



# WHO Safe Childbirth Checklist Implementation Guide

*Improving the quality of facility-based delivery  
for mothers and newborns*



World Health  
Organization



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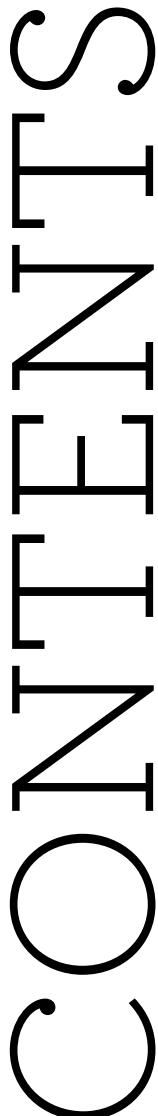
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# INTRODUCTION



In 2013, 289 000 women died during and following pregnancy and childbirth, and 2.8 million newborns died within 28 days of birth. The majority of these deaths occurred in low-resource settings and most could have been prevented.<sup>1</sup>

Childbirth is a complex process, and it is essential to remember to provide everything that is needed to ensure both the mother and newborn child receive the safest care possible. Checklists are useful tools to organize such complex, and important processes – they have long been used to prompt users to remember essential tasks to deliver better and safer care in a variety of settings.<sup>1,2</sup>

The WHO Safe Childbirth Checklist was designed as a tool to improve the quality of care provided to women giving birth. The Checklist is an organized list of evidence-based essential birth practices, which targets the major causes of maternal deaths, intrapartum-related stillbirths and neonatal deaths that occur in health-care facilities around the world. Each Checklist item is a critical action that, if missed, can lead to severe harm for the mother, the newborn, or both.

Experience with other patient safety tools, including the WHO Surgical Safety Checklist, highlights that simply offering a checklist to a health-care worker or demanding that a facility or system use a patient safety tool does not result in widespread, consistent use of the checklist or tool. Nor do such strategies lead to improved care for patients.<sup>2</sup> As a result, this guide has been developed to help birth attendants and health-care leaders successfully use the WHO Safe Childbirth Checklist. We have drawn on lessons learned by a wide range of health-care professionals who have tested, used, and championed the Checklist across the world.

Development, use and implementation of the Checklist are described in this guide. It covers how to introduce and ensure continuous use of the Checklist by engaging relevant stakeholders, how to launch the Checklist formally, and how to provide support through coaching and data-sharing. The annexes provide a more detailed description of the Checklist items, as well as useful resources to complement the implementation approach described.



THIS IMPLEMENTATION  
GUIDE AND THE WHO SAFE  
CHILDBIRTH CHECKLIST  
ARE ALSO AVAILABLE  
ONLINE AT:  
[www.who.int/patientsafety/  
implementation/checklists/  
childbirth/](http://www.who.int/patientsafety/implementation/checklists/childbirth/)

# BACKGROUND & OVERVIEW



Childbirth is a complex process with many necessary, sometimes difficult, sometimes complicated steps that ensure both the mother and her newborn child receive the safest care possible. Most people find it difficult to simply remember all of the relevant information; actually performing all the steps correctly and in the correct order is even more challenging. But in settings from restaurants to construction sites, from airplanes to hospitals, professionals are successfully using checklists to organize and order large amounts of complex information, to remind themselves to perform crucial duties, and to ultimately do their jobs more effectively, efficiently and safely.<sup>3</sup>

## Checklist development

With this evidence in mind, the World Health Organization — with input from nurses, midwives, obstetricians, paediatricians, general practitioners, patient safety experts and patients from around the world — developed the WHO Safe Childbirth Checklist (the Checklist) to help health-care workers provide high quality care during births in health facilities, from the moment the mother arrives to the moment the mother and her newborn leave the facility.<sup>3,4</sup>

The Checklist is a list of evidence-based practices, organized into four different pause points. Based on WHO guidelines, the items on the Checklist help prevent the major worldwide causes of maternal deaths, intrapartum-related stillbirths and neonatal deaths (including haemorrhage, infection, obstructed labour and hypertensive disorders and complications of prematurity). Each task on the Checklist is a crucial action that, if missed, can result in severe harm for the mother, the newborn, or both.



**THE IMPORTANCE OF THE CHECKLIST:** These safe childbirth practices have been proven to reduce maternal and newborn harm.

## Evidence from testing

The World Health Organization has tested the Checklist extensively. The pilot edition of the WHO Safe Childbirth Checklist underwent field evaluation in nine countries, providing thorough feedback. WHO used that feedback to revise the Checklist, and it was then field-tested in Karnataka State, India. It was found that the delivery of evidence-based essential birth practices at each birth event increased from an average of 10 out of 29 practices prior to introduction of the Checklist to an average of 25 out of 29 practices after the Checklist had been introduced.<sup>2</sup>

Following this pilot study in Karnataka, a large randomized control trial was designed to follow 116 000 births across Uttar Pradesh, the most populous state in India. This trial – the BetterBirth Programme – which is still ongoing, will determine the effect of a successful Checklist introduction on maternal and neonatal health outcomes. Preliminary results from the first five facilities participating in the BetterBirth programme are promising. Before the Checklist was introduced, the facilities performed only five of the 17 birth practices measured in the trial. However, after BetterBirth introduced the Checklist – using many of the tools and strategies introduced here – birth attendants in the facilities performed 16 of the birth practices consistently. In Rajasthan, India, Jhpiego, with support from the Children's Investment Fund Foundation (CIFF) and in partnership with Government of Rajasthan have used the checklist in 101 public facilities.

Initial results in the Jhpiego program have demonstrated improved quality of care in public sector facilities and state of Andhra Pradesh and Gujarat have already introduced the checklist in several public health facilities.

Alongside these efforts to test the Checklist, WHO, in partnership with Ariadne Labs, established the WHO Safe Childbirth Checklist Collaboration (the WHO Collaboration) to explore the circumstances that influence use of the Checklist around the world. From November 2012 to March 2015, thirty-four groups registered projects with the WHO Collaboration, covering 29 countries and 234 sites. Groups explored many questions concerned with how and why some facilities used the Checklist readily, effectively, and consistently, while others did not.



**From November 2012 through March 2015 a total of **34** registered projects with the Collaboration, representing **29** COUNTRIES and **234** SITES**

To gather and document the lessons learned by these 34 groups, a comprehensive survey about the introduction and use of the checklist was conducted.

## THE RIGHT MOMENTS TO PAUSE AND CHECK

The WHO Safe Childbirth Checklist is intended for use at four pause points during facility-based births:



### PAUSE POINT 1: ON ADMISSION

Checking the mother at the time of admission is important to detect and treat complications that she may already have, to confirm whether she needs to be referred to another facility, to prepare her (and her companion) for labour and delivery, and to educate her (and her companion) about danger signs for which she should call for help.



### PAUSE POINT 2: JUST BEFORE PUSHING (or before Caesarean)

Checking the mother just before pushing (or before Caesarean) is important to detect and treat complications that can occur during labour and to prepare for routine events and possible crisis situations that may occur after birth.

1

**DELIVERY PROCESS**



**ADMISSION**

2

**DELIVERY**



The results of this survey greatly improved understanding of how to make the WHO Safe Childbirth Checklist most effective in improving care for mothers and newborns in settings around the world. Many of these lessons and experiences from the survey are shared in this guide.

## Overview of the WHO Safe Childbirth Checklist

The WHO Safe Childbirth Checklist helps health-care workers ensure that essential birth practices are performed at critical moments during childbirth for every delivery, every time. Childbirth is characterized by events that are both routine and unexpected, and complications for the mother, the newborn, or both can happen unpredictably. While it is not possible to list on a single checklist all practices that are required at each birth, the Checklist does list a core set of practices that have been proven to reduce harm to mothers and newborns.

In designing the Checklist, routine flow of events were considered and essential birth practices were streamlined into four sections. The four sections, or pause points, are specific points in time when birth attendants should “check” that they have completed essential birth practices. These pause points allow birth attendants to make their “checks” at times when they can protect the mother and newborn against dangerous complications, but the pause points also take place when it is convenient for birth attendants to take the time to perform the checks.

Each item on the WHO Safe Childbirth Checklist is described in more detail in the **GLOSSARY**.



### PAUSE POINT 3: SOON AFTER BIRTH (within one hour)

Checking the mother and newborn soon after birth (within 1 hour) is important to detect and treat complications that can occur after delivery, and to educate the mother (and her companion) about danger signs for which she should call for help.

**3**



### PAUSE POINT 4: BEFORE DISCHARGE

Checking the mother and newborn before discharge is important to be sure that the mother and newborn are healthy before discharge, that follow-up has been arranged, that family planning options have been discussed and offered to the mother (and her companion), and that education on danger signs to look out for, both in the mother and her baby, has been given in case immediate skilled care is needed.

**4**

**DISCHARGE**



**ONGOING CARE**

In many health facilities, the pause points will not take place in the same location. For instance, pause point 1 may take place at the admission desk, pause point 2 may take place in the labour room, pause point 3 may take place in the postpartum bay, and pause point 4 may take place on the postpartum ward. In facilities with only a labour room, all pause points may occur in that place. Each facility should determine, based on their own needs and practices, where birth attendants will conduct their checks during each of the four pause points. If the pause points take place in separate locations, then the Checklist must "follow" the mother and newborn as they move from room to room. In many situations, keeping the Checklist with the mother's chart or medical record will allow the birth attendant to find it more easily when she needs it.

## Tips on using the WHO Safe Childbirth Checklist

Checklists can commonly be used in two ways: in "Read-Do," you first read the item on the Checklist, then complete the task. In "Do-Confirm," you complete the task then read the item on the Checklist to confirm that you have done it. You may use either method, though many find the "Read-Do" method easier to carry out, especially those who are new to using the Checklist.

To further help birth attendants, the Checklist includes additional information located to the right of each item. For instance, for the item related to the partograph, the Checklist offers a description of how a partograph should be used. Birth attendants should refer to this supplementary information as needed. After repeatedly using the Checklist, birth attendants may memorize this information, however, birth attendants should carry on using the WHO Safe Childbirth Checklist at every pause point during each delivery, in order to ensure that they are always performing all the essential birth practices, every time.

### TIPS ON USING THE WHO SAFE CHILDBIRTH CHECKLIST

- Each Checklist item is important for every mother and every delivery – birth attendants must always refer to the Checklist at each pause point, even if they are confident in their knowledge of birth practices
- Birth attendants should use one Checklist for each mother, and that Checklist should follow the mother and baby from location to location and birth attendant to birth attendant
- Though the Checklist may seem complicated and time-consuming at first, it will soon allow birth attendants to perform essential birth practices more easily, safely, and quickly

Several Checklist items require administering medications such as antibiotics, magnesium sulfate, antihypertensives, and oxytocin. The Checklist does not list specific antibiotics, anti-hypertensives because guidelines used across the world may require different pharmaceuticals in different locations. In adapting the Checklist to your facility, select antibiotics according to your nation's or to WHO's guidelines. Similarly, plan dosages and treatment courses for all medications according to these guidelines.

# THE WHO SAFE CHILDBIRTH CHECKLIST

A soft-focus photograph of a woman in a white dress holding a newborn baby wrapped in a light-colored blanket. The woman is looking down at the baby with a gentle expression. The background is blurred, suggesting a hospital or birthing center environment.

1

## On Admission

**Does mother need referral?**

- No  
 Yes, organized

Check your facility's criteria

**Partograph started?**

- No, will start when  $\geq 4$  cm  
 Yes

Start plotting when cervix  $\geq 4$  cm, then cervix should dilate  $\geq 1$  cm/hr

- Every 30 min: plot HR, contractions, fetal HR
- Every 2 hrs: plot temperature
- Every 4 hrs: plot BP

**Does mother need to start:**

## Antibiotics?

- No  
 Yes, given

Ask for allergies before administration of any medication

Give antibiotics to mother if any of:

- Mother's temperature  $\geq 38^{\circ}\text{C}$
- History of foul-smelling vaginal discharge
- Rupture of membranes  $> 18$  hrs

## Magnesium sulfate and antihypertensive treatment?

- No  
 Yes, magnesium sulfate given  
 Yes, antihypertensive medication given

Give magnesium sulfate to mother if any of:

- Diastolic BP  $\geq 110$  mmHg and 3+ proteinuria
- Diastolic BP  $\geq 90$  mmHg, 2+ proteinuria, and any: severe headache, visual disturbance, epigastric pain

Give antihypertensive medication to mother if systolic BP  $> 160$  mmHg

- Goal: keep BP  $< 150/100$  mmHg

Confirm supplies are available to clean hands and wear gloves for each vaginal exam.

Encourage birth companion to be present at birth.

Confirm that mother or companion will call for help during labour if needed.

Call for help if any of:

- Bleeding
- Severe abdominal pain
- Severe headache or visual disturbance
- Unable to urinate
- Urge to push

This checklist is not intended to be comprehensive and should not replace the case notes or partograph. Additions and modifications to fit local practice are encouraged. For more information on recommended use of the checklist, please refer to the "WHO Safe Childbirth Checklist Implementation Guide" at: [www.who.int/patientsafety](http://www.who.int/patientsafety).

2

## Just Before Pushing (Or Before Caesarean)

**Does mother need to start:**

Antibiotics?

- No  
 Yes, given

*Magnesium sulfate and antihypertensive treatment?*

- No  
 Yes, magnesium sulfate given  
 Yes, antihypertensive medication given

Ask for allergies before administration of any medication

Give antibiotics to mother if any of:

- Mother's temperature  $\geq 38^{\circ}\text{C}$
- History of foul-smelling vaginal discharge
- Rupture of membranes  $>18$  hrs
- Caesarean section

Give magnesium sulfate to mother if any of:

- Diastolic BP  $\geq 110$  mmHg and 3+ proteinuria
- Diastolic BP  $\geq 90$  mmHg, 2+ proteinuria, and any: severe headache, visual disturbance, epigastric pain

Give antihypertensive medication to mother if systolic BP  $>160$  mmHg

- Goal: keep BP  $<150/100$  mmHg

**Confirm essential supplies are at bedside and prepare for delivery:**

For mother

- Gloves  
 Alcohol-based handrub or soap and clean water  
 Oxytocin 10 units in syringe

For baby

- Clean towel  
 Tie or cord clamp  
 Sterile blade to cut cord  
 Suction device  
 Bag-and-mask

Prepare to care for mother immediately after birth:

Confirm single baby only (not multiple birth)

1. Give oxytocin within 1 minute after birth
2. Deliver placenta 1-3 minutes after birth
3. Massage uterus after placenta is delivered
4. Confirm uterus is contracted

Prepare to care for baby immediately after birth:

1. Dry baby, keep warm
2. If not breathing, stimulate and clear airway
3. If still not breathing:
  - clamp and cut cord
  - clean airway if necessary
  - ventilate with bag-and-mask
  - shout for help

- Assistant identified and ready to help at birth if needed.

3

## Soon After Birth (Within 1 Hour)

**Is mother bleeding abnormally?**

- No  
 Yes, shout for help

If bleeding abnormally:

- Massage uterus
- Consider more uterotonic
- Start IV fluids and keep mother warm
- Treat cause: uterine atony, retained placenta/fragments, vaginal tear, uterine rupture

**Does mother need to start:**

Antibiotics?

- No  
 Yes, given

Ask for allergies before administration of any medication

Give antibiotics to mother if placenta manually removed or if mother's temperature  $\geq 38^{\circ}\text{C}$  and any of:

- Chills
- Foul-smelling vaginal discharge

If the mother has a third or fourth degree of perineal tear give antibiotics to prevent infection

## Magnesium sulfate and antihypertensive treatment?

- No  
 Yes, magnesium sulfate given  
 Yes, antihypertensive medication given

Give magnesium sulfate to mother if any of:

- Diastolic BP  $\geq 110$  mmHg and 3+ proteinuria
- Diastolic BP  $\geq 90$  mmHg, 2+ proteinuria, and any: severe headache, visual disturbance, epigastric pain

Give antihypertensive medication to mother if systolic BP  $> 160$  mmHg

- Goal: keep BP  $< 150/100$  mmHg

**Does baby need:**

Referral?

- No  
 Yes, organized

Check your facility's criteria.

Antibiotics?

- No  
 Yes, given

Give baby antibiotics if antibiotics given to mother for treatment of maternal infection during childbirth or if baby has any of:

- Respiratory rate  $> 60/\text{min}$  or  $< 30/\text{min}$
- Chest in-drawing, grunting, or convulsions
- Poor movement on stimulation
- Baby's temperature  $< 35^{\circ}\text{C}$  (and not rising after warming) or baby's temperature  $\geq 38^{\circ}\text{C}$

## Special care and monitoring?

- No  
 Yes, organized

Arrange special care/monitoring for baby if any:

- More than 1 month early
- Birth weight  $< 2500$  grams
- Needs antibiotics
- Required resuscitation

 Started breastfeeding and skin-to-skin contact (if mother and baby are well). Confirm mother / companion will call for help if danger signs present.

4

**Before Discharge** **Confirm stay at facility for 24 hours after delivery.****Does mother need to start antibiotics?**

- No  
 Yes, given and delay discharge

Ask for allergies before administration of any medication

- Give antibiotics to mother if any of:
- Mother's temperature  $\geq 38^{\circ}\text{C}$
  - Foul-smelling vaginal discharge

**Is mother's blood pressure normal?**

- No, treat and delay discharge  
 Yes

Give magnesium sulfate to mother if any of:

- Diastolic BP  $\geq 110$  mmHg and 3+ proteinuria
- Diastolic BP  $\geq 90$  mmHg, 2+ proteinuria, and any: severe headache, visual disturbance, epigastric pain

Give antihypertensive medication to mother if systolic BP  $> 160$  mmHg

- Goal: keep BP  $< 150/100$  mmHg

**Is mother bleeding abnormally?**

- No  
 Yes, treat and delay discharge

If pulse  $> 110$  beats per minute and blood pressure  $< 90$  mmHg

- Start IV and keep mother warm
- Treat cause (hypovolemic shock)

**Does baby need to start antibiotics?**

- No  
 Yes, give antibiotics, delay discharge, give special care

Give antibiotics to baby if any of:

- Respiratory rate  $> 60/\text{min}$  or  $< 30/\text{min}$
- Chest in-drawing, grunting, or convulsions
- Poor movement on stimulation
- Baby's temperature  $< 35^{\circ}\text{C}$  (and not rising after warming) or baby's temperature  $\geq 38^{\circ}\text{C}$
- Stopped breastfeeding well
- Umbilicus redness extending to skin or draining pus

**Is baby feeding well?**

- No, establish good breastfeeding practices and delay discharge  
 Yes

 **Discuss and offer family planning options to mother.** **Arrange follow-up and confirm mother / companion will seek help if danger signs appear after discharge.****Danger Signs****Mother has any of:**

- Bleeding
- Severe abdominal pain
- Severe headache or visual disturbance
- Breathing difficulty
- Fever or chills
- Difficulty emptying bladder
- Epigastric pain

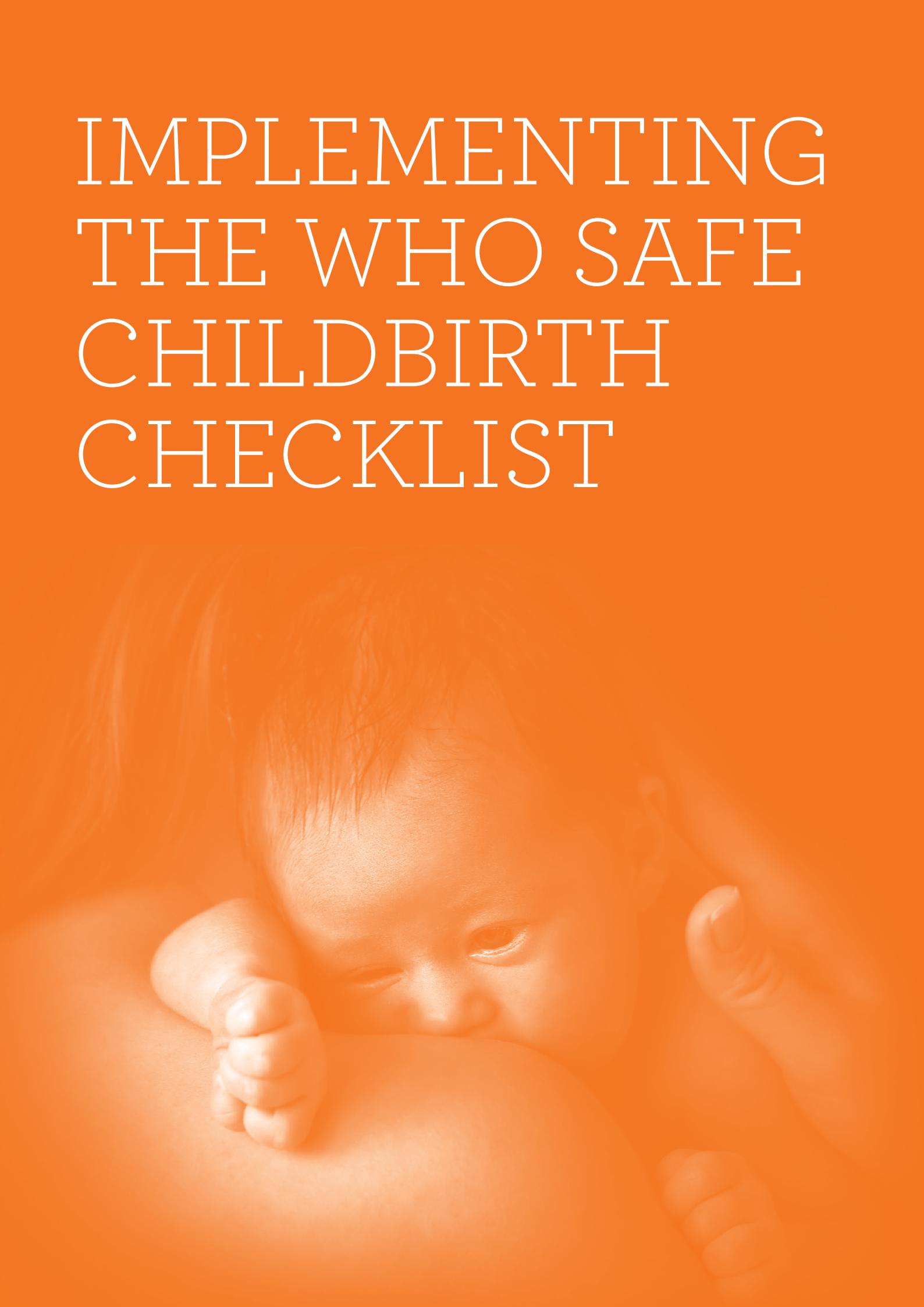
**Baby has any of:**

- Fast/difficult breathing
- Fever
- Unusually cold
- Stops feeding well
- Less activity than normal
- Whole body becomes yellow

A copy of the WHO Safe Childbirth Checklist can be downloaded as a separate document, and can be found on WHO and Ariadne Labs websites.

The WHO Safe Childbirth Checklist was developed according to WHO guidelines and international standards of care. However, modifying the Checklist may be necessary to reflect contextual factors or national protocols and guidelines. If changes are necessary, please refer to the guiding principles on pages 23 and for some common context specific adaptations on page 58.

# IMPLEMENTING THE WHO SAFE CHILDBIRTH CHECKLIST



The way in which the Safe Childbirth Checklist (the Checklist) is introduced to health-care workers is important. Experience with the WHO Surgical Safety Checklist and other ventures to improve safety and quality for patients across the globe has shown that simply introducing a checklist to a facility will not lead to sustained improvement in essential health-care practices.<sup>5-7</sup> Based on well-described models for behaviour change<sup>5-7</sup> in health-care settings and using lessons learned from a range of stakeholders' experiences, the following three key steps can help each facility or system achieve the best results:



### **ENGAGE: Gaining buy-in and establishing a team to support implementation**

- Ensuring buy-in and stakeholder understanding of the Checklist
- Establishing a team to take ownership of the Checklist
- Reviewing current resources and practices to determine what is needed for the Checklist to be successful
- Adapting the Checklist to fit local guidelines and protocols



### **LAUNCH: Event to introduce the WHO Safe Childbirth Checklist**

- Launching the WHO Safe Childbirth Checklist through an official event or training
- Incorporating technical training to address gaps in practice



### **SUPPORT: Encouraging use through coaching, monitoring and evaluation**

- Discussing Checklist use and showcasing people in the facility using the Checklist
- Observing Checklist use and using coaching skills to give respectful and constructive feedback to encourage change and motivate adherence
- Documenting successes and challenges by gathering information on use of the Checklist, essential birth practice behaviours and supply availability
- Sharing information regularly to encourage improvement.

With appropriate engagement, launch and ongoing support, the Checklist can change individuals' and facilities' practices for the better, as well as create system-wide improvements and awareness about patient safety. These changes can, in turn, lead to improved quality of care for both mothers and newborns.

## **IMPLEMENTING THE WHO SAFE CHILDBIRTH CHECKLIST**

After launching the Checklist, a continuous cycle of coaching, performance measurement, and data feedback helps lead to improved standards and quality of care.

### **FROM THE FIELD**

#### **The Checklist Alone is Not Enough**

Engagement with leadership, a checklist launch and ongoing support can help achieve successful outcomes.

#### **THE CHECKLIST**



**ENGAGE**



**LAUNCH**



**COACHING**



**RESULTS**



**Strengthened Individual & System Standards**

**LEADING TO**



**Improved Maternal & Neonatal Quality of Care**



## Engage

Using the WHO Safe Childbirth Checklist successfully for every delivery leads to safer and better care for mothers and newborns. However, you can only achieve such consistent Checklist use if birth attendants and health-care leaders believe in and actively support implementation of the WHO Safe Childbirth Checklist.

In order to reach this belief and gain support, influential individuals, institutions and organizations should come together early on in the effort to begin using the Checklist. Other important partners may include government officials, local and national administrative staff, and even patients. Convincing these stakeholders that the WHO Safe Childbirth Checklist can improve the quality of health care and the safety of mothers and newborns will improve the chances of successfully introducing the Checklist into a facility or health system.<sup>7</sup>

### FROM THE FIELD

Experience from the WHO Collaboration indicates that leadership engagement was critical for staff to begin using the Checklist

#### THE ENGAGE PROCESS INVOLVES THE FOLLOWING FIVE STEPS<sup>8</sup>

- 1.** Identify which individuals, institutions, or organizations must give approval or support for using the Checklist
- 2.** Organize a meeting to describe and explain the Checklist
- 3.** Establish a team made up of appropriate health-care leaders and birth attendants to guide implementation of the Checklist
- 4.** Review available resources and current practices to determine how the Checklist can best be used and what needs must be fulfilled to ensure success
- 5.** Customize the Checklist appropriately to make it more relevant to your local facility and health-care system

1

#### IDENTIFY WHICH INDIVIDUALS, INSTITUTIONS, OR ORGANIZATIONS MUST GIVE APPROVAL OR SUPPORT FOR USING THE WHO SAFE CHILDBIRTH CHECKLIST

It is important to gain the public endorsement of key individuals, institutions, and organizations to ensure effective implementation of the Checklist. Engagement with different health administrative levels is especially important to ensure that they are aware of your process for implementing the Checklist. By publicly embracing the process and providing the resources required, these leaders send a powerful message of support for adoption of the Checklist that will in turn motivate health-care staff to use it. Understanding whom to engage is the first step to successfully implementing the Checklist. In many institutions, physicians are not employees, but private contractors who work in the institutions. It is important to get their buy-in early on, as merely sending a directive to use the Checklist is unlikely to be successful.

## **2 ORGANIZE A MEETING TO DESCRIBE AND EXPLAIN THE CHECKLIST**

In order to gain the support of health-care leaders, birth attendants and other participants, you must first explain what the Checklist is, how it works, and why each item on the Checklist is so important.

## **3 ESTABLISH A TEAM MADE UP OF APPROPRIATE HEALTH-CARE LEADERS AND BIRTH ATTENDANTS TO GUIDE THE IMPLEMENTATION OF THE CHECKLIST**

General support for the use of the Checklist is not enough. You must next decide who will be directly responsible for guiding the implementation process to success. At a national or state level, a working group, a responsible institution or organization, or a team can guide implementation of the Safe Childbirth Checklist. At the facility level, select one or more birth attendants to be guides or "champions" of the process. The champions can come from a variety of health-care professions. Champions should take an active role in managing each step of the implementation process. Your team may benefit from inviting a member from the next health administrative level such as a district or regional health office. This may be valuable especially in the beginning of the implementation process and can help other facilities decide to implement the Checklist as well.

## **4 REVIEW AVAILABLE RESOURCES AND CURRENT PRACTICES TO DETERMINE HOW THE CHECKLIST CAN BEST BE USED AND WHAT NEEDS MUST BE FULFILLED TO ENSURE SUCCESS**

**TO ENSURE SUCCESS** At the start of the implementation process, leaders should collect data on what supplies, guidelines/policies, infrastructure-related issues (i.e. hand washing stations) are available at the facility and what practices are in place. This data will serve many purposes: it will reveal ways in which the facility can improve its care, and help measure improvement after the implementation process has begun. It may also help motivate staff to change their practices as the process is on-going. Thus, leaders should be extremely careful to collect these data in a sympathetic and non-threatening manner. Staff should know that the aim is to improve quality of care for mothers and newborns.

Without essential supplies, it is not possible to successfully introduce the Checklist into a facility or health-care system. A list of safe birth supplies required for successful use of the Checklist is included in the annexes. This may be used to conduct an initial assessment of resources, as well as for regular monitoring, to ensure that the necessary supplies are always available. Knowing which items are and which are not performed in facilities before the Checklist is to be introduced allows leaders to provide more support for those items that require it. An initial well-documented assessment may help to advocate for better procurement and supply chain management at the national level.

## **5 CUSTOMIZE THE CHECKLIST APPROPRIATELY TO MAKE IT MORE RELEVANT TO YOUR LOCAL FACILITY AND HEALTH-CARE SYSTEM**

The Checklist was developed according to WHO guidelines and international standards of care, so modifying the Checklist too much may make it less effective. However, you may need to make changes to the Checklist to reflect contextual factors such as prevalence of HIV

or a risk of malaria, for example. In this case, it is important for the implementation team to interact with the national level and advocate for a nationwide review of the WHO Safe Childbirth Checklist. A national convening of experts could review the Checklist to ensure accordance with national standards, guidelines and culture and modify the Checklist accordingly.

The Checklist should be translated into the local language in order to make it easy to use. As with modifications to the Checklist, it is important to coordinate translations at the national level. This will prevent duplication of work if other facilities in the region or country are also implementing the Checklist.

If it is necessary to modify the Checklist further to suit the local setting, working with local health-care leaders, birth attendants, and other participants will allow everyone to share in the success. Knowing that their facility or colleagues participated in the process of modifying the Checklist may contribute to others' willingness to use it.

You should remember that checklists are most useful when they are easy to use.

If you must modify the Checklist, for example, adding items relating to HIV or malaria to make the Checklist more specific to your context, consider the guiding principles below:

**Using fewer items.** Many facilities struggle with the temptation to include too many items in their Checklist, but remember that each new item will make the Checklist more difficult to use. Every item on the Checklist should fit at least one of these statements:<sup>8</sup>

- Serious consequences can result if it is missed out
- It needs to be done, but is commonly missed
- It improves communication between team members

**Using language that is comfortable and simple.** Using clear, straightforward language that feels 'right' when said aloud. When items are written in a language that is not comfortable or simple, people are less likely to use the Checklist.

**Using a simple and easy-to-read design.** Using consistent formatting and not using small, crowded text. If the Checklist is unclear and therefore difficult to read, people are unlikely to use it.

## FROM THE FIELD

### Modifying the Checklist

Each member of the WHO Collaboration who participated in the Evaluation and also reported ongoing use of the Checklist, also reported making modifications to the Checklist.

A few facilities also indicated that they asked obstetrician/gynaecology experts across their respective countries to help adapt the Checklist.

Examples of Checklist modifications included inserting a space to include the mother's name, blood pressure and temperature results; adding the facility's specific criteria for referral of the mother or newborn to a higher-level facility; adding a check for allergies; and adding prevention of mother-to-child transmission (PMTCT)-related activities such as HIV testing and administration of antiretrovirals.



# Launch

Launching the WHO Safe Childbirth Checklist through an official event or training is important to establish the importance of using the Checklist. Key stakeholders at the local level can train others at their facility after they are trained through a training-of-trainers that takes place at a higher health administrative level.

Independent of the type of format you choose for the local level, the event can be led by the designated implementation or management team established in the 'Engage' phase. However, active participation from staff across different disciplines is encouraged, including physicians. Such an event can further engage health-care staff and administrators, provide the opportunity for additional technical training on childbirth practices and provide a forum for discussing barriers and enablers. You should inform the next health administrative level about the event and invite them to help formalize the launch.

The event should create an atmosphere of excitement for birth attendants and other staff. You may wish to include materials such as handouts and lectures, or create an instructional or motivational video. Hands-on simulation using props or training participants as mock patients is an essential component of adult learning and training.

## FROM THE FIELD

### Include Technical Training Sessions

Most Collaboration members included a technical training on subjects such as hand hygiene and partograph use. Their teams reviewed the resources available and the practices in use in their facilities (as described in the 'Engage' process) in order to decide which trainings to include in their launch events.

Many Collaboration sites reported using simulation and conducting a training initially for obstetricians and senior nurses or midwives to gain buy-in and equip them to then be able to train others. The BetterBirth programme used instructional and motivational videos to guide facility staff on how to use the Checklist and emphasize its importance.

### A LAUNCH SHOULD INCORPORATE THE FOLLOWING STEPS<sup>8</sup>

1. Introduce yourself and the team guiding the implementation of the WHO Safe Childbirth Checklist
2. Introduce the benefits of using a checklist
3. Explain the four pause points of the WHO Safe Childbirth Checklist
4. Demonstrate and explain the proper use of the Checklist using mock performances, videos, and other materials
5. Give participants the opportunity to practice using the Checklist
6. Encourage participants to discuss the potential challenges to using the Checklist
7. Invite participants to share their thoughts and feelings about the Checklist and answer any questions they raise
8. Let the participants know they have your support and the team's ongoing support throughout implementation of the Checklist

A guide for the launch event can be found in the annexes. Additionally, a set of images to describe each of the pause points in the Checklist, also found among the annexes, can be helpful to display and reference during a launch training event. In the days following the launch event, implementers and/or selected facility staff are encouraged to be readily available to answer questions.



## Support

Implementers and facility leaders are encouraged to provide support by continuously promoting the Checklist to create awareness of and enthusiasm about its use. For example, taking advantage of regularly scheduled meetings is useful to emphasize the importance of using the Checklist and discussing progress to date. Additionally, using photos, videos and message boards to showcase people using the Checklist helps make its implementation more meaningful and reinforces the idea that it is being led locally and is customized for the local setting.

Two essential components of support are coaching others to encourage change and using monitoring and evaluation for improvement.

### COACHING OTHERS TO ENCOURAGE CHANGE<sup>8</sup>

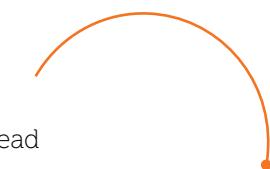
Coaching is an important component of successful checklist implementation. It helps lead individuals and teams towards better performance and helps sustain effective checklist use over time. Coaching colleagues and staff on checklist use is about observing, encouraging and giving people respectful and constructive feedback to shape new behaviour and improve performance. Coaching involves meeting people where they are in their practice and helping them to improve. A coach can be any individual or a group of individuals from a variety of clinical and/or administrative backgrounds, from any level within the facility or outside. A coach can coach others full-time or part-time in addition to having other responsibilities. A coach can be, but does not have to be, a senior member of the facility. Coaches can also come from a higher health administration level to support a number of facilities or districts with implementation of the Checklist.

Coaching involves observing others during a delivery to assess adherence to the Checklist. It may also mean reviewing completed checklists to ensure that they were filled in completely and correctly. Giving respectful and constructive feedback on both observations of deliveries and completed checklists are important components of coaching. To motivate others and give appropriate feedback, good communication is critical. Good coaches know how and when to listen, speak to others with respect and kindness, and communicate ideas clearly and simply. See the Principles for Effective Coaching in the annexes to learn more about the qualities and skills of effective coaching and helpful communication techniques for giving constructive feedback.

While helping to establish and maintain proper Checklist use in the facility, coaching can help support a number of improvements:

- **BETTER, COORDINATED PATIENT CARE.** Teams that function well take better care of patients
- **BETTER MORALE.** Coaching on Checklist use will help to reinforce best practices that keep communication and teamwork at a high level
- **DISCOVERY OF OTHER OPPORTUNITIES.** Coaching can help identify new opportunities for improvement
- **LONG-TERM SUCCESS.** Coaching can show that what people do matters and that there is an investment in their continued success

In order to facilitate change, a coach must understand what keeps others from improving their practices. A coach is likely to witness three factors<sup>9</sup> that make it difficult for others to perform the items on the Checklist:



#### A GOOD COACH IS SOMEONE WHO IS:

- Coachable
- Respected
- Humble
- Patient

- **OPPORTUNITY**

Environmental or contextual factors beyond an individual's control

(For example: leadership support challenges, human resource or supply constraints)

- **MOTIVATION**

Interest or internal belief

- **ABILITY**

Skill, knowledge, or technical confidence

## FROM THE FIELD

### Challenges in Using the Checklist

The WHO Safe Childbirth Checklist Collaboration evaluation revealed a number of motivational challenges in using the Checklist, such as the belief that the Checklist was too complex and took too much time. Coaches were able to address these challenges by conducting ongoing supervision and training, and reinforcing the importance of the Checklist through education and staff-wide meetings.

Many WHO Collaboration sites also faced challenges related to skills, both in using the Checklist and in certain birth practices advocated on the Checklist. Successful sites held additional launch events and technical trainings to help increase skills.

Across the WHO Collaboration, a common opportunity challenge included a lack of essential supplies. In this case, many coaches and birth attendants worked with facility managers and even higher level health administrators to develop a stronger supply chain. In facilities where birth attendants did not readily have access to copies of the Checklist, because the facility had no printer, sites considered making posters. Each pause point poster of the Checklist was placed in the room where the care was delivered for that pause point. Some facilities created a few laminated copies of the Checklist that could be wiped clean and reused for each delivery. To address staff shortages and inconsistent attendance, many sites focused on attendance policies and encouraged health-care workers to use birth companions for assistance, when appropriate.

## MONITORING AND EVALUATION FOR IMPROVEMENT

In order to provide birth attendants with ongoing encouragement and support in using the WHO Safe Childbirth Checklist, you must first know when, how, and why birth attendants are (or are not) using the Checklist in their work. Measuring how often and how well birth attendants use the Checklist and deliver the essential birth practices on the Checklist can tell you what they find difficult about using the Checklist, allow you to seek help with solving those challenges, and identify personal and facility improvements to celebrate with the team and more broadly. Remember that the Checklist can be integrated within the facility's existing health processes and quality improvement efforts and does not have to be an additional task. It is important to assess how the Checklist can complement or enhance the systems in place.

### Monitoring the implementation process

Coaches, supervisors and birth attendants, may gather information on use of the Checklist and on the quality of care delivered by making direct observations of others conducting birth practices. In the annexes, you will find an Observation Tool that can allow an observer to:

- Document what practices the birth attendants perform during each observation period
- Decide which practices are the most important for your facility or health-care system to improve on
- Make sure all observers watch for and document the same kinds of practices and behaviours
- Decide and document the main reason for a birth attendant not completing a Checklist item (Lack of opportunity, ability or motivation)

The purpose of the Observation Tool is not to judge birth attendants' performance, and so you must make certain that they know that the observations are for data collection for coaching and quality improvement only. Additionally, it is helpful to avoid using names or other information that can identify birth attendants or patients on the observation tools to further increase provider buy-in for the process. You may want to include supervisors from the next health administrative level in this process: they may be able to observe practices more objectively and provide useful comments compared to those that staff always present at the facility would perhaps not see. No matter what observation tool you use, all of the observers must agree on the definitions of specific items on the Checklist, for example when is a "mother's bleeding successfully controlled?"

In addition to the Observation Tool, the Checklist itself can also be used to monitor and document the kind of care offered by birth attendants. By reviewing completed Checklists, you can see whether and how the quality of care in your facility or health-care system is evolving. When you discuss results with birth attendants and leadership, you should do so using the Principles of Effective Coaching in the annexes, so birth attendants feel that you are supporting them in improving their practices rather than pressuring them to "check the box."

Because specific equipment and supplies are necessary to delivering the essential birth practices on the Checklist, regularly monitoring their availability in your facility is important. You will find a sample Safe Birth Supplies Tool, in the annexes, that can be used to help facilities monitor their supplies, identify needs, and notice areas for improvement.

### **Evaluation and feedback for improvement**

After you collect data on your facility's use of the Checklist and quality of care, it is important to take steps to learn lessons from the data and then share those lessons with birth attendants and others using the Checklist in their work. At a health system level, data can be collected from and aggregated across many facilities to analyze regional or national trends in maternal and neonatal health.

Storing data in a paper- or computer-based spreadsheet will allow you to organize data and find trends. You might ask some or all of the following questions:

- How is use of the Checklist changing over time?
- Which specific Checklist items are more likely to be completed? Which are less likely to be?
- What supplies and equipment are routinely missing? Why? How can the supplies be available more consistently?
- Why do birth attendants commonly not complete specific Checklist items? How can these challenges be overcome?

Regardless of the details, such as which document you use or what kind of spreadsheet you create, you will find data feedback and reporting to be crucial to success. Everyone involved in using the Checklist – birth attendants, facility and health-care leaders, and coaches – must understand when and how to make changes to solve ongoing challenges. This will require asking the birth attendants and facility leaders questions to understand how and why there are challenges and engaging them in helping to solve system level challenges as well as provide motivation to each other.

Additionally, successes should be shared with everyone regularly in order to encourage them to continue the practices that work well. In the annexes, you will find a Coaching Tool that can be helpful for recording successes and challenges, as well as preparing for data-sharing conversations with birth attendants or others. You may also find this tool useful in recognizing staff that have contributed to success, or for creating a plan to resolve specific challenges. Many successful quality improvement programmes give social recognition to those who are positive leaders in the implementation process.

## FROM THE FIELD

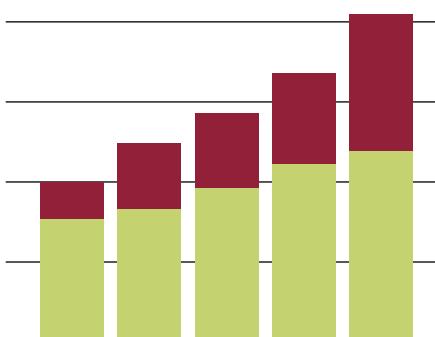
### How to Use the Data Visualizations

Experience from the BetterBirth trial and the WHO Collaboration indicate that visually displaying data at a facility can empower staff by demonstrating where challenges to Checklist use still remain and where the facility is improving.

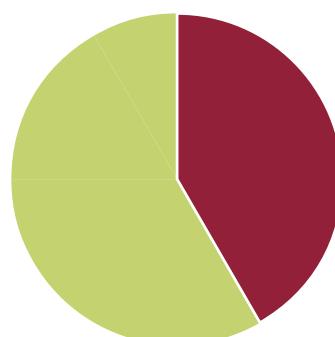
## VISUALLY DISPLAYING YOUR DATA

While data visualizations are often computer-generated tables, charts, and graphs, you may also hand-draw them. Using color is a simple way to show progress (red to indicate “no” or a negative trend, green to indicate “yes” or a positive trend). Below are examples of data visualizations that will help show progress and tell the story of the implementation process:

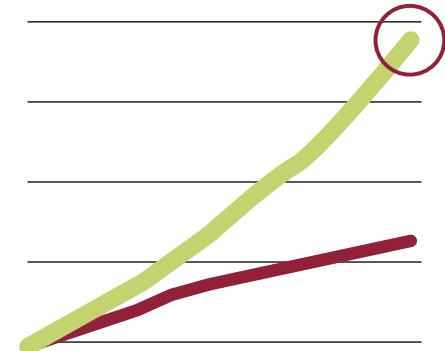
**BAR CHARTS**



**PIE CHARTS**



**LINE CHARTS**



### BEHAVIOUR LOGS

**SAMPLE BEHAVIOURS**

|   | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|----|
| Mother's blood pressure taken           | ✓ | ✗ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓  |
| Oxytocin given within 1 minute of birth | ✓ | ✓ | ✗ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓  |
| Skin-to-skin contact                    | ✗ | ✗ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓  |
| Danger signs explained                  | ✗ | ✗ | ✗ | ✓ | ✗ | ✗ | ✗ | ✓ | ✓ | ✓  |

**OR**

**SAMPLE BEHAVIOURS**

|   | 1           | 2           | 3           | 4           | 5           | 6           | 7           | 8           | 9           | 10          |
|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Mother's blood pressure taken           | Light Green | Dark Red    | Light Green |
| Oxytocin given within 1 minute of birth | Light Green | Light Green | Dark Red    | Light Green |
| Skin-to-skin contact                    | Dark Red    | Dark Red    | Light Green | Light Green | Dark Red    | Dark Red    | Light Green | Light Green | Light Green | Light Green |
| Danger signs explained                  | Dark Red    | Dark Red    | Dark Red    | Light Green | Dark Red    | Dark Red    | Light Green | Light Green | Light Green | Light Green |

# ANNEXES



# Safe Birth Supplies

## WHAT ARE SAFE BIRTH SUPPLIES?

Supplies required to safely and hygienically manage the process of labor and delivery as outlined by the items and practices of the WHO Safe Childbirth Checklist.

### TO USE:

1. Start at the first available column. Write today's date at the top of the column.

2. Look for each item on the list.

- Fill in circle "Y" if that supply, equipment, or medication is working, not expired, and readily available to birth attendants.
- Fill in circle "N" if that supply, equipment, or medication is broken, expired, or otherwise unavailable to birth attendants.

|                                       | Date    | Date    | Date    | Date    | Date    |
|---------------------------------------|---------|---------|---------|---------|---------|
| <b>GENERAL SUPPLIES AND EQUIPMENT</b> |         |         |         |         |         |
| Power Supply                          | (Y) (N) |
| Clean Water                           | (Y) (N) |
| Soap or Alcohol Hand Rub              | (Y) (N) |
| Disinfectant                          | (Y) (N) |
| Autoclave                             | (Y) (N) |
| Clean Gloves                          | (Y) (N) |
| Stethoscope                           | (Y) (N) |
| Thermometer                           | (Y) (N) |
| Blood Pressure Instrument             | (Y) (N) |
| Partograph                            | (Y) (N) |
| Fetoscope/Doppler                     | (Y) (N) |
| <b>SUPPLIES IN THE DELIVERY ROOM</b>  |         |         |         |         |         |
| Suction Machine                       | (Y) (N) |
| Mucus Extractor                       | (Y) (N) |
| Neonatal Bag-and-Mask                 | (Y) (N) |
| Oxygen Cylinder/Concentrator          | (Y) (N) |
| Baby Scale                            | (Y) (N) |
| Needle/Syringe                        | (Y) (N) |
| Urine Dip Sticks                      | (Y) (N) |
| Sterilized Blade/Scissor              | (Y) (N) |
| Cord Tie/Clamp                        | (Y) (N) |
| Clean Pads for Mother                 | (Y) (N) |
| Clean Towel                           | (Y) (N) |
| <b>MEDICATIONS/INJECTIONS/DRIPS</b>   |         |         |         |         |         |
| Bag of IV Fluids                      | (Y) (N) |
| Injectable Oxytocin                   | (Y) (N) |
| Injectable Magnesium Sulfate          | (Y) (N) |
| Antibiotics for Mother                | (Y) (N) |
| Antibiotics for Infant                | (Y) (N) |
| Antihypertensives                     | (Y) (N) |

# Safe Birth Supplies Example

## WHAT ARE SAFE BIRTH SUPPLIES?

Supplies required to safely and hygienically manage the process of labor and delivery as outlined by the items and practices of the WHO Safe Childbirth Checklist.

### TO USE:

1. Start at the first available column. Write today's date at the top of the column.
2. Look for each item on the list.
  - Fill in circle "Y" if that supply, equipment, or medication is working, not expired, **and** readily available to birth attendants.
  - Fill in circle "N" if that supply, equipment, or medication is broken, expired, **or** otherwise unavailable to birth attendants.

|                                       | Date<br>Jan 1 | Date<br>Jan 8 | Date    | Date    | Date    |
|---------------------------------------|---------------|---------------|---------|---------|---------|
| <b>GENERAL SUPPLIES AND EQUIPMENT</b> |               |               |         |         |         |
| Power Supply                          | (Y) (N)       | (Y) (N)       | (Y) (N) | (Y) (N) | (Y) (N) |
| Clean Water                           | (Y) (N)       | (Y) (N)       | (Y) (N) | (Y) (N) | (Y) (N) |
| Soap or Alcohol Hand Rub              | (Y) (N)       | (Y) (N)       | (Y) (N) | (Y) (N) | (Y) (N) |
| Disinfectant                          | (Y) (N)       | (Y) (N)       | (Y) (N) | (Y) (N) | (Y) (N) |
| Autoclave                             | (Y) (N)       | (Y) (N)       | (Y) (N) | (Y) (N) | (Y) (N) |
| Clean Gloves                          | (Y) (N)       | (Y) (N)       | (Y) (N) | (Y) (N) | (Y) (N) |
| Stethoscope                           | (Y) (N)       | (Y) (N)       | (Y) (N) | (Y) (N) | (Y) (N) |
| Thermometer                           | (Y) (N)       | (Y) (N)       | (Y) (N) | (Y) (N) | (Y) (N) |
| Blood Pressure Instrument             | (Y) (N)       | (Y) (N)       | (Y) (N) | (Y) (N) | (Y) (N) |
| Partograph                            | (Y) (N)       | (Y) (N)       | (Y) (N) | (Y) (N) | (Y) (N) |
| Fetoscope/Doppler                     | (Y) (N)       | (Y) (N)       | (Y) (N) | (Y) (N) | (Y) (N) |
| <b>SUPPLIES IN THE DELIVERY ROOM</b>  |               |               |         |         |         |
| Suction Machine                       | (Y) (N)       | (Y) (N)       | (Y) (N) | (Y) (N) | (Y) (N) |
| Mucus Extractor                       | (Y) (N)       | (Y) (N)       | (Y) (N) | (Y) (N) | (Y) (N) |
| Neonatal Bag and Mask                 | (Y) (N)       | (Y) (N)       | (Y) (N) | (Y) (N) | (Y) (N) |
| Oxygen Cylinder/Concentrator          | (Y) (N)       | (Y) (N)       | (Y) (N) | (Y) (N) | (Y) (N) |
| Baby Scale                            | (Y) (N)       | (Y) (N)       | (Y) (N) | (Y) (N) | (Y) (N) |
| Needle/Syringe                        | (Y) (N)       | (Y) (N)       | (Y) (N) | (Y) (N) | (Y) (N) |
| Urine Dip Sticks                      | (Y) (N)       | (Y) (N)       | (Y) (N) | (Y) (N) | (Y) (N) |
| Sterilized Blade/Scissor              | (Y) (N)       | (Y) (N)       | (Y) (N) | (Y) (N) | (Y) (N) |
| Cord Tie/Clamp                        | (Y) (N)       | (Y) (N)       | (Y) (N) | (Y) (N) | (Y) (N) |
| Clean Pads for Mother                 | (Y) (N)       | (Y) (N)       | (Y) (N) | (Y) (N) | (Y) (N) |
| Clean Towel                           | (Y) (N)       | (Y) (N)       | (Y) (N) | (Y) (N) | (Y) (N) |
| <b>MEDICATIONS/INJECTIONS/DRIPS</b>   |               |               |         |         |         |
| Bag of IV Fluids                      | (Y) (N)       | (Y) (N)       | (Y) (N) | (Y) (N) | (Y) (N) |
| Injectable Oxytocin                   | (Y) (N)       | (Y) (N)       | (Y) (N) | (Y) (N) | (Y) (N) |
| Injectable Magnesium Sulfate          | (Y) (N)       | (Y) (N)       | (Y) (N) | (Y) (N) | (Y) (N) |
| Antibiotics for Mother                | (Y) (N)       | (Y) (N)       | (Y) (N) | (Y) (N) | (Y) (N) |
| Antibiotics for Infant                | (Y) (N)       | (Y) (N)       | (Y) (N) | (Y) (N) | (Y) (N) |
| Antihypertensives                     | (Y) (N)       | (Y) (N)       | (Y) (N) | (Y) (N) | (Y) (N) |

# Guide to Holding a Launch Event

## INSTRUCTIONS

Use the following discussion points and activities during a Safe Childbirth Checklist Launch event to introduce the WHO Safe Childbirth Checklist.

### 1. INTRODUCE YOURSELF AND THE TEAM GUIDING THE IMPLEMENTATION OF THE WHO SAFE CHILDBIRTH CHECKLIST.

Encourage an open, welcoming environment in which all participants feel comfortable asking questions and making suggestions by introducing yourself and the team, and facilitating introductions among all trainees at the event.

### 2. INTRODUCE THE BENEFITS OF USING A CHECKLIST.

Explain the benefits of using a checklist to aid birth attendants during childbirth.  
Provide an overview of the Checklist.

#### WHY USE A CHECKLIST?

- The greatest risk of death for mothers is in the first day after delivery.
- The greatest risk of death for babies is in the first day of life – usually just after birth.
- Childbirth is a complex process with serious and all-too-frequent consequences.
- In other complex processes with potentially grave consequences (such as flying an airplane or performing surgery), research has proven that checklists can save lives and prevent serious harm.
- Like a pilot on an airplane or a surgeon in a surgical theater, a birth attendant can have great impact on how safe a mother and baby are during childbirth.

#### HOW DO CHECKLISTS WORK?

- Checklists do not contain new activities: the items on a checklist are created from existing training, guidelines, and practices.
- The items on a checklist help us to remember the many practices we ought to perform during a complex situation.
- We can be forgetful.
- We can be distracted by emergencies or other duties.
- We can neglect to communicate important information to others.

**EXAMPLE:** When you go to market, a checklist helps you remember to purchase the correct products, in the correct order, at the correct time.

#### DISCUSSION PROMPT: What are possible causes for childbirth related complications?

A checklist to aid a birth attendant's memory will increase the number of essential birth practices performed at deliveries, which will improve the health of mothers and babies.

# Guide to Holding a Launch Event

## 3. EXPLAIN THE FOUR PAUSE POINTS OF THE WHO SAFE CHILDBIRTH CHECKLIST

Identify each pause point (*use the associated pause point images to inspire discussion*). Encourage participants to identify the goals of care and the key practices they should undertake at each pause point, then review each Checklist item aloud and describe it in detail, explaining why it is an essential birth practice.

Use the following **discussion prompts** for each pause point to guide additional discussion with the participants.



### PAUSE POINT 1: ON ADMISSION

- How do we assess mother for risks?
- For what reasons do we refer mothers out before delivery?



### PAUSE POINT 2: JUST BEFORE PUSHING (OR BEFORE CAESAREAN)

- What supplies and equipment do we prepare for the mother and baby before delivery?
- Which supplies are readily available for each mother and baby? Which supplies are often (always or sometimes) unavailable?



### PAUSE POINT 3: SOON AFTER BIRTH (WITHIN 1 HOUR)

- How do we encourage breastfeeding and skin-to-skin contact?
- What practices can we improve upon at this pause point?
- What danger signs should we watch for in the mother? In the baby?



### PAUSE POINT 4: BEFORE DISCHARGE

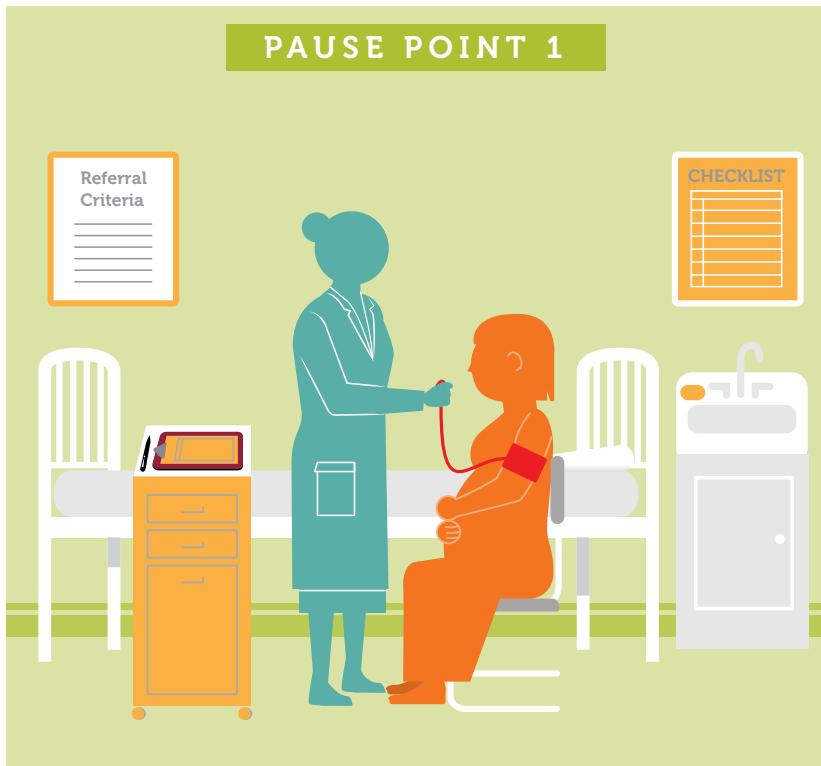
- What practices must we perform before the mother and baby go home?
- How do we ensure mother is given family planning information?

#### Remind participants:

- Every Checklist item is important for each mother and every delivery – birth attendants must always refer to the Checklist at each pause point, even if they are confident in their knowledge of birth practices.
- Birth attendants should use one Checklist for each mother, and that Checklist should follow the mother and baby from location to location and birth attendant to birth attendant.
- Though the Checklist may seem complicated and time-consuming at first, it will soon allow birth attendants to perform essential birth practices more easily, safely, and quickly.

## Pause Point Illustrations

### PAUSE POINT 1

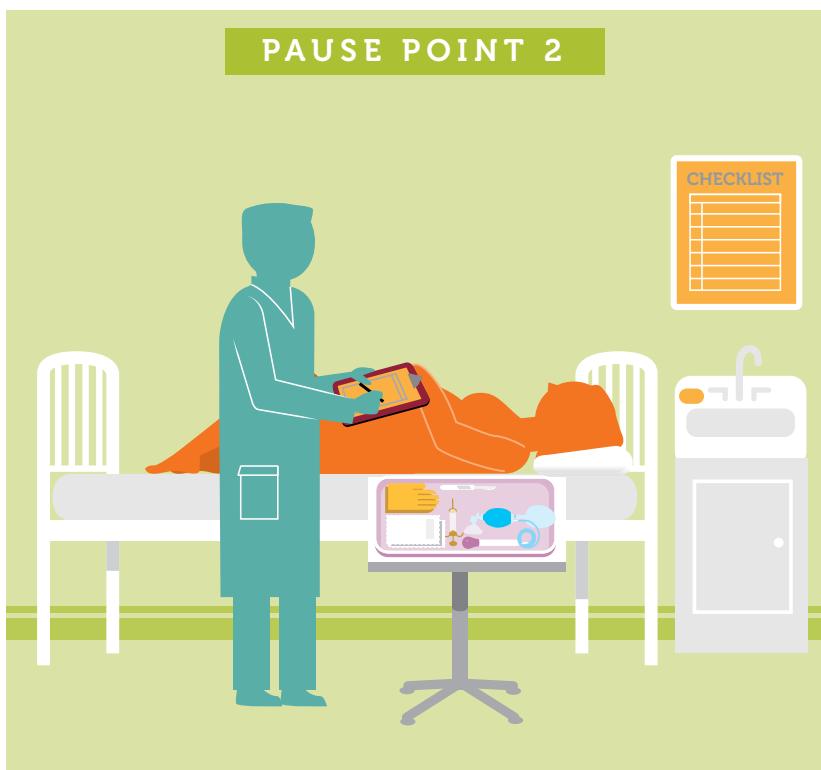


1

### PAUSE POINT: ON ADMISSION

Checking the mother at the time of admission is important to detect and treat complications that she may already have, to confirm whether she needs to be referred to another facility, to prepare her (and her companion) for labour and delivery, and to educate her (and her companion) about danger signs for which she should call for help.

### PAUSE POINT 2



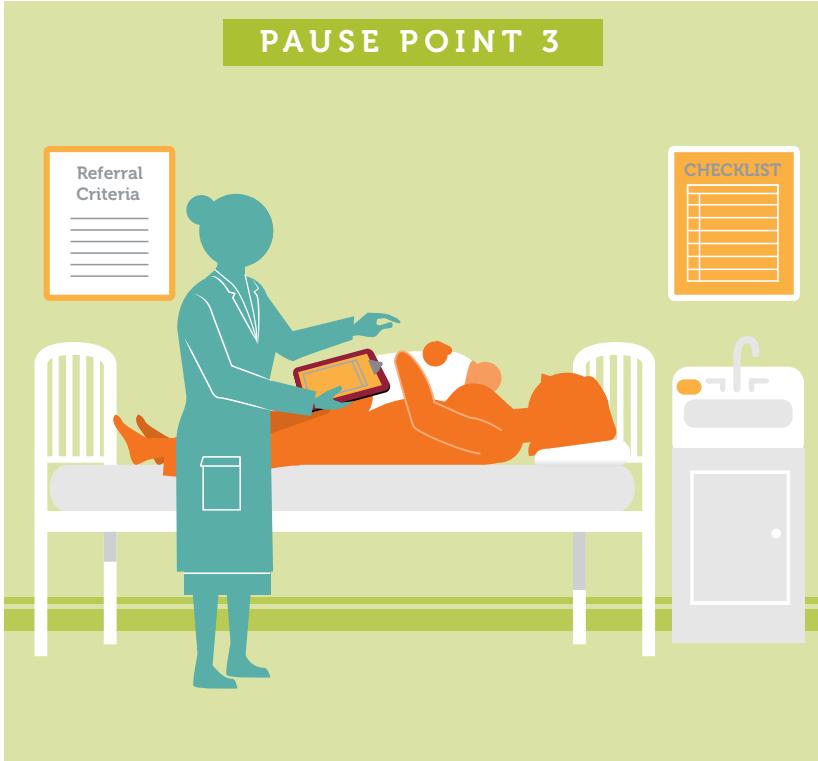
2

### PAUSE POINT: JUST BEFORE PUSHING (OR BEFORE CAESAREAN)

Checking the mother just before pushing (or before Caesarean) is important to detect and treat complications that can occur during labour and to prepare for routine events and possible crisis situations that may occur after birth.

## Pause Point Illustrations

### PAUSE POINT 3

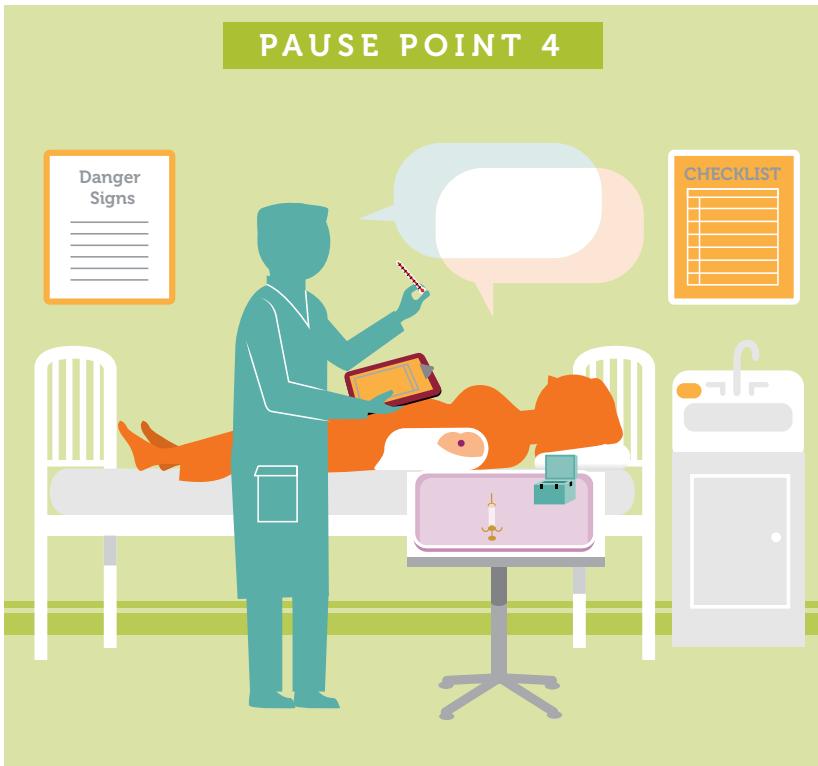


3

### PAUSE POINT: SOON AFTER BIRTH (WITHIN 1 HOUR)

Checking the mother and newborn soon after birth (within 1 hour) is important to detect and treat complications that can happen after delivery, and to educate the mother (and her companion) about danger signs for which she should call for help.

### PAUSE POINT 4



4

### PAUSE POINT: BEFORE DISCHARGE

Checking the mother and newborn before discharge is important to be sure that the mother and newborn are healthy before discharge, that follow-up has been arranged, that family planning options have been discussed and offered to the mother (and her companion), and that education on danger signs to look out for, both in the mother and her baby, has been given in case immediate skilled care is needed.

# Principles of Effective Coaching

## WHO CAN COACH?

Anyone can be a coach. They can come from a variety of clinical or administrative backgrounds, from any rank within the facility, or from outside the facility altogether. Experience from the BetterBirth trial and from the WHO Collaboration showed that a peer-to-peer model works best – in other words, nurses coaching nurses and doctors coaching doctors. A Checklist coach can coach others full time, or they can coach part time, in addition to their other responsibilities. A coach can be, but does not need to be, a senior member of the facility. No matter what the coach's background, they must have the characteristics of a good coach.

## QUALITIES OF A GOOD COACH

A good coach is someone who is:

- Coachable
- Respected
- Humble
- Patient

Effective coaches are those who are **coachable** themselves – they are motivated by the goal of improving their practices, they are willing to be observed while working, and they will openly answer questions about their own performance. People who respond well to being coached usually have the insight, sensitivity and understanding needed to coach people themselves.

While a good coach does not need to hold a senior position in the facility or health-care system, effective coaches should be trusted and **respected** by their peers. Similarly, coaches do not need to be clinicians, but they are better able to build trust with birth attendants if they understand, can relate to, or have expertise in the environment surrounding childbirth. However, pretending to have all the answers can destroy the trust that is so vital to a successful coaching relationship. A good coach acknowledges what he or she doesn't always know.

Coaches who are **humble** and honest are able to build successful relationships with their colleagues. Effective coaches treat others as though they are doing their best to help the mother and newborn and to provide safe care. With this humble attitude, coaches are much more likely to get birth attendants to listen to and respond to feedback. Good coaches recognize birth attendants for the positive actions they take and acknowledge that they are trying to learn and do their best. When offering observations of other people's practices, coaches do not judge what or how they did.

Coaches also have the **patience** and flexibility to allow others to learn by reaching their own conclusions. Effective coaches convince birth attendants to reflect on what has happened and guide birth attendants to identify for themselves the challenges and potential solutions for improving their performance. In doing so, coaches create opportunities for others to solve their own unique difficulties themselves, rather than presenting ready-made solutions to generic problems. Not only does the coach better address the birth attendants' concerns, but the birth attendants are also more likely to make use of the solutions they themselves have created.

Coaches must demonstrate flexibility by using multiple approaches to meet the needs of others. For example, coaches may meet with birth attendants one-on-one or in small groups. Similarly, coaches may coach birth attendants in person or remotely (by telephone or by internet). Coaches should make their decisions about how to coach based on what will be the most effective choice for the birth attendants they coach, or for the facility or health-care system at large and based on what will work with the resources available.

# Principles of Effective Coaching

## NECESSARY COACHING SKILLS

In order to help birth attendants improve their skills, coaches should use the following skills:

- **Building relationships based on trust**
- **Demonstrating genuine curiosity**
- **Using effective observation and communication skills**

In order to help others improve their practices, coaches must convince them that their practices can be changed for the better. Birth attendants will offer a commitment to improving their practices only to coaches who have earned their trust. An effective coach will take the time to build a rapport with others and understand their perspective, in order to gain trust and a commitment to improve. Expressing empathy when appropriate is important and lays the foundation for a strong coaching relationship. Demonstrating genuine curiosity or sincere interest while observing and asking questions will enable greater trust and success. Coaches can do this by using a nonjudgmental tone and open-ended questions that prompt conversation and reflection. Others should want to talk to and seek support from the coach.

Additionally, coaches who keenly observe and ask the right questions can accurately diagnose root causes of problems. While assuming the best of individuals and teams, coaches who understand root causes can better facilitate solutions that are appropriate and achievable. For example, a birth attendant may be skipping measuring temperature not because s/he doesn't know how to do this, but because there is no working thermometer at the facility. When coaches can help others identify for themselves the barriers that stand in the way of improvement, it is a much more powerful motivator for change.

In order to facilitate change, a coach must understand what keeps others from improving their practices. A coach is likely to witness three factors that make it difficult for others to perform the items on the Checklist:

- **OPPORTUNITY – Environmental or contextual factors beyond an individual's control**  
(for example: leadership support challenges, human resource, time or supply constraints)
- **MOTIVATION – Interest or internal belief**
- **ABILITY – Skill, knowledge, or technical confidence.**

## HELPFUL COMMUNICATION SKILLS TO ENCOURAGE PROGRESS

In discussing practices, giving feedback, and helping birth attendants to identify problems and solutions, a coach must use good communication skills. A good coach knows when and how to listen well, how to speak to others with respect and kindness, and how to communicate ideas clearly and simply.

|                                   |   |
|-----------------------------------|---|
| <b>Using open-ended questions</b> | Open-ended questions are questions that cannot be answered with a simple yes, no, or other one-word answer. Such questions typically begin with Why or How. By using open-ended questions, a coach creates an opportunity for birth attendants to discuss and reflect on their practices rather than simply agreeing (or disagreeing) with the coach.   |
| <b>Seeking commitment</b>         | By encouraging birth attendants to clearly state specific, concrete goals with definite timelines, a coach helps others to commit to changing their practices. While a coach should not judge or shame a birth attendant for not reaching a goal, they can help by motivating a birth attendant to reach their own objectives and by discussing ways in which, together, they can make reaching those goals easier. |

# Principles of Effective Coaching

|  |   |
|--|---|
| <b>Actively listening</b>                          | Actively listening requires a coach to participate in the conversation, even when they are not speaking, by paying close attention to the speaker and by confirming what they hear. A coach may use verbal and non-verbal cues to show the listener that they are interested. For example, they may nod to show they are interested and they agree with the speaker's statement, or they may use statements like "What I'm hearing you say is ..." to be certain that they have heard the right message.  |
| <b>Giving respectful and constructive feedback</b> | A coach offers their observations about a birth attendant's practices in order to help that birth attendant understand why and how to change their practices for the better. Feedback should never discourage but instead should build others' confidence and motivation to improve. Therefore, feedback must be given respectfully and constructively: <ul style="list-style-type: none"><li>• A coach should set an appropriate time and place to share their observations. If they wait to give feedback on a past action or situation, their observations will not be as powerful because the birth attendant will not necessarily remember the event well. Additionally, the coach should be sure that the time and place in which they choose to give feedback is not threatening or embarrassing for the birth attendant.</li><li>• A coach should describe and discuss facts and their observations rather than generalizations. They should be as specific as possible and should not express stereotypes or judgments based on assumptions.</li></ul> |

The three-part question allows a coach to give feedback in a safe and productive way by organizing their feedback and the conversation that results from it in a respectful way. The figure below offers an explanation and some examples of the 3-part question. These important communication skills always require a calm, polite, interested tone in order to avoid offending or angering a listener.

## FORMULATING THE 3-PART QUESTION

The 3- part question is based on a simple formula:

**1 YOUR OBSERVATION + 2 YOUR THOUGHTS + 3 YOUR QUESTION**

### GOALS

- Explain your observation
- Be specific and clear
- Remain as objective as possible

### EXAMPLES

- "I saw..."
- "I observed..."
- "I watched..."
- "The team did..."
- "The team didn't..."
- "I noticed..."

### GOALS

- Share why you are focusing on a specific behavior or action and explain its importance.

### EXAMPLES

- "I think..."
- "I believe..."
- "It's really important to..."
- "I am pleased that..."
- "I am concerned that..."

### GOALS

- Allow the team to reflect
- Display genuine interest in what happened

### EXAMPLES

- "Can you help me understand?"
- "I am curious, what do you think happened?"
- "What is your point of view?"
- "How did you experience that?"
- "I wonder what you think happened?"

# Observation Tool

## INSTRUCTIONS

This observation tool is used to monitor essential birth practices during childbirth. Review each question and sub-question and mark if the practice was completed (Y for Yes) or not completed (N for No).

Use the following categories to identify the reason why any practice was not completed:

- **Opportunity** – environmental or contextual factors beyond individual's control. For example, leadership support challenges, human resource, time or supply constraints
- **Ability** – skills or knowledge; experience or technical confidence
- **Motivation** – limited interest or internal belief preventing adoption

| 1 | ON ADMISSION  | Response                              | Barrier<br><i>Opportunity, Ability, Motivation</i> |
|---|---|---------------------------------------|--|
|   |   | (Y) (N)                               |  |
|   | <b>1. Does mother need referral?</b>  | (Y) (N)                               |  |
|   | <b>2. Partograph started?</b><br><br>Were fetal heart sounds measured?  | (Y) (N)<br><br>(Y) (N)                |  |
|   | <b>3. Does mother need to start antibiotics?</b><br><br>Was temperature taken?  | (Y) (N)<br><br>(Y) (N)                |  |
|   | <b>4. Does mother need to start magnesium sulfate and hypertensive treatment?</b><br><br>Was blood pressure taken?  | (Y) (N)<br><br>(Y) (N)                |  |
|   | <b>5. Are supplies available to clean hands and wear gloves for each vaginal exam?</b><br><br>a. Were hands washed with hand sanitizer or soap and water?<br><br>b. Were gloves worn during vaginal exam? | (Y) (N)<br><br>(Y) (N)<br><br>(Y) (N) |  |
|   | <b>6. Was the presence of a birth companion at birth encouraged?</b>  | (Y) (N)                               |  |
|   | <b>7. Were mother or companion told to call for help during labor if needed?</b><br><br>Were danger signs explained to mother/companion?  | (Y) (N)<br><br>(Y) (N)                |  |

## Observation Tool

2

### JUST BEFORE PUSHING (OR BEFORE CAESAREAN)

|  | Response   | Barrier<br>Opportunity, Ability, Motivation |
|--|--|---|
| <b>1. Does mother need to start antibiotics?</b><br><br>Was temperature taken?   | (Y) (N)<br><br>(Y) (N)   |   |
| <b>2. Does mother need to start magnesium sulfate and antihypertensive treatment?</b><br><br>Was blood pressure taken?   | (Y) (N)<br><br>(Y) (N)   |   |
| <b>3. Are essential supplies at bedside?</b><br><br>For mother<br>a. Gloves<br><br>b. Alcohol-based handrub or soap and clean water<br><br>c. Oxytocin 10 units in syringe<br><br>For baby<br>a. Clean towel<br><br>b. Tie or cord clamp<br><br>c. Sterile blade to cut cord<br><br>d. Suction device<br><br>e. Bag-and-mask       | (Y) (N)<br><br>(Y) (N)<br><br>(Y) (N)<br><br><br>(Y) (N)<br><br>(Y) (N)<br><br>(Y) (N)<br><br>(Y) (N)<br><br>(Y) (N) |   |
| <b>4. Correct use of essential supplies:</b><br><br>a. Were hands washed immediately before delivery?<br><br>b. Were gloves worn during delivery?<br><br>c. Was oxytocin 10 units given to mother within one minute after birth?<br><br>d. Was baby's breathing assessed?<br><br>e. If baby not breathing, was the airway cleared? | (Y) (N)<br><br>(Y) (N)<br><br>(Y) (N)<br><br>(Y) (N)<br><br>(Y) (N)  |   |
| <b>5. Was an assistant identified and ready to help at birth, if needed?</b>   | (Y) (N)  |   |

## Observation Tool

3

### SOON AFTER BIRTH (WITHIN 1 HOUR)

|   |  | Response | Barrier<br><i>Opportunity, Ability, Motivation</i> |
|---|--|----------|--|
| <b>1. Is mother bleeding abnormally?</b>  | a. Did the birth attendant check for bleeding? | (Y) (N)  |  |
|   |  | (Y) (N)  |  |
| <b>2. Does mother need to start antibiotics?</b>                                      | Was temperature taken?                         | (Y) (N)  |  |
|   |  | (Y) (N)  |  |
| <b>3. Does mother need to start magnesium sulfate and antihypertensive treatment?</b> | Was blood pressure taken?                      | (Y) (N)  |  |
|   |  | (Y) (N)  |  |
| <b>4. Does baby need referral?</b>  |  | (Y) (N)  |  |
| <b>5. Does baby need antibiotics?</b>   | b. Was baby temperature taken?                 | (Y) (N)  |  |
|   | c. Was baby respiratory rate measured?         | (Y) (N)  |  |
| <b>6. Does baby need special care and monitoring?</b>                                 | a. Newborn weight taken?                       | (Y) (N)  |  |
|   |  | (Y) (N)  |  |
| <b>7. Was breastfeeding started within 1 hour?</b>                                    |  | (Y) (N)  |  |
| <b>8. Was baby placed skin to skin on mother's chest or abdomen?</b>                  |  | (Y) (N)  |  |
| <b>9. Were danger signs explained to mother/companion?</b>                            |  | (Y) (N)  |  |

## Observation Tool

| 4  | BEFORE DISCHARGE | Response                                 | Barrier<br>Opportunity, Ability, Motivation |
|--|------------------|--|---|
|  |                  |  |   |
| 1. Was stay confirmed for 24 hours after delivery?   |                  | (Y) (N)                                  |   |
| 2. Is mother's blood pressure normal?  |                  | (Y) (N)                                  |   |
| 3. Is mother bleeding abnormally?<br><br>Was mother checked for bleeding?  |                  | (Y) (N)<br>(Y) (N)                       |   |
| 4. Does mother need to start antibiotics?<br><br>Was temperature taken?  |                  | (Y) (N)<br>(Y) (N)                       |   |
| 5. Does baby need to start antibiotics?<br><br>a. Was baby temperature taken?<br><br>b. Was baby respiratory rate measured?  |                  | (Y) (N)<br>(Y) (N)<br>(Y) (N)            |   |
| 6. Is baby feeding well?<br><br>Was baby's feeding checked?  |                  | (Y) (N)<br>(Y) (N)                       |   |
| 7. Family planning options discussed and offered to mother?  |                  | (Y) (N)                                  |   |
| 8. Follow up arranged and danger signs explained to mother/companion?  |                  | (Y) (N)                                  |   |
| <b>General observations:</b><br><br>Was the mother or baby referred out at any point during your observation?<br><br>Was a caesarean section performed at any point during your observation?<br><br>Did the mother die at any time during your observation?<br><br>Did the baby die at any time during your observation? |                  | (Y) (N)<br>(Y) (N)<br>(Y) (N)<br>(Y) (N) |   |
| <b>Comments:</b>   |                  |  |   |

## Coaching Tool

### HOW TO USE THE COACHING TOOL

- Report successful performance of birth practices or availability and use of supplies, and recognize the birth attendants who are responsible.
- Identify challenges for birth attendants performing the items on the Checklist.
- Record solutions and commitments made for each improvement area.
- Record the solutions determined for each challenge and the healthcare professional committed to carrying it out.

### Successes

#### LIST OF ESSENTIAL BIRTH PRACTICES AND SUPPLY ACHIEVEMENTS

#### CHILDBIRTH CHAMPION OF THE MONTH

### Areas for Improvement

| ESSENTIAL BIRTH PRACTICE OR SUPPLY ISSUE | PROPOSED SOLUTION |
|--|-------------------|
|  |                   |

## Coaching Tool Example

### HOW TO USE THE COACHING TOOL

- Report successful performance of birth practices or availability and use of supplies, and recognize the birth attendants who are responsible.
- Identify challenges for birth attendants performing the items on the Checklist.
- Record solutions and commitments made for each improvement area.
- Record the solutions determined for each challenge and the healthcare professional committed to carrying it out.

## Successes

### LIST OF ESSENTIAL BIRTH PRACTICES AND SUPPLY ACHIEVEMENTS

EXAMPLE 1 Oxytocin was given correctly to all women within 1 minute of birth for all deliveries this past week.

EXAMPLE 2 Danger signs were explained to all women after delivery and before discharge.

### CHILDBIRTH CHAMPION OF THE MONTH

## Areas for Improvement

| ESSENTIAL BIRTH PRACTICE OR SUPPLY ISSUE | PROPOSED SOLUTION  |
|--|--|
| EXAMPLE 1 Soap is not always available.  | Pharmacist will place soap order this week. In the future, soap will be ordered each month to ensure there is sufficient to supply in the labor room.<br><br>Health-care worker will prepare trays in the morning to be used throughout the day. |

# GLOSSARY



# Description of Checklist Items

## ABBREVIATIONS

|             |                                   |              |  |
|-------------|-----------------------------------|--------------|--|
| <b>ARVs</b> | Antiretrovirals                   | <b>MMR</b>   | Maternal mortality ratio                   |
| <b>ART</b>  | Antiretroviral therapy            | <b>NMR</b>   | Neonatal mortality rate                    |
| <b>DMPA</b> | Depot medroxyprogesterone acetate | <b>PMTCT</b> | Prevention of mother-to-child transmission |
| <b>HCF</b>  | Health-care facility              | <b>PPROM</b> | Preterm prelabour rupture of membranes     |
| <b>HCW</b>  | Health-care worker                | <b>SCC</b>   | Safe Childbirth Checklist                  |
| <b>HIV</b>  | Human immunodeficiency virus      | <b>WHO</b>   | World Health Organization                  |

## PAUSE POINT 1 ON ADMISSION

Checking the mother at the time of admission is important to detect and treat complications that she may already have, to confirm whether she needs to be referred to another facility, to prepare her (and her companion) for labour and delivery, and to educate her (and her companion) about danger signs for which she should call for help.

### DOES MOTHER NEED REFERRAL?

Mothers with complications, or those at high risk of complications, may require referral to another facility to ensure they receive safe care. The Checklist user should confirm whether the mother needs referral to another facility by reviewing the facility's criteria for referral. If indicated, the health-care worker should take immediate action to organize safe transfer. The health-care worker should communicate the reason for referral to the mother (and birth companion) and to health-care workers at the facility to which she is being referred. Posting a list of referral criteria in the admission area can serve as a useful reference for health-care workers and help them to rapidly identify mothers who should be referred.

### PARTOGRAPH STARTED?

The partograph is a one-page tool used to assess labour progress. The alert and action lines on the partograph help health-care workers to recognize and take action to manage prolonged and obstructed labour. Studies have shown that use of the partograph can help prevent prolonged labour, reduce operative intervention, and improve neonatal outcomes.<sup>10</sup> The Checklist user should start the partograph when a mother's cervical dilation is four centimetres or more (i.e., when she is in active labour).<sup>11,12</sup> The mother's cervix should then dilate at a rate of at least 1 centimetre per hour. Every 30 minutes, the health-care worker should plot the mother's heart rate, contraction pattern, and the fetal heart rate on the partograph. Every two hours the mother's temperature should be plotted. Every four hours the mother's blood pressure should be plotted. If the mother is not in active labour at the time of admission, then a partograph should be attached to her chart or medical record and started when her cervical dilation reaches four centimetres.



ADDITIONAL INFORMATION ABOUT THE PARTOGRAPH IS AVAILABLE AT:  
[http://www.glowm.com/resources/glowm/videos/safermotherhood/Partograph%20E-tool/Partograph\\_WHO.swf](http://www.glowm.com/resources/glowm/videos/safermotherhood/Partograph%20E-tool/Partograph_WHO.swf)

## DOES THE MOTHER NEED TO START ANTIBIOTICS?

Antibiotics prevent and treat bacterial infections. If a pregnant woman has an infection, or has risk factors for infection, then antibiotic treatment will help to prevent infection-related complications in her, in the fetus, and in the newborn.<sup>13</sup> Before administering any medications, it is important to ask for allergies. The Checklist user should confirm whether the mother needs antibiotics at the time of admission and, if indicated, the antibiotics should be administered immediately. Antibiotics should be given if the mother has a temperature of 38°C or higher, foul-smelling vaginal discharge, or rupture of the membranes for more than 18 hours.<sup>11,12</sup>

## DOES THE MOTHER NEED TO START MAGNESIUM SULFATE AND ANTIHYPERTENSIVE TREATMENT?

Pre-eclampsia is a severe form of hypertension in pregnancy. Very high blood pressure ( $\geq 160/110$  mmHg) is associated with complications for the mother, including eclampsia and stroke, and for the baby, intrauterine death. Prophylactic treatment of mothers who have pre-eclampsia with magnesium sulfate and antihypertensive treatment will help prevent these complications.

The Checklist user should confirm whether the mother needs magnesium sulfate and antihypertensive treatment at the time of admission. If indicated, the magnesium sulfate and antihypertensive agent (according to local guidelines) should be urgently administered if the mother has diastolic blood pressure at or over 110 mmHg with 3+ proteinuria, or if her diastolic blood pressure is at or over 90 mmHg with 2+ proteinuria and any signs of pre-eclampsia (severe headache, visual disturbance or epigastric pain).<sup>11</sup> If systolic blood pressure is 160 mmHg or more, use antihypertensive treatment (according to local protocol) to lower and maintain blood pressure to just under 150/100 mmHg. Anticonvulsant therapy with magnesium sulfate should continue for 24 hours after childbirth or after the last convulsion, whichever is the later.<sup>11,14</sup> High blood pressure should be confirmed by at least one repeated measurement.

## CONFIRM SUPPLIES ARE AVAILABLE TO CLEAN HANDS AND WEAR GLOVES FOR EACH VAGINAL EXAM

Health-care workers with unclean hands can transmit infections to mothers and babies. Good hand hygiene practices help to prevent avoidable infections. Health-care workers should thus use an alcohol-based handrub, or thoroughly wash their hands with soap and clean water every time (before and after) they have contact with a mother or newborn. Any time a health-care worker has contact with secretions from a mother or newborn (for example, during vaginal exams) then health-care workers should thoroughly wash their hands and also wear clean gloves.<sup>11,12</sup> Health-care workers should also clean their hands before any clean aseptic procedure. Hygiene supplies (i.e. soap and clean running water or alcohol-based handrub and clean gloves) must be readily available and accessible at all times to help health-care workers adhere to good hand hygiene practices.



CORRECT  
TECHNIQUES FOR  
HAND HYGIENE USING  
ALCOHOL-BASED  
HANDRUB OR SOAP  
AND CLEAN WATER  
ARE AVAILABLE AT  
[http://www.who.int/gpsc/5may/tools/workplace\\_reminders/en/](http://www.who.int/gpsc/5may/tools/workplace_reminders/en/)

## **ENCOURAGE BIRTH COMPANION TO BE PRESENT AT BIRTH**

Birth companions provide support to the mother during labour, childbirth, and in the postpartum period. They can also help to recognize danger signs, alert the health-care worker in case of emergency, and care for the baby. Examples of possible birth companions are family members, the spouse, friends, community health workers, doulas, or staff members.

Evidence shows that birth companions can help to improve health outcomes. The presence of birth companions increases the likelihood that the mother will have a spontaneous vaginal delivery instead of a caesarean, vacuum, or forceps birth.<sup>11</sup> Mothers with birth companions have also been shown to need fewer pain medications, be better satisfied with their delivery experience, and have slightly shorter labours. Babies can also benefit. Studies have shown that newborns' 5-minute Apgar Scores are better and there is improved maternal bonding postnatally when birth companions are present.<sup>11,12,15,16</sup>

The Checklist user should encourage the presence of a birth companion during labour, birth, and in the postpartum and postnatal periods. If a birth companion is present at the time of admission then s/he should be encouraged to remain present for the entire childbirth process. If a birth companion is not present at the time of admission, then the mother should be encouraged to identify a birth companion.

## **CONFIRM THAT MOTHER OR COMPANION WILL CALL FOR HELP DURING LABOUR IF NEEDED**

Complications are unpredictable and can happen at any time during childbirth. In general, complications become more difficult to manage the longer they go undetected and untreated. It is therefore important for health-care workers to detect and treat complications as soon as possible.

"Danger signs" are clinical signs and symptoms that indicate a complication may be developing or is already present. Many times, health-care workers will be able to recognize danger signs directly. Sometimes, however, health-care workers will be attending to other delivery cases or will be otherwise distracted at the time that a danger sign develops in a mother or baby. In such a situation, it is important that the mother (and birth companion) alert the health-care workers to the presence of danger signs. Mothers (and birth companions) should therefore be educated to recognize danger signs and to alert a health-care worker immediately in the event that a danger sign appears. Health-care workers are encouraged to share their own names with the mother and birth companion since this usually helps the mother and the birth companion to feel more comfortable asking for help.

The Checklist user should tell the mother (and birth companion) at the time of admission to alert a health-care worker immediately if any of the following danger signs develop during labour: bleeding, severe abdominal pain, severe headache or visual disturbance, or inability to urinate. The Checklist user should also tell the mother to alert a health-care worker when she feels the urge to push since this means the baby will likely to be born soon.

**PAUSE POINT 2****JUST BEFORE PUSHING (OR BEFORE CAESAREAN)**

**Checking the mother just before pushing (or before Caesarean) is important to detect and treat complications that can occur during labour and to prepare for routine events and possible crisis situations that may occur after birth.**

**DOES MOTHER NEED TO START ANTIBIOTICS?**

As stated above, antibiotics prevent and treat bacterial infections. If a labouring mother has an infection, or has risk factors for infection, then antibiotic treatment will help to prevent infection-related complications in her, in the fetus, and in the newborn.<sup>13</sup> Before administering any medications, it is important to ask for allergies. The Checklist user should confirm whether the mother needs antibiotics at the time that pushing starts and, if indicated, the antibiotics should immediately be administered. Antibiotics should be administered if the mother has a temperature of 38°C or higher, foul-smelling vaginal discharge, or rupture of the membranes for more than 18 hours.<sup>11,12</sup> Antibiotics should also be administered if the mother will be undergoing a Caesarean section delivery.<sup>13</sup>

**DOES MOTHER NEED TO START MAGNESIUM SULFATE AND ANTIHYPERTENSIVE TREATMENT?**

As described above, pre-eclampsia is a severe form of hypertension in pregnancy. Prophylactic treatment of mothers who have pre-eclampsia with magnesium sulfate and antihypertensive medicines will help prevent hypertension-related complications for her (specifically, eclamptic fits or seizures and stroke) and for her baby. The Checklist user should confirm whether the mother needs magnesium sulfate and antihypertensive treatment at the time that pushing starts and, if indicated, magnesium sulfate should be administered immediately and blood pressure should be lowered with antihypertensives. Magnesium sulfate should be administered if the mother has diastolic blood pressure at or over 110 mmHg with 3+ proteinuria or if her diastolic blood pressure is at or over 90 mmHg with 2+ proteinuria and any signs of pre-eclampsia (severe headache, visual disturbance or epigastric pain).<sup>11,14</sup> High blood pressure should be confirmed by at least one repeated measurement.

If systolic blood pressure is 160 mmHg or more, use antihypertensives (according to local protocol) to lower and maintain blood pressure to just under 150/100 mmHg. Anticonvulsant therapy with magnesium sulfate should continue for 24 hours after childbirth or 24 hours after the last convulsion, whichever is the later.

**CONFIRM ESSENTIAL SUPPLIES ARE AT BEDSIDE AND PREPARE FOR DELIVERY**

The moment of birth and the first few minutes after birth are the highest risk periods for complications in the mother and her baby. Crisis situations can evolve quickly and put the mother and baby at very high risk of complications and even death. In general, health-care workers will not have enough time to prepare once in a crisis situation; they must therefore prepare beforehand for both routine care and potential crisis situations at every birth, in order to keep the mother and baby safe.

There are two ways in which health-care workers need to be prepared at the time of birth. Specifically, health-care workers must prepare essential supplies and also prepare themselves to take essential actions. The essential supplies must always be clean, functioning and ready

to use before the birth occurs. Actions must be performed immediately or complications can develop quickly. Health-care workers must therefore remember the essential actions before birth—so that they can quickly complete them at the time of birth and in the first few minutes after birth.

**For mother:** At the start of pushing (or before Caesarean), health-care workers should confirm that the following essential supplies for the mother are at the bedside and ready to be used at the time of birth: Gloves; and soap and clean water with single use of towels, or alcohol-based hand rub; and oxytocin (10 international units in a syringe).

The use of gloves, soap and clean water, single use of towels and alcohol-based hand rub is to ensure good hand hygiene practices during delivery to prevent infection in the mother and baby. The use of oxytocin is to help the uterus to contract to prevent postpartum bleeding.

At the start of pushing health-care workers should also review the steps involved to care for the mother immediately after birth. Essential actions for the mother immediately after birth will help to ensure safe expulsion of the placenta and prevent postpartum bleeding. It is important to ensure there are no additional babies to be delivered before starting with the first step, which is to administer 10 IU of oxytocin intramuscularly to the mother within 1 minute of delivery.

The second step is to clamp and cut the cord before ensuring complete delivery of the placenta. The third step is to massage the uterus immediately after the delivery of placenta. This technique helps the uterus to contract and will help to prevent bleeding. Finally, the health-care worker should feel the uterus to be sure that it remains contracted.

**For baby:** At the start of pushing (or before Caesarean), health-care workers should confirm that the following essential supplies for the baby are at the bedside and ready to be used at the time of birth: clean towels, tie or cord clamp, a sterile blade to cut the umbilical cord, a suction device, and bag-and-mask.

The use of a clean towel to dry the baby immediately after birth will help to keep the baby warm since amniotic and vaginal fluid on the baby can promote potentially harmful cooling as the fluid evaporates.<sup>11,17</sup> Also, the process of drying the baby provides stimulation for the baby that will help to signal the baby to cry or breathe.

The use of a sterile blade to cut the cord will help prevent infection in the newborn baby (non-sterile blades risk transmitting infection to the baby).<sup>11,17</sup> A tie or cord clamp should be placed around the cord before cutting in order to prevent bleeding.<sup>11,17</sup> Evidence suggests that the best time to clamp and cut the cord is 1–3 minutes after the baby is born.<sup>18</sup> This length of time allows the right amount blood to enter the baby's circulation.

The use of a suction device to clear secretions from the baby's mouth and nose will be important if the baby's airway is obstructed and the baby fails to immediately cry or breathe at birth. The use of a bag-and-mask device will be important if the baby requires resuscitation to begin crying or breathing.<sup>18</sup>



MORE INFORMATION  
ABOUT CARE AT THE  
TIME OF BIRTH CAN  
BE FOUND AT:  
[http://www.who.int/reproductivehealth/publications/maternal\\_perinatal\\_health/pcpnc-guide/en/](http://www.who.int/reproductivehealth/publications/maternal_perinatal_health/pcpnc-guide/en/)

At the start of pushing, health-care workers should also review the steps involved to care for the baby immediately after birth. Essential actions for the baby immediately after birth will help to ensure a successful transition to extrauterine life. The period of one minute following birth is called the “golden minute” for the baby because the baby must start crying or breathing by approximately one minute of age in order to be safe.<sup>18</sup> If the baby does not cry or breathe spontaneously within one minute of birth, then health-care workers must quickly provide assistance.

The first step after birth, is immediately to dry and keep the baby warm. Keeping the baby warm can be accomplished by putting the baby skin-to-skin on the mother or covering the baby with a warm, dry cloth. If the baby cries and appears healthy, then routine care can be provided. If the baby does not cry or breathe, then the health-care worker should stimulate the baby by rubbing the baby’s back. If the baby still does not cry or breathe, then the health-care worker should quickly clamp and cut the umbilical cord, clean or suction the baby’s mouth and nose if they are obstructed, urgently ventilate the baby with a bag-and-mask, and call for help.

Most babies that do not cry or breathe at birth will begin to do so when they are stimulated. Babies that do not respond to stimulation will almost always start to cry or breathe when positive pressure ventilation is appropriately delivered with a bag-and-mask.<sup>11,17,18,19</sup>

### **ASSISTANT IDENTIFIED AND READY TO HELP AT BIRTH IF NEEDED**

As described above, the moment of birth and the first few minutes after birth are the highest risk period for complications in the mother and the baby and preparation is paramount. Health-care workers must prepare beforehand for possible crisis situations at birth in order to keep the mother and baby safe. Having an assistant available in the event that a crisis situation occurs is also important. They can perform several complimentary roles, including assessing the mother or baby, starting IVs, administering medications, organizing referrals and calling for additional help.

At the start of pushing, health-care workers should identify an assistant who is informed that the birth will happen soon, who will remain nearby, and who will be ready to help at birth if needed. The assistant can be another health-care worker or, in settings where there are staff shortages, the assistant can be the birth companion or another layperson (in this case, the assistant will not be expected to perform medical tasks such as starting IVs or administering medications, but can help to gather supplies, call for additional help, and other simple but important tasks).<sup>11,14</sup>

**PAUSE POINT 3****SOON AFTER BIRTH (WITHIN ONE HOUR)**

**Checking the mother and baby soon after birth (within one hour) is important to detect and treat complications that can occur after delivery, and to educate the mother (and her companion) about danger signs for which she should call for help.**

**IS THE MOTHER BLEEDING ABNORMALLY?**

Abnormal postpartum bleeding is a major complication that must be detected and treated as soon as possible. Postpartum bleeding can occur due to several conditions, including uterine atony, retained placenta or placental fragments, a vaginal tear, or uterine rupture. Abnormal bleeding is defined by a blood loss of 500 ml or more, or any blood loss in which the mother's condition deteriorates, particularly if she is anaemic (if a mother is severely anaemic, the threshold for initiating action may be much lower than 500 ml).<sup>20,21</sup>

The Checklist user should assess the mother for abnormal bleeding soon after birth (within one hour) and perform the following actions if the mother is bleeding abnormally: massage the uterus, consider the administration of more uterotonic such as oxytocin, start an IV and give IV fluids, keep the mother warm, and treat the specific cause of the abnormal bleeding.<sup>14,16,18,20,22</sup> It is also important to assess the pulse of the mother: a rising pulse rate is an early warning of hypovolemic shock, as the pulse rises before other signs of shock are evident.<sup>11</sup>



**ADDITIONAL INFORMATION ABOUT MANAGING POSTPARTUM HAEMORRHAGE IS AVAILABLE AT:**  
[http://apps.who.int/iris/bitstream/10665/75411/1/9789241548502\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/75411/1/9789241548502_eng.pdf)

**DOES MOTHER NEED TO START ANTIBIOTICS?**

As described above, antibiotics prevent and treat bacterial infections. If a mother in the postpartum period has an infection, or has risk factors for infection, then antibiotic treatment will help prevent infection-related complications.<sup>7</sup> Before administering any medications, it is important to ask for allergies. The Checklist user should confirm whether the mother needs antibiotics soon after birth (within one hour) and, if indicated, the anti-biotics should be administered immediately. Antibiotics should be administered if the mother's placenta was removed manually, if she has suffered a third or fourth degree perineal tear or if she has a temperature of 38°C or higher and chills, or foul-smelling vaginal discharge.<sup>11,12,16,21,23</sup>

**DOES MOTHER NEED TO START MAGNESIUM SULFATE AND ANTIHYPERTENSIVE TREATMENT?**

As described above, pre-eclampsia is a severe form of hypertension in pregnancy. Prophylactic treatment of mothers who have pre-eclampsia with magnesium sulfate and antihypertensive medicines helps to prevent hypertension-related complications (specifically, eclamptic fits or seizures). Hypertensive disease in pregnancy can still be a problem after delivery of the baby; up to a third of eclamptic fits occur after childbirth. The Checklist user should confirm whether the mother needs magnesium sulfate and antihypertensive treatment soon after birth (within one hour) and, if indicated, the magnesium sulfate should be administered immediately. Magnesium sulfate should be administered if the mother has diastolic blood pressure at or over 110 mmHg with 3+ proteinuria or if her diastolic blood pressure is at or over 90 mmHg with 2+ proteinuria and any signs of pre-eclampsia (severe headache, visual disturbance or epigastric pain).<sup>11,14</sup> High blood pressure should be confirmed by at least one repeated measurement.

If systolic blood pressure is greater than 160 mmHg, give antihypertensive medications to lower and keep diastolic blood pressure just under 150/100 mmHg. Anticonvulsant therapy with magnesium sulfate should continue for 24 hours after childbirth or for 24 hours after the last convulsion, whichever is the later.

### **DOES BABY NEED REFERRAL?**

Babies with complications may require referral to another facility to ensure they receive safe care.<sup>11,17,20,22</sup> The Checklist user should confirm whether the baby needs referral to another facility by reviewing the facility's criteria for referral. If referral is indicated, the health-care worker should take immediate action to organize safe transfer. The health-care worker should communicate the reason for referral to the mother and to health-care workers at the facility to which the baby is being referred. Posting a list of referral criteria in the postnatal area can serve as a useful reference for health-care workers and help them to rapidly identify babies who should be referred.

### **DOES BABY NEED ANTIBIOTICS?**

As described above, antibiotics prevent and treat bacterial infections. If a baby has an infection, or has risk factors for infection, then antibiotic treatment will help to prevent infection-related complications.<sup>13</sup> Babies are particularly susceptible to infections because their immune systems are relatively weak. It is urgent that babies with an infection or risk factors for an infection be treated immediately. The Checklist user should confirm whether the baby needs antibiotics soon after birth (within one hour) and, if indicated, the antibiotics should be administered immediately. The baby will need antibiotics if antibiotics were administered to the mother, or if the baby has any of the following: respiratory rate >60 per minute or <30 per minute; chest in-drawing, grunting, or convulsions; poor movement on stimulation; or temperature <35°C (and not rising after warming) or temperature ≥38°C.<sup>11,16,24</sup>

### **DOES BABY NEED SPECIAL CARE OR MONITORING?**

Some babies may have risk factors that do not meet criteria for referral, but for which special care or monitoring is nevertheless required, to be sure that the baby stays safe. For example, small or premature babies may appear healthy, but they are in fact much more susceptible to complications in the first hours and days after birth. Checklist users should confirm whether the baby needs special care or monitoring soon after birth (within one hour) and, if indicated, the special care or monitoring should immediately be arranged. Special care or monitoring should be given if the baby is born more than one month early, has a birth weight <2500 grams, needs antibiotics, or required resuscitation to help cry or breathe at birth.<sup>11,18,22,25,26</sup>

## **START BREASTFEEDING AND SKIN-TO-SKIN CONTACT (IF MOTHER AND BABY ARE WELL)**

Early breastfeeding is good for both babies and mothers. Evidence suggests that early breastfeeding within one hour of birth helps the baby to establish good bonding with the mother. Early breastfeeding may also stimulate uterine contraction for the mother through maternal hormone release and help to prevent postpartum vaginal bleeding.<sup>24,27,28</sup>

Babies are highly susceptible to cold stress. Complications can happen quickly if a baby's core temperature falls below the normal range. Skin-to-skin contact of the baby with the mother is the best method for keeping the baby warm. To give skin-to-skin contact, the baby's skin should be placed against the mother's skin, and then a clean sheet or blanket should be wrapped around the mother and the baby together. Immediate skin-to-skin contact after delivery also helps to promote bonding between the baby and the mother.<sup>11,17,28,22,24,26</sup>

If the mother and baby are both doing well, the Checklist user should confirm that breastfeeding and skin-to-skin contact have been started soon after birth (within one hour).

## **CONFIRM MOTHER/COMPANION WILL CALL FOR HELP IF DANGER SIGNS PRESENT**

As described above, complications are unpredictable and can happen at any time during the birth process. This is true for both mothers and babies. Mothers (and birth companions) can be educated to recognize danger signs and to alert a health-care worker immediately in the event that a danger sign occurs.

The Checklist user should tell the mother (and birth companion) soon after birth (within one hour) to alert a health-care worker immediately if any of the following danger signs for the mother develop in the postpartum period: bleeding, severe abdominal pain, severe headache or visual disturbance, difficulty breathing, fever or chills, or difficulty emptying bladder.<sup>11,17,18,22,24</sup>

The Checklist user should also tell the mother (and birth companion) soon after birth (within one hour) to alert a health-care worker immediately if any of the following danger signs for the baby develop in the postnatal period: fast breathing or difficulty breathing, fever, unusually cold, stopping feeding well, less activity than normal, or whole body becomes yellow.<sup>11,17,18,24</sup>

**PAUSE POINT 4****BEFORE DISCHARGE**

Checking the mother and baby before discharge is important to be sure that the mother and baby are healthy before discharge, that follow-up care has been arranged, that family planning options have been discussed and offered, and to educate the mother (and her companion) about danger signs after discharge for which immediate skilled care is needed.

**CONFIRM STAY AT FACILITY FOR 24 HOURS AFTER DELIVERY**

Half of all maternal deaths and 40% of neonatal deaths occur during the first 24 hours after childbirth. WHO therefore recommends that the mother and her newborn should be observed in the health facility for at least 24 hours before discharge.<sup>29,30,31</sup>

**DOES MOTHER NEED TO START ANTIBIOTICS?**

Antibiotics are needed to treat infections that can develop in the mother in the postpartum period. Puerperal sepsis is a major cause of maternal infection after delivery. Other potential infections are mastitis or wound infection after a Caesarean section: these conditions may not be present at the time of discharge, but women should be asked to report at the facility if these problems arise after discharge. Before administering any medications, it is important to ask for allergies. The Checklist user should confirm whether the mother needs antibiotics before discharge and, if indicated, the antibiotics should be administered immediately and discharge delayed. Antibiotics should be administered and discharge delayed if the mother has a temperature of 38°C or higher and chills or foul-smelling vaginal discharge.<sup>11,12,16,21</sup>

**IS MOTHER'S BLOOD PRESSURE NORMAL?**

Before discharge of the mother, the Checklist user should check the blood pressure and pulse to make sure that the blood pressure is normal as preeclampsia can arise after childbirth and one third of all the eclamptic seizures appear during the postpartum period. Furthermore, if the mother has had a postpartum haemorrhage, it is important to know that her blood pressure and pulse are normal.<sup>20</sup>

**IS MOTHER BLEEDING ABNORMALLY?**

As described above, abnormal postpartum bleeding is a major complication that must be detected and treated early. The Checklist user should confirm whether the mother's bleeding is controlled before discharge and whether the pulse is normal. This can be accomplished by asking the mother about her blood loss and by examining her. The health-care worker should examine the mother's abdomen to be sure that the uterus is contracted and check blood loss from the vagina.<sup>15</sup> The health-care worker should also check for other signs or symptoms such as breathlessness, feeling tired or too weak to get out of bed.<sup>11</sup> If the mother's bleeding is not controlled or her pulse is high, then the mother should be treated and the mother's discharge should be delayed. Under no circumstances should a mother with uncontrolled bleeding be discharged.

## DOES BABY NEED TO START ANTIBIOTICS?

Antibiotics are needed to treat infections that develop in the baby in the postnatal period. Bacterial sepsis is a major cause of death in newborn babies.<sup>28</sup> The Checklist user should confirm whether the baby needs antibiotics before discharge and, if indicated, antibiotics should be administered immediately, discharge should be delayed and special care or monitoring should be given. The baby needs antibiotics if any of the following are present: respiratory rate >60 per minute or <30 per minute; chest in-drawing, grunting, or convulsions; poor movement on stimulation; temperature <35°C (and not rising after warming) or temperature ≥38°C; has stopped breastfeeding well; or umbilicus redness extending to skin or draining pus.<sup>11,17,24</sup>

## IS BABY FEEDING WELL?

The Checklist user should confirm that adequate breastfeeding has been established before the mother and baby are discharged from the birth facility. In the event that breastfeeding is not possible, then the Checklist user should confirm that the baby is bottle-feeding adequately. Signs of feeding well in the baby are active feeding every 1-3 hours with frequent urination or stooling.<sup>11,18,22,24</sup> If the baby is not feeding well, then help should be given to the mother and the baby to establish good feeding and discharge should be delayed.

## DISCUSS AND OFFER FAMILY PLANNING OPTIONS TO MOTHER

Family planning can help to prevent unwanted pregnancies and help to keep the mother safe in the future. Checklist users should confirm that family planning options have been discussed with and offered to the mother before discharge. Ideally, mothers should be given at least two family planning options. Family planning options may include condoms, intra-uterine devices, implantable rods, long-acting injectable progesterone (DMPA), oral contraceptives, and also tubal ligation.

Intra-uterine devices can be inserted immediately after childbirth or after six weeks postpartum. Insertion of an intra-uterine device within 10 minutes of placenta delivery is best, but it can also be inserted up to 48 hours postpartum with low levels of expulsion.<sup>32</sup> Implantable devices (Norplant, Implanon) can be inserted immediately after childbirth or after six weeks postpartum.

Use of progesterone-only methods, with the exception of the levonorgestrel-bearing intra-uterine device, are not usually recommended for mothers who are less than six weeks postpartum and breastfeeding, unless other more appropriate methods are unavailable or unacceptable. Beyond six weeks postpartum, there is no restriction on the use of progesterone-only contraceptive methods for breastfeeding mothers. The levonorgestrel-bearing intra-uterine device is not usually recommended for the first four postpartum weeks, unless other more appropriate methods are unavailable or unacceptable. Beyond four weeks postpartum, there is no restriction on its use.<sup>33</sup>



FOR MORE INFORMATION ON POSTPARTUM OPTIONS, ACCESS THE LATEST WHO MEDICAL ELIGIBILITY CRITERIA AT: [http://www.who.int/reproductivehealth/publications/family\\_planning/MEC-5/en/](http://www.who.int/reproductivehealth/publications/family_planning/MEC-5/en/)

Combined hormonal contraceptives containing estrogen should generally be avoided for the first 21 days postpartum. In addition, mothers who are breastfeeding or have additional risk factors for venous thromboembolism should not use them in the first 21 days postpartum.<sup>34</sup> Between 21 and 42 days postpartum, combined hormonal contraceptives can generally be used, although for some mothers with additional risk factors for thromboembolism, these methods should not be used unless other more appropriate methods are unavailable. Breastfeeding mothers should generally not use combined hormonal contraceptives prior to six months postpartum.<sup>34</sup>

If the mother wishes to have tubal ligation, it may be advantageous to schedule this procedure before she is discharged.

Checklist users should also take the opportunity before discharge of the mother of discussing optimal birth spacing. After a live birth, the recommended interval before attempting the next pregnancy is at least 24 months in order to reduce the risk of adverse maternal, perinatal and infant outcomes.<sup>11,17,35</sup>

#### **ARRANGE FOLLOW-UP AND CONFIRM MOTHER/COMPANION WILL SEEK HELP IF DANGER SIGNS APPEAR AFTER DISCHARGE**

Even if the mother and baby appear healthy at the time of discharge, complications can occur after the mother and baby have returned home. Routine follow-up for both the mother and baby are necessary so that health-care workers can detect and treat any complications early.

Mothers (and birth companions) should also be educated to recognize danger signs themselves for which skilled care should be sought after discharge. The Checklist user should tell the mother (and birth companion) before discharge to alert a health-care worker immediately if any of the following danger signs occur in the mother: bleeding, severe abdominal pain, severe headache or visual disturbance, difficulty breathing, fever or chills, difficulty emptying her bladder, or epigastric pain.<sup>11,17,18,22,24</sup>

The Checklist user should tell the mother (and birth companion) before discharge to alert a health-care worker immediately if any of the following danger signs occur in the baby: fast breathing or difficulty breathing, fever, unusually cold, stopping to feed well, less activity than normal, or whole body becoming yellow.<sup>17,18,22,24</sup>

# Optional, context-specific adaptations for the Checklist

There are different evidence-based optional adaptations for the Checklist that are specific to the context. Some of these include antiretrovirals (ARVs) for areas where the prevalence of HIV is high; malaria testing in high-risk areas; and management of preterm births at facilities with resources and possibilities to offer the necessary care.

## HIV AND ANTIRETROVIRALS

### **Pause point 1:** Does the mother need to start antiretrovirals?

Mothers who have tested positive for the Human Immunodeficiency Virus (HIV) can become very sick, and HIV can be passed from HIV positive mothers to their babies. If a pregnant woman has HIV then lifelong antiretroviral treatment (ART) will help to prevent infection-related complications for her, the fetus, and for the newborn. It will also reduce the risk of transmission to her baby. Prophylaxis with antiretrovirals to mothers who are eligible for ART will help to prevent virus transmission to newborns. The Checklist user should confirm whether the mother needs antiretrovirals (ART or prophylaxis) at the time of admission and, if indicated, the antiretrovirals should be administered immediately.

Since 2013, WHO recommends Option B and B+ as HIV treatment protocols.<sup>36</sup> Each country decides which protocol to adopt depending on their status in terms of the epidemic, priorities and cost implications. If a pregnant woman is found to be HIV-positive and is eligible for ART, then antiretroviral drugs should be given according to the national protocol.

According to treatment protocol B, HIV positive mothers should have triple ARV treatment throughout pregnancy, childbirth and breastfeeding. The treatment is made lifelong only if she meets the eligibility criteria of CD4 cell count of less than 500 cells /mm<sup>3</sup> or clinical stage 3 and 4. Option B+ protocol for treatment of HIV implies lifelong triple ARV treatment during pregnancy, childbirth, breastfeeding and thereafter, irrespective of CD4 count or clinical stage.

If a pregnant woman is found to be HIV-positive and is eligible for ART, then antiretroviral drugs should be given according to the national protocol. HIV-positive mothers who need ART should continue treatment throughout labour, birth, breastfeeding and thereafter. Treatment should start as soon as possible after HIV status is confirmed and appropriate counselling and explanations given.

If the mother's HIV status is unknown at the time of admission, then an HIV test should be immediately obtained if possible, according to locally recommended practices. Every mother's HIV status should be documented in her medical record. It is important that other health-care workers who care for the mother and baby know about the mother's HIV status so that appropriate management of the mother and baby after birth can be ensured.

**Pause point 3: Does Baby need antiretrovirals?**

HIV infection can be transmitted to babies from mothers who are HIV-positive. Administering antiretroviral prophylaxis to babies immediately after birth and throughout the breastfeeding period can help to decrease the risk of HIV transmission.<sup>37,38</sup> Checklist users should confirm before delivery whether the baby needs antiretroviral prophylaxis and, if indicated, antiretroviral prophylaxis should be given as soon after birth as possible (within 4-6 hours). Thereafter, if the mother is HIV-positive, antiretroviral prophylaxis should be administered according to local guidelines.

**Pause point 4: If mother is HIV positive, mother and baby have ARVs for six weeks**

The Checklist user should have confirmed by now whether the mother is HIV-positive and whether treatment or prophylaxis with antiretrovirals are indicated according to local guidelines. If the mother is HIV-positive, a six-week supply of antiretrovirals should be given to the mother and baby and follow-up for continued HIV management should be arranged.<sup>36,37</sup>

**MALARIA**

Pause points 1, 2, 3 and 4: Mothers with fever ( $\geq 38^{\circ}\text{C}$ ) should be tested with rapid diagnostic tests (RDTs) for malaria and treated accordingly following the existing national guidelines. If treatment is given before the birth of the child, it is important to remember that some treatments may affect the newborn: for example hypoglycaemia when treating with quinine.<sup>39</sup>

**MANAGEMENT OF A PRETERM BIRTH**

Management of preterm birth is an optional adaptation for the Checklist and only for health-care facilities that have the resources and possibilities of offering adequate care for the mother and her newborn.

Management of preterm birth with antenatal corticosteroids for lung maturation is recommended for gestational age between 24-34 weeks, mothers with preterm prelabour rupture of membranes (PPROM), mothers with hypertensive disorders and diabetes and pregnancies with fetal growth restriction. There are however criteria that should be met before deciding to give antenatal corticosteroids such as an accurate gestational age assessment, imminent birth, that maternal infection has been excluded and that the health-care facility can offer a suitable level of preterm care for the mother and her baby.<sup>40</sup>

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