yes	Yes	Yes	Consolidated Guidelines on use of Antiretroviral Drugs for Treating and Preventing HIV Infection, 2023.
State of Palestine	NA	NA	NA	NA	NA	NA	
Qatar	NA	NA	Yes	Yes	NA	NA	National policy for antenatal screening for HBsAg.
Saudi Arabia	Yes	Yes	Yes	Yes	Yes	Yes	The Saudi midwifery clinic standards, 2021. The Saudi guidelines for HIV treatment, 2022.
Somalia	Yes	Yes	No	No	Yes (NAT at 4-6 weeks)	Yes	Chronic HIV care with antiretroviral therapy and prevention,2020.
Sudan	Yes	Yes	No	No	Yes	Yes	National guidelines on the use of antiretroviral drugs for treating and preventing HIV infection, 2021.
Syria	Yes	Yes	Yes	Yes	Yes	NA	Treatment protocols for PLHIV, 2023.
Tunisia	Yes	Yes	Yes	Yes	Yes	Yes	Consolidated guidelines for HIV prevention, diagnosis and prevention, 2020.
UAE	Yes	Yes	Yes	NA	NA	NA	UAE-standards for obstetric and neonatal services-2018
Yemen	Yes	Yes	No	No	Yes	Yes	Consolidated guidelines for HIV prevention, diagnosis and prevention, 2022.
Number of countries	**14**	**12**	**9**	**7**	**14**	**10**	

ANNEX 6: Number and percentage of PMTCT indicators with new data available

Countries	Overall	Testing & cascade of treatment	PMTCT interven-tions	Gender equality	Community leadership	Stigma and discrimina-tion	Universal Health Coverage
Data year	2022	2022	2022	2022	2022	2022	2022
Number of total indicators	95	12	8	6	1	14	13
Afghanistan	30 (31.6%)	7 (58.3%)	5 (62.5%)	1 (16.7%)	0 (0%)	1 (7.1%)	4 (30.8%)
Algeria	NA	NA	NA	NA	NA	NA	NA
Bahrain	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Djibouti	19 (20%)	5 (41.7%)	3 (37.5%)	0 (0%)	0 (0%)	0 (0%)	3 (23.1%)
Egypt	37 (38.9%)	6 (50%)	5 (62.5%)	1 (16.7%)	1 (100%)	1 (7.1%)	6 (46.2%)
Iran (Islamic Republic of)	39 (41.1%)	8 (66.7%)	6 (75%)	1 (16.7%)	1 (100%)	0 (0%)	9 (69.2%)
Iraq	9 (9.5%)	4 (33.3%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1 (7.7%)
Jordan	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Kuwait	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Lebanon	14 (14.7%)	7 (58.3%)	2 (25%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Libya	12 (12.6%)	4 (33.3%)	3 (37.5%)	0 (0%)	0 (0%)	1 (7.1%)	0 (0%)
Morocco	38 (40%)	7 (58.3%)	6 (75%)	1 (16.7%)	1 (100%)	1 (7.1%)	6 (46.2%)
Oman	28 (29.5%)	7 (58.3%)	1 (12.5%)	1 (16.7%)	1 (100%)	1 (7.1%)	8 (61.5%)
Pakistan	35 (36.8%)	10 (83.3%)	2 (25%)	2 (33.3%)	1 (100%)	1 (7.1%)	3 (23.1%)
State of Palestine	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Qatar	16 (16.8%)	5 (41.7%)	2 (25%)	0 (0%)	0 (0%)	0 (0%)	5 (38.5%)
Saudi Arabia	28 (29.5%)	5 (41.7%)	7 (87.5%)	1 (16.7%)	1 (100%)	0 (0%)	8 (61.5%)
Somalia	12 (12.6%)	6 (50%)	3 (37.5%)	0 (0%)	0 (0%)	0 (0%)	2 (15.4%)
Sudan (the)	15 (15.8%)	4 (33.3%)	3 (37.5%)	0 (0%)	0 (0%)	0 (0%)	1 (7.7%)
Syrian Arab Republic (the)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Tunisia	13 (13.7%)	6 (50%)	2 (25%)	0 (0%)	0 (0%)	0 (0%)	1 (7.7%)
United Arab Emirates	21 (22.1%)	5 (41.7%)	6 (75%)	0 (0%)	0 (0%)	0 (0%)	6 (46.2%)
Yemen	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)

Green	≥75%	Orange	≥ 25-74.99%	Red	<25%

Source: UNAIDS Global AIDS Monitoring Report 2023.

ANNEX 7: Indicators on prevention of mother to child transmission

Countries	National plan for EMTCT of HIV	% of PW with known HIV status	Number of infants who received an HIV test within 2 months of birth	% of infants born to women living with HIV receiving a virological test for HIV within 2 months of birth		Estimated % of children newly infected with HIV from MTCT among women living with HIV delivering in the past 12 months	% of PW living with HIV who received ARV medicine to reduce the risk of MTCT of HIV		% of children living with HIV (0-14 years) receiving ARV medicine	Coverage of syphilis testing in women attending ANC services at any visit	% of PW attending ANC with a positive (reactive) syphilis serology treated adequately	Congenital syphilis rate (live births and stillbirth).
Data year	2022	2021–2022	2022	2022		2021–2022	2021–2022		2022	2022	2002	2013–2022
Sources				GAM	SOWC	GAM/ UNICEF/WHO	GAM	SOWC	SOWC			
Afghanistan	Yes	<1	22	100	6.0	45.5	NA	16	12	NA	NA	NA
Algeria	NA	5.5	NA	NA	14	27.2	NA	16	82	NA	NA	NA
Bahrain	NA	10.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Djibouti	NA*	0.2	42	NA	5.0	16.4	NA	44	33	NA	NA	NA
Egypt	Yes	20.2	65	11.8	11	28.8	27.5	18	18	NA	NA	NA
Iran		73.2	100	26.2	25	33	37.5	36	33	NA	NA	NA
Iraq	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Jordan	NA	NA	2	NA	NA	NA	NA	NA	NA	NA	NA	NA
Kuwait	NA	NA	4	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lebanon	NA	NA	6	36	NA	26.3	NA	NA	NA	NA	NA	NA
Libya	NA	NA	38	41.3	49	19.9	67.7	64	30	NA	NA	NA
Morocco	Yes	19*	190	NA	33	14.9	63.6	44	91	NA	48*	11*
Oman	Yes	>95	22	NA	44	<2	>95**	61	57	99.9	100	1.18
Pakistan	NA	NA	100	NA	4.0	44.8	NA	23	53	NA	NA	NA
State of Palestine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Qatar	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100	9
Saudi Arabia	Yes	71.4	30	100	NA	24.9	100	NA	NA	NA	100	0
Somalia	NA	NA	NA	NA	20	28.0	NA	42	15	NA	NA	NA
Sudan	NA	3.2	NA	NA	NA	38.8	NA	4	26	NA	NA	NA
Syria	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tunisia	NA	7.2	26	NA	33	28.8	NA	41	33	NA	NA	NA
UAE	NA	100%	8	100	NA	12	100	NA	NA	NA	100	3.1
Yemen	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Regional	**5 countries**	**<1-100%**	**657 (14 countries)**	**11.8-100%**	**15%**	**32% [12-87.4%] (10 countries)**	**27.5-100% (6 countries)**	**28%**	**49%**	**NA**	**0–100% (4 countries)**	**0–11 (5 countries)**
Global	NA			NA	**62%**	**11%**	NA	**81%**	**52%**	NA		

Green	≥75%	Orange	≥ 25-74.99%	Red	<25%

Sources: Global AIDS Monitoring (GAM) 2023, UNICEF State of the World's Children (SOWC) 2023. https://data.unicef.org/, https://rho.emro.who.int, aidsinfo.unaids.org

* National guidelines for the triple elimination of mother-to-child transmission of HIV, syphilis, and hepatitis B, 2023.
** >95 per cent in 2020–2021.

ANNEX 8: Maternal and newborn and child health indicators

Countries	Women aged 15–49 whose demand for family planning is satisfied with a modern method of contraception (%)	Service coverage on Reproductive and MNCH (%)	Births attended by skilled health personnel (%)	Institutional delivery (%)	Postnatal check (%)	
					For newborn	For mother
Data year range	2016–2021	2019	2016–2021			
			2030 EMTCT targets ≥ 95%			
Afghanistan	47.1	37	62	63	19	37
Algeria	72.4	75	NA	99	92	88
Bahrain	58	80	100	98	NA	NA
Djibouti	51.8	48	40	87	NA	NA
Egypt	81.4	70	91.5	87	14	82
Iran (Islamic Republic of)	76.6	97	99	95	NA	NA
Iraq	57.7	55	91	87	78	83
Jordan	57.1	60	99.7	98	86	83
Kuwait	67.1	70	100	99	NA	NA
Lebanon	62.1	72	98	100	NA	NA
Libya	38.5	60	99	100	NA	NA
Morocco	75.1	73	86.6	86	NA	NA
Oman	40.0	69	99.7	99	98	95
Pakistan	52.3	45	69	70	64	69
State of Palestine	NA	NA	100	99	92	89
Qatar	64.4	74	100	99	NA	NA
Saudi Arabia	46.7	73	99.7	NA	NA	NA
Somalia	4.6	27	38.4	9	NA	NA
Sudan (the)	34.4	44	78	28	28	27
Syrian Arab Republic (the)	61.6	56	96	78	NA	NA
Tunisia	70.7	70	81	100	97	89
United Arab Emirates	60.6	78	100	100	NA	NA
Yemen	48.5	44	44.7	30	11	20
Regional	**69 (MNHC database, 2022)**	**70 (MNHC database 2022)**	**NA**	**NA**	**NA**	**NA**
Global	**67(MNHC database, 2022)**	**78 (MNHC database 2022)**	**82 (data from SOWC,2023)**	**78 (data from SOWC, 2023)**	**67 (data from SOWC,2023)**	**62 (data from SOWC,2023)**

Green	Yellow	Orange
Births attended by skilled health personnel coverage ≥95%	Births attended by skilled health personnel coverage ≥80% and <95%	Births attended by skilled health personnel coverage <80%
≥80% for family planning data, RMNCH service coverage, and postnatal check.	≥60% and <80% for family planning data, RMNCH service coverage, and postnatal check.	<60% for family planning data, RMNCH service coverage, and postnatal check.

Sources: UNICEF Maternal and Newborn Health Coverage Database December 2022, UNICEF State of the World's Children (SOWC), 2023.

ANNEX 9: Sexual and reproductive health indicators

Countries	Comprehensive knowledge of HIV among adolescents aged 15–19 (%)		Condom use among adolescents aged 15–19 with multiple partners (%)		Girls aged 15–19 whose demand for family planning satisfied with modern methods (%)	Informed decisions regarding sexual relations, contraceptive use and reproductive health care among adolescents aged 15–19 (%)
Data year range	2012–2020				2016–2021	
	Male	Female	Male	Female		
Afghanistan	4.0	1.0	NA	NA	21	NA
Algeria	NA	8.0	NA	NA	57	NA
Bahrain	NA	NA	NA	NA	NA	NA
Djibouti	NA	NA	NA	NA	NA	NA
Egypt	5.0	3.0	NA	NA	64	NA
Iran (Islamic Republic of)	NA	NA	NA	NA	NA	NA
Iraq	NA	5.0	NA	NA	44	NA
Jordan	8.0	2.0	NA	NA	31	43
Kuwait	NA	NA	NA	NA	NA	NA
Lebanon	22	26	NA	NA	NA	NA
Libya	NA	NA	NA	NA	NA	NA
Morocco	NA	NA	NA	NA	75	NA
Oman	NA	NA	NA	NA	17	NA
Pakistan	0.0	1.0	NA	NA	23	NA
State of Palestine	NA	NA	NA	NA	NA	NA
Qatar	23	10	NA	NA	NA	NA
Saudi Arabia	NA	NA	NA	NA	NA	NA
Somalia	NA	NA	NA	NA	NA	NA
Sudan (the)	10	8.0	NA	NA	19	NA
Syrian Arab Republic (the)	NA	NA	NA	NA	31	NA
Tunisia	12	13	NA	NA	NA	NA
United Arab Emirates	NA	NA	NA	NA	NA	NA
Yemen	NA	NA	NA	NA	23	NA
Regional	**NA**	**NA**	**NA**	**NA**	**53**	**NA**
Global	**NA**	**NA**	**NA**	**NA**	**52**	**NA**

Green	≥80%	Yellow	≥60% and <80%	Orange	<60%

Sources: UNICEF Maternal and Newborn Health Coverage Database December 2022, UNICEF State of the World's Children (SOWC), 2023.

ANNEX 10: Economic and financial indicators

Countries	GNI per capita in USD (2022)	Health expenditure per capita in USD (2020)	Health expenditure total (per cent of GDP) (2020)	Government health expenditure (%) (2020)	Out-of-pocket health spending (%) (2020)	External funding (EF) for HIV, from Global Fund (GF)
Afghanistan	NA	80	16	7.6	74.8	GF country allocation
Algeria	12,930	215	6	62.6	35.8	GF country allocation*
Bahrain	NA	994	NA	57.7	30.1	No EF
Djibouti	5,780	63	2	50.1	26.6	GF country allocation
Egypt	14,590	151	4	31.9	59.3	GF country allocation
Iran (Islamic Republic of)	18,130	573	5	53.9	37.1	GF country allocation
Iraq	10,820	202	5	54.8	44.8	GF regional allocation (MER)
Jordan	10,890	299	7	49.7	30.2	GF regional allocation (MER)
Kuwait	NA	711	NA	89.9	9.1	No EF
Lebanon	NA	994	8	33.1	44.2	GF regional allocation (MER)
Libya	23,590	NA	NA	NA	NA	No EF
Morocco	9,390	187	6	43.5	42.0	GF country allocation
Oman	NA	678	NA	90.3	4.7	No EF
Pakistan	6,350	38	3	35.6	54.3	GF country allocation
State of Palestine	NA	NA	NA	NA	NA	GF regional allocation (MER)
Qatar	NA	1,716	NA	79.1	9.5	No EF
Saudi Arabia	NA	1,485	NA	68.5	14.4	No EF
Somalia	NA	ND	NA	NA	NA	GF country allocation
Sudan (the)	4,150	23	3	34.2	53.0	GF country allocation
Syrian Arab Republic (the)	NA	NA	NA	NA	NA	GF regional allocation (MER)
Tunisia	12,160	222	6	58.7	36.4	GF country allocation
United Arab Emirates	NA	1,682	NA	62.8	11.6	No EF
Yemen	NA	NA	NA	10.2	81.0	GF regional allocation (MER)

*Transition HIV allocation. MER: Middle East Response.

Sources: https://cfs.hivci.org/, https://rho.emro.who.int/index.php/Indicator/TermID/66, https://apps.who.int/nha/database/country_profile/Index/en

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