

WHO Recommended Interventions for Improving Maternal and Newborn Health

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Department of
Making Pregnancy Safer

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Maternal and newborn health care programmes should include key interventions to improve maternal and newborn health and survival. The five tables include these key interventions to be delivered through health services, family and the community.

Table 1 lists interventions delivered to the mother during pregnancy, childbirth and in the postpartum period, and to the newborn soon after birth. These include important preventive, curative and health promotional activities for the present as well as the future. “*Routine essential care*” refers to the care that should be offered to all women and babies, while “*situational care*” is dependent on disease patterns in the community. Some women and babies with moderately severe diseases or complications require “*additional care*” while those with severe diseases or complications require “*specialized care*”.

Table 2 lists the places where care should be provided through health services, the type of providers required and the recommended interventions and commodities at each level.

Table 3 lists practices, activities and support needed during pregnancy and childbirth by the family, community and workplace.

Table 4 lists key interventions provided to women before conception and between pregnancies.

Table 5 addresses unwanted pregnancies.

Further information on these interventions is available in WHO’s Integrated Management of Pregnancy and Childbirth (IMPAC) clinical guidelines: *Pregnancy, Childbirth, Postpartum and Newborn Care: a guide for essential practice*, *Managing Complications in Pregnancy and Childbirth: a guide for midwives and doctors*, and *Managing Newborn Problems: a guide for doctors, nurses and midwives*. IMPAC guidelines are available at www.who.int/making_pregnancy_safer/en.

Table 1. Care in pregnancy, childbirth and postpartum period for mother and newborn infant

	Routine care (offered to all women and babies)	Additional care (for women and babies with moderately severe diseases and complications)	Specialized - obstetrical and neonatal care (for women and babies with severe diseases and complications)
Pregnancy care - 4 visits <i>Essential</i>	<ul style="list-style-type: none"> • Confirmation of pregnancy • Monitoring of progress of pregnancy and assessment of maternal and fetal well-being • Detection of problems complicating pregnancy (e.g., anaemia, hypertensive disorders, bleeding, malpresentations, multiple pregnancy) • Respond to other reported complaints. • Tetanus immunization, anaemia prevention and control (iron and folic acid supplementation) • Information and counselling on self care at home, nutrition, safer sex, breastfeeding, family planning, healthy lifestyle • Birth planning, advice on danger signs and emergency preparedness • Recording and reporting • Syphilis testing 	<ul style="list-style-type: none"> • Treatment of mild to moderate pregnancy complications: <ul style="list-style-type: none"> - mild to moderate anaemia - urinary tract infection - vaginal infection • Post abortion care and family planning • Pre-referral treatment of severe complications <ul style="list-style-type: none"> - pre-eclampsia - eclampsia - bleeding - infection - complicated abortion • Support for women with special needs e.g. adolescents, women living with violence • Treatment of syphilis (woman and her partner) 	<ul style="list-style-type: none"> • Treatment of severe pregnancy complications: <ul style="list-style-type: none"> - anaemia - severe pre-eclampsia - eclampsia - bleeding - infection - other medical complications • Treatment of abortion complications
<i>Situational</i>	<ul style="list-style-type: none"> • HIV testing and counselling • Antimalarial Intermittent preventive treatment (IPT) and promotion of insecticide treated nets (ITN) • Deworming • Assessment of female genital mutilation (FGM) 	<ul style="list-style-type: none"> • Prevention of mother to child transmission of HIV (PMTCT) by antiretroviral treatment (ART), infant feeding counselling, mode of delivery advice • Treatment of mild to moderate opportunistic infections • Treatment of uncomplicated malaria 	<ul style="list-style-type: none"> • Treatment of severe HIV infection • Treatment of complicated malaria
Childbirth Care (labour, delivery, and immediate postpartum) <i>Essential</i>	<ul style="list-style-type: none"> • Care during labour and delivery <ul style="list-style-type: none"> - Diagnosis of labour - Monitoring progress of labour, maternal and fetal well-being with partograph - Providing supportive care and pain relief - Detection of problems and complications (e.g. malpresentations, prolonged and/or obstructed labour, hypertension, bleeding, and infection) - Delivery and immediate care of the newborn baby, initiation of breastfeeding - Newborn resuscitation - Active management of third stage of labour • Immediate postnatal care of mother <ul style="list-style-type: none"> - Monitoring and assessment of maternal well being, prevention and detection of complications (e.g. hypertension, infections, bleeding, anaemia) - Treatment of moderate post-haemorrhagic anaemia - Information and counselling on home self care, nutrition, safe sex, breast care and family planning - Postnatal care planning, advice on danger signs and emergency preparedness • Recording and reporting 	<ul style="list-style-type: none"> • Treatment of abnormalities and complications (e.g. prolonged labour, vacuum extraction; breech presentation, episiotomy, repair of genital tears, manual removal of placenta) • Pre-referral management of serious complications (e.g. obstructed labour, fetal distress, preterm labour, severe peri- and postpartum haemorrhage) • Emergency management of complications if birth imminent • Support for the family if maternal death 	<ul style="list-style-type: none"> • Treatment of severe complications in childbirth and in the immediate postpartum period, including caesarean section, blood transfusion and hysterectomy): <ul style="list-style-type: none"> - obstructed labour - malpresentations - eclampsia - severe infection - bleeding • Induction and augmentation of labour
<i>Situational</i>	<ul style="list-style-type: none"> • Vitamin A administration 	<ul style="list-style-type: none"> • Prevention of mother-to-child transmission of HIV by mode of delivery, guidance and support for chosen infant feeding option 	<ul style="list-style-type: none"> • Management of complications related to FGM

	Routine care (offered to all women and babies)	Additional care (for women and babies with moderately severe diseases and complications)	Specialized - obstetrical and neonatal care (for women and babies with severe diseases and complications)
Postnatal maternal care (up to 6 weeks) <i>Essential</i>	<ul style="list-style-type: none"> • Assessment of maternal wellbeing • Prevention and detection of complications (e.g. infections, bleeding, anaemia) • Anaemia prevention and control (iron and folic acid supplementation) • Information and counselling on nutrition, safe sex, family planning and provision of some contraceptive methods • Postnatal care planning, advice on danger signs and emergency preparedness • Provision of contraceptive methods 	<ul style="list-style-type: none"> • Treatment of some problems (e.g. mild to moderate anaemia, mild puerperal depression) • Pre-referral treatment of some problems (e.g. severe postpartum bleeding, puerperal sepsis) 	<ul style="list-style-type: none"> • Treatment of all complications <ul style="list-style-type: none"> - severe anaemia - severe postpartum bleeding - severe postpartum infections - severe postpartum depression • Female sterilization
<i>Situational</i>	<ul style="list-style-type: none"> • Promotion of ITN use 	<ul style="list-style-type: none"> • Treatment of uncomplicated malaria 	<ul style="list-style-type: none"> • Treatment of complicated malaria
Newborn care (birth and immediate postnatal) <i>Essential</i>	<ul style="list-style-type: none"> • Promotion, protection and support for breastfeeding • Monitoring and assessment of wellbeing, detection of complications (breathing, infections, prematurity, low birthweight, injury, malformation) • Infection prevention and control, rooming-in • Eye care • Information and counselling on home care, breastfeeding, hygiene • Postnatal care planning, advice on danger sign and emergency preparedness • Immunization according to the national guidelines (BCG, HepB, OPV-0) 	<ul style="list-style-type: none"> • Care if moderately preterm, low birth weight or twin: support for breastfeeding, warmth, frequent assessment of wellbeing and detection of complications e.g. feeding difficulty, jaundice, other perinatal problems • Kangaroo Mother Care follow-up • Treatment of mild to moderate <ul style="list-style-type: none"> - local infections (cord, skin, eye, thrush) - birth injuries • Pre-referral management of infants with severe problems: <ul style="list-style-type: none"> - very preterm babies and/or birth weight very low - severe complications - malformations • Supporting mother if perinatal death 	<ul style="list-style-type: none"> • Management of severe newborn problems - general care for the sick newborn and management of specific problems: <ul style="list-style-type: none"> - preterm birth - breathing difficulty - sepsis - severe birth trauma and asphyxia - severe jaundice - Kangaroo Mother Care (KMC) • Management of correctable malformations
<i>Situational</i>	<ul style="list-style-type: none"> • Promotion of sleeping under ITN 	<ul style="list-style-type: none"> • Presumptive treatment of congenital syphilis • Prevention of mother-to-child transmission of HIV by ART • Support for infant feeding of maternal choice 	<ul style="list-style-type: none"> • Treatment of: <ul style="list-style-type: none"> - congenital syphilis - neonatal tetanus
Postnatal newborn care (visit from/at home) <i>Essential</i>	<ul style="list-style-type: none"> • Assessment of infant's wellbeing and breastfeeding • Detection of complications and responding to maternal concerns • Information and counselling on home care • Additional follow-up visits for high risk babies (e.g. preterm, after severe problems, on replacement feeding) 	<ul style="list-style-type: none"> • Management of: <ul style="list-style-type: none"> - minor to moderate problems and - feeding difficulties • Pre-referral management of severe problems: <ul style="list-style-type: none"> - convulsions - inability to feed • Supporting the family if perinatal death 	<ul style="list-style-type: none"> • Management of severe newborn problems: <ul style="list-style-type: none"> - sepsis - other infections - jaundice - failure to thrive

 Routine care
 Additional care
 Specialized - Obstetrical and neonatal care

Table 2. Place of care, providers, interventions and commodities

Health care	Level of health care	Venue / place	Provider	Interventions and commodities
Pregnancy (antenatal) care				
Routine	Primary	<ul style="list-style-type: none"> Health centre in the community Outpatient clinic of a hospital Outreach home visit 	<ul style="list-style-type: none"> Health worker with midwifery skills* 	<ul style="list-style-type: none"> On site tests (Hb, syphilis) Maternal health record Vaccine Basic oral medicines
Situational	Primary	<ul style="list-style-type: none"> Health centre in the community Outpatient clinic of a hospital Outreach home visits 	<ul style="list-style-type: none"> Health worker with midwifery skills* 	<ul style="list-style-type: none"> On site tests (HIV) Insecticide treated nets (ITN)
Additional	Primary	<ul style="list-style-type: none"> Health centre in the community Outpatient clinic of a hospital 	<ul style="list-style-type: none"> Health worker with midwifery and selected obstetric and neonatal skills* 	<ul style="list-style-type: none"> IV fluids Parenteral drugs (antibiotics, MgSO₄, antimalarial) Manual Vacuum Aspiration (MVA) Anti-retroviral therapy (ART)
Specialized	Secondary	<ul style="list-style-type: none"> Hospital 	<ul style="list-style-type: none"> Team of doctors, midwives and nurses 	All of the above plus: <ul style="list-style-type: none"> Blood transfusion Surgery Laboratory tests Obstetric care
Childbirth (mother and baby)				
Routine	Primary	<ul style="list-style-type: none"> Health centre in the community Maternity ward of a hospital Outreach home care 	<ul style="list-style-type: none"> Health worker with midwifery skills* 	<ul style="list-style-type: none"> Delivery set Oxytocin Partograph
Situational	Primary	<ul style="list-style-type: none"> Health centre in the community Maternity ward of a hospital Outreach home care 	<ul style="list-style-type: none"> Health worker with midwifery skills* 	<ul style="list-style-type: none"> ART
Additional	Primary	<ul style="list-style-type: none"> Health centre in the community Maternity ward of a hospital 	<ul style="list-style-type: none"> Health worker with midwifery and selected obstetric and neonatal skills* 	<ul style="list-style-type: none"> Vacuum extraction Manual removal of placenta Repair of genital tears IV fluids MgSO₄, parenteral uterotonics, and antibiotics Newborn resuscitation
Specialized Mother	Secondary	<ul style="list-style-type: none"> Hospital 	<ul style="list-style-type: none"> Team of doctors, midwives and nurses with neonatal care skills 	All of the above plus: <ul style="list-style-type: none"> Surgery Blood transfusion
Specialized Newborn	Secondary	<ul style="list-style-type: none"> Hospital 	<ul style="list-style-type: none"> Team of doctors and nurses with obstetric and nursing skills 	<ul style="list-style-type: none"> Oxygen IV fluids Parenteral antibiotics Blood transfusion Laboratory - biochemical and microbiology (small blood samples)
Postpartum (mother), postnatal (newborn infant)				
Routine	Primary	<ul style="list-style-type: none"> Health centre in the community Outpatient clinic of a hospital Outreach home visit 	<ul style="list-style-type: none"> Health worker with midwifery skills* 	<ul style="list-style-type: none"> On site tests (Hb, syphilis) Vaccines Basic oral medicines
Situational	Primary	<ul style="list-style-type: none"> Health centre in the community Outpatient clinic of a hospital 	<ul style="list-style-type: none"> Health worker with midwifery skills* 	<ul style="list-style-type: none"> On site tests (HIV) ART
Additional	Primary	<ul style="list-style-type: none"> Health centre in the community Outpatient clinic of a hospital 	<ul style="list-style-type: none"> Health worker with midwifery and selected obstetric and neonatal skills* 	<ul style="list-style-type: none"> IV fluids Parenteral drugs (antibiotics, MgSO₄, antimalarial) Manual removal of placenta
Specialized Mother	Secondary	<ul style="list-style-type: none"> Hospital 	<ul style="list-style-type: none"> Team of doctors, midwives and nurses 	All of the above plus: <ul style="list-style-type: none"> Blood transfusion Surgery Laboratory tests Obstetric care
Specialized Newborn	Secondary	<ul style="list-style-type: none"> Hospital 	<ul style="list-style-type: none"> Team of doctors, midwives and nurses with neonatal skills 	<ul style="list-style-type: none"> Oxygen IV fluids Parenteral antibiotics Blood transfusion Laboratory - biochemical and microbiology (small samples)

* Health worker providing maternity care only or a health worker providing other services in addition to maternity care

Table 3. Home care, family, community and workplace support for the woman during pregnancy and childbirth and for the newborn infant

	Home/family	Community and workplace
Pregnancy	<ul style="list-style-type: none"> • Safe and nutritive diet • Safe sexual practices • Support for quitting smoking • Protection from passive tobacco smoking • Support for avoiding hard work • Planning for birth, and emergencies -mother and baby • Knowledge and support for the birth and emergency plan • Recognition of labour and danger signs • Support for compliance with preventive treatments • Support / accompaniment for pregnancy care visits • Adolescent girls encouraged to continue going to school • Participation in improving quality of services • Participation in transport and financing scheme 	<ul style="list-style-type: none"> • Maternity protection • Time off for antenatal care visits • Safe and clean workplace • Tobacco free working environment • Pregnant adolescents kept at school
<i>Situational</i>	<ul style="list-style-type: none"> • Support for taking ART and for coping with its side effects 	<ul style="list-style-type: none"> • Support for HIV positive women
Childbirth	<ul style="list-style-type: none"> • Accompanying and supporting the woman in childbirth • Support and care for the rest of the family • Organize transport and financial support 	<ul style="list-style-type: none"> • Support for the family during childbirth and immediate postpartum
Postpartum and beyond	<ul style="list-style-type: none"> • Support for exclusive breastfeeding/replacement feeding • Personal hygiene • Safe disposal / washing of pads • Support for rest and less work load • Safe and nutritive diet • Safe sexual practices • Motivation for prescribed treatments • Recognition of dangers signs, including blues / depression • Optimal pregnancy spacing • Reporting birth and death (vital registration) • Participation in improving quality of services • Participation in transport and financing scheme 	<ul style="list-style-type: none"> • Maternity leave • Breastfeeding breaks • Time off for postpartum and baby care visits • If mother referred to hospital, support that she is accompanied with the baby
Newborn and young infant	<ul style="list-style-type: none"> • Exclusive breastfeeding • Hygiene (cord care, washing, clothes) • Avoiding contacts with sick family members • Clean, warm and quiet place, tobacco and fire smoke free • Extra care for small babies (preterm, low birth weight) including KMC • Support for routine and follow up visits • Motivation for home treatment of minor problems • Recognition of danger signs • Safe disposal of baby stool • Care seeking at health facility or hospital 	<ul style="list-style-type: none"> • Promotion, protection and support for breast feeding. • Keeping mother with the baby in hospital for breast-feeding • Supporting the family during maternal absence • Support for referral care for sick newborn.
<i>Situational</i>	<ul style="list-style-type: none"> • Sleeping under ITN 	

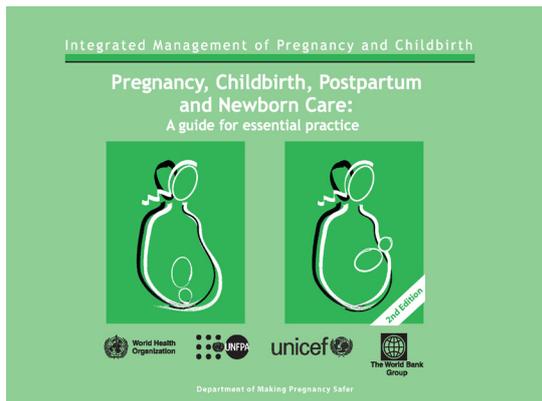
Table 4. Care for the woman before and between pregnancies

	Care by health services	Home/family	Community and workplace
Adolescence	<ul style="list-style-type: none"> • Immunization according to national policy (tetanus and rubella) • Family planning • HIV prevention including VCT 	<ul style="list-style-type: none"> • Delayed childbearing • Healthy lifestyle • Balanced diet, including iodized salt 	<ul style="list-style-type: none"> • Education • Information on prevention of HIV and STI infections
All women of reproductive age	<ul style="list-style-type: none"> • Family planning • Assessment and management of STIs • HIV prevention including testing and counselling 	<ul style="list-style-type: none"> • Optimal pregnancy timing 	

Table 5. Pregnant women not wanting child

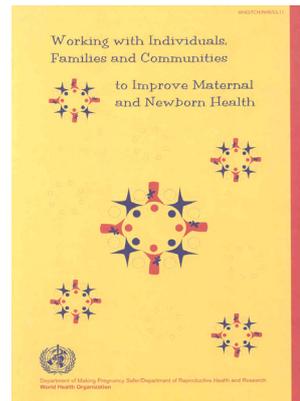
	Care by health services	Home/family	Community and workplace
Pregnant woman not wanting child	<ul style="list-style-type: none"> • Safe abortion (where legal) • Post-abortion care and family planning 	<ul style="list-style-type: none"> • Care for unwanted pregnancy 	

Integrated Management of Pregnancy and Childbirth (IMPAC) Guidelines



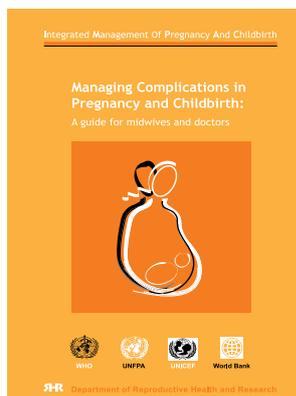
Pregnancy, childbirth, postpartum and newborn care: a guide for essential practice

This guide provides evidence-based recommendations to guide health-care professionals in the management of women during pregnancy, childbirth and postpartum, and post abortion, and newborns during their first week of life. It is a guide for clinical decision-making. It facilitates the collection, analysis, classification and use of relevant information by suggesting key questions, essential observations and/or examinations, and recommending appropriate research-based interventions. It promotes the early detection of complications and the initiation of early and appropriate treatment, including timely referral, if necessary.



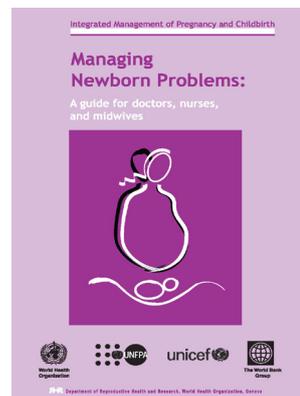
Working with individuals, families and communities to improve maternal and newborn health

The purpose of this document is to establish a common vision and approach, as well as to identify the role of maternal and newborn health programmes, for working with women, men, families and communities to improve maternal and newborn health. Part 1 of the document defines the concepts, values and guiding principles. Part 2 presents strategies, settings, and priority areas for intervention. Part 3 proposes an implementation process; and, finally, Part 4 considers the role and functions of WHO.



Managing complications in pregnancy and childbirth: a guide for midwives and doctors

This easy-to-use manual is arranged by symptoms (e.g. vaginal bleeding in early pregnancy). Because this symptom-based approach is different from most medical texts, which are arranged by disease, corresponding diagnosis tables are provided. Links have been used extensively to facilitate navigation between symptoms and diagnoses. The clinical action steps are based on clinical assessment with limited reliance on laboratory or other tests and most can be performed in a variety of clinical settings (e.g. district hospital or health centre).



Managing newborn problems: a guide for doctors, nurses and midwives

This guide is designed to assist countries with limited resources in their efforts to reduce neonatal mortality and to ensure care for newborn babies with problems due to complications of pregnancy and childbirth, such as asphyxia, sepsis, and low birth weight or preterm birth. The main section of this guide is arranged by clinical signs or findings, which facilitates early identification of illness, and provides up-to-date guidelines for clinical management.