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Postnatal Care for Mothers and Newborns

Highlights from the World Health Organization 2013 Guidelines

Background

The days and weeks following childbirth—the postnatal period—are a critical phase in the lives of mothers and newborn babies. Most maternal and infant deaths occur in the first month after birth: almost half of postnatal maternal deaths occur within the first 24 hours,¹ and 66% occur during the first week.² In 2013, 2.8 million newborns died in their first month of life—1 million of these newborns died on the first day.^{3,4}

Considerable progress has been made globally in improving maternal health. Around the world, 72% of women give birth attended by skilled personnel,⁵ and the maternal mortality ratio has decreased from 380 to 210 per 100,000 live births between 2000 and 2013. Yet, in South-East Asia and sub-Saharan Africa only 67% and 48% of women give birth with the assistance of skilled personnel, respectively.⁵ Postnatal care reaches even fewer women and newborns: less than half of women receive a postnatal care visit within 2 days of childbirth.⁴ An analysis of Demographic and Health Survey data from 23 sub-Saharan African countries found that only 13% of women who delivered at home received postnatal care within 2 days of birth.⁶

The World Health Organization (WHO) recently updated global guidelines on postnatal care for mothers and newborns through a technical consultation process. The new guidelines address the timing and content of postnatal care for mothers and newborns with a special focus on resource-limited settings in low- and middle-income countries.⁷ They complement other recommendations on maternal, perinatal and newborn health,^{8,9} as well as those recommendations on which type of health care worker can safely deliver key maternal and newborn health care interventions,¹⁰ which went through a similar guidelines development process.

Although this brief focuses on postnatal care, the importance of antenatal and intrapartum care within a continuum is recognized to have the greatest impact on maternal and newborn survival.

This brief presents the WHO recommendations while highlighting changes and recommended best practices. It is intended to assist policy-makers, programme managers, educators, and providers involved in caring for women and newborns after birth. Operationalization of these guidelines may help end preventable death, improve health outcomes, strengthen community-based health systems, address gender and equity issues, and emphasize respectful and women-centred maternity care.¹¹ Strategies to improve quality and achieve equitable use of postnatal care should be selected to maximize population-level results in low-resource settings.



A Unifying Term—Postnatal Care

Because the interchangeable use of the terms “postpartum” referring to issues pertaining to the mother and “postnatal” referring to those concerning the baby creates sometimes confusion, the adoption of just a single term “postnatal” should be used for all issues pertaining to the mother and the baby after birth up to 6 weeks (42 days).

Source: WHO Technical Consultation on Postpartum and Postnatal Care. WHO/MPS/10.03. World Health Organization 2010

Best Practices: Postnatal Care for All Mothers and Newborns

- **Provide postnatal care in the first 24 hours to all mothers and babies—regardless of where the birth occurs.** A full clinical examination should be done around 1 hour after birth, when the baby has had his/her first breastfeed. The baby should be checked again before discharge. For home births, the first postnatal contact should be as early as possible within 24 hours of birth and, if possible, an extra contact for home births at 24–48 hours is desirable. Mobile phone-based postnatal care contacts between mothers and the health

system may be useful. The content of postnatal care is described in the next two sections.

- **Ensure healthy women and their newborns stay at a health facility at least 24 hours and are not discharged early.** This recommendation is an update from 2006, and the minimum duration of stay was lengthened from 12 to 24 hours. Evidence suggests discharge is acceptable only if a mother's bleeding is controlled, mother and baby do not have signs of infection or other diseases, and the baby is breastfeeding well.
- **All mothers and babies need at least four postnatal checkups in the first 6 weeks.** This is a notable change to the previous guidance, which recommended only two postnatal checkups within 2 to 3 days and at 6 weeks after birth. Now, in addition to postnatal care with two full assessments on the first day, three additional visits are recommended: day 3 (48–72 hours), between days 7–14 and 6 weeks after birth. These contacts can be made at home or in a health facility, depending on the context and the provider. Additional contacts may be needed to address issues or concerns.

Postnatal Care Highlights

- Provide postnatal care in first 24 hours for every birth:
 - Delay facility discharge for at least 24 hours.
 - Visit women and babies with home births within the first 24 hours.
- Provide every mother and baby a total of four postnatal visits on:
 - First day (24 hours)
 - Day 3 (48–72 hours)
 - Between days 7–14
 - Six weeks
- Offer home visits by midwives, other skilled providers or well-trained and supervised community health workers (CHWs).
- Use chlorhexidine after home deliveries in high newborn mortality settings.
- Re-emphasize and support elements of quality postnatal care for mother and newborn, including identification of issues and referrals.

Table 1. Provision of Postnatal Care to Mothers and Newborns: Policy and Programme Actions Based On the New WHO Guidelines

WHO Recommendation 2013	Policy/Programme Action
RECOMMENDATION 1: Timing of discharge from a health facility after birth	
After an uncomplicated vaginal birth in a health facility, healthy mothers and newborns should receive care in the facility for at least 24 hours after birth.* (NEW in 2013) * For the newborn, this care includes an immediate assessment at birth, a full clinical examination around 1 hour after birth and before discharge.	<ul style="list-style-type: none"> • Ensure respectful, women-centred quality care^a is provided for all births. • Review if increased infrastructure (beds, etc.) and staff in postnatal wards are required to provide care respectfully and comfortably for women to stay longer. • Align policies (such as national institutional delivery incentive and insurance schemes) with recommendation. • Adapt and use a simple discharge checklist.¹²
RECOMMENDATION 2: Number and timing of postnatal contacts	
If birth is in a health facility , mothers and newborns should receive postnatal care in the facility for at least 24 hours after birth. ^a (NEW in 2013)	<ul style="list-style-type: none"> • Ensure that national standards, quality improvement tools and training curricula promote three assessments in the first 24 hours for the newborn: an immediate assessment at birth; a full clinical examination around 1 hour after birth and again before discharge. • Coordinate postnatal care with the Baby-Friendly Hospital Initiative¹³ to ensure that facility-based procedures and outreach to the community support optimal breastfeeding practices. • Update facility-based providers and promote best practices in postnatal care including pre-discharge counselling, according to the new guidelines.
If birth is at home , the first postnatal contact should be as early as possible within 24 hours of birth. (NEW in 2013)	<ul style="list-style-type: none"> • Review current policies and programmes to strengthen delivery and early postnatal care for home births by midwives, other skilled providers and/or well-trained, supervised CHWs.
At least three additional postnatal contacts are recommended for all mothers and newborns, on day 3 (48–72 hours), between days 7–14, and 6 weeks after birth. (NEW in 2013)	<ul style="list-style-type: none"> • Ensure national standards, quality improvement tools, training curricula and behaviour change communication (BCC) messages/materials to explicitly promote the three additional postnatal care checkups (a total of four from birth in the first 6 weeks) through home visits and facility-based care. • Review/revise national monitoring systems to include the process indicator for postnatal care visits—number of mothers/newborns who received postnatal within 2 days of childbirth (regardless of place of delivery)—for all births.

WHO Recommendation 2013	Policy/Programme Action
RECOMMENDATION 3: Home visits for postnatal care	
Home visits in the first week after birth are recommended for care of the mother and newborn.	<ul style="list-style-type: none"> • Determine how best to integrate home visits for postnatal care into responsibilities and training of midwives, other skilled providers and/or well-trained, supervised CHWs. • Explore appropriate mHealth strategies to communicate with mothers who may be difficult to physically reach.
^a WHO guidelines, <i>Pregnancy, childbirth, postpartum and newborn care: A guide for essential practice</i> , define this standard of care; they can be found at http://www.who.int/maternal_child_adolescent/documents/924159084x/en/ .	

Related Highlights from Other WHO Guidelines

- Encourage women to deliver with a skilled birth attendant at a health facility so they receive quality intrapartum and postnatal care including administration of a uterotonic during the third stage of labour. Professional skilled care is important for all women and newborns during labour, childbirth and the first day after birth.
- Promote respectful and women-centred maternity care where women are treated with kindness, dignity and respect. Respectful maternity care is an essential part of postnatal care particularly in health facilities. It promotes best practices (such as rooming in, unless separation is medically necessary), recognizes that women and their families should be fully informed on all aspects of care, and values counselling as an opportunity to answer questions and address concerns.

Best Practices: Postnatal Care for Newborns

- **Strengthen postnatal care through home visits and at health facilities.** Elements of postnatal care are re-emphasized from the 2006 guidelines without many significant changes.
- **At each of the four postnatal care checkups, newborns should be assessed for key clinical signs of severe illness and referred as needed.** Nine clinical signs (listed in Recommendation 4 in Table 2 below) have been identified as danger signs that can be identified at home by a CHW or by a skilled provider in a health facility. Evidence suggests that simple algorithms are valid tools in both settings.
- **Continue to promote early and exclusive breastfeeding (EBF) within delivery settings including antenatal care, at delivery, and in all postnatal care visits.** Consistent with previous WHO guidelines, evidence shows EBF reduces the risks of mortality and morbidity in the first month of life (compared to partial and predominant breastfeeding) and improves post-neonatal outcomes. It also encourages improved birth spacing by delaying the return to fecundity. Given the increases in institutional deliveries in many developing countries, policies and programmes should actively promote facility-based counselling and support for EBF including counselling on common breastfeeding problems and ways to manage them if they occur.
- **Consider the use of chlorhexidine for umbilical cord care for babies born at home** to reduce newborn mortality. For newborns who are born at home in settings with high neonatal mortality (30 or more neonatal deaths per 1,000 live births) it is recommended to apply chlorhexidine (7.1% chlorhexidine digluconate aqueous solution or gel, delivering 4% chlorhexidine) daily to the umbilical cord stump during the first week of life. This is a new recommendation, and clean, dry cord care remains the standard recommendation for newborns born in health facilities and at home in low neonatal mortality settings. The use of chlorhexidine in these situations may be considered only to replace application of a harmful traditional substance, such as cow dung, to the cord stump.
- **Reinforce key newborn care messages among families and providers.** WHO re-emphasizes key elements of newborn care including delayed bathing, skin-to-skin contact and immunization. Given the vulnerability of preterm and low-birth-weight babies, interventions are needed to identify these newborns in home and facility settings and ensure they receive special care.

Table 2. Postnatal Care for Newborns: Policy and Programme Actions Based On the New WHO Guidelines

WHO Recommendation 2013	Policy/Programme Action
RECOMMENDATION 4: Assessment of the baby	
<p>The following signs should be assessed during each postnatal care contact, and the newborn should be referred for further evaluation if any of the signs is present: <i>stopped feeding well, history of convulsions, fast breathing (breathing rate of ≥ 60 per minute), severe chest in-drawing, no spontaneous movement, fever (temperature $\geq 37.5^{\circ}\text{C}$), low body temperature (temperature $< 35.5^{\circ}\text{C}$), any jaundice in first 24 hours of life, or yellow palms and soles at any age.</i></p> <p>The family should be encouraged to seek health care early if they identify any of the above danger signs in-between postnatal care visits.</p>	<ul style="list-style-type: none"> • Review and adapt available community-based and facility-based job aids for clinical assessments (such as integrated management of childhood illness, integrated management of pregnancy and childbirth) based on simple clinical signs of severe newborn illnesses. • Integrate recognition of clinical signs into CHW and skilled provider trainings. • Review/revise educational messages to emphasize newborn danger signs and care-seeking in counselling of pregnant and postnatal women, families and communities.
RECOMMENDATION 5: Exclusive breastfeeding (EBF)	
<p>All babies should be exclusively breastfed from birth until 6 months of age. Mothers should be counselled and provided support for EBF at each postnatal contact.</p>	<ul style="list-style-type: none"> • Reinforce early EBF and EBF messages during pregnancy and during all postnatal care visits. • Ensure breastfeeding is actively promoted in all health facilities. • Identify and address problems that prevent EBF (e.g., not initiating breastfeeding within 1 hour after birth, not giving colostrum, giving pre-lacteal feeds, breast health issues, mothers' perceptions that their breast milk is not sufficient, lack of knowledge about breastfeeding frequently and from both breasts to ensure breast milk supply). • Integrate lactational amenorrhoea method (LAM) and EBF messages to ensure LAM criteria are followed and the major barriers to EBF are addressed that threaten the effectiveness of LAM. • Prepare mothers for transitioning their infants to complementary foods with continued breastfeeding at 6 months and modern family planning methods for mothers using LAM.
RECOMMENDATION 6: Cord care	
<p>Daily chlorhexidine (7.1% chlorhexidine digluconate aqueous solution or gel, delivering 4% chlorhexidine) application to the umbilical cord stump during the first week of life is recommended for newborns who are born at home in settings with high neonatal mortality (30 or more neonatal deaths per 1,000 live births). (NEW in 2013)</p> <p>Clean, dry cord care is recommended for newborns born in health facilities and at home in low neonatal mortality settings. Use of chlorhexidine in these situations may be considered only to replace application of a harmful traditional substance, such as cow dung, to the cord stump.</p>	<ul style="list-style-type: none"> • In settings with high neonatal mortality, ensure chlorhexidine is available for home births for immediate use by mothers. Related policy/programme issues may include: inclusion on the national List of Essential Medicines for Children; drug registration; local production or procurement; training; supply chain maintenance; and training community midwives and health workers, etc. • Reinforce community messages about clean, dry cord care and add chlorhexidine messages, as appropriate.
RECOMMENDATION 7: Other postnatal care for the newborn	
<p>Bathing should be delayed until 24 hours after birth. If this is not possible due to cultural reasons, bathing should be delayed for at least 6 hours. Appropriate clothing of the baby for ambient temperature is recommended. This means one to two layers of clothes more than adults, and use of hats/caps. The mother and baby should not be separated and should stay in the same room 24 hours a day.</p> <p>Communication and play with the newborn should be encouraged. Immunization should be promoted as per existing WHO guidelines.</p>	<ul style="list-style-type: none"> • Review BCC messages and facility standards to ensure families and providers are informed on these key newborn care messages. • Review national policies and standards with WHO guidelines¹⁴ and revise/strengthen as appropriate. • Encourage skin-to-skin care as part of kangaroo mother care, but also to keep babies warm in cold environments and for all newborns for at least 1 hour after birth.

WHO Recommendation 2013	Policy/Programme Action
Preterm and low-birth-weight babies should be identified as soon as possible and should be provided special care as per existing WHO guidelines.	<ul style="list-style-type: none"> • Develop approaches to identify and refer preterm and low- birth-weight babies, appropriate for home and facility births. • Review clinical standards to promote special care, such as feeding of low-birth-weight infants ¹⁵and kangaroo mother care.¹¹

POSTNATAL CARE-RELATED RECOMMENDATIONS ON NEWBORN CARE FROM OTHER WHO GUIDELINES

- Immediately at birth, all babies should be dried thoroughly and their breathing assessed. The cord should be clamped and cut only after 1–3 minutes, unless the baby needs resuscitation. Routine suctioning must not be done.
- During the first hour after birth, the baby should be in skin-to-skin contact with the mother for warmth and the initiation of breastfeeding.
- A full clinical examination (including weight, danger signs, eyes, cord) and other preventive care should be done around 1 hour after birth, when the baby has had his/her first breastfeed. This care includes giving vitamin K prophylaxis and hepatitis B vaccination as soon as possible after birth (within 24 hours).
- When skilled health personnel attend the newborn, whether at home or in a facility, additional care should be provided. This care includes basic newborn resuscitation with bag and mask for newborns not breathing spontaneously and full clinical examinations at the recommended times.

Best Practices: Postnatal Care for Mothers

- **Strengthen postnatal care for mothers through home visits and at health facilities.** Elements of care are re-emphasized from the 2006 guidelines without many significant changes. Postnatal care includes counselling on family planning, maternal mental health, nutrition and hygiene, and gender-based violence.

Table 3. Postnatal Care for Mothers: Policy and Programme Actions Based On the New WHO Guidelines

WHO Recommendation 2013	Policy/Programme Action
RECOMMENDATION 8: Assessment of the mother	
First 24 hours after birth: All postpartum women should have regular assessment of vaginal bleeding, uterine contraction, fundal height, temperature and heart rate (pulse) routinely during the first 24 hours starting from the first hour after birth. Blood pressure should be measured shortly after birth. If normal, the second blood pressure measurement should be taken within 6 hours. Urine void should be documented within 6 hours.	<ul style="list-style-type: none"> • Ensure that national standards and training curricula for skilled birth attendants include these elements of postnatal care. • Introduce or re-emphasize standards at the facility level using quality improvement tools and checklists.
Beyond 24 hours after birth: At each subsequent postnatal contact, enquiries should continue to be made about general well-being and assessments made regarding the following: urination and urinary incontinence, bowel function, healing of any perineal wound, headache, fatigue, back pain, perineal pain and perineal hygiene, breast pain, uterine tenderness and lochia.	<ul style="list-style-type: none"> • Review national standards and trainings for skilled birth attendants and CHWs include these elements of postnatal care. • Introduce or re-emphasize standards at the facility level and for home postnatal care visits using quality improvement tools, job aids, and checklists.
Breastfeeding should be assessed at each postnatal contact.	<ul style="list-style-type: none"> • Ensure national standards, quality improvement tools and training curricula includes updated breastfeeding policy about managing breastfeeding problems, Baby-Friendly Hospital Initiative principles for facility births, and community outreach.
At each postnatal contact, women should be asked about their emotional wellbeing, what family and social support they have and their usual coping strategies for dealing with day-to-day matters. All women and their families/partners should be encouraged to tell their health care professional about any changes in mood, emotional state and behaviour that are outside of the woman's normal pattern.	<ul style="list-style-type: none"> • Review/revise national standards, quality improvement tools and training curricula to include emotional wellbeing assessment.

WHO Recommendation 2013	Policy/Programme Action
At 10–14 days after birth, all women should be asked about resolution of mild, transitory postpartum depression (“maternal blues”). If symptoms have not resolved, the woman’s psychological well-being should continue to be assessed for postpartum depression, and if symptoms persist, evaluated.	<ul style="list-style-type: none"> Review/revise national standards, quality improvement tools and training curricula to include counselling for postpartum depression. Ensure linkages/referrals to available maternal mental health services for evaluation.
Women should be observed for any risks, signs and symptoms of domestic abuse.	<ul style="list-style-type: none"> Ensure linkages/referrals within facilities and at the community level to available gender-based violence services.
Women should be told whom to contact for advice and management.	
All women should be asked about resumption of sexual intercourse and possible dyspareunia as part of an assessment of overall well-being 2–6 weeks after birth.	<ul style="list-style-type: none"> Integrate messages on postpartum pregnancy risk and family planning, including LAM and postpartum intrauterine contraceptive device (IUD). Review national health management information systems tools to construct new feasible postpartum family planning indicator(s) to be tracked and reported (e.g., percentage of postpartum women accepting a contraceptive method prior to discharge [disaggregated by method: LAM, postpartum IUD, postpartum tubal ligation, condoms]; percentage of women bringing children for vaccination who accept a family planning method in the same visit).
If there are any issues of concern at any postnatal contact, the woman should be managed and/or referred according to other specific WHO guidelines. ^a	
RECOMMENDATION 9: Counselling	
All women should be given information about the physiological process of recovery after birth and told that some health problems are common, with advice to report any health concerns to a health care professional, in particular, signs and symptoms of postpartum haemorrhage, pre-eclampsia/eclampsia, infection and thromboembolism. (NEW in 2013)	<ul style="list-style-type: none"> Review/revise national standards, quality improvement tools and training curricula for skilled birth attendants and CHWs to include these elements of postnatal counselling and care, particularly the addition of screening for thromboembolism. Introduce or re-emphasize standards at the facility level and for home postnatal care visits using quality improvement tools, job aids, and checklists. Review/revise educational messages to emphasize postnatal danger signs and care seeking in counselling of pregnant and postnatal women, families and communities.
Women should be counselled on nutrition.	<ul style="list-style-type: none"> Emphasize with mothers and their family members the importance of eating a greater amount and variety of healthy foods. Review/revise national standards, quality improvement tools and training curricula for providers to ensure adequate counselling skills on nutrition in the context of local practices and taboos, particularly adolescents and very thin women. Review/revise CHW training curriculum, CHW job aids and BCC materials to emphasize key postnatal nutrition messages.
Women should be counselled on hygiene, especially handwashing.	<ul style="list-style-type: none"> Review/revise CHW training curriculum, CHW job aids and BCC materials to emphasize hygiene and handwashing for postnatal (especially if the woman experienced a severe perineal tear), newborn, and infant care.
Women should be counselled on birth spacing and family planning. Contraceptive options should be discussed, and contraceptive methods should be provided if requested.	<ul style="list-style-type: none"> Integrate messages on postpartum pregnancy risk and family planning, including LAM.
Women should be counselled on safer sex including use of condoms.	

WHO Recommendation 2013	Policy/Programme Action
In malaria-endemic areas, mothers and babies should sleep under insecticide-impregnated bed nets.	
All women should be encouraged to mobilize as soon as appropriate following the birth. They should be encouraged to take gentle exercise and make time to rest during the postnatal period.	<ul style="list-style-type: none"> Review community messages for family members, such as partners and mothers-in-law, to encourage them to help ensure the woman eats enough and avoids strenuous physical work.
RECOMMENDATION 10: Iron and folic acid supplementation	
Iron and folic acid supplementation should be provided for at least 3 months after delivery. ^b	<ul style="list-style-type: none"> Review national standards, quality improvement tools, and training curricula on postnatal iron and folic acid supplementation for postnatal mothers. Strengthen iron and folic acid distribution and compliance among postnatal mothers. Review/update national standards to remove vitamin A supplementation for postnatal women¹⁶ and transition to promoting dietary sources of vitamin A for postnatal mothers.
RECOMMENDATION 11: Prophylactic antibiotics	
The use of antibiotics among women with a vaginal delivery and a third or fourth degree perineal tear is recommended for prevention of wound complications. (NEW in 2013)	<ul style="list-style-type: none"> Review/revise national standards, quality improvement tools, and training curricula to include use of antibiotics for women with a third or fourth degree perineal tear.
There is insufficient evidence to recommend the routine use of antibiotics in all low-risk women with a vaginal delivery for prevention of endometritis.	
RECOMMENDATION 12: Psychosocial support	
Psychosocial support by a trained person is recommended for the prevention of postpartum depression among women at high risk of developing this condition. There is insufficient evidence to recommend routine formal debriefing to all women to reduce the occurrence/risk of postpartum depression or to recommend the routine distribution of, and discussion about, printed educational material for prevention of postpartum depression.	<ul style="list-style-type: none"> Review/revise national standards, quality improvement tools, and training curricula on counselling for postpartum depression. Ensure linkages/referrals to available maternal mental health services for evaluation.
Health professionals should provide an opportunity for women to discuss their birth experience during their hospital stay.	
A woman who has lost her baby should receive additional supportive care.	<ul style="list-style-type: none"> Review/revise national standards, quality improvement tools, and training curricula to integrate culturally appropriate services (including counselling) for women experiencing miscarriages, stillbirths, and newborn deaths.
<p>^a The WHO guidelines, <i>Pregnancy, childbirth, postpartum and newborn care: A guide for essential practice</i>, that define this standard of care can be found at http://www.who.int/maternal_child_adolescent/documents/924159084x/en/.</p> <p>^b Currently, there is no evidence to change this recommendation. WHO is working on developing specific guidelines for maternal nutrition interventions after birth.</p>	

Postnatal Care-Related Recommendations from Other WHO Guidelines

Continue to ensure all women who give birth receive active management of third stage of labour and close monitoring immediately after birth as part of their delivery care that reduces the risk of postpartum haemorrhage in the postnatal period.

- ¹ Every Newborn, An Executive Summary for *The Lancet's* Series. May 2014.
- ² Nour N. 2008. An Introduction to Maternal Mortality. *Reviews in Obstetrics & Gynecology*. 1:77–81.
- ³ The Inter-agency Group for Child Mortality Estimation (UN IGME). 2014. *Levels & Trends in Child Mortality, Report 2014*. United Nations Children's Fund.
- ⁴ Lawn JE et al. 2014. Every Newborn: Progress, Priorities, and Potential Beyond Survival. *Lancet* 384:189–205.
- ⁵ WHO. 2014. *World Health Statistics 2014*. Geneva: WHO.
- ⁶ Warren C, Daly P, Toure L, and Mongi P. 2006. Postnatal Care. Pp. 79–90 in *Opportunities for Africa's Newborns: Practical Data Policy and Programmatic Support for Newborn Care in Africa*, edited by J. Lawn and K. Kerber. Cape Town, South Africa: Partnership for Maternal, Newborn and Child Health.
- ⁷ WHO. *WHO Recommendations on Postnatal Care of the Mother and Newborn*. October 2013. Geneva: WHO.
- ⁸ WHO. 2013. *Recommendations on Maternal and Perinatal Health*. Geneva: WHO. Guidelines on maternal, newborn, child and adolescent health approved by the WHO guidelines review committee.
- ⁹ Ibid.
- ¹⁰ WHO recommends optimizing health worker roles to improve access to key maternal and newborn health interventions through task shifting (WHO, 2012).
- ¹¹ For information and resources on respectful maternity care, see <http://www.k4health.org/toolkits/rmc>.
- ¹² WHO guidelines recommend a safe childbirth checklist such as <http://www.plosone.org/article/info%3Adoi%2F10.1372%2Fjournal.pone.0035151#s5>.
- ¹³ <http://www.who.int/nutrition/topics/bfhi/en/>.
- ¹⁴ http://www.who.int/reproductivehealth/publications/maternal_perinatal_health/924159084X/en/index.html.
- ¹⁵ WHO. 2011. Guidelines on Optimal Feeding of Low Birth-weight Infants in Low- and Middle-income Countries.
- ¹⁶ Vitamin A supplementation in postpartum women is not included in these guidelines. More information can be found at http://whqlibdoc.who.int/publications/2011/9789241501774_eng.pdf.

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