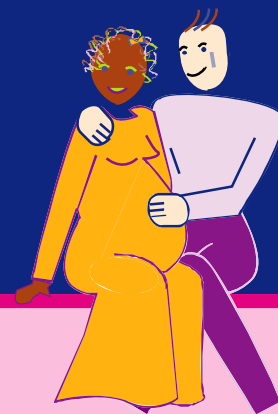




## making pregnancy safer



- Global action for
- skilled attendants for
- pregnant women



Department of Reproductive Health and Research  
Family and Community Health  
World Health Organization, Geneva



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Department of Reproductive Health and Research  
Family and Community Health  
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# **Global Action for Skilled Attendants for Pregnant Women**

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Family and Community Health  
Department of Reproductive Health and Research

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## List of Acronyms and Abbreviations

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<b>ACNM</b>	American College of Nurse-Midwives
<b>ANC</b>	Antenatal care
<b>AIDS</b>	Acquired immunodeficiency syndrome
<b>EURO</b>	WHO Regional Office for Europe
<b>FIGO</b>	International Federation of Gynaecologists and Obstetricians
<b>HIV</b>	Human immunodeficiency virus
<b>HRP</b>	UNDP/UNFPA/WHO/World Bank Special Programme of Research, Development and Research Training in Human Reproduction
<b>ICM</b>	International Confederation of Midwives
<b>MDG</b>	Millennium Development Goal
<b>MPR</b>	Making Pregnancy Safer initiative
<b>MTCT</b>	Mother-to-child transmission
<b>NGO</b>	Nongovernmental organization
<b>RHL</b>	WHO's Reproductive Health Library
<b>SEARO</b>	WHO Regional Office for South-east Asia
<b>TBA</b>	Traditional birth attendant
<b>UNFPA</b>	United Nations Population Fund
<b>UNICEF</b>	United Nations Children's Fund
<b>WHO</b>	World Health Organization



## Introduction

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In December 2000, 149 Heads of State or Government and 189 Member States jointly endorsed the Millennium Declaration which committed signatories to achieving, by 2015, ambitious goals in poverty reduction, alleviation of hunger, control of disease, achievement of universal education and reversing environmental degradation. These goals are known collectively as the Millennium Development Goals (MDGs). The MDG process is designed to enhance accountability and to stimulate quantitative and qualitative changes in the way countries and development partners monitor improvements. The MDGs will serve as the framework for reporting on progress in development for the next 15 years, with achievements measured in terms of a 1990 baseline and a 2015 target. This framework aims to bring all development partners together around a common, unified agenda that is focused on poverty alleviation.

The reduction of maternal mortality is one of the key goals of the Millennium Declaration. In addition, the goal on the reduction of under-five mortality will require greater attention to the needs of the newborn if it is to be realized. Thus, attention to both maternal and newborn health is central to the attainment of the MDGs.

In the MDG framework, two indicators are proposed for monitoring progress towards the maternal health goal namely, the maternal mortality ratio and the proportion of deliveries with a skilled health care provider. The need for access to skilled health care for pregnancy, birth and the postnatal period has been central to WHO's Making Pregnancy Safer initiative. However, two years of efforts in the Making Pregnancy Safer initiative, together with the experiences of partners working in safe motherhood, have shown that countries have yet to integrate increasing access to skilled care for pregnant women into their national health and development plans. Concerns have been expressed that the strategies required are complex and too difficult to implement because of human resource constraints.

The term 'skilled attendant' refers exclusively to people with midwifery skills (for example midwives, doctors and nurses) who have been trained to proficiency in the skills necessary to manage normal deliveries and diagnose, manage\* or refer obstetric complications.

\*Manage was added in 2000 by the Inter-Agency Group for Safe Motherhood in recognition that some skilled attendants will also have competencies to manage complications.

Source: A Joint WHO/UNFPA/UNICEF/World Bank Statement on Reduction of Maternal Mortality, 1999.



Also, the concept of the skilled attendant is not always well understood. Even when it is understood, there are operational difficulties in identifying precisely what skilled attendants should do, how they should be trained and deployed, and what it will cost.

Thus, WHO is proposing an accountability framework for urgent and concerted action at both international and national levels for increasing access to skilled attendants. The action should be focused on the human resources needed for safe motherhood i.e. the skilled attendant, but should also include the systems required to support this health care provider. The accountability framework aims to assist key actors at both national and international levels with identifying and fulfilling their core responsibilities and roles, to achieve skilled care for all women and their newborn babies during pregnancy, childbirth and the postpartum period. The framework will ensure that all issues related to the skilled attendant are not left to one or two main actors. Additionally it is important to ensure that there is concentration of efforts in only one or two areas, namely logistics or equipment, policy, increasing the number of facilities able to manage complications, increasing the capacities of communities to recognise and respond to danger signs, or the human resource issues. All of these components are essential to support skilled care. However, without a skilled attendant to provide a continuum of care from the community to the highest level of referral for those who require this, maternal and newborn health cannot be assured.

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## A health sector responsibility

Although other factors affect overall levels of maternal mortality, notably social status, education, nutrition and fertility, timely access to skilled care, particularly when complications arise is often the crucial factor affecting death or survival for the woman. One way of achieving access to the skills required to avert death or serious morbidity when complications arise, is through increasing access to a skilled attendant throughout the pregnancy and particularly during birth and the early postpartum period, which are the times when most maternal and newborn complications arise. WHO has already identified a number of interventions that have been proved to be effective using rigorous scientific standards. In addition, it has also been shown that some interventions that are frequently used have little or no efficacy, and may even be harmful. The list of interventions, and evidence for and against their effectiveness, is constantly increasing and this information is made widely available by WHO through the annual updates of its WHO Reproductive Health Library (for the 2002 list, see Appendix 1). Although care providers with different mixes of skills can deliver the interventions known to be effective (see Appendix 2), the full package of interventions necessary for saving the lives of mothers and newborn will require access to a skilled attendant. A small sample selection of the evidence-based



interventions by the level of care provider needed to deliver them safely and effectively is shown in Appendices 2 and 3.

Although the case for skilled attendant is a strong one, alone they are not sufficient for ensuring access to appropriate pregnancy-related care. In order to function effectively, they need a supportive health system that ensures they have access to essential infrastructure, medicines and equipment and that they work as part of a team and have supportive supervisory systems. The responsibility for ensuring that this is in place lies with public health authorities and with national governments, who have a duty to see that women and newborns have access to the care they need to save lives. This includes skilled providers who can competently carry out the essential functions necessary for a healthy pregnancy outcome.

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## **Increasing access - begins with mobilizing what you have**

The strategy for increasing access to a skilled attendant encompasses emergency obstetric care for the management of obstetric complications, but it goes beyond it, in positing the need for skilled care throughout pregnancy, childbirth and the postpartum period. Reliance on the effective management of complications as and when they arise is based upon an assumption that individual women, families and communities can recognize complications and take decisions to seek care in a timely way. For this to happen, individual women, their families and the community must be well informed and believe that their needs will be met in a way that is acceptable to them. Evidence is now available to show that by working closely with individual women, their families and communities throughout pregnancy, childbirth and the postnatal period, skilled attendants can help achieve this. Additionally, skilled attendants are trained to both recognize and respond appropriately to complications and to implement interventions to help prevent them in the first place. For example, the skilled birth attendant can provide active management of the third stage of labour, which will help avert half of all cases of postpartum haemorrhage.

In countries where currently there are too few skilled attendants, health care providers without midwifery skills may be able to deliver some or parts of the interventions, but should work in collaboration or under the supervision of a health care worker with the requisite midwifery skills. In some instances this will have consequences for how the services are organized and may require redeployment of staff in order to maximise scarce resources.

In the majority of countries there are essentially four key types of providers of maternal and newborn care, most of whom operate within the formal health sector, but some may operate in the informal health sector, or within communities and families. Currently, the main providers of maternal and newborn health are:



- Doctors (generalists with midwifery skills and obstetrician/gynaecologists);
- Midwives and nurse-midwives, or country equivalents (see definition of midwife in Appendix 4);
- Care providers without midwifery skills (a large and heterogeneous group comprising some providers who can deliver parts of the interventions known to be effective but only if they are supported and supervised by providers with midwifery skills);
- Traditional birth attendants, volunteer workers/supporters, family members, friends, and, importantly, women themselves, as many women rely through choice or circumstances on self-care for their pregnancy and/or birth.

Only the first two groups fall within the definition of a skilled attendant.

The outstanding challenge for many countries is how to ensure that all women have access to skilled attendants through pregnancy, childbirth and the postpartum period. To achieve this, it will be necessary to identify currently available human resources and to make most effective and efficient use of them. In some cases this will include upgrading the skills of those cadres with the potential to function as skilled attendants in pregnancy and childbirth. In others it will be through working with women, their partners and the community, to increase their skills and find appropriate solutions to access the skilled attendants already in existence. Whilst in other situations there will be a need to dramatically increase the numbers of skilled attendants trained. In all cases it is likely to require a revision of regulations and administrative procedures to ensure a shift of responsibility for care among current health providers to the level where it is most needed.

In most countries there will be a combination of approaches required. Many of the poorest countries will require assistance from a number of key partners and stakeholders to ensure they can provide skilled care to all women and newborns.

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## Call for action

Working with other key partners will permit a global movement to create the necessary commitment and unlock essential resources required to increase access to skilled attendants.

Thus, WHO is engaging in global advocacy and action for 'Skilled Attendants for Pregnant Women', which identifies key global partners who can help push forward this agenda. Further, recognizing that there is a need for accountability, WHO has outlined a framework that defines its own roles and responsibilities and those of other key



stakeholders in this global action movement. The framework also identifies key actions needed at different levels by the different actors.

In short, WHO is proposing a *5+5 strategy*, 5 key partners and 5 strategic actions to ensure that countries and partners come together around the health agenda encapsulated in the Millennium Declaration and reduce maternal and newborn mortality and morbidity.

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## The 5+5 Strategy

### 5 key partners

- Health care professionals at all levels, especially national and international professional organizations (such as the International Federation of Gynaecologists and Obstetricians (FIGO), International Confederation of Midwives (ICM), and others);
- Women, their families and communities;
- National governments and public health authorities, including teaching institutions;
- The private sector and philanthropic organizations;
- International donor and technical agencies, including WHO.

### 5 key strategies

- Setting norms and standards to define what care skilled attendants must be able to deliver;
- Development, deployment and management of human resources, to ensure skilled attendants are available where they are needed;
- Strengthening of the enabling environment and capacities both within the health sector and within communities;
- Mobilization of resources (human, financial, knowledge);
- Monitoring and evaluation of both strategies and the partners actions as well as the impact.



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## The accountability framework

### Examples of what health care professionals can do – “A commitment to quality”

- **Doctors with midwifery and/or obstetric skills, and their professional associations**

**Individuals can:**

- implement the clinical interventions which only doctors can provide (see Box in Appendix 2);
- develop/adapt, promote and use locally relevant norms, guidelines and standards of care based on most recent evidence;
- advise policy-makers on public health issues ensuring maternal and newborn health is a priority;
- as key members of the health care team, adopt collaborative working models that value the contribution of others, as well as provide leadership and direction to other levels of health care providers;
- institute regular audit and enquiries to investigate adverse events affecting pregnant women and their newborns;
- ensure maintenance of good case notes and other records and provider leadership for regular monitoring and evaluation of quality of care.

**Professional associations can:**

- develop professional codes of conduct that make it incumbent upon their members to maintain their skills and ensure that responsibility of care is delegated as far down the care continuum as is feasible and consistent with quality care;
- lobby for increasing access to skilled attendant and inclusion of maternal and newborn health issues in national and local health and development policies and plans in full accord with good quality of care;
- provide specialist training for junior colleagues and other health care professionals through locally designed courses using for instance, WHO’s midwifery modules, or other specialist courses, such as Advances in Labour and Risk Management (ALARM) or Advanced Life Support in Obstetrics (ALSO);
- develop effective networks with associations representing other relevant professions, as well as with similar professional associations in other countries (particularly resource-poor countries), for mutual benefit, exchange of ideas and capacity-building, and advocacy for increasing access to skilled attendants for safe motherhood.



## **WHO tools available to support doctors with midwifery and /or obstetric skills in these tasks**

- Managing Complications during Pregnancy and Childbirth: A guide for midwives and doctors;
- Management of Newborn Problems: A guide for doctors, nurses and midwives;
- WHO Reproductive Health Library;
- Beyond the Numbers: Reviewing maternal death and complications to make pregnancy safer;
- Standards of Maternal and Neonatal Care;
- Education materials for teachers of midwifery;
- Essential Care Practice Guide for Pregnancy, Childbirth, Postnatal and Newborn Care;
- The Essential Antenatal, Perinatal and Post-partum Care and the Essential Newborn Care and Breastfeeding (WHO EURO).
- Safe abortion: technical and policy guidance for health systems.

## **Indicators of progress**

- Proportion of health care facilities that have regular investigation of maternal and perinatal deaths and other adverse events;
- Case-fatality rates (number of deaths for each condition divided by the number of people with this condition);
- Proportion of deliveries that have completed case notes;
- Proportion of complicated obstetric cases managed correctly (for example, cases of eclampsia managed using appropriate protocols).

## **Midwives (nurse-midwives/country equivalents) and their professional associations**

### **Midwives can:**

- implement the clinical interventions that are the particular responsibility of health care providers with midwifery skills (see Box 1 in Appendix 2 and Appendix 3);
- contribute to the development of and apply locally relevant norms and guidelines on standards of care, including audits of care;
- as essential members of the team contribute to the smooth functioning and coordination of the maternal health care team by establishing good rapport and regular contact with other members of the team;



- work closely with women and women’s groups to ensure maternal and newborn health receives adequate attention and resources;
- lobby for equitable access to quality maternal and newborn care;
- provide on-the-job training and supportive supervision to other members of the health care team (including, as appropriate and feasible, community workers, traditional providers and traditional birth attendants (TBAs) and others).

**Professional associations can:**

- develop codes of professional conduct to make it incumbent on members to maintain their skills and to lobby for equitable access to quality maternal and newborn care;
- provide specialist training courses to junior colleagues and other health professionals as required, using locally adapted materials or the WHO midwifery education materials or the American College of nurse-midwives;
- work closely with women and women’s groups to ensure maternal and newborn health receives adequate attention and resources;
- develop effective networks with associations representing other relevant professions as well as with similar professional associations in other countries (particularly resource-poor countries) for mutual benefit, exchange of ideas and capacity-building, and advocacy for increasing access to skilled attendants for safe motherhood.

**WHO tools available to support midwives (nurse-midwives/ country equivalents) in these tasks**

- Managing Complications during Pregnancy and Childbirth: A guide for midwives and doctors;
- Management of Newborn Problems: A guide for doctors, nurses and midwives;
- Education materials for teachers of midwifery;
- Essential Care Practice Guide for Pregnancy, Childbirth, Postnatal and Newborn Care;
- Standards of Maternal and Neonatal Care;
- Strengthening Midwifery Toolkit;
- Beyond the Numbers: Methods of reviewing maternal death and complications to make pregnancy safer;
- Standards of Midwifery Practice (WHO SEARO);
- The Essential Antenatal, Perinatal and Post-partum Care and the Essential Newborn Care and Breastfeeding (WHO EURO).



## Indicators for monitoring

- Proportion of midwives involved in peer review of clinical practice;
- Proportion of midwives receiving in-service updating or continuing education;
- Proportion of maternal and neonatal life-threatening conditions correctly identified, managed or referred;
- Proportion of districts with established process for regular auditing of standards of midwifery care.

### ▪ **Health service managers and planners can:**

- ensure a policy framework is in place to permit the delivery of clinical interventions at the appropriate levels, as far down the health care chain as is consistent with good practice (see box 1 in Appendix 2 and Appendix 3);
- ensure mechanisms are in place for the development and use of locally relevant norms, guidelines and standards of care in all sectors (public and private);
- ensure human resources are recruited, deployed and managed to enable delivery of quality maternal and newborn care;
- establish mechanisms to ensure the smooth functioning and coordination of the maternal health care team, including links with the private sector;
- develop effective referral systems for management of complications;
- develop mechanisms for regular audit and enquiries and ensure “no name – no blame” mentality to investigate adverse events affecting pregnant women and their newborns;
- identify training needs and ensure provision of training and supportive supervision for all maternal health care providers;
- develop quality-enhancement procedures that link maternal health care providers with other members of the health care team, including blood bank, laboratory and other diagnostic technicians, maintenance and transport workers, etc.;
- foster links between the community and the health care system, for example, through the establishment of local maternal health committees;
- establish sound monitoring and evaluation strategies including appropriate case notes and other records, surveillance of adverse events, and feedback on progress for all health care providers in both public and private sectors, including monitoring of “marker interventions” (see Box 2, Appendix 2).



## **WHO tools available to support health service managers and planners**

- Making Pregnancy Safer Planning Guide;
- Making Pregnancy Safer District Planners Workshop Manual;
- Beyond the Numbers: Methods of reviewing maternal death and complications to make pregnancy safer;
- Strengthening Midwifery Toolkit;
- Making Pregnancy Safer Costing-Spreadsheet;
- Standards of Maternal and Neonatal Care.

## **Indicators for monitoring**

- Proportion of child-bearing women with access to skilled attendant within 2 hours;
- Proportion of health facilities that have a regular review of maternal and perinatal deaths and other adverse events affecting pregnant women and their newborns and act on the findings;
- Proportion of health facilities providing 24-hour quality maternal and neonatal services with continuity of care (no lack of human resources, no lack of drugs or supplies etc.);
- Where fees for service exist, proportion of pregnant women covered by national or private health insurance scheme to pay for full maternal care including access to emergency obstetric and neonatal care.

## **Examples of what women, families and communities including community volunteers can do —“A commitment to make pregnancy and birth special”**

- **The pregnant/postpartum woman herself and/or her family members, traditional providers, TBAs, health volunteers and/or communities can:**
  - communities can develop and implement plans for promotion and use of skilled attendants for pregnancy, birth and the postnatal period;
  - communities can work in collaboration with local health facilities to ensure means of transportation are available to all women and newborns who may need it in an emergency, including provision for payment of costs (direct costs and indirect costs such as cost of child care, etc);
  - a woman can seek support and her partner, family can support her to seek advice and access antenatal care from a skilled attendant as soon as pregnancy is suspected;



- a woman and her family can prepare a birth plan (including ways of meeting unexpected expenses and transportation for referral care). Skilled attendants can support, advise and counsel women on informed decision-making for preparing this plan;
- all can support and encourage compliance with local maternal and newborn health initiatives, such as immunization against tetanus, iron supplementation during pregnancy, regular antenatal care, etc.;
- all can recognise danger signs and advise, or seek care from a skilled attendant, immediately signs and symptoms occur that indicate urgent professional help is needed;
- women can seek (and partners, family members, friends and TBAs can provide) social support during labour, birth and the postpartum period;
- women and their families can ensure that, for home births, the place for birth is clean and warm;
- all attending the birth can ensure the newborn is dried immediately after birth and kept warm;
- families and communities can support breastfeeding, including early initiation within 1 hour of birth, by ensuring there are no barriers or unnecessary restriction on the mother's ability to freely breastfeed when the newborn needs to.

### **WHO tools available to support family members, traditional providers, TBAs, health volunteers and communities**

- Essential Care Practice Guide, for Pregnancy, Childbirth, Postnatal and Newborn Care Counselling booklet for individuals, families and communities;
- Making Pregnancy Safer Planning Guide;
- Making Pregnancy Safer District Planners Workshop Manual;

### **Indicators for monitoring**

- Proportion of newborns commencing breastfeeding within 1 hour of birth;
- Proportion of women with a birth plan prior to birth;
- Proportion of pregnant women attending for antenatal care;
- Proportion of communities with development plans highlighting the special needs of pregnant women and newborns;
- Proportion of communities with effective means of transportation for women and their newborns with pregnancy-related complications;
- Proportion of pregnant women protected against tetanus;
- Proportion of newborns born at home referred to a facility for treatment for hypothermia.



## Examples of what the private sector, civil society and philanthropic organizations can do — “A commitment to quality education and training”

- **The private sector, civil society and philanthropic organizations can:**
  - develop local, national or regional schemes to increase skilled attendants, particularly schemes for supporting midwives, as it this cadre of worker at the community level, which is often in short supply. For example, in a “Sponsor a midwife” scheme, the organization would provide funding for the initial education programmes and/or in-service training of health care providers in midwifery skills;
  - develop local, national or regional schemes to support midwife teachers in “Sponsor a midwife teacher” schemes;
  - establish local, national or regional awards and scholarships for skilled attendants, for instance to receive additional, advanced or continuing education and thus enhance their ability to help with national capacity-building.

### **WHO tools to assist private sector, charitable associations, etc.**

- Strengthening Midwifery Toolkit;
- Effective Teaching: A guide for educating healthcare providers.

### **Indicators for monitoring**

- Number of school-leavers supported to enter midwifery training programmes;
- Number of midwives (including nurses-midwives and/or country equivalents, nurses, other health practitioners) supported to receive refresher training or skills upgrading;
- Number of doctors with midwifery skills supported to receive refresher/updating training;
- Number of midwife teachers supported for training and/or updating
- Number of institutions for training skilled attendants supported by type of institution and country;
- Number of scholarships provided for advancing midwifery care in the locality;
- Number of scholarships awarded for continuing education/advanced education programmes for skilled attendants, by professional background of grantees, or type of organization.



## Examples of what National authorities can do – “A commitment to carers”

- **National authorities can:**
  - ensure supportive legal and regulatory framework;
  - undertake forward planning of basic education and career advice to create a pool of eligible school-leavers for entry into programmes for skilled attendants;
  - ensure infrastructure development and maintenance;
  - ensure that national essential drugs lists include key commodities needed by skilled attendants and others to implement the core interventions;
  - collaborate with organizations engaged in education and health care training and in professional health care to develop and implement plans to produce set numbers of health care workers trained in midwifery skills; to formulate human resource policies and career pathways; and to establish national rules, regulations and frameworks for practice, including national ethical codes of professional practice;
  - ensure appropriate staff deployment and payment mechanisms are in place, including, for example, incentives for health care professionals in rural areas;
  - establish national quality assurance systems for both public and private sectors, including provision of supportive supervisory schemes for all skilled attendants;
  - establish mechanisms to ensure involvement of and collaboration between skilled attendants (private and public) and informal health care providers, such as TBAs, traditional healers, etc., as appropriate;
  - provide leadership and direction on maternal and newborn health and the role of skilled attendants within national public health promotion and information efforts, including through specialist and popular journalists and the media;
  - undertake national-level monitoring and evaluation of skilled attendants, including monitoring of educational institutions to ensure curricula are fit-for- purpose and national-level monitoring of implementation of best practice.

### WHO tools to assist national authorities

- Strengthening Midwifery Toolkit;
- Effective Teaching: A guide for educating healthcare providers;
- Making Pregnancy Safer Strategy;
- Making Pregnancy Safer Planning Guide.



## Indicators for monitoring

- Number of countries with national Making Pregnancy Safer or safe motherhood strategic team with action plans for revising human resources to ensure skilled attendants are available to all women;
- Number of countries revising their regulatory framework to ensure licensing of midwives and doctors with midwifery skills;
- Number of midwives receiving post-basic preparation for teaching midwifery;
- Number of midwifery schools and medical schools with midwifery skills programmes, updated and fully staffed with appropriate faculty and teaching and learning resources;
- Student midwife : midwife teacher ratios;
- Number of countries with appropriate ethical codes of professional conduct for all types of skilled attendants.

## Examples of what donor and international technical assistance agencies, including WHO can do — “A promise of resources”

- **Donors and international technical assistance agencies, including WHO can:**
  - undertake to mainstream safe motherhood efforts that contribute to increasing access to skilled attendants for all women, into all development activities;
  - allocate specified funding to safe motherhood programming;
  - stimulate partnerships and sharing of information with all relevant stakeholders;
  - stimulate partnerships at country level for implementing activities to increase skilled attendants;
  - support the strengthening of midwifery and obstetric professional associations;
  - promote, coordinate, implement and/or disseminate research, with relevant partners as appropriate (Skilled Attendance for Everyone (SAFE), Initiative for Maternal Mortality Programme Assessment (IMMPACT), Averting Maternal Death and Disability (AMDD), The Population Council, etc.);
  - undertake to promote skilled attendants with all national and international nongovernmental organizations (NGOs) and others implementing programmes in safe motherhood;
  - establish a partnership for monitoring global action and advocacy on skilled attendant;



- develop a charter on access of mothers and newborns to skilled attendants;
- within WHO, engage the energies of the Organization at all levels (headquarters, regional and country offices) to support this agenda.

### **Indicators for monitoring**

- Proportion of countries and international technical agencies signing the ‘mothers and newborns charter’;
- Increase in funding to safe motherhood programmes;
- Proportion of midwifery and obstetric professional associations supported and strengthened.

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## **What WHO is doing to galvanise this action for Skilled Attendants for pregnant women**

Working with the International Confederation of Midwives (ICM) and International Federation of Obstetricians and Gynaecologists (FIGO) to develop a “Joint Statement on Skilled Attendants”.

Working with UNICEF, UNFPA and other partners to coordinate actions in-country around increasing access to a skilled attendant.

Developing evidence on the cost-effectiveness of the interventions known to be effective.

Developing briefing packs for regional and country use and ensuring the topic of skilled attendant is on all relevant internal WHO agendas and on the agendas of meetings with external partners.

Liaison with Inter-Agency Group for Safe Motherhood to develop activities for *Global action for skilled attendants for pregnant women*; including plans for a high-profile launch in late 2002 or early 2003.

Working with the United Nations Millennium Project monitoring MDGs, to develop ways of accurately measuring the proportion of births with a skilled attendant.

Working with the media to intensify action and messages around the need for skilled attendants for safe motherhood, including developing briefing packs with messages for the media.

Meeting with donors and other partners, (for instance at the Meeting of Interested Parties and other high-level meetings), to increase knowledge and gain commitment for action on skilled attendants.



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## Appendix 1

### Maternal Health Effectiveness Summary

(adapted from the World Health Organization Reproductive Health Library, No 5, 2002)

#### Beneficial forms of care

- Active management decreases blood loss after delivery.
- Antibiotic treatment of asymptomatic bacteriuria prevents pyelonephritis in pregnancy and reduces preterm delivery.
- Antibiotics for preterm prelabour rupture of membranes prolong pregnancy and reduce maternal and infant infectious morbidity.
- Antibiotic prophylaxis for women undergoing caesarean section reduces postoperative infectious complications.
- Corticosteroids prior to preterm delivery reduce neonatal mortality, respiratory distress syndrome and intraventricular haemorrhage.
- External cephalic version at term reduces breech delivery and caesarean section rates.
- Intraumbilical vein injection of saline solution with oxytocin reduces the need for manual removal of placenta.
- Magnesium sulfate therapy for women with eclampsia is more effective in preventing further fits than other anticonvulsants.
- Routine midwife/general practitioner led antenatal care for low-risk women compared to specialist led care, costs less without an increase in adverse outcomes.
- Population-based iodine supplementation in severely iodine-deficient areas prevents cretinism and infant deaths due to iodine deficiency.
- Reduced number of antenatal care visits with specific activities compared to higher number of visits in standard western style antenatal care costs less without an increase in adverse outcomes.
- Routine iron and folate supplementation during pregnancy prevents maternal anaemia at delivery or six weeks postpartum.
- Routine periconceptional folate supplementation reduces the occurrence of neural tube defects and their recurrence.
- Social support during labour in busy, technology-oriented settings reduces the need for pain relief and is associated with a positive labour experience.



## Forms of care likely to be beneficial

- Antimalarial prophylaxis or presumptive treatment during pregnancy to primigravidae in endemic malarious areas increases birth weight and decreases the incidence of low-birth-weight babies.
- Antimalarial prophylaxis during pregnancy in endemic malarious areas to reduce subsequent fever and sickness episodes.
- Antimalarial prophylaxis or presumptive treatment during pregnancy in endemic malarious areas reduces the incidence of maternal anaemia in late pregnancy.
- Balanced protein/energy supplementation during pregnancy to women with malnutrition or low calorie intake on reduces the number of low-birth-weight babies and increases birth weight.
- Calcium supplementation to nulliparous women living in low-calcium intake areas reduces the rate of pre-eclampsia.
- Routine early-pregnancy ultrasound by experienced staff is likely to be effective for early detection of fetal abnormalities and multiple pregnancies, and for reducing rates of induction of labour for post-term pregnancy.
- Social support during labour in busy, technology-oriented settings may lower caesarean section rates, number of infants with low Apgar scores (<7 at 5 minutes) and duration of labour.

## Forms of care with a trade-off

- Amnioinfusion during labour for treatment of cord compression is effective in correcting fetal heart rate (FHR) abnormalities, Apgar scores (fewer babies with low Apgar), birth asphyxia and lowering caesarean section rates (when indication for caesarean section is based on FHR criteria alone), but safety of amnioinfusion concerning rare but serious maternal complications is not established.
- Amnioinfusion during labour when moderate or thick meconium is noted is effective in reducing the incidence of meconium found below the vocal cords, meconium aspiration syndrome and caesarean section rate, but safety of amnioinfusion concerning rare but serious maternal complications is not established.
- Antihypertensive therapy for mild to moderate hypertension during pregnancy is effective in reducing the incidence of severe hypertension. Beta-blockers are associated with fewer cases of proteinuria/pre-eclampsia but more small-for-gestational age babies.
- As part of active management of the third stage of labour, ergot preparations compared to oxytocin are more effective in reducing blood loss, but are associated with a small but significant increase in blood pressure, nausea and vomiting.



- Intramuscular prostaglandins are effective in reducing blood loss in the third stage of labour but their safety is uncertain and their costs are prohibitive in under-resourced settings.
- Where required, planned caesarean section is, overall, significantly beneficial for the baby as opposed to emergency caesarean section. In settings with high perinatal mortality and where resources are poor these benefits are not as clear.
- Vaginal misoprostol administration for induction of labour in doses of 25 mcg at intervals of 3 hours or less is more effective than oxytocin or other prostaglandins, but it is associated with increased fetal heart rate (FHR) abnormalities and uterine hyperstimulation. Vaginal misoprostol in doses of 25 mcg 4-6 hourly is likely to be less effective but safer in terms of FHR abnormalities and uterine hyperstimulation.
- When compared to intermittent auscultation of the heart rate, continuous electronic FHR monitoring during labour is associated with fewer neonatal seizures, similar long-term infant outcome, but increased caesarean section rates.

### **Forms of care of unknown effectiveness**

- Amnioinfusion during labour to correct cord compression is of unknown effectiveness with respect to caesarean section rates when decision is based not only on fetal heart rate monitoring criteria but also scalp blood gas analyses.
- Amnioinfusion for moderate or thick meconium staining during labour is of unknown effectiveness with respect of reducing perinatal mortality due to meconium aspiration.
- Anticonvulsant treatment of women with pre-eclampsia is of unknown effectiveness in terms of the prevention of eclampsia.
- Antimalarial prophylaxis during pregnancy in endemic malarious areas is of unknown effectiveness with respect to lowering preterm delivery and perinatal mortality rates.
- Balanced protein/energy supplementation during pregnancy to women with malnutrition or low calorie intake is of unknown effectiveness in terms of reducing preterm delivery and perinatal mortality and improving long-term neurocognitive development of the infant.
- Decisions on ideal treatment of iron deficiency anaemia during pregnancy with iron tablets, parenteral iron or blood transfusion according to the level of anaemia, is as yet unproven.
- Giving nutritional advice during pregnancy is of unknown effectiveness with respect to improving maternal and infant outcomes.



- The routine measurement of symphysis-fundal height during pregnancy is of unknown effectiveness with respect to detecting impaired fetal growth and preventing perinatal mortality.
- Using postural manoeuvres to convert breech to vertex presentation is of unknown effectiveness with respect to reducing the incidence of breech delivery.

### **Forms of care likely to be ineffective**

- Antibiotics in preterm labour with intact membranes to prolong pregnancy and reduce preterm birth.
- Early amniotomy during labour in reducing caesarean section rates.
- External cephalic version before term to reduce the incidence of breech presentation at delivery.
- Isocaloric protein supplementation during pregnancy to improve pregnancy outcomes.
- Ketanserin (a serotonin antagonist) for rapid lowering of very high blood pressure during pregnancy.
- Oral or rectal misoprostol as part of active management of the third stage of labour for the prevention of postpartum haemorrhage.
- Routine early pregnancy ultrasound in decreasing perinatal mortality.
- Routine continuous electronic fetal monitoring during labour for low-risk pregnancies.
- Social support during the course of pregnancy before labour in improving biological pregnancy outcomes and mothers' satisfaction.

### **Forms of care likely to be harmful**

- A policy of routine episiotomy to prevent perineal/vaginal tears compared to restricted use of episiotomy because of the incidence of post procedural complications and increased incidence of trauma to the maternal genital tract.
- Diazoxide (a potassium-channel activator) for rapid lowering of severe high blood pressure during pregnancy because of severe hypotension.
- Forceps extraction instead of vacuum extraction for assisted vaginal delivery when both are applicable, because of increased incidence of trauma to the maternal genital tract.
- Using diazepam, phenytoin, or lytic cocktail when magnesium sulfate is available, because the former are less effective in preventing further fits in women with eclampsia.



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## Appendix 2

### What works and who can do it?

As a first step in strengthening human resources for safe motherhood, WHO has identified a number of interventions that are known to be effective; many of these have been proved to be effective using the rigorous scientific standard of the randomised control trial. The full list of interventions for saving lives of mothers and newborn, including guidelines on effective management of pregnancy and birth-related complications in mother and newborn, is available from WHO.

The interventions identified by WHO can be delivered by health providers with different mixes of skills. A *selection* of these evidence-based interventions by the level of care provider needed to deliver them safely and effectively is shown in Box 1.

The care providers designated for each intervention in Box 1 are those who are best placed in terms of decision-making and who can provide the interventions most efficiently or cost-effectively, although it is acknowledged that other health providers may also be able to provide the interventions, or that others could do so if specifically trained and /or if supervised by a skilled attendant. In some instances, applying the framework outlined in Box 1 will have consequences for how the services are organized and may require redeployment of staff in order to maximize scarce resources.

The skills and competencies of the different types of care providers will inevitably vary from place to place. In the majority of countries there are essentially four key types of providers; most of whom operate within the formal health sector, but some operate in the informal health sector, or within communities and families. Currently, the main providers of maternal and newborn health in the majority of countries are:

- Doctors (generalists with midwifery skills and obstetrician/gynaecologists): In these particular groups of health professionals the issue for planners may be the need to distinguish which professional doctors are also skilled attendants, as countries frequently have no mechanism for recording specific competencies of medical doctors.
- Midwives and nurse-midwives, or their country equivalents who by definition will have or should have the midwifery skills required to save lives: The international definition of the “midwife” (see Appendix 4) ratified by WHO allows each country to specify entry requirements and the need for a specific licence to practice as a midwife (or country equivalent). In those countries where the main health care providers with midwifery skills are midwives (although countries may have different names for these



workers), a key issue for planners and service managers will be to determine if they have all the competencies to carry out the full spectrum of interventions identified by WHO as essential for saving the lives of mothers and newborns.

- Care providers without midwifery skills: A large and heterogeneous group comprising some providers who can deliver parts of the interventions known to be effective, but only if they are supported and supervised by providers with midwifery skills.
- Traditional birth attendants, volunteer workers/supporters, family members, friends and, importantly, women themselves, as many women rely through choice or circumstances on self-care for their pregnancy and/or birth.

Only the first two groups fall within the definition of a skilled attendant.

### **What must skilled attendants do?**

The list of interventions by level of health care provider presented in Box 1 should not be taken to imply that these are the only interventions that are effective, or the only ones needed to ensure a healthy outcome. For example, skilled attendants must be able to manage birth asphyxia for which the only reliable intervention is to apply resuscitation skills. Also, in certain situations, such as areas with high levels of HIV/AIDS or malaria endemic areas, other interventions are critical and hence may need to be added to the list. Rather, the list represents a selection of “*marker interventions*”. These *marker interventions* have been drawn from a list of interventions for which there is the highest level of evidence and without which it will not be possible to ensure the health and survival of mother and newborn; additionally, the *marker interventions* can be measured through most health information systems. The underlying assumption in choosing these interventions as markers is that, if these interventions are in place, other beneficial forms of care are likely to be also available. Conversely, if these *marker interventions* are not in place, the level of care offered will most likely be inadequate.

Additionally, these *marker interventions* can be the central focus around which programmes are strengthened to ensure other interventions are made possible. To put each of these interventions in place, specific actions can be undertaken by each of the major stakeholders; examples of these are presented in Appendix 3.

As already stated, all the interventions listed in Box 1 can currently be recorded in the majority of countries through the normal health-facility information systems and are thus amenable to monitoring and to the establishment of systems of accountability. A list of indicators for each intervention is included in Box 2.



**Box 1. Selected 'marker Interventions' of proven effectiveness and level of care provider**

	<b>Intervention/care provider</b> (ordered to show interventions that can be carried out from individual/family level – to referral level facility with a doctor)	<b>Individual woman, family member, TBA, volunteer</b>	<b>Health care worker without midwifery skills</b>	<b>Midwife (including nurse-midwife/country equivalent)</b>	<b>Doctor with midwifery/obstetric skills</b>
1.	Women have social support during labour and birth	Yes			
2.	Exclusive breastfeeding is initiated one hour after birth	Yes	Yes	Yes	
3.	Every newborn is immediately dried and kept warm to protect against hypothermia	Yes	Yes	Yes	
4.	The WHO antenatal care package is used for all pregnant women		Partial under supervision	Yes	Yes
5.	Magnesium sulphate is used to treat severe pre-eclampsia and eclampsia		Partial - as directed, if skills allow	Yes	Yes
6.	A partogram is used to identify obstructed labour			Yes	Yes
7.	Oxytocin is used for all women as part of the active management of third stage of labour			Yes	Yes
8.	Antibiotic prophylaxis is used for women undergoing caesarean delivery			Yes	Yes
9.	Manual vacuum aspiration is used for management of incomplete abortion and safe induced abortion up to 12 completed weeks of pregnancy (in circumstances where it is not against the law)		Only if specifically trained	Only if specifically trained	Yes
10.	The kangaroo-mother-care of skin-to-skin contact is used for all low birth weight babies		Only specialist neonatal nurses	Yes	Yes
11.	Assisted delivery including caesarean section is performed in cases of prolonged and/or obstructed labour			If specifically trained	Yes
12.	<p>In specific situations such as when malaria is endemic or in areas of high HIV-prevalence, other 'marker intervention' may be added:</p> <ul style="list-style-type: none"> <li>▪ Pregnant women are offered intermittent preventive treatment (IPT);</li> <li>▪ Pregnant and postnatal women and newborns sleep under insecticide-treated bednets;</li> <li>▪ Pregnant women are offered voluntary counselling and testing (VCT) for HIV. Women who are HIV-positive are provided with specific interventions to reduce HIV transmission to their infant and relevant care and support. Women who are HIV-negative are counselled on how to remain uninfected.</li> </ul>				



## Box 2. Interventions of proven effectiveness and associated indicator(s)

Intervention/care provider		Indicators
1.	Women have social support during labour and birth	<ul style="list-style-type: none"> <li>Proportion of women with social support during labour and birth by facility per 1,000 total live births, by facility (district/country).</li> </ul>
2.	Breastfeeding is initiated within one hour after birth	<ul style="list-style-type: none"> <li>Proportion of mothers initiating breastfeeding within one hour after birth per 1,000 live births, by facility (district/country).</li> </ul>
3.	Every newborn is immediately dried and kept warm to protect against hypothermia	<ul style="list-style-type: none"> <li>Proportion of newborns treated for hypothermia per 1,000 total live births, by facility (district/country).</li> </ul>
4.	The WHO antenatal care package is used for all pregnant women	<ul style="list-style-type: none"> <li>Proportion of pregnant women receiving the complete WHO antenatal care package per 1,000 total births, by facility (district/country).</li> </ul>
5.	Magnesium sulphate is used to treat severe pre-eclampsia and eclampsia	<ul style="list-style-type: none"> <li>Proportion of women with pre-eclampsia and eclampsia treated with magnesium sulphate per 1,000 total births, by facility (district/country).</li> </ul>
6.	A partogram is used to identify obstructed labour	<ul style="list-style-type: none"> <li>Proportion of completed partograms per 1,000 total births, by facility (District/country).</li> <li>Proportion of obstructed labours referred using a partogram by 1,000 total births, by facility (district/country).</li> </ul>
7.	Oxytocin is used for all women as part of the active management of third stage of labour	<ul style="list-style-type: none"> <li>Proportion of births managed using oxytocin as part of the active management of third stage of labour per 1,000 total births, by facility (district/country).</li> </ul>
8.	Antibiotic prophylaxis is used for women undergoing caesarean delivery	<ul style="list-style-type: none"> <li>Proportion of women undergoing caesarean delivery for who Antibiotic prophylaxis has been used by facility, (country).</li> </ul>
9.	Manual vacuum aspiration (MVA) is used for management of incomplete abortion and induced abortion up to 12 weeks of amenorrhea (in circumstances where it is not against the law)	<ul style="list-style-type: none"> <li>Proportion of incomplete abortion and induced abortion up to 12 weeks of amenorrhea (in circumstances where it is not against the law) managed using MVA, by facility (district/country).</li> </ul>
10.	The kangaroo-mother-care of skin-to-skin contact is used for all low birth weight babies	<ul style="list-style-type: none"> <li>Proportion of low birth weight babies managed using the kangaroo-mother-care of skin-to-skin contact per 1,000 total births, by facility (district/country).</li> </ul>
11.	Assisted delivery (including caesarean section) is performed in cases of obstructed labour	<ul style="list-style-type: none"> <li>Proportion of assisted deliveries (including caesarean section) performed in cases of prolonged labour, diagnosis of obstructed labour and/or confirmed cephalopelvic disproportion by 1,000 total births, by facility (district/country).</li> <li>Case-fatality rate for prolonged and obstructed labour management, at facility level.</li> </ul>



Where malaria is endemic or HIV-prevalence is high, other markers may be added:

Intervention/care provider		Indicators
12a	All pregnant women receive Intermittent Preventive Treatment (IPT) for malaria during pregnancy	<ul style="list-style-type: none"> <li>• Proportion of pregnant women receiving Intermittent Preventive Treatment (IPT) for malaria during pregnancy by facility, (district/country).</li> </ul>
12b	All pregnant and postnatal women and newborns sleep under insecticide-treated bednets	<ul style="list-style-type: none"> <li>• Proportion of pregnant and postnatal women sleeping under insecticide-treated bednets, by district (country).</li> <li>• Proportion of neonates sleeping under insecticide-treated bednets, by district (country).</li> </ul>
12c	All pregnant women are offered voluntary counselling and testing (VCT) for HIV. Women who are HIV-positive are provided with specific interventions to reduce HIV transmission to their infant and relevant care and support. Women who are HIV-negative are counselled on how to remain uninfected.	<ul style="list-style-type: none"> <li>• Proportion of pregnant women having access to VCT, by district (country).</li> <li>• Proportion of pregnant women having access to antiretroviral interventions for prevention of mother-to-child-transmission (MTCT) of HIV, by district (country).</li> <li>• Proportion of pregnant women having access to ARV treatment and to support, by district (country).</li> <li>• Proportion of pregnant women aware of their HIV status and provided with specific interventions to reduce HIV transmission to their infant and relevant care and support when positive, and counselled on how to remain uninfected, when negative.</li> </ul>



## Appendix 3

### Responsibilities for clinical interventions of proven effectiveness and level of service delivery

Clinical intervention	Women, family and community	TBAs	Health workers without midwifery skills	Midwives/ nurse-midwives/country equivalents	Doctors with midwifery/obstetric skills	Managers (health system enabling factors)
<b>All women have social support</b> during labour and birth	Community demand for services; community involvement in quality; male involvement in reproductive health.	Provide social support if woman wishes.  Advocate with women and community benefits of social support.		Advocacy at all levels; in particular encourage women to plan for having social support.	Encourage policy makers to see benefits of social support.  Establish good rapport with supporters.	Policy; quality assurance of services.
<b>Promote, protect and support exclusive breastfeeding</b> , especially initiation within 1 hr after birth to assist in establishing successful breastfeeding	Family and community support for breastfeeding.	Explain benefits to women and families.  Explain to families need for mother to have good nutrition for exclusive breastfeeding.  Assist women to breastfeed.	Educate women and families on benefits of breastfeeding, especially initiation within 1 hour.  Provide advice on self-care for good lactation.  Assist women to breastfeed.	Educate women and families on benefits of breastfeeding, especially initiation within 1 hour.  Provide advice on self-care for good lactation.  Assist women to breastfeed.	Ensure clinical protocols and organization of care do not act as a barrier.	Policy; training; quality assurance; finance.

Clinical intervention	Women, family and community	TBAs	Health workers without midwifery skills	Midwives/ nurse-midwives/country equivalents	Doctors with midwifery/obstetric skills	Managers (health system enabling factors)
<p><b>Every newborn is immediately dried</b> and wrapped in a warm clean cloth, or skin-to-skin contact to keep warm – to protect against hypothermia</p>	<p>Supply clean warm cloth for drying and separate for wrapping newborn.</p> <p>Keep birthing room &amp; room for early postnatal care warm.</p>	<p>Explain to women and families benefits.</p> <p>Explain to families the need to keep newborns warm; dry newborn at birth.</p>	<p>Educate women and families to ensure that newborns are dried and kept warm.</p>	<p>Establish protocol.</p>	<p>Policy; community links; health education messages; heating in facilities; financing.</p>	<p>Policy; community links; health education messages; heating in facilities; financing.</p>
<p><b>The WHO antenatal care package</b> –to provide evidence-based quality care to all pregnant women</p>	<p>Support women to seek care.</p> <p>Participate in birth and emergency planning.</p> <p>Support, advice and counselling on recommendations (i.e. iron tablets, increased nutrition, etc.).</p>	<p>Advocate for women to attend antenatal care, especially early first visit.</p> <p>Carry out some tests and procedures under supervision of a skilled attendant.</p> <p>Attend antenatal care visit with woman if she has no supporter.</p>	<p>Carry out some of the tests/ components of package under the supervision of skilled attendant.</p>	<p>Apply full package correctly.</p>	<p>Establish protocols.</p> <p>Manage referrals/ complicated cases.</p> <p>Provide antenatal care for women with medical conditions.</p>	<p>Policy; training of staff; deployment; accommodation for skilled attendants in certain conditions; community linkages, linkages with other sectors; health education processes in the community; quality assurance system; management; supplies (drugs and equipment); referral system; records; financing; supervision; remuneration; incentives.</p>
<p><b>Magnesium sulphate</b> - to treat severe pre-eclampsia and eclampsia</p>	<p>Support care-seeking behaviour for emergency signs; birth and emergency planning.</p>	<p>Advocate for women to seek skilled attendant if any danger signs appear.</p>	<p>Call skilled attendant.</p> <p>Assist with giving drug.</p> <p>If skilled, give initial first aid.</p>	<p>Apply initial intervention in full and refer for follow-up.</p>	<p>Apply intervention where no midwife and manage follow-up.</p>	<p>Policy; training; quality assurance system; deployment of staff; supplies (drug and equipment); referral system; finance; supervision.</p>

<b>Clinical intervention</b>	<b>Women, family and community</b>	<b>TBAs</b>	<b>Health workers without midwifery skills</b>	<b>Midwives/ nurse-midwives/country equivalents</b>	<b>Doctors with midwifery/obstetric skills</b>	<b>Managers (health system enabling factors)</b>
<b>Partogram</b> - to avoid prolonged labour and identify and manage obstructed labour			Record some of vital signs on partogram under supervision of skilled attendant.	Use partogram and refer if deviations occur.	Manage referrals. Support for skilled attendant as required.	Policy; training; deployment of staff and management; quality assurance system; record; supplies; referral system; financing; supervision
<b>Oxytocin</b> IV or IM for all women as part of active management of third stage of labour - to prevent and treat postpartum haemorrhage.	Ensure women have a skilled attendant present for birth.	Explain benefits of oxytocin injection to women.	Give injection under supervision of skilled attendant.	Give oxytocin correctly.	Management of referrals for postpartum haemorrhage.	Policy; training; deployment; quality assurance system; supplies (drug and equipment); referral system; finance.
<b>Use antibiotic prophylaxis</b> - for women undergoing caesarean delivery to prevent post-operative infection			Give antibiotics under supervision of skilled attendant.	Give antibiotics in accordance with established protocols.	Establish evidence-based protocols Give antibiotics in accordance with established protocols. Manage referrals.	Policy; training; quality assurance system; supplies (drug and equipment); referral system; finance; supervision.
<b>Kangaroo-mother care</b> for all low birth weight babies - to protect against illness and assist in promoting exclusive breastfeeding	Support breastfeeding. Support kangaroo-mother care for low birth weight newborns.	Explain benefits of kangaroo-mother care to women and families.		Educate women and families on benefits of this method.	Develop policy.	Policy; quality assurance system

Clinical intervention	Women, family and community	TBAs	Health workers without midwifery skills	Midwives/ nurse-midwives/country equivalents	Doctors with midwifery/obstetric skills	Managers (health system enabling factors)
<p><b>Use manual vacuum aspiration</b> for management of incomplete abortion and safe induced abortion up to 12 completed weeks of amenorrhea (in circumstances where it is not against the law) - to reduce post-abortion complications.</p>	<p>Support care-seeking behaviour.</p>	<p>Inform women about need to seek consultation early and how to access services.</p>	<p>Apply protocols correctly.</p>	<p>Apply protocols correctly.</p>	<p>Develop and apply effective and safe protocols.</p>	<p>Policy; training of staff; deployment; living conditions –in certain situations; quality assurance system; management; supplies (drugs and equipment); infrastructure; referral system; records; financing.</p>
<p><b>Assisted surgical delivery (caesarean section)</b> is performed for obstructed labour – to prevent severe morbidity and death.</p>	<p>Seek skilled attendant for all births. Arrange emergency transportation to referral facility.</p>	<p>Promote skilled care in labour. Recognise prolonged labour and advise women to seek skilled care/immediate transfer to referral centre.</p>	<p>Promote skilled care in labour. Recognise prolonged labour and advise women to seek skilled care/immediate transfer to referral centre.</p>	<p>Referral for cases considered being at risk of developing prolonged/obstructed labour. Use of partogram, and transfer as appropriate. Assisted surgical delivery if trained to do so.</p>	<p>Manage all referrals. Supervise, support and train midwives to recognise signs of prolonged and obstructed labour. Provide training for undertaking assisted delivery as appropriate.</p>	<p>Policy; training of staff; deployment of staff; living conditions for skilled attendants in certain situations; quality assurance system; management; supplies (drugs and equipment); infrastructure; referral system; records; financing.</p>

Clinical intervention	Women, family and community	TBAs	Health workers without midwifery skills	Midwives/ nurse-midwives/country equivalents	Doctors with midwifery/obstetric skills	Managers (health system enabling factors)
<p><b>In high incidence of HIV areas:</b></p> <p>All pregnant women are offered voluntary counselling and testing (VCT) for HIV. Women who are HIV positive are provided with specific interventions to reduce HIV transmission to their infant and relevant care and support. Women who are HIV-negative are counselled on how to remain uninfected.</p>	<p>Support and comply with messages.</p>	<p>Information and education to individual women, families and communities.</p>	<p>Information and education.</p> <p>Offer VCT if trained.</p> <p>Arrange referral or other support.</p>	<p>Offer VCT.</p> <p>Apply intervention in full and provide referral as required.</p> <p>Arrange other home support available.</p> <p>Advice on self-care, postnatal care and breastfeeding.</p>	<p>Establish protocols.</p>	<p>Policy; training of staff; deployment; living conditions –in certain situations; quality assurance system; management; supplies (drugs and equipment); infrastructure; referral system; records; financing.</p>
<p><b>In Malaria endemic areas:</b></p> <p>Promote use of Intermittent Preventive Treatment (IPT) and insecticide-treated nets (ITNs) for all pregnant women and newborns.</p>	<p>Support and comply with messages.</p> <p>Local system of financing ITNs if not supplied free.</p>	<p>Information and education to individual women, families and communities.</p>	<p>Information and education.</p> <p>Give IPT, if skilled or supervised by skilled attendant.</p>	<p>Education and information.</p> <p>Give IPT as part of antenatal care package.</p>	<p>Establish protocols.</p>	<p>Policy; training of staff; deployment; living conditions in certain situations; quality assurance system; management; supplies (drugs and equipment); infrastructure; referral system; records; financing.</p>

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## Appendix 4

### The International Definition of a Midwife

'A midwife is a person who, having been regularly admitted to an educational programme, duly recognised in the country in which it is located, has successfully completed the prescribed course of studies in midwifery and has acquired the requisite qualifications to be registered and/or legally licensed to practise midwifery.

She must be able to give the necessary supervision, care and advice to women during pregnancy, labour and the postpartum period, to conduct deliveries on her own responsibility and to care for the newborn and the infant. This care includes preventative measures, the detection of abnormal conditions in mother and child, the procurement of medical assistance and the execution of emergency measures in the absence of medical help. She has an important task in health counselling and education, not only for women, but also within the community. The work should involve antenatal education and preparation for parenthood and extends to certain areas of gynaecology, family planning and child care. She may practise in hospitals, clinics, health units, domiciliary conditions or any other service.'

This definition was approved by the International Confederation of Midwives (ICM) and the International Federation of Gynaecologists and Obstetricians (FIGO) in 1973 and later adopted by WHO. In 1990, it was amended by ICM and the amendment was ratified by FIGO in 1991 and by WHO in 1992.

*This reference to gender was used at the time of writing to reflect that most midwives were female. However, the definition is currently under review in order to make it gender neutral.*

