

## Neonatal resuscitation is a life-saving component of childbirth care and must be available at all births.

It is estimated that complications during childbirth resulting in birth asphyxia contribute to 25% of all neonatal deaths and 50% of fresh stillbirths globally. Many more newborns are left with permanent brain injury. Fortunately, most of these deaths and disability can be prevented by quality care during labour and childbirth and by providing basic neonatal resuscitation.

While basic neonatal resuscitation is a life-saving component of care at all births, recent assessments of health facilities in refugee sites show that many health facilities are not prepared to provide neonatal resuscitation – either they do not have the essential equipment available and/or health workers are not skilled in resuscitation.

UNHCR Public Health Officers and implementing health partners must ensure that all health facilities that provide childbirth services have the capacity to provide basic neonatal resuscitation as part of their essential package of care. Reviewing the current level of readiness to provide neonatal resuscitation is recommended in all operations.

### Neonatal Resuscitation

Approximately 10% of all newborns will require some assistance to begin breathing at birth. Less than 1% will require advanced resuscitation measures.

#### Basic resuscitation includes:

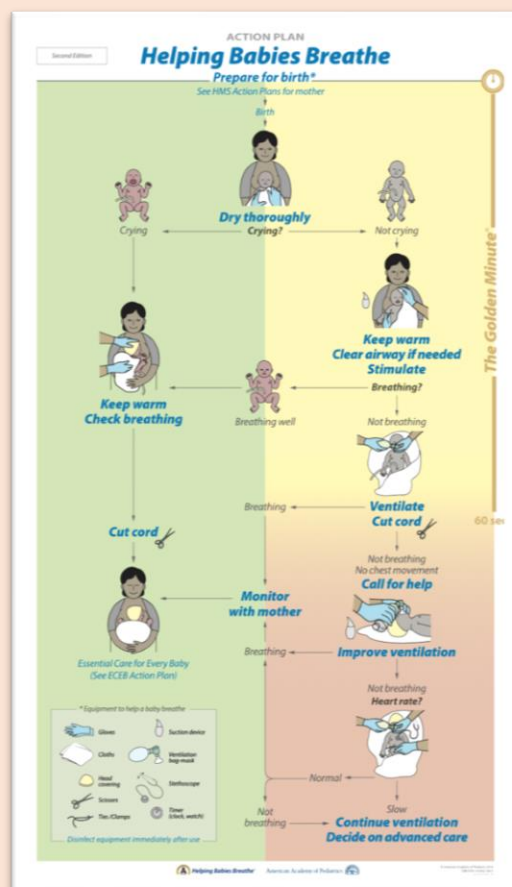
- ✓ Initial assessment (APGAR score, term or preterm status)
- ✓ Open airway. Nasal and oral suctioning only when indicated. Routine suctioning is no longer recommended.
- ✓ Thermal management (drying and covering newborn; skin-to-skin; radiant warmer or other external heat source where available)
- ✓ Tactile stimulation (rubbing back to stimulate breathing)

If spontaneous breathing does not occur after 30 seconds:

- ✓ Positive pressure ventilation with ambient air using neonatal resuscitation bag and mask
- ✓ Chest compressions when heart rate is less than 60 bpm after good ventilation
- ✓ Post resuscitation care: including maintaining warmth; breastfeeding and blood glucose monitoring; seizure management; and transfer when needed.

**Advanced resuscitation** may be considered only in higher level health facilities (secondary or tertiary level) with appropriate staffing and equipment. Advanced resuscitation includes:


- ✓ Safe oxygen administration and monitoring using pulse oximetry
- ✓ Umbilical vessel catheterization
- ✓ Administration of medications such as epinephrine
- ✓ Advanced respiratory support




# Health Facility Readiness

UNHCR Public Health Officers together with the implementing health partner should conduct an assessment of health facility readiness to provide basic neonatal resuscitation. This includes assessing the readiness of the health facility **TO TAKE ACTION** within the “Golden Minute” – the first minute after birth. Minimum standards include:

- ✓ A health provider skilled in basic neonatal resuscitation is available for every birth
- ✓ All health programs include basic neonatal resuscitation in the annual training plan, offering a formal training course at least once per year, with regular on-site refresher training (weekly skills and drills practice)
- ✓ All health facilities are equipped with the needed materials and have them ready for use at every birth
- ✓ Health outcome data including numbers of neonatal deaths from intrapartum-related events and rates of fresh stillbirths are regularly monitored

 <b>Skilled personnel</b>	<b>Available: Yes/No</b>
Health provider trained in neonatal resuscitation available at every birth?	
Formal neonatal resuscitation training conducted within the past year	
Percentage of health workers who have attended neonatal resuscitation course in the past year	
Regular refresher training plan in place (weekly skills and drills)	
Staff ‘champion’ in place to lead regular skills practice	
Training equipment (such as mannequins) available in each facility	

 <b>Basic Neonatal Resuscitation Equipment</b>	<b>Available*: Yes/No</b>
Neonatal resuscitation bag and mask with 2 sizes of mask – 0 (preterm) and 1 (term)	
Suction device (Penguin-style is preferable)	
Gloves	
Timer, clock or watch	
Stethoscope	
Sterile instrument to cut the cord	
Cord ties or clamps	
Towel or cloth (2) to dry and cover the newborn	
Heat source (such as radiant warmer) where electricity is available	
Dedicated space for resuscitation (with firm surface)	
Job aid: Poster with algorithm in delivery room	

\*Ensure that equipment is prepositioned at the newborn area in delivery room and operating theatre for every birth. Ensure equipment is in working order and in hygienic condition.

## Ordering and Maintaining Equipment

Missing equipment may be ordered from UNHCR's Essential Medicines and Equipment List, UNFPA, or sourced locally. Equipment for training such as mannequins can be ordered through [Laerdal Global Health](#).

- After the initial assessment, regular monitoring of the availability of functioning equipment may be done as part of the Balanced Score Card, and as part of routine daily supervision
- Resuscitation equipment must be checked and prepared before each birth and within easy reach of the birth attendant. It must not be kept in an office or cupboard away from patient care areas.
- Resuscitation equipment must be properly sterilized following manufacturer's instructions after each use to avoid cross-contamination



Photo: Left: © Laerdal Global Health: Neonatalie mannequin; Penguin suction; and newborn bag and mask. Right: Midwives in Cameroon taking a Helping Babies Breathe course

## Training Courses

[Helping Babies Breathe \(HBB\)](#) is an internationally recognized basic neonatal resuscitation training program that is suitable to the majority of UNHCR-supported health facilities in low-resource settings. Course materials can be downloaded for free from their website. When planning a training it may be useful to consider the following:

- Discuss with the Ministry of Health and other UN Agencies (UNICEF, UNFPA) to check for the availability of experienced HBB trainers in your area.
- Consider conducting a training-of-trainers course with the participation of one trainer from each health facility or cluster of facilities. Roll-out is best provided on-site in the health facility, with the participation of the entire health team.
- Attendance at an annual course is not sufficient to maintain skills. Following the initial training, skills are more effectively maintained with short, frequent "skills and drills" at the beginning of each shift and/or at weekly in-service meetings. A 'champion' may be nominated in each health facility to lead regular practices. A training mannequin should therefore remain in the health facility wherever possible.
- For locations where more advanced resuscitation is appropriate, personnel would benefit from a training program such as Neonatal Resuscitation Program (NRP) from the American Academy of Pediatrics (or similar).

*This training material has been developed as part of "Saving newborn lives in refugee situations", project supported by the Bill & Melinda Gates Foundation. The findings and conclusions contained within are those of the authors and do not necessarily reflect positions or policies of the Bill & Melinda Gates Foundation.*