



Newborn Care Supply Kits for Humanitarian Settings

MANUAL

FIRST EDITION



DRAFT



Newborn Care Supply Kits for Humanitarian Settings

MANUAL

FIRST EDITION



1st edition
2018

Inter-agency Working Group on Reproductive Health in Crises

Table of Contents

ACKNOWLEDGEMENTS	4
1. Introduction	6
2. Ordering Newborn Kits	10
3. Community Newborn Kit	14
4. Clinic or Primary Health Facility Newborn Kit	18
5. Hospital Newborn Kit	26
6. Annex A: Advanced Newborn Care	36
Annex B: Sample Order for a Population of 20,000 People	38
RESOURCES	40

DRAFT

ACKNOWLEDGEMENTS

A number of individuals participated in the development and review of this manual, including Kweku Ackom(International Medical Corps), Myungsoo Cho(UNICEF SD), Sabine Baunach(Save the Children), Adelaide Challier(Save the Children), Sheena Currie(USAID), Henia Dakkak(UNFPA), Blami Dao, Christian Dehoux (UNICEF SD), Wilma Doedens(UNFPA), Susanne Fraise(UNICEF SD), Debra Jackson (UNICEF),Hyo Jeong Kim(WHO), Smita Kumar(USAID), Amanda Lanzarone(BMGF), Joy Lawn (LSHTM),Ornella Lincetto(WHO), Sarah Moxon(LSHTM), David Muhia(UNICEF SD), Jolene Nakao, Antonia Naydenov, Henrik Nielsen(UNICEF SD), Susan Niermeyer(USAID), Pablo Panadero(UNICEF SD), Pavani Ram(USAID), Sarah Rich (WRC/IAWG), Samira Sami (JHU), Petra Straight(Save the Children) , Shamim Qazi (WHO) and Owen Wood(Save the Children).

Many thanks are due to the Steering Committee for their significant contributions: Ribka Amsalu (Save the Children), Sarah Chynoweth (consultant for Save the Children), Tedbabe Degefie Hailegebriel(UNICEF), Brenda Kaaya-Hallen(UNICEF), Atieno Ojoo(UNICEF), Heather Papowitz(UNICEF), Elaine Scudder (Save the Children) and Steve Wall (Save the Children).



© UN0188890



© UN0205735

The neonatal period (0-28 days) marks one of the most vulnerable periods in the life cycle. Globally, an estimated 2.7 million babies die within the first month of life every year, and another 2.6 million babies are stillborn. In conflict and emergency settings, the vulnerabilities of newborns increase while access to services decreases. As a result, the highest neonatal mortality rates are found in countries that have recently experienced a humanitarian crisis. Though important gains have been made in addressing sexual and reproductive health in humanitarian settings since the International Conference on Population and Development in Cairo in 1994, further attention is needed to ensure newborn needs are sufficiently and systematically addressed from the onset of a crisis response. Newborns everywhere have a right to this care.

The *Inter-agency Field Manual on Sexual and Reproductive Health in Humanitarian Settings (IAFM)*, originally published in 1999 and revised in 2010 and 2017, is the primary guidance document outlining sexual and reproductive health service provision, including maternal and newborn health, in a crisis response. It articulates the minimum standard in humanitarian sexual and reproductive health service provision, the Minimum Initial Service Package (MISP). The MISP details the life-saving activities, services, equipment, and drugs that health actors should prioritize in an acute emergency response. To support rapid implementation of the MISP, pre-packaged kits—The Inter-agency Reproductive Health Kits (RH Kits)—are available from UNFPA. They can be ordered from: <https://www.unfpaprocedure.org/products>.

To provide more detailed guidance on newborn care in emergencies, *The Newborn Health in Humanitarian Settings: Field Guide (Field Guide)* was developed to complement the *IAFM*. The *Field Guide* serves as a program management and advocacy tool rather than a clinical guide. To complement the RH Kits, which do not provide the full range of supplies, equipment and drugs to support implementation of priority newborn care services, The Newborn Supply Kits for Humanitarian Settings (Newborn Kits) were developed.

KEY POINTS

- **The Newborn Kits are designed for use in the acute phase of a crisis**

Like the RH Kits, the Newborn Kits are designed for the onset of a crisis response and are not intended for longer-term use. They contain essential supplies, equipment and drugs for a specific population size for a three-month time period. They are not intended for continued ordering, which will result in the accumulation of redundant items. Ordering through standard supply chains, based on consumption, should commence as soon as possible. Note that the Kits are pre-packaged and standardized for global use. As such, they may contain items that are not appropriate for some settings.

- **Some Newborn Kits are designed for use only by qualified and trained health personnel**

The Newborn Kits are organized by levels of care, and the level of skill required for the use of each kit is detailed in this manual. Be sure to review carefully as some contents are only for qualified health providers of a particular skill level.

- **Ordering should be based on the findings from a situation analysis**

As outlined in the *Field Guide (Section 4.2)*, undertaking a situation analysis is critical to confirm that Newborn Kits are needed, which types are needed, how many are needed, and where they are needed. This will help inform adequate and appropriate ordering.

- **The Newborn Kits do not provide supplies to address all newborn needs**

The Newborn Kits do not contain all the supplies, medicine and equipment necessary to address every newborns' health needs. The Newborn Kits are complementary to the RH Kits, which provide additional supplies for maternal and neonatal care. The Newborn Kits should be ordered in conjunction with the RH Kits, which this *Manual* specifies per level of care. In addition, vaccines and diapers (nappies) should be locally procured.

- **The Sexual and Reproductive Health Coordinator should coordinate ordering of Newborn Kits as well as RH Kits**

The Coordinator of the Sexual and Reproductive Health Working Group should coordinate ordering of supplies among working group partners to avoid waste. The Coordinator should ensure complementary ordering of RH and Newborn Kits. Ordering of vaccines should also be coordinated.

OVERVIEW OF THE KITS

The Newborn Kits are divided into three kits organized by levels of care.

Community Newborn Kit

Part A: Family Care Kit

Part B: Community Health Worker Kit

Clinic or Primary Health Facility Newborn Kit

Hospital Newborn Kit

DRAFT

1. Where can I order Newborn Kits?

- UNICEF's Procurement Services Partners (UN agencies, NGOs, governments) should follow procurement guidance outlined at: https://www.unicef.org/supply/index_purchasing.html. The UNICEF Supply Catalogue can be found at: <https://supply.unicef.org>.
- UNICEF Country Offices can place direct orders: https://www.unicef.org/about/structure/index_worldcontact.html.

2. What do I need to place an order?

Procurement Services Partners will need:

- A signed Memorandum of Understanding (MOU) between your organization and UNICEF prior to any procurement activity. NGOs must register as a partner.
- A completed Request Form sent to PSID@unicef.org clearly outlining number and types of kits together with supporting documents on the situational analysis. See link above to access the Request Form.
- Adequate funding. UNICEF will issue a Cost Estimate, and advance payment for the total amount of the cost estimate is required.

UNICEF Country Offices will need:

- Adequate funding, including a chargeable budget code.
- The name and contact details of the person responsible for ordering and coordinating the delivery of the kits.
- The name and complete contact details (address, telephone, fax, email) of the person responsible for receiving the kits in the field.
- If multiple destinations in a county are involved, a detailed list outlining the respective destinations, types and quantities of each kit to each destination and the contact persons.
- Any other requirements for program orders in VISION, UNICEF's internal enterprise resource planning system.

3. How much do the kits cost?

- The cost of each kit changes periodically. The indicative pricing can be obtained from Supply Division as reflected in the Supply Catalogue: <https://supply.unicef.org>.
- For Procurement Services requests, a Cost Estimate will be issued indicating estimated costs of items, shipping and other additional estimated charges (i.e., handling fee, contingency buffer, etc.)
- The handling fee levels for standard commodities can be found at: https://www.unicef.org/supply/index_62330.html.

4. How do I calculate supplies?

- Base the quantity and type of kit on the size of the population to be served and the type of health facilities in place. Every country has a different prevalence and incidence rate of complications and infection. Whenever possible we used the highest prevalence data to make sure that there is sufficient supply. This will need to be updated as more epidemiology data is available.

The assumptions are:

- 18% of newborns will be preterm¹
- 34% of pregnant women will have syphilis²
- 10% of newborns will have sepsis³
- 1% of newborns will have severe sepsis⁴
- 11.5% of newborns will be severely ill requiring advanced care
- 0.6% of newborns will have meningitis⁵

-
- 1 Blencowe, H., Cousens, S., Oestergaard, M. Z., Chou, D., Moller, A. B., Narwal, R., . . . Lawn, J. E. (2012). National, regional, and worldwide estimates of preterm birth rates in the year 2010 with time trends since 1990 for selected countries: a systematic analysis and implications. *Lancet*, 379(9832), 2162-2172. doi:10.1016/s0140-6736(12)60820-4
 - 2 Emmanuel SK, Lado M, Amwayi S, Abade AM, Oundo JO, Ongus JR. Syphilis among pregnant women in Juba, Southern Sudan. *East Afr Med J*. 2010 May;87(5):192-8. PubMed PMID: 23057281.
 - 3 Cortese, F., Scicchitano, P., Gesualdo, M., Filaninno, A., De Giorgi, E., Schettini, F., . . . Ciccone, M. M. (2016). Early and Late Infections in Newborns: Where Do We Stand? A Review. *Pediatr Neonatol*, 57(4), 265-273. doi:10.1016/j.pedneo.2015.09.007
 - 4 Mitra, D. K., Mullany, L. C., Harrison, M., Mannan, I., Shah, R., Begum, N., . . . Baqui, A. H. (2018). Incidence and risk factors of neonatal infections in a rural Bangladeshi population: a community-based prospective study. *J Health Popul Nutr*, 37(1), 6. doi:10.1186/s41043-018-0136-2

- 10% of newborns will require resuscitation; 6% will require bag and mask ventilation⁶
- 4% of a population will be pregnant at any given time⁷
- 10 cases per 100,000 livebirths will have neonatal herpes⁸

5. How are they packaged?

- The boxes containing supplies:
 - can be handled by one or two people;
 - are marked with the name, weight and volume of each kit;
 - have a detailed list of contents included in a self-adhesive slip attached to the outside.⁹
- Equipment, which is a one-time procurement, is packaged separately from consumables, which require replenishment.
- The Clinic/Primary Health Facility Newborn Kit and the Hospital Kit contain rapid plasma reagin (RPR) tests for syphilis. This product is packaged and shipped separately in a cool box. Note that sensitivity may decrease if cold chain is broken.

6. How big are the kits?

- This will be determined after the first kit prepared

-
- 5 Ahmed, Arslan. Etiology of Bacterial Meningitis in Ethiopia, 2007 - 2011 : A Retrospective Study. 2012. <https://www.duo.uio.no/handle/10852/34243>
- 6 Ekwochi, U., Asinobi, N. I., Osuorah, C. D., Ndu, I. K., Ifediora, C., Amadi, O. F., . . . Okeke, B. I. (2017). Incidence and Predictors of Mortality Among Newborns With Perinatal Asphyxia: A 4-Year Prospective Study of Newborns Delivered in Health Care Facilities in Enugu, South-East Nigeria. *Clin Med Insights Pediatr*, 11, 1179556517746646. doi:10.1177/1179556517746646
- 7 <https://data.worldbank.org/indicator/SP.DYN.CBRT.IN>
- 8 Looker, K. J., Magaret, A. S., May, M. T., Turner, K. M. E., Vickerman, P., Newman, L. M., & Gottlieb, S. L. (2017). First estimates of the global and regional incidence of neonatal herpes infection. *Lancet Glob Health*, 5(3), e300-e309. doi:10.1016/s2214-109x(16)30362-x
- 9 Hazardous materials, such as batteries will be packed and shipped separately.

7. How long until delivery?

- For Procurement Services requests, UNICEF will provide estimated delivery timelines in the Cost Estimate depending on the item availability. The timelines will be confirmed after funds are received.
- For UNICEF Country Offices, delivery is dependent on availability. Please contact your Country Focal Point in the Supply Division warehouse.

8. Who can I contact for further information?

- Procurement Services Partners: psid@unicef.org.
- UNICEF Country Offices: Supply Division Country support at countrysupport@unicef.org.

Note: The Newborn Kits are periodically reviewed. For general feedback and feedback on kit contents, please send to: info@iawg.net. For feedback on quality, packaging, shipping, and procurement, please send to: supply@unicef.org.

Use: Newborn kits for use at home. **Part A: Family Care Kit** should be distributed to pregnant women. **Part B: Community Health Work (CHW) Kit** are items to be used by CHWs.

Instructions: The kits (Part A & B) should be distributed with the enclosed illustrative instructions on how to use the kit contents and easy-to-use educational materials for essential newborn care.

Target Population: 10,000 people for 3 months

Assumptions: Part A: Family Care Kit is based on the assumption that in a population of 10,000 people with crude birth rate of 4% there will be 100 deliveries in 3 months. 100 individual newborn kits will be distributed to women delivering during the first 3 months, and 100 individual newborn kits will be distributed to women who are 6-9 months pregnant (3rd trimester). Where possible, align the distribution with the ANC visits. Each kit has 200 individual packages. **Part B: CHW Kit** is calculated on the assumption that there will be 10 CHWs for a population of 10,000 people. The kit is designed to serve women and newborns whose needs are not addressed through other distribution mechanisms.

Complementary RH Kit:¹⁰ The Community Newborn Kit is complementary to the RH Kit 2. Note that the Community Newborn Kit Part B: CHW Kit contains clean delivery kits, which is also included in RH Kit Part 2A. RH Kit 2B contains additional supplies for birth attendants, including a flashlight, plastic apron, and poncho; these are not included in the Community Newborn Kit and can be ordered separately from UNFPA. The SRH Coordinator should ensure complementary ordering of kits to avoid duplication.

10 The Inter-agency Reproductive Health Kits for Crisis Situations: Manual, which details the RH Kit contents, can be found on www.unfpa.org and www.iawg.net.

Content: Part A: Family Care Kit: 200 of the following items, packed as separate packages

Item	Quantity per kit	Notes	Indication
Medicines			
Tetracycline hydrochloride, eye ointment, 1%, tube, 5 g	200		To prevent neonatal conjunctivitis (chlamydia/ gonococcal)
Clothing and accessories			
Blanket, baby, 50 x 75 cm, polyester fleece	200		
Cap, newborn, cotton	200		
Romper suit, newborn, cotton	200		
Socks, baby, size extra small, cotton	200		
Towel, 60 x 80 cm, cotton	200		For drying
Resources			
Generic pictograph, tetracycline hydrochloride, for families	200		

Part B: Community Health Worker Kit: 10 of the following items, packed as separate packages.

Item	Quantity per kit	Notes	Indication
Medicines			
Chlorhexidine digluconate, gel, 7.1% (4% base), 10 mg	100	See footnote ¹¹ as well as enclosed job aid.	To prevent sepsis and cord infections
Tetracycline hydrochloride, eye ointment, 1%, tube, 5 g	100		To prevent neonatal conjunctivitis (chlamydia/ gonococcal)
Zinc oxide, ointment, tube, 100 mg	100		To prevent diaper dermatitis
Medical devices: consumable			
Bag, shoulder	20	Provide 2 bag per CHW	
Clean delivery kit, Part A: Individual Delivery Package (UNFPA), single kit	100	Each kit includes: 1 bar of soap, 100 mg; 1 clear plastic sheet, 100x100 cm; 1 plastic bag, for disposal of placenta, 18 x 28 cm; 1 razor blade, single-edged, disposable; 3 tape, umbilical, 3 mm x 15 cm; 2 cloth, cotton, 100 x 100 cm; 2 gloves, examination, medium, single use	

11 WHO recommendation: “Daily chlorhexidine (7.1% chlorhexidine digluconate aqueous solution or gel, delivering 4% chlorhexidine) application to the umbilical cord stump during the first week of life is recommended for newborns who are born at home in settings with high neonatal mortality (30 or more neonatal deaths per 1000 live births). Clean, dry cord care is recommended for newborns born in health facilities and at home in low neonatal mortality settings. Use of chlorhexidine in these situations may be considered only to replace application of a harmful traditional substance, such as cow dung, to the cord stump.” See: http://apps.who.int/iris/bitstream/10665/97603/1/9789241506649_eng.pdf

Item	Quantity per kit	Notes	Indication
Gloves, examination, latex, powder-free, medium, single use, box of 100	10	Total gloves: 1000	
Scale, infant, spring, tubular, for use up to 5 kg with 25 g precision	10		
Sling, for use with scale, 80 cm x 80 cm	30	3 per CHW	
Thermometer, clinical, digital, 32 - 43o C	10		
Timer, for acute respiratory infection (ARI), version: mark 2	10		
Resources			
Newborn health in humanitarian settings, field guide	10		
Job aid, generic pictograph, tetracycline hydrochloride, for families	10		
Job aid, chlorhexidine, generic pictograph	10		
Job aid, clean delivery kit, generic pictograph	10		
Job aid, essential newborn care, generic pictograph	10		

Remarks

Parts A and B can be ordered separately in different quantities.

Clothes or blankets to protect the baby (in Part A: Family Care Kit) should be procured locally wherever possible. Locally procure reusable diapers. Local products are often less expensive and familiar to mothers.

Use: The Clinic or Primary Health Facility (PHC) Kit is for use in health facilities together with the Inter-agency Reproductive Health Kit 6 (Parts A and B). The kit contents can be used:

- To provide essential newborn care for uncomplicated live births
- To provide newborn resuscitation
- To stabilize newborns with serious infection prior to referral
- To care for preterm babies at the clinic or primary health care level

Instructions: For use by trained personnel: midwives, nurses, medical doctors. The kit should be distributed with the enclosed illustrative materials on how to use the kit contents and educational materials for mothers and caregivers.

Target population: For one facility serving a population of 30,000 for 3 months

Assumptions: The kit contents are based on the assumptions that, for a population of 30,000 people, 300 deliveries will occur in a 3-month period with a crude birth rate of 4%. Of these 300 newborns, 18% may be preterm and/or low birthweight and 20% of those small newborns may develop complications¹²

¹² The anticipated 300 deliveries are at the PHC/clinic level only and do not capture deliveries at the community level.

Complementary RH Kit:¹³²

The Clinic or Primary Health Facility Newborn Kit is complementary to the RH Clinical Delivery Kit 6, which includes supplies for labor and delivery.

Content:

Item (PHC)	Quantity per kit	Notes	Indication
Medicines			
Amoxicillin, scored tablet, 250 mg	3000	To be reserved for completion of treatment upon discharge	To treat local bacterial infection
Ampicillin (as sodium salt), powder for IV/IM injection, 500 mg	400		To treat severe bacterial infection
Benzathine benzylpenicillin, powder for IM injection, 900 g, 5-mL vial (equivalent to 1.2 million IU)	150		To treat asymptomatic congenital syphilis
Benzylpenicillin (as sodium or potassium salt), sterile powder for IV/IM injection, 600-mg vial (equivalent to 1 million IU)	50	Use within 90 minutes of opening vial	To treat severe bacterial infection/ pneumonia and symptomatic congenital syphilis
Chlorhexidine digluconate, gel, 7.1% (4% base), 10 mL	300	See footnote ¹⁴ as well as enclosed job aid.	To prevent sepsis and cord infections
Gentamicin (as sulfate), sterile solution, for IM/IV injection or IV infusion, 10 mg/mL, 2-mL ampoules	1200		To treat severe bacterial infection

13 The Inter-agency Reproductive Health Kits for Crisis Situations: Manual, which details the RH Kit contents, can be found on www.unfpa.org and www.iawg.net.

14 The anticipated 1,500 deliveries are at the hospital level only and do not capture deliveries at the PHC and community levels.

Item (PHC)	Quantity per kit	Notes	Indication
Glucose, sterile solution for IV infusion, 10%, 500-mL bottle, non-PVC flexible or collapsible bags with nipple head + infusion-giving set	600		To manage neonatal hypoglycemia
Paracetamol, rectal suppositories, capsule form, 125 mg	150		To manage neonatal fever
Paracetamol, oral liquid, 120 mg/5 mL, bottle, 60 mL	300		To manage neonatal fever
Phenobarbital, elixir, 15 mg/5 mL	15		To treat seizures
Phenobarbital sodium, sterile solution for IM injection, 30 mg/mL, 1-mL ampoule	150		To treat neonatal seizures
Sodium chloride, solution for infusion, 0.9%, 200-mL bottle, non-PVC flexible or collapsible bags with nipple head + infusion-giving set	150		Replenishment of fluids, to treat dehydration
Sodium chloride, solution for injection, 0.9%, 10-mL ampoule	900		Flushing IV line after medication administration
Tetracycline hydrochloride, eye ointment, 1%, tube, 5 g	300		To prevent neonatal conjunctivitis (chlamydia/gonococcal)
Phytomenadione (vitamin K1), sterile solution for injection, 1 mg/0.5 mL, 0.5-mL ampoule	300		To prevent vitamin K deficiency bleeding (hemorrhagic disease of the newborn)
Water, for injection, 10-mL ampoule	1500		To reconstitute medications
Zinc oxide, ointment, tube, 100 mg	300		As protective barrier to promote healing of diaper dermatitis

Item (PHC)	Quantity per kit	Notes	Indication
Medical devices: consumable			
Battery alkaline, 1.5V, 13 x 50 mm, type AA / LR6	*	*Order as needed. Batteries must be ordered and shipped separately. Batteries for battery-operated items are not included with the product.	
Cannula, IV, short, 24G, sterile, single use (yellow)	300		
Cup, flexible, plastic, 100 mL	30		For feeding expressed breastmilk
Cup, flexible, plastic, with lid, 30 mL	30		For storing/administration of expressed breastmilk
Gel, ultrasound, 250 mL	30		
Gloves, examination, latex, powder-free, size: medium, single use, box of 100	9	900 gloves in total	
Infusion set, pediatric, 60 drops/mL, 120-140 cm, filter 15-20 micron, needle 23 G x 1", sharp airway	150		
Safety lancet, neonate, disposable	1200		
Needle, disposable, 21 G, sterile, box of 100	7	700 needles in total	
Needle, disposable, 25 G, sterile, box of 100	22	2200 needles in total	
Partograph	350		

Item (PHC)	Quantity per kit	Notes	Indication
Sanitizer, alcohol-based for hands, 60%, bottle with pump, 500-mL	10	bottle	
Scalp vein infusion set 23 G (0.60 mm)	150	Extra needles to accompany the infusion set	
Swab, anti-septic, for skin preparation, 6 cm x 3 cm, box of 100	10	1000 swabs in total	
Syringe, hypodermic, luer, 2-part, 2 mL, sterile, disposable	1750		
Syringe, hypodermic, luer, 2-part, 5 mL, sterile, disposable	750		
Syringe, hypodermic, luer, 3-part, 1 mL, sterile, disposable	300		
Tape, medical adhesive, 2.5 cm x 5 m, roll	90		
Test strip, rapid plasma reagin (RPR), for syphilis	300	For mothers	
Test strip, for urine, multi-purpose (ketones, Ph, blood, glucose, protein), 10 detections	1200	For mothers	
Tube, feeding (nasogastric), CH 5, 40 cm, disposable, sterile	150		
Tube, feeding (nasogastric), CH 6, 40 cm, disposable, sterile	150		
Tube, feeding (nasogastric), CH 8, 40 cm, disposable, sterile	200		

Item (PHC)	Quantity per kit	Notes	Indication
Equipment			
Photometer, HemoCue Glucose 201+/SET	9	To be shipped separately due to short shelf life of cuvettes (12 months)	
Doppler apparatus, pocket-type, LCD display, FHR display, interchangeable 2 Mhz probe	3	Battery operated; batteries are required but not supplied with product. Batteries must be ordered and shipped separately. Power requirements: 1.5 V AA (LR6) commercial disposable batteries or 1.2 V Ni-MH commercial rechargeable batteries, 2 or 3 units depending on the available model.	To monitor fetal heartbeat
Resuscitation bag, with mask	9	Includes 3 mask sizes: preterm, newborn, and infant up to 3 months (up to 10 kg)	

Item (PHC)	Quantity per kit	Notes	Indication
Scale, baby, electronic, 10 kg	3	Battery operated; batteries are required but not supplied with product. Batteries must be ordered and shipped separately	
Stand, for IV, 2 hooks on 5 castors, adjustable from 115 - 210 cm, epoxy-coated steel	6		
Suction device, penguin-model, silicone, autoclavable (986000)	9		
Tape measure, tailors, fibreglass, 1.5 m	30		
Thermometer, clinical, digital, 32 - 43° C	20		
Timer, for acute respiratory infection (ARI), version: mark 2	6		
Clothing and accessories			
Blanket, baby, polyester fleece, 50 x 75 cm	30		
Cap, newborn, cotton	30		
Socks, baby, size: extra small, cotton	30		
Towel, cotton, 60 x 80 cm	300		For drying
Wrap, for baby carrying (kangaroo wrap), cotton, 50 cm x 3 m	30		For KMC

Item (PHC)	Quantity per kit	Notes	Indication
Malaria Module			
Artesunate, 60 mg with 2 solvents (sodium chloride 5mL & sodium bicarbonate 5% 1mL)	150		
Multiple parasite detection kit and related accessories	6		For Malaria diagnostic
Needle, disposable, 21 G, sterile, box of 100	3	300 needles in total	
Syringe, hypodermic, luer, 2-part, 5 mL, sterile, disposable	300		
Resources			
<i>Guidelines for the Treatment of Malaria</i> . Third edition WHO, 2015.		Included with the Malaria Module only	
<i>Management of Severe Malaria: A Practical Handbook</i> . Third edition. WHO, 2013.		Included with the Malaria Module only	
<i>Newborn Health in Humanitarian Settings: Field Guide</i> . UNICEF/Save the Children, 2018.	10		
Job aid, glucose 10%			
Job aid, Chlorhexidine digluconate, gel, 7.1%, for cord care			

Remarks

Medicines, consumables, equipment, clothing and accessories and the malaria module can be ordered separately in different quantities.

Clothes or blankets to protect the baby should be procured locally wherever possible. Locally procure reusable diapers. Local products are often less expensive and familiar to mothers.

Use: The Hospital Newborn Kit is for use in hospitals together with the Inter-agency Reproductive Health Kits 11 (Parts A and B) and 12. The kit contents can be used:

- To prevent and treat newborn infections
- To provide newborn resuscitation
- To care for preterm babies with complications at the referral level

Instructions: For use by trained personnel: midwives, nurses, medical doctors. Items should be applicable for most hospital settings. Annex A includes a list of items recommended for advanced newborn care.

Target population: For one referral facility serving a population of 150,000 for 3 months

Assumptions: The kit contents are based on the assumptions that 1,500 deliveries will occur in 3-month period for a population of 150,000 people and crude birth rate of 4%, of which 18% may be preterm and/or low birthweight and 20% of those small babies may develop complications.¹⁵

Complementary RH Kit:¹⁶ The Hospital Newborn Kit is complementary to the Referral Emergency Obstetric Kit (11A, 11B, and 12) of the Inter-agency Reproductive Health Kits in Crisis Situations. These kits contain supplies for comprehensive emergency obstetric care, including blood transfusion.

¹⁵ The anticipated 1,500 deliveries are at the hospital level only and do not capture deliveries at the PHC and community levels.

¹⁶ The Inter-agency Reproductive Health Kits for Crisis Situations: Manual, which details the RH Kit contents, can be found on www.unfpa.org and www.iawg.net.

Content:

Item (Hospital)	Quantity per kit	Notes	Indication
Medicines			
Aciclovir, sterile powder for IV solution, (as sodium salt), 250-mg vial	30		To prevent herpetic conjunctivitis
Amoxicillin (as trihydrate), powder for oral suspension, 125 mg/5 mL, bottle, 100 mL	150	To be reserved for completion of treatment upon ischarge	To treat bacterial infection
Amoxicillin, scored tablet, 250 mg	3000	To be reserved for completion of treatment upon discharge	To treat local bacterial infection
Ampicillin (as sodium salt), powder for IV/IM injection, 500-mg vial	7000		To treat severe infection
Benzathine benzylpenicillin, powder for IM injection, 900 g, 5-mL vial (equivalent to 1.2 million IU)	250		To treat asymptomatic congenital syphilis
Benzylpenicillin (as sodium or potassium salt), sterile powder for IV/IM injection, 600-mg vial (equivalent to 1 million IU)	500	Use within 90 minutes of opening vial	To treat severe bacterial infection/ pneumonia and symptomatic congenital syphilis
Caffeine, oral, 12.5 mg/mL, 2 mL	1250		To treat or prevent apnea
Cefotaxime (as sodium salt). sterile powder for injection, 500-mg vial	1250		To treat bacterial infection
Ceftriaxone, sterile powder for solution, for deep IM/slow IV injection, 250-mg vial	400		To treat bacterial infection
Chlorhexidine digluconate, gel, 7.1% (4% base), 10 mL	1500		To prevent sepsis and cord infections
Cholecalciferol (vitamin D3), oral drops, 10 micrograms/ drop, 14,400 IU/mL (equivalent to 400 IU/drop)	1200	Dose: for the mother, give between 1-2 drops	

Item (Hospital)	Quantity per kit	Notes	Indication
Cloxacillin (as sodium salt), powder for oral liquid, 125 mg/5 mL, bottle, 100 mL	2500		To treat bacterial infection
Cloxacillin, sterile powder for IM/IV injection, 500-mg vial	250		To treat bacterial infection
Gentamicin (as sulfate), sterile solution for IM/IV injection or IV infusion, 10 mg/mL, 2-mL ampoules	1000		To treat severe bacterial infection
Glucose, sterile solution for IV infusion, 10%, 500-mL bottle, flexible or collapsible bags + infusion-giving set	3000		To manage neonatal hypoglycemia
Paracetamol, rectal capsules or suppositories, 125 mg	250		To manage neonatal fever
Phenobarbital, elixir, 15 mg/5 mL	75		To treat seizures
Phenobarbital sodium, sterile solution for IM injection, 30 mg/mL, 1-mL ampoule	750		To treat neonatal seizures
Sanitizer, alcohol-based for hands, 60%, bottle with pump, 500-mL	200		
Sodium chloride infusion, 0.9%, (equivalent to Na ⁺ 154 mmol/L, Cl ⁻ 154 mmol/L), 200-mL flexible or collapsible bags + giving set	750		Replenishment of fluids, to treat dehydration
Sodium chloride injection, 0.9%, (equivalent to Na ⁺ 154 mmol/L, Cl ⁻ 154 mmol/L), 10-mL ampoule	12,500		Flushing IV line after medication administration
Tetracycline hydrochloride, eye ointment, sterile, 1%, tube, 5 g	1500		To prevent neonatal conjunctivitis (chlamydia/gonococcal)
Phytomenadione (vitamin K), sterile solution for injection, 1 mg/0.5 mL, 0.5 mL ampoule	1500		To prevent vitamin K deficiency bleeding (hemorrhagic disease of the newborn)

Item (Hospital)	Quantity per kit	Notes	Indication
Water, for injection, 10-mL plastic ampoule	1500		To reconstitute medications
Zinc oxide, ointment, tube, 100 mg	1500		To prevent diaper dermatitis
Medical devices: consumable			
17	*	*Order as needed. Batteries must be ordered and shipped separately. Batteries for battery-operated items are not included with the product.	
Cannula, IV, short, 24G, sterile, single use (yellow)	4500		
Cup, flexible, plastic, 100 mL	150		For feeding expressed breastmilk
Cup, flexible, plastic, with lid, 30 mL	150		For storing/administration of expressed breast milk
Gel, ultrasound, 250 mL	150		
Gloves, examination, latex, powder-free, size: medium, single use, box of 100	75	7500 gloves in total	
Infusion set, pediatric, 60 drops/mL, 120-140 cm, filter 15-20 micron, needle 23 G x 1", sharp airway	3000		
Lancet safety, neonates, disposable	700		
Needle, 19 G x 1.5" (1.1 x 40 mm), sterile, disposable, box of 100	132	13,200 in total	
Needle, 22Gx1 1/4" (0.7x30mm) sterile, disposable, box of 100	15	1500 in total	

17 Battery, alkaline, 1.5V, 13 x 50 mm, type AA / LR6

Item (Hospital)	Quantity per kit	Notes	Indication
Needle, 25 G x 5/8" (0.5 x 16 mm), sterile, disposable, box of 100	85	8500 in total	
Partograph	1600		
Prongs, nasal, oxygen, neonate, single use	100		
Pump, infusion, with accessories	6		
Stopcock, 3-way, sterile, disposable	625		
Swab, anti-septic, for skin preparation, 6 cm x 3 cm, box of 100	100	10,000 swabs in total	
Syringe, hypodermic, luer, 2-part, 10 mL, sterile, disposable	500		
Syringe, hypodermic, luer, 2-part, 5 mL, sterile, disposable	13,200		
Syringe, hypodermic, luer, 3-part, 1 mL, sterile, disposable	3500		
Tape, medical adhesive, 2.5 cm x 5 m, roll	1000		
Test strip, rapid plasma reagin (RPR), for syphilis	1500	For mothers	
Test strip, for urine, multi-purpose (ketones, Ph, blood, glucose, protein), 10 detections	3600	For mothers	
Test strips, for whole blood glucose analysis, box of 100	8	To be shipped separately, due to short shelf life	

Item (Hospital)	Quantity per kit	Notes	Indication
Tube, feeding (nasogastric), CH 5, 40 cm, disposable, sterile	150		
Tube, feeding (nasogastric), CH 6, 125 cm, disposable, sterile	500		
Tube, feeding (nasogastric), CH 8, 40 cm, disposable, sterile	400		
Equipment			
Photometer, HemoCue Glucose 201+ 1 SET	20	To be shipped separately due to short shelf life	
Doppler apparatus, pocket-type, LCD display, FHR display, interchangeable 2 Mhz probe	15		To monitor fetal heartbeat
Flowsplitter, for oxygen concentrator	10		
Infusion pump, with accessories	20		
Light, examination, floor-type, flexible neck, 220V lamp, on castors	25		
Oxygen blender	15		
Oxygen concentrator set, flowrate up to 5 l/m, visual/audible alarms (Sunrise/DeVilbiss Compact 525)	5		

Item (Hospital)	Quantity per kit	Notes	Indication
Phototherapy unit, overhead, mobile, with accessories	6	AC powered. Includes: 2 x spare blue light CFL tube, 20 W 1 x spare white light CFL tube, 15 W 1 x set of spare fuses	
Pulse oximeter, portable, battery operated, wrap-around, with accessories	5	Includes extension cable and sensor. Suitable to operate with 3 x AA (LR6) 1.5 V commercial disposable batteries. Supplied with battery charger/recharge station.	
Resuscitation bag, with mask	25	Includes 3 mask sizes: preterm, newborn, and infant up to 3 months (up to 10 kg)	

Item (Hospital)	Quantity per kit	Notes	Indication
Resuscitation kit, basic	2	For neonates, infants, and older babies. Includes: 1 Pump, suction, foot-operated 1 Resuscitator, hand-operated, neonate, set 1 Resuscitator, hand-operated child, set 1 Resuscitator, hand-operated, adult, set 1 Airway guedel, sterile, single use, size 00 1 Airway guedel, sterile, single use, size 0 1 Airway guedel, sterile, single use, size 1 1 Airway guedel, sterile, single use, size 2 1 Airway guedel, sterile, single use, size 3 1 Airway guedel, sterile, single use, size 4	

Item (Hospital)	Quantity per kit	Notes	Indication
Scale, baby, electronic, 10 kg	15	Battery-operated; batteries are required but not supplied with product. Batteries must be ordered and shipped separately.	
Stand, for IV, 2 hooks on 5 castors, adjustable from 115 - 210 cm, epoxy-coated steel	50		
Stethoscope, neonatal	10		
Suction device, penguin-model, silicone, autoclavable (986000)	50		
Tape measure, tailors, fibreglass, 1.5 m	100		
Thermometer, clinical, digital, 32 - 43° C	50		
Timer, for acute respiratory infection (ARI), version: mark 2	50		
Clothing and accessories			
Blanket, baby, 50 x 75 cm, polyester fleece	150		
Cap, newborn, cotton	150		
Cup, for breast milk collection, with cover	150		
Socks, baby, size extra small, cotton	150		
Towel, cotton, 60 x 80 cm	1500		
Wrap, for baby carrying (kangaroo wrap), cotton, 50 cm x 3 m	150		

Item (Hospital)	Quantity per kit	Notes	Indication
Malaria Module			
Artesunate, 60 mg with 2 solvents (sodium chloride 5 mL & sodium bicarbonate 5% 1 mL)	100		
Multiple parasite detection kit and related accessories	30		For Malaria diagnostic
Needle, disposable, 21 G, sterile, box of 100	3	300 needles in total	
Syringe, hypodermic, luer, 2-part, 5 mL, sterile, disposable	300		
Resources			
<i>Essential Care for Every Baby Action Plan, Provider Guide.</i> AAP, 2014.			
<i>Guidelines for the Treatment of Malaria.</i> Third edition WHO, 2015.		Included with the Malaria Module only	
<i>Management of Severe Malaria: A Practical Handbook.</i> Third edition. WHO, 2013.		Included with the Malaria Module only	
<i>Newborn Health in Humanitarian Settings: Field Guide.</i> UNICEF/Save the Children, 2018.	10		
<i>Pocket Book of Hospital Care for Children.</i> Second edition. WHO, 2013.			

Remarks

Medicines, consumables, equipment, clothing and accessories and the malaria module can be ordered separately in different quantities.

Clothes or blankets to protect the baby should be procured locally wherever possible. Locally procure reusable diapers. Local products are often less expensive and familiar to mothers.

Advanced Newborn Care

Advanced newborn care is difficult to establish in many humanitarian crises, but may be feasible in some settings. Adequate infrastructure as well as specialized, dedicated health workers are needed.

Items to be considered for advanced newborn care include:

1. Caffeine citrate, sterile solution for IV injection
2. Dexamethasone, injectable
3. Surfactant
4. Blades, for laryngoscope (0, 1)
5. Infusion pump, with accessories
6. Laryngoscope, neonate, set
7. Tubes, capillary, for centrifuge
8. Centrifuge, PCV
9. CPAP, bubble or standard
10. Incubator
11. Photometer

These can be ordered from the UNICEF supply catalogue: <https://supply.unicef.org>. Only order items if the hospital is sufficiently equipped with a dedicated space for advanced neonatal care and skilled providers trained in advanced neonatal care.

DRAFT

Sample Order for a Population of 20,000 People

Overview

1. Number of refugees/IDPs: 20,000
2. Facilities: 1 primary health center located nearby and 1 referral hospital 20 km away. Both are poorly equipped, and the hospital does not have dedicated space for advanced newborn care.
3. Personnel: Health center has 1 medical doctor, 2 trained nurses, and has trained a number of community health workers. The hospital has doctors and nurses, but none are specialized in neonatal care.
4. Observations: Not a malaria-endemic area. Clothing, blankets and accessories can be locally procured.

Order

Item	Quantity
Community Newborn Kit	
Part A: Family Care Kit	2
Part B: Community Health Worker Kit	2
Clinic/Primary Health Facility Newborn Kit	
Medicines	1
Consumables	1
Equipment	1
Clothing and accessories	0
Malaria Module	0
Hospital Newborn Kit	
Medicines	1
Consumables	1
Equipment	1
Clothing and accessories	0
Malaria Module	0

Reminder

The Community Newborn Kit (Part A and B) is sufficient for the estimated needs of 10,000 people for 3 months.

The Clinic/Primary Health Facility Newborn Kit is sufficient for the estimated needs of 30,000 people for 3 months.

The Hospital Newborn Kit is sufficient for the estimated needs of 150,000 people for 3 months.

Assess malaria endemicity and locally procure clothing and blankets where possible.

General

- Inter-agency Working Group on Reproductive Health in Crises. *Inter-agency Field Manual on Sexual and Reproductive Health in Humanitarian Settings*. IAWG, 2018. www.iawg.net
- Inter-agency Working Group on Reproductive Health in Crises. *Inter-agency Reproductive Health Kits for Crisis Situations*. 6th edition. UNFPA, 2018. www.unfpa.org
- <https://www.healthynewbornnetwork.org/hnn-content/uploads/NewBornHealthBook-Production2017-V4b-WEB.pdf>
- UNICEF. *Midwifery Kit*. UNICEF, 2016. <https://supply.unicef.org> (under Medical Kits)
- WHO. *Interagency Emergency Health Kit 2011: Medicines and Medical Devices Needed to Treat 10,000 people for Approximately 3 Months*. WHO, 2011. www.who.int/medicines/publications/emergencyhealthkit2011/en/
- WHO. *Recommendations on Newborn Health. Guidelines Approved by the WHO Guidelines Review Committee*. WHO, 2017. http://www.who.int/maternal_child_adolescent/documents/newborn-health-recommendations/en/
- WHO. *Pocket Book of Hospital Care for Children*. Second edition. WHO, 2013. http://www.who.int/maternal_child_adolescent/documents/9241546700/en/
- WHO. *WHO Guideline on Syphilis Screening and Treatment for Pregnant Women*. WHO, 2017. <http://www.who.int/reproductivehealth/publications/rtis/syphilis-ANC-screenandtrat-guidelines/en/>
- WHO. *WHO Recommendations on Antenatal Care for a Positive Pregnancy Experience*. WHO, 2016. http://www.who.int/reproductivehealth/publications/maternal_perinatal_health/anc-positive-pregnancy-experience/en/

Pharmacy Management

- JSI/WHO. *Guidelines for the Storage of Essential Medicines and Other Health Commodities*. John Snow, Inc./DELIVER in collaboration with WHO, 2003. <http://apps.who.int/medicinedocs/pdf/s4885e/s4885e.pdf>
- PATH. *Procurement Capacity Toolkit, Tools and Resources for Procurement of Reproductive Health Supplies*. PATH, 2009. <http://www.path.org/publications/detail.php?i=1652>
- UNHCR. *UNHCR Drug Management Manual 2006. Policies, Guidelines, UNHCR List of Essential Drugs*. UNHCR, 2006. <http://apps.who.int/medicinedocs/documents/s19720en/s19720en.pdf>
- USAID. *Logistics Handbook: A Practical Guide for Supply Chain Managers in Family Planning and Health Programs*. USAID/DELIVER. 2009. https://www.k4health.org/sites/default/files/The%20Logistics%20Handbook_JSI.pdf

Medicines

- UNHCR. *Essential Medicines and Medical Supplies Policy and Guidance 2013*. UNHCR, 2013. www.unhcr.org/527baab09.html
- UNICEF, WHO. *Sources and Prices of Selected Medicines for Children*. UNICEF/WHO, April 2010. [https://www.unicef.org/supply/files/SOURCES_AND_PRICES_2010\(2\).pdf](https://www.unicef.org/supply/files/SOURCES_AND_PRICES_2010(2).pdf)
- WHO. *Priority Life-saving Medicines for Women and Children 2012: Improving Health and Saving Lives by Ensuring access to Priority Medicines*. WHO, May 2012. http://www.who.int/medicines/publications/emp_mar2012.1/en/
- WHO. *WHO Essential Medicines List – Adults (18th edition) and Children (4th edition)*, WHO, 2013. www.who.int/medicines/publications/essentialmedicines/en/

Inter-agency Working Group for Reproductive Health in Crises

The Bill and Melinda Gates Foundation
International Medical Corps
Jhpiego

Johns Hopkins Bloomberg School of Public Health
The London School of Hygiene & Tropical Medicine
Office of U.S. Foreign Disaster Assistance (OFDA)
Save the Children

United Nations Children's Fund (UNICEF) (Supply & Program
Division)

United Nations Population Fund (UNFPA)
United States Agency for International Development (USAID)
World Health Organization (WHO)
Women's Refugee Commission



UNITED NATIONS CHILDREN'S FUND
3 UNITED NATIONS PLAZA
NEW YORK, NY 10017
www.unicef.org

Contact: psid@unicef.org or info@iawg.net
