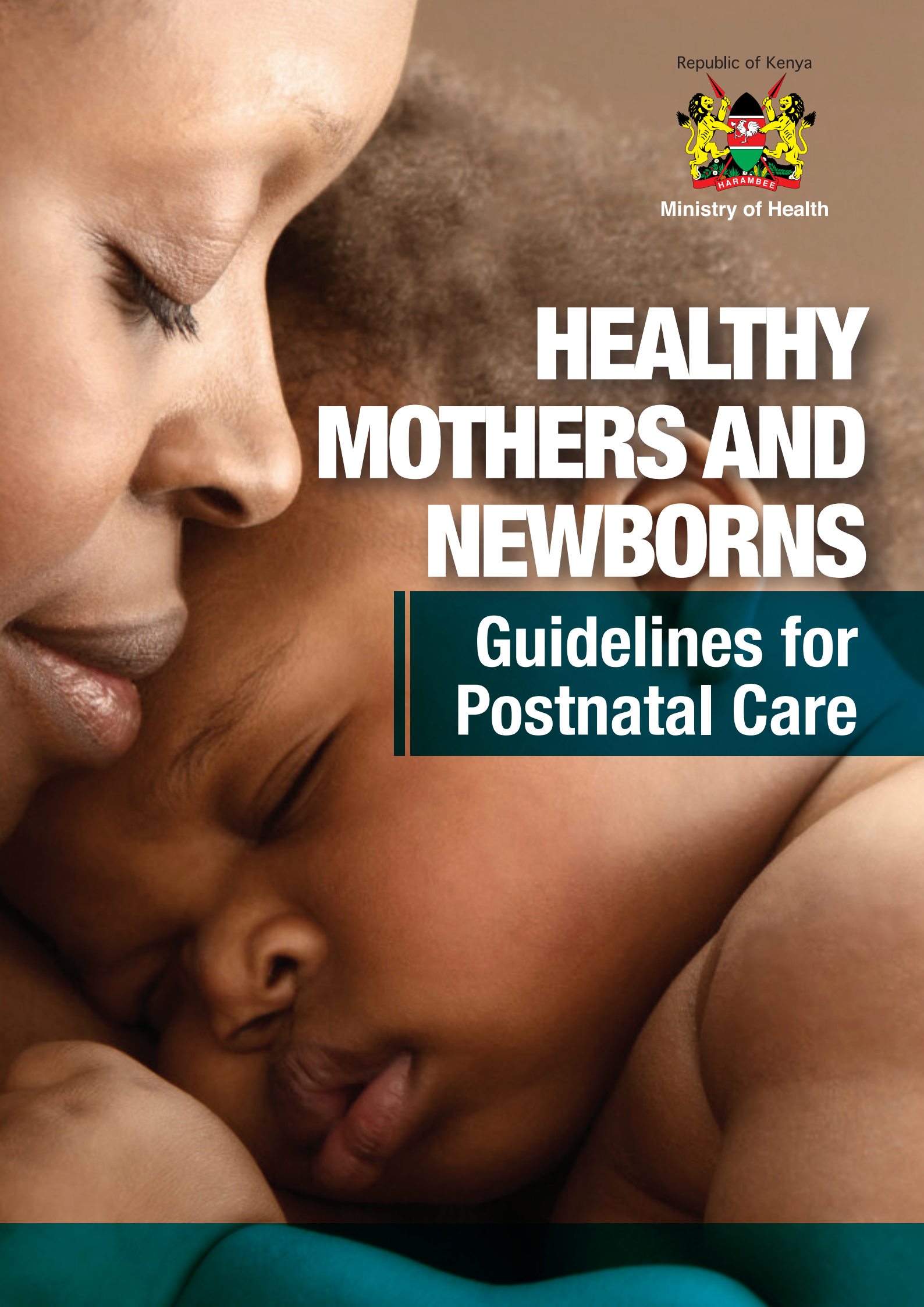

Republic of Kenya

Ministry of Health

HEALTHY MOTHERS AND NEWBORNS

Guidelines for Postnatal Care

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ABBREVIATIONS AND ACRONYMS

ART	Antiretroviral treatment
BCG	Bacille Calmette-Guerin
BMI	Body mass index
C/S	Caesarean section
CHV	Community health volunteer
CHWs	Community Health Workers
DMPA	Depot Medroxyprogesterone Acetate
EBF	Exclusively Breast Feeding
eMTCT	Elimination of mother to child HIV transmission
FP	Family Planning
HIV	Human Immunodeficiency Virus
HPV	Human Papilloma Virus
IUCD	Intrauterine Contraceptive Device
KDHS	Kenya Demographic and Health Survey
KEPI	Kenya Expanded Program on Immunization
KMC	Kangaroo Mother Care
LAM	Lactational Amenorrhoea
LMICs	Low and Middle Income Countries
M & E	Monitoring and Evaluation
MCH	Mother and Child Health
MDR	Maternal Death Report
OPV	Oral Polio Vaccine
PMTCT	Prevention of Mother-to-Child Transmission
PNC	Postnatal Care
RPR	Rapid Plasma Reagin
STIs	Sexually Transmitted Infections
VDRL	Venereal Disease Research
SGBV	Sexual and Gender Based Violence

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Full list of contributors is annexed.

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FOREWORD

Postpartum care is a key strategy to enhance maternal and newborn health and reduce maternal and newborn deaths. However, utilization of postnatal care service in Kenya has remained low. The 2014 Kenya Demographic Health Survey reports that only 52% of women and 36% of newborns receive postnatal care. Low utilization of postnatal care leads to missed opportunities for early diagnosis and management of common puerperium and newborn conditions, delay in HIV testing and initiation antiretroviral drugs for prophylaxis or treatment in HIV exposed infants, low rates of repeat maternal HIV testing and low uptake of contraception.

These guidelines provide a comprehensive postnatal service package that aims to optimize provision of high quality maternal and child health services through alignment of postnatal care service with immunization, HIV, TB, family planning services among other health programs.

The postnatal package will support health care providers to promote maternal and newborn health by empowering women and other care givers to recognize danger signs of common maternal and newborn complications, ensure early identification and management or referral of postnatal complications, early diagnosis and treatment of infant HIV infection, participation of women and their male partners in postnatal care, increased use of contraception, and exclusive breastfeeding.

Dr. Mohamed A. Sheikh
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BACKGROUND

Introduction

Every day, approximately 830 women die from preventable conditions related to pregnancy and childbirth. Most (99%) of these deaths occur in developing countries. Severe bleeding, puerperal infections, pre-eclampsia and eclampsia, complications from delivery and unsafe abortion account for nearly 75% of all maternal deaths. Skilled health care before, during and after childbirth could save these lives. Similarly, in 2015, there were about 2.6 million neonatal deaths equivalent to 7123 deaths per day. Almost three quarters total deaths during the neonatal period occur in the first week of life. This includes nearly all deaths due to asphyxia, 2 in 5 deaths due to sepsis and over 80% of deaths due to prematurity. The first day contributes to around 40% of these deaths. Most of these deaths can be prevented with simple, low-cost interventions during delivery and during the week following birth.

The postnatal period covers the first six weeks after the delivery of the baby. This is a critical phase in the lives of a woman and her newborn as most deaths occur during this time. Utilization of postnatal care provides health providers with an opportunity to identify post-delivery problems early and to offer treatment promptly. However, this is the most neglected period in provision of quality health care. In Kenya, only 52% of women receive postnatal care compared to over 90% who receive antenatal care or HIV testing.

Effective utilization of postnatal care services is a key initiative towards attainment of the United Nations Sustainable Development Goals goal 3 that aims to reduce maternal mortality ratio to less than 70 per 100,000 live births and to reduce neonatal mortality to 12 per 1,000 live births as well as the global target on elimination of mother-to-child HIV transmission (less than 5%). However, utilization of postnatal care services in Kenya has been low resulting in missed opportunities for early diagnosis and timely management of common maternal and infant conditions.

Postnatal care within 48 hours after child birth

Postnatal care is the care given to both the mother and the newborn from birth in order to reduce the incidence of complications and deaths as well as to promote the health of the mother and baby.

Postnatal care should be woman-centred to enable the women to participate in informed decision making regarding their own care and the care of their baby. Providing information and education relating to the normal physiological changes associated with childbirth, breastfeeding and parenting is a key component of postnatal care that is aimed at giving women and their families the confidence to manage the care of their baby.

World Health Organization recommends at least four postnatal contacts for all mothers and newborns within at 24 hours, 10-14 days, 4-6 weeks and 4-6 months after birth. In Kenya, the visits are scheduled; within 48 hours after birth, 1-2 weeks, 4-6 weeks, and 4-6 months. Following a home delivery, mother and newborn should be referred to the nearest health facility as soon as possible and preferably within 24-48 hours.

The aims of postnatal care are as follows:

- Support for the mother and her baby
- Prevention, early diagnosis and treatment of complications of mother and infant

- Referral of mother and infant for specialized care when necessary
- Counselling on baby care
- Support of exclusive breastfeeding
- Maternal nutrition, assessment, counselling and support
- Counselling and service provision for contraception and the resumption of sexual activity
- Immunization of the infant

Maternal and Newborn Health Situation in Kenya

The 2014 Kenya Demographic and Health Survey (KDHS) reports improved Maternal, Newborn and Child health indicators compared to the 2008-9 report; maternal mortality ratio reduced from 448 to 362/100,000 live births, neonatal mortality rate reduced from 31 to 22/1000 live Births, infant mortality rate reduced from 52 to 39/1000 and under five mortality reduced from74 to 52/1000. Mother to child transmission (MTCT) of HIV reduced from 27% in 2003 to 8.3% 2015.

However, Kenya did not meet the 2015 target for MDGs 4, 5 and the global target on Elimination of mother to child HIV transmission (eMTCT).

Factors that contributed to failure to attain MDGs include:

- sub-optimal utilization of postnatal services.
- only 51% of mothers receive post-natal care within 48 hours
- high unmet need for family planning
- there is no data on the other 4 follow up post-natal visits
- inadequate support for early initiation of breastfeeding in the first one hour after delivery
- poor nutrition status of women leading to birth complications e.g. high prevalence of anaemia

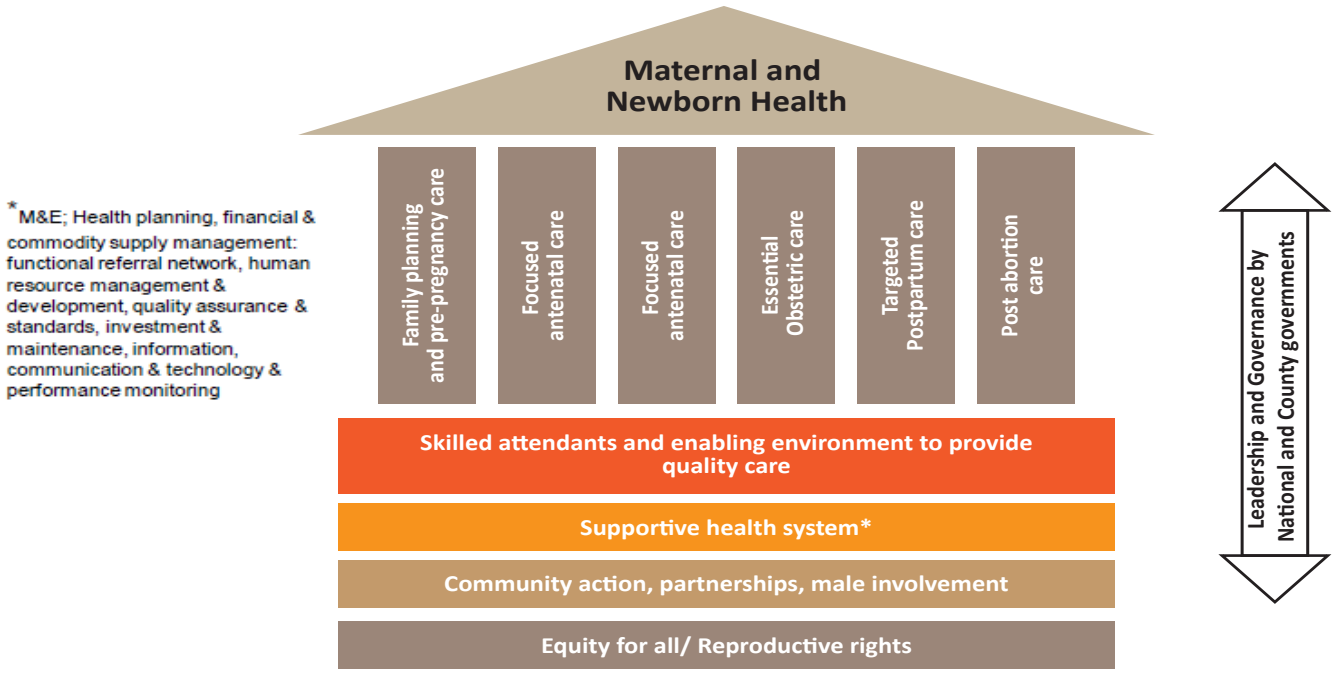


Figure 1: Kenya Maternal and Newborn Health Model

- early Infant diagnosis coverage at 2 months and paediatric HIV treatment coverage is only 56%
- only 36% of newborns had a postnatal check-up within the critical first two days
- over half (52%) of infants born in a health facility do not receive postnatal check-ups
- progressive decline in proportion of infants immunized or brought to clinic for growth monitoring after 6 weeks
- inadequate number of healthcare workers deployed to provide postnatal care (PNC) services
- low rates of repeat maternal HIV test among women who tested HIV negative in 1st trimester
- inadequate knowledge and skills to provide full range of PNC package
- delays in seeking maternal and newborn care
- there are no follow up system developed to support longitudinal care of mothers through pregnancy and with their babies in the postnatal period making it difficult to identify mothers and infants who fail to receive critical postnatal care services
- Lack of chronic care systems in the antenatal/postnatal care clinics impacts outcomes for both mothers and children including PMTCT and immunization, but also NCDs in pregnancy
- using out dated practices that are not based on sound and latest scientific evidence
- Low uptake of postpartum family planning and high unmet need for family planning during the postnatal period
- Lack of appropriate follow up of developmental and growth milestones in infants and poor early childhood develpment
- Lack of postnatal care planning during the antenatal period

- The three delays that contribute to maternal and newborn deaths
  - 1stdelay: Women and families are not aware of the danger signs in pregnancy, childbirth and postnatal period; There is delay in making decisions at home
  - 2nddelay: No plans for transport have been made and how to pay for any emergency referral within the home, community or facility
  - 3rddelay: There is delay in receiving care in the health facility

- The postnatal care guidelines aims to optimize utilization of maternal and child health services through
  - integration of postnatal services with other existing maternal and child health (MCH) services such as immunization, FP, TB and HIV and SGBV and screening for reproductive organ cancers (breast and cervical cancer)
  - improvement of the follow up systems for women and their infants – through revised maternal and child care tools
  - promotion of postnatal testing to identify women who acquire HIV infections during pregnancy and after delivery
  - development and implementation of initiatives to identify all HIV exposed infants and link those who are infected to care
  - development and implementation of comprehensive monitoring & evaluation tools

Summary of key elements of postnatal care:

- Provision of care to mother and baby by skilled attendant
- Emergency preparedness and complication readiness for the mother and baby
- Early detection and management of maternal complications such as eclampsia and postpartum haemorrhage and referral as necessary
- Essential newborn care practices including early initiation of breastfeeding, within the first hour of birth, thermoregulation, cord care and care of the small and sick baby
- Early detection and management of neonatal complications such as fever, hypothermia, convulsions, jaundice for the baby and referral as necessary
- Assisting the mother and family to develop a personalized postnatal care plan
- Counselling for HIV, family planning, personal hygiene, maternal and infant nutrition especially promoting exclusive breastfeeding and early childhood development
- Health promotion initiatives on contraception, sexuality, HIV, maternal and infant nutrition,

The key objectives of these guidelines are to support health care providers to:

- Promote delivery of postnatal care to women and the newborns
- Ensure women and newborns receive the full range of maternal and infant services
- Promote communication between the women, her partner and health care providers at the facility and community levels

POSTNATAL CARE WITHIN 48 HOURS

Maternal care within the 48 hours

Maternal care within 48 hours after uncomplicated vaginal delivery in health facility

General information

- Vigilance in period after delivery is critical to ensure early recognition of complications and prompt response
- If birth occurs at home, the first postnatal contact should be as early as possible within the first 24 hours of birth

Recommendations:

- All postpartum women should have regular assessment during the first 24 hours as follows:
    - pulse rate 4 hourly until discharge
    - blood pressure should be measured shortly after birth
        - If normal (100/60-140/90mm/hg), blood pressure should be taken every 4 hours until discharge

  - excessive vaginal bleeding is indicated by presence of the following:
    - pad soaked in less than five minutes
    - increased pulse rate (pulse>100bpm)
    - pallor (conjunctiva, palms)
    - low blood pressure (BP<100/60mm/hg)
    - shock index (Pulse rate/systolic BP) is greater than 0.7
  - uterine contraction
    - uterus is hard and round
    - fundal height should be below the umbilicus
  - temperature should be normal (36.5 -37.2 degrees Celsius)
  - Monitor temperature 4 hourly
  - respiratory rates should be normal (18 to 24 breaths per minute)
- Woman should have passed urine within 6 hours
- Breastfeeding should be initiated within an hour after delivery progress should be assessed at each postnatal contact. Support offered as needed
  - there is no need to clean breast every time the baby feeds
  - daily bath is enough
- Maternity units should ensure some warm food and hot beverage is available for all postpartum especially those who deliver at night
- All HIV-infected women should be offered ART as per the Kenya ART guidelines
- HIV- infected women should
  - be counselled on importance of adherence to antiretroviral drugs
  - have viral load test if they have been on antiretroviral therapy for the past 6 months
- All women with unknown HIV status should be offered testing at delivery or soon as possible thereafter
- Women who tested HIV negative in the antenatal period should be offered repeat testing as per 2016 PMTCT guidelines
- All women should be offered syphilis test (RPR, VDRL or POC) if the test was not done during the antenatal visits
- Routine antibiotic prophylaxis following uncomplicated vaginal delivery is **not** recommended
- Prophylactic antibiotics are only recommended for women who have sustained third or fourth degree perineal tears
- Check for calf tenderness once a day until discharge
- Encourage male partner to support the women by:
  - allowing male partner free access to postnatal ward
  - involving men in care of the mother
  - providing privacy in the postnatal ward for male partners to stay with their spouses where possible
- Where it is feasible healthy mothers should receive care in the facility for at least 24 hours after an uncomplicated vaginal birth in a health facility
- Before discharge mother should be:
  - assessed for signs of high blood pressure
  - assessed for excessive vaginal bleeding
  - assessed for signs of infection
  - assessed for leakage of urine or faeces through the vagina
  - counselled on feeding, eg two extra meals and 2 snacks in addition to the 3 meals (for example)
  - encouraged to use locally available and affordable foods and explained to about the need of extra food portions
  - assessed for mental or psychological wellness
- All women should be given information about the physiological process of recovery after birth

- All women should be advised to report any health concerns to a health care provider. In particular mothers educated on:
    - signs and symptoms of postpartum haemorrhage:
        - sudden and profuse blood loss or persistent increased blood loss
        - faintness
        - dizziness
        - palpitations/tachycardia
    - signs and symptoms of pre-eclampsia/eclampsia:
        - headaches accompanied by one or more of the symptoms of visual disturbances
        - nausea
        - vomiting
        - epigastric or hypochondrial pain
        - feeling faint
        - convulsions
    - signs and symptoms of infection:
        - fever
        - shivering
        - abdominal pain and/or
        - offensive vaginal discharge
    - signs and symptoms of thromboembolism:
        - unilateral calf pain
        - redness or swelling of calves
        - shortness of breath or chest pain
- Adequate nutrition for the mother should be maintained to ensure the mother remains healthy and to enhance lactation performance and rapid recovery after delivery
- Women should be provided information on
    - their own nutrition
    - maintaining exclusive breastfeeding for the first 6 months
    - hygiene, especially handwashing
    - birth spacing and family planning
        - health providers should discuss with the women about their contraceptive options
    - safer sex including use of condoms
- In malaria-endemic areas, mothers and babies should sleep under long lasting Insecticidal treated bed nets
- Women should be advised on importance of perineal hygiene. This includes:
    - frequent changing of sanitary pads
    - washing hands before and after changing pads
    - daily bathing or showering to keep their perineum clean
- Iron and folic acid supplementation should be provided for at least three months after delivery
- Signs of obstetric fistula- bleeding in urine, leakage of urine or faeces in vagina

Postnatal care following home delivery

- Women who deliver at home should be reviewed at a health facility as soon as possible and preferably within 24 hours after delivery
- Community health volunteer or community midwife should refer or accompany the mothers to the health facility
- At the facility the women should receive the standard package of postnatal care
- Haemoglobin levels determined, testing for HIV and syphillis, urinalysis done
- All women should be advised to report any health concerns to a health care professional

Maternal care within the first 48 hours after complicated vaginal delivery

Introduction

Complicated delivery refers to operative vaginal deliveries, caesarean sections, or women who were resuscitated, who had pre-eclampsia , eclampsia, and postpartum haemorrhage among others

Recommendation

- All women who had complicated deliveries should be managed according to relevant national guidelines and besides been offered the standard postnatal care
- women delivered by caesarean section should be assessed for signs of bleeding at the incision site and infection over and above post surgical monitoring of the patient

Neonatal care within the first 48 hours

Introduction

Almost three fourths (74.3%) of the total deaths during the neonatal period occur in the first week of life. This include; almost all deaths (98.2%) due to asphyxia, about 40% deaths secondary to sepsis, and 83.2% of deaths due to prematurity.

The first day (day 0) contributes to around 40% of these deaths.

Recommendations

- Where it is feasible, all healthy newborns should receive care in the facility for at least 24 hours after an uncomplicated vaginal birth
- Health care providers should always observe infection prevention and control measures when handling all infants
- All newborns should have**:**
    - immediate skin to skin contact before the umbilical cord is clamped
    - full clinical examination within an hour after birth and before discharge
- Initiation of breast feeding should be encouraged within the first 1 hour of birth
    - support with correct positioning and attachment
    - practice rooming in,
    - encouraging breastfeeding on demand
- Infants should be kept warm
    - room temperature should be 25- 28ºC
    - baby should be placed on the mother's abdomen or on a warm, clean and dry surface if the mother is not there
    - use a radiant warmer if room not warm
    - kangaroo mother care for preterm infants (less than 37 weeks gestation) and low birth weight (less than 2.5kg)
    - 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

- 1% tetracycline eye ointment should be administered to the infant for opthalmia neonatorum prophylaxis
- BCG and OPV vaccination should be administered as soon as possible after birth
- Vitamin K should be administered to all neonates
- Bathing should be delayed until after 24 hours of birth. If this is not possible, bathing should be delayed for at least six hours
- All mothers and care givers should be advised to observe hygiene at all times
- Infants and their mothers should sleep in long lasting insecticidal nets
- HIV exposed children (HEI) should be initiated on antiretroviral prophylaxis as per the Kenya PMTCT guidelines
- Birth notification form should be completed before discharge
- Communication and play with the newborn should be encouraged

- Health provides should enquire and assesses for signs and symptoms during each postnatal care contact:
    - fever (temperature >37.5 °C)
    - low body temperature (temperature <35.5 °C)
    - fast breathing (breathing rate >60 per minute)
    - severe chest in-drawing
    - swollen eyes, pus draining from eye or ear
    - any yellowness (jaundice) of the eyes, in first 24 hours of life, or yellowness of palms and soles at any age
    - baby blue around the mouth
    - redness of umbilical cord stump at the base
    - not breastfeeding
    - history of convulsions
    - no spontaneous movement or baby lethargic
- The newborn should be referred for further evaluation if any of the signs or symptoms is present
- The mother or care giver should be counselled to seek health care promptly if they notice any of the above danger signs occurs in-between postnatal care visits

Home visits for postnatal care

Community health volunteers should conduct home visits as per the guidelines to assess mother and infant for danger signs and appropriate referral

Recommendation

- A home visit should be conducted in the first week after delivery
- Mothers should be counselled on the following:
    - Danger signs for maternal and newborn complications in postnatal period and encouraged to promptly seek care in case of occurrence.
    - family planning individually or with her partner
    - personal hygiene
    - hand washing
    - breast care and exclusive breastfeeding
    - importance of adequate maternal nutrition

POSTNATAL CARE 10–14 DAYS AFTER BIRTH

Maternal care

- All women should have:
    - vital signs observed
    - complete physical examination
    - assessment of lochia loss
- Women delivered through caesarean section should be assessed for signs of infection at the incision site
- In case the woman had an episiotomy or perineal tear, health care providers should check if the site is well healed
- At all postnatal contacts, health providers should make enquiries about general well-being of the mother by asking about:
    - fever
    - headache
    - breast pain or cracked nipples
    - fatigue
    - abdominal pains
    - healing of incisional site if delivered by caesarean section
    - lochia (amount, colour and smell)
    - healing of any perineal wound
    - perineal pain
    - perineal hygiene
    - back pain
    - micturition and urinary incontinence,
    - bowel function
- All women should be assessed for postnatal depression by asking the following two questions:
    - during the past month have you often been bothered by feeling down, depressed, or hopeless?
    - during the past month have you often been bothered by little interest or pleasure in doing things?
- Women who answer “yes” to either of the questions should be referred for assessment for postpartum depression
- Health providers should enquire about intimate partner violence
- Women who report intimate partner violence should be referred to the intimate partner violence desk in the facility or to the social worker for advice and management
- HIV-infected women should be:
    - on ART
    - advised on importance of adherence to ARTs
- Health providers should encourage men to accompany their partners to the facility
- Male partners who accompany the women to health facility should be
    - advised on when to resume sex. This would be
        - when the couple is comfortable (when physiologically and psychologically ready)
        - after perineal healing has taken place
        - when there is no lochia
    - offered assessments of non-communicable diseases. This includes:
        - blood pressure measurement
        - determination of body mass index (calculated as weight in kilograms divided by the square of height in meters)

Neonatal care within 1-2 weeks after delivery

- Health providers should:
    - weigh the baby and indicate in the chart
    - conduct a complete physical examination
        - check eyes for discharge
    - assessed for danger signs for baby
        - treatment of any complications detected or referral if necessary
    - check for the immunisation status of the infant
        - provide immunization if not yet started
    - assess and observe how the baby is breastfed
    - birth registration if not yet done

POSTNATAL WITHIN FOUR TO SIX WEEKS

Maternal

All women should be:

- Asked about resumption of sexual intercourse and possible dyspareunia as part of an assessment of overall well-being.
    - women who complains of dyspareunia should be advised to use water based lubricant gel to ease discomfort
- Encouraged to continue exclusively breastfeeding their infants until they are six months
- Advised to report any health concerns to a health care provider promptly
- All women should have a full physical examination
- All women should be offered contraceptive method
- All women should be offered cervical cancer screening
- All women should be offered STI screening and treatment if required
- All women with unknown HIV status should be offered testing
- All HIV negative women should be offered repeat testing
- Women who test HIV negative should be:
    - encouraged to use condoms if partner is HIV-infected or of unknown HIV status
    - offered pre exposure prophylaxis (PrEP) if partner is HIV-infected as per 2016 Kenya ART guidelines
- All women should be encouraged to have couple or partner HIV testing if their male partners were not tested during the antenatal period or during labour and delivery
- All HIV-infected women should
    - have access to ART
    - TDF + 3TC + EFV is the preferred first line regimen for treatment in breastfeeding women
    - be screened for tuberculosis (TB) and should be offered isoniazid preventive therapy if uninfected
- Health care workers should assess for
    - general condition of mother
    - Uterine involution
    - Lochia (amount /colour)
    - postpartum depression
    - intimate partner violence
    - alcohol and drug use/abuse
    - non-communicable diseases. This includes:

    - blood pressure measurement
    - determination of body mass index (calculated as weight in kilograms divided by the square of height in meters)
- women should be treatment for any complications detected or referred as appropriate
- Health providers should observe a mother breast feed
- Health providers should record in PNC register and Mother Child booklet

Infant postnatal care within four to six weeks

At the six week postnatal visit:

- The general condition of the baby should be assessed
- Complete physical examination should be performed
- The weight and length of the baby should be measured and recorded in the growth chart
- The baby should be assessed for developmental milestones
    - smile
    - eye movement to coloured objects
- All infants should be given immunization
    - second dose of OPV
    - first dose of the Pentavalent (DPT/HEB/HIB) vaccine

Immunization should be promoted as per existing KEPI guidelines

Table 1: Kenya Immunization schedule

Vaccine	Ages of administration	Entire country	Parts of the country
BCG	At birth	√	
OPV	At birth, 6wks, 10wks, 14wks	√	
DPT-HepB-Hib	6wks, 10wks, 14wks	√	
Measles 1*	9 months	√	
Measles 2	18 Months	√	
Yellow fever**	9 months		√
PCV10	6wks, 10wks, 14wks	√	
Rota	6wks, 10wks	√	
HPV***	Class 4 at 10 years of age		√
IPV**	14 wks	√	

***HPV piloted in Kitui County

- Birth registration if not yet done
- Treatment for any condition appropriate referral and linkages
- Confirm the infant sleeps under an insecticide treated net where applicable
- HIV exposed infants should
    - be initiated cotrimoxazole
    - have a DNA PCR already unless already known to be HIV infected
    - be screened for tuberculosis and given IPT if negative (as per guidelines)
- Infants identified as HIV infected should be initiated on ART as per 2016 Kenya ART guidelines

* HIV exposed infants receive measles vaccine at 6 and 9 months

**Yellow fever is given only in 2 high risk Counties Baringo and Elgeyo –Marakwet

POSTNATAL CARE AT THE 4-6 MONTHS POSTNATAL CARE VISIT

Maternal

Mother should be:

- counselled on introduction complementary infant feeds
- advised to continue breast feeding even after introducing other feeds
- offered contraception if she was using lactational ammenorrhoea method or had not initiated contraception
- offered cervical cancer screening
- General health of mother

Infant care at the 6 month immunization visit

- All infants should have an assessment of immunisation status
    - HIV exposed infants should be offered measles immunization
- All infants should be weighed
- All infants should have a complete physical examination
- Assessed for danger signs for baby

NUTRITION

Maternal

- Mothers should be advised against all dietary restrictions
- A lactating mother should take two extra meals and two snacks in addition to three meals in a day
- Mothers should be advised on amount and variety of foods to eat and the frequency-
- Each meal should contain a minimum of 4 food varieties from the 10 food groups for dietary diversity (provide list as annex or refer to appropriate guideline)

- Mothers should be encouraged to consume foods rich in iron (dark green leafy vegetables, legumes,) and foods which enhance iron absorption (fruits and vegetables rich in vitamin C)
- Lactating women should avoid taking coffee or tea with meals as it binds iron and prevent its absorption
- Tea or coffee should be taken an hour after meals
- Mothers should drink milk daily to get enough calcium
- All mothers should have a nutritional assessment
    - In case of malnutrition, mothers should be referred for nutritional support

Iodine deficiency is prevented through use of iodized table salt

- Breast feeding mothers should be advised:
    - to drink more liquids:
    - not to go on restricted diets in an attempt to lose weight while nursing as this can lead to reduced milk production
    - not to drink beer or smoke
    - to have adequate rest

  - to minimize caffeine intake in tea or coffee
  - avoid supplements for babies < 6 months (including solid food, water, juice, and formula).
  - snack often on micro-nutrient rich foods high in protein and calcium
  - take light exercises such as abdominal breathing, pelvic floor exercises and leg raising
- Employers should support mother friendly workplace initiatives that promote breast feeding

BREASTFEEDING

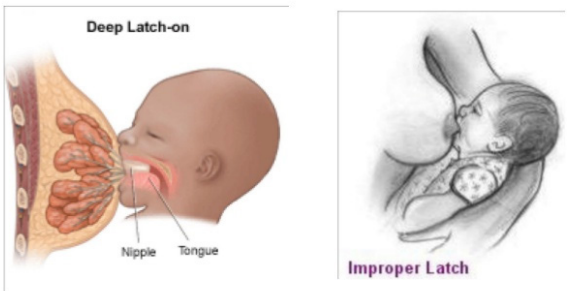
Introduction

- Exclusive breastfeeding occurs when the infant only receives breast milk without any additional food or drink, not even water
- Benefits of breastfeeding:
  - Safe, clean, easy to access, right temperature,
  - no preparation time required
  - protective antibodies passed to the infant
  - contributes to the health and well-being of mothers and infants
  - helps to space children
  - reduces the risk of ovarian cancer and breast cancer in mother
  - saves family resources
- There are significant benefits of exclusive compared to partial breastfeeding in the first month in reducing the risks of :
  - all-cause mortality and morbidity resulting from sepsis and other infections
  - acute respiratory infection
  - diarrhoea
- KDHS reports that only 61% of infants less than six months are exclusively breastfed

Recommendations

- All neonates should have breastfeeding initiated as early as possible, preferably within the first hour of birth
- All babies should be exclusively breastfed from birth until 6 months of age
- In infants more than 6 months, breastfeeding should continue alongside complementary foods for up to or beyond two years of age,. This contributes to optimal physical growth and mental development

Good Breastfeeding Techniques



- Exclusive breastfeeding should be promoted during all antenatal and postnatal care contacts
- Mothers should give baby the first milk (colostrum), which is nutritious
- Breastfeeding should be given as often as the child desires, day and night, at least 8 times in 24 hours
- Particular support for exclusive breastfeeding should be provided when the mother has had a caesarean section or the baby is born preterm
- Mother should be advised to drink plenty of fluids, eat more, eat healthy foods and rest while breastfeeding

Breastfeeding the new born

- The mother should be in a comfortable position
- The mother should be shown how to hold her baby. She should:
    - make sure the baby's head and body are in a straight line
    - make sure the baby is facing the breast; the baby's nose is opposite her nipple
    - hold the baby's body close to her body
    - support the baby's whole body, not just the neck and shoulders
- Health care workers should show the mother how to help her baby to attach. She should:
    - touch her baby's lips with her nipple
    - wait until her baby's mouth is opened wide
    - move her baby onto her breast, aiming the infant's lower lip well below the nipple

- Signs of good attachment:
    - more of areola visible above the baby's mouth
    - mouth wide open
    - lower lip turned outwards
    - baby's chin touching breast
- Signs of effective suckling
    - slow, deep sucks, sometimes pausing
- In case of breast engorgement, the mother should express a small amount of breast milk before she starts to breastfeed in order to soften the areola area so that it is easier for the baby to attach
- For HIV exposed infants, exclusive breastfeeding is recommended for 6 months, thereafter complimentary feeding with breastfeeding till the baby is one year of age

Correct Infant Latch-on Position

Breast problems

- Recommendations to prevent breast problems
    - proper attachment and positioning of the baby during breastfeeding
    - frequent emptying of the breasts
    - mother should not give pre-lacteal feeds e.g. glucose, water or other types of milk
    - mothers should be educated on how to breastfeed during antenatal clinic and postnatal visits

Sore or cracked nipples

- Presentation
    - mother reports pain on breastfeeding
    - cracks on nipples
- Management
    - counsel on personal hygiene and how to keep the nipples clean
    - express the milk from the affected breast to prevent engorgement
    - mother educated on how to position and attach baby
    - application of milk on the cracks and encourage exposure to air or sunshine if possible continue breastfeeding both breasts
    - check for oral thrush in baby

Breast Engorgement

- Presentation
    - occurs when there is congestion as well as over accumulation of milk
    - breasts feel hard with distended vessels
    - breasts are warm and tender
    - areola may look oedematous

- Management
    - mother should be encouraged to express the milk if the baby is not able to suckle
    - mother should be encouraged to breastfeed more frequently using both breasts at each feeding
    - mother should be educated on how to hold and attach baby to breast
    - relief measures before breastfeeding may include:
        - applying warm/ cold compresses to the breasts just before breastfeeding, or encourage the woman to take warm shower
        - massaging the woman's neck and back
        - mother should be advised to express some milk manually prior to breastfeeding and wet the nipple area with breast milk to help the baby latch properly and easily
    - relief measures after feeding may include:
        - supporting the breast with a binder or brassier but avoiding tight ones
        - applying cold/ warm compresses to the breast between feeding to reduce swelling and pain
        - analgesics
    - paracetamol 1000mg orally as needed

Mastitis

- Inflammation of the breast
- Presentation
    - breast engorgement
    - tenderness
    - fever
- Management of mastitis:
    - Mother encouraged to:
        - continue breastfeeding on the unaffected side
        - use brassiere to support breast
        - apply cold/ warm compresses to the breast between feeds to reduce swelling and pain
        - express and discard milk from affected side several times a day
    - Antibiotics
        - amoxicillin 500mg every 8hours or flucloxacillin 500mg every six hours for 5-10 days or
        - erythromycin 500mg every six hours for 5 – 10 days if allergic to penicillins
    - Analgesics
        - paracetamol 1000mg orally as needed

CORD CARE

Introduction

Chlorhexidine application to the cord reduces rate of cord infection by 30%

Recommendation

- Use of 4% chlorhexidine for cord care once daily for 7 days or until the cord drops off and heals is recommended

Cord infection (omphalitis)

- Omphalitis is defined as redness extending to the skin with or without pus
- Inflammation of the umbilical stump usually occurring in the first week of life
- Early signs of cord infection include
    - redness at base of stump
    - wetness of stump
    - offensive smell
- late signs of cord infection include
    - baby looks ill
    - temperature may be elevated
    - refusal to feed
    - pus discharge from the umbilicus
    - jaundice
- management of an infected cord
    - clean the cord with antiseptic solution e.g. povidone (tincture) iodine with clean gauze/ cotton wool
    - keep cord dry
    - keep baby clean
    - antibiotics
        - amoxicillin 62.5g mg/kg – three times a day for 5 days.
        - baby with late signs should be admitted
- The mother or care giver should be advised to:
    - wash hands before and after cord care
    - apply 4% chlorhexidine only daily for 7 days
    - keep cord stump loosely covered with clean clothes
    - keep cord dry
    - keep baby clean
    - avoid touching the stump unnecessarily

CONTRACEPTION

Introduction

- Contraceptive counselling is one of the most important aspects of postpartum care
- Unmet need for family planning is high among women during the first year after childbirth
- Information on when to start a contraceptive method will vary depending on whether a woman is breastfeeding or not
- If a woman has sex and is not exclusively breastfeeding, she can become pregnant as soon as four weeks after delivery

- Postpartum family planning is defined as the prevention of unintended pregnancy and closely spaced pregnancies through the first 12 months following childbirth. The timing may be as follows:
    - post-placental –within 10 minutes after placenta delivery
    - immediate postpartum –delivery to 1 week
    - postpartum –1 week up to 4 weeks
    - extended postpartum –4 weeks to one year after delivery
- Postpartum contraceptives are convenient, cost-effective and meet the needs of women
- The foundation for postpartum contraception should be established during the antenatal period
- Mothers should be advised to wait for two years after the last birth before trying to conceive
    - This reduces risks of adverse maternal, perinatal and infant outcomes
- Immediate postpartum FP is more cost-effective than after six-weeks post-delivery

Table 2: Contraceptive options for breastfeeding women

Method	Considerations
Lactational Amenorrhoea 	The criteria for LAM with postnatal women is: • amenorrhoeic postpartum • Less than 6 months since giving birth • Baby is breastfed exclusively and on demand i.e. frequently (8 or more times day and night, no other foods or fluids) If women follow this criteria there is less than a 2% risk of conceiving during the first 6 months post birth
Progestogen Only Pill 	• Can be commenced anytime in breastfeeding women • May cause heavy irregular bleeding if used within 21 days after birth
Combined Oral Contraceptive Pill	• Detrimental effect on the volume of breast milk before 6 weeks • Not recommended if exclusively breastfeeding
Implants (Etonogestrel and Levonorgestrel Implant)	• Inserted anytime from delivery • If >21 days postpartum and the woman is amenorrhoeic, exclude pregnancy • Can be inserted prior to postnatal discharge
Depot medroxy-progesterone acetate	• Commenced anytime postpartum for non-breast feeding mothers • Not recommend < 6 weeks postpartum for breast feeding mothers
Intrauterine Devices (IUD): Levonorgestrel IUD, or Copper (Cu-IUD) 	• Inserted within 48 hours postpartum or 4 weeks after childbirth (& exclude pregnancy) • **Note**: It is recommended to insert after >4 weeks postpartum due to the increased risk of perforation. • LNG-IUD contraception is effective within 7 days, and Cu-IUDs are effective immediately.

- Postpartum contraceptive choices depend on the woman's preferences, whether she has resumed sexual activity, cultural practices, breastfeeding and medical consideration
    - contraception use is not required until 21 days after delivery
    - heavy irregular bleeding may occur if progestogen only contraceptives are used less than 3 weeks postpartum
    - due to increased thrombosis risk, combined oral contraceptives (COC) should be delayed until 21 days postpartum
    - women should avoid using COC when breastfeeding as oestrogen may decrease milk supply
- Postnatal family planning services can be integrated in various points of service delivery such as ART clinic, maternity ward, MCH/FP, gynaecology clinic, youth clinics, and other specialized clinics
- Facility community linkages through community health volunteers and community health extension workers to promote contraception use through:
    - advocacy
    - promoting male involvement
    - linkages or referral of clients to facilities
    - providing some methods as per the national family planning guidelines 2016.

PARTNER INVOLVEMENT

Introduction

- Men play a key role in decisions integral to maternal and newborn health
- Involving male partners in maternal and newborn services can contribute to improved
    - utilization of postnatal care.
    - infant feeding practices especially exclusive breastfeeding
    - childhood immunization
    - couple communication regarding family planning
    - uptake and use of contraception
- Women with social support have decreased likelihood of postpartum depression
- Women should have opportunity to decide if they want their male partner to attend postnatal clinic
- Including men in maternal and child health services may have further benefits for men's own health
- Encouraging couples to attend maternal and newborn health services together is desirable but care is required in order to avoid inadvertently dissuading women from accessing health services alone

Challenges to male involvement

- Gender norms that discourage male involvement are common in many communities
    - both men and women believe that taking children for MNCH services is woman's role
    - men feel out of place in the largely female dominated MNCH clinics
    - often there are communication difficulties between men and women about sexual and reproductive health
    - poor understanding among men of the health problems faced by women and newborns
    - lack of knowledge regarding how to take an active role in maternal and child health
    - fear of being tested for sexually transmitted infections and HIV

Strategies to promote male involvement

- Use of male motivator intervention
    - use of male peer educators to talk to men about contraceptives can increase uptake of contraception
- Screening for non-communicable diseases
    - BMI
    - blood pressure
    - diabetes
    - prostate cancer

HIV CARE

Maternal

- All women with unknown HIV status should be offered testing at delivery or soon as possible thereafter
- All women should be offered syphilis test (RPR, VDRL or POC) if the test was not done during the antenatal visits
- Women who tested HIV negative in the antenatal period should be offered
    - repeat HIV test if not retested in 3rd trimester or during delivery
    - counselling on HIV and STI prevention including use of condoms
    - pre exposure prophylaxis (PrEP) as per the 2016 Kenya ART guidelines if they are at ongoing risk of HIV acquisition
    - couple or partner HIV testing if the male partners was not tested antenatally
- All HIV-infected women should have access to lifelong ART and infant ARV prophylaxis
- Tenofovir (TDF) + Lamivudine (3TC) + efavirenz (EFV) is the preferred regimen in breastfeeding
- HIV infected women should be offered adherence counselling and support as per the 2016 Kenya ART guidelines
- All HIV-infected women should be linked to psychosocial support system (for example mentor mothers program) to ensure retention in care

Care for HIV exposed infants

- HIV exposed children should be offered comprehensive package of care as per the Kenya ART guidelines that includes:
    - exclusive breastfeeding in the first 6 months of life, with subsequent introduction of appropriate complementary feeds and continued breastfeeding until 2 years
    - monitoring growth and development as a means of identifying the child who is failing to thrive and also as a tool for monitoring the effect of interventions.
    - Antiretroviral prophylaxis
        - all HIV exposed infants should be initiated on once-daily NVP + AZT for 6 weeks and NVP alone for an additional 6 weeks at birth or as soon as possible thereafter
    - for mothers who decline infant prophylaxis, the health care worker should refer to the social services
    - all HIV infected infants should be initiated on treatment promptly as per the 2016 Kenya ART guidelines
        - adherence counselling to the care taker and demonstration on dosage and administration of the drugs
        - screening, prophylaxis and treatment for TB

CARE FOR ADOLESCENT MOTHERS

Introduction

- World Health Organization defines adolescents as young people between the ages of 10 and 19 years
- Medical complications associated with adolescent pregnancy include:
    - poor maternal weight gain
    - anaemia
    - pregnancy-induced hypertension
    - postpartum depression
- Compared with offspring of older mothers, infants of adolescent mothers have an increased risk of adverse health outcomes. This include
    - higher incidences of perinatal mortality
    - low birth weight
    - preterm birth
    - developmental disabilities
- Poorer developmental outcomes Poverty, lower educational level, inadequate family support and stigma contribute to a lack of adequate prenatal care, which may account for the majority of negative health outcomes for both the adolescent mother and her child
- Intimate partner violence, which can include verbal abuse, assault by a partner or family member, being in a fight or being hurt, or witnessing violence are more common among adolescent mothers
- Adolescents are at increased risk for repeat adolescent pregnancy
- Factors associated with repeat adolescent pregnancy within 2 years include:
    - not returning to school within 6 months after delivery.
    - being married or living with a male partner
    - inadequate counselling and guidance
    - not using a long-acting contraceptive within 3 months of delivery
    - experiencing intimate partner violence
- Specialized school-based programs can provide a means of providing multidisciplinary services parenting adolescents while keeping them in school
- mHealth and social media can be used to promote participation in postnatal care i.e reminders for clinic visits, sharing of post-natal danger signs and family planning and contraception
- The following services should be integrated to optimize utilization
    - integration of adolescent and youth friendly services into maternal health services.
    - integrating HIV services with youth friendly services
    - integrating family planning services into child health care services especially immunization to reduce missed opportunities

Recommendation

- Postnatal care provided to adolescent is similar to that provided to adult mothers
- Health care workers should;
    - encourage exclusive breastfeeding
    - educate on importance of exclusive breastfeeding
    - counsel on techniques and good positions of infant during breastfeeding
    - offer HIV and STIs Counselling and testing
    - encourage use of contraception preferably long-acting reversible methods
    - provide awareness on intimate partner violence services
    - enquire about social support of postpartum adolescents at each postnatal care visit

        - encourage early involvement of male partners for the married adolescent
        - involvement of family members if adolescent is not married
    - screen for postpartum depression
        - linkage to support groups

POSTPARTUM DEPRESSION

Introduction

- Postpartum depression is defined as any non-psychotic depressive illness occurring during the first postnatal year
- The prevalence of postpartum depression is about 10-15%
- However, only about 15% of women seek or obtain medical advice
- increases the risk of infant undernutrition
- The following conditions are risk factors for postpartum depression:
    - previous postpartum depression
    - previous mental illness
    - vulnerable population
    - traumatic childbirth
    - infant born preterm
    - stillbirth or neonatal death
    - psychological disturbance during pregnancy.
    - poor social support
    - poor relationship with partner
    - infant admitted to intensive care
    - history of being a neglected child

Recommendation

- The following questions can be used to screen for depression:
    - during the past month, have you often been bothered by feeling down, depressed or hopeless?
    - during the past month, have you often been bothered by having little interest or pleasure in doing things?
    - if the answer is “yes” to any of these questions, or if there is clinical concern, further assessment is required
    - a formal assessment tool, such as the Edinburgh Postnatal Depression Scale or Patient Health Questionnaire (PHQ-9) can be used (see appendix 1&2)

INTIMATE PARTNER VIOLENCE

Introduction

- Violence against women particularly intimate partner violence and sexual violence are major public health problems and constitute violation of human rights of the women
- ~ 1 in 3 (35%) of women worldwide have experienced either physical and or sexual intimate partner violence or non-partner sexual violence in their lifetime
- Most of this violence is intimate partner violence

- Adolescents at increased risk for intimate partner violence
- Violence can negatively affect physical, mental, sexual and reproductive health of women
- Violence may also increase vulnerability to HIV
    - programs that target adolescents in and out of school to prevent violence within dating relationships through building of self-esteem and skills in intercouple communication
    - microfinance with gender equality training for wealth creation
    - promoting communication and relationship skills within couples and communities
    - reducing access to, and harmful use of alcohol
    - Community mobilisation and engagement to address harmful cultural gender norm and to promote violence prevention within their community
- Interventions that have been effective in reducing intimate partner violence include

Recommendation

- Health care providers should screen for intimate partner violence during all postnatal care visits using the following questions
    - are you in a relationship with a person who physically hurts (hit, slap, kick you?
    - are you in a relationship with a person who threatens, frightens, or insults you, or treats you badly?
    - are you in a relationship with a person who forces you to participate in sexual activities that make you feel uncomfortable?
- Women who report intimate partner violence should be referred to the social workers in the facility for support

CARE FOR MOTHERS FOLLOWING PERINATAL DEATH

Introduction

Procedures and practices to address the psychosocial and practical needs of both women and their partners at the time of their baby's death and afterwards

Recommendation:

- Immediate clinical care that is provided to women is similar to those with live infants
- Health providers should
    - provide comprehensive information about stillbirth and neonatal death to the women and their partners in a simplified language
- Women and their partners should be offered counselling and linked to psychosocial support groups
- Lactation should be suppressed through
    - Wearing a firm brassiere
    - Use of medication
        - bromocriptine 2.5 mg twice a day for 7 days
        - cabergoline given as a single oral dose of 1 mg in the first 24 hours postpartum
- Women should be advised to delay pregnancy for at least 6 months
- Women should initiate contraception immediately

LEGAL CONSIDERATIONS

- A female employee is entitled to 90 calendar days of maternity leave with full pay
- The male partner is entitled to 14 days of paternity leave with full pay
- Women who report intimate partner violence should be referred to the social worker or gender based violence desk in the facility

MONITORING AND EVALUATION

Introduction: Monitoring

- The regular observation and recording of activities taking place in a project or program
- It is a process of routinely gathering information on all aspects of the project
- To monitor is to check on how project activities are progressing. It is observation; - systematic and purposeful observation
- involves reporting and giving feedback about the progress of the project to the donors, implementers and beneficiaries of the project
- provides project management and project stakeholders the information needed to assess progress, identify trends, keep project schedules and measure progress towards expected goals

Introduction: Evaluation

- process of judging value on what a project or program has achieved particularly in relation to activities planned and overall objectives
- important to identify the constraints or bottlenecks that hinder the achievement of project objectives. Solutions to the constraints can then be identified and implemented
- enables the project planners and implementers to assess the benefits and costs that accrue to the intended direct and indirect beneficiaries of the project
- provides opportunities for mid-course corrections to project implementation, as necessary
- Data Collection and Reporting Tools
    - Postnatal register- MOH 406
    - Mother Child booklet
    - CHW register
    - Birth notification forms
    - Immunization register
    - FP register
    - MDR notification form
    - ANC- MOH 405
    - MOH 333-Maternity Register
    - Monthly summary form
    - DHS: -Demographic and Health Survey
    - MICS: -Multiple Indicator Cluster Surveys
    - HMIS: -Health Management Information System
    - Facility data and summary tools
    - Community Service Log Book

Table 3 :Key monitoring indicators

Services	Monitoring Indicators
PNC Attendance	% of women receiving postnatal care: • within 48 hours, • at 2 weeks, • at 6 weeks • at 6 months • Proportion of women who receive 4 postnatal checks % of infants receiving post-natal care • within 48 hours, • at 2 weeks, • at 6 weeks • at 6 months • Proportion of infants who receive 4 postnatal checks
Assessment of mother and baby • Physical Examination • Vital Signs • Danger signs	This information will be collected for consumption at the facility level but will not be tracked
Counselling of mother • Maternal Nutrition • Breast care and Exclusive breastfeeding • Hygiene • Family planning • Cord care • Danger signs for both mother and baby • Resumption of sex	This information will be collected for consumption at the facility level but will not be tracked
Screening • Obstetric Fistula • Cervical Cancer • Post-partum depression • Sexual Gender Based violence (SGBV)	• number of postnatal women screened for obstetrics fistulae • number of women with obstetric fistula • % of women screened for cervical cancer • % of women with number with positive results • % of post-natal women screened for post-partum depression • % of women screened for post-partum depression • % of women with postpartum depression • % of women screened for SGBV • disaggregate by age to capture adolescents 10-19 years
Post-Partum Family Planning	Proportion of post-natal women using family planning • within 48 hours of delivery • at 6 weeks post-partum • at 6 months post-partum • method mix-uptake

Nutrition	• new born breastfed within the first one hour after delivery • Infants<6/12 on exclusive breastfeeding. • Infants<6/12 on exclusive breastfeeding
PMTCT	• Number of postnatal women tested for HIV within 6 weeks of delivery • No. testing positive • No. started on HAART • Number of postnatal women tested for HIV at 6 months • No. testing positive • Proportion of HEIs with initial PCR in less than 8 • No. testing positive • No. started on ART prophylaxis • Proportion of HEIs with initial PCR between 8 weeks -12 months • No. testing positive • No. started on ART prophylaxis • Number of male partners tested for HIV postnatally
Immunization	• BCG coverage • DPT/HEP+ HiB (Penta 1) to (Penta 3 coverage) • Fully immunized child coverage • Measles coverage • OPV 1 to 3 coverage • OPV birth coverage • PCV 10 (1to 3 coverage) • Rota Virus Vaccine (1 and 2 coverage)
Community	• number of children under five years with danger signs referred • number of postnatal women referred from the community unit
Male involvement Non communicable diseases assessment • Body mass index • Blood Pressure • Blood Sugar	• number of male partners accompanying their spouses to the clinic
Outcome/impact indicators	number of maternal deaths • within 48hrs of delivery • within 6 weeks of delivery number of neonatal deaths • Within 48hrs • within 7 days

RESEARCH GAPS – World Health Organization

The prioritized list includes:

- Evaluate effectiveness of the recommended package of postnatal care (content number and timing of contacts) in improving maternal and newborn outcomes.
- Evaluate the effectiveness of different strategies to implement postnatal care recommendations.
- Find the optimal timing of discharging mothers and babies from health facilities in LMICs.
- Evaluate the role of a post-discharge checklist during postnatal care contacts.
- Evaluate the effectiveness and cost-effectiveness of providing postnatal care at home versus at health facilities.
- Evaluate different approaches to provide psychosocial support to women after birth.
- Combine cause- and time-specific maternal and neonatal mortality and morbidity data to make suggestions on appropriate timing of visits.
- Evaluate the role of mHealth in improving the coverage and quality of postnatal care.
- Epidemiology of maternal depression, tools to identify depression's contribution to suicide, prevention strategies.
- Evaluate a package of interventions to prevent sepsis in the mother and newborn.
- Maternal recall of contact points for tracking timing of postnatal care, in home or facility births, and in caesarean section or normal vaginal deliveries.
- Prevalence and adverse effects of routine antibiotics after vaginal birth.
- Effect of increasing caesarean section rate on postnatal care.
- Qualitative research on care of small babies.
- Evaluate intervention strategies for prevention of hypothermia.
- Develop algorithms to identify sick newborns during postnatal care contacts at different time points, which have higher sensitivity than the currently-recommended algorithm, without significant loss of specificity.
- Evaluate newborn danger signs that are feasible for the mother /family to recognize.

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Appendix 1
EDINBURG POSTNATAL DEPRESSION SCALE (EPDS)

Name: _____

Address: _____

Baby's Age:_____

As you have recently had a baby, we would like to know how you are feeling. Please UNDERLINE which comes closest to how you have felt IN THE PAST 7 DAYS, not just how you feel today.

Here is an example, already completed.
I have felt happy:

Yes, all the time.
Yes, most of the time.
No, not very often.
No, not at all.

This would mean, "I have felt happy most of the time" during the past week. Please complete the other questions in the same way.

In the Past 7 Days:

1. I have been able to laugh and see the funny side of things as much as I always could.
   0 - As much as I always could
   1 - Not quite so much now.
   2 - Definitely not so much now
   3 - Not at all

2. I have looked forward with enjoyment to things.
   0 - As much as I ever did
   1 - Rather less than I used to
   2 - Definitely less than I used to
   3 - Hardly at all

3. I have blamed myself unnecessarily when things went wrong.
   3 - Yes, most of the time.
   2 - Yes, some of the time
   1 - Not very often
   0 - No, never

4. I have been anxious or worried for no good reasons.
   0 - No, not at all.
   1 - Hardly, ever
   3 - Yes, sometimes
   4 - Yes, very often

5. I have felt scared or panicky for no very good reason.
   3 - Yes, quite a lot
   2 - Yes, sometimes
   1 - No, not much
   0 - No, not at all

6. Things have been getting on top of me.
   3 - Yes, most of the time I haven't been able to cope at all
   2 - Yes, sometimes I haven't been coping as well as usual
   1 - No, most of the time I have coped quite will
   0 - No, I have been coping as well as ever

7. I have been so unhappy that I have had difficulty sleeping
   3 - Yes, most of the time
   2 - Yes, sometimes
   1 - Not very often
   0 - No, not at all

8. I have felt sad or miserable
   3-Yes, most of the time
   2 – Yes, quite often
   1 – Not very often
   0 – No, not at all

9. I have been so unhappy that I have been crying
   3 - Yes, most of the time
   2 - Yes, quite often
   1 - Only occasionally
   0 - No, not at all

10. The thought of harming myself has occurred to me.
   3 - Yes, quite often
   2 - Sometimes
   1 - Hardly ever
   0 - Never
   Screening Tool for PPD

Edinburgh Postnatal Depression Scale (EPDS) [Cox, Holden & Sagovsky 1987]

The EPDS is a self-rated questionnaire that has been used in Europe and Australia for over 10 years to screen women for PPD. It asks women to rate how they have been feeling in the last 7 days and consists of 10 short statements of common depressive symptoms with 4 choices per statement. Each statement is rated on a scale of 0 – 3 with possible total scores ranging from 0 – 30.

To administer the test you give the woman a pen and the questionnaire and ask her to answer the questions in relation to the past 7 days. The questionnaire should only take a few minutes to complete.

Scoring the questionnaire only take a couple of minutes with practice

Questions 3,5,6,7,8,9 and 10 are scored: statement 1 = 3 points, statement 2 = 2 points, statement 3 = 1 point and statement 4 = 0 points.

A cut-off score of 12.5 has been shown to detect major depression and a woman who meets this threshold can be further assessed. Asking a woman to complete such a questionnaire not only makes her stop and think about how she has been feeling but also indicates a willingness on the part of the person giving the questionnaire to listen to how she is feeling.

Appendix 2 PHQ 9 (Patient Health Questionnaire)

Name:_____

Date:_____

Over the last 2 weeks, have you felt bothered by any of these things?	Not at all	Several Days	More than half the days	Nearly Every day
1. Feeling nervous, anxious, or on edge?	0	1	2	3
2. Not being able to stop or control worrying?	0	1	2	3
3. Worrying too much about different things?	0	1	2	3
4. Trouble relaxing?	0	1	2	3
5. Being so restless that it is hard to sit still?	0	1	2	3
6. Becoming easily annoyed or irritable?	0	1	2	3
7. Feeling afraid as if something awful might happen?	0	1	2	3

Add Columns _____ + _____ + _____**Total** _____

If you checked off any problems, how difficult have these problems made it for you to do your work, take care of the things at home, or get along with other people?

Not difficult at all	Somewhat difficult	Very difficult	Extremely difficult
☐	☐	☐	☐

Appendix 3

LIST OF CONTRIBUTORS

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20	Dr. Kigen Bartilol	MoH-RMHSU	Head
21	John Kinuthia	KNH	Head Obgyn
22	Merina Lekorere	MoH-NASCOP	P O
23	Eunice Wachira	MoH-RMHSU	Nursing
24	Danielson Kennedy	NASCOP	P O
25	Rose N Wafula	NASCOP	PMTCT TA
No.	**Name**	**County**	**Designation**
1	Sebenzia M Ulwenya	Vihiga	CASCO
2	Christine M Mataza	Kilifi	CPHN
3	Monica N Kangethe	Nairobi	SNO
4	Josephine Oniego	Kisii	ACNO
5	Irene Muthee	Kirinyaga	SNO
6	Dr. Rosemary Obara	Kisumu	CRHC
7	Louisa R S Muteti	Makueni	SACNO
8	Beatrice A Oloo	Migori	CRHC
9	Sarah W Mbote	Nakuru	SNO
10	Dr. Omwoyo Willis	Homabay	CASCO
11	Caroline Mwangi	Kiambu	CHRIO
12	Jacinta Kithome	Machakos	CCNO
13	Wambua Mulwa	Kitui	CHRIO
14	Fatuma Ibrahim	Garissa	SNO
15	Thomas Ole Keempnua	Kajaido	CHRIO
16	Lawrence Letimon	Marsabit	CHRIO
17	George Mochana	Laikipia	CASCO
18	Florence Kabuga	Nairobi	SNO
No.	**Name**	**Organization**	**Designation**
1	Lulu Ndaptani	CHS	PMTCT/RH
2	Dr. Amos Oyoko	UNFPA	NPPP-RH
3	Ruth W Kinyua	AHF Kenya	Prog. Coordinator-Makueni
4	Sharon Olwande	CHAI	P O
5	Soud Tengali	KRCS	RPC
6	Peter Kaimenyi	MANI	MNH
7	Jane Muli	WRP	PMTCT-TA
8	Kennedy Muriithi	CHAI	P O
9	Benjamin O Elly	CDC	T A
10	Gladys Someren	RH Advisor	Afya Jijini
11	Diana Mwarania	PS Kenya	SQ Coordinator
12	Joan Emoh	Save the Children	SHC
13	Khadija Ahmed	UNICEF	Health Specialist
14	Miriam Chege	AFYA TIMIZA	MNCH Advisor
15	Agnes Langat	CDC	MNCH Specialist
16	Joyce Mutuku	LSTM	Technical Officer
17	Lynn Kanyuru	SHPIEGO/MCSP	STA
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19	Dr.S.N. Wawire	M.O.H	

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