GUIDELINES ON

MATERNAL, NEWBORN, CHILD AND ADOLESCENT HEALTH

approved by the

WHO GUIDELINES REVIEW COMMITTEE

Recommendations on maternal and perinatal health

World Health Organization

Contents

Abbreviations

AIDS	acquired immunodeficiency syndrome
ANC	antenatal care
ART	antiretroviral therapy
ARV	antiretroviral
AZT	zidovudine
CCT	controlled cord traction
EFZ	efavirenz
FTC	emtricitabine
GRC	Guidelines Review Committee
GDG	Guidelines Development Group
HIV	human immunodeficiency virus
IM	intramuscular
IV	intravenous
3TC	lamuvidine
mg	milligram
NVP	nevirapine
NNRTI	non-nucleotide reverse transcriptase inhibitor
NRTI	nucleotide reverse transcriptase inhibitor
PMTCT	prevention of mother-to-child transmission
PPH	postpartum haemhorrage
TDF	tenofovir
WHO	World Health Organization

Introduction

This publication on recommendations related to maternal and perinatal health is one of four in a series; the others relate to newborn, child and adolescent health. The documents are meant to respond to the questions:

- What health interventions should the pregnant woman, mother, newborn, child or adolescent receive and when should s/he receive it?
- What health behaviours should a pregnant woman, mother, child or adolescent practise (or not practise)?

The recommendations included are all approved (or in the final stages of approval or publication) by WHO's Guidelines Review Committee (GRC). The process of developing guidelines is documented in WHO's *Handbook for guideline development*[1] and are based on the grading of recommendations, assessment, development and evaluation (GRADE) system.

The GRADE system classifies the strength of a recommendation as "strong" or "conditional".[2] A strong recommendation is one where the desirable effects of adhering to the recommendation outweigh the undesirable effects. A conditional recommendation is one where the desirable effects of adhering to the recommendation probably outweigh the undesirable effects but these trade-offs are not clear.

The system also grades the quality of evidence:

- High: further research is very unlikely to change confidence in the estimate of effect;
- Moderate: further research is likely to have an important impact on confidence in the effect;
- Low: further research is very likely to have an estimate of effect and is likely to change the estimate;
- Very low: any estimate of effect is very uncertain.

Wherever possible, the quality of evidence and strength of each recommendation, as well as the link where it can be found, are included in this publication.

Where no GRC-approved recommendation currently exists for a topic area of importance, a link is provided to existing guidance. In many cases, this guidance is currently being updated. The situation is described in the respective topic.

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[1] *Handbook for guideline development*. Geneva, WHO, 2012.

[2] The *Handbook for guideline development* does not define a "weak" recommendation, although this category is sometimes still used.

Promote, prevent and protect maternal and perinatal health

1. Antenatal care (ANC)[1]

Nutrition interventions

Vitamin D supplementation in pregnant women

- Vitamin D supplementation during pregnancy is not recommended to prevent the development of pre-eclampsia and its complications.

  (Strong recommendation, very low quality evidence) Source

- As there is currently limited evidence available to directly assess the benefits and harms of the use of vitamin D supplementation alone in pregnancy for improving maternal and infant health outcomes, the use of this intervention during pregnancy as part of routine ANC is not recommended.

  (Conditional recommendation, low to very low quality evidence) Source

Calcium supplementation in pregnant women

- In populations where calcium intake is low, calcium supplementation as part of ANC is recommended for the prevention of preeclampsia among pregnant women, particularly among those at higher risk of hypertension.

  (Strong recommendation, moderate quality evidence) Source

Daily iron and folic acid supplementation in pregnant women

- Daily oral iron and folic acid supplementation is recommended as part of ANC to reduce the risk of low birth weight, maternal anaemia and iron deficiency.

  (Strong recommendation, very low to moderate quality evidence) Source

Intermittent iron and folic acid supplementation in non-anaemic pregnant women

- Intermittent iron and folic acid supplementation is recommended in non-anaemic pregnant women to prevent development of anaemia and to improve gestational outcomes.

  (Strong recommendation, very low quality evidence) Source

Vitamin A supplementation in pregnant women

- Vitamin A supplementation in pregnancy as part of routine ANC is not recommended for the prevention of maternal and infant morbidity and mortality.

  (Strong recommendation, moderate to high quality evidence) Source

[1] General guidelines on ANC are currently under development.

- In areas where vitamin A deficiency is a severe public health problem, vitamin A supplementation in pregnancy is recommended for the prevention of night blindness.

  (Strong recommendation, moderate to high quality evidence) Source

Multiple micronutrient powders for home fortification of foods consumed by pregnant women

- As there is currently no available evidence to directly assess the potential benefits or harms of the use of multiple micronutrient powders in pregnant women for improving maternal and infant health outcomes, routine use of this intervention during gestation is not recommended.

  (Strong recommendation, no quality of evidence) Source

Immunization[1]

Influenza

- Pregnant women should be vaccinated with trivalent inactivated influenza vaccine at any stage of pregnancy.

  (Strong recommendation, high quality evidence) Source

Tetanus

- Eligible pregnant women should be routinely immunized at their first contact with antenatal clinics or other health services offering vaccination. Pregnant women with an inadequate or unknown immunization history should always receive 2 doses of tetanus toxoid-containing vaccine: the first dose as early as possible during pregnancy and the second dose at least 4 weeks later.

  (Strong recommendation, high quality evidence) Source

Prevention of pre-eclampsia and eclampsia

- In areas where dietary calcium intake is low, calcium supplementation during pregnancy (at doses of 1.5–2.0 g elemental calcium/day) is recommended for the prevention of pre-eclampsia in all women, but especially those at high risk of developing pre-eclampsia.

  (Strong recommendation, moderate quality evidence) Source, Source

- Low-dose acetylsalicylic acid (aspirin, 75 mg) is recommended for the prevention of pre-eclampsia in women at high risk of developing the condition.

  (Strong recommendation, moderate quality evidence) Source

- Low-dose acetylsalicylic acid (aspirin, 75 mg) for the prevention of pre-eclampsia and its related complications should be initiated before 20 weeks of pregnancy.

  (Weak recommendation, low quality evidence) Source

- Women with severe hypertension during pregnancy should receive treatment with antihypertensive drugs.

  (Strong recommendation, very low quality evidence) Source

[1] For updated information on all recommended immunizations, see http://www.who.int/immunization/policy/immunization_tables/en/index.html.

- Advice to rest at home is not recommended as an intervention for the primary prevention of pre-eclampsia and hypertensive disorders of pregnancy in women considered to be at risk of developing those conditions.

  (Weak recommendation, low quality evidence) Source

- Strict bedrest is not recommended for improving pregnancy outcomes in women with hypertension (with or without proteinuria) in pregnancy.

  (Weak recommendation, low quality evidence) Source

- Restriction in dietary salt intake during pregnancy with the aim of preventing the development of pre-eclampsia and its complications is not recommended.

  (Weak recommendation, moderate quality evidence) Source

- Vitamin D supplementation during pregnancy is not recommended to prevent the development of pre-eclampsia and its complications.

  (Strong recommendation, very low quality evidence) Source, Source

- Individual or combined vitamin C and vitamin supplementation during pregnancy is not recommended to prevent the development of pre-eclampsia and its complications.

  (Strong recommendation, high quality evidence) Source

- Diuretics, particularly thiazides, are not recommended for the prevention of pre-eclampsia and its complications.

  (Strong recommendation, low quality evidence) Source

2. Labour and child birth[1]

Induction of labour

When induction of labour may be appropriate

- Induction of labour is recommended for women who are known with certainty to have reached 41 weeks (>40 weeks + 7 days) of gestation.

  (Weak recommendation, low quality of evidence) Source

- Induction of labour is not recommended in women with an uncomplicated pregnancy at gestational age less than 41 weeks.

  (Weak recommendation, low quality of evidence) Source

- If gestational diabetes is the only abnormality, induction of labour before 41 weeks of gestation is not recommended.

  (Weak recommendation, very low quality evidence) Source

- Induction of labour at term is not recommended for suspected fetal macrosomia.

  (Weak recommendation, low quality evidence) Source

- Induction of labour is recommended for women with prelabour rupture of membranes at term.

  (Strong recommendation, high quality evidence) Source

[1] General guidelines on labour and delivery are currently being developed.

Methods of induction of labour

- If prostaglandins are not available, intravenous oxytocin alone should be used for induction of labour. Amniotomy alone is not recommended for induction of labour.

  (Weak recommendation, moderate quality evidence) Source

- Oral misoprostol (25 µg, 2-hourly) is recommended for induction of labour.

  (Strong recommendation, moderate quality evidence) Source

- Low-dose vaginal misoprostol (25 µg, 6-hourly) is recommended for induction of labour.

  (Strong recommendation, moderate quality evidence) Source

- Misoprostol is not recommended for induction of labour in women with previous caesarean section.

  (Strong recommendation, low quality evidence) Source

- Low doses of vaginal prostaglandins are recommended for induction of labour.

  (Strong recommendation, moderate quality evidence) Source

- Balloon catheter is recommended for induction of labour.

  (Strong recommendation, moderate quality evidence) Source

- The combination of balloon catheter plus oxytocin is recommended as an alternative method of induction of labour when prostaglandins (including misoprostol) are not available or are contraindicated.

  (Weak recommendation, low quality evidence) Source

- In the third trimester, in women with a dead or an anomalous fetus, oral or vaginal misoprostol is recommended for induction of labour.

  (Strong recommendation, low quality evidence) Source

- Sweeping membranes is recommended for reducing formal induction of labour.

  (Strong recommendation, moderate quality evidence) Source

Management of adverse events related to induction of labour

- Betamimetics are recommended for women with uterine hyperstimulation during induction of labour.

  (Weak recommendation, low quality evidence) Source

Setting for induction of labour

- Outpatient induction of labour is not recommended for improving birth outcomes.

  (Weak recommendation, low quality evidence) Source

Preterm birth prevention

- No GRC-approved recommendations currently exist. Guidance on this topic is in the process of being updated.

Augmentation of labour

- Augmentation of labour guidelines addressing prevention of prolonged labour are currently being finalized.

3. Postnatal care

Timing of discharge from the health facility

- After an uncomplicated vaginal birth in a health facility, healthy mothers and newborns should receive care in the facility for at least 24 hours after birth.

  (Weak recommendation, low quality evidence) Source

Timing and number of postnatal contacts

- If birth is in a health facility, mothers and newborns should receive postnatal care in the facility for at least 24 hours after birth. If birth is at home, the first postnatal contact should be as early as possible within 24 hours of birth. At least three additional postnatal contacts are recommended for all mothers and newborns, on day 3 (48–72 hours), between days 7–14, and 6 weeks after birth.

  (Strong recommendation, low to moderate quality evidence) Source

Home visits in the first week of life

- Home visits in the first week after birth are recommended for care of the mother and newborn.

  (Strong recommendation, low to moderate quality evidence) Source

Exclusive breastfeeding

- All babies should be exclusively breastfed from birth until 6 months of age. Mothers should be counselled and provided support for exclusive breastfeeding at each postnatal contact.

  (Strong recommendation, moderate quality evidence) Source

Immunization[1]

- Immunization should be promoted as per existing WHO guidelines.

  (GDG consensus based on existing WHO guidelines) Source

Assessment of the mother

First 24 hours after birth

- All postpartum women should have regular assessment of vaginal bleeding, uterine contraction, fundal height, temperature and heart rate (pulse) routinely during the first 24 hours starting from the first hour after birth. Blood pressure should be measured shortly after birth. If normal, the second blood pressure measurement should be taken within six hours. Urine void should be documented within six hours.

  (GDG consensus based on existing WHO guidelines) Source

[1] For updated information on all recommended immunizations, see http://www.who.int/immunization/policy/immunization_tables/en/index.html.

Beyond 24 hours after birth

- At each subsequent postnatal contact, enquiries should continue to be made about general well-being and assessments made regarding the following: micturition and urinary incontinence, bowel function, healing of any perineal wound, headache, fatigue, back pain, perineal pain and perineal hygiene, breast pain, uterine tenderness and lochia.

  (GDG consensus based on existing WHO guidelines) Source

- At each postnatal contact, women should be asked about their emotional well-being, what family and social support they have and their usual coping strategies for dealing with day-to-day matters. All women and their families/partners should be encouraged to tell their health care professional about any changes in mood, emotional state and behaviour that are outside of the woman's normal pattern.

  (GDG consensus based on existing WHO guidelines) Source

- At 10–14 days after birth, all women should be asked about resolution of mild, transitory postpartum depression ("maternal blues"). If symptoms have not resolved, the woman's psychological well-being should continue to be assessed for postnatal depression, and if symptoms persist, evaluated.

  (GDG consensus based on existing WHO guidelines) Source

- Women should be observed for any risks, signs and symptoms of domestic abuse.

  (GDG consensus based on existing WHO guidelines) Source

- Women should be told whom to contact for advice and management.

  (GDG consensus based on existing WHO guidelines) Source

- All women should be asked about resumption of sexual intercourse and possible dyspareunia as part of an assessment of overall well-being two to six weeks after birth.

  (GDG consensus based on existing WHO guidelines) Source

- If there are any issues of concern at any postnatal contact, the woman should be managed and/or referred according to other specific WHO guidelines.

  (GDG consensus based on existing WHO guidelines) Source

Counselling

All women should be given information about the physiological process of recovery after birth, and that some health problems are common, with advice to report any health concerns to a health care professional, in particular:

— **Signs and symptoms of postpartum haemorrhage**: sudden and profuse blood loss or persistent increased blood loss, faintness, dizziness, palpitations/tachycardia.

— **Signs and symptoms of pre-eclampsia/eclampsia**: headaches accompanied by one or more of the symptoms of visual disturbances, nausea, vomiting, epigastric or hypochondrial pain, feeling faint, convulsions (*in the first few days after birth*).

— **Signs and symptoms of infection**: fever, shivering, abdominal pain and/or offensive vaginal loss.

— **Signs and symptoms of thromboembolism**: unilateral calf pain, redness or swelling of calves, shortness of breath or chest pain.

(GDG consensus based on existing WHO guidelines) Source

- All women should be encouraged to mobilize as soon as appropriate following the birth. They should be encouraged to take gentle exercise and make time to rest during the postnatal period.

  (GDG consensus based on existing WHO guidelines) Source

Prophylactic antibiotics

- The use of antibiotics among women with a vaginal delivery and a third or fourth degree perineal tear is recommended for prevention of wound complications. The GDG considers that there is insufficient evidence to recommend the routine use of antibiotics in all low-risk women with a vaginal delivery for prevention of endometritis.

  (Strong recommendation based on very low quality evidence) Source

Nutrition

Nutrition counselling and supplementation

- Women should be counselled on nutrition.

  (GDG consensus based on existing WHO guidelines) Source

Iron supplementation in postpartum women

- Iron and folic acid supplementation should be provided for at least three months.

  (GDG consensus, based on existing WHO guidelines) Source

Vitamin A supplementation in postpartum women

- Vitamin A supplementation in postpartum women is not recommended as a public health intervention for the prevention of maternal and infant morbidity and mortality.

  (Strong recommendation, very low to high quality evidence) Source

Infection prevention

- Women should be counselled on hygiene, especially handwashing.

  (GDG consensus based on existing WHO guidelines) Source

Psychosocial support

- Psychosocial support by a trained person is recommended for the prevention of postpartum depression among women at high risk of developing this condition.

  (Weak recommendation, very low quality evidence) Source

- The GDG considers that there is insufficient evidence to recommend routine formal debriefing to all women to reduce the occurrence/risk of postpartum depression.

  (Weak recommendation based on low quality evidence) Source

- The GDG also considers that there is insufficient evidence to recommend the routine distribution of, and discussion about, printed educational material for prevention of postpartum depression.

  (Weak recommendation based on very low quality evidence) Source

- Health professionals should provide an opportunity for women to discuss their birth experience during their hospital stay.

  (GDG consensus, based on existing WHO guidelines) Source

- A woman who has lost her baby should receive additional supportive care.

  (GDG consensus, based on existing WHO guidelines) Source

- Women should be counselled on birth spacing and family planning. Contraceptive options should be discussed, and contraceptive methods should be provided if requested.

  (GDG consensus, based on existing WHO guidelines) Source

- Women should be counselled on safer sex including use of condoms.

  (GDG consensus, based on existing WHO guidelines) Source

Malaria prevention

- In malaria endemic areas, mothers and babies should sleep under insecticide-impregnated bed nets.

  (GDG consensus, based on existing WHO guidelines) Source

Mobilization, rest and exercise

- All women should be encouraged to mobilize as soon as appropriate following the birth. They should be encouraged to take gentle exercise and make time to rest during the postnatal period.

  (GDG consensus based on existing WHO guidelines) Source

4. Prevention of postpartum haemorrhage (PPH)

- The use of uterotonics for the prevention of PPH during the third stage of labour is recommended for all births.

  (Strong recommendation, moderate quality evidence) Source

- Oxytocin (10 IU, IV/IM) is the recommended uterotonic drug for the prevention of PPH.

  (Strong recommendation, moderate quality evidence) Source

- In settings where oxytocin is unavailable, the use of other injectable uterotonics (if appropriate ergometrine/methylergometrine or the fixed drug combination of oxytocin and ergometrine) or oral misoprostol (600 µg) is recommended.

  (Strong recommendation, moderate quality evidence) Source

- In settings where skilled birth attendants are not present and oxytocin is unavailable, the administration of misoprostol (600 µg PO) by community health care workers and lay health workers is recommended for the prevention of PPH.

  (Strong recommendation, moderate quality evidence) Source

- In settings where skilled birth attendants are available, controlled cord traction (CCT) is recommended for vaginal births if the care provider and the parturient woman regard a small reduction in blood loss and a small reduction in the duration of the third stage of labour as important.

  (Weak recommendation, high quality evidence) Source

- In settings where skilled birth attendants are unavailable, CCT is not recommended.

  (Strong recommendation, moderate quality evidence) Source

- Late cord clamping (performed after 1 to 3 minutes after birth) is recommended for all births while initiating simultaneous essential newborn care.

  (Strong recommendation, moderate quality evidence) *Source*

- Early cord clamping (<1 minute after birth) is not recommended unless the neonate is asphyxiated and needs to be moved immediately for resuscitation.

  (Strong recommendation, moderate quality evidence) *Source*

- Sustained uterine massage is not recommended as an intervention to prevent PPH in women who have received prophylactic oxytocin.

  (Weak recommendation, low quality evidence) *Source*

- Postpartum abdominal uterine tonus assessment for early identification of uterine atony is recommended for all women.

  (Strong recommendation, very low quality evidence) *Source*

- Oxytocin (IV or IM) is the recommended uterotonic drug for the prevention of PPH in caesarean section.

  (Strong recommendation, moderate quality evidence) *Source*

- CCT is the recommended method for removal of the placenta in caesarean section.

  (Strong recommendation, moderate quality evidence) *Source*

Management of maternal and fetal health conditions

5. Prolonged and obstructed labour

- No GRC-approved recommendations currently exist. Guidance on this topic is in the process of being updated.

6. Fetal distress

- No GRC-approved recommendations currently exist. Guidance on this topic is in the process of being updated.

7. Postpartum haemorrhage

- Intravenous oxytocin alone is the recommended uterotonic drug for the treatment of PPH.

  (Strong recommendation, moderate quality evidence) Source

- If intravenous oxytocin is unavailable, or if the bleeding does not respond to oxytocin, the use of intravenous ergometrine, oxytocin-ergometrine fixed dose, or a prostaglandin drug (including sublingual misoprostol, 800 µg) is recommended.

  (Strong recommendation, low quality evidence) Source

- The use of isotonic crystalloids is recommended in preference to the use of colloids for the initial intravenous fluid resuscitation of women with PPH.

  (Strong recommendation, low quality evidence) Source

- The use of tranexamic acid is recommended for the treatment of PPH if oxytocin and other uterotonics fail to stop bleeding or if it is thought that the bleeding may be partly due to trauma.

  (Weak recommendation, moderate quality evidence) Source

- Uterine massage is recommended for the treatment of PPH.

  (Strong recommendation, very low quality evidence) Source

- If women do not respond to treatment using uterotonics, or if uterotonics are unavailable, the use of intrauterine balloon tamponade is recommended for the treatment of PPH due to uterine atony.

  (Weak recommendation, very low quality evidence) Source

- If other measures have failed and if the necessary resources are available, the use of uterine artery embolization is recommended as a treatment for PPH due to uterine atony.

  (Weak recommendation, very low quality evidence) Source

- If bleeding does not stop in spite of treatment using uterotonics and other available conservative interventions (e.g. uterine massage, balloon tamponade), the use of surgical interventions is recommended.

  (Strong recommendation, very low quality evidence) Source

- The use of bimanual uterine compression is recommended as a temporizing measure until appropriate care is available for the treatment of PPH due to uterine atony after vaginal delivery.

  (Weak recommendation, very low quality evidence) Source

- The use of external aortic compression for the treatment of PPH due to uterine atony after vaginal birth is recommended as a temporizing measure until appropriate care is available.

  (Weak recommendation, very low quality evidence) Source

- The use of non-pneumatic anti-shock garments is recommended as a temporizing measure until appropriate care is available.

  (Weak recommendation, low quality evidence) Source

- The use of uterine packing is not recommended for the treatment of PPH due to uterine atony after vaginal birth.

  (Weak recommendation, very low quality evidence) Source

- If the placenta is not expelled spontaneously, the use of IV/IM oxytocin (10 IU) in combination with controlled cord traction is recommended.

  (Weak recommendation, very-low-quality evidence) Source

- The use of ergometrine for the management of retained placenta is not recommended as this may cause tetanic uterine contractions which may delay the expulsion of the placenta.

  (Weak recommendation, very low quality evidence) Source

- The use of prostaglandin E2 alpha (dinoprostone or sulprostone) for the management of retained placenta is not recommended.

  (Weak recommendation, very low quality evidence) Source

- A single dose of antibiotics (ampicillin or first-generation cephalosporin) is recommended if manual removal of the placenta is practised.

  (Weak recommendation, very low quality evidence) Source

8. Interventions for treatment of pre-eclampsia and eclampsia

- The choice and route of administration of an antihypertensive drug for severe hypertension during pregnancy, in preference to others, should be based primarily on the prescribing clinician's experience with that particular drug, its cost and local availability.

  (Weak recommendation, very low quality evidence) Source

- Magnesium sulfate is recommended for the prevention of eclampsia in women with severe pre-eclampsia in preference to other anticonvulsants.

  (Strong recommendation, high quality evidence) Source

- Magnesium sulfate is recommended for the treatment of women with eclampsia in preference to other anticonvulsants.

  (Strong recommendation, moderate evidence) Source

- The full intravenous or intramuscular magnesium sulfate regimens are recommended for the prevention and treatment of eclampsia.

  (Strong recommendation, moderate quality evidence) Source

- For settings where it is not possible to administer the full magnesium sulfate regimen, the use of magnesium sulfate loading dose followed by immediate transfer to a higher level health-care facility is recommended for women with severe pre-eclampsia and eclampsia.

  (Weak recommendation, very low quality evidence) Source

- Induction of labour is recommended for women with severe pre-eclampsia at a gestational age when the fetus is not viable or unlikely to achieve viability within one or two weeks.

  (Strong recommendation, very low quality evidence) Source

- In women with severe pre-eclampsia, a viable fetus and before 34 weeks of gestation, a policy of expectant management is recommended, provided that uncontrolled maternal hypertension, increasing maternal organ dysfunction or fetal distress are absent and can be monitored.

  (Weak recommendation, very low quality evidence) Source

- In women with severe pre-eclampsia, a viable fetus and between 34 and 36 (plus 6 days) weeks of gestation, a policy of expectant management may be recommended, provided that uncontrolled maternal hypertension, increasing maternal organ dysfunction or fetal distress are absent and can be monitored.

  (Weak recommendation, very low quality evidence) Source

- In women with severe pre-eclampsia at term, early delivery is recommended.

  (Strong recommendation, low quality evidence) Source

- In women with mild pre-eclampsia or mild gestational hypertension at term, induction of labour is recommended.

  (Weak recommendation, moderate quality evidence) Source

- In women treated with antihypertensive drugs antenatally, continued antihypertensive treatment postpartum is recommended.

  (Strong recommendation, very low quality evidence) Source

- Treatment with antihypertensive drugs is recommended for severe postpartum hypertension.

  (Strong recommendation, very low quality evidence) Source

- The use of corticosteroids for the specific purpose of treating women with HELLP syndrome is not recommended.

  (Weak recommendation, very low quality evidence) Source

9. HIV infection

HIV diagnosis

- Couples and partners in antenatal care settings should be offered voluntary HIV testing and counselling with support for mutual disclosure

  (Strong recommendation, low quality evidence) Source

Generalized epidemics

- Provider-initiated testing and counselling is recommended for women as a routine component of the package of care in all antenatal, childbirth, postpartum and paediatric care settings.

  (No strength, no quality of evidence) Source quoted also in Source

- Re-testing is recommended in the third trimester, or during labour or shortly after delivery, because of the high risk of acquiring HIV infection during pregnancy.

  (No strength, no quality of evidence) Source quoted also in Source

Low-level and concentrated epidemics

- Provider-initiated testing and counselling should be considered for pregnant women. Many countries prioritize provider-initiated testing and counselling in antenatal care as a key component of their effort to eliminate the mother-to-child transmission of HIV and are effectively bundling HIV testing with syphilis screening, hepatitis testing or other key tests relevant to the setting as well as strengthening the underlying maternal and child health system.

  (No strength, no quality of evidence) Source quoted also in Source

When to start ART in pregnant and breastfeeding women

- All pregnant and breastfeeding women infected with HIV should initiate triple ARVs (ART), which should be maintained at least for the duration of mother-to-child transmission risk. Women meeting treatment eligibility criteria should continue lifelong ART.

  (Strong recommendation, moderate quality evidence). Source

- For programmatic and operational reasons, particularly in generalized epidemics, all pregnant and breastfeeding women infected with HIV should initiate ART as lifelong treatment.

  (Conditional recommendation, low quality evidence) Source

- In some countries, for women who are not eligible for ART for their own health, consideration can be given to stopping the ARV regimen after the period of mother-to-child transmission risk has ceased.

  (Conditional recommendation, low quality evidence) Source

Special considerations for the care and management of pregnant women living with HIV

General guidance

- Pregnant women with HIV should receive at least the minimum package of recommended antenatal visits and pregnancy care, and additional interventions such as screening for sexually transmitted infections, nutritional support and infant feeding and family planning counselling should be considered.

  (No strength, no quality of evidence) Source

- There is a high risk of HIV transmission during labour and delivery. This risk can be minimized by following several key principles and practices, including reinforcing recommended antenatal clinic visits, especially high-risk management in the late third trimester; promoting facility-based delivery by trained skilled birth attendants; avoiding unnecessary instrumentation and premature rupture of membranes by using a partograph to monitor stages of labour; and non-invasive suction of nasogastric secretions and washing away blood in the newborn.

  (No strength, no quality of evidence) Source

Additional measures to reduce HIV transmission include:

- The early identification of mothers with HIV and providing ARV drugs to both the mother and the newborn baby are essential.

  (No strength, no quality of evidence) Source

- For mothers presenting at labour with unknown HIV status, rapid HIV testing should be done during labour or immediately postpartum.

  (No strength, no quality of evidence) Source

- For women testing positive, ARV drugs should be provided to both the mother and child in accordance with current treatment recommendations and with consideration of extended prophylaxis to the infant.

  (No strength, no quality of evidence) Source

- Health care workers should follow universal precautions for all deliveries, including those involving mothers with HIV.

  (No strength, no quality of evidence) Source

- Special efforts should be made to ensure that delivery care is provided in a nonstigmatizing and supportive manner.

  (No strength, no quality of evidence) Source

- Although caesarean section has been shown to protect against HIV transmission, especially in the absence of ARV drugs or in the case of high viral load, WHO does not recommend it in resource-limited settings specifically for HIV infection; rather it is recommended for obstetric and other medical indications.

  (No strength, no quality of evidence) Source

- Women with HIV and women of unknown HIV status who deliver outside health facilities should be encouraged to be medically assessed at a maternal and child health facility as soon as possible after delivery and to begin or continue appropriate HIV interventions.

  (No strength, no quality of evidence) Source

- Providing follow-up, linkages to care and treatment and postpartum care are especially important for women with HIV and their HIV-exposed infants. Initial care of the child is usually scheduled at the first immunization visit at four to six weeks, including reinforcement of safe feeding practices, review of ARV coverage and early infant diagnosis testing. Follow-up care for the mother should ideally be scheduled at the same time and should include a postpartum check, family planning counselling, review of ARV regimen and adherence support.

  (No strength, no quality of evidence) Source

First-line ART for pregnant and breastfeeding women and ARV drugs for their infants

- A once-daily fixed-dose combination of TDF + 3TC (or FTC) + EFV is recommended as first-line ART in pregnant and breastfeeding women, including pregnant women in the first trimester of pregnancy and women of childbearing age. The recommendation applies both to lifelong treatment and to ART initiated for PMTCT and then stopped.

  (Strong recommendation, low to moderate quality evidence) Source

- Infants of mothers who are receiving ART and are breastfeeding should receive six weeks of infant prophylaxis with daily NVP. If infants are receiving replacement feeding, they should be given four to six weeks of infant prophylaxis with daily NVP (or twice-daily AZT). Infant prophylaxis should begin at birth or when HIV exposure is recognized postpartum.

  (Strong recommendation, moderate quality evidence for breastfeeding infants; strong recommendation, low quality evidence for infants receiving only replacement feeding) Source

- Mothers known to be HIV-infected should be provided with lifelong ART or ARV prophylaxis interventions to reduce HIV transmission through breastfeeding according to WHO recommendations.

  (Strong recommendation, high quality evidence) Source

Vitamin A supplementation in pregnancy for reducing the risk of mother-to-child transmission of HIV

- Vitamin A supplementation in HIV-positive pregnant women is not recommended as a public health intervention for reducing the risk of mother-to-child transmission of HIV.

  (Strong recommendation, very low to moderate quality evidence) Source