Towards the elimination of mother-to-child transmission of HIV

Conceptual framework for the Middle East and North Africa Region
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This document was developed by WHO and UNICEF in consultation with regional experts and the regional UN Task Team on the elimination of mother-to-child transmission of HIV. Several countries in the Region held national stakeholder consultations to review and comment on the draft framework, involving experts from ministries of health, health service providers, nongovernmental organizations and people living with HIV.
Impressive advances in scaling up programmes for the prevention of mother-to-child transmission (PMTCT) of HIV have been made in many low-income and middle-income countries. However, these successes have not been seen yet in the Eastern Mediterranean/Middle East and North Africa (EM/MENA) Region, and special efforts are needed in this Region to prevent mother-to-child transmission of HIV.

A situation analysis shows that while most countries in the Region are characterized as having a low level or concentrated epidemic, the EM/MENA Region is among the top two regions in the world with the fastest growing HIV epidemics. Three countries – Djibouti, Somalia and South Sudan – are already experiencing generalized epidemics.

The health sector response to HIV has been variable; some countries have made great strides to better understand their epidemic and to scale up testing and treatment. However, regional antiretroviral therapy coverage remains low at 13% (2011).

The scaling-up of PMTCT interventions in the Region has been generally slow. Primary prevention efforts may have missed the women who are usually infected by spouses, but who have little, if any, awareness of their risk. Data on unmet need for family planning among all women, including HIV-infected women, are not widely available. HIV testing for pregnant women is not universally offered and coverage for the Region remains one of the lowest in the world. Consequently, coverage of pregnant women receiving the most effective antiretroviral regimen for PMTCT in 2010 was less than 5%.

The Region has embraced the global vision for elimination of new HIV infections among children and keeping their mothers alive. It has adopted the overall global goals of reducing the number of new HIV infections among children by 90% by 2015, and reducing the number of AIDS-related maternal deaths by 50%, also by 2015.

Further, experts in the Region have determined that the globally-endorsed, comprehensive approach to prevention of mother-to-child transmission is essential for the elimination of HIV infections among children. This approach includes primary prevention; preventing unintended pregnancies among women living with HIV; preventing transmission of HIV from HIV-infected pregnant women to their children; and providing treatment, care and support to mothers, children and families living with HIV.

The regional initiative “Towards the elimination of mother-to-child transmission of HIV in the Middle East and North Africa” demonstrates the Region’s commitment to the elimination of new HIV infections among children, and will guide countries to move productively and expeditiously toward this goal. The initiative is not separate from the goal of universal access to prevention, treatment and care but rather forms part of the comprehensive HIV response, and will also contribute to the progress being made to reach the targets of the United Nations Millennium Development Goals 4, 5 and 6.

This document is designed to provide the Region with a common systematic approach to the elimination of mother-to-child transmission of HIV. The framework serves as a tool to advocate for government endorsement of the elimination initiative. The intended audience for this document includes implementing partners, programme managers, clinicians and networks of people living with HIV.
1.1 Background

In 2010, an estimated 3,400,000 children aged less than 15 years were living with HIV in the world and 390,000 children were newly infected in that year alone. (1) The year 2010 saw 250,000 AIDS-related child deaths, and AIDS-related child morbidity continued to challenge health systems to meet the growing needs for AIDS-related health care. Fifty per cent (50%) of adults living with HIV globally are women. The impact of HIV/AIDS on women and children is the rationale for strengthening programmes for the prevention of mother-to-child transmission (PMTCT).

Global commitment to PMTCT has been accelerating, and the 2011 High Level Meeting of the General Assembly on AIDS was a key development in the global AIDS response. As United Nations Secretary-General Ban Ki-moon stated in his report to the General Assembly, “Bold decisions must be taken to dramatically reshape the AIDS response to reach zero new HIV infections, zero discrimination and zero AIDS-related deaths”. United Nations Member States unanimously endorsed the 2011 Political Declaration on HIV/AIDS and its new targets: by 2015, to reduce sexual transmission of HIV and HIV infection among people who inject drugs by half; to increase the number of people on treatment to 15 million; to halve tuberculosis (TB)-related deaths in people living with HIV; and to eliminate mother-to-child transmission of HIV (also known as eMTCT). (2)

The specific target set for eMTCT is to eliminate mother-to-child transmission of HIV by 2015 and substantially reduce AIDS-related maternal deaths.

Progress to date at global level is already considerable. More than 350,000 new HIV infections among children have been averted by providing antiretroviral (ARV) prophylaxis to pregnant women living with HIV. Annual child infections were rising until 2002, when they reached their peak of about 560,000. By 2010 they had fallen to an estimated 390,000. In the past two years alone, rapid increase of coverage of HIV treatment and prevention services for pregnant women resulted in a doubling of cumulative HIV infections averted. In 2010, 48% of pregnant women living with HIV in low- and middle-income countries received effective ARV regimens to prevent new HIV infections among children. (3)

Although characterized as a region with low level epidemic, the annual number of people newly infected with HIV has risen in the Middle East and North Africa, from 43,000 in 2001 to 59,000 in 2010. (4) The antiretroviral therapy (ART) coverage in the Region is one of the lowest in the world and while all countries in the Region offer some PMTCT services; the coverage of these services is very low compared to the global average. Less than 5% of the estimated number of HIV infected pregnant women received the most effective ARV regimens to prevent mother-to-child transmission in 2010.
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1.2 Purpose of this document

This document is designed to provide a common systematic approach to the elimination of mother-to-child transmission of HIV in the Eastern Mediterranean Region of WHO and the Middle East and North Africa (MENA) Region of UNICEF. In this document the region that includes all countries of either the WHO Eastern Mediterranean Region or the UNICEF Middle East and North Africa Region is referred to as EM/MENA Region. The framework was developed following pledges of commitment made by several countries in the Region to HIV/AIDS prevention and treatment. A broad consultative process included regional experts, national HIV programme managers, civil society organizations, international organizations working in the fields of maternal, neonatal and child health, sexual and reproductive health and HIV and representatives of people living with HIV. It is intended to demonstrate and foster the Region’s commitment to the global eMTCT vision, and provide a region-appropriate, systematic approach to eMTCT. It will provide support to ministries of health in advocating for high-level government endorsement and mobilizing funds, agreeing upon priority actions, and improving the scope and scale of PMTCT interventions in order to move toward eMTCT targets.

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1The EM/MENA Region includes Algeria, Afghanistan, Bahrain, Djibouti, Egypt, Islamic Republic of Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Pakistan, occupied Palestinian territory, Qatar, Saudi Arabia, Somalia, South Sudan, Sudan, Syrian Arab Republic, Tunisia, United Arab Emirates and Yemen. Sudan is usually referred to as one country in this framework, since most data available at the time the framework was drafted were generated before the creation of the Republic of South Sudan.
2. Situation analysis

2.1 Epidemiology of HIV in the Region

Most countries in the EM/MENA Region are characterized as having a low level or concentrated epidemic, where HIV is largely confined to key populations most at risk. Three countries—Djibouti, Somalia and South Sudan—are experiencing generalized epidemics. (5)

While the rate of new HIV infections is declining globally, the HIV epidemic in the EM/MENA Region has been rising since 2001, and EM/MENA is currently among the top two regions in the world with the fastest growing HIV epidemics. This region suffers generally from a lack of accurate HIV prevalence and incidence data. However, available data indicate that HIV infection is a result of increased HIV prevalence among key populations at higher risk, along with transmission from those persons to a larger group of lower-risk individuals, including women.

At the end 2010 an estimated 580 000 adults and children were living with HIV in the Region. Among those aged more than 15 years, approximately 40% were women. The vast majority of women in the Region who are HIV-infected acquired their infection from husbands or partners who practise high-risk behaviour. One study from Pakistan established that 10% of female spouses of male injecting drug users (IDU) are HIV-positive. Similarly, the Islamic Republic of Iran is witnessing a rise in sexual transmission from male intravenous drug users to their spouses or sexual partners. Estimated HIV seroprevalence data among antenatal care attendees vary from 0% to 3.4%.

Overall, the number of children younger than 15 years living with HIV and those newly infected with HIV in the Region is increasing.

AIDS-related mortality has almost doubled in the past 10 years among children, as a result of the accelerating epidemic in the region overall, a rise in the number of women living with HIV, and inadequate PMTCT services.

2.2 Maternal, neonatal and child health services as entry points to PMTCT

While an estimated 350 000 new infections among children have been averted globally since 1995, thanks to the provision of ARV medicines to HIV-infected pregnant women,
the scaling-up of PMTCT interventions in the Region has been generally slow. Primary preven-

sion (PMTCT) of HIV have been made in many low-income and middle-income countries.

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Provision of primary health care and effective referral services to mothers and their children, particularly where they are most needed, is a prerequisite to reduction of maternal and child morbidity and mortality. In addition, socioeconomic factors play a large role in maternal and child health. Thus, low level of community awareness about life-saving practices in pregnancy, poverty, illiteracy, fertility and family formation patterns, malnutrition and the low social status of women are undoubtedly among the major underlying causes of maternal and child morbidity and mortality.

PMTCT interventions, and functional services are critical to the success of eMTCT. There is wide variability between countries in the Region with regard to the burden of disease, availability of resources and strength of programmes for maternal, neonatal and child health.

Of the population in the Eastern Mediterranean Region, 12.2% are children under five years of age and 28.6% are women of reproductive age. Availability of and access to health services, and health status of these two vulnerable groups of population, vary significantly among countries in the Region. This has led to uneven progress in reduction of maternal and under-five child mortality and morbidity. Between 1990 and 2010 average maternal and under-five child mortality in the Region was reduced by 42% and 32%, respectively.

Most countries have updated guidelines for PMTCT. However, identifying the pregnant women who are HIV-positive remains challenging. Even in countries where antenatal care coverage is good, women attending antenatal care are not routinely offered HIV testing. There are, nevertheless, encouraging signs. In 2010, Oman offered HIV testing to all women attending antenatal care clinics and 99% of the women opted for the test. Following a pilot study, Morocco has decided to offer HIV testing to all pregnant women, and the Islamic Republic of Iran is reviewing its PMTCT programme with a view of extending HIV testing among pregnant women. Despite the low testing coverage, a review of available PMTCT data (2010) shows that the majority of pregnant women, once identified as being HIV infected, go on to receive effective ARV regimens to prevent mother-to-child transmission of HIV.
WHO and UNICEF have promoted a comprehensive approach to the prevention of mother-to-child transmission of HIV. The approach has four major components (prongs), which encompass a broad range of prevention, care, treatment and support interventions.

These components are:

- primary prevention of HIV infection among women of childbearing age
- preventing unintended pregnancies among women living with HIV
- preventing HIV transmission from a woman living with HIV to her infant
- providing appropriate treatment, care and support to mothers living with HIV and their children and families

The state of current efforts in the Region in relation to the four prongs of PMTCT is summarized below.

**Prong 1: Primary prevention of HIV infection among women of childbearing age**

Limited studies of knowledge of HIV/AIDS in the Region indicate that some basic knowledge of HIV/AIDS is widespread. However, many misperceptions still persist, including the misperception that sexual relations within marriage are completely safe. Current prevention efforts may have missed important opportunities to educate women who do not consider themselves at high risk about the risks of sexual transmission, as well as about mother-to-child transmission of HIV.

HIV prevention interventions among key populations at increased risk of HIV are, for the most part, not well developed in the Region. Consequently, women at increased risk of HIV, namely female sex workers, female injecting drug users and spouses of men at increased risk of HIV, rarely access HIV prevention, treatment and care services.

**Prong 2: Preventing unintended pregnancies among women living with HIV**

Increasing universal access to reproductive health care, including family planning, is one of the targets of Millennium Development Goal No.5. Women living with HIV have special needs for, and rights to, these services. Recent surveys show that the level of unmet family planning need is 11% globally (irrespective of HIV status), and some surveys indicate, in particular, a higher unmet need for women living with HIV. Data on unmet need for family planning for most countries in the EM/MENA Region (irrespective of HIV status) are not readily available. Reported prevalence of modern family planning methods ranges from 1% and 7% in Somalia and Sudan, respectively, to 57% and 59% in Egypt and the Islamic Republic of Iran, respectively.²

Prong 3: Preventing HIV transmission from women living with HIV to their infants

This prong refers to direct interventions to diagnose HIV infection in women and provide quality ARV interventions in order to decrease the risk of vertical transmission. Eliminating PMTCT requires identification of all pregnant women living with HIV, to enable them to receive ARV and other appropriate interventions. In the EM/MENA Region, the percentage of pregnant women who received an HIV test in 2010 was less than 4%. Furthermore, women at increased risk of HIV rarely get the chance of being offered the HIV test due to the lack of services adapted to their needs.

Globally, by 2010, the coverage for the most effective ARV regimens for PMTCT in all low-and middle-income countries was 48%. An additional 11% of women received less effective regimes (single-dose nevirapine). In the EM/MENA Region, less than 5% of the estimated number of HIV-infected pregnant women overall received the most effective ARV regimens to prevent mother-to-child transmission. This low regional average masks the efforts made by some countries. For example, the highest coverage is reported by Oman, at 78%, followed by Morocco at 26%. A few countries in the Region still used single-dose nevirapine in 2010 to prevent mother-to-child transmission of HIV. Similarly, the percentage of infants exposed to HIV who received ARV prophylaxis for PMTCT in the EM/MENA Region is very low, at 2% only.

Prong 4: Providing appropriate treatment, care and support to mothers living with HIV and their children and families

For women who are living with HIV and are clinically eligible for treatment, and for infants who have acquired HIV infection, quality lifelong antiretroviral therapy is essential to reduce AIDS-related morbidity and mortality and improve quality of life. In 2010, the ART coverage in the Region was less than 10%; ART coverage among children was even lower. Some countries have very high attrition in their HIV treatment programmes. There is generally a lack of data on mother–baby pairs who are lost to follow-up in PMTCT programmes.

2.4 Challenges to and opportunities for scaling up PMTCT in the Region

There are numerous challenges to the elimination of mother-to-child transmission of HIV in the Region.

• HIV prevalence in the general population is low in most countries. Most countries - except for member countries of the Gulf Cooperation Council where important data gaps exist - are experiencing expanding concentrated epidemics among most-at-risk populations (mostly males);
• Global guidance is mostly intended for high HIV prevalence settings. Approaches to PMTCT that are cost–effective and appropriate in the context of low level and concentrated epidemics, high stigma and limited resource availability are not well documented.
• The understanding of risk and vulnerability for HIV infection in women who do not themselves engage in high-risk behaviours (e.g. injecting drug use) is still limited among health authorities and the public.
• Poor perception of risk and fear of stigma are among the most important obstacles to utilization of voluntary counselling and testing services. Uptake of counselling and testing is generally low, and even lower for women given the cultural context.
• The success of eMTCT is dependent on a functioning maternal, neonatal and child health programme. In some countries, the antenatal care coverage and the proportion of births attended by skilled health personnel is low, and the health system in general is weak.
• HIV testing of pregnant women as an integrated component of antenatal care services is very limited, even in countries where antenatal care coverage is high.
• Laboratory and diagnostic capacities are still limited in some countries (e.g. CD4 cell count and early infant diagnosis are not readily available).
• Stigma and discrimination are still rife in the Region: this is a major obstacle to the utilization of HIV services.
• Preventing HIV infection among a relatively small number of children may not be perceived as a priority by some policy-makers. The costs of testing large numbers of low-risk pregnant women in order to identify the few who are infected with HIV may appear high and cost-effectiveness has been questioned.
• Integrating PMTCT within reproductive, maternal, neonatal and child health programmes can be challenging, as programmes historically are run vertically.
• Several countries are experiencing civil strife or are in post-crisis situations and have many competing health priorities; PMTCT is currently not considered a priority.
• In a few countries, there is heavy reliance on donor funds and in particular on the Global Fund to Fight AIDS, Tuberculosis and Malaria. The current uncertain funding landscape is a real risk to PMTCT programmes.

There are also opportunities in the Region.

• The few countries implementing large-scale PMTCT interventions demonstrate acceptability of interventions (e.g. HIV testing of pregnant women) despite cultural sensitivities, and recent reports indicate that other countries are now planning to start similar interventions.
• PMTCT interventions, albeit on a limited scale, already exist in a number of countries. They need to be strengthened and expanded to improve quality and coverage.
• Globally, there has been an increase in advocacy for eMTCT and major donor agencies like PEPFAR and the Global Fund have made the elimination of paediatric HIV a priority.
• WHO’s recently published normative guidance on PMTCT and infant feeding in the context of HIV provide an important opportunity to implement highly effective interventions, even in resource-limited settings.
• PMTCT can be an important entry point to treatment and care for women in EM/MENA countries where there is very little testing among women.
• Cost–benefit analyses carried out in other countries with low HIV prevalence have demonstrated that the life-time cost of caring for an HIV-infected child far outweigh the cost of PMTCT interventions.
• Understanding of the nature of local HIV epidemics has increased and, accordingly, so has willingness to develop and invest in enhanced strategies to reach those who are vulnerable and most at risk.
3. Guiding principles

3.1 Country leadership and ownership

Governments, in collaboration with other stakeholders, own and drive the planning and implementation process. Planning for eMTCT at country level is essential to ensure that eMTCT plans take into account local epidemiology, health service capacity and available resources. Countries need to assume ownership of, responsibility for and commitment to their eMTCT plans. To make country ownership a reality, all HIV/AIDS policies and programmes (including eMTCT) must also align with the "three ones": one national action framework, one national coordinating mechanism, and one monitoring and evaluation system at country level.

3.2 Comprehensive approach to PMTCT

PMTCT requires a cascade of interventions that are delivered across different levels, and by different providers. While core PMTCT interventions involve identifying the HIV-infected pregnant women and delivering quality ARV interventions, reaching elimination targets will require efforts in regard to the four prongs of the United Nations comprehensive approach to the prevention of HIV infection among infants.

3.3 Equity in health (addressing the needs of vulnerable and most-at-risk women)

The number of women living with HIV in the Region is rising. The majority of women living with HIV acquire HIV infection from their spouses. (6) However, in some countries there are women engaged in sex work and, to a lesser extent, injecting drugs. Women who are the sex partners of men who practise high-risk behaviour have been particularly neglected, are unlikely to have received HIV/AIDS education, and are unlikely to be aware of their risk. PMTCT services have to be accessible, acceptable and responsive to the needs of all women.

3.4 Shared responsibility and accountability

The responsibility for making eMTCT a reality must be shared between families, communities, health services and national authorities and regional partners. These roles and responsibilities must be specific, transparent and have clear indicators to measure progress and accountability.
4. Vision, goal and programmatic objectives

4.1 Vision and goal

Vision
The global eMTCT vision, as outlined in the global plan, is “women and children alive and free from HIV”. (7) This vision is shared by the EM/MENA Region.

Goal
The goal is to eliminate by 2015 new paediatric HIV infections and improve maternal, neonatal and child survival and health in the context of HIV, where elimination is defined as:

- reduction of new paediatric HIV infections by 90% from the 2009 baseline; and
- reduction of the overall, population-based HIV transmission rate (through PMTCT) to less than 5%.

The goal of elimination of mother-to-child transmission of HIV is bold and ambitious. Working towards this goal will ensure that mother-to-child transmission of HIV is controlled and reduced to a very low level, such that it is no longer a public health problem. The Region will work towards this goal, recognizing that reaching the 2015 targets will be very challenging for some countries. The global and regional eMTCT objectives and targets are intended to act as a catalyst to encourage countries to work towards significantly reducing mother-to-child transmission of HIV.

4.2 Programmatic objectives

The Region will work towards achieving the following objectives.

1. Reduce HIV incidence among women aged 15–49 by 50%.
2. Reduce unmet need for family planning for all women to zero.
3. Increase the number of pregnant women who are tested for HIV and know their result to >90%.
4. Increase the number of HIV-infected pregnant women and exposed infants who receive effective antiretrovirals (ARVs) to reduce mother-to-child transmission of HIV to >90%.
5. Reduce HIV-attributable deaths in infants and children under 5 years of age by 90%.
Reaching elimination targets will be very challenging for those countries in the Region, where the burden of disease is relatively high, health systems need strengthening and resources are limited. Countries will set their own targets, tailored to their specific context and realities. Target-setting at both national and sub-national levels is essential to inform planning processes, ensure a high level of accountability and help with resource mobilization.

Using a phased and incremental approach to implement PMTCT interventions, countries can significantly reduce new paediatric HIV cases and achieve improved maternal and child health.
5. Strategic priorities and key actions

The eMTCT framework is structured around four strategic priorities which are interrelated and mutually supportive. To achieve eMTCT goals, it is important for Member States to address all the strategic priorities when they develop their national plans. The strategic priorities and key actions in this framework are coherent with the priority interventions outlined in the regional strategy for health sector response to HIV 2011–2015.

The strategic priorities are to:

1. ensure commitment to eMTCT
2. improve coverage and quality of PMTCT services
3. ensure access to services for vulnerable women
4. promote integration/linkages with relevant health programmes.

5.1 Ensure political commitment

Main objective

All Member States have national costed eMTCT plans.

The degree to which national AIDS programmes have put recommended strategies into practice in the EM/MENA Region has varied depending on many factors, including the degree of political commitment, and willingness and ability to address culturally and politically-sensitive issues pragmatically.

In June 2011, all Heads of State in the EM/MENA Region endorsed the global United Nations Political Declaration on HIV/AIDS. In addition, in the past two years, many regional stakeholders (policy-makers, civil society organizations and their networks, associations of people living with HIV, religious leaders and United Nations agencies) have expressed a clear commitment to reaching universal access to HIV prevention, treatment, care and support. Examples include the WHO Regional strategy for health sector response to HIV 2011-2015 and the decision of the 37th Regular Session of the Council of Arab Ministers of Health in 2012 to develop a joint strategy to combat HIV/AIDS, and the 2011 Riyadh Charter.
The first intercountry consultation on PMTCT in countries of the EM/MENA Region held in Cairo, Egypt, from 17 to 18 June 2009, called for increased commitment and scaling up of integrated PMTCT programmes, as did the joint WHO/UNICEF intercountry consultation on PMTCT of HIV held in Beirut, Lebanon, on 25 September 2011, in which the national AIDS programme and reproductive/maternal and child health managers and other regional stakeholders recommended that countries in the EM/MENA Region scale up current PMTCT policies, strategies and programmes towards virtual elimination vision and targets.

Country-level political commitment and leadership for eMTCT is emerging, as illustrated by, for example, the support for eMTCT by the First Lady of Morocco and the First Lady of Sudan, and in Pakistan the recent endorsement of the national PMTCT programme by the Association of Obstetricians and Gynaecologists.

**Key actions**

- Address the prevention of mother-to-child transmission of HIV in national HIV plans in all epidemic settings.
- Engage policy-makers in the elimination initiative and mobilize support from all stakeholders.
- Ensure meaningful involvement of women and mothers living with HIV in development of national plans for PMTCT.
- Enhance political leadership and political will for scale-up of health services for women and children, including PMTCT.
- Set national targets and work towards eMTCT goals using a phased and incremental approach.
- Develop costed eMTCT plans, and assure sufficient financial investment in eMTCT initiatives by: increasing domestic investments, mapping and leveraging existing resources.

### 5.2 Improve coverage and quality of PMTCT services

**Main objective**

_More pregnant women receive HIV testing and all HIV-infected pregnant women and exposed infants receive quality ARV interventions to prevent mother-to-child transmission of HIV._

The coverage with existing PMTCT services in the Region is very low. To achieve the goals of eMTCT there is an urgent need to increase the coverage of HIV testing among pregnant women and to ensure that all HIV-infected pregnant women receive effective ARV regimens to prevent mother-to-child transmission.

**Key actions**

- Scale up HIV testing of pregnant women. The key interventions for prong 3 are identification of HIV-infected pregnant women and providing effective ARV interventions. There is an urgent need in the region to increase the number of pregnant women tested for HIV. Several approaches for identifying HIV-infected pregnant women can be considered by countries.
- Routine HIV testing of all pregnant women (8). Routine testing of all pregnant women is recommended in the global plan; this entails testing of all pregnant women as part of the routine maternal and child health care, to identify the maximum number of HIV-positive women both for counselling and for entry into PMTCT programmes. Usually HIV testing is done with other routine maternal and child blood tests (e.g. syphilis, haemoglobin). The best practice approach is to provide provider-initiated HIV testing and counselling as a routine, standard part of antenatal care, preferably at first antenatal care visit, to use a rapid test with same-day results and to enrol all HIV-infected women into the PMTCT programme as part of post-test counselling. For women who are not tested on first antenatal visit, or who present late to antenatal care or even at labour and delivery, HIV rapid testing should be done at the first possible opportunity.

- Targeting geographic areas or “hotspots”. In countries with low level epidemic and where resources are scarce, it might not be feasible to start with routine testing of all pregnant women on a national scale. Countries with low level epidemic or concentrated epidemics among key populations can identify and map geographic areas and hotspots where HIV prevalence is known to be higher than the national average or where most new infections are occurring. Women living in such areas are more likely to be infected. HIV testing of pregnant women in those areas (through antenatal care and community-based services) will identify the majority of women who are HIV-infected. This approach might be more cost-effective rather than testing very large numbers of pregnant women at low risk on a national scale. Countries should develop a scale-up plan and aim to reach programmatic objectives. However, the approach will need to be reviewed regularly to assess effectiveness and evaluate impact.

- Link all HIV-infected pregnant women to PMTCT/ART services. Whatever testing strategy is implemented as part of PMTCT services, countries must ensure access to a minimum package of HIV-related prevention, care, treatment and support services for women, children and their families, whether on-site or through referral.
- Revise national PMTCT guidelines to reflect current professional knowledge and international recommendations.
- Provide effective ARV regimens to HIV-infected pregnant women and exposed infants in line with national guidelines to prevent mother-to-child-transmission.
- Promote couples counselling and testing (in line with current recommendations).3
- Develop national guidelines for the diagnosis of HIV in infants and children below 18 months of age.
- Build capacity of health providers in PMTCT, including training on family planning and counselling in reproductive choices.
- Develop and implement standard operating procedures and standards of care for PMTCT.
- Develop strategies to limit the number of mother–baby pairs who are lost to follow up.
- Build capacity in data recording, management and analysis.

5.3 Ensure access to services for vulnerable women and their families

Main objective

PMTCT services reach vulnerable women.

Several groups of women in the EM/MENA Region are especially vulnerable to HIV. These include female injecting drug users, female sex workers, female migrant workers, and pregnant women who do not access antenatal care. Other vulnerable groups include spouses of male migrant workers, spouses of key populations at increased risk (male injecting drug users, and men who have sex with men).

Key actions

• Identify the social, legal and economic barriers to accessing PMTCT services by key populations.
• Ensure that national PMTCT plans take into account the needs of marginalized and most at-risk pregnant women.
• Identify appropriate entry points to reach vulnerable women.
• Forge strategic partnerships with nongovernmental organizations and civil society organizations working with key populations.
• Develop/strengthen the relationship between PMTCT services and community organizations.
• Promote couples counselling and testing and develop strategies and services to reach female spouses of men at increased risk of HIV.
• Develop user-friendly HIV prevention, treatment and care service delivery models adapted to the needs of vulnerable women.
• Link PMTCT services to prevention and treatment services for key populations.
• Address/reduce stigma and discrimination in health-care settings.

5.4 Promote integration/linkages with maternal, neonatal and child health, sexual and reproductive health and other relevant programmes

Main objective

Sexual and reproductive health and maternal, neonatal and child health facilities have links to, promote and/or offer PMTCT services.

Eliminating new cases of paediatric HIV and keeping mothers alive contribute directly to several Millennium Development Goals (MDGs). Effective PMTCT services can have a positive impact on maternal, neonatal and child health and sexual and reproductive health programmes. At the same time, integrating PMTCT interventions into functioning MDGS and sexual and reproductive health programmes can improve PMTCT outcomes.
In order to assure progress towards achieving eMTCT, PMTCT services must be integrated with maternal, neonatal and child health services. Integration will depend on the national context and can happen at policy, programmatic and service delivery level. Integration will ensure follow-up of HIV-infected mothers and children through the entire cascade of services, promote retention, offer the possibility of using limited resources to leverage multiple health outcomes and ensure sustainability. (9)

Improving maternal and child health is one of the priorities of the WHO Regional Office for the Eastern Mediterranean. Integration and linkages of eMTCT with sexual and reproductive health and maternal, neonatal and child health programmes will help to contribute to the achievement of MDGs 4 and 5.

**Key actions**

- Involve maternal, neonatal and child health and sexual and reproductive health programmes in the development of national eMTCT plans.
- Promote and support increased collaboration and integration between programmes.
- Develop coordination mechanisms to ensure effective integration, linkages and referrals between HIV, sexual and reproductive health, and maternal, neonatal and child health programmes.
- Provide counselling on reproductive choices and family planning services for women living with HIV.
- Ensure that family planning/sexual and reproductive health services promote, offer or link women to:
  - counselling on safer sex practices
  - information, education and communication on HIV/AIDS
  - HIV counselling and testing
  - PMTCT services.
- Develop locally-relevant approaches to ensure a seamless provision of PMTCT services through a network of linked services.
- Link PMTCT services to injecting drug use harm-reduction services.
For monitoring and evaluation purposes see Figure 1 for the conceptual eMTCT framework.

**Goal**
Eliminate new paediatric HIV and improve maternal and child health

**Overall targets**
1. Reduce new paediatric HIV infections by 90%
2. Reduce mother-to-child transmission of HIV to <5%

**Programmatic objectives**
1. Reduce HIV incidence among women aged 15–49 by 50%
2. Reduce unmet need for family planning for all women to zero
3. Increase the number of pregnant women who are tested for HIV and know their result to > 90%
4. Increase the number of HIV-infected pregnant women and exposed infants who receive effective ARVs to reduce mother to child transmission of HIV to > 90%
5. Reduce HIV attributable deaths in infants and children <5 years of age by 90%

**Strategic priorities**
- Ensure commitment to eMTCT
- Improve coverage and quality of PMTCT services
- Ensure access to PMTCT services for vulnerable women
- Promote integration/linkages with other health programmes

*Figure 1. Conceptual eMTCT framework*
PMTCT data reported by countries in the Region are often incomplete. HIV programmes have a high reporting burden and countries often have to cope with numerous and varied reporting requirements from different donors. Furthermore, as PMTCT services are decentralized and integrated into other programmes, care should be taken to ensure that standardized tools for data collection are used. Reporting on progress towards eMTCT will pose some specific challenges for the Region as some baseline data are not readily available (e.g. HIV incidence in women of childbearing age). There is a need to follow both mother and child over time and across different service delivery points. For impact, countries will have to track both paediatric HIV infections averted and HIV-free survival.

Countries are urged to review and revise their current monitoring system to allow more complete and reliable data collection (10). Annual progress reviews should be conducted at the country level to assess achievements, share experience, analyse programme strengths and weaknesses, share good practices, identify areas for improvement and define corrective measures.

### 6.1 Monitoring and evaluation framework

**Overall targets**

1. Reduce the number of new paediatric HIV infections by 90%
2. Reduce mother-to-child transmission rate of HIV to <5%

**Targets**

**Prong 1**
Reduce HIV incidence among women 15–49 years of age by 50%

**Prong 2**
Reduce unmet need for family planning to zero

**Prong 3**
Reduce mother-to-child transmission of HIV to <5%

**Prong 4**
Reduce HIV-associated maternal, infant and child death by 90%
### Key indicators

<table>
<thead>
<tr>
<th>HIV prevalence in pregnant women (15–49 years of age) attending antenatal care</th>
<th>Unmet need in family planning</th>
<th>Percentage of pregnant women who were counselled and tested for HIV and received their result</th>
<th>Percentage of women living with HIV who received most effective antiretrovirals to reduce the risk of mother-to-child transmission</th>
<th>Percentage of infants born to HIV-infected women receiving ARTs for PMTCT</th>
<th>Percentage of infants born to HIV-infected women receiving a virological test for HIV within 2 months of birth</th>
<th>Percentage of HIV-infected children aged 0–14 years who are currently receiving ART</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modelled reduction of HIV incidence among all women, age-disaggregated, by 2015 from a baseline of 2010</td>
<td>Percentage of pregnant women who were counselled and tested for HIV and received their result</td>
<td>Percentage of women living with HIV who received most effective antiretrovirals to reduce the risk of mother-to-child transmission</td>
<td>Percentage of infants born to HIV-infected mothers receiving ARVs for PMTCT</td>
<td>Percentage of infants born to HIV-infected women receiving a virological test for HIV within 2 months of birth</td>
<td>Percentage of HIV-infected children aged 0–14 years who are currently receiving ART</td>
<td></td>
</tr>
</tbody>
</table>
### 6.2 Definitions of some key indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Numerator</th>
<th>Denominator</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of pregnant women who were tested for HIV and received their result during pregnancy, during labour and delivery, and during the postpartum period (within 72 hrs of delivery) including those with a previously known positive HIV status</td>
<td>Number of pregnant women who were tested for HIV and received their results during pregnancy, during labour and delivery, and during the postpartum period (within 72 hours of delivery), including those with previously known positive HIV status</td>
<td>Estimated number of pregnant women</td>
<td>Universal access indicator</td>
</tr>
<tr>
<td>Percentage of HIV-infected pregnant women who received ARVs to reduce the risk of mother-to-child transmission</td>
<td>Number of HIV-infected pregnant women who received ARVs to reduce the risk of mother-to-child transmission</td>
<td>Estimated number of HIV-infected pregnant women</td>
<td>Universal access indicator disaggregate by type of regimens (A, B, B+)</td>
</tr>
<tr>
<td>Percentage of infants born to HIV-infected mothers receiving ARVs for PMTCT</td>
<td>Number of infants born to HIV-infected mothers receiving ARVs for PMTCT</td>
<td>Estimated number of HIV-infected women giving birth</td>
<td>Universal access indicator</td>
</tr>
<tr>
<td>Indicator</td>
<td>Numerator</td>
<td>Denominator</td>
<td>Remarks</td>
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<tr>
<td>Percentage of infants born to HIV-infected mothers who received testing</td>
<td>Number of infants, in the preceding 12 months, born to HIV-infected women who received an HIV test: a) viral load or qualitative PCR in the first 2 months b) viral load or qualitative PCR after the first 2 months c) initial antibody testing between 9 and 12 months d) tested after 12 months e) those not assessed (e.g. due to loss to follow-up by 12 months, death)</td>
<td>Estimated number of HIV-infected pregnant women giving birth</td>
<td>Universal access indicator (the numerator includes only the initial test in order to avoid double counting of infants)</td>
</tr>
<tr>
<td>to determine their HIV status by:</td>
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<td></td>
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<tr>
<td>a) virological HIV test in the first 2 months</td>
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<tr>
<td>b) first virological HIV test after 2 months</td>
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<tr>
<td>c) initial serological test between 9 and 12 months</td>
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<tr>
<td>(infants without previous virological test)</td>
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<tr>
<td>d) initial serological test after 12 months</td>
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<tr>
<td>e) children lost to follow-up before an assessment of their HIV status</td>
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<tr>
<td>Percentage of infants born to HIV-infected women who are started on</td>
<td>Number of infants born to HIV-infected women who started prophylaxis within 2 months of birth in the last 12 months</td>
<td>Estimated number of HIV-infected pregnant women who gave birth in the last 12 months</td>
<td>Universal access indicator</td>
</tr>
<tr>
<td>co-trimoxazole prophylaxis within 2 months of birth</td>
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<td></td>
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<tr>
<td>Percentage of HIV-infected children aged 0–14 years who are currently</td>
<td>Number of children 0–14 years receiving ART</td>
<td>Estimated number of children 0–14 years in need of ART</td>
<td>Universal access indicator</td>
</tr>
<tr>
<td>receiving ART</td>
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</tbody>
</table>
The key indicators are all universal access indicators that countries already report on. More PMTCT related indicators can be found in the WHO documents on monitoring and evaluation of PMTCT services. Additionally, other programme data should monitor the number of vulnerable women accessing PMCT services, one of the strategic priorities of this framework.

6.3 eMTCT validation/certification

WHO, in consultation with partners, is working on defining impact indicators and methods of measurement appropriate for different epidemic profiles. Additionally, work is ongoing on the requirements for certification/validation of eMTCT.

These requirements will be based on:

- evidence of achievement of the elimination targets for at least 3 consecutive years
- existence of an adequate surveillance system
- documented evidence of the programmatic capacity to sustain the elimination targets and objectives.

More guidance on monitoring and evaluation of eMTCT and on definitions and procedures for certification/validation of eMTCT is being developed.

4 These documents can be found online at: http://www.who.int/hiv/pub/me/en/index.html.
7. Next steps

7.1 Country level

The Region has a very low HIV prevalence in the general population but it is also the region with the lowest ART coverage in the world. There are big disparities between countries as regards the HIV epidemic profile, the scale and quality of the health sector response to HIV and the availability and quality of MNCH services. Several countries are currently in a crisis situation and have competing health priorities, while the HIV response in a few countries is very donor-dependent.

The main aim of the regional eMTCT framework is to be a catalyst for the implementation of large-scale, quality PMTCT interventions. Using the framework, countries will define the specific actions to eliminate new HIV infections among children that are appropriately tailored to local realities.

It is recommended that countries:

- conduct a strategic assessment of their PMTCT programmes and identify gaps and bottlenecks;
- establish a government-driven coordination body and mechanisms for eMTCT that bring together key government departments, especially maternal, newborn and child health, family and reproductive health divisions, partner organizations, civil society representatives and groups of people living with HIV;
- develop a national eMTCT plan involving all stakeholders, set goals and targets tailored to local context and develop a scale-up plan using a phased and incremental approach;
- revise policies, guidelines and tools to facilitate scale-up of PMTCT services and build capacity;
- strengthen community involvement;
- institute country-specific accountability mechanisms and performance-based management;
- develop methodologies and tools to track progress;
- mobilize resources to secure sustainable financing for implementing PMTCT interventions and HIV care for children.
WHO, UNICEF and partner agencies will support countries to operationalize the eMTCT framework locally. In particular, WHO will provide policy guidance and technical support to improve the coverage of HIV testing among pregnant women and the provision of quality ARV interventions to HIV-infected pregnant women and exposed infants.

A regional United Nations Task Team (WHO, UNICEF, UNFPA, UNAIDS) on eMTCT has been created and will serve as a forum for supporting a coordinated response to the development, implementation and tracking of progress of the elimination of new HIV infections among children in the Region.

In particular the Task Team will:

- advocate for one eMTCT initiative in the Region;
- commit to the goals and objectives of eMTCT framework for the Region;
- address issues related to policies, strategies, resource mobilization and allocation, and tracking of progress on the implementation of eMTCT interventions in the Region;
- ensure linkages, coordination and information sharing between UN agencies and other partners on eMTCT in the Region;
- promote coordination and harmonization of policy guidance and programming;
- contribute to the development and timely review of eMTCT technical products (framework, reports, eMTCT country plans, monitoring and evaluating framework, etc.).
8. References


This document is designed to provide the region with a common systematic approach to the elimination of mother-to-child transmission of HIV. The framework serves as a tool to advocate for government endorsement of the elimination initiative. The intended audience for this document includes implementing partners, programme managers, clinicians and networks of people living with HIV.