

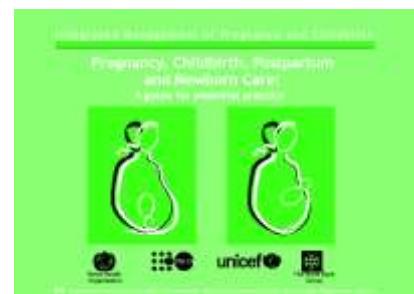
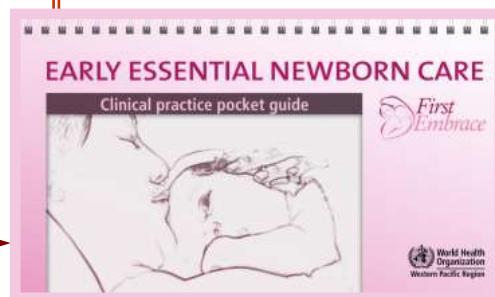
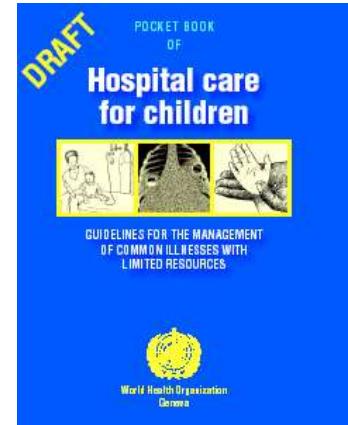
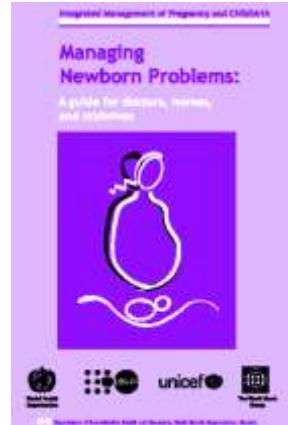


SIN – GdS «Neonatologia e Sviluppo»

Dal Web:

*Risorse
per la cura al Neonato
nei LMIC*

Ospedali
di 2° e 3° livello



PCPNC

Strutture di 1° livello



Ostetriche Infermieri

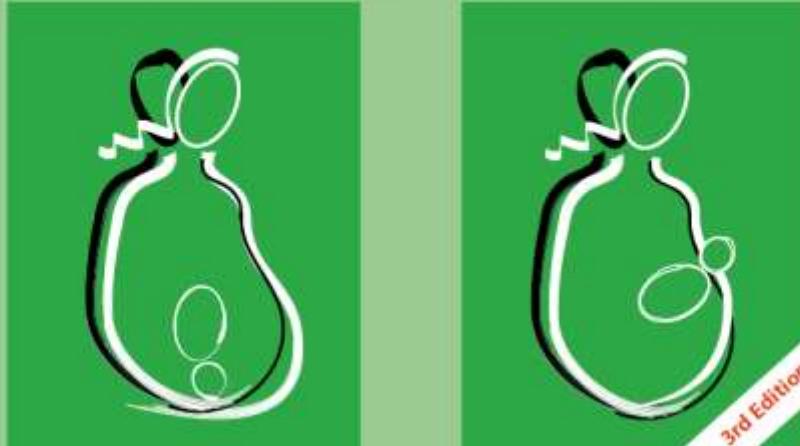
Medici



PCPNC ... ?

Integrated Management of Pregnancy and Childbirth

Pregnancy, Childbirth, Postpartum and Newborn Care: A guide for essential practice



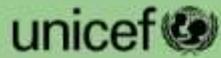
World Health Organization  UNFPA  unicef  The World Bank Group 



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J NEWBORN CARE

- J2** Examine the newborn
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 - J4** Assess breastfeeding
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 - J7** If danger signs
 - J8** If swelling, bruises or malformation
 - J9** Assess the mother's breasts if complaining of nipple or breast pain
- J10** Care of the newborn
- J11** Additional care of a small baby (or twin)
- J12** Assess replacement feeding

K BREASTFEEDING, CARE, PREVENTIVE MEASURES AND TREATMENT FOR THE NEWBORN

- K2** Counsel on breastfeeding
 - K3** Counsel on importance of exclusive breastfeeding
 - K2** Help the mother to initiate breastfeeding
 - K3** Support exclusive breastfeeding
 - K3** Teach correct positioning and attachment for breastfeeding
 - K4** Give special support to breastfeed the small baby (preterm and/or low birth weight)
 - K4** Give special support to breastfeed twins
- K5** Alternative feeding methods
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 - K5** Hand express breast milk directly into the baby's mouth
 - K6** Cup feeding expressed breast milk
 - K6** Teach mother heat treating expressed breast milk
 - K6** Quantity to feed by cup
 - K6** Signs that baby is receiving adequate amount of milk
- K7** Weigh and assess weight gain
 - K7** Weigh baby in the first month of life
 - K7** Assess weight gain
 - K7** Scale maintenance

- K8** Other breastfeeding support
 - K8** Give special support to the mother who is not yet breastfeeding
 - K8** If the baby does not have a mother
 - K8** Advise the mother who is not breastfeeding at all on how to relieve engorgement

K9 Ensure warmth for the baby

- K9** Keep the baby warm
- K9** Keep a small baby warm
- K9** Rewarm the baby skin-to-skin

K10 Other baby care

- K10** Cord care
- K10** Sleeping
- K10** Hygiene

K11 Newborn resuscitation

- K11** Keep the baby warm
- K11** Open the airway
- K11** If still not breathing, ventilate
- K11** If breathing less than 30 breaths per minute or severe chest in-drawing, stop ventilating
- K11** If not breathing or gasping at all after 20 minutes of ventilation

K12 Treat and immunize the baby

- K12** Treat the baby
- K12** Give 2 IM antibiotics (first week of life)
- K12** Give IM benzathine penicillin to baby (single dose) if mother tested RPR-positive
- K12** Give IM antibiotic for possible gonococcal eye infection (single dose)
- K13** Teach the mother to give treatment to the baby at home
- K13** Treat local infection
- K13** Give isoniazid (INH) prophylaxis to newborn
- K13** Immunize the newborn
- K13** Give antiretroviral (ARV) medicine to newborn
- K14** Advise when to return with the baby
- K14** Routine visits
- K14** Follow-up visits
- K14** Advise the mother to seek care for the baby
- K14** Refer baby urgently to hospital



NEWBORN CARE

J2 EXAMINE THE NEWBORN



J3 IF PRETERM, BIRTH WEIGHT <2500 G OR TWIN



J4 ASSESS BREASTFEEDING



J5 CHECK FOR SPECIAL TREATMENT NEEDS



J6 LOOK FOR SIGNS OF JAUNDICE AND LOCAL INFECTION



J7 IF DANGER SIGNS



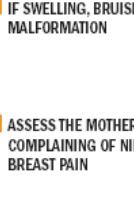
J8 IF SWELLING, BRUISES OR MALFORMATION



J9 ASSESS THE MOTHER'S BREASTS IF COMPLAINING OF NIPPLE OR BREAST PAIN



J10 CARE OF THE NEWBORN



J11 ADDITIONAL CARE OF A SMALL BABY (OR TWIN)



- Examine routinely all babies around an hour of birth, for discharge, at routine and follow-up postnatal visits in the first weeks of life, and when the provider or mother observes danger signs.
- Use the chart Assess the mother's breasts if the mother is complaining of nipple or breast pain **J9**.
- During the stay at the facility, use the Care of the newborn chart **J10**. If the baby is small but does not need referral, also use the Additional care for a small baby or twin chart **J11**.
- Use the Breastfeeding, care, preventive measures and treatment for the newborn sections for details of care, resuscitation and treatments **K1-K13**.
- Use Advise on when to return with the baby **K14** for advising the mother when to return with the baby for routine and follow-up visits and to seek care or return if baby has danger signs. Use information and counselling sheets **M5-M6**.
- For care at birth and during the first hours of life, use Labour and delivery **D19**.

ALSO SEE:

- Counsel on choices of infant feeding and HIV-related issues **G7-G8**.
- Equipment, supplies and drugs **L1-L5**.
- Records **N1-N7**.
- Baby died **D24**.

Newborn care

J1



Examine the newborn

J2

EXAMINE THE NEWBORN

Use this chart to assess the newborn after birth, classify and treat, possibly around an hour; for discharge (not before 12 hours); and during the first week of life at routine, follow-up, or sick newborn visit. Record the findings on the postpartum record Always examine the baby in the presence of the mother.

ASK, CHECK RECORD	LOOK, LISTEN, FEEL	SIGNS	CLASSIFY	TREAT AND ADVISE
<p>Check maternal and newborn record or ask the mother:</p> <ul style="list-style-type: none"> ■ How old is the baby? ■ Preterm (less than 37 weeks or 1 month or more early)? ■ Breech birth? ■ Difficult birth? ■ Resuscitated at birth? ■ Has baby had convulsions? <p>Ask the mother:</p> <ul style="list-style-type: none"> ■ Do you have concerns? ■ How is the baby feeding? <p>Is the mother very ill or transferred?</p>	<ul style="list-style-type: none"> ■ Assess breathing (baby must be calm) <ul style="list-style-type: none"> * listen for grunting * count breaths: are they 30-60 per minute? Repeat the count if not. * look at the chest for in-drawing. ■ Look at the movements: are they normal and symmetrical? ■ Look at the presenting part – is there swelling and bruising? ■ Look at abdomen for pallor. ■ Look for malformations. ■ Feel the tone: is it normal? ■ Feel for warmth. If cold, or very warm, measure temperature. ■ Weigh the baby. 	<ul style="list-style-type: none"> ■ Normal weight baby (2500g or more). ■ Feeding well – sucking effectively 8 times in 24 hours, day and night. ■ No danger signs. ■ No special treatment needs or treatment completed. ■ Small baby, feeding well and gaining weight adequately. 	<p>WELL BABY</p>	<p>If first examination:</p> <ul style="list-style-type: none"> ■ Ensure care for the newborn ■ Examine again for discharge. <p>If pre-discharge examination:</p> <ul style="list-style-type: none"> ■ Immunize if due ■ Advise on baby care ■ Advise on routine visit of age 3-7 days ■ Advise on when to return if danger signs ■ Record in home-based record. ■ If further visits, repeat advices.
		<ul style="list-style-type: none"> ■ Body temperature 35-36.4°C. 	<p>MILD HYPOTHERMIA</p>	<ul style="list-style-type: none"> ■ Re-warm the baby skin-to-skin ■ If temperature not rising after 2 hours, reassess the baby.
		<ul style="list-style-type: none"> ■ Mother not able to breastfeed due to receiving special treatment. ■ Mother transferred. 	<p>MOTHER NOT ABLE TO TAKE CARE FOR BABY</p>	<ul style="list-style-type: none"> ■ Help the mother express breast milk ■ Consider alternative feeding methods until mother is well ■ Provide care for the baby, ensure warmth ■ Ensure mother can see the baby regularly. ■ Transfer the baby with the mother if possible. ■ Ensure care for the baby at home.



NEXT: If preterm, birth weight <2500 g or twin



IF DANGER SIGNS

SIGNS

Any of the following signs:

- Fast breathing (more than 60 breaths per minute).
- Slow breathing or gasping (less than 30 breaths per minute).
- Severe chest in-drawing.
- Not feeding well.
- Grunting.
- Convulsions.
- Floppy or stiff.
- No spontaneous movement, floppy or stiff.
- Temperature >37.5°C.
- Temperature <35.5°C or not rising after rewarming.
- Umbilicus draining pus or umbilical redness and swelling extending to skin.
- More than 10 skin pustules or bullae, or swelling, redness, hardness of skin.
- Bleeding from stump or cut.
- Pallor.

CLASSIFY

POSSIBLE
SERIOUS ILLNESS

TREAT AND ADVISE

- Give first dose of 2 IM antibiotics **K12**.
- Refer baby urgently to hospital **K14**.

In addition:

- Re-warm and keep warm during referral **K9**.
- Treat local umbilical infection before referral **K13**.
- Treat skin infection before referral **K13**.
- Stop the bleeding.

▼ Next: If swelling, bruises or malformation

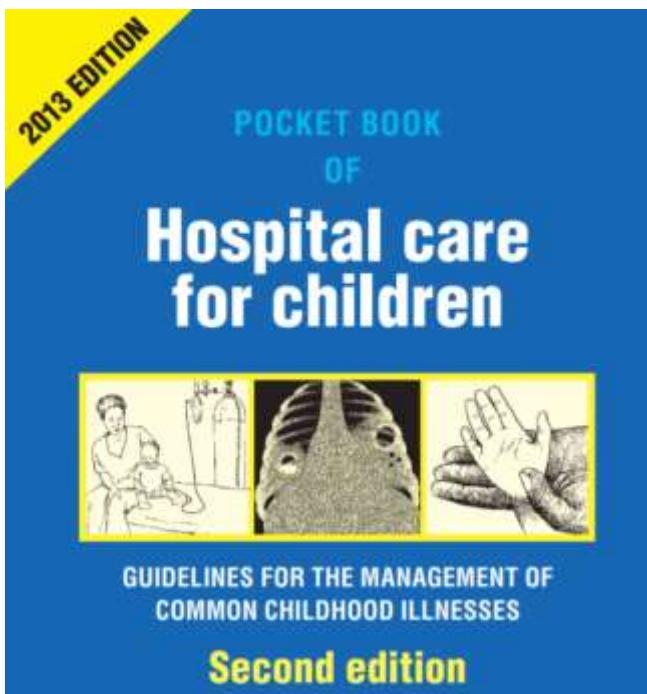
If danger signs

J7

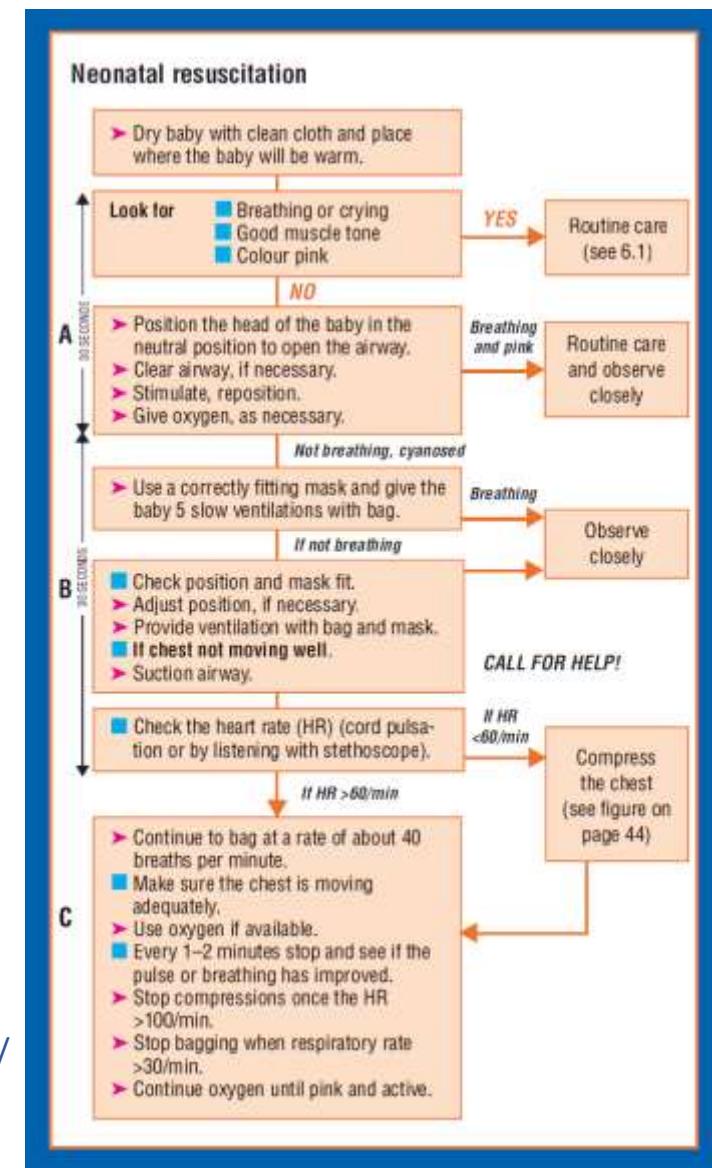


Pocket book of hospital care for children

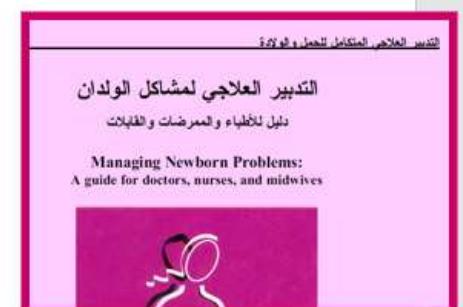
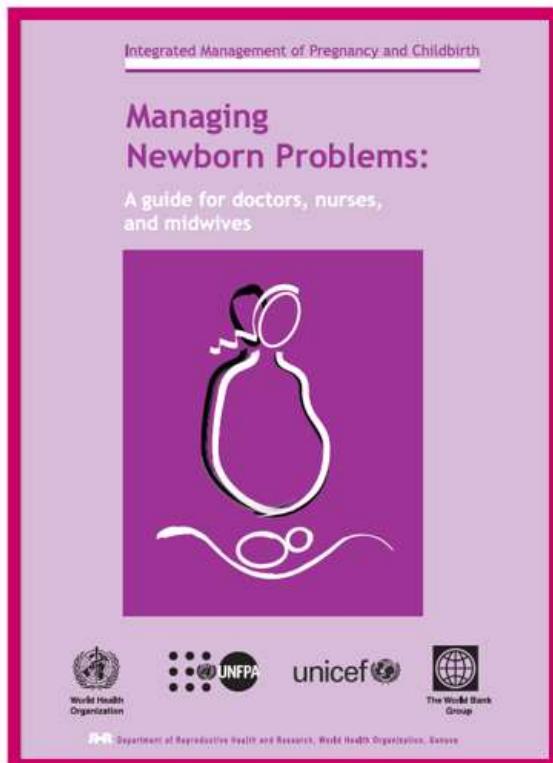
Guidelines for the management of common illnesses with limited resources



https://www.who.int/maternal_child_adolescent/documents/9241546700/en/

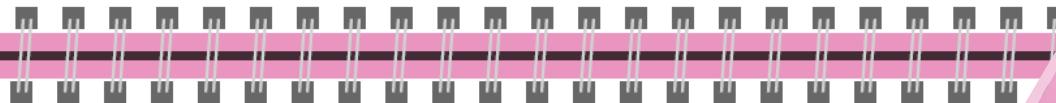


Managing Newborn Problems



https://www.who.int/maternal_child_adolescent/documents/9241546220/en/

العربية, Bahasa Indonesia, English, Português, Français, Русский



TIME BAND: FROM 30 SECONDS TO 3 MINUTES

► **IF** after thorough drying and stimulation (as close to 30 seconds as possible), newborn is gasping or is not breathing.

- Start of positive pressure ventilation
- ▶ Call for help.
 - ▶ Clamp and cut the cord with sterile scissors and with sterile gloves on.
 - ▶ Transfer to warm, firm surface.
 - ▶ Inform the mother in a kind and gentle tone that the baby has difficulty breathing and that you will help the baby to breathe.
 - ▶ Start ventilation (see page 53).

► **IF** breathing or crying

- Continue skin-to-skin contact
- ▶ If baby is breathing normally or crying, avoid manipulation such as routine suctioning that may cause trauma or introduce infection. Postpone routine procedures such as weighing and measurements.
 - ▶ Continue skin-to-skin contact with the baby prone on the mother's abdomen or chest. Turn the baby's head to one side.
 - ▶ Keep the baby's back covered with a blanket and head with a bonnet.

► 15



NEWBORN CARE
0–90 MIN

NEWBORN CARE
90 MIN–6 HOURS

CARE PRIOR
TO DISCHARGE

FROM DISCHARGE
TO 6 WEEKS

ADDITIONAL
CARE

NEONATAL CARE
ENVIRONMENT

MAINTENANCE
CHECKLIST

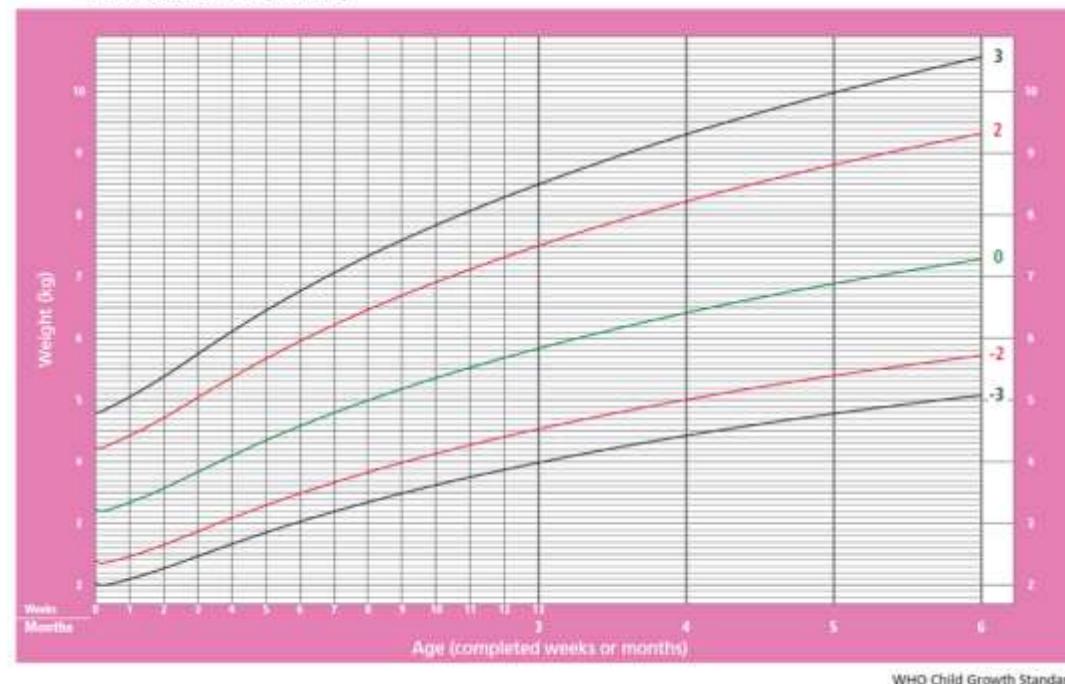
https://iris.wpro.who.int/bitstream/handle/10665.1/10798/9789290616856_eng.pdf



Home / Tools and toolkits / Child growth standards / Standards

Weight-for-age GIRLS

Birth to 6 months (z-scores)



<https://www.who.int/tools/child-growth-standards/standards>



Integrated Management of Childhood Illness 2019



Nutrition



Safety



Protection



Healthcare



Extra Care



IMCI Program, South Africa

INTEGRATED MANAGEMENT OF CHILDHOOD ILLNESS

MANAGEMENT OF THE SICK YOUNG INFANT AGED UP TO 2 MONTHS

2019



<https://www.who.int/publications/i/item/9789241516365>

ASSESS, CLASSIFY AND IDENTIFY TREATMENT

RAPIDLY APPRAISE ALL WAITING INFANTS.

ASK THE MOTHER WHAT THE YOUNG INFANT'S PROBLEMS ARE.

- Determine whether this is an initial or follow-up visit for this problem.
 - If a follow-up visit, use the follow-up instructions.
 - If an initial visit, assess the young infant as follows:

USE ALL BOXES THAT MATCH THE INFANT'S SIGNS AND SYMPTOMS TO CLASSIFY THE ILLNESS.

CHECK FOR POSSIBLE SERIOUS BACTERIAL INFECTION, VERY SEVERE DISEASE, PNEUMONIA OR LOCAL BACTERIAL INFECTION.

		SIGNS	CLASSIFY	IDENTIFY TREATMENT
ASK:	LOOK AND FEEL:			(Urgent pre-referral treatment is shown in bold.)
<ul style="list-style-type: none"> • Is the infant having difficulty in feeding? • Has the infant had convulsions (fits)? 	<ul style="list-style-type: none"> • Count the breaths in 1 minute. Repeat the count if it is 60 or more breaths per minute. • Look for severe chest indrawing. • Measure axillary temperature. • Look at the young infant's movements. If the infant is sleeping, ask the mother to wake him/her. <ul style="list-style-type: none"> – Does the infant move on his/her own? If the infant is not moving, gently stimulate him or her. – Does the infant move only when stimulated but then stops? – Does the infant not move at all? • Look at the umbilicus. Is it red or draining pus? • Look for skin pustules. <p>The young infant must be calm.</p>	Classify ALL YOUNG INFANTS	<ul style="list-style-type: none"> Any one or more of the following signs: • Not able to feed at all or not feeding well or • Convulsions or • Severe chest indrawing or • High body temperature (38°C or above) or • Low body temperature (less than 35.5°C) or • Movement only when stimulated or no movement at all or • Fast breathing (60 breaths per minute or more) in infants less than 7 days old 	POSSIBLE SERIOUS BACTERIAL INFECTION or VERY SEVERE DISEASE <ul style="list-style-type: none"> → Give first dose of intramuscular antibiotics. → Treat to prevent low blood sugar. → Advise the mother how to keep the infant warm on the way to the hospital. → Refer URGENTLY to hospital. OR <ul style="list-style-type: none"> → If referral is REFUSED or NOT FEASIBLE, treat in the clinic until referral is feasible. (See chart on p. 13)
			PNEUMONIA	<ul style="list-style-type: none"> → Give oral amoxicillin for 7 days. → Advise the mother to give home care. → Follow up in 3 days.
			LOCAL BACTERIAL INFECTION	<ul style="list-style-type: none"> → Give amoxicillin for 5 days. → Teach the mother how to treat local infections at home. → Advise the mother to give home care. → Follow up in 2 days
			INFECTION UNLIKELY	<ul style="list-style-type: none"> → Advise the mother on giving home care to the young infant.

* Thresholds based on axillary temperature

MANAGEMENT OF THE SICK YOUNG INFANT AGED UP TO 2 MONTHS 1

“ENCC” : WHO Essential Newborn Care Course based on PCPNC



Publication details

Publication date: 2010
Languages: English

Downloads

- Trainers guide [pdf 1.12Mb]
- Directors guide [pdf 500kb]
- Training file [pdf 6.66Mb]
- Clinical practice [pdf 1.55Mb]
- Classroom practice [pdf 724kb]
- Participants workbook [pdf 5.54Mb]

http://www.who.int/maternal_child_adolescent/documents/newborncare_course/en/

Kangaroo Mother Care

M5

S14

3

KMC provides the newborn low-birth-weight of preterm baby with the benefits of incubator care.



Maternal and newborn health

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Effective Perinatal Care (EPC) Training Package

Second edition 2015

In 2004, WHO/Europe developed the EPC training package in the framework of the Making Pregnancy Safer strategic approach. Updating of the EPC and the development of the second edition was coordinated by the WHO Collaborating Centre for Maternal and Child Health, Institute of Child Health IRCCS Burlo Garofolo, Trieste, Italy. The Russian translation was carried out by the WHO Collaborating Centre for Reproductive Health in Human Reproduction, Research Center for Obstetrics, Gynecology and Perinatology of the Ministry of Health, Moscow, Russian Federation.

[Learn more about the EPC training package](#)[Effective Perinatal Care \(EPC\) manual](#)[EPC Training: Common modules \(Modules C\)](#)[EPC Training: Maternal health modules \(Modules MO\)](#)[EPC Training: Newborn modules \(Modules N\)](#)[EPC Training: Facilitator Modules \(Modules FT\)](#)



**Effective Perinatal Care (EPC)
training package**
2nd Edition 2015



Учебный пакет по эффективной
перинатальной помощи (ЭПП)
2^{ое} издание, 2015 год

Common modules

- 6C Care of the neonate at birth
- 7C Breastfeeding
- 8C Postpartum care of mothers and newborns
- 9C Neonatal resuscitation

Neonatology modules (N modules)

- 1N Complete examination of a newborn
- 2N Post-resuscitation neonatal care
- 3N Breathing difficulty in the newborn
- 4N Neonatal jaundice
- 5N Neonatal infections
- 6N Care of a newborn with birth defects, congenital malformations or birth trauma
- 7N Pre-term baby low-birth-weight baby
- 8N Supportive care to sick newborn

<https://www.euro.who.int/en/health-topics/Life-stages/maternal-and-newborn-health/activities-and-tools/effective-perinatal-care-epc-training-package>



Neonatal Jaundice



JSI

- Jaundice is defined as an yellow colouration of skin and mucous tissues due to increased level of bilirubin in the blood
- Jaundice is one of the most common physical signs observed during the neonatal period
 - Up to 50% of term newborns have jaundice, the peak of hyperbilirubinemia occurs on day 3 or 4
 - Up to 80% of pre-term newborns have jaundice, the peak of hyperbilirubinemia occurs on day 5 or 7

Effective Perinatal Care (EPC)

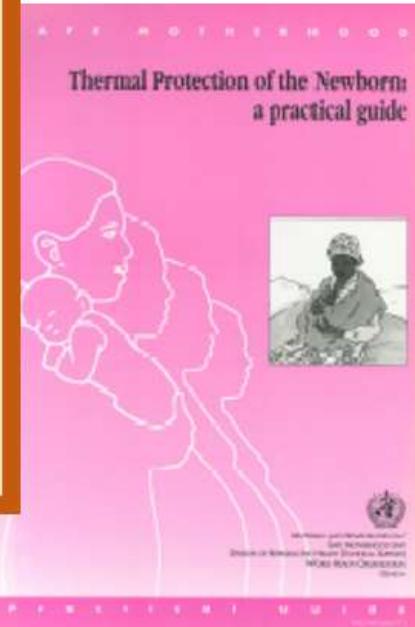
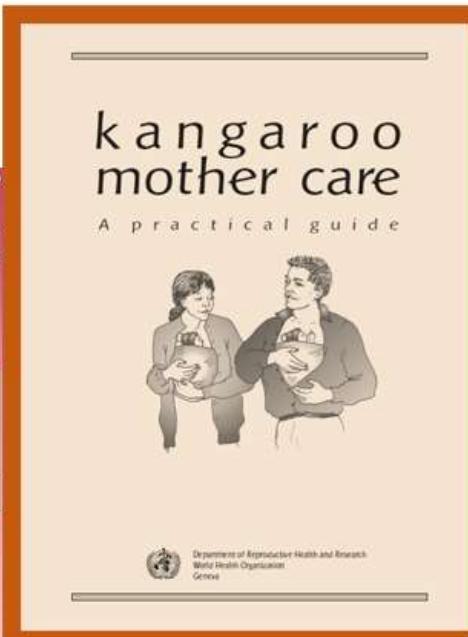
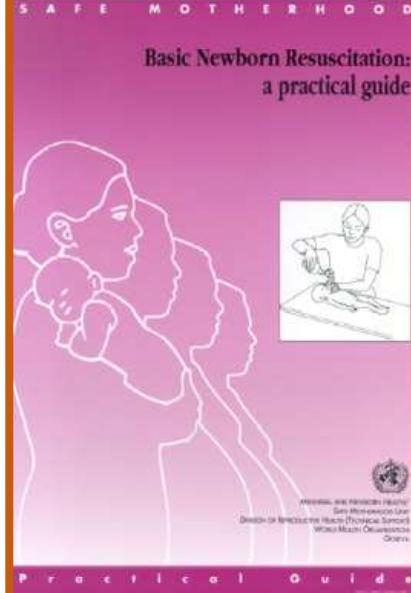


Watcho J, 2013



4N-3

Le Guide Pratiche





[Twitter](#) ← Fundación Canguro-Colombia
282 Tweet

"Faire du Kangourou c'est passer de se préoccuper à s'occuper de son enfant".

Follow "Fundación Canguro-Colombia" Segui

Fundación Canguro-Colombia
@FundCanguro

Trabajamos para mejorar y difundir el #MétodoMadreCanguro para recién nacidos de alto riesgo. Apoyemos a los prematuros y sus familias: bit.ly/2DbVoEf

<https://fundacioncanguro.co/>



American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN®



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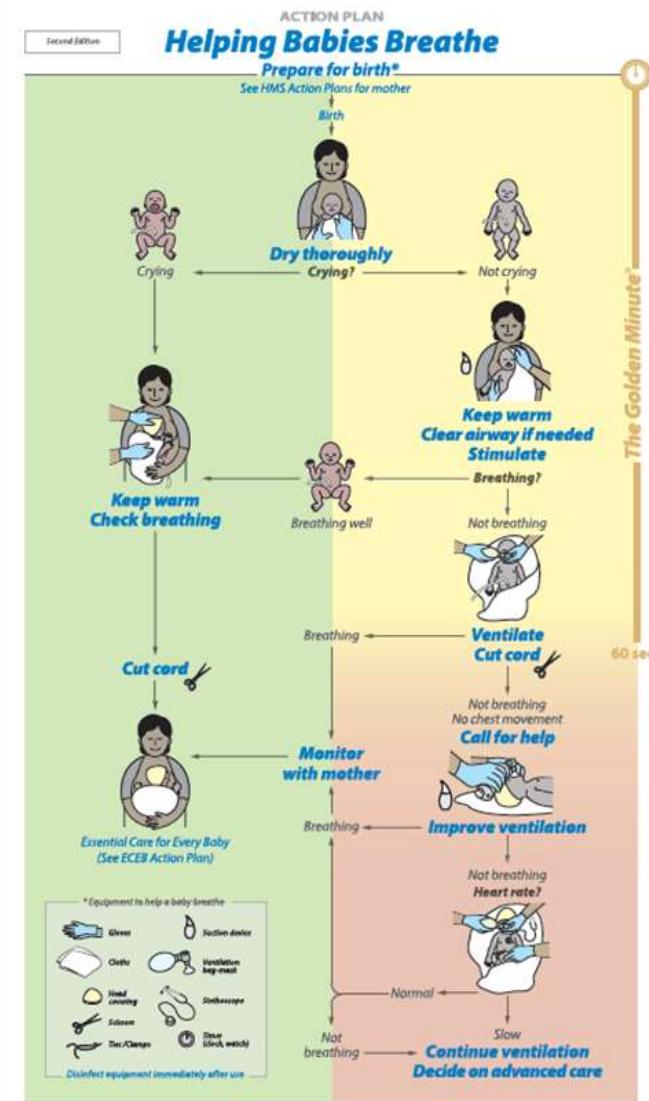
Essential Care for Every Baby (ECEB) (Africa)

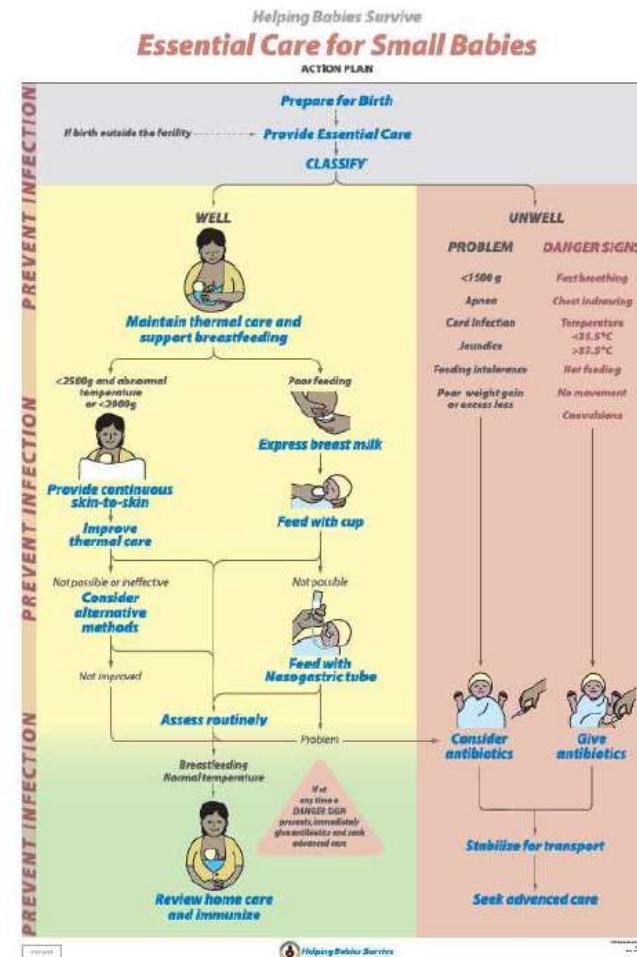
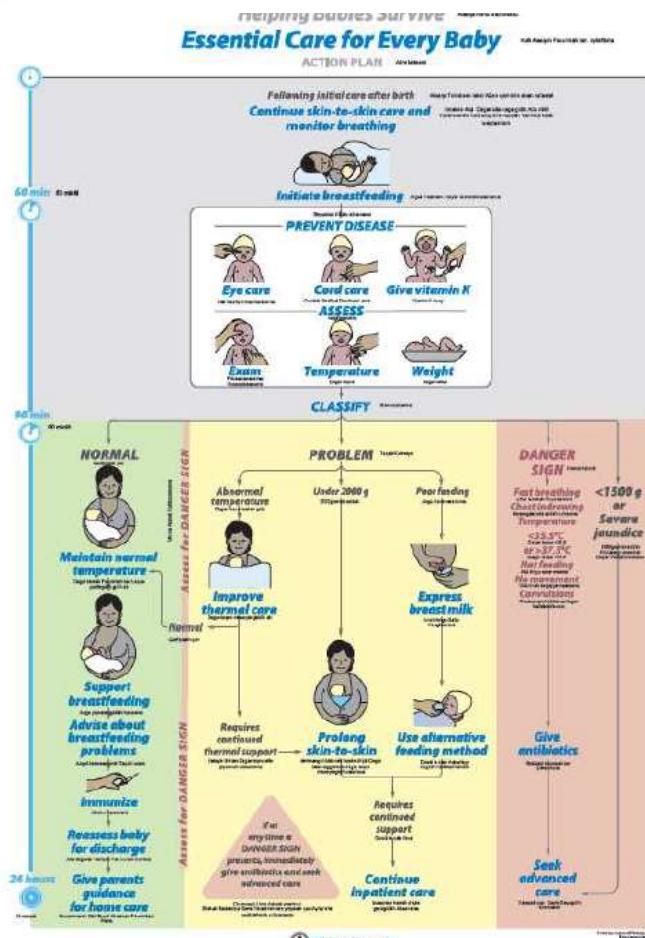


Essential Care for Every Baby (ECEB) (Africa)

Parent Guide

Flipchart





Helping Babies Survive

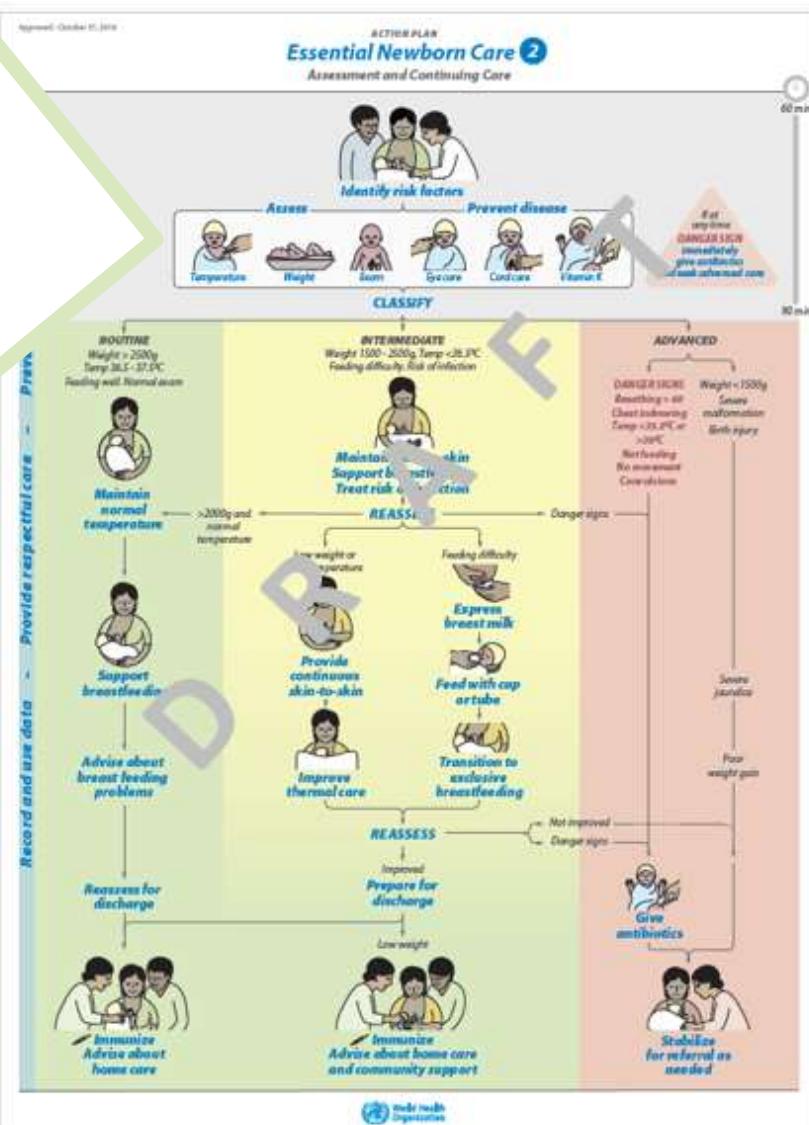
AAP

<https://internationalresources.aap.org/>



Coordinamento grafico: Laerdal Foundation

DRAFT





Coordinamento grafico:
Laerdal Foundation
DRAFT

Essential Newborn Care 1

Immediate Care and Helping Babies Breathe at Birth



Flipchart

Dalla Fondazione Chiesi e da BirthLink (UK)



nest
Neonatal Essential Survival Technology

Essential Care

An Overview of Fundamental principles
of neonatal care

Warm, Sweet, Pink & Safe

Chiesi
FOUNDATION



Essential care

Warm
Maintain temperature between 36.5 and 37.5°C

Wrap baby and place in a cot
Initiate skin to skin
Place in an incubator

Sweet
Start early feeding to prevent hypoglycaemia

Give early breast feed
Consider tube feeding if necessary
Start intravenous fluids if feeding not appropriate

Pink
Assess breathing

Assess: look & listen
Maintain oxygen saturations 90–95%
Give oxygen therapy if $\text{SpO}_2 < 90\%$

Safe
Maintain good hygiene standards

Always wash your hands
Clean eyes and mouth when necessary
Keep cord dry and change nappy regularly

BirthLink
www.birthlinkuk.org

Immediate care for baby after birth



1. Dry baby



2. Discard the wet towel



3. Cover baby with dry towel. Put on hat



4. Assess baby (breathing & heart rate)



6. If no resuscitation is needed, give to mum for KMC



5. No breathing – start resuscitation
• Airway • Breathing • Circulation



www.birthlinkuk.org

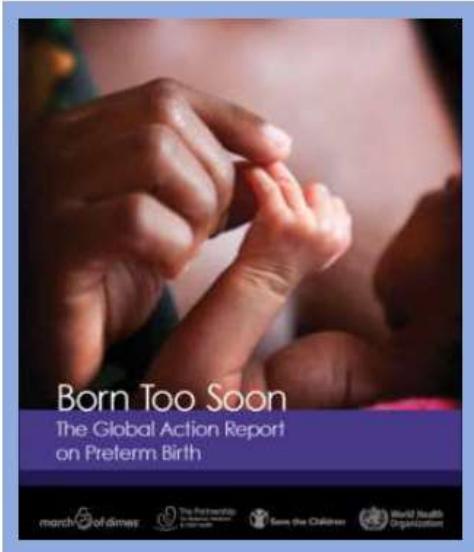
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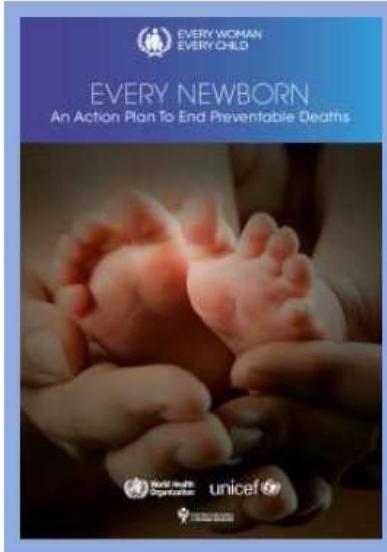
WHO Collaborating Center
for Maternal and Child Health
Trieste Italy

Hôpital Saint Camille de Ouagadougou - Burkina Faso - 21-26 Janvier 2018

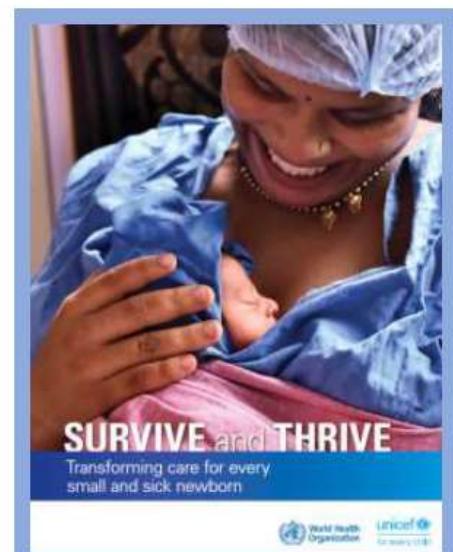




2012



2014



2019

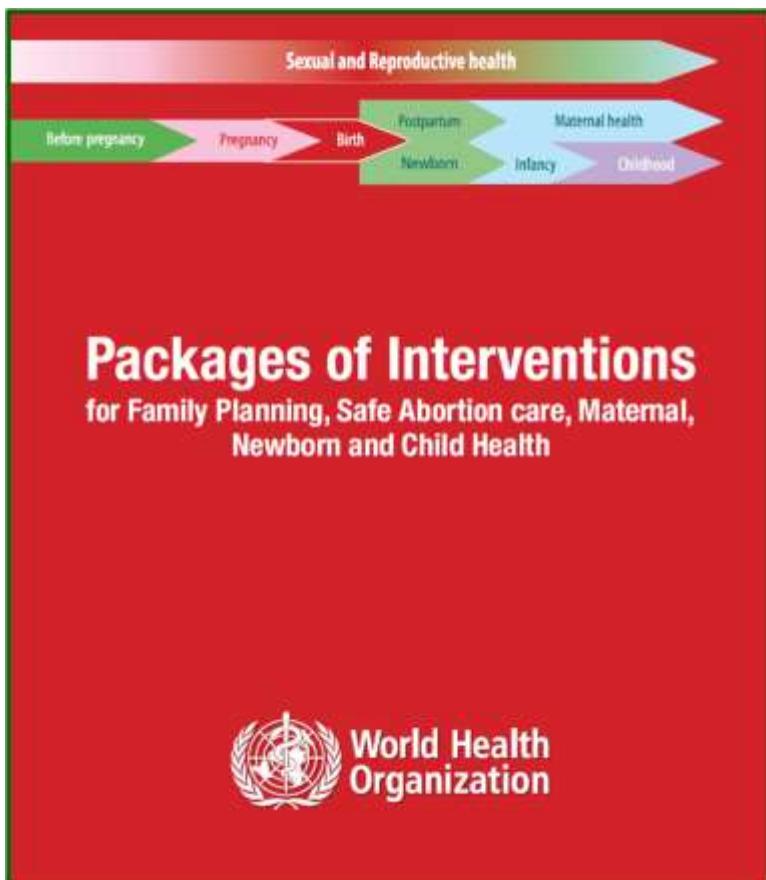
More than 80% of all newborn deaths result from three preventable and treatable conditions and complications due to prematurity, intrapartum-related deaths (including birth asphyxia) and neonatal infections.

Cost-effective, proven interventions exist to prevent and treat each main cause.

https://www.who.int/pmnch/media/news/2012/201204_borntoosoon-report.pdf

https://www.who.int/maternal_child_adolescent/newborns/every-newborn/en

https://www.who.int/maternal_child_adolescent/documents/care-small-sick-newborns-survive-thrive/en/



Packages of Interventions

for Family Planning, Safe Abortion care, Maternal, Newborn and Child Health



World Health Organization



Newborn care	
Interventions at Home/COMMUNITY level	Key supplies and commodities needed
<ul style="list-style-type: none"> Promotion and support for: <ul style="list-style-type: none"> Exclusive breastfeeding Thermal protection Infection prevention: general hygiene, hand washing, cord care and safe disposal of baby's faeces Care of a small baby without breathing and feeding problems: frequent breastfeeding, skin-to-skin contact Prevention of indoor air pollution Newborn stimulation and play Recognition of problems, illness and timely care-seeking Support for routine care and follow up visits Birth registration <p>Situational:</p> <ul style="list-style-type: none"> Promotion and provision of insecticide treated bed nets Adherence to ARTs for PMTCT 	<ul style="list-style-type: none"> Counselling, health education and promotion materials Weighing scales Thermometers Timing devices Child's health record and immunization cards Insecticide treated bed nets
Interventions at FIRST LEVEL HEALTH FACILITIES	Key supplies and commodities needed
<ul style="list-style-type: none"> All of the above plus: Feeding in Promotion, protection and support for exclusive breastfeeding Eye infection prophylaxis Immunization Presumptive treatment of congenital syphilis Monitoring and assessment of well-being and response to maternal concerns Additional follow-up for at-risk babies Treatment of local infections (skin, cord, eye, mouth) Identification, initial management and referral of a newborn with any sign of severe illness, injury or malformation Care of preterm / low birth weight without breathing problems: support for breast-milk feeding, Kangaroo Mother Care Recording and reporting <p>Situational:</p> <ul style="list-style-type: none"> All of the above plus: ART regimens for PMTCT including ART Support for older infant: feeding options 	<ul style="list-style-type: none"> All of the above plus: On site tests (Syphilis, HIV) Vaccines ORS, zinc Oral and parenteral antibiotics, treatment for local infections Utensils for breastmilk expression and cup feeding Record keeping materials
Interventions at REFERRAL FACILITIES	Key supplies and commodities needed
<ul style="list-style-type: none"> All of the above plus: Management of a newborn with severe problems: general care of a sick newborn and specific care for: <ul style="list-style-type: none"> Preterm babies with breathing problem or unable to feed orally (Includes provision of KMC) severe infection severe birth asphyxia other: severe jaundice, malformations 	<ul style="list-style-type: none"> All of the above plus: Oxygen IV fluids NG tubes Binders for ICM Baby warmers / incubators Blood and blood transfusion sets Phototherapy Laboratory - biochemical and microbiology test kits



Sexual and Reproductive health

Before pregnancy

Pregnancy

Birth

Postpartum

Newborn

Maternal health

Infancy

Childhood

Newborn care

Interventions at Home/COMMUNITY level

Promotion and support for:

- Exclusive breastfeeding
- Thermal protection
- Infection prevention: general hygiene, hand washing, cord care and safe disposal of baby's faeces
- Care of a small baby without breathing and feeding problems: frequent breastfeeding, skin-to-skin contact
- Prevention of indoor air pollution
- Newborn stimulation and play
- Recognition of problems, illness and timely care-seeking
- Support for routine care and follow up visits
- Birth registration

Situational:

- Promotion and provision of insecticide treated bed nets
- Adherence to ARVs for PMTCT

Key supplies and commodities needed

- Counselling, health education and promotion materials
- Weighing scales
- Thermometers
- Timing devices
- Child's health record and immunization cards
- Insecticide treated bed nets



Interventions at FIRST LEVEL HEALTH FACILITIES

All of the above plus:

- Rooming in
- Promotion, protection and support for exclusive breastfeeding
- Eye infection prophylaxis
- Immunization
- Presumptive treatment of congenital syphilis
- Monitoring and assessment of well being and response to maternal concerns
- Additional follow-up for at-risk babies
- Treatment of local infections (skin, cord, eye, mouth)
- Identification, initial management and referral of a newborn with any sign of severe illness, injury or malformation
- Care of preterm / low birth weight without breathing problems: support for breast(-milk) feeding, Kangaroo Mother Care
- Recording and reporting

Key supplies and commodities needed

All of the above plus:

- On site tests (Syphilis, HIV)
- Vaccines
- ORS, Zinc
- Oral and parenteral antibiotics, treatment for local infections
- Utensils for breastmilk expression and cup feeding
- Record keeping materials

Situational:

All of the above plus:

- ARV regimens for PMTCT including ART
- Support for safer infant feeding options

Key supplies and commodities needed

All of the above plus:

- Antiretroviral drugs
- Cotrimoxazole drugs



Interventions at REFERRAL FACILITIES

All of the above plus:

- Management of a newborn with severe problems: general care of a sick newborn and specific care for:
 - Preterm babies with breathing problem or unable to feed orally (includes provision of KMC)
 - severe infection
 - severe birth asphyxia
 - other: severe jaundice, malformations

Key supplies and commodities needed

All of the above plus:

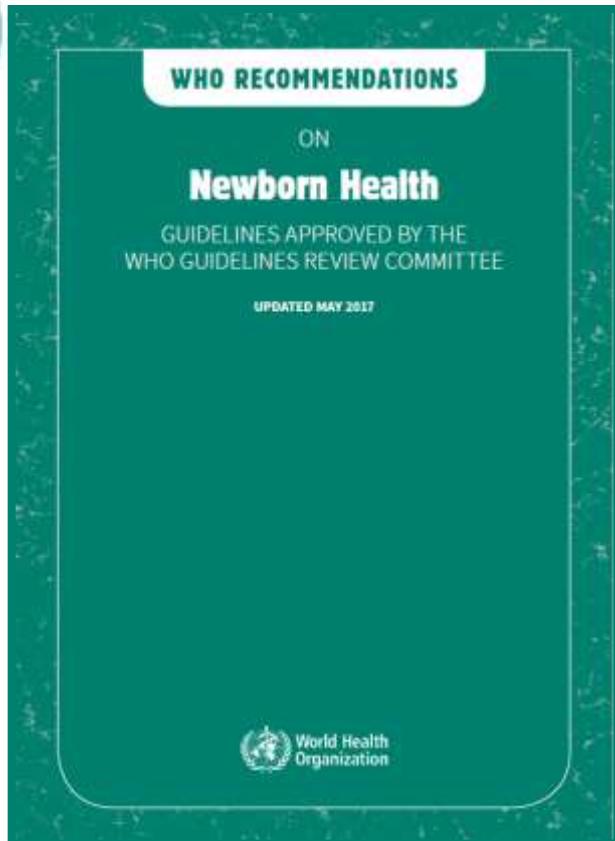
- Oxygen
- IV fluids
- NG tubes,
- Binders for KMC
- Baby warmers / incubators
- Blood and blood transfusion sets
- Phototherapy
- Laboratory - biochemical and microbiology test kits



WHO
recommendations
on health promotion
interventions
for maternal and
newborn health
2015



World Health
Organization



1. CARE OF THE NEWBORN IMMEDIATELY AFTER BIRTH

Immediate drying and additional stimulation

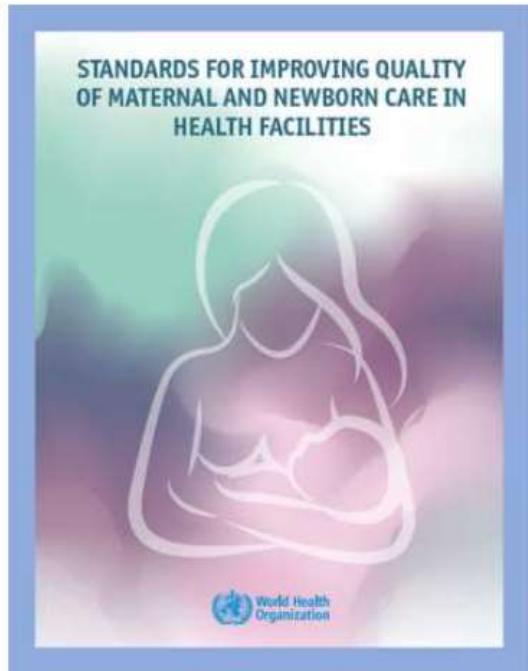
- Newly born babies who do not breathe spontaneously after thorough drying should be stimulated by rubbing the back 2-3 times before clamping the cord and initiating positive pressure ventilation. (*Weak recommendation, quality of evidence not graded*). [Source](#)

Suction in newborns who start breathing on their own

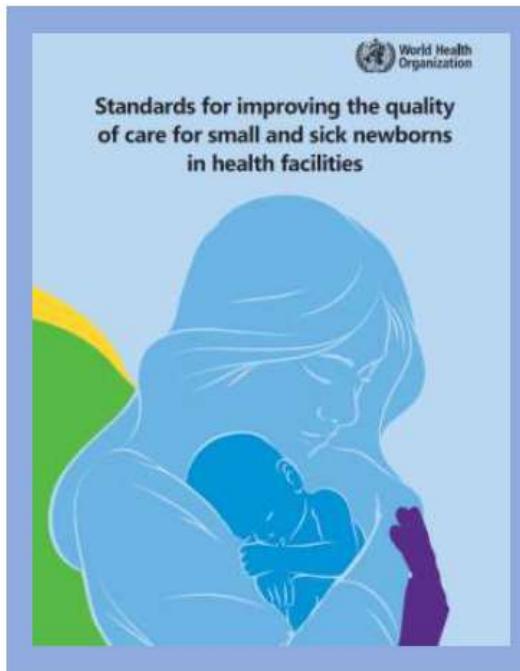
- Routine nasal or oral suction should **not** be done for babies born through clear amniotic fluid who start breathing on their own after birth. (*Strong recommendation, high quality evidence*). [Source](#)
- Intrapartum suction of mouth and nose at the delivery of head in neonates born through meconium is **not** recommended. (*Strong recommendation, low quality evidence*). [Source](#)
- Suctioning of mouth or nose is **not** recommended in neonates born through liquor with meconium who start breathing on their own. (*Weak recommendation, quality of evidence not graded*). [Source](#)
- Tracheal suctioning should **not** be performed in newly born babies born through meconium who start breathing on their own. (*Strong recommendation, moderate to low quality evidence*). [Source](#)

2017

<https://www.who.int/publications/i/item/WHO-MCA-17.07>



2016



2020



QUALITY MEASURES

https://www.who.int/maternal_child_adolescent/documents/improving-maternal-newborn-care-quality/en/

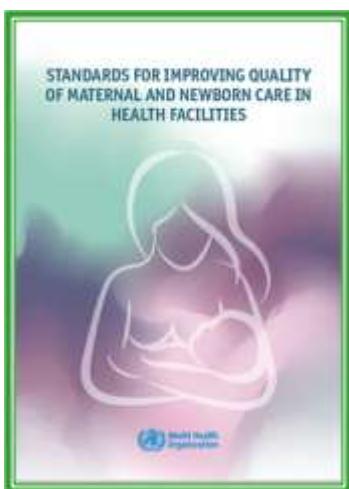
<https://www.who.int/publications/i/item/9789240010765>

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

(*Strong recommendation, moderate quality evidence*) [Source](#)

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

(*Strong recommendation, moderate-quality evidence*) [Source](#)



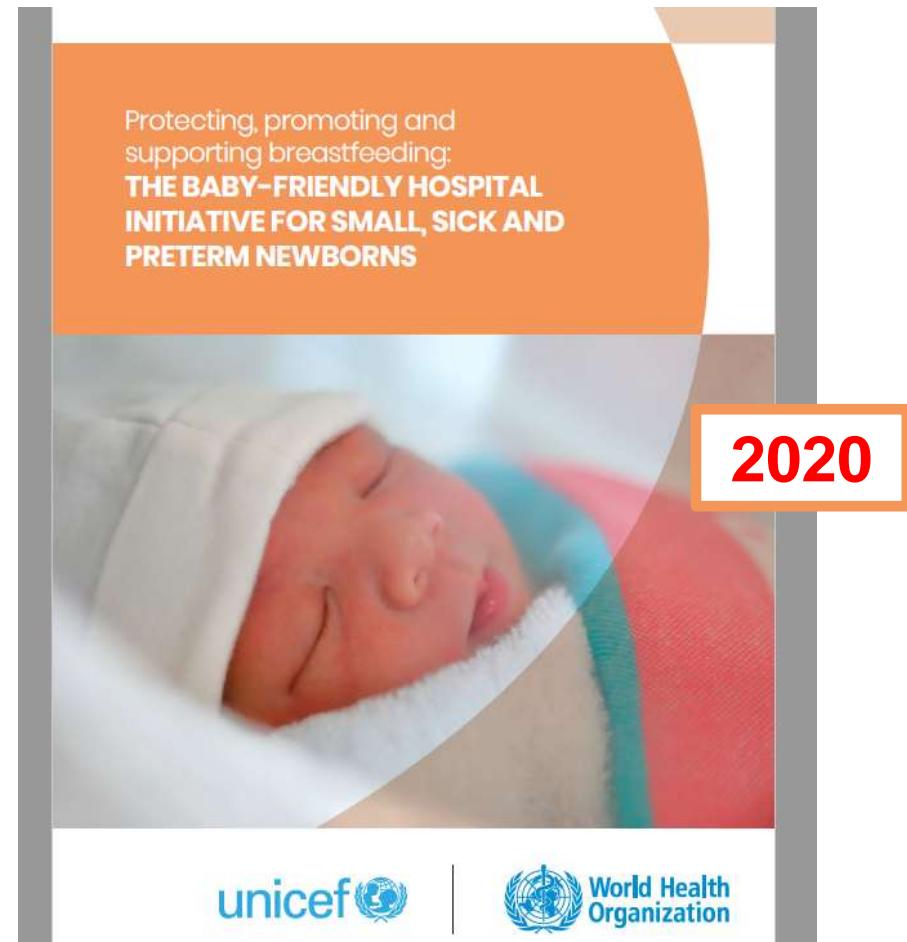
<https://www.who.int/docs/default-source/mca-documents/advisory-groups/quality-of-care/standards-for-improving-quality-of-maternal-and-newborn-care-in-health-facilities.pdf>

BFHI - UNICEF

*Baby
Friendly
Hospital
Iniziative*



<https://www.who.int/nutrition/publications/infantfeeding/bfhi-implementation-2018.pdf>



<https://www.who.int/publications/item/9789240005648>



World Health Organization
REGIONAL OFFICE FOR **Europe**

Hospital care for mothers and newborn babies: quality assessment and improvement tool

A systematic standard based participatory approach

Second Edition (2014)

<https://www.euro.who.int/en/health-topics/Life-stages/maternal-and-newborn-health/publications/2014/hospital-care-for-mothers-and-newborn-babies-quality-assessment-and-improvement-tool>



WHO recommendations on
Postnatal care of the mother and newborn

2013



World Health Organization

Working with Individuals, Families and Communities
to Improve Maternal and Newborn Health



A Toolkit for Implementation

<https://apps.who.int/iris/handle/10665/97603>

https://www.who.int/maternal_child_adolescent/documents/community-engagement-mnh-toolkit/en/



CARING FOR NEWBORNS
AND CHILDREN
IN THE COMMUNITY A TRAINING COURSE
FOR COMMUNITY
HEALTH WORKERS



**Caring for the newborn
at home**

FACILITATOR NOTES

unicef  World Health Organization 

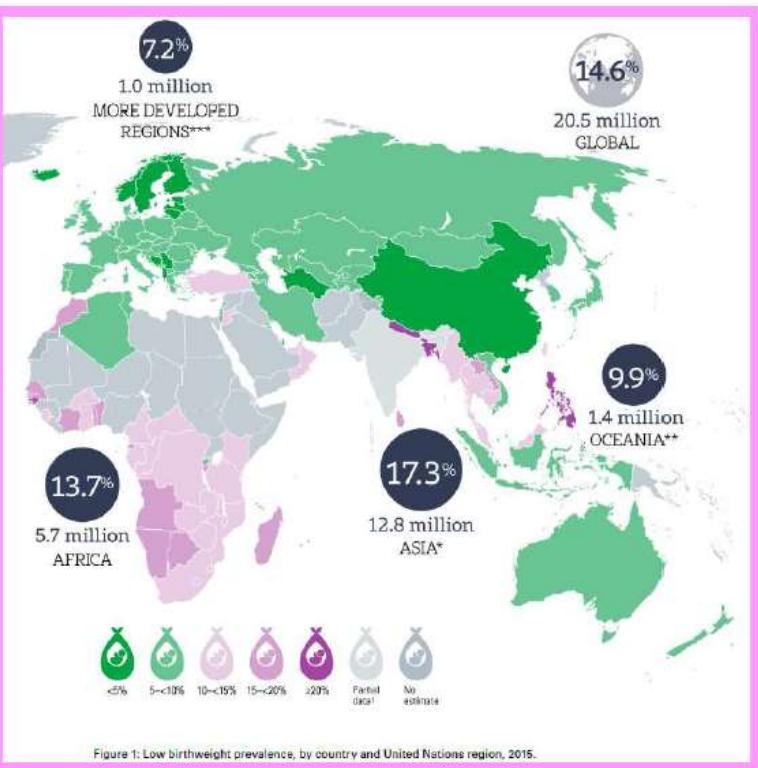
https://www.who.int/maternal_child_adolescent/documents/caring-for-the-newborn-at-home/en/

WHO recommendations on
home-based records
for maternal, newborn and child health

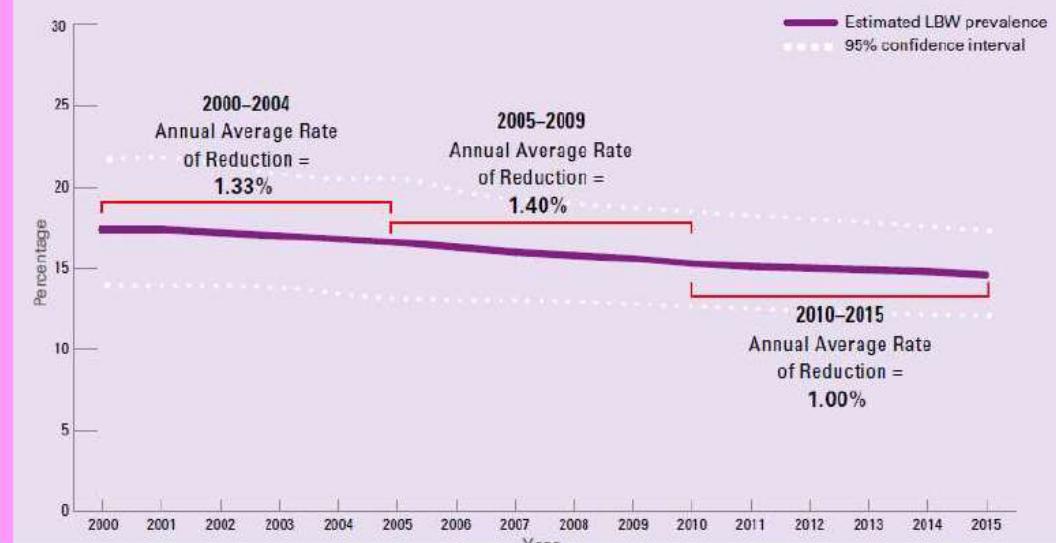


World Health Organization 

<http://158.232.12.119/nutrition/publications/guidelines/home-based-records-maternal-newborn-childhealth/en/>



PROGRESS IN REDUCING LOW BIRTHWEIGHT HAS BEEN STAGNANT SINCE 2000



<https://www.who.int/nutrition/publications/UNICEF-WHO-lowbirthweight-estimates-2019/en/>



Countdown to 2030
Women's, Children's & Adolescents' Health

ABOUT COUNTDOWN | COUNTRY COLLABORATIONS | RESOURCES FOR ANALYSIS | PUBLICATIONS | COUNTRY PROFILES |

DOWNLOAD COUNTRY PROFILES (DECEMBER 2017)

The *Countdown* country profiles present in one place the latest evidence to assess country progress in improving women's, children's and adolescents' health. Download the PDF versions of the *Countdown* country profiles from December 2017 below. The profiles, including an interactive version of them and all associated data, can be found by viewing the [latest country profile data](#).

Using the *Countdown* country profile as a tool for action 

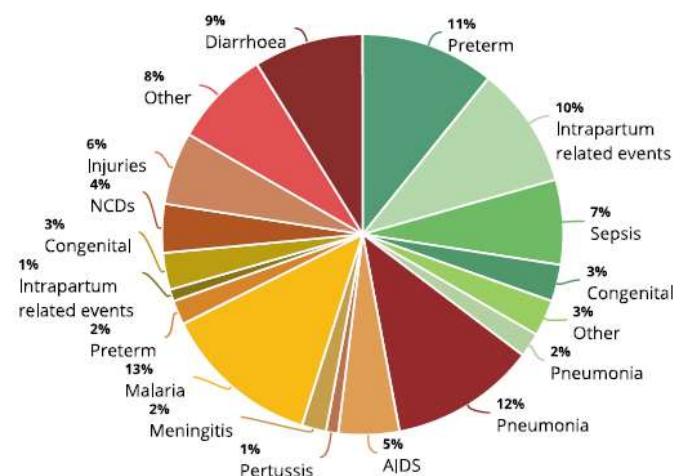
Afghanistan	Lesotho
Algeria	Liberia
Angola	Madagascar
Azerbaijan	Malawi

<https://www.countdown2030.org/>



Causes of Death Under-Five - 2015

Globally nearly half of child deaths are attributable to undernutrition



Children ages 1-59 months
Newborns ages 0-27 days

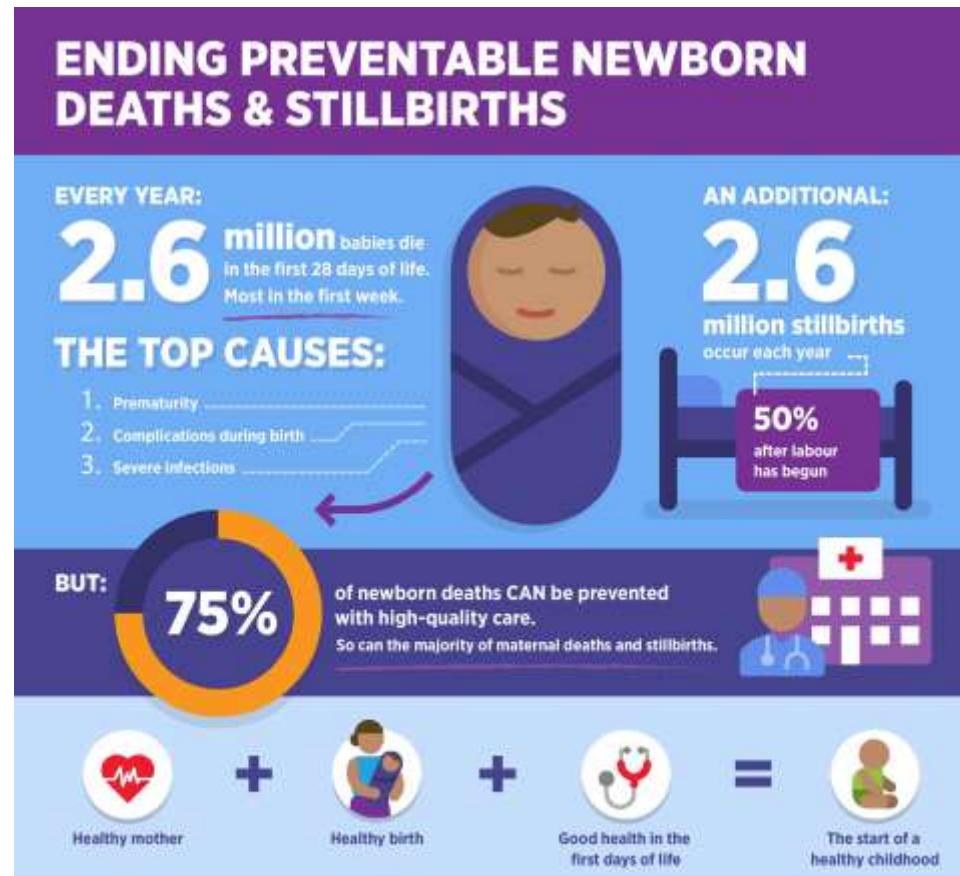
35% of deaths occur in the neonatal period

Source: WHO MCEE 2015

Moçambique
<https://www.countdown2030.org/>



Communication Materials and Banners





Quality, Equity, Dignity
A Network for Improving Quality of Care
for Maternal, Newborn and Child Health

Series 4 - Webinar 5: Health workers' perspectives

<https://www.qualityofcarenetwork.org/webinars/delivering-quality-essential-maternal-newborn-and-child-health-services-during-covid-19>



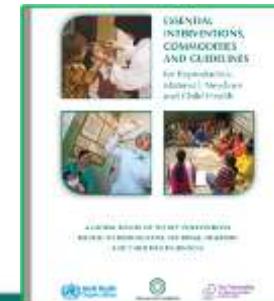
**ESSENTIAL
INTERVENTIONS,
COMMODITIES
AND GUIDELINES**
for Reproductive,
Maternal, Newborn
and Child Health



A GLOBAL REVIEW OF THE KEY INTERVENTIONS
RELATED TO REPRODUCTIVE, MATERNAL, NEWBORN
AND CHILD HEALTH (RMNCH)



https://www.who.int/pmnch/topics/part_publications/essential_interventions_18_01_2012.pdf



Intervention	Referral level	1 st level	Community
Postnatal (newborn)			
Immediate thermal care	✓	✓	✓
Initiation of exclusive breastfeeding (within first hour)	✓	✓	✓
Hygienic cord and skin care	✓	✓	✓
Neonatal resuscitation with bag and mask (professional health worker)	✓	✓	-
Case management of neonatal sepsis, meningitis and pneumonia	✓	✓	-
Kangaroo mother care for preterm and for less than 2000g babies	✓	✓	-
Management of newborns with jaundice	✓	✓	-
Surfactant to prevent respiratory distress syndrome in preterm babies	✓	-	-
Continuous positive airway pressure (CPAP) to manage babies with respiratory distress syndrome	✓	-	-
Extra support for feeding small and preterm babies	✓	✓	-
Presumptive antibiotic therapy for newborns at risk of bacterial infections	✓	-	-



Toolkit for Setting Up
Special Care Newborn Units,
Stabilisation Units and
Newborn Care Corners

Functional Description ■ Equipments ■ Renewable Resources

unicef

Toolkit for Setting Up Special Care Newborn Units, Stabilization Units and Newborn Care Corners

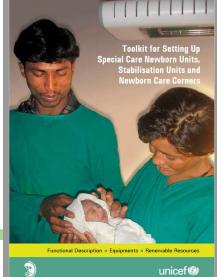


Table B.1: Equipments for individual care

Item No.	Item Description	Essential	Desirable	Quantity for 12 bed unit	Installation	Training	Civil/Mechanical	Mechanical	Electrical
1.	Open care system: radiant warmer, fixed height, with trolley, drawers, O2-bottles	E		12	✓	✓	✓	✓	✓
2.	Phototherapy unit, single head, high intensity	E		6	✓	✓			✓
3.	Resuscitator, hand-operated, neonate, 250 ml	E		2		✓			
4.	Resuscitator, hand-operated, neonate, 500ml	E		4		✓			
5.	Laryngoscope set, neonate	E		6		✓			
6.	Pump, suction, portable, 220V, vv/access	E		2	✓	✓			✓
7.	Pump, suction, foot-operated	E		2		✓			
8.	Surgical instrument, suture/SET	E		2					
9.	Syringe pump, 10,20,50 ml, single phase	E		3	✓	✓			✓
10.	Oxygen hood, S and M, set of 3 each, including connecting tubes	E		6					
11.	Oxygen concentrator	E		4	✓	✓			✓
12.	Thermometer, clinical, digital, 32-43°C	E		12					
13.	Scale, baby, electronic, 10 kg <5g>	E		4	✓	✓			✓
		E		6	✓	✓			✓
		E		12					
		E		6		✓			✓
		E		6	✓				✓

For a 12-bed unit, the recommended staffing is:

- Staff Nurses: 10
- Physicians: 3
- Support Staff: 4

For example, if a hospital conducts 3,000 deliveries per year, the number of beds required would be:

- For intramural: $3/1000 \times 3000 = 9$ beds
- For extramural: $30\% * 9 = 3$ beds
- Total beds required = 12

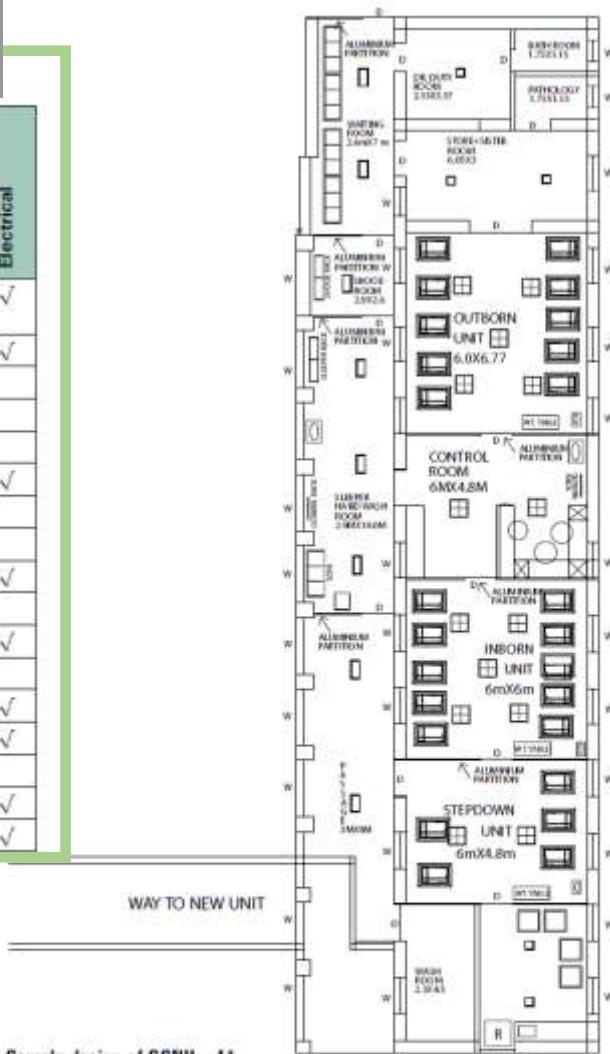
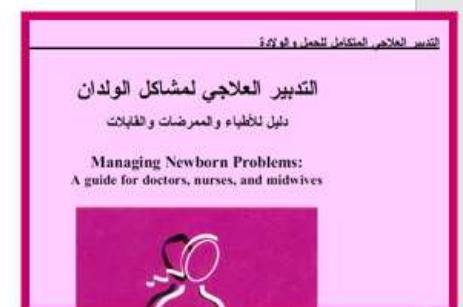
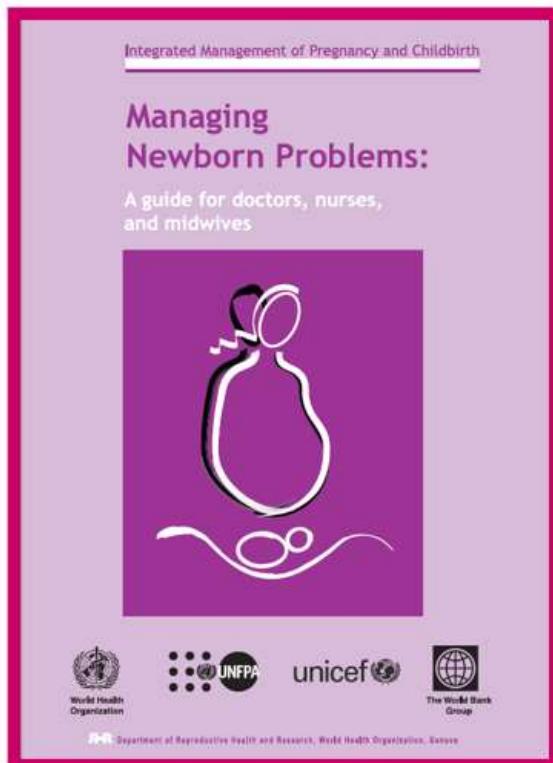


Figure – 1: Sample design of SCNU – 1*

* Adapted from design of SCNU at Satna District Hospital, M.P.

Managing Newborn Problems



https://www.who.int/maternal_child_adolescent/documents/9241546220/en/

العربية, Bahasa Indonesia, English, Português, Français, Русский

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•**Valutazione,**

•**Sintomi,**

•**Trattamento.**

Il bambino piccolo.

Sintomatologia multipla : sepsi od asfissia

Difficoltà di respirazione

...

Convulsioni o spasmi

Temperatura anomala

Ittero

...

Ipoglicemia

Occhi rossi

Ombelico secernente

...

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- Alimentazione e fabbisogno di liquidi
- Ossigenoterapia
- Antibiotici
- Prevenzione delle infezioni
- Vaccinazioni
- Valutazione della crescita
- ...

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- Terapie iniettive
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- Attrezzature, rifornimenti e farmaci essenziali

Newborn Care nei LMIC – Links a siti utili

* WHO

https://www.who.int/maternal_child_adolescent/documents/newborn/en/

* American Academy of Pediatrics - AAP

<https://www.aap.org/en/aap-global/international-resources/>

* Healthy Newborn Network – HNN

<https://www.healthynewbornnetwork.org/>

* Geneva Foundation for Medical Education and Research.

Obstetrics and gynecology guidelines. Newborn.

<https://www.gfmer.ch/Guidelines/Neonatology/Newborn.htm>

Newborn Care nei LMIC – Links a siti utili

* **Packages of Interventions for Family Planning, Safe Abortion Care, Maternal, Newborn and Child Health. WHO, 2010**

https://www.who.int/maternal_child_adolescent/documents/fch_10_06/en/

* **Born too soon: the global action report on preterm birth. WHO, 2012**

https://www.who.int/pmnch/media/news/2012/201204_borntoosoon-report.pdf

* **Standards for improving quality of maternal and newborn care in health facilities. WHO, 2016.**

http://www.who.int/maternal_child_adolescent/documents/improving-maternal-newborn-

* **Baby Friendly Hospital Initiative (BFHI). Breastfeeding in facilities. WHO-UNICEF, 2017**

<https://www.who.int/nutrition/publications/guidelines/breastfeeding-facilities-maternity-newborn/en/>

<https://www.who.int/nutrition/publications/infantfeeding/bfhi-implementation-2018.pdf>

Newborn Care nei LMIC – Links a siti utili

* **Low Birthweight Estimates Level and trends 2000-2015. WHO-UNICEF, 2019**

<https://www.who.int/nutrition/publications/UNICEF-WHO-lowbirthweight-estimates-2019/en/>

* **Survive and Thrive. Transforming care for every small and sick newborn. WHO-UNICWF, 2019**

https://www.who.int/maternal_child_adolescent/documents/care-small-sick-newborns-survive-thrive/en/

* **Standards for improving the quality of care for small and sick newborns in health facilities. WHO, 2020**

<https://www.who.int/publications/i/item/9789240010765>

* **BFHI for small, sick and preterm newborns, WHO-UNICEF, 2020**

<https://www.who.int/publications/i/item/9789240005648>

Newborn Care nei LMIC – Links a siti utili

* **Compilation of WHO recommendations on maternal, newborn, child and adolescent health, 2013**

http://www.who.int/maternal_child_adolescent/documents/guidelines-recommendations-newborn-health.pdf?ua=1

* **Recommendations on health promotion interventions for maternal and newborn health, 2015**

https://www.who.int/maternal_child_adolescent/documents/health-promotion-interventions/en

* **WHO recommendations on Newborn Health. Guidelines approved by the WHO Guidelines Review Committee, 2017**

<https://www.who.int/publications/i/item/WHO-MCA-17.07>

* **WHO recommendations on home-based records for maternal, newborn, child health, 2018**

<http://158.232.12.119/nutrition/publications/guidelines/home-based-records-maternal-newborn-childhealth/en/>

Newborn Care nei LMIC – Links a siti utili

* **MNP ‘Managing newborn problems’: a guide for doctors, nurses, and midwives’. WHO, 2003.**

Languages: العربية، Bahasa Indonesia, English, Português, Français, Русский

http://www.who.int/reproductivehealth/publications/maternal_perinatal_health/9241546220/en/

* **PCPNC WHO 2015 ‘Pregnancy, childbirth, postpartum and newborn care: a guide for essential practice’ (3rd edition)**

<https://www.who.int/publications/i/item/pregnancy-childbirth-postpartum-and-newborn-care>

* **POCKET BOOK of Hospital care for children 2nd edition. WHO, 2015**

https://apps.who.int/iris/bitstream/handle/10665/81170/9789241548373_eng.pdf

Newborn Care nei LMIC – Links a siti utili

* Thermal Protection of the Newborn: a Practical Guide. WHO,1997

<https://apps.who.int/iris/handle/10665/63986>

* Kangaroo mother care: a practical guide WHO-2003

<https://www.who.int/publications/i/item/9241590351>

* Basic Newborn Resuscitation. WHO,2012

https://www.who.int/maternal_child_adolescent/documents/basic_newborn_resuscitation/en/

* Update on HIV and infant feeding WHO-UNICEF 2016

https://www.who.int/nutrition/publications/hivaids/guideline_hiv_infant_feeding_2016/en/

Newborn Care nei LMIC – Links a siti utili

* Integrated Management Childhood Illness. WHO, 2019

<http://apps.who.int/iris/bitstream/handle/10665/42939/9241546441.pdf>

https://www.who.int/maternal_child_adolescent/documents/management-sick-young-infant-0-2-months/en/

* “First Embrace” Early Essential newborn care. WHO West Pacific Region, 2014

https://iris.wpro.who.int/bitstream/handle/10665.1/10798/9789290616856_eng.pdf

Newborn Care nei LMIC – Links a siti utili

* Essential Newborn Care Course. WHO, 2010

<https://www.who.int/publications/i/item/essential-newborn-care-course>

* Effective Perinatal Care (training course). WHO-Euro, 2015

https://www.euro.who.int/_data/assets/pdf_file/0007/299167/EPC-manual-2nd-edition-2015-en.pdf

* Caring for the newborn at home. A training course for community health workers. WHO-UNICEF, 2015

https://www.who.int/maternal_child_adolescent/documents/caring-for-the-newborn-at-home/en/

* Facilitators Guide for Training on Kangaroo Mother Care. UNICEF 2018

<https://www.healthynewbornnetwork.org/hnn-content/uploads/KMC-Guide.pdf>

Newborn Care nei LMIC – Links a siti utili

- * AAP “International Resources”, Training materials.

<https://www.aap.org/en/aap-global/international-resources/>

- * Helping Babies Breathe – AAP, 2010

<https://www.healthynewbornnetwork.org/partner/helping-babies-breathe/>

- * Progetto NEST, Fondazione Chiesi

<https://www.chiesifoundation.org/progetto-nest/>

Newborn Care nei LMIC – Links a siti utili

* **Survive and Thrive. Transforming care for every small and sick newborn. WHO-UNICWF, 2019**

[https://www.who.int/maternal child adolescent/documents/care-small-sick-newborns-survive-thrive/en/](https://www.who.int/maternal_child_adolescent/documents/care-small-sick-newborns-survive-thrive/en/)

* **Standards for improving the quality of care for small and sick newborns in health facilities. WHO, 2020**

<https://www.who.int/publications/i/item/9789240010765>

* **BFHI for small, sick and preterm newborns, WHO-UNICEF, 2020**

<https://www.who.int/publications/i/item/9789240005648>

Newborn Care nei LMIC – Links a siti utili

Organizzazione

* **Essential Interventions, Commodities and Guidelines for Reproductive, Maternal, Newborn and Child Health. WHO, 2012**

https://www.who.int/pmnch/topics/part_publications/essential_interventions_18_01_2012.pdf

* **Toolkit for Setting Up Special Care Newborn Units, Stabilisation Units and Newborn Care Corners. UNICEF, 2018**

<https://www.healthynewbornnetwork.org/resource/toolkit-for-setting-up-special-care-newborn-units-stabilisation-units-and-newborn-care-corners/>

Valutazione di qualità

* **Hospital care for mothers and newborn babies quality assessment and improvement tool. WHO-EURO, 2014, 2nd edition.**

<https://www.euro.who.int/en/health-topics/Life-stages/maternal-and-newborn-health/publications/2014/hospital-care-for-mothers-and-newborn-babies-quality-assessment-and-improvement-tool>

Video di Global Health

<https://globalhealthmedia.org/video/>