

# Assessment Tool for Hospital Care

Improving the Quality of Care for Reproductive,  
Maternal, Neonatal, Child and Adolescent Health  
in South-East Asia Region



## A Regional Framework



**World Health  
Organization**

Regional Office for South-East Asia





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## **Introduction**



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## Introduction

Available statistics on the causes of maternal, newborn and child mortality highlight the fact that most of the deaths are as a result complications during and following pregnancy and/or childbirth; or from severe illnesses in children that require optimal care at health facilities. Much of the maternal deaths that occur in high burden countries result mainly from five morbidities: severe bleeding, high blood pressure, sepsis, unsafe abortion and obstructed labour; and the leading causes for child deaths being neonatal causes (preterm complications, birth asphyxia and neonatal infections), pneumonia, diarrhoea, malaria, and malnutrition. These deaths are 'mostly preventable' because the necessary medical interventions exist and are well known. However, the main obstacles are lack of access and poor quality of care provided in hospitals during pregnancy, childbirth and early postnatal period for the mothers and newborns, and poor case management of severely ill children who are under five years of age.

This generic assessment tool is to be used to evaluate the quality of care for mothers, babies and children in hospitals, based on standards derived from the WHO Pocket book of Hospital Care for Children and the WHO Integrated Management of Pregnancy and Childbirth (IMPAC). The aim is to aid Ministry of Health, key stakeholders and partners who are involved in quality of care improvement process, to carry out comprehensive assessments of maternal, neonatal and paediatric health care provided at facility level in a systematic way. Ultimately, this is to contribute to identifying gaps in key areas of maternal, newborn and child health care that need to be improved.

### 1. Structure of the tool

The tool attempts to be comprehensive but not exhaustive in addressing areas that are important to provide appropriate standard of care for mothers, babies and children admitted in hospitals. The assessment tool provides some prioritization recognizing that some aspects of patient care are essential. It helps hospitals to prioritize these essential aspects first and other areas, though important, may be addressed later. The key priority areas with the highest impact on improving quality of care include triage, hygiene (including hand-washing); availability of emergency and first line drugs; availability of updated standard treatment guidelines; emergency care and assessment; and management of common and routine conditions. Before use in a country, the assessment tool should be reviewed by health professionals for its consistency with national standards and guidelines, such as an essential drug list, or prevalence of diseases and adapted where necessary.

The tool includes sections with:

- 1) Brief questionnaires with yes or no answers, and space for written comments from observations or interviews;

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- 2) Checklists for availability of services, equipment, drugs and supplies;
- 3) Structured forms for scoring of case management observations based on accepted standards of care and criteria;
- 4) Summary forms for each clinical case management observations and overall summary for the assessment;
- 5) Structured table for prioritizations and a framework for an action plan;
- 6) Structured interviews for health professionals, caregivers or mothers.

The assessment tool is organized in such a way, so as to facilitate dialogue with various stakeholders in the hospital during the hospital visit. These different sections are structured as follows:

### **1.1 Module A - General Section**

This is the first section of the tool, which looks at the general hospital information on the basic infrastructure and layout of the facility and hospital support systems including overall staffing. This information is usually collected prior to the hospital visit and the questionnaires are sent by post or email to the participating hospital. The areas that are assessed in this section are:

- Lay out
- Infrastructure
- Staffing
- Hospital statistics
- Health information system and medical records
- Essential drugs and blood products
- Laboratory
- Guidelines and auditing

### **1.2 Modules B, C and D - The Continuum of Care**

This section of the tool has three modules- a module on maternal care B; a neonatal module C and a paediatric module D. Each of these modules can be assessed separately on different occasion as well as together in one cycle. Each of the modules has the following subsections:

- Emergency care
- Wards
- Infection control and supportive care
- Essential drugs, equipment and supplies
- Case Management
- Monitoring and follow-up

The quality of medical care provided in the facility to pregnant women and new mothers, newborns and children are assessed in the case management sections and are based on the accepted standards of care.

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### 1.3 Annexes - Interview questionnaires

There are 3 structured questionnaires to be administered during the assessment visit. These questionnaires are designed to capture additional information on access to the facility, perception of care provided and services received. This is assessed from both the provider and the patient's perspective. These can be self-administered or via interview from caregivers, patients and clients. The following are the interview questionnaires in this section:

- Interview with new mother
- Interview with caregivers or family members of children
- Interview of health professionals

\* This section also provides a postal questionnaire that may be sent to the hospital in advance to collect information infrastructure, staffing and supplies

## 2. Adaptation of the tool

The tool that has been developed is a generic framework that needs to be adapted to the epidemiology and structure at country/local level. The adaptation may include deleting items that do not appear to be crucial, adding new priority items, or changing the assessment visit agenda to adapt to local needs/resources. For example: A section on management of dengue fever will be necessary in some countries in the South-East Asia. The tool is also sectionalized into modules to allow its adaptation for assessments of maternal, newborn or paediatric care. The tool can also be used at different levels of care, e.g. in small district hospitals or tertiary care centres. It is therefore necessary that the team of national and international assessors, when planning the assessment, identify the sections of the tool that is relevant to the level of hospital being assessed. For example in some hospitals, paediatric surgical services might not be provided and therefore that section maybe removed from the tool, the same is true for the sections regarding obstetric care and particularly obstetric complications. As some specific items within the same section may not be applicable to the facility being assessed, it will be sufficient to classify the item as N.A. (Not Applicable) when this occurs.

### 2.1 Review of the assessment tool

The WHO integrated hospital assessment tool is based on the WHO standards of care and needs to be adapted to the national standards by reviewing the WHO guidelines and its relevance to the country. Items that are not important, such as: a specific disease conditions that do not exist in the country e.g. malaria, dengue fever, are removed from the assessment tool, and other items relevant to the country may be added. Some areas to be considered in the adaptation process are:

- Type of hospital and level of care.
- National standards of for the hospitals
- Existing protocols (clinical guidelines), oxygen or blood transfusion procedures.

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- Essential drug list
- Essential supplies and equipment
- Sections on diseases particular to local epidemiology (e.g. malaria)

In some countries there will be need to translate the national adaptation of the assessment tool into the local language.

### 2.2 National standards of care

The assessment should be based on national standards for hospital care. Ensuring that there are clear evidence-based standards of care against which the tool will assess is critical for improving quality of care and is a major part of the process. Countries may already have various guidelines for managing maternal, neonatal and paediatric conditions in form of national treatment guidelines or hospital case management protocols. These guidelines should be reviewed and compared against WHO standards and guidelines by all stakeholders especially senior clinicians, nurses, representatives from medical and nursing training institutions, professional associations, committees in charge of national treatment guidelines and practicing doctors and nurses from public as well as private hospitals. The assessment tool needs to be adapted to these national standards.

It is important that the standards used are evidence based and are in line with the WHO standards of care. All the assessors will therefore use the same standards. Where there are no national standards or care or guidelines, then the generic tool should be used as it is and the development of guidelines or standards of care should become one of the outcomes of this process.

## 3. Guide to using the assessment tool

The assessment tool is useful for introducing the concept and the contents of internationally recommended guidelines and standards. Indeed, quality assessment appears to be an effective way of introducing WHO guidelines and international standards in the clinical practice at country level. After these have been adapted to the national standards, then the tool can be used for the national level assessment. Through a combination of different sources, the tool allows to build an overall diagnosis of quality of care and to single out those areas that represent a gap in the quality of care.

The tool can be used country-wide as a component of a quality improvement strategy in perinatal and paediatric health. Alternatively, a representative sampling of health care facilities can be assessed to provide results that can be reliably generalizable to interested health authorities at national, provincial, district, or hospital level. The tool can also be used in a single facility for a pilot program of quality improvement. The tool, by providing a semi-quantitative assessment of the quality of care in a variety of key areas, can be used to assess and monitor the baseline situation and subsequent

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improvements, thus providing key information before and after interventions to improve quality of care, as well as for incentive and accreditation programs. The assessment tool can be used both for external assessment and self assessment.

### 3.1 Using the tool

To evaluate the different aspects of the hospital, information is collected in various formats including:

- Brief questionnaires on hospital layout and structure with yes or no answers, and space for written information to be completed during hospital visit observation or through interviews with staff.
- Checklists for equipment, drugs and supplies for completion
- Documenting the management of different conditions based on accepted standards of care and criteria to meet these standards. The documentation follows a scoring system for the practices ranging from are good (according to standards) to weak needing improvement.

Each section is evaluated with the information gathered by different sources and is scored on the criteria that need to be met to reach the standards. The national hospital standards are the minimum requirements for good quality of care for mothers, newborn and children. For the case management sections, the instructions in the assessment tool provide guidance to the standards but do not cover all aspects of a given standard, and therefore it is important to refer to the relevant sections of the *WHO Pocket book of Hospital Care for Children* and the *WHO Integrated Management of Pregnancy and Childbirth (IMPAC)* which may have been adapted to the local context and guidelines in the country.

The tool ensures that the general information, which has been collected prior to the visit through a postal questionnaire, is validated during the hospital visit. The core of the assessment is a hospital visit that lasts about 2 days. Assessors complete the assessment tool recording form. One recording form is used for each hospital. Since the tool is modular it is possible for each area i.e. maternal, newborn or paediatric care to be assessed separately. At the end of the assessment each of section is summarised and a mean score assigned for each standard and comments made on general weaknesses and strengths. At the end of the hospital visit, assessors and hospital administration meet for a debriefing and agree on a plan of action for immediate and later improvements that would be reviewed in the next cycle of hospital assessment.

### 3.2 Questionnaires and checklists

Prior to visiting the facility questionnaires are sent out well in advance of the actual hospital visit (see Annex 4: Postal questionnaire), together with a letter explaining the purpose of the exercise, to hospital directors with a request to provide the information prior to the visit. These questionnaires focus on information expected to be of

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importance for planning quality improvement interventions. Examples of information in this section include: admission rates, case fatality rates, availability of essential drugs, etc. The advantage of sending out the questionnaires/checklists is the possibility to obtain, within a short time and at low cost, comprehensive information on a number of factors that influence the ability of a hospital to provide good quality care. Information from the postal questionnaires will have to be reviewed together with information from onsite observations of quality of care during the visit for hospital assessment.

### 3.3 Hospital visits

The sections of the assessment tool for completion during the hospital visits include information from observations of case management and physical environment with information from interviews with hospital staff and caregivers of sick children. It is suggested to spend as much time as possible on the wards to gain first-hand information by direct observation, especially on the management and care in the hospital. Try to establish by direct observation if the drugs and equipment are available in the emergency room, on the ward or in pharmacy. If possible have a look in theatre/ operating room to check if essential equipment is available. Try to verify information provided by the hospital, staff or patients while observing during the visit. Information from postal questionnaires would be cross-checked during the hospital visit.

### 3.4 Sources of information

- i. **Case observations:** For quality of clinical case management, this is the preferred source of information, and should be used as much as possible. The care for new arrivals and admitted patients to the hospital should be observed first hand without causing any interference. This is complemented by discussion of the case with staff, review of the case records and monitoring charts, and interviewing the caregivers.
- ii. **Records:** If there are not sufficient patients for direct case observations, assessors should ask staff if it is possible to review records. Assessors obtain information on the quality of care for admitted and recently discharged patients by checking records. This source of information is particularly important for relatively rare, but severe conditions such as meningitis, where there might be no case admitted during the time of the visit.
- iii. **Interviews:** Assessors conduct interviews with hospital staff and caregivers to gain some idea of their perception of care for patients in the hospitals. The assessment tool provides an outline for interviews with mothers, caregivers and health workers that can be found in Annexes 2 and 3 respectively. Also, if there are not enough cases for direct review of case management, simulated cases may be presented to staff to assess their competence in clinical case management.
- iv. During hospital visit and rounds there is observation of other items such as cleanliness, whether clinical protocols are being followed, and whether the drugs and equipment listed are available as indicated by the facility. Try to verify information provided; areas of doubt can be clarified by interview.

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### 3.5 Scoring system

For overall scoring, numbers from 5 to 1 are awarded, 5 being good practice complying with standards of care; 4 showing little need for improvement to reach standard of care; 3 meaning some need for improvement to reach standards of care; 2 indicating considerable need for improvement to reach standards of care; and 1 being services not provided, totally inadequate care or potentially life-threatening practices. The assessing group can also chose to adapt the scoring system to that of 0-3 with 0 -equating to service not being provided/totally inadequate care/potentially life threatening practices and 3- good practice complying with standard of care. But this modification should only be done when there is clear agreement and a consensus reached on what each value means. These scores are simply added up at the end of each section and an average for the section used. For each score mark that had been given, sufficient space is left to make a few comments indicating why that score has been given, where possible additional information should be noted, especially on how the information has been obtained (chart review, staff interview, observation of care provided). This information contained in the commentary is useful during the debriefing sessions with hospital staff.

Each of the different sections ends with a summary table, in which the findings can be condensed, and space is provided to include comments on the main strengths and weaknesses, to facilitate a quick overview of each chapter. This will help with keeping in mind important points which should be covered during the final debriefing of the hospital director and staff.

**Table 1: Scoring system, summary score**

| Summary score   | Good | To be improved |   |   |   |
|-----------------|------|----------------|---|---|---|
| (to be circled) | 5    | 4              | 3 | 2 | 1 |

Please indicate the quality of **support** by marking one of the 5 numbers; 5 indicates good quality of care, 4 to 1 indicating levels of necessary improvement (4=small need for improvement, 1=urgent need for improvement)

The summary score should be the average score for the whole section.

After completion of the assessment, there is a summary evaluation score table, where every topic is marked in the evaluation sheet. This table also includes a comments section where the key strengths at the end of the hospital assessment are summarized and the key weaknesses that have been identified are also summarized in a narrative manner, this will be helpful during the debriefing of the hospital staff. This can assist in monitoring hospital improvements over time and to make inter-hospital comparison. Note that if sections of the tool are removed or edited, the total potential summary score

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should be revised. A table is also included for the debriefing and action plan, this can be adapted as needed by the hospital staff and assessors.

## **4. Overview of the assessment process**

The core of the assessment is a hospital visit, which depending on the size of the hospital, may vary from 1-3 full days. It is important that the facility is assessed both in the evenings and also at night. The assessment teams should be composed of people who are well experienced and with complementary and mixed backgrounds, to put the findings into perspective, such as paediatricians, midwives, obstetricians, general physicians, nurses or clinical officers. Depending on the purpose of the assessment, the teams can be composed of internal assessors only; a combination of internal and external assessors that have representation of both national and international members; or only of external assessors. It is always advisable to include staff from other hospitals as part of the assessment team as this will help foster collaboration between hospitals in improving quality of care.

### **4.1 Training of assessors**

Before conducting the assessment, all the assessors need to be made thoroughly familiar with the national accepted standards of care, and/or guidelines and the assessment tool. Such a training takes about 3 days, which will be composed of training sessions to familiarize with the National standards, review of the assessment tool, and practical sessions on hospital wards to become familiar with the assessment tool and to agree between the assessors on scoring.

### **4.2 Planning to conduct the assessment**

After general agreement, written information should be sent to all participant hospitals on the purpose of the assessment and the proposed agenda prior to the visit. The hospital director must be informed in advance and should have agreed to perform the assessment. It is emphasized that the assessment is part of an initiative to support the hospital in improving the quality of care provided to patients and that its purpose is to identify areas of care with greatest potential for positive change. It is explained that in addition to a structured layout of services provided, management of cases will be observed and staff and patients will be interviewed about hospital routines and practices and that the assessor(s) would like to directly observe clinical practice in selected areas.

The visit should attempt to include all relevant services: admission, labour and delivery ward, postnatal ward, nursery, neonatal intensive care unit, paediatric ward, outpatient and emergency area, pharmacy, laboratory, blood bank, etc. The visit is considered over when the information collected is deemed sufficient to allow a reasonable assessment of the quality of care in each main area.

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### **4.3 Steps in conducting the hospital assessment**

The following are the key steps that the assessment units should take when assessing the quality of care being provided in a hospital.

#### ***Step 1: Introductory meeting:***

Schedule a meeting with the medical director, administrators, pharmacists, senior matron, doctors and nursing staff from maternity, newborn and paediatrics. The objectives, purpose and assessment processes and what will be required during the process e.g. patient records and charts (on ward, discharges and deaths), and hospital statistics, are all explained and discussed with the hospital staff. A quick tour of the hospital is requested to see which areas the team will be assessing, you will also agree on when you will be meeting the staff again for the follow-up debriefing session at the end of the visit.

#### ***Step 2: Full team walk-through hospital***

This should be a quick walk-through to get an idea of the layout, sense of patient load and various areas that may need to be visited. The team should try to do this without much interruption of hospital activities. During the walk through take note and understand the organization and other areas that you may need to visit in detail later.

#### ***Step 3: Conduct the assessment***

Decision would be made with the group on how the assessment team will be divided for the different sections that will be assessed. Generally grouping should be into three groups (Maternal, Newborn, Paediatric), but allow for flexibility on how to manage the different areas and sections. Each group should go through patient flow and together and then the various tasks could then be divided as appropriate. The relevant patient/caregiver and health worker interviews should be conducted in each respective team. The team leaders should manage the overall planning and organization of how the team will manage to collect all the information. At the end of the assessment, the different groups summarize their scores to prepare for the assessors' team meeting

#### ***Step 4: Assessors meeting***

At this meeting, regroup and share your key findings and agree on important issues and highlights to debrief the staff from each section. Summarize the key high impact priorities on the summary action plan sheet. Agree on who will be the lead person in providing feedback to the hospital staff.

#### ***Debriefing hospital staff***

Each hospital will receive an immediate feedback at the end of the visit, the purpose is to review the assessment findings and commence planning for implementation of the improvement process. Reconvene all the staff you met at the beginning and start by thanking them, and inform them that the debriefing session will be useful to the staff in making plans to improve quality of care within the hospital. Highlight and commend them on the good things you found, and then present the key weaknesses especially those that have major impact on patient outcomes. There could be some additional

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limited comments may be made by 1 or 2 other members of the assessing team. Encourage the hospital staff to respond to this feedback to reflect on the issues you have raised (should be dialogue with all staff with suggestions) and how they would try to address them.

### ***Hospital action plan***

Work with them to develop a draft action plan summary sheet concentrating on issues they can address locally and in immediate future, identifying resources required.

### ***Wider briefing***

After assessing the planned sample of facilities the assessors prepare a report summarizing findings and recommendations and present the report to MOH (or local) authorities and other relevant partners. It will be good to invite the staff from selected hospitals to come with a final action plan to the main (national) debrief.





**Module A - General Hospital Information**



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### MATERNAL

- Is the obstetrical outpatient area separate from the general outpatient department? Y N
- At what time does the obstetrical outpatient department open? ..... hrs
- At what time does the obstetrical outpatient department close? ..... hrs
- Does the health facility have a ward for admitting obstetrics patients? Y N
- If yes, how many beds? .....beds
- Does the health facility have a theatre to perform CS? Y N
- If yes, is the operating theatre available 24 hours? Y N
- If not, what hours is it open? From..... hrs to..... hrs
- Are the most seriously ill women cared for in a section (near the nursing station) where they receive closest attention? Y N
- Comments and descriptions of the above:

### NEONATAL

- Does the health facility have a separate ward for admitting newborns? Y N
- If yes, how many beds? .....beds
- Up to which age are babies admitted to the NICU? ..... (age in months)
- Is the duration of babies' care in the NICU restricted/regulated? Y N
- If yes, where are they transferred to? .....
- Does the health facility have a separate room or ward for admitting newborn "Infectious" cases (i.e. isolation ward)? Y N
- If so, how many beds? .....beds
- Comments and descriptions of the above:

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**PAEDIATRIC**

Is the paediatric outpatient area separate from the general outpatient department? Y N

At what time does the paediatric outpatient department open? .....hrs

At what time does the paediatric outpatient department close? ..... hrs

Does the health facility have a ward for admitting paediatric patients? Y N

If yes, how many beds? .....beds

Does the health facility have a separate room or ward for admitting paediatric “Infectious” cases (i.e. isolation ward)? Y N

If so, how many beds? ..... beds

Where are children with surgical conditions admitted?  
.....  
.....  
.....

Where are children with severe conditions requiring special or high level care admitted?  
.....  
.....  
.....

Are the most seriously ill children cared for in a section (near the nursing station) where they receive closest attention? Y N

Comments and descriptions of the above:

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### 2. Infrastructure

|  | <b><u>YES</u></b> | <b><u>NO</u></b> | <b><u>Comments</u></b> |
|--|-------------------|------------------|------------------------|
| Is electricity continuously available?   |                   |                  |                        |
| Is there a back-up power supply in the case of a power cut (i.e. diesel generator)?                            |                   |                  |                        |
| Is there running water?  |                   |                  |                        |
| If no: Is there water for hand-washing available in the area?  |                   |                  |                        |
| Is there soap and/or disinfectant available?   |                   |                  |                        |
| Is there a sharps disposal box available?  |                   |                  |                        |
| Is there a functioning fridge available for drugs or vaccines?   |                   |                  |                        |
| Is there a complaints box on the hospital premises or a formal way patients can communicate with the hospital? |                   |                  |                        |

### 3. Staffing

| <b>Type of staff</b>      | <b>during working hours<br/>(number)</b> | <b>after working hours<br/>Present/ not present<br/>If present,<br/>number</b> | <b>Remarks</b> |
|---------------------------|--|--|----------------|
| Administrative clerk      |  |  |                |
| Auxiliary Nurse           |  |  |                |
| Nurse                     |  |  |                |
| Midwife                   |  |  |                |
| Generic medical officer   |  |  |                |
| Obstetrician-gynecologist |  |  |                |
| Pediatrician              |  |  |                |

Comments

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### 4. Hospital statistics

**Source:** This information should ideally be collected before the visit, and be available for reference during the visit. If it has not been collected before, collect the information early during the visit from the records department, chief nursing officer, or hospital administration. Make use of routine statistics; adjust the categories accordingly (e.g. age groups) where necessary.

#### 4.1 Maternal and neonatal statistics

Please use the figures for the last available year. If data are available for a different period, please specify.

Year.....Any other period.....

#### MATERNAL / NEONATAL

|   |  |
|---|--|
| Number of deliveries  |  |
| Number of live births <sup>1</sup>  |  |
| Number of low birth weight newborn babies (<2500 g)                                       |  |
| Number of very low birth weight newborn babies (<1500 g)                                  |  |
| Number of extremely low birth weight babies (<1000g)                                      |  |
| Number of deliveries: <37 completed weeks   |  |
| Number of deliveries: < 32 weeks  |  |
| Number of deliveries: < 28 weeks  |  |
| Number of babies diagnosed with birth asphyxia <sup>2</sup>                               |  |
| Number of babies with Apgar score <3 at 5 minutes   |  |
| Number of neonatal deaths   |  |
| Number of still births  |  |
| Number of perinatal deaths (number of stillbirths plus neonatal deaths in hospital)       |  |
| Number of maternal deaths in hospital   |  |
| Maternal mortality ratio (number of maternal deaths per 100,000 live births) <sup>3</sup> |  |

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|   |  |
|---|--|
| Caesarean section deliveries as % of all births   |  |
| Episiotomies as % of all births   |  |
| Instrumental deliveries as % of all births  |  |
| Inductions as % of all births   |  |
| Augmentations (stimulations) as % of all births   |  |
| Prevalence of anaemia ( defined as Hb concentration of less than 110g/l or 11g/dL) per 1000 pregnant women <sup>4</sup> |  |
| Average length of stay for vaginal delivery (number of days)  |  |
| Average length of stay for operative vaginal delivery (number of days)  |  |
| Average length of stay for caesarean section (number of days)   |  |
| Number of women transferred to higher level of care   |  |

<sup>1</sup> Reference WHO definition for live births: Live birth refers to the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of the pregnancy, which, after such separation, breathes or shows any other evidence of life - e.g. beating of the heart, pulsation of the umbilical cord or definite movement of voluntary muscles - whether or not the umbilical cord has been cut or the placenta is attached. Each product of such a birth is considered live born. Please specify if other definition is used.

<sup>2</sup> Criteria: live birth with an Apgar score at 5 minutes of <3, depression at birth requiring resuscitation with a mask for >3 minutes and/or intubation. World Federation of Neurology Group 1993.

<sup>3</sup> The maternal mortality ratio can be assessed with a denominator of 10,000 births, if it is anticipated to be very high.

<sup>4</sup> From MPS/PEPC assessment and follow up after training-Manual and Interview form Feb 2006-form 7 page

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### 4.2 Paediatric statistics

Please use the figures for the last available year. If data are available for a different period, please specify.

Year.....Any other period.....

#### PAEDIATRIC

|  |  |
|--|--|
| Number of children under-5 hospitalized in the facility          |  |
| Number of under-5 child deaths in the facility                   |  |
| Under-5 mortality rate in facility                               |  |
| Number of child deaths reviewed in the health facility           |  |
| Number of hospitalized children with pneumonia                   |  |
| Number of child deaths caused by pneumonia in facility           |  |
| Number of children hospitalised with diarrhoea                   |  |
| Number of child deaths caused by diarrhoeal disease in facility  |  |
| Number of children admitted in facility with severe malnutrition |  |
| Number of child deaths caused by severe malnutrition in facility |  |

#### Paediatric surgery details

Most common paediatric surgical procedures performed:

|    | Procedure | Annual number of procedures | Performed by |
|----|-----------|-----------------------------|--------------|
| 1. |           |                             |              |
| 2. |           |                             |              |
| 3. |           |                             |              |
| 4. |           |                             |              |
| 5. |           |                             |              |

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How often are the following paediatric surgical procedures performed?

|   | Regularly | Infrequent | Never | Performed by | Referred to another facility |
|---|-----------|------------|-------|--------------|------------------------------|
| Phimosis/<br>circumcision                                 |           |            |       |              |                              |
| Hernia repair   |           |            |       |              |                              |
| Fractures   |           |            |       |              |                              |
| Skin grafting   |           |            |       |              |                              |
| Laparotomy<br>including<br>appendectomy                   |           |            |       |              |                              |
| Incision and<br>drainage for<br>abscesses/<br>pyomyositis |           |            |       |              |                              |

### 4.3 Patient load, deaths and fatality rates

Indicate the total number of outpatient visits in pregnancy / puerperium / neonatal / paediatric period, emergency visits and admissions per year (indicate year; if any other period of time, e.g. semester, is used, indicate the exact period) for women and children. Include all medical diagnosis but exclude patients dead on arrival.

Year: .....

| <b>MATERNAL</b>      | Outpatient visits | Emergency visits | Inpatients / admissions | Number of total deaths including women under 19) | Number of adolescent death |
|----------------------|-------------------|------------------|-------------------------|--|----------------------------|
| Pregnant women       |                   |                  |                         |  |                            |
| Number of deliveries |                   |                  |                         |  |                            |
| <b>PAEDIATRIC</b>    | Outpatient visits | Emergency visits | Inpatients/ admissions  | Number of deaths                                 | Age-specific fatality rate |
| 0-7 days             |                   |                  |                         |  |                            |
| 7-28 days            |                   |                  |                         |  |                            |
| 1-12 months          |                   |                  |                         |  |                            |
| 1-5 years            |                   |                  |                         |  |                            |
| >5 years             |                   |                  |                         |  |                            |

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### 4.4 Reasons for hospital visits and admissions, deaths and case fatality rates

From the hospital records, list the five most important medical reasons (diagnoses) for outpatient visits (excluding routine ANC visits), emergency visits, and hospital admissions in pregnancy/puerperium (excluding labour). Similarly, list the five most important medical reasons for neonates and for children.

| <b>MATERNAL<br/>Most frequent<br/>diagnosis</b> | <b>Outpatient<br/>visits</b> | <b>Emergency<br/>visits</b> | <b>Hospital<br/>admissions</b> | <b>Deaths</b> | <b>Case fatality<br/>rate</b> |
|---|------------------------------|-----------------------------|--------------------------------|---------------|-------------------------------|
| First   |                              |                             |                                |               |                               |
| Second  |                              |                             |                                |               |                               |
| Third   |                              |                             |                                |               |                               |
| Fourth  |                              |                             |                                |               |                               |
| Fifth   |                              |                             |                                |               |                               |
| <b>NEONATAL<br/>Most frequent<br/>diagnosis</b> | <b>Outpatient<br/>visits</b> | <b>Emergency<br/>visits</b> | <b>NICU<br/>admissions</b>     | <b>Deaths</b> | <b>Case fatality<br/>rate</b> |
| First   |                              |                             |                                |               |                               |
| Second  |                              |                             |                                |               |                               |
| Third   |                              |                             |                                |               |                               |
| Fourth  |                              |                             |                                |               |                               |
| Fifth   |                              |                             |                                |               |                               |

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| <b>PAEDIATRIC<br/>Most frequent<br/>diagnosis</b> | <b>Outpatient<br/>visits</b> | <b>Emergency<br/>visits</b> | <b>Hospital<br/>admissions</b> | <b>Deaths</b> | <b>Case fatality<br/>rate</b> |
|---|------------------------------|-----------------------------|--------------------------------|---------------|-------------------------------|
| First   |                              |                             |                                |               |                               |
| Second  |                              |                             |                                |               |                               |
| Third   |                              |                             |                                |               |                               |
| Fourth  |                              |                             |                                |               |                               |
| Fifth   |                              |                             |                                |               |                               |

Comments

## 5. Health information system and medical records

**Source:** This information should ideally be collected before the visit, and be available for reference during the visit. If it has not been collected before, collect the information early during the visit from the records department, chief nursing officer, or hospital administration.

### 5.1 Health information system

| <b>Standards and criteria</b>  | <b>Score 1-5</b> | <b>Comments</b> |
|--|------------------|-----------------|
| Existence and quality of a computer-based information system on patient flow (admissions, outpatients, etc.)                           |                  |                 |
| Existence and quality of a computer-based information system on important medical indicators   |                  |                 |
| Existence and quality of paper-based information system on patient flow (admissions, outpatients, etc.), if computer-based unavailable |                  |                 |
| Existence and quality of paper-based information system on important medical indicators, if computer-based unavailable                 |                  |                 |
| Periodical review and evaluation of statistics and indicators by the relevant professional teams                                       |                  |                 |

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### 5.2 Medical records

| Standards and criteria   | Score 1-5 | Comments |
|--|-----------|----------|
| Are all records clear and legible?   |           |          |
| Are records dated?   |           |          |
| Are all admissions and discharge diagnoses clearly written in the notes?                                     |           |          |
| Are all drugs and treatments clearly identifiable?   |           |          |
| Is information from previous admissions available to staff providing care to mothers, neonates and children? |           |          |
| Is information from antenatal records available to staff providing care during labour?                       |           |          |
| Are all antenatal and intrapartum records available to staff providing care during postpartum period?        |           |          |
| Do mothers have access to their medical records?   |           |          |
| Do parents have access to their child's medical records?   |           |          |

### 5.3 Summary – Health information system and medical records

*Score*

|   |          |          |          |          |          |
|---|----------|----------|----------|----------|----------|
| <b>Summary score</b>                            |          |          |          |          |          |
| - Health information system and medical records |          |          |          |          |          |
| <b>(to be circled)</b>                          | <b>5</b> | <b>4</b> | <b>3</b> | <b>2</b> | <b>1</b> |

Please indicate the quality of support by marking one of the 5 numbers; 5 indicates efficient and quality health record management, 4 to 1 indicating levels of necessary improvement (4=just a few shortcomings in health record management, 1=non-existent health records)

*Main strengths*

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### Main weaknesses

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## 6. Essential drugs and blood products

**Source:** This information should ideally be collected before the visit, and be available for reference during the visit. If it has not been collected before, collect the information early during the visit from the pharmacy.

Availability of drugs varies considerably in different regions. Please indicate the drugs available. For some drugs, local adaptations of use might exist (specify in note). If drugs are only available for sale and not freely available for patients, make a note. Check for the presence of drugs and enquire with staff whether drugs are regularly available. Check expiry dates. Note whether drugs with the earliest expiry date are used first (in the front-row).

| Drugs   | Pharmacy | Comments |
|---|----------|----------|
| <b>General anaesthetics and oxygen</b>                                  |          |          |
| Halothane inhalation  |          |          |
| Ketamine injection  |          |          |
| Oxygen inhalation   |          |          |
| Nitrous oxide inhalation  |          |          |
| Thiopental iv   |          |          |
| <b>Local anaesthetics</b>   |          |          |
| Lidocaine injection   |          |          |
| Lidocaine + epinephrine injection                                       |          |          |
| Ephedrine injection   |          |          |
| <b>Preoperative medications and sedations for short term procedures</b> |          |          |
| Atropine iv   |          |          |
| Promethazine iv   |          |          |

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| Drugs  | Pharmacy | Comments |
|--|----------|----------|
| <b>Analgesics, antipyretics, non-steroidal anti-inflammatory drugs</b> |          |          |
| Acetylsalicylic acid po/pr   |          |          |
| Ibuprofen lysine (for PDA)   |          |          |
| Indomethacin (for PDA)   |          |          |
| Paracetamol/acetaminophen po/pr  |          |          |
| Morphine po/im/iv  |          |          |
| <b>Anti-histamines/anti-anaphylactics</b>                              |          |          |
| Chlorphenamine po/iv   |          |          |
| Epinephrine injection  |          |          |
| <b>Corticosteroids</b>   |          |          |
| Betamethasone im   |          |          |
| Dexamethasone im   |          |          |
| Hydrocortisone po/iv   |          |          |
| Prednisolone po  |          |          |
| <b>Antidotes and other substances used in poisoning</b>                |          |          |
| Calcium gluconate injection  |          |          |
| Naloxone injection   |          |          |
| <b>Anticonvulsants and antiepileptics</b>                              |          |          |
| Diazepam po/iv/pr  |          |          |
| Magnesium sulphate injection   |          |          |
| Phenobarbital  |          |          |
| <b>Anti-infective medicines</b>  |          |          |
| Mebendazole  |          |          |
| <b>Antibacterials</b>  |          |          |
| Amoxicillin  |          |          |
| Ampicillin iv  |          |          |
| Benzathine benzylpenicillin injection                                  |          |          |
| Cefixime   |          |          |
| Ceftriaxone im   |          |          |
| Ciprofloxacin po/iv  |          |          |

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| Drugs  | Pharmacy | Comments |
|--|----------|----------|
| Ceftazidime  |          |          |
| Cefotaxime   |          |          |
| Co-trimoxazole   |          |          |
| Doxycycline  |          |          |
| Erythromycin po/iv   |          |          |
| Gentamicin iv  |          |          |
| Nitrofurantoin   |          |          |
| Metronidazole po/iv  |          |          |
| Spectinomycin po   |          |          |
| <b>All anti-TB drugs needed according to the national TB control program</b>       |          |          |
| <b>Antifungal medicines</b>  |          |          |
| Amphotericin injection   |          |          |
| Clotrimazole cream/tablet  |          |          |
| Miconazole   |          |          |
| Fluconazole po/injection   |          |          |
| Nystatin topical/po  |          |          |
| <b>Antiviral medicines</b>   |          |          |
| Aciclovir po   |          |          |
| <b>All Anti-HIV drugs according to HIV program</b>                                 |          |          |
| <b>All anti-malaria drugs needed according to national malaria control program</b> |          |          |
| <b>Anti-pneumocystis and antitoxoplasmosis medicines</b>                           |          |          |
| Pentamidine po   |          |          |
| <b>Medicines affecting the blood</b>   |          |          |
| Ferrous salt + Folic acid po   |          |          |
| Iron syrup po  |          |          |
| Low molecular weight heparin (LWMH) injection                                      |          |          |
| <b>Respiratory Drugs</b>   |          |          |

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| Drugs  | Pharmacy | Comments |
|--|----------|----------|
| Aminophylline                                  |          |          |
| Caffeine citrate                               |          |          |
| Surfactants                                    |          |          |
| <b>Plasma substitutes</b>                      |          |          |
| Dextran 79 injection                           |          |          |
| <b>Cardiovascular medicines</b>                |          |          |
| Glyceryl trinitrate spray/po                   |          |          |
| Digoxin injection/po                           |          |          |
| Hydralazine injection/po                       |          |          |
| Methyldopa po                                  |          |          |
| Furosemide iv/po                               |          |          |
| <b>Dermatological medicines (topical)</b>      |          |          |
| <b>Disinfectants and antiseptics (topical)</b> |          |          |
| Chlorexidine                                   |          |          |
| Polyvidone iodine                              |          |          |
| <b>Insulins and other antidiabetic agents</b>  |          |          |
| Insulin injection (soluble)                    |          |          |
| Intermediate acting insulin                    |          |          |
| <b>Immunologicals</b>                          |          |          |
| Anti-D Immunoglobulin (human) injection        |          |          |
| Anti-tetanus immunoglobulin (human) injection  |          |          |
| <b>Vaccines</b>                                |          |          |
| BCG vaccine                                    |          |          |
| Diphtheria + tetanus vaccine                   |          |          |
| Measles vaccine                                |          |          |
| Rubella vaccine                                |          |          |
| Hepatitis B vaccine                            |          |          |
| Poliomyelitis vaccine                          |          |          |

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| Drugs   | Pharmacy | Comments |
|---|----------|----------|
| Pertussis vaccine   |          |          |
| <b>Muscle relaxants and cholinesterase inhibitors</b>                     |          |          |
| Suxamethonium injection   |          |          |
| <b>Ophthalmological preparations (topical)</b>                            |          |          |
| Tetracycline  |          |          |
| <b>Oxytocics and antioxytocics</b>  |          |          |
| Ergometrine injection   |          |          |
| Oxytocin injection  |          |          |
| Misoprostol tablets   |          |          |
| Nifedipine tablets  |          |          |
| <b>Solutions correcting water, electrolyte and acid-base disturbances</b> |          |          |
| Glucose 5-10-50%  |          |          |
| Glucose with sodium chloride  |          |          |
| Sodium chloride 0.9% isotonic   |          |          |
| Ringer's lactate  |          |          |
| Water for injection   |          |          |
| ORS   |          |          |
| <b>Vitamins and minerals</b>  |          |          |
| Vitamin A oral  |          |          |
| Vitamin K IM  |          |          |

|   |   |   |
|---|---|---|
| Are there any expired drugs in the pharmacy or in the pharmacy? | Y | N |
| Is cold chain respected for vaccines?                           | Y | N |
| Is there a blood bank in the facility?                          | Y | N |
| Are blood units available for transfusion?                      | Y | N |

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### 6.1 Summary - Essential drugs and blood products

*Score*

|  |          |          |          |          |          |
|--|----------|----------|----------|----------|----------|
| <b>Summary score</b><br>- Essential drugs and blood products |          |          |          |          |          |
| <b>(to be circled)</b>                                       | <b>5</b> | <b>4</b> | <b>3</b> | <b>2</b> | <b>1</b> |

Please indicate the quality of support by marking one of the 5 numbers; 5 indicates all essential drugs are available and not expired/expiring, 4 to 1 indicating levels of necessary improvement (4=small need for improvement, 1=urgent or chronic shortages of drugs/chronic lapses in the quality leading to potentially life threatening situation to both patient and staff)

*Main strengths*

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*Main weaknesses*

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### 7. Laboratory

**Source:** This information should ideally be collected before the visit, and be available for reference during the visit. If it has not been collected before, collect the information early during the visit from the laboratory and chief laboratory technician.

Try to see as many essential laboratory investigations being carried out as possible. Are the following laboratory investigations and their results readily available? (e.g. blood glucose, Hemoglobin, Hematocrit (PCV) within ½ hour, other investigations 1-2 hours). If available, indicate average time to get results.

| Lab test                           | Not available | Available | Time to get results | Comments |
|------------------------------------|---------------|-----------|---------------------|----------|
| Blood glucose                      |               |           |                     |          |
| Haemoglobin                        |               |           |                     |          |
| Haematocrit (PCV)                  |               |           |                     |          |
| Immature to total neutrophil ratio |               |           |                     |          |
| Leukocyte count                    |               |           |                     |          |
| Blood gas analysis                 |               |           |                     |          |
| Blood grouping and crossmatch      |               |           |                     |          |
| Bilirubin                          |               |           |                     |          |
| Rhesus antibodies                  |               |           |                     |          |
| Urine dipstick                     |               |           |                     |          |
| Urine microscopy                   |               |           |                     |          |
| Bacteriology (culture)             |               |           |                     |          |
| Bacterioscopy (smear)              |               |           |                     |          |
| Full blood count                   |               |           |                     |          |
| Coagulation tests                  |               |           |                     |          |

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| Lab test   | Not available | Available | Time to get results | Comments |
|--|---------------|-----------|---------------------|----------|
| Liver function tests   |               |           |                     |          |
| Bilirubin  |               |           |                     |          |
| Renal function tests   |               |           |                     |          |
| Electrolytes   |               |           |                     |          |
| HIV test   |               |           |                     |          |
| CD4 count or HIV plasma viral loads according to national guidelines |               |           |                     |          |
| Coombs' test: direct and indirect                                    |               |           |                     |          |
| Serum protein and albumin  |               |           |                     |          |
| Urinalysis   |               |           |                     |          |
| Rapid test for syphilis  |               |           |                     |          |
| Microscopy or rapid diagnostic test (RDT) for malaria parasites      |               |           |                     |          |
| CSF microscopy   |               |           |                     |          |

Are essential lab tests available continuously and results available in a rapid manner?

Y

N

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**7.1 Summary – Laboratory**

*Score*

Please indicate the quality of support by marking one of the 5 numbers; 5 indicates all

|                                      |          |          |          |          |          |
|--------------------------------------|----------|----------|----------|----------|----------|
| <b>Summary score</b><br>- Laboratory |          |          |          |          |          |
| <b>(to be circled)</b>               | <b>5</b> | <b>4</b> | <b>3</b> | <b>2</b> | <b>1</b> |

laboratory tests and possible and results available in a rapid manner constantly, 4 to 1 indicating levels of necessary improvement (4=small need for improvement, 1= most laboratory tests not possible in facility and adversely affects the managements of patients).

*Main strengths*

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*Main weaknesses*

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# 8. Guidelines and auditing

## 8.1 Guidelines

| Standards and criteria   | Score 1-5 | Comments |
|--|-----------|----------|
| A recent neonatal textbook is readily available  |           |          |
| A recent obstetric textbook is readily available   |           |          |
| Guidelines/protocols on care during normal child birth are available   |           |          |
| Guidelines/protocols on management of emergency conditions for mothers are available as pocket instructions, wall charts, or job aids        |           |          |
| Guidelines/protocols on management of emergency conditions for newborn babies are available as pocket instructions, wall charts, or job aids |           |          |
| Guidelines/protocols on management of emergency conditions for children are available as pocket instructions, wall charts, or job aids       |           |          |
| Hospital essential drugs list is available   |           |          |
| Periodical staff meetings are held to discuss and revise protocols   |           |          |

## 8.2 Auditing

| Standards and criteria  | Score 1 -5 | Comments |
|---|------------|----------|
| Audits are conducted to review cases of deaths and complications  |            |          |
| Clinical audits involve all team members including midwives and nurses                                      |            |          |
| The audits take into account monitoring, hospital flow and quality of care as well as more clinical aspects |            |          |
| Recommendations from audits are discussed and implemented   |            |          |
| Nurses and midwives run their own periodical meetings   |            |          |
| Nurses and midwives are involved in organizational staff meetings   |            |          |
| Periodical staff meetings are held to discuss organizational aspects  |            |          |
| Periodical staff meetings are held to discuss and revise protocols  |            |          |

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**8.3 Summary – Guidelines and auditing**

*Score*

|   |          |          |          |          |          |
|---|----------|----------|----------|----------|----------|
| <b>Summary score</b><br>- Guidelines and auditing |          |          |          |          |          |
| <b>(to be circled)</b>                            | <b>5</b> | <b>4</b> | <b>3</b> | <b>2</b> | <b>1</b> |

Please indicate the quality of support by marking one of the 5 numbers; 5 indicates excellent guidelines, protocols and information are available for staff; 4 to 1 indicating levels of necessary improvement (4=small need for improvement, 1=urgent need for improvement/life threatening practices)

*Main strengths*

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*Main weaknesses*

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## **Module B - Maternal Care**



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## Module B – Maternal Care

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# Maternal Care

**Source:** This information should be collected by visiting the labour, delivery ward and operating theatre and observing the treatment and other clinical practices of women, review of records and logbooks and interviews with staff and women.

## 1. Emergency obstetric care

### 1.1 Patient flow

**Source:** Visit to the emergency department/labour ward and interviews with staff dealing with emergencies. **Instructions:** Interview staff where emergencies would present, observe who would see them, how senior staff are contacted to respond to the condition, and where and how severe conditions are handled.

Where are patients with an emergency obstetric condition received?

Describe the patient flow of a typical obstetric emergency (woman presenting as an emergency to hospital):

- A.
- B.
- C.
- D.
- E.
- F.
- G.
- H.
- I.
- J.

|  |   |   |
|--|---|---|
| Is there an emergency management area equipped to take care of pregnant women? | Y | N |
| Is there a separate consultation area for moderately ill women?                | Y | N |
| Is this separate from the normal outpatient facility dealing with patients?    | Y | N |

Comments and descriptions:

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Do patients come with referral notes when they have been referred from first level units?  
 Never  Sometimes  Always

Are there any job aids (wall charts, chart booklets) displayed for the management of obstetric cases Y N

If so, describe about what, and comment on adequacy:

Distance from reception area to emergency management area:

In the same building, distance.....

In another building, distance.....

Distance from consultation area to emergency management area:

In the same building, distance.....

In another building, distance.....

### 1.2 Staff providing emergency obstetric care

| Type of staff              | during working hours<br><br><i>Present/not present<br/>If present, number</i> | after working hours<br><br><i>Present/not present<br/>If present, Number</i> | Trained in assessment/detection of emergency conditions<br><br><i>Yes/No</i> | Trained in management of emergency conditions<br><br><i>Yes/No</i> | Comments |
|----------------------------|---|--|--|--|----------|
| Administrative clerk       |   |  |  |  |          |
| Auxiliary Nurse            |   |  |  |  |          |
| Nurse                      |   |  |  |  |          |
| Midwife                    |   |  |  |  |          |
| Generic medical officer    |   |  |  |  |          |
| Obstetrician-gynaecologist |   |  |  |  |          |

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### 1.3 Layout and structure of emergency care

| Standards and Criteria   | Score 1-5 | Comments |
|--|-----------|----------|
| A system is in place to prioritize severely ill patients (triage)  |           |          |
| Triage is done in a timely manner and not hindered by registration procedures, payment etc. before lifesaving action takes place   |           |          |
| Staff in charge of triage are adequately trained and able to apply triage criteria <sup>1</sup>  |           |          |
| A health professional is always available to manage patients with emergency conditions   |           |          |
| Essential drugs for emergency conditions are always available <sup>2</sup>   |           |          |
| Essential lab tests (glucose, PCV) and equipment (including AMBU bags and face masks for adults and newborns) for emergency conditions are always available <sup>2</sup> |           |          |
| Case Management (see below)  |           |          |

1 Information is mainly obtained by direct case observation and through interviews with staff about the routine practice. If no cases with emergency conditions are observable, staff is interviewed about how they would manage such conditions.

2 Please refer to the tables in the section “Essential maternal drugs, equipment and supplies”. Please note when judging the adequacy of supplies that some drugs (e.g. oxygen, anticonvulsants) need to be immediately available; whereas for others (e.g. antibiotics) it is sufficient that availability is assured.

### 1.4 Case managements of emergency conditions

**Source:** Information is obtained by case observation of cases presenting, as far as possible, and through interviews with staff about the routine practice.

If you cannot observe one to two cases, describe scenarios to staff of two to three cases presenting with eclampsia or post-partum haemorrhage.

Cases to observe include women presenting with danger signs (i.e. significant vaginal bleeding, eclamptic fits etc.). Case management is observed during working hours and after hours. Enquire about the management of a pregnant woman with significant vaginal bleeding, convulsions, or shortness of breath.

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**1.5 Summary - Emergency obstetric care**

| <b>Summary</b>       | <b>Score 1-5</b> | <b>Comments</b> |
|----------------------|------------------|-----------------|
| Patient Flow         |                  |                 |
| Layout and structure |                  |                 |
| Essential Drugs      |                  |                 |
| Equipment            |                  |                 |
| Staffing             |                  |                 |
| Case management      |                  |                 |

*Score*

|                            |          |          |          |          |          |
|----------------------------|----------|----------|----------|----------|----------|
| <b>Summary score</b>       |          |          |          |          |          |
| - Emergency obstetric care |          |          |          |          |          |
| <b>(to be circled)</b>     | <b>5</b> | <b>4</b> | <b>3</b> | <b>2</b> | <b>1</b> |

Please indicate the quality of support by marking one of the 5 numbers; 5 indicates good quality of care i.e. well-staffed emergency department with experienced and trained staff available on hand at all hours to help manage emergency cases, 4 to 1 indicating levels of necessary improvement (4=small need for improvement, 1=urgent need for improvement/life threatening practices)

*Main strengths*

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### 2.3 Attention to the most seriously ill patients

|  |   |   |
|--|---|---|
| Is there an emergency management area in or near to each ward?   | Y | N |
| Are the most seriously ill patients cared for in a section close to the nursing station where they receive closer attention? | Y | N |
| Is there a heat source on the ward, and room temperatures kept above 25C, if applicable ?                                    | Y | N |

**Comments:**

### 2.4 Summary - Maternity wards

*Score*

|   |          |          |          |          |          |
|---|----------|----------|----------|----------|----------|
| <b>Summary score</b><br>- Maternity wards |          |          |          |          |          |
| <b>(to be circled)</b>                    | <b>5</b> | <b>4</b> | <b>3</b> | <b>2</b> | <b>1</b> |

Please indicate the quality of support by marking one of the 5 numbers; 5 indicates adequately staffed, clean and well-equipped maternal wards; 4 to 1 indicating levels of necessary improvement (4=small need for improvement, 1=indicates significant deficiencies in one or more of the wards)

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### 3. Infection control and supportive care

#### 3.1 Infection control in the maternity ward

##### Appropriate hand hygiene

| Standards and criteria  | Score 1- 5 | Comments |
|---|------------|----------|
| Hand washing stations are well organized and equipped: <ul style="list-style-type: none"><li>- soap<sup>1</sup></li><li>- single-use towels</li><li>- containers for used towel collection</li></ul>  |            |          |
| Alcohol-based hand rub is available at the point of care  |            |          |
| Written protocols on hygiene for hands are available and information on hand washing technique <i>How to handwash and How to handrub</i> are put above or near the sinks and the alcohol based formulation dispensers respectively (WHO Guidelines on Hand Hygiene in Health Care page 154/155)   |            |          |
| Protocols on hand washing and disinfection for various procedures are available and all staff has been briefed  |            |          |
| HCWs have a dedicated time available for infection control training, including sessions on hand hygiene   |            |          |
| HCWs' adherence to recommended hand hygiene practices are monitored and performance feedback is provided to them  |            |          |
| Hands are washed with soap and water when visibly dirty or visibly soiled with blood or other body fluid or after using the toilet - <ul style="list-style-type: none"><li>- hands are wet with water and amount of product necessary to cover all surfaces is applied</li><li>- hands are rinsed with water and dried thoroughly with a single-use towel.</li><li>- a towel is used to turn off tap/faucet</li><li>- hands are dried thoroughly using a method that does not recontaminate hands.</li><li>- towels are not used multiple times or by multiple people</li></ul> |            |          |
| Alcohol-based handrub is used as the preferred means for routine hand antisepsis in all other clinical situations, if hands are not visibly soiled  |            |          |

<sup>1</sup> Liquid, bar, leaf or powdered forms of soap are acceptable. WHO Guidelines on Hand Hygiene in Health Care

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| Standards and criteria  | Score 1- 5 | Comments |
|---|------------|----------|
| <p>Soap and alcohol-based handrub are not used concomitantly</p>  |            |          |
| <p>Hand hygiene is performed:</p> <ol style="list-style-type: none"> <li>before and after touching the patient</li> <li>before handling an invasive device for patient care, regardless of whether or not gloves are used</li> <li>after contact with body fluids or excretions, mucous membranes, non-intact skin, or wound dressings</li> <li>if moving from a contaminated body site to another body site during care of the same patient</li> <li>after contact with inanimate surfaces and objects (including medical equipment) in the immediate vicinity of the patient</li> <li>after removing sterile or non-sterile gloves</li> </ol>   |            |          |
| <p>Surgical scrub or surgical hand and forearm disinfection are performed for:</p> <ul style="list-style-type: none"> <li>severely immuno-compromised patients (&lt;500 WBC/ml), multiple trauma, severe burns, organ transplant</li> <li>surgery or high-risk invasive procedures (e.g. central venous catheter, manual removal of placenta, endotracheal intubation)</li> </ul>   |            |          |
| <p>Surgical hand preparation is carried out appropriately:</p> <ul style="list-style-type: none"> <li>rings, wrist-watch, and bracelets are removed before beginning</li> <li>artificial nails are prohibited</li> <li>if hands are visibly soiled, hands are washed with plain soap before surgical hand preparation</li> <li>debris are removed from underneath fingernails using a nail cleaner, preferably under running water</li> <li>no brushes are used for surgical hand preparation</li> <li>a suitable antimicrobial soap or suitable alcohol-based handrub is used</li> <li>when an antimicrobial soap is used hands and forearms are scrubbed for 2–5 minutes</li> <li>surgical hand scrub and surgical handrub with alcohol-based products are not applied sequentially</li> <li>after application of the alcohol-based handrub hands and forearms are allowed to dry thoroughly before donning sterile gloves</li> </ul> |            |          |
| <p>If hands touch a contaminated surface during procedure or care of patient, surgical scrub is repeated</p>  |            |          |

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### Use of gloves

| Standards and criteria   | Score 1-5 | Comments |
|--|-----------|----------|
| Sterile gloves are used for surgical operations, minor surgical operations on skin, any procedure that may penetrate into tissues and mucous membranes, inserting sterile catheters, gavages etc., or any contact with sterile tissue or body fluids (blood, amniotic fluid) |           |          |
| The use of gloves does not replace hand hygiene by either handrubbing or handwashing   |           |          |
| Gloves are used when it can be anticipated that contact with blood or other potentially infectious materials, mucous membranes, or non-intact skin will occur  |           |          |
| Gloves are removed after caring for a patient. The same pair of gloves are not used for the care of more than one patient.   |           |          |
| Gloves are changed or removed during patient care if moving from a contaminated body site to either another body site (including non-intact skin, mucous membrane or medical device) within the same patient or the environment  |           |          |
| The reuse of gloves is not recommended: In the case of glove reuse, the safest reprocessing method is implemented  |           |          |
| Gloves are used when handling soiled instruments and when disposing of contaminated waste items  |           |          |

### Practices for infection control

| Standards and criteria   | Score 1-5 | Comments |
|--|-----------|----------|
| Routine disinfection of premises performed, facilities are closed regularly for disinfection                               |           |          |
| Ultra-violet lamp is routinely used for disinfection   |           |          |
| Routine policy of changing dress and footwear by staff observed  |           |          |
| Bandages on aseptic wound/IV catheter are changed daily  |           |          |
| Hair is not routinely removed preoperatively   |           |          |
| Wound dressing is changed at least every 48 hrs  |           |          |
| There is an infection control policy for visitors in the hospital, that may require restriction of access to some patients |           |          |
| Caps and masks are routinely used by staff   |           |          |

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**Summary- Infection control**

| Summary                         | Score 1-5 | Comments |
|---------------------------------|-----------|----------|
| Appropriate hand hygiene:       |           |          |
| Use of Gloves                   |           |          |
| Practices for infection control |           |          |

*Score*

|   |          |          |          |          |          |
|---|----------|----------|----------|----------|----------|
| <b>Summary score</b><br>- Infection control |          |          |          |          |          |
| <b>(to be circled)</b>                      | <b>5</b> | <b>4</b> | <b>3</b> | <b>2</b> | <b>1</b> |

Please indicate the quality of support by marking one of the 5 numbers; 5 indicates excellent infections control practices are being used at all times in all wards; 4 to 1 indicating levels of necessary improvement (4=small need for improvement, 1=urgent need for improvement/life threatening practices)

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### 3.2 Supportive care

#### Nutritional needs of admitted patients

| Standards and criteria   | Score 1-5 | Comments |
|--|-----------|----------|
| Nutritional needs of hospitalized pregnant women/mothers are met               |           |          |
| IV-glucose should not be used as calorie source for more than maximum 24 hours |           |          |

#### Use of Intravenous fluids

| Standards and criteria   | Score 1-5 | Comments |
|--|-----------|----------|
| Intravenous fluids are given only when indicated according to international guidelines |           |          |
| Appropriate fluids are chosen  |           |          |
| The flow rate is monitored closely   |           |          |

#### Drug treatment

| Standards and criteria   | Score 1-5 | Comments |
|--|-----------|----------|
| Routine use of drugs/ supplements of unproven effectiveness are NOT used                                   |           |          |
| Drugs are only given for an established or highly suspected diagnosis, or under clear indication for usage |           |          |
| Routine use of sedative drugs or anti-histamines are NOT used  |           |          |

#### Blood transfusion

| Standards and criteria             | Score 1-5 | Comments |
|------------------------------------|-----------|----------|
| Blood is only given when indicated |           |          |
| Only screened blood is used        |           |          |
| The flow rate is monitored         |           |          |

#### Summary- Supportive care

| Summary                | Score 1-5 | Comments |
|------------------------|-----------|----------|
| Nutritional needs      |           |          |
| Intravenous fluids use |           |          |
| Drug treatment         |           |          |
| Blood transfusion      |           |          |

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### Score

|   |          |          |          |          |          |
|---|----------|----------|----------|----------|----------|
| <b>Summary score</b><br>- Supportive care |          |          |          |          |          |
| <b>(to be circled)</b>                    | <b>5</b> | <b>4</b> | <b>3</b> | <b>2</b> | <b>1</b> |

Please indicate the quality of support by marking one of the 5 numbers; 5 indicates good quality of care, 4 to 1 indicating levels of necessary improvement (4=small need for improvement, 1=urgent need for improvement/life threatening practices)

### Main strengths

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### Main weaknesses

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## 4. Maternal essential drugs, equipment and supplies

### 4.1 Drugs

**Source:** This information should ideally be collected before the visit, and be available for reference during the visit. If it has not been collected before, collect the information early during the visit from the emergency and ward areas.

Availability of drugs varies considerably in different regions. Please indicate the drugs available. For some drugs, local adaptations of use might exist (specify in note). If drugs are only available for sale and not freely available for patients, make a note. Check for the presence of drugs and enquire with staff whether drugs are regularly available. Check expiry dates.

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|   | Lying-in | Labour ward | Comments |
|---|----------|-------------|----------|
| Water for Injection   |          |             |          |
| Normal saline IV  |          |             |          |
| Ringer's lactate IV   |          |             |          |
| Adrenaline  |          |             |          |
| Hydralazine   |          |             |          |
| Oxytocin  |          |             |          |
| Misoprostol   |          |             |          |
| Ergometrine   |          |             |          |
| Calcium gluconate   |          |             |          |
| Injection Magnesium Sulphate                                  |          |             |          |
| Diazepam  |          |             |          |
| Ampicillin / Amoxicillin                                      |          |             |          |
| Benzylpenicillin  |          |             |          |
| Gentamycin  |          |             |          |
| Metronidazole   |          |             |          |
| Lidocaine   |          |             |          |
| Tetracycline 1% eye ointment                                  |          |             |          |
| Eye antimicrobial (1% silver nitrate or 2.5% povidone iodine) |          |             |          |
| Vitamin A   |          |             |          |

Are there any expired drugs in the ward?

Y N

### 4.2 Equipment and supplies in the maternity ward

Is the following equipment available in delivery room for normal labour, caesarean section (if delivery room for normal labour and caesarean section are in common, please specify in the note)? If a postal questionnaire was sent, cross check the information obtained in advance. Check the information during the visit. Ask the person in charge of the delivery room/ward for the items to be shown to you, and check that they are safe, hygienic and in good working order.

|                                  | <u>Delivery room (normal labour)</u> | <u>Delivery room (caesarean section)</u> | <u>Comments</u> |
|----------------------------------|--------------------------------------|--|-----------------|
| Adequate lighting                |                                      |  |                 |
| Wall clock                       |                                      |  |                 |
| Partographs                      |                                      |  |                 |
| Heating lamp for neonates        |                                      |  |                 |
| Towels for drying newborn babies |                                      |  |                 |
| Oxygen source: oxygen cylinder   |                                      |  |                 |
| Oxygen source: oxygen            |                                      |  |                 |

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|   | <b><u>Delivery room (normal labour)</u></b> | <b><u>Delivery room (caesarean section)</u></b> | <b><u>Comments</u></b> |
|---|---|---|------------------------|
| concentrator                                  |   |   |                        |
| Oxygen source: central supply                 |   |   |                        |
| Flow-meters for oxygen                        |   |   |                        |
| Equipment for the administration of oxygen    |   |   |                        |
| via nasal prongs                              |   |   |                        |
| via catheters                                 |   |   |                        |
| via masks                                     |   |   |                        |
| Self-inflating bags for respiratory support   |   |   |                        |
| Bags and Masks (adult and neonatal size)      |   |   |                        |
| Anaesthetic equipment                         |   |   |                        |
| Normal thermometer (body temperature)         |   |   |                        |
| Sterile gloves (re-sterilized or disposable?) |   |   |                        |
| Sterile gauze                                 |   |   |                        |
| Foetal stethoscope                            |   |   |                        |
| Stethoscope                                   |   |   |                        |
| Sphygmomanometer                              |   |   |                        |
| Infusion sets                                 |   |   |                        |
| Infusion pumps/dosimeters                     |   |   |                        |
| IV catheters                                  |   |   |                        |
| Syringes                                      |   |   |                        |
| Needles                                       |   |   |                        |
| Suturing set (scissors, needles holder)       |   |   |                        |
| Suturing material                             |   |   |                        |
| Balance for baby                              |   |   |                        |
| Cord cutting/cord clamping set                |   |   |                        |
| Vacuum extractor -                            |   |   |                        |
| Forceps                                       |   |   |                        |
| Vacuum aspirator                              |   |   |                        |
| Beds - delivery beds                          |   |   |                        |
| Beds - regular beds                           |   |   |                        |
| Beds - operating theatre beds                 |   |   |                        |
| Neonatal equipment:                           |   |   |                        |
| - tracheal tubes                              |   |   |                        |
| - face masks                                  |   |   |                        |
| - laryngoscope blades                         |   |   |                        |
| - oropharyngeal airways                       |   |   |                        |
| - breathing valves                            |   |   |                        |
| - resuscitation bags                          |   |   |                        |

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|  |   |   |
|--|---|---|
| Is all the equipment safe?                           | Y | N |
| Is all the equipment cleaned regularly and sanitary? | Y | N |
| Is all the equipment kept in good working order?     | Y | N |

**4.3 Summary - Essential drugs, equipment and supplies**

*Score*

|   |          |          |          |          |          |
|---|----------|----------|----------|----------|----------|
| <b>Summary score</b><br>- Essential drugs, equipment and supplies |          |          |          |          |          |
| <b>(to be circled)</b>  | <b>5</b> | <b>4</b> | <b>3</b> | <b>2</b> | <b>1</b> |

Please indicate the quality of support by marking one of the 5 numbers; 5 indicates an adequate amount and quality of all essential drugs, equipment and supplies and also that drugs are not expired/expiring, 4 to 1 indicating levels of necessary improvement (4=small need for improvement, 1=indicates chronic shortages of essential drugs, equipment and supplies or recurrent lapses in the quality leading to potential dangerous and life threatening situations to both patients and staff)

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# 5. Maternal case management

**Source:** Visit to the labour and delivery ward, observation of practices, review of records and logbooks and interviews with staff and women.

**Instructions:** Give priority to direct observation, use interviews to staff and mothers to provide additional information.

## 5.1 Antepartum care

### Hypertension in pregnancy, mild/severe pre-eclampsia and eclampsia

#### Diagnosis of hypertension, mild/ severe pre-eclampsia and eclampsia

| Standards and Criteria   | Score 1-5 | Comments |
|--|-----------|----------|
| The HCW is able to define hypertension, mild/ severe pre-eclampsia and eclampsia correctly   |           |          |
| Chronic hypertension:<br>Diastolic blood pressure 90 mm Hg or more before first 20 weeks of gestation  |           |          |
| Chronic hypertension with superimposed mild pre-eclampsia:<br>Diastolic blood pressure 90–110 mm Hg before 20 weeks of gestation<br>Proteinuria up to 2+ |           |          |
| Pregnancy-induced hypertension:<br>Two readings of diastolic blood pressure 90–110 mm Hg 4 hours apart after 20 weeks gestation<br>No proteinuria        |           |          |
| Mild pre-eclampsia:<br>Two readings of diastolic blood pressure 90–110 mm Hg 4 hours apart after 20 weeks gestation<br>Proteinuria up to 2+              |           |          |
| Severe pre-eclampsia: Diastolic blood pressure 110 mmHg or more after 20 weeks gestation and/or<br>Proteinuria 3+ or more                                |           |          |
| Eclampsia:<br>Convulsions<br>Diastolic blood pressure 90 mm Hg or more after 20 weeks gestation<br>Proteinuria 2+ or more                                |           |          |
| Blood pressure and screening for proteinuria are done in all pregnant women seen in the antenatal clinic   |           |          |

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|   |  |  |
|---|--|--|
| Dipstick urine is immediately performed in women coming to hospital with hypertension                                     |  |  |
| Mild and severe pre-eclampsia and eclampsia are correctly diagnosed (see criteria above )<br>Check records and/or observe |  |  |

### Prevention of pre-eclampsia

| Standards and Criteria  | Score 1-5 | Comments |
|---|-----------|----------|
| Calcium supplementation (1.5 – 2.0 g elemental calcium/day) is recommended for the prevention of pre-eclampsia to pregnant women at risk for pre-eclampsia from areas where dietary calcium intake is low.  |           |          |
| Low-dose acetylsalicylic acid (aspirin, 75 mg) is recommended for the prevention of pre- eclampsia in women at high risk of developing the condition.   |           |          |
| Women are not advised to rest at home for the primary prevention of pre-eclampsia and hypertensive disorders  |           |          |
| Strict bed rest is not recommended for improving pregnancy outcomes in women with hypertension (with or without proteinuria)  |           |          |
| The following are NOT done to prevent/treat pre-eclampsia: <ul style="list-style-type: none"> <li>- Restriction in dietary salt intake</li> <li>- Vitamin D supplementation</li> <li>- Individual or combined vitamin C and vitamin supplementation</li> <li>- Treatment with</li> <li>- diuretics, particularly thiazides</li> </ul> |           |          |

### Management of mild-pre-eclampsia

| Standards and Criteria   | Score 1-5 | Comments |
|--|-----------|----------|
| GESTATION LESS THAN 37 WEEKS<br>Women with stable or normalizing signs are followed up twice a week as an outpatient   |           |          |
| If women is admitted (at gestation less than 37 weeks):<br>Normal diet is provided (salt restriction is discouraged); <ul style="list-style-type: none"> <li>- blood pressure (twice daily) and urine for proteinuria (daily) are monitored;</li> <li>- No anticonvulsants, antihypertensives, sedatives or tranquilizers are given (unless blood</li> </ul> |           |          |

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|  |  |  |
|--|--|--|
| <p>pressure or urinary protein level increases)</p> <ul style="list-style-type: none"> <li>- No diuretics are given (only indicated for use in pre-eclampsia with pulmonary oedema or congestive heart failure)</li> </ul> |  |  |
| <p>GESTATION MORE THAN 37 WEEKS</p> <p>In women with mild pre-eclampsia or mild gestational hypertension at term, induction of labour is recommended.</p>  |  |  |

### Management of severe pre-eclampsia and eclampsia

| Standards and Criteria  | Score 1-5 | Comments |
|---|-----------|----------|
| Guidelines and a well-defined written protocol for management of severe pre-eclampsia and eclampsia are available, known and routinely used by staff  |           |          |
| A kit is ready for management of severe pre-eclampsia and eclampsia   |           |          |
| Staff skilled to manage severe pre-eclampsia and eclampsia are 24 hours available   |           |          |
| IV infusion is started using a large-bore (16-gauge or largest available) cannula or needle and IV fluids (normal saline or Ringer's lactate) are infused   |           |          |
| <p>Magnesium sulfate is infused for the prevention of eclampsia in women with severe pre-eclampsia and for treatment of women with eclampsia</p> <p>Loading dose</p> <ul style="list-style-type: none"> <li>• 4 g of 20% magnesium sulfate solution IV over five minutes.</li> <li>• Followed promptly with 10 g of 50% magnesium sulfate solution: 5 g in each buttock as a deep IM injection with 1 mL of 2% lignocaine in the same syringe.</li> </ul> <p>Maintenance dose</p> <p>5 g of 50% magnesium sulfate solution with 1 mL of 2% lignocaine in the same syringe by deep IM injection into alternate buttocks every four hours</p> |           |          |
| Vital signs (pulse, blood pressure, respiration), reflexes and fetal heart rate are monitored regularly (at least hourly) and woman is never left alone   |           |          |
| <p>Fluid balance chart is maintained to prevent fluid overload</p> <p>the bladder is catheterized to monitor urine output and proteinuria.</p> <ul style="list-style-type: none"> <li>• the amount of fluids administered is monitored</li> </ul>   |           |          |
| If diastolic blood pressure remains above 110 mm Hg, antihypertensive drugs, namely hydralazine 5 mg IV is given slowly every five minutes until the diastolic blood pressure is lowered to less than 100 mm Hg but not below 90 mm Hg (and repeated hourly or hydralazine 12.5 mg IM is given every two hours if needed)   |           |          |

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| Standards and Criteria  | Score 1-5 | Comments |
|---|-----------|----------|
| 1 g Calcium gluconate (10 ml of 10% solution) is kept ready in case of signs of toxicity of magnesium sulphate  |           |          |
| In women with severe pre-eclampsia at term, early delivery is pursued   |           |          |
| Labour is induced in women with severe pre-eclampsia at a gestational age when the fetus is not viable or unlikely to achieve viability within one or two weeks.  |           |          |
| In women with severe pre-eclampsia, a viable fetus and before 34 weeks of gestation, a policy of expectant management is adopted provided that uncontrolled maternal hypertension, increasing maternal organ dysfunction or fetal distress are absent and are monitored.                        |           |          |
| In women with severe pre-eclampsia, a viable fetus and between 34 and 36 (plus 6 days) weeks of gestation, a policy of expectant management is adopted, provided that uncontrolled maternal hypertension, increasing maternal organ dysfunction or fetal distress are absent and are monitored. |           |          |
| Corticosteroids are not used for the specific purpose of treating women with HELLP syndrome,  |           |          |
| Women are carefully monitored after delivery.   |           |          |
| Clinicians aware of risk of developing eclampsia post-partum  |           |          |
| Women with severe pre- eclampsia/eclampsia are kept in the hospital for at least 4 days postpartum  |           |          |
| Follow-up is planned at 6 weeks for women with pre-eclampsia and further investigation implemented if persistent hypertension or proteinuria  |           |          |

### Antihypertensive treatment

| Standard and Criteria  | Score 1-5 | Comments |
|--|-----------|----------|
| Antihypertensive treatment is started when diastolic BP>110 OR if high proteinuria is present  |           |          |
| Antihypertensive treatment NOT routinely started if BP<160/100   |           |          |
| The choice and route of administration of an antihypertensive drug for severe hypertension during pregnancy, in preference to others, is based primarily on the prescribing clinician's experience with that particular drug, its cost and local availability. |           |          |

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|  |  |  |
|--|--|--|
| In women treated with antihypertensive drugs antenatally, antihypertensive treatment is continued postpartum |  |  |
| Treatment with antihypertensive drugs is provided for severe postpartum hypertension.                        |  |  |

**Summary - Hypertension in pregnancy, mild/severe pre-eclampsia and eclampsia**

| <u>Summary</u>  | <u>Score 1-5</u> | <u>Comments</u> |
|---|------------------|-----------------|
| (a) Diagnosis of hypertension, mild/ severe pre-eclampsia and eclampsia |                  |                 |
| (b) Prevention of pre-eclampsia   |                  |                 |
| (c) Management of mild pre-eclampsia                                    |                  |                 |
| (d) Management of severe pre-eclampsia and eclampsia                    |                  |                 |
| (e) Antihypertensive treatment  |                  |                 |

*Score*

|  |          |          |          |          |          |
|--|----------|----------|----------|----------|----------|
| <b>Summary score</b>   |          |          |          |          |          |
| - Hypertension in pregnancy, mild/severe pre-eclampsia and eclampsia |          |          |          |          |          |
| <b>(to be circled)</b>   | <b>5</b> | <b>4</b> | <b>3</b> | <b>2</b> | <b>1</b> |

Please indicate the quality of support by marking one of the 5 numbers; 5 indicates good quality of care, 4 to 1 indicating levels of necessary improvement (4=small need for improvement, 1=urgent need for improvement/life threatening practices)

*Main strengths*

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*Main weaknesses*

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### Prevention and management of infections in pregnancy

#### Antibiotic prophylaxis in pregnancy

| Standards and criteria   | Score 1-5 | Comments |
|--|-----------|----------|
| Adequate antibiotics are given in case of preterm prelabour rupture of membranes (PROM) (erythromycin 250 mg by mouth three times per day for seven days; PLUS amoxicillin 500 mg by mouth three times per day for seven days;)                    |           |          |
| Adequate antibiotic prophylaxis is given to prevent infection in case of prolonged (more than 18 hours) rupture of membranes at or near term (prophylactic penicillin or ampicillin to help reduce Group B streptococcus infection in the neonate) |           |          |
| Adequate antibiotics are given to women with established preterm labour (penicillin G 2 million units IV every six hours until delivery; OR ampicillin 2 g IV every six hours)   |           |          |
| Adequate antibiotics according to aetiology are given in labour to women with fever >38°C  |           |          |
| Adequate antibiotics are given for prophylaxis in C-section (after delivery and cord clamping)   |           |          |

#### Screening and management of urinary tract infections in pregnant women

| Standards and Criteria   | Score 1-5 | Comments |
|--|-----------|----------|
| Screening at 12-16 weeks with urine culture is performed in all antenatal patients.  |           |          |
| Cystitis is diagnosed correctly and treated with<br>- amoxicillin 500 mg by mouth three times per day for three days;<br>- OR trimethoprim/sulfamethoxazole one tablet (160/800 mg) by mouth two times per day for three days.   |           |          |
| Pyelonephritis is correctly treated according to standard treatment guidelines:<br>Urine culture and sensitivity is checked, if possible, and infection treated with an antibiotic appropriate for the organism.<br><ul style="list-style-type: none"><li>If urine culture is unavailable, treat with<ul style="list-style-type: none"><li>ampicillin 2 g IV every six hours;</li><li>PLUS gentamicin 5 mg/kg body weight IV every 24 hours</li></ul></li><li>Once the woman is fever-free for 48 hours, give amoxicillin 1 g by mouth three times per day to complete 14 days of treatment.</li></ul> |           |          |

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### *Screening and management of syphilis in pregnant women*

| <b>Standards and Criteria</b>  | <b>Score 1-5</b> | <b>Comments</b> |
|--|------------------|-----------------|
| Appropriate syphilis testing is performed in all women at first antenatal visit and if possible in the third trimester.  |                  |                 |
| Penicillin) is given at the appropriate dose. BENZATHINE PENICILLIN IM (2.4 million units in 5ml as two injections at two different sites) Or (if woman is allergic) erythromycin 500 mg |                  |                 |
| Women with syphilis are also screened and treated for other STDs; and partner screened and tested if found infected.   |                  |                 |
| Women with syphilis are not hospitalized and isolated during pregnancy/delivery.   |                  |                 |

### *Screening and management of HIV in pregnant women*

| <b>Standards and Criteria</b>   | <b>Score 1-5</b> | <b>Comments</b> |
|---|------------------|-----------------|
| Guidelines and a written protocol for testing, counselling and management of pregnant women with HIV is available, known and routinely used by staff.   |                  |                 |
| Couples and partners in antenatal care settings should be offered voluntary HIV testing and counselling with support for mutual disclosure<br>Provider-initiated testing and counselling is offered for women as a routine component of the package of care in all antenatal, childbirth, postpartum and paediatric care settings.<br>Re-testing is offered in the third trimester, or during labour or shortly after delivery, because of the high risk of acquiring HIV infection during pregnancy. |                  |                 |
| All pregnant women infected with HIV are initiated on triple ARVs (ART): once-daily fixed-dose combination of TDF + 3TC (or FTC) + EFV  |                  |                 |
| Pregnant women with HIV receive additional interventions such as screening for sexually transmitted infections, nutritional support and infant feeding and family planning counselling  |                  |                 |
| Facility- based delivery by trained skilled birth attendants is promoted. (Although caesarean section has been shown to protect against HIV transmission, especially in the absence of ARV drugs or in the case of high viral load, WHO does not recommend it in resource-limited settings specifically for HIV infection)  |                  |                 |
| Unnecessary instrumentation and premature rupture of membranes are avoided by using a partograph to monitor stages of labour;   |                  |                 |
| PMTCT – see section on PMTCT  |                  |                 |

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### Screening and management of malaria in pregnant women

| <b>Standards and Criteria</b>   | <b>Score 1-5</b> | <b>Comments</b> |
|---|------------------|-----------------|
| Guidelines and a written protocol for diagnosing and management of Malaria in pregnancy is available, known and routinely used by staff   |                  |                 |
| Parasite-based diagnosis is carried out to confirm clinical diagnosis before treatment is given to pregnant women<br>(WHO Malaria treatment guidelines, 2010)   |                  |                 |
| Appropriate treatment is given to women with Malaria during pregnancy (First trimester: quinine + clindamycin for 7 days; artesunate + clindamycin for 7 days if first line treatment failed) (second or third trimester: ACT (with the exception of DHA+PPQ for which there is insufficient information in second and third trimesters of pregnancy to use as firstline therapy) if known to be effective in the country/region or artesunate plus clindamycin to be given for 7 days or quinine plus clindamycin to be given for 7 days.)<br>(WHO Malaria treatment guidelines, 2010) |                  |                 |
| Intermittent Presumptive Treatment (IPTp) with Sulfadoxine/Pyrimethamine (SP) is used for all pregnant women at each scheduled antenatal care visit (in areas of moderate –to-high malaria transmission), with the first dose administered as early as possible during the 2 <sup>nd</sup> trimester of gestation. (WHO recommendation, Nov 2012)   |                  |                 |

### Screening and management of gonorrhoea in pregnant women

| <b>Standards and Criteria</b>   | <b>Score 1-5</b> | <b>Comments</b> |
|---|------------------|-----------------|
| If there is a high prevalence of gonorrhoea in the population, screening is performed by cervical culture   |                  |                 |
| Appropriate treatment is given to the woman and the partner is tested and treated.  |                  |                 |
| Women who are infected are not admitted to the hospital/not isolated and the eradication of the infection is checked with a follow-up swab and culture after treatment. |                  |                 |

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### *Screening and management of other infections in pregnant women*

| <b>Standard and Criteria</b>  | <b>Score 1-5</b> | <b>Comments</b> |
|---|------------------|-----------------|
| Screening for Tuberculosis in pregnancy is performed in high risk population (e.g. people living with HIV).   |                  |                 |
| Screening for Hepatitis B is performed in all pregnant women and babies receive appropriate immunoglobulin treatment and vaccination at birth if the mother is found positive.  |                  |                 |
| Pregnant Women with genital herpes are not isolated and hospitalized  |                  |                 |
| Caesarean section is performed if genital herpes present or prodromal symptoms develop at the time of delivery.   |                  |                 |
| Termination of pregnancy is offered to women diagnosed with rubella in the first 16 weeks of pregnancy  |                  |                 |
| Women with cytomegalovirus, toxoplasmosis, trichomoniasis, and candidiasis are not hospitalized or isolated from other women.   |                  |                 |
| Women with rubella are not hospitalized (for rubella)<br>If hospitalized are isolated from other women.   |                  |                 |
| Vaccination for rubella is offered to all seronegative women after childbirth, or miscarriage, when probability for another pregnancy in the next 30 days is low.   |                  |                 |
| Rooming in is promoted appropriately<br>Depending on mother's infection status:<br><br>IF mother has VDRL, gonorrhoea, Chlamydia, GBS, toxoplasmosis, malaria, trichomonas or candidiasis, AND mother and baby are adequately treated, baby can room-in and breast feed with mother<br><br>IF mother has TB, AND has normal chest Xray and/or no clinical evidence of TB/sputum negative, baby can room-in and breast feed with mother.<br><br>IF mother has TB, BUT has active disease, baby MUST be isolated from mother until both are treated appropriately and maternal sputum is clear of bacilli.<br><br>IF mother has hepatitis B, baby can room-in and breast feed with mother, IF baby has been vaccinated and treated appropriately with immunoglobulin treatment<br><br>IF mother has herpes, CMV or rubella, baby MUST be isolated from other babies, though can room-in with mother. IF baby is pre-term, then mothers with CMV CANNOT breastfeed baby. |                  |                 |

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| Standard and Criteria  | Score 1-5 | Comments |
|--|-----------|----------|
| General recommendation are given to pregnant women for prevention of listeriosis and toxoplasmosis |           |          |

### *Summary – Prevention and management of infections in pregnant women*

| Standards and Criteria  | Score 1-5 | Comments |
|---|-----------|----------|
| 1. Antibiotic prophylaxis in pregnancy                              |           |          |
| 2. Screening and management of urinary tract infection in pregnancy |           |          |
| 3. Screening and management of syphilis in pregnancy                |           |          |
| 4. Screening and management of HIV in pregnancy                     |           |          |
| 5. Screening and management of Malaria in pregnancy                 |           |          |
| 6. Screening and treatment of gonorrhoea in pregnancy.              |           |          |
| 7. Screening and management of other infections in pregnancy        |           |          |

### *Score*

|   |          |          |          |          |          |
|---|----------|----------|----------|----------|----------|
| <b>Summary score</b><br>– Prevention and management of infections in pregnant women |          |          |          |          |          |
| <b>(to be circled)</b>  | <b>5</b> | <b>4</b> | <b>3</b> | <b>2</b> | <b>1</b> |

Please indicate the quality of support by marking one of the 5 numbers; 5 indicates good quality of care, 4 to 1 indicating levels of necessary improvement (4=small need for improvement, 1=urgent need for improvement/life threatening practices)

### *Main strengths*

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### *Main weaknesses*

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### 5.2 Intrapartum & postpartum care

#### Normal labour and vaginal delivery

**Source:** Visit to the labour and delivery ward, observation of practices, review of records and logbooks and interviews with staff and women.

**Instructions:** Give priority to direct observation, use interviews to staff and mothers to provide additional information.

**Please note:** the page-references refer to the English version of the WHO IMPAC guidelines, “Managing complications in pregnancy and childbirth”, 2007.

#### *Delivery conditions*

| <b>Standards and Criteria</b>  | <b>Score 1-5</b> | <b>Comments</b> |
|--|------------------|-----------------|
| Labour ward teams use childbirth checklist   |                  |                 |
| Guidelines and a written protocol for delivery are available, known and used by staff  |                  |                 |
| Appropriate admission history is taken   |                  |                 |
| Cleanliness of the woman and her environment is ensured  |                  |                 |
| Staff wash their hands before delivery, and use high level disinfected/<br>sterile gloves while assisting with delivery.   |                  |                 |
| Staff use sterile instruments for delivery.  |                  |                 |
| Privacy and confidentiality is ensured<br>Single room or curtains/screens available if there is more than one woman per room<br>Bed is positioned far from door or window (not in front of them) |                  |                 |
| The woman’s consent is obtained for attendance of people other than staff (i.e. students)  |                  |                 |
| Staff use gloves while disposing waste   |                  |                 |
| The room is kept at an adequate temperature  |                  |                 |

#### *Supportive care throughout labour*

| <b>Standards and Criteria</b>  | <b>Score 1-5</b> | <b>Comments</b> |
|--|------------------|-----------------|
| There is at least one skilled service provider present throughout labour and birth.  |                  |                 |
| Chosen birth companion is allowed to remain with woman throughout labour and birth   |                  |                 |
| A supportive, encouraging atmosphere for birth that is respectful of the woman’s wishes is provided and her complaints listened to and taken seriously |                  |                 |

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| <b>Standards and Criteria</b>   | <b>Score 1-5</b> | <b>Comments</b> |
|---|------------------|-----------------|
| <ul style="list-style-type: none"> <li>- all procedures are explained, permissions are sought, and findings discussed with the woman.</li> <li>- she is kept informed about the progress of labour.</li> <li>- she is praised, encouraged and reassured that things are going well</li> </ul>   |                  |                 |
| Breathing techniques for labour and delivery are explained and taught to the woman  |                  |                 |
| <b>Mobility</b> <ul style="list-style-type: none"> <li>- the woman is encouraged to walk around freely during the first stage of labour.</li> <li>- the woman's choice of position is supported (left lateral, squatting, kneeling, standing supported by the companion) for each stage of labour and delivery.</li> </ul>  |                  |                 |
| Women are encouraged to eat and drink as they wish <ul style="list-style-type: none"> <li>- if wasting is visible or woman tires during labour, it is ensured that she eats and drinks</li> </ul>   |                  |                 |
| Women are encouraged to empty their bladder frequently (and reminded every 2 hours)   |                  |                 |
| For pain and discomfort relief change of position is suggested <ul style="list-style-type: none"> <li>- mobility is encouraged</li> <li>- companion is encouraged to:               <ul style="list-style-type: none"> <li>- massage the woman's back if she finds this helpful.</li> <li>- hold the woman's hand and sponge her face between contractions.</li> </ul> </li> </ul> Woman is encouraged to use the breathing technique and warm bath or shower |                  |                 |
| The following are NOT done: enemas, pubic shaving, or swabbing vagina with antiseptics  |                  |                 |

### *Partogram/Partograph*

| <b>Standards and Criteria</b>  | <b>Score 1-5</b> | <b>Comments</b> |
|--|------------------|-----------------|
| Partogram is used properly and consistently at the bedside   |                  |                 |
| Partogram's information is collected, recorded and interpreted by skilled birth attendant and is used to support labour management interventions |                  |                 |

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### *Foetal monitoring during labour*

| <b>Standards and Criteria</b>   | <b>Score 1-5</b> | <b>Comments</b> |
|---|------------------|-----------------|
| <b>Intermittent auscultation for low risk pregnancy</b>   |                  |                 |
| Guidelines for intermittent auscultation are in place stating how auscultation should be performed, and are known and used routinely by staff.                        |                  |                 |
| Health service providers performing intermittent auscultation are skilled enough to recognize fetal heart beat pattern, maternal uterine activity and maternal pulse. |                  |                 |
| <b>Continuous electronic fetal monitoring (EFM) or cardiotocography (CTG)</b>   |                  |                 |
| Guidelines for performing and interpreting EFM/CTG are in place in the unit, known and used by the staff  |                  |                 |
| If abnormal EFM/CTG suggests the need of expedited delivery, an emergency caesarean section / operative vaginal delivery is performed within 30 minutes.              |                  |                 |
| Continuous EFM/CTG is used only in higher risk pregnancy according to local protocol.   |                  |                 |
| EFM/CTG machines are in good condition and correctly working with the proper settings for date and time, paper speed and fetal heart rate.                            |                  |                 |
| Name of the woman, mode of delivery, significant intra-partum events, uterine activity, day and time are registered on the paper and stored with the notes            |                  |                 |
| If medical staff is called to review the EFM/CTG, the evaluation is written in the notes or on the trace.   |                  |                 |
| Women don't lie on their back when undergoing EFM/CTG.  |                  |                 |

### *Care during first stage of labour*

| <b>Standard and Criteria</b>   | <b>Score 1-5</b> | <b>Comments</b> |
|--|------------------|-----------------|
| Guidelines for safe delivery are available, known and used by skilled birth attendants                               |                  |                 |
| Guidelines for anticipating and managing shoulder dystocia are available, known and used by skilled birth attendants |                  |                 |
| Guidelines for managing cord prolapse are available, known and used by skilled birth attendants                      |                  |                 |

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| Standard and Criteria  | Score 1-5 | Comments |
|--|-----------|----------|
| <p>Women are monitored at least hourly and during active labour every 30 minutes for:</p> <ul style="list-style-type: none"> <li>- emergency signs</li> <li>- Frequency, intensity and duration of contractions.</li> <li>- Fetal heart rate</li> <li>- Mood and behaviour (distressed, anxious)</li> </ul>  |           |          |
| <p>Every 4 hours monitoring is carried out of:</p> <ul style="list-style-type: none"> <li>- Cervical dilatation<br/>(Unless indicated, vaginal examination is NOT done more frequently than every 4 hours.)</li> <li>- temperature</li> <li>- pulse</li> <li>- Blood pressure</li> </ul>   |           |          |
| <p>Findings are recorded regularly in Labour record and Partograph/Partogram</p> <ul style="list-style-type: none"> <li>- time of rupture of membranes and colour of amniotic fluid are recorded</li> </ul>  |           |          |
| <p>supportive care is given (see section on supportive care throughout labour)</p>   |           |          |
| <p>Progress of labour is assessed correctly and appropriate actions taken</p> <p>(After 8 hours if:</p> <p>Contractions stronger and more frequent but</p> <p>No progress in cervical dilatation with or without membranes ruptured → complications during labour</p> <p>After 8 hours if:</p> <p>no increase in contractions, and membranes are not ruptured, and no progress in cervical dilatation → discharge and advise when to return</p> <ul style="list-style-type: none"> <li>- Cervical dilatation 4 cm or greater.--&gt; manage active labour)</li> </ul> |           |          |
| <p>Woman is never left alone during active labour</p>  |           |          |

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### *Care during second stage of labour*

| <b>Standards and Criteria</b>   | <b>Score 1-5</b> | <b>Comments</b> |
|---|------------------|-----------------|
| When cervix is dilated 10 cm or bulging thin perineum and head visible:<br>- women is never left alone and monitored every 5 minutes for emergency signs Frequency, intensity and duration of contractions.<br>Fetal heart rate<br>Perineum thinning and bulging.<br>Visible descent of fetal head or during contraction.<br>Mood and behaviour (distressed, anxious) |                  |                 |
| Monitoring findings are recorded  |                  |                 |
| Controlled delivery of the head is ensured  |                  |                 |
| Episiotomy is NOT routinely performed (only if fetal distress/operative delivery)   |                  |                 |
| Local anaesthesia is given if episiotomy is performed   |                  |                 |
| Mother's abdomen is accessed<br>- second baby excluded<br>- vaginal bleeding assessed   |                  |                 |
| 10 IU oxytocin IM are given to the mother   |                  |                 |
| Essential newborn care is provided (refer to Chapter Neonatal Care)   |                  |                 |

### *Care during third stage of labour*

| <b>Standards and Criteria</b>  | <b>Score 1-5</b> | <b>Comments</b> |
|--|------------------|-----------------|
| Active management of third stage is appropriately performed  |                  |                 |
| Mother is monitored (as above)   |                  |                 |
| Baby is monitored (refer to Chapter Neonatal Care)   |                  |                 |
| Placenta is delivered<br>- strong uterine contraction (2-3 minutes) is awaited and placenta by controlled cord traction delivered<br>- Placenta and membranes are checked for completeness |                  |                 |

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### Care of mother after delivery

| Standards and Criteria   | Score 1-5 | Comments |
|--|-----------|----------|
| Blood loss, fundal height and blood pressure are monitored regularly post-partum |           |          |
| Minor tears are not stitched if not bleeding <b>p P83</b>                        |           |          |
| Episiotomy/ tears are repaired with local anaesthesia                            |           |          |
| Vagina and perineum are NOT swabbed with antiseptics after delivery              |           |          |
| Bladder catheterisation is NOT routinely performed in post-partum                |           |          |
| Cervix is NOT routinely checked after delivery                                   |           |          |

### Summary- Normal labour and vaginal delivery

| Standard and Criteria                  | Score 1-5 | Comments |
|--|-----------|----------|
| (a) Conditions of delivery             |           |          |
| (b) Supportive care throughout labour  |           |          |
| (c) Partogram/Partograph               |           |          |
| (d) Foetal monitoring during labour    |           |          |
| (e) Care during first stage of labour  |           |          |
| (f) Care during second stage of labour |           |          |
| (g) Care during third stage of labour  |           |          |
| (h) Care of mother after delivery      |           |          |

### Score

|  |          |          |          |          |          |
|--|----------|----------|----------|----------|----------|
| <b>Summary score</b><br>- Normal labour and vaginal delivery |          |          |          |          |          |
| <b>(to be circled)</b>                                       | <b>5</b> | <b>4</b> | <b>3</b> | <b>2</b> | <b>1</b> |

Please indicate the quality of support by marking one of the 5 numbers; 5 indicates good quality of care, 4 to 1 indicating levels of necessary improvement (4=small need for improvement, 1=urgent need for improvement/life threatening practices)

### Main strengths

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### Main weaknesses

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## Prevention and management of preterm labour

### Prevention of preterm labour

| Standards and Criteria  | Score 1-5 | Comments |
|---|-----------|----------|
| Bed rest, hospitalization and refraining from sexual activity are not currently recommended for women at risk of PTD. |           |          |
| Prophylactic oral betamimetics/ magnesium sulphate/calcium supplementation are not given to women at risk of PTD.     |           |          |

### Management of preterm labour

| Standards and Criteria   | Score 1-5 | Comments |
|--|-----------|----------|
| Guidelines and written protocol with indications and procedures for tocolysis are available, known and used by skilled birth attendants  |           |          |
| Tocolysis is attempted in case of premature labour if: <ul style="list-style-type: none"><li>- gestation is less than 37 weeks;</li><li>- the cervix is less than 3 cm dilated;</li><li>- there is no amnionitis, pre-eclampsia or active bleeding;</li><li>- there is no fetal distress</li></ul>   |           |          |
| Appropriate tocolytic drugs are used at correct doses:<br>Salbutamol:<br>Initial dose: 10 mg in 1 L IV fluids.<br>IV infusion is started at 10 drops per minute.<br>Subsequent dose: If contractions persist, infusion rate is increased by 10 drops per minute every 30 minutes until contractions stop or maternal pulse exceeds 120 per minute.<br>If contractions stop, the same rate is maintained for at least eight hours<br>Indomethacin: 100 mg loading dose by mouth or rectum, subsequent dose: 25 mg every six hours for 48 hours are given <ul style="list-style-type: none"><li>- Nifedipine as first choice??</li><li>- Betamimetics only if no contraindications??</li></ul> |           |          |

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| <b>Standards and Criteria</b>  | <b>Score 1-5</b> | <b>Comments</b> |
|--|------------------|-----------------|
| - Magnesium sulphate NOT used ?  |                  |                 |
| Tocolytics are not given for more than 48 hours  |                  |                 |
| Maternal and fetal condition are monitored (pulse, blood pressure, signs of respiratory distress, uterine contractions, loss of amniotic fluid or blood, fetal heart rate, fluid balance, blood glucose, etc.).  |                  |                 |
| Repeated treatment with tocolytics is NOT given after first successful treatment   |                  |                 |
| Oral betamimetics/ magnesium for maintenance therapy are not used  |                  |                 |
| If preterm labour continues despite use of tocolytic drugs, it is arranged for the baby to receive care at the most appropriate service with neonatal facilities   |                  |                 |
| Labour is allowed to progress if: <ul style="list-style-type: none"> <li>- gestation is more than 37 weeks;</li> <li>- the cervix is more than 3 cm dilated;</li> <li>- there is active bleeding;</li> <li>- the fetus is distressed, dead or has an anomaly incompatible with survival;</li> <li>- there is amnionitis or pre-eclampsia.</li> </ul> |                  |                 |
| If labour continues and gestation is less than 37 weeks, prophylactic antibiotics are given in order to help reduce Group B streptococcus infection in the neonate: penicillin G 2 million units IV every six hours until delivery; - OR ampicillin 2 g IV every six hours.  |                  |                 |
| Delivery by vacuum extraction is avoided, as the risks of intracranial bleeding in the preterm baby are high.  |                  |                 |
| It is prepared for management of preterm or low birth weight baby and the need for resuscitation is anticipated  |                  |                 |

### *Antenatal administration of corticosteroids*

| <b>Standards and Criteria</b>   | <b>Score 1-5</b> | <b>Comments</b> |
|---|------------------|-----------------|
| If less than 34 weeks gestation, corticosteroids are given to the mother to improve fetal lung maturity and chances of neonatal survival: |                  |                 |

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|   |  |  |
|---|--|--|
| - betamethasone 12 mg IM, two doses 24 hours apart;<br>- OR dexamethasone 6 mg IM, four doses 12 hours apart. |  |  |
| Corticosteroids are not used in the presence of frank infection.  |  |  |
| Repeated courses are NOT routinely given  |  |  |

### Summary – Prevention and management of preterm labour

| Standards and Criteria                      | Score 1-5 | Comments |
|---|-----------|----------|
| Prevention of preterm labour                |           |          |
| Management of preterm labour                |           |          |
| Antenatal administration of corticosteroids |           |          |

### Score

|  |          |          |          |          |          |
|--|----------|----------|----------|----------|----------|
| <b>Summary score</b><br>- Management of preterm labour |          |          |          |          |          |
| <b>(to be circled)</b>                                 | <b>5</b> | <b>4</b> | <b>3</b> | <b>2</b> | <b>1</b> |

Please indicate the quality of support by marking one of the 5 numbers; 5 indicates good quality of care, 4 to 1 indicating levels of necessary improvement (4=small need for improvement, 1=urgent need for improvement/life threatening practices)

### Main strengths

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### Main weaknesses

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## Module B – Maternal Care

*Improving the Quality of care for Reproductive, Maternal, Neonatal, Child and Adolescent Health in South-East Asia Region*

### Caesarean section (CS)

**Source:** This information should be collected by observing the treatment and care of women undergoing surgery, interviewing staff and caregivers and reviewing guidelines, where available.

**Instructions:** Give priority to direct observation, use interviews to staff and mothers to provide additional information

#### *Emergency caesarean section*

| <b>Standards and Criteria</b>  | <b>Score 1-5</b> | <b>Comments</b> |
|--|------------------|-----------------|
| Guidelines and a written protocol for emergency caesarean section is available, known and used routinely by staff    |                  |                 |
| Anaesthesiologist, surgeon and operating theatre staff are always available for emergency caesarean section          |                  |                 |
| Emergency caesarean section starts in less than 30 min after decision made to proceed                                |                  |                 |
| An operating theatre is 24 hours/7 days fully ready for emergency caesarean sections (surgery kit, electricity. etc) |                  |                 |
| Stored blood (particularly O negative blood) is readily available in case blood transfusion needed                   |                  |                 |

#### *Timing of caesarean section and informed consent*

| <b>Standards and Criteria</b>  | <b>Score 1-5</b> | <b>Comments</b> |
|--|------------------|-----------------|
| Elective caesarean sections are performed after 39 weeks age of gestation. |                  |                 |
| Informed consent is obtained from women undergoing caesarean section       |                  |                 |

#### *Indications for caesarean section and policies to reduce inappropriate caesarean section incidence*

| <b>Standard and Criteria</b>  | <b>Score 1-5</b> | <b>Comments</b> |
|---|------------------|-----------------|
| Indication for caesarean section is reviewed before carrying out the procedure  |                  |                 |
| A surgeon is always involved in the decision to perform a caesarean section   |                  |                 |
| Caesarean section on maternal request is not allowed unless in very specific circumstances (e.g. previous stillbirth) |                  |                 |

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| Standard and Criteria   | Score 1-5 | Comments |
|---|-----------|----------|
| When there is a maternal request for caesarean section, risks and benefits of vaginal delivery vs. CS are discussed with woman and discussion is documented in the notes.   |           |          |
| <p>The decision about mode of birth after a previous caesarean section is taken after considering risk of uterus rupture during labour:</p> <ul style="list-style-type: none"> <li>- the previous surgery was NOT a low transverse caesarean incision;</li> <li>- the fetus is NOT in a normal vertex presentation;</li> <li>- emergency caesarean section canNOT be carried out immediately if required</li> </ul> <p>if the woman has a history of two lower uterine segment caesarean sections or ruptured uterus caesarean section is carried out</p>                     |           |          |
| <p>Women with breech presentation are offered the option of an external cephalic version, if:</p> <ul style="list-style-type: none"> <li>- breech presentation is present at or after 37 weeks</li> <li>- vaginal delivery is possible;</li> <li>- facilities for emergency caesarian section are available;</li> <li>- membranes are intact and amniotic fluid is adequate;</li> <li>- there are no complications (e.g. fetal growth restriction, uterine bleeding, previous caesarean delivery, fetal abnormalities, twin pregnancy, hypertension, fetal death).</li> </ul> |           |          |
| Caesarean section is planned if external cephalic version fails   |           |          |
| Elective caesarean section is performed in uncomplicated twin pregnancies only if first twin is not vertex lie.   |           |          |
| Caesarean section is NOT routinely offered in preterm pregnancies or term small for gestational age babies.   |           |          |
| Caesarean section is NOT routinely offered for maternal viral infections other than primary HSV infection in the 3rd trimester (e.g. HCV+, HBV+).   |           |          |
| Caesarean section is NOT routinely carried out for mothers with HIV infection   |           |          |

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### *Procedures related to caesarean section*

| <b>Standards and Criteria</b>  | <b>Score 1-5</b> | <b>Comments</b> |
|--|------------------|-----------------|
| Guidelines and written protocol (or checklist) for caesarean section procedures are available, known and used by staff   |                  |                 |
| Pre- operative care principles are followed prior to caesarean section <ul style="list-style-type: none"> <li>- the operating theatre is prepared according to guidelines</li> <li>- the women is prepared according to guidelines</li> </ul>  |                  |                 |
| Oxygen, suction and resuscitation equipment are readily available and functioning.   |                  |                 |
| A blood sample for haemoglobin or haematocrit and type is sent and screened, and blood for possible transfusion ordered  |                  |                 |
| The bladder is catheterized if necessary and urine output monitored  |                  |                 |
| Spinal anaesthesia, local infiltration with lignocaine, ketamine or general anaesthesia are used<br><br>Regional anaesthesia is offered as a first choice to all women undergoing caesarean section  |                  |                 |
| Intra- operatives care principles are followed<br><br>The women is positioned appropriately this includes that the operating table is tilted 15° as long as baby is not yet delivered to decrease supine hypotension syndrome<br><br>Surgical hand scrub is carried out<br><br>The incision side is prepared |                  |                 |
| Proper, evidence-based caesarean section technique is used   |                  |                 |
| A single dose of prophylactic antibiotics (ampicillin 2 g IV; OR cefazolin 1 g IV) is given after the cord is clamped and cut  |                  |                 |
| The woman's condition is monitored throughout the procedure: <ul style="list-style-type: none"> <li>- vital signs (blood pressure, pulse, respiratory rate), level of consciousness and blood loss are monitored</li> <li>- pain is managed</li> </ul>   |                  |                 |

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### *Immediate post-caesarean care*

| <b>Standards and Criteria</b>  | <b>Score 1-5</b> | <b>Comments</b> |
|--|------------------|-----------------|
| There are specific notes from the surgeon on the procedure performed, required monitoring and necessary treatment. There is handover for the nurses from theatre staff.  |                  |                 |
| After recovery from anaesthesia, observations (respiratory rate, heart rate, blood pressure, pain and sedation) are continued every 15 min in the first hour, every half hour for the second hour, and hourly thereafter provided that the patient is stable.<br><br>If patient is not stable, more frequent observations and medical review are done<br><br>It is ensured that the woman has constant supervision until she is conscious.   |                  |                 |
| Guidelines on post-operative pain relief are available, known and used by staff  |                  |                 |
| If there is no contraindication, non-steroidal anti-inflammatory drugs are offered post-CS as an adjunct to other analgesics.<br><br>Good postoperative pain control regimens include: <ul style="list-style-type: none"> <li>• non-narcotic mild analgesics such as paracetamol 500 mg by mouth as needed;</li> <li>• narcotics such as pethidine 1 mg/kg body weight (but not more than 100 mg) IM or IV slowly or morphine 0.1 mg/kg body weight IM every four hours as needed;</li> <li>• combinations of lower doses of narcotics with paracetamol.</li> </ul>  |                  |                 |
| Removal of the urinary bladder catheter is carried out once patient is mobile after regional anaesthesia and not sooner than 12 hours after the last 'top up' dose<br><br>It is ensured that the urine is clear before removing the catheter.<br><br>If the urine is clear, the catheter is removed eight hours after surgery or after the first postoperative night. <ul style="list-style-type: none"> <li>• If the urine is not clear, the catheter is left in place until the urine is clear.</li> <li>• 48 hours after surgery before removing the catheter are waited, if there was: <ul style="list-style-type: none"> <li>- uterine rupture;</li> <li>- prolonged or obstructed labour;</li> </ul> </li> </ul> |                  |                 |

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| Standards and Criteria  | Score 1-5 | Comments |
|---|-----------|----------|
| - massive perineal oedema;<br>- puerperal sepsis with pelvic peritonitis.   |           |          |
| Women, who are recovering well and mobilizing after caesarean section and do not have complications, can eat and drink when they feel hungry or thirsty |           |          |

### *Care after the first 24 hours and discharge after caesarean section*

| Standards and Criteria  | Score 1-5 | Comments |
|---|-----------|----------|
| Women are prescribed regular analgesia for postoperative pain, using, if no contra-indication: <ul style="list-style-type: none"> <li>• non-narcotic mild analgesics such as paracetamol 500 mg by mouth as needed;</li> <li>• narcotics such as pethidine 1 mg/kg body weight (but not more than 100 mg) IM or IV slowly or morphine 0.1 mg/kg body weight IM every four hours as needed;</li> <li>• combinations of lower doses of narcotics with paracetamol.</li> </ul> |           |          |
| Temperature is monitored to exclude fever   |           |          |
| Dressing is removed 24 hours after the caesarean section  |           |          |
| Wound is assessed for signs of infection, separation or dehiscence  |           |          |
| Wound care is carried out appropriately<br>- the wound is gently cleaned and dried daily  |           |          |
| Women who are recovering well, do not have fever or complications following caesarean section are offered early discharge (after 24 hrs) from hospital and follow-up at home  |           |          |
| Removal of sutures/clips is planned at discharge if needed  |           |          |
| At the time of discharge from the hospital, women are informed to seek care for abnormal symptoms such as fever, abnormal uterine bleeding, urinary symptoms, chest and leg symptoms of deep vein thrombosis.   |           |          |
| Women discuss with healthcare providers the reasons for the caesarean section and implications for the child or future pregnancies and delivery methods for subsequent children.  |           |          |
| Women are informed that they can resume activities, such as formal exercise, once they have fully recovered from the caesarean section  |           |          |

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*Improving the Quality of care for Reproductive, Maternal, Neonatal, Child and Adolescent Health in South-East Asia Region*

**Summary - Caesarean section**

| <b>Standard and Criteria</b>   | <b>Score 1-5</b> | <b>Comments</b> |
|--|------------------|-----------------|
| (a) Emergency caesarean section  |                  |                 |
| (b) Timing of caesarean section and informed consent   |                  |                 |
| (c) Indications for caesarean section and policies to reduce the inappropriate caesarean section incidence |                  |                 |
| (d) Procedures related to caesarean section  |                  |                 |
| (e) Immediate post-caesarean care  |                  |                 |
| (f) Care after the first 24 hours and discharge after caesarean section                                    |                  |                 |

**Score**

|   |          |          |          |          |          |
|---|----------|----------|----------|----------|----------|
| <b>Summary score</b><br>- Caesarean section |          |          |          |          |          |
| <b>(to be circled)</b>                      | <b>5</b> | <b>4</b> | <b>3</b> | <b>2</b> | <b>1</b> |

Please indicate the quality of support by marking one of the 5 numbers; 5 indicates good quality of care, 4 to 1 indicating levels of necessary improvement (4=small need for improvement, 1=urgent need for improvement/life threatening practices).

**Main strengths**

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**Main weaknesses**

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## Module B – Maternal Care

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### Postpartum haemorrhage (PPH)

| Standards and Criteria  | Score 1-5 | Comments |
|---|-----------|----------|
| Guidelines and a written protocol for preventing and managing PPH is available, known and used by skilled birth attendants <b>p S25-34</b>  |           |          |
| Adequate equipment, drugs and personnel are readily available in case of PPH.   |           |          |
| Uterine tonus is controlled after delivery (every 15 min in the first hour; at the end of the 2nd, 3rd, 4th hour, then every 4 hours) and uterus massaged if necessary                  |           |          |
| In the delivery room and during early puerperium, the facility has reliable means of measuring blood loss   |           |          |
| Blood can be obtained without delay 24 hours a day <b>p C23</b>   |           |          |
| A written protocol is readily available, known and used routinely by staff for immediate notification of on-call-staff, initial assessment, treatment and resuscitation <b>p S25-27</b> |           |          |
| A written protocol is readily available, known and used routinely by staff for treatment of uterine atony <b>p S28-31</b>   |           |          |
| A written protocol is readily available, known and used routinely by staff for refractory haemorrhages after medical treatment  |           |          |

### Summary - Postpartum haemorrhage

#### Score

|  |          |          |          |          |          |
|--|----------|----------|----------|----------|----------|
| <b>Summary score</b><br>- Postpartum haemorrhage |          |          |          |          |          |
| <b>(to be circled)</b>                           | <b>5</b> | <b>4</b> | <b>3</b> | <b>2</b> | <b>1</b> |

Please indicate the quality of support by marking one of the 5 numbers; 5 indicates good quality of care, 4 to 1 indicating levels of necessary improvement (4=small need for improvement, 1=urgent need for improvement/life threatening practices)

#### Main strengths

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## Module B – Maternal Care

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### Main weaknesses

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## Management of unsatisfactory progress of labour

### Diagnosis of unsatisfactory progress of labour

| Standard and Criteria  | Score 1-5 | Comments |
|--|-----------|----------|
| Stage and phase of labour are correctly diagnosed  |           |          |
| Onset of labour is correctly diagnosed (presence of regular uterine contractions leading to effacement and dilatation of the cervix)   |           |          |
| False labour is correctly diagnosed (cervix not dilated with infrequent contractions and no cervical changes in 4 hours) and women are discharged after excluding urinary infection/ rupture of membranes  |           |          |
| Partograph is used   |           |          |
| Unsatisfactory progress of labour is correctly diagnosed <ul style="list-style-type: none"><li>▪ Latent phase &gt; 8 hours (cervical dilatation less than 4 cm after 8 hours of regular uterine contractions), OR</li><li>▪ Labor lasting more than 12 hours and the baby has not been delivered, OR</li><li>▪ Cervical dilatation line in the partograph is between Alert Line and Action Line, OR</li><li>▪ No progress of descent of fetal presenting part in stage II.</li></ul> |           |          |

### Management of unsatisfactory progress of labour

| Standard and Criteria   | Score 1-5 | Comments |
|---|-----------|----------|
| Prolonged active phase is correctly diagnosed (cervical dilatation to the right of the action line)   |           |          |
| Uterine contractions are assessed and if efficient, cephalopelvic disproportion, obstruction, malposition or malpresentation are suspected  |           |          |
| If no sign of cephalopelvic disproportion/obstruction and membranes intact, artificial rupture of membranes/ amniotomy (ARM) is performed   |           |          |
| If there is secondary arrest of cervical dilatation and descent of presenting part in presence of good contractions, cephalopelvic disproportion is diagnosed and caesarean section performed |           |          |

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| Standard and Criteria   | Score 1-5 | Comments |
|---|-----------|----------|
| Signs of obstructed labour are known and evaluated and correctly managed  |           |          |
| If there is a prolonged active phase, contractions are inefficient and cephalopelvic disproportion/obstructed labour excluded: <ul style="list-style-type: none"><li>- ARM is performed</li><li>- oxytocin infusion started after 1 hour from ARM if good labour not established; progress reassessed after 2 hours of good uterine contractions</li><li>- CS performed if no progress</li><li>- cervix reassessed after 2 hours if there is progress</li></ul> |           |          |
| Routine early amniotomy is NOT performed  |           |          |
| Amniotomy is safely and correctly performed   |           |          |
| Supine position in labour is not encouraged; woman encouraged to walk around and a birth companion is present in labour   |           |          |

### *Oxytocin augmentation*

| Standard and Criteria   | Score 1-5 | Comments |
|---|-----------|----------|
| Guidelines and protocol for indications, dosage and usage of oxytocin are available, known and used by staff. |           |          |
| Oxytocin infusion is stopped if fetal heart rate less than 100/min  |           |          |
| Amniotomy is performed when feasible before starting infusion   |           |          |
| Oxytocin is NOT given less than 12 hours after starting prostaglandins  |           |          |
| Prostaglandins are NOT used iv for induction or augmentation  |           |          |

### *Summary - Management of unsatisfactory progress of labour*

| Standard and Criteria                           | Score 1-5 | Comments |
|---|-----------|----------|
| Diagnosis of unsatisfactory progress in labour  |           |          |
| Management of unsatisfactory progress in labour |           |          |
| Oxytocin augmentation                           |           |          |

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### Score

|   |          |          |          |          |          |
|---|----------|----------|----------|----------|----------|
| <b>Summary score</b><br>Management of unsatisfactory progress in labour |          |          |          |          |          |
| <b>(to be circled)</b>  | <b>5</b> | <b>4</b> | <b>3</b> | <b>2</b> | <b>1</b> |

Please indicate the quality of support by marking one of the 5 numbers; 5 indicates good quality of care, 4 to 1 indicating levels of necessary improvement (4=small need for improvement, 1=urgent need for improvement/life threatening practices)

### Main strengths

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### Main weaknesses

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## 6. Monitoring and follow-up

**Note:** Applies to women with complications.

### Standards

- Every woman with a complication of pregnancy has a monitoring chart according to severity of condition where individual progress is monitored.
- Reassessment and monitoring is adequately done and correctly recorded by the nurses and a senior health professional is called when needed.
- Admitted women are reassessed by a doctor regularly according to severity of illness.
- Follow up is arranged prior to discharge with a discharge note explaining the condition and advice for return to the facility if condition reoccurs

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### 6.1 Monitoring of individual progress

| <b>Standards and criteria</b>  | <b>Score 1-5</b> | <b>Comments</b> |
|--|------------------|-----------------|
| Nutritional status is assessed in all admitted patients  |                  |                 |
| At the time of admission, a monitoring plan is made according to the severity of the patient's condition   |                  |                 |
| A standard monitoring chart is used with the following information: patient details, vital signs, clinical signs depending on condition, treatments given, feeding and outcome |                  |                 |

### 6.2 Reassessment and monitoring by nurses

| <b>Standards and criteria</b>   | <b>Score 1-5</b> | <b>Comments</b> |
|---|------------------|-----------------|
| Key risk signs are monitored and recorded by a nurse twice a day and at least 4 times a day for critically ill patients   |                  |                 |
| Dosages and time are recorded for every patient receiving medications and IV fluids given by the nurse  |                  |                 |
| Additional special monitoring is performed and recorded appropriately when needed to follow the progress of particular conditions:<br>e.g. use of MgSO <sub>4</sub> in pre-eclampsia, |                  |                 |
| Nurses use the results of patient monitoring to alert the physicians of problems or changing patient status warranting their attention  |                  |                 |

### 6.3 Reassessment by physicians

| <b>Standards and criteria</b>   | <b>Score 1-5</b> | <b>Comments</b> |
|---|------------------|-----------------|
| Seriously ill patients are assessed by a doctor upon admission and reviewed at least twice daily until improved |                  |                 |
| All patients are reassessed daily during working days by a doctor   |                  |                 |
| Sick patients or new admissions are also reviewed by a physician on weekends and holidays                       |                  |                 |

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### 6.4 Follow up

| Standards and criteria  | Score 1-5 | Comments |
|---|-----------|----------|
| If needed, follow up is arranged before discharge in the health facility closest to the patient's home that can provide the necessary follow up treatment |           |          |
| All women receive a discharge note explaining their condition and providing information for the staff at the follow up facility                           |           |          |

### 6.5 Summary-Monitoring and follow up

| Summary  | Score 1-5 | Comments |
|--|-----------|----------|
| Nutritional status is assessed in all women                          |           |          |
| Each woman's progress is individually monitored, and charts are used |           |          |
| The most ill women receive highest attention                         |           |          |
| All admitted women are appropriately reassessed by a doctor          |           |          |
| Follow-up  |           |          |

#### Score

|  |          |          |          |          |          |
|--|----------|----------|----------|----------|----------|
| <b>Summary score</b><br>- Monitoring and follow up |          |          |          |          |          |
| <b>(to be circled)</b>                             | <b>5</b> | <b>4</b> | <b>3</b> | <b>2</b> | <b>1</b> |

Please indicate the quality of support by marking one of the 5 numbers; 5 indicates good quality of care and excellent monitoring and follow/up procedures of all patients occurs; 4 to 1 indicating levels of necessary improvement (4=small need for improvement, 1=urgent need for improvement/life threatening practices)

#### Main strengths

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## Module B – Maternal Care

*Improving the Quality of care for Reproductive, Maternal, Neonatal, Child and Adolescent Health in South-East Asia Region*

### Main weaknesses

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## 7. Summary scores – Module B: Maternal care

| Summary scores  |  | 5 | 4 | 3 | 2 | 1 |
|-----------------|--|---|---|---|---|---|
| B.1.            | Emergency obstetric care   |   |   |   |   |   |
| B.2.            | Maternity wards  |   |   |   |   |   |
| B.3.            | Infection control and supportive care                              |   |   |   |   |   |
|                 | Infection control  |   |   |   |   |   |
|                 | Supportive care  |   |   |   |   |   |
| B.4.            | Essential drugs, equipment and supplies                            |   |   |   |   |   |
| B.5.            | Maternal case management   |   |   |   |   |   |
|                 | Hypertension in pregnancy, mild/severe pre-eclampsia and eclampsia |   |   |   |   |   |
|                 | Management of infections   |   |   |   |   |   |
|                 | Normal labour and vaginal delivery                                 |   |   |   |   |   |
|                 | Preterm labour   |   |   |   |   |   |
|                 | Caesarean section  |   |   |   |   |   |
|                 | Postpartum haemorrhage   |   |   |   |   |   |
|                 | Management of unsatisfactory progress of labour                    |   |   |   |   |   |
| B.6.            | Monitoring and follow up   |   |   |   |   |   |
| <b>Module B</b> | <b>TOTAL SCORE</b>   |   |   |   |   |   |

**Comments on the summary scores/ total score:**



## **Module C - Neonatal Care**



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|   |           |
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# NEONATAL CARE

**Source:** Observation during the visit to the ward, and interviews with staff and persons accompanying the patients.

## 1. Neonatal resuscitation

**Source:** Observation during the visit, and interviews with staff

| <b>Standards and Criteria</b>  | <b>Score 1-5</b> | <b>Comments</b> |
|--|------------------|-----------------|
| Guidelines for resuscitation and care of the newborn baby are available, known and used by staff   |                  |                 |
| There is always (24/7) staff available able to appropriately help a newborn baby breath and to perform resuscitation appropriately   |                  |                 |
| At every delivery resuscitation can be performed immediately (staff and equipment is available) if needed  |                  |                 |
| There is a clean resuscitation bed with a heating source and equipment ready to use  |                  |                 |
| A functioning self-inflating bag with functioning relief valve is available  |                  |                 |
| Appropriate sized masks (size 0, size 1) are available   |                  |                 |
| Post resuscitation care is provided appropriately <ul style="list-style-type: none"><li>- once adequate ventilation and circulation has been established, ventilation is stopped</li><li>- newborn is returned to mother for skin-to-skin contact as soon as possible.</li><li>- newborn is closely monitored for breathing difficulties, signs of asphyxia</li><li>- need for further care is anticipated</li></ul> |                  |                 |

### 1.1 Summary - Neonatal resuscitation

*Score*

|  |          |          |          |          |          |
|--|----------|----------|----------|----------|----------|
| <b>Summary score</b><br>- Neonatal resuscitation |          |          |          |          |          |
| <b>(to be circled)</b>                           | <b>5</b> | <b>4</b> | <b>3</b> | <b>2</b> | <b>1</b> |

Please indicate the quality of support by marking one of the 5 numbers; 5 indicates adequately staffed, clean and well-equipped nursery facilities; 4 to 1 indicating levels of

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necessary improvement (4=small need for improvement, 1=indicates significant deficiencies in one or more of the wards)

### *Main strengths*

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### *Main weaknesses*

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## 2. Neonatal wards

**Source:** Observation during the visit to the ward, and interviews with staff and persons accompanying the patients.

### 2.1 Neonatal ward staffing

|                                 | # on day shift | # on night shift | # on weekend shifts |
|---------------------------------|----------------|------------------|---------------------|
| Doctors                         |                |                  |                     |
| Nurses                          |                |                  |                     |
| Medical assistants or Residents |                |                  |                     |
| Auxiliary staff                 |                |                  |                     |
| Others (please specify)         |                |                  |                     |

### 2.2 Rooming, hygiene and safety

| Standards and criteria  | Score 1-5 | Comments |
|---|-----------|----------|
| Sick newborns are kept in a separate unit or room from healthy babies |           |          |

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| Standards and criteria   | Score 1-5 | Comments |
|--|-----------|----------|
| Mothers of sick newborns are rooming in with their babies, with adequate facilities            |           |          |
| Beds are safe, clean, well maintained and have mattresses                                      |           |          |
| Patients have access to clean bed linen  |           |          |
| Staff have regular access to hand washing facilities   |           |          |
| Mothers have access to clean running water, soap and an appropriate space by the ward to wash. |           |          |
| Mosquito nets are available for use by mother and babies (if relevant)                         |           |          |
| Ward is kept clean   |           |          |
| Toilets and washing facilities are kept clean  |           |          |
| Dangerous items are inaccessible to patients   |           |          |
| Sharps are disposed of in a special container to prevent accidents                             |           |          |

### 2.3 Attention to the most seriously ill neonates

Is there an emergency management area in or near to each ward?                      Y            N

Are the most seriously ill neonates cared for in a section close to the nursing station where they receive closer attention?                      Y            N

Is there a heat source on the ward, and room temperatures kept above 25C?                      Y            N

Comments:

### 2.4 Summary – Neonatal wards

*Score*

|  |          |          |          |          |          |
|--|----------|----------|----------|----------|----------|
| <b>Summary score</b><br>- Neonatal wards |          |          |          |          |          |
| <b>(to be circled)</b>                   | <b>5</b> | <b>4</b> | <b>3</b> | <b>2</b> | <b>1</b> |

Please indicate the quality of support by marking one of the 5 numbers; 5 indicates adequately staffed, clean and well-equipped nursery facilities; 4 to 1 indicating levels of necessary improvement (4=small need for improvement, 1=indicates significant deficiencies in one or more of the wards)

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### Main strengths

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### Main weaknesses

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## 3. Infection control and supportive care

### 3.1 Infection control in the neonatal wards

#### Hand hygiene

| Standards and criteria  | Score 1- 5 | Comments |
|---|------------|----------|
| Hand washing stations are well organized and equipped:<br>- soap <sup>1</sup><br>- single-use towels<br>- containers for used towel collection  |            |          |
| Alcohol-based hand rub is available at the point of care  |            |          |
| Written protocols on hygiene for hands are available and information on hand washing technique <i>How to handwash and How to handrub</i> are put above or near the sinks and the alcohol based formulation dispensers respectively (WHO Guidelines on Hand Hygiene in Health Care page 154/155) |            |          |
| Protocols on hand washing and disinfection for various procedures are available and all staff has been briefed  |            |          |
| HCWs have a dedicated time available for infection  |            |          |

<sup>1</sup> Liquid, bar, leaf or powdered forms of soap are acceptable. WHO Guidelines on Hand Hygiene in Health Care

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| Standards and criteria  | Score 1- 5 | Comments |
|---|------------|----------|
| control training, including sessions on hand hygiene  |            |          |
| HCWs' adherence to recommended hand hygiene practices are monitored and performance feedback is provided to them  |            |          |
| <p>Hands are washed with soap and water when visibly dirty or visibly soiled with blood or other body fluid or after using the toilet -</p> <ul style="list-style-type: none"> <li>- hands are wet with water and amount of product necessary to cover all surfaces is applied</li> <li>- hands are rinsed with water and dried thoroughly with a single-use towel.</li> <li>- a towel is used to turn off tap/faucet</li> <li>- hands are dried thoroughly using a method that does not recontaminate hands.</li> <li>- towels are not used multiple times or by multiple people</li> </ul>  |            |          |
| Alcohol-based handrub is used as the preferred means for routine hand antisepsis in all other clinical situations, if hands are not visibly soiled  |            |          |
| Soap and alcohol-based handrub are not used concomitantly   |            |          |
| <p>Hand hygiene is performed:</p> <ol style="list-style-type: none"> <li>a. before and after touching the patient</li> <li>b. before handling an invasive device for patient care, regardless of whether or not gloves are used</li> <li>c. after contact with body fluids or excretions, mucous membranes, non-intact skin, or wound dressings</li> <li>d. if moving from a contaminated body site to another body site during care of the same patient</li> <li>e. after contact with inanimate surfaces and objects (including medical equipment) in the immediate vicinity of the patient</li> <li>f. after removing sterile or non-sterile gloves</li> </ol> |            |          |
| <p>Surgical scrub or surgical hand and forearm disinfection are performed for:</p> <ul style="list-style-type: none"> <li>- severely immuno-compromised patients (&lt;500 WBC/ml), multiple trauma, severe burns, organ transplant</li> <li>- surgery or high-risk invasive procedures (e.g. central venous catheter, manual removal of placenta, endotracheal intubation)</li> </ul>   |            |          |

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| <b>Standards and criteria</b>  | <b>Score 1- 5</b> | <b>Comments</b> |
|--|-------------------|-----------------|
| <p>Surgical hand preparation is carried out appropriately:<br/>rings, wrist-watch, and bracelets are removed before beginning<br/>artificial nails are prohibited<br/>if hands are visibly soiled, hands are washed with plain soap before surgical hand preparation<br/>debris are removed from underneath fingernails using a nail cleaner, preferably under running water<br/>no brushes are used for surgical hand preparation (a suitable antimicrobial soap or suitable alcohol-based handrub is used</p> <ul style="list-style-type: none"> <li>- when an antimicrobial soap is used hands and forearms are scrubbed for 2–5 minutes</li> <li>- surgical hand scrub and surgical handrub with alcohol-based products are not applied sequentially</li> <li>- after application of the alcohol-based handrub hands and forearms are allowed to dry thoroughly before donning sterile gloves</li> </ul> |                   |                 |
| If hands touch a contaminated surface during procedure or care of patient, surgical scrub is repeated  |                   |                 |

### *Use of gloves*

| <b>Standards and criteria</b>  | <b>Score 1-5</b> | <b>Comments</b> |
|--|------------------|-----------------|
| Sterile gloves are used for surgical operations, minor surgical operations on skin, any procedure that may penetrate into tissues and mucous membranes, inserting sterile catheters, gavages etc., or any contact with sterile tissue or body fluids (blood, amniotic fluid) |                  |                 |
| The use of gloves does not replace hand hygiene by either handrubbing or handwashing   |                  |                 |
| Gloves are used when it can be anticipated that contact with blood or other potentially infectious materials, mucous membranes, or non-intact skin will occur  |                  |                 |
| Gloves are removed after caring for a patient. The same pair of gloves are not used for the care of more than one patient.   |                  |                 |
| Gloves are changed or removed during patient care if moving from a contaminated body site to either another body site (including non-intact skin, mucous membrane or medical device) within the same patient or the environment  |                  |                 |

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|   |  |  |
|---|--|--|
| The reuse of gloves is not recommended: In the case of glove reuse, the safest reprocessing method is implemented |  |  |
| Gloves are used when handling soiled instruments and when disposing of contaminated waste items                   |  |  |

### *Practices for infection control*

| <b>Standards and criteria</b>  | <b>Score 1-5</b> | <b>Comments</b> |
|--|------------------|-----------------|
| Routine disinfection of premises performed, facilities are closed regularly for disinfection                               |                  |                 |
| Ultra-violet lamp is routinely used for disinfection   |                  |                 |
| Routine policy of changing dress and footwear by staff observed  |                  |                 |
| Bandages on aseptic wound/IV catheter are changed daily  |                  |                 |
| There is an infection control policy for visitors in the hospital, that may require restriction of access to some patients |                  |                 |
| Caps and masks are routinely used by staff   |                  |                 |

## 3.2 Summary - Infection control

| <b>Summary</b>                  | <b>Score 1-5</b> | <b>Comments</b> |
|---------------------------------|------------------|-----------------|
| Appropriate hand hygiene:       |                  |                 |
| Use of Gloves                   |                  |                 |
| Practices for infection control |                  |                 |

### *Score*

|   |          |          |          |          |          |
|---|----------|----------|----------|----------|----------|
| <b>Summary score</b><br>- Infection control |          |          |          |          |          |
| <b>(to be circled)</b>                      | <b>5</b> | <b>4</b> | <b>3</b> | <b>2</b> | <b>1</b> |

Please indicate the quality of support by marking one of the 5 numbers; 5 indicates excellent infections control practices are being used at all times in all wards; 4 to 1 indicating levels of necessary improvement (4=small need for improvement, 1=urgent need for improvement/life threatening practices)

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### Main strengths

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### Main weaknesses

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## 3.3 Supportive care

### ***Nutritional needs of sick neonates***

see section on case management of the sick neonate

### ***Use of Intravenous fluids***

| Standards and criteria   | Score 1-5 | Comments |
|--|-----------|----------|
| Intravenous fluids are given only when indicated by international guidelines |           |          |
| Appropriate fluids are chosen  |           |          |
| The flow rate is monitored closely   |           |          |

### ***Drug treatment***

| Standards and criteria   | Score 1-5 | Comments |
|--|-----------|----------|
| Drugs/ supplements of unproven effectiveness are NOT used  |           |          |
| Drugs are only given for an established or highly suspected diagnosis/under clear indication for usage |           |          |
| Routine use of sedative drugs is NOT the norm  |           |          |

### ***Blood transfusion***

| Standards and criteria | Score 1-5 | Comments |
|------------------------|-----------|----------|
|------------------------|-----------|----------|

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|                                    |  |  |
|------------------------------------|--|--|
| Blood is only given when indicated |  |  |
| Only screened blood is used        |  |  |
| The flow rate is monitored         |  |  |

**3.4 Summary- Supportive care for sick neonates**

| Summary                | Score 1-5 | Comments |
|------------------------|-----------|----------|
| Intravenous fluids use |           |          |
| Drug treatment         |           |          |
| Blood transfusion      |           |          |

*Score*

|   |          |          |          |          |          |
|---|----------|----------|----------|----------|----------|
| <b>Summary score</b><br>- Supportive care |          |          |          |          |          |
| <b>(to be circled)</b>                    | <b>5</b> | <b>4</b> | <b>3</b> | <b>2</b> | <b>1</b> |

Please indicate the quality of support by marking one of the 5 numbers; 5 indicates good quality of care, 4 to 1 indicating levels of necessary improvement (4=small need for improvement, 1=urgent need for improvement/life threatening practices)

*Main strengths*

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*Main weaknesses*

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# 4. Neonatal essential drugs, equipment and supplies

## Drugs

**Source:** This information should ideally be collected before the visit, and be available for reference during the visit. If it has not been collected before, collect the information early during the visit from the emergency and ward areas.

Availability of drugs varies considerably in different regions. Please indicate the drugs available. For some drugs, local adaptations of use might exist (specify in note). If drugs are only available for sale in the emergency area and not freely available for patients, make a note. Check for the presence of drugs and enquire with staff whether drugs are regularly available. Check expiry dates

| <b>Drugs</b>                | <b><u>Comments</u></b> |
|-----------------------------|------------------------|
| Ampicillin                  |                        |
| Cefotaxime                  |                        |
| Cloxacillin                 |                        |
| Penicillin                  |                        |
| Ceftriaxone                 |                        |
| Chloramphenicol             |                        |
| Gentamicin                  |                        |
| Kanamycin                   |                        |
| Vancomycin                  |                        |
| <b>Cardiovascular drugs</b> | <b><u>Comments</u></b> |
| Ibuprofen lysine (for PDA)  |                        |
| Indomethacin (for PDA)      |                        |
| <b>CNS drugs</b>            | <b><u>Comments</u></b> |
| Naloxone                    |                        |
| Phenobarbital               |                        |
| Phenytoin                   |                        |
| Fentanyl                    |                        |
| <b>Diuretics</b>            | <b><u>Comments</u></b> |
| Furosemide                  |                        |
| <b>Respiratory drugs</b>    | <b><u>Comments</u></b> |
| Aminophylline               |                        |
| Caffeine citrate            |                        |
| Surfactants                 |                        |

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| Miscellaneous drugs                                      | Comments |
|--|----------|
| Isotonic crystalloid (normal saline or Ringer's lactate) |          |
| Sodium bicarbonate                                       |          |
| Vitamins/minerals  | Comments |
| Vitamin K  |          |
| Vitamin D  |          |
| Ferrous sulfate  |          |

Are there any expired drugs in the ward? Y N

### 4.2 Equipment and supplies

|                            | <u>Y</u> | <u>N</u> | <u>Number</u> | <u>Comments</u> |
|----------------------------|----------|----------|---------------|-----------------|
| Incubators                 |          |          |               |                 |
| Radiant warmers            |          |          |               |                 |
| Heated mattress cots       |          |          |               |                 |
| Phototherapy lamps         |          |          |               |                 |
| Ambu Bag                   |          |          |               |                 |
| Oxygen supply/concentrator |          |          |               |                 |
| Appropriate sized masks    |          |          |               |                 |
| CPAP systems               |          |          |               |                 |
| Multi-function monitors    |          |          |               |                 |

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|  | <b>Y</b> | <b>N</b> | <b>Number</b> | <b>Comments</b> |
|--|----------|----------|---------------|-----------------|
| Pulse-oximeters                                |          |          |               |                 |
| Breast pumps                                   |          |          |               |                 |
| Nasogastric tubes                              |          |          |               |                 |
| Infusion pumps                                 |          |          |               |                 |
| Exchange transfusion kit                       |          |          |               |                 |
| Portable ultrasound                            |          |          |               |                 |
| Dedicated X-ray                                |          |          |               |                 |
| Glucometers                                    |          |          |               |                 |
| Bilirubinometer                                |          |          |               |                 |
| Transport incubator without ventilation system |          |          |               |                 |
| Transport incubator with ventilation system    |          |          |               |                 |

Is all the equipment safe? Y      N

Is all the equipment cleaned regularly and sanitary? Y      N

Is all the equipment kept in good working order? Y      N

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### 4.3 Summary - Essential drugs, equipment and supplies

#### Score

|   |          |          |          |          |          |
|---|----------|----------|----------|----------|----------|
| <b>Summary score</b><br>- Essential drugs, equipment and supplies |          |          |          |          |          |
| <b>(to be circled)</b>  | <b>5</b> | <b>4</b> | <b>3</b> | <b>2</b> | <b>1</b> |

Please indicate the quality of support by marking one of the 5 numbers; 5 indicates all essential drugs are available and not expired/expiring, equipment and supplies are present and are of good quality, 4 to 1 indicating levels of necessary improvement (4=small need for improvement, 1=urgent or chronic shortages of drugs/chronic lapses in the quality of equipment leading to potentially life threatening situation to both patient and staff)

#### Main strengths

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#### Main weaknesses

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## 5. Routine neonatal care

**Source:** Please collect the information by observing the treatment and care of children with the relevant condition and interviewing staff and carers.

Keep the baby in skin-to-skin contact on the mother's chest or at her side, in a warm, draught-free room.

Start breastfeeding within the first hour as soon as the baby shows signs of readiness to feed.

Let the infant breastfeed on demand if able to suck.

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Give IM vitamin K (phytomethadione) to all newborns.

– 1 ampoule (1 mg/0.5 ml or 1 mg/ml) once. (Do not use 10 mg/ml ampoule.)

– For preterm neonates, give 0.4 mg/kg IM (maximum dose, 1 mg).

Keep umbilical cord clean and dry.

Apply antiseptic eye drops or ointment (e.g. tetracycline ointment) to both eyes once, according to national guidelines.

Give oral polio, hepatitis B and bacille Calmette-Guérin (BCG) vaccines, depending on national guidelines.

### 5.1 Newborn assessment and immediate care

| <b>Standards and criteria</b>  | <b>Score 1-5</b> | <b>Comments</b> |
|--|------------------|-----------------|
| The newborn baby is assessed and dried immediately after birth   |                  |                 |
| The newborn baby is kept in a warm room, with no draughts, and if transport is required, baby is kept warm |                  |                 |
| Baby's temperature is monitored while in the hospital  |                  |                 |
| Routine suctioning of the nose or catheterization of oesophagus is NOT done                                |                  |                 |
| Umbilical cord is clamped after pulsation stops  |                  |                 |
| Stump of umbilical cord is left without dressing   |                  |                 |
| Mother and baby are covered together; baby given warm hat  |                  |                 |
| Bathing or washing are postponed to a few hours after birth  |                  |                 |

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### 5.2 Screening, prevention and management of vertically transmitted infectious diseases in the newborn

#### ***Syphilis***

| <b>Standards and criteria</b>   | <b>Score 1-5</b> | <b>Comments</b> |
|---|------------------|-----------------|
| Newborn babies are tested (serum blood) for syphilis and assessed for clinical signs of syphilis  |                  |                 |
| If the mother was not treated, inadequately treated or treatment status is unknown and baby does not have signs of syphilis, baby is treated with procaine benzylpenicillin (or benzathine benzylpenicillin) IM at the appropriate dose and followed up in 4 weeks to check growth and signs of congenital syphilis |                  |                 |
| If women were treated more than 30 days before delivery, no treatment is given to the baby.   |                  |                 |

#### ***Ophthalmia neonatorum***

| <b>Standards and criteria</b>   | <b>Score 1-5</b> | <b>Comments</b> |
|---|------------------|-----------------|
| Appropriate eye care is provided to all newborns at the time of birth to prevent ophthalmia neonatorum within 1 hour of delivery → antiseptic eye drops or ointment (e.g. tetracycline) are applied to both eyes once |                  |                 |

#### ***Tuberculosis***

| <b>Standards and criteria</b>   | <b>Score 1-5</b> | <b>Comments</b> |
|---|------------------|-----------------|
| Tuberculosis vaccine at birth (BCG) is given to all newborn babies unless the mother has active TB treated for less than 2 months before birth (in this case vaccine is given two weeks after treatment of the newborn baby is completed) |                  |                 |

#### ***Hepatitis B***

|   |  |  |
|---|--|--|
| All newborn babies receive Hepatitis B vaccination at birth |  |  |
|---|--|--|

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### **Rooming in of neonates, according to mother's infection status**

|  |  |  |
|--|--|--|
| <p>Babies are roomed-in and breast feed with their mother,</p> <p>if the mother has VDRL, gonorrhoea, Chlamydia, GBS, toxoplasmosis, malaria, trichomonas or candidiasis, AND mother and baby are adequately treated,</p> <p>if the mother has TB, AND has normal chest Xray and/or no clinical evidence of TB/ is sputum negative</p> <p>if mother has hepatitis B, AND, if baby has been vaccinated and treated appropriately with immunoglobulin treatment</p> <p>Babies are isolated from their mother</p> <p>if the mother has active TB disease until both are treated appropriately and maternal sputum is clear of bacilli</p> <p>Babies are isolated from other babies, but roomed-in with their mother</p> <p>if the mother has herpes, CMV or rubella,</p> <p>If the baby is pre-term,, mothers with CMV are not breastfeeding their baby</p> |  |  |
|--|--|--|

## 5.2 Early and exclusive breastfeeding

| <b>Standards and criteria</b>  | <b>Score 1-5</b> | <b>Comments</b> |
|--|------------------|-----------------|
| <p>The baby is put onto the mothers chest in skin-to-skin contact immediately after delivery (if there is no need for resuscitation or maternal problem)</p> |                  |                 |
| <p>Initiation of breastfeeding is encouraged within the first hour, and it is ensured that mothers and babies are undisturbed,</p>                           |                  |                 |
| <p>Staff are trained and help mother and babies to initiate breastfeeding within an hour after delivery</p>  |                  |                 |
| <p>There is no promotion of infant formula on the ward and samples are not distributed to mothers or staff</p>   |                  |                 |

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| <b>Standards and criteria</b>  | <b>Score 1-5</b> | <b>Comments</b> |
|--|------------------|-----------------|
| There are no restrictions on the frequency or length of breastfeeding  |                  |                 |
| At discharge, exclusive breastfeeding is recommended until the age of 6 months and complementary breastfeeding until 24 months             |                  |                 |
| Expressed breast-milk is given by cup or NG-tube when the child is unable to feed or if the mother cannot stay with the child all the time |                  |                 |
| Infant formula, glucose supplementation, water supplementation are not used unless upon written medical instruction                        |                  |                 |
| Exceptions to exclusive breastfeeding are based on current evidence  |                  |                 |

### 5.4 Routine prophylaxis

| <b>Standards and criteria</b>                                       | <b>Score 1-5</b> | <b>Comments</b> |
|---|------------------|-----------------|
| Eye prophylaxis (at the end of first hour) is provided              |                  |                 |
| Vitamin K is given i.m.   |                  |                 |
| Immunizations are administered according to the local policy        |                  |                 |
| Baby's Rh status is checked after delivery if mother is Rh negative |                  |                 |

### 5.5 Monitoring of newborns before discharge

| <b>Standards and criteria</b>                                      | <b>Score 1-5</b> | <b>Comments</b> |
|--|------------------|-----------------|
| Breathing rate is assessed and documented in the first day of life |                  |                 |
| Documentation on breastfeeding and frequency is kept               |                  |                 |
| Documentation on absence or presence of jaundice kept              |                  |                 |

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### 5.6 Information and counselling for mothers

| <b>Standard and Criteria</b>  | <b>Source 1-5</b> | <b>Comments</b> |
|---|-------------------|-----------------|
| Guidelines available to teach mothers on how to care for the baby at home   |                   |                 |
| Mothers shown how to bathe the baby, how to take care of the umbilical stump and of their breasts   |                   |                 |
| Every baby is recorded in the delivery room register  |                   |                 |
| Gestational age, weight, length and head circumference at birth and weight at discharge are recorded in the information provided to mothers |                   |                 |

### 5.7 Summary - Routine neonatal care

| <b>Summary Routine Neonatal Care</b>   | <b>Score 1-5</b> | <b>Comments</b> |
|--|------------------|-----------------|
| Newborn assessment and immediate care  |                  |                 |
| Screening, prevention & adequate management of vertically transmitted infectious diseases in the newborn |                  |                 |
| Early and exclusive breastfeeding  |                  |                 |
| Routine prophylaxis  |                  |                 |
| Monitoring of the newborn before discharge   |                  |                 |
| Information and counselling for mothers  |                  |                 |

#### Score

|   |          |          |          |          |          |
|---|----------|----------|----------|----------|----------|
| <b>Summary score</b><br>- Routine neonatal care |          |          |          |          |          |
| <b>(to be circled)</b>                          | <b>5</b> | <b>4</b> | <b>3</b> | <b>2</b> | <b>1</b> |

Please indicate the quality of support by marking one of the 5 numbers; 5 indicates good quality of care, 4 to 1 indicating levels of necessary improvement (4=small need for improvement, 1=urgent need for improvement/life threatening practices)

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### Main strengths

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### Main weaknesses

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## 6. Case management of the sick newborn

**Note:** Sick newborns might be admitted in different areas, the maternity ward or the infant ward. Information should be primarily by case observation

### 6.1 Monitoring and treatment for sick newborns

| Standards and criteria  | Score 1-5 | Comments |
|---|-----------|----------|
| Sick babies are kept in a separate unit or room from healthy babies                             |           |          |
| Mothers are NOT routinely separated from babies, and can room-in together                       |           |          |
| Heart rate and breathing rate are documented every 3-6 hrs. according to the clinical situation |           |          |
| Temperature is recorded every 6-12 hrs. or 3-6 hrs. if under radiant source                     |           |          |
| Weight is recorded at least daily (twice daily in LBW babies)                                   |           |          |
| Special feeding needs are included in the plan/record   |           |          |
| Routine medications are NOT given if no specific indications                                    |           |          |

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### 6.2 Neonatal sepsis

| <b>Standards and criteria</b>   | <b>Score 1-5</b> | <b>Comments</b> |
|---|------------------|-----------------|
| Sepsis is suspected in neonates with signs such as difficulty feeding, hypotonia, lethargy and babies are appropriately investigated (urine microscopy, search for foci of infection, etc.) |                  |                 |
| Lumbar puncture is done to rule out or confirm meningitis   |                  |                 |
| Newborn babies get oxygen if cyanosed or in severe respiratory distress   |                  |                 |
| Antibiotics are given according to age and weight of the baby   |                  |                 |
| Clinical status and the response to treatment is monitored and recorded   |                  |                 |

### 6.3 Specific feeding needs

| <b>Standards and criteria</b>   | <b>Score 1-5</b> | <b>Comments</b> |
|---|------------------|-----------------|
| Mothers' milk is given to Low Birth Weight (LBW) babies as much as possible   |                  |                 |
| Frequent feedings (at least 8 per day) are provided to LBW babies and intake is monitored   |                  |                 |
| Babies unable to feed are given expressed breast milk by cup, spoon or fed by naso-gastric tube in adequate amounts according to age. Intake is monitored |                  |                 |
| If IV fluids are given, they are recorded and precautions are taken to prevent fluid overload   |                  |                 |
| In LBW babies (< 1.75 Kg) that are being nursed, heat loss is minimized by kangaroo-care and a cap on the head  |                  |                 |

### 6.4 Recognition and treatment of hypoglycaemia, hypocalcaemia and jaundice

| <b>Standards and criteria</b>  | <b>Score 1-5</b> | <b>Comments</b> |
|--|------------------|-----------------|
| Guidelines for recognition and treatment of hypoglycaemia are available, known and used by staff |                  |                 |

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| <b>Standards and criteria</b>  | <b>Score 1-5</b> | <b>Comments</b> |
|--|------------------|-----------------|
| Guidelines for prevention of hypoglycaemia in SGA, LGA and babies of diabetic mothers are available, known and used by staff |                  |                 |
| In case of “convulsions” or “lethargy”, glucose, calcium and magnesium levels are checked and corrected                      |                  |                 |
| Facilities for exchange transfusion are available, or there are guidelines when to transfer a seriously jaundiced baby       |                  |                 |
| Phototherapy and guidelines when to use it are available and adequate hydration is ensured                                   |                  |                 |
| Procedures are in place to check the bilirubin level   |                  |                 |
| Phototherapy lamps are checked regularly for correct functioning   |                  |                 |

### 6.5 Appropriate and safe use of oxygen for preterm babies

| <b>Standards and criteria</b>   | <b>Score 1-5</b> | <b>Comments</b> |
|---|------------------|-----------------|
| Guidelines for the use and monitoring of oxygen therapy in preterm infants are available, known and used by the staff |                  |                 |
| Oxygen need is routinely assessed using a pulse-oxymeter  |                  |                 |
| Preterm babies with oxygen therapy have SatO <sub>2</sub> monitored   |                  |                 |

### 6.6 Summary - Case management of the sick newborn

| <b>Summary</b>   | <b>Score 1-5</b> | <b>Comments</b> |
|--|------------------|-----------------|
| Monitoring and treatment for sick newborns                             |                  |                 |
| Neonatal sepsis  |                  |                 |
| Specific feeding needs   |                  |                 |
| Recognition and treatment of hypoglycaemia, hypocalcaemia and jaundice |                  |                 |
| Appropriate and safe use of oxygen for preterm babies                  |                  |                 |

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### Score

|   |          |          |          |          |          |
|---|----------|----------|----------|----------|----------|
| <b>Summary score</b><br>- Case management and sick newborn care |          |          |          |          |          |
| <b>(to be circled)</b>  | <b>5</b> | <b>4</b> | <b>3</b> | <b>2</b> | <b>1</b> |

Please indicate the quality of support by marking one of the 5 numbers; 5 indicates good quality of care, 4 to 1 indicating levels of necessary improvement (4=small need for improvement, 1=urgent need for improvement/life threatening practices)

### Main strengths

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### Main weaknesses

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## 7. Monitoring and follow-up

### 7.1 Monitoring of individual progress

| <b>Standards and criteria</b>  | <b>Score 1-5</b> | <b>Comments</b> |
|--|------------------|-----------------|
| Nutritional status is assessed in all sick neonates  |                  |                 |
| At the time of admission, a monitoring plan is made according to the severity of the neonates condition  |                  |                 |
| A standard monitoring chart is used with the following information: patient details, vital signs, clinical signs depending on condition, treatments given, feeding and outcome |                  |                 |

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### 7.2 Monitoring by nurses

| <b>Standards and criteria</b>  | <b>Score 1-5</b> | <b>Comments</b> |
|--|------------------|-----------------|
| Key risk signs are monitored and recorded by a nurse twice a day and at least 4 times a day for critically ill patients  |                  |                 |
| Dosages and time are recorded for every patient receiving medications and IV fluids given by the nurse   |                  |                 |
| Additional special monitoring is performed and recorded appropriately when needed to follow the progress of particular conditions:<br>e.g. coma scale for unconscious neonates |                  |                 |
| Nurses use the results of patient monitoring to alert the physicians of problems or changing patient status warranting their attention   |                  |                 |

### 7.3 Reassessment by physicians

| <b>Standards and criteria</b>   | <b>Score 1-5</b> | <b>Comments</b> |
|---|------------------|-----------------|
| Seriously ill neonates are assessed by a doctor upon admission and reviewed at least twice daily until improved |                  |                 |
| All patients are reassessed daily during working days by a doctor   |                  |                 |
| Sick neonates or new admissions are also reviewed by a physician on weekends and holidays                       |                  |                 |

### 7.4 Follow up

| <b>Standards and criteria</b>   | <b>Score 1-5</b> | <b>Comments</b> |
|---|------------------|-----------------|
| If needed, follow up is arranged before discharge in the health facility closest to the patient's home that can provide the necessary follow up treatment         |                  |                 |
| All mothers/caretakers of admitted neonates receive a discharge note explaining their condition and providing information for the staff at the follow up facility |                  |                 |

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**7.5 Summary - Monitoring of the sick neonate**

| Summary                              | Score 1-5 | Comments |
|--------------------------------------|-----------|----------|
| 1. Monitoring of individual progress |           |          |
| 2. Monitoring by nurses              |           |          |
| 3. Reassessment by physicians        |           |          |
| 4. Follow up                         |           |          |

*Score*

|  |          |          |          |          |          |
|--|----------|----------|----------|----------|----------|
| <b>Summary score</b><br>- Monitoring and follow up |          |          |          |          |          |
| <b>(to be circled)</b>                             | <b>5</b> | <b>4</b> | <b>3</b> | <b>2</b> | <b>1</b> |

Please indicate the quality of support by marking one of the 5 numbers; 5 indicates good quality of care and excellent monitoring and follow/up procedures of all patients occurs; 4 to 1 indicating levels of necessary improvement (4=small need for improvement, 1=urgent need for improvement/life threatening practices)

*Main strengths*

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*Main weaknesses*

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### 8. Summary scores – Module C: Neonatal Care

| Summary scores  |   | 5 | 4 | 3 | 2 | 1 |
|-----------------|---|---|---|---|---|---|
| C.1.            | Neonatal resuscitation                  |   |   |   |   |   |
| C.2.            | Nursery facilities                      |   |   |   |   |   |
| C.3.            | Infection control and supportive care   |   |   |   |   |   |
|                 | Infection control                       |   |   |   |   |   |
|                 | Supportive care                         |   |   |   |   |   |
| C.4.            | Essential drugs, equipment and supplies |   |   |   |   |   |
| C.5             | Routine neonatal care                   |   |   |   |   |   |
| C.6.            | Case management of the sick newborn     |   |   |   |   |   |
| C.7.            | Monitoring and follow up                |   |   |   |   |   |
| <b>Module C</b> | <b>TOTAL SCORE</b>                      |   |   |   |   |   |

**Comments on the summary scores/ total score:**





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## **PAEDIATRIC CARE**

**Source:** This information should be collected by checking for drugs, equipment and supplies; and through observing the treatment and care of children presenting in emergencies and also those with the relevant condition and interviewing staff and caregivers.

### **1 Paediatric emergency care**

**Source:** Visit to the emergency paediatric ward and interviews with staff dealing with emergencies.

**Instructions:** Interview staff where emergencies would present, who would see them; how senior staff are called, and where and how severe conditions are handled.

#### **1.1 Patient flow**

Where are children with medical or surgical emergency conditions received?

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Describe the patient flow of a typical obstetric emergency (woman presenting as an emergency to hospital):

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|   |   |   |
|---|---|---|
| Is there an emergency management area equipped to take care of children?    | Y | N |
| Is there a separate consultation area for moderately ill children?          | Y | N |
| Is this separate from the normal outpatient facility dealing with patients? | Y | N |

Comments and descriptions:

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Do patients come with referral notes when they have been referred from first level units?

never                       sometimes                       always

Are there any job aids (wall charts, chart booklets) displayed for the management of paediatric emergencies?                      Y                      N

If so, describe about what, and comment on adequacy:

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Distance from reception area to emergency management area:

In the same building, distance \_\_\_\_\_

In another building, distance \_\_\_\_\_

Distance from consultation area to emergency management area:

In the same building, distance \_\_\_\_\_

In another building, distance \_\_\_\_\_

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### 1.2 Staffing

| Type of staff        | during working hours<br><br><i>Present/ not present<br/>If present, number</i> | after working hours<br><br><i>Present/ not present<br/>If present, number</i> | Trained in assessment/ detection of emergency conditions<br><br><i>Yes/No</i> | Trained in management of emergency conditions<br><br><i>Yes/No</i> | Remarks |
|----------------------|--|---|---|--|---------|
| Administrative clerk |  |   |   |  |         |
| Auxiliary Nurse      |  |   |   |  |         |
| Triage Nurse         |  |   |   |  |         |
| Medical officer      |  |   |   |  |         |
| Paediatrician        |  |   |   |  |         |

### 1.3 Layout and structure of emergency care

| Standards and criteria  | Score 1-5 | Comments |
|---|-----------|----------|
| A system is in place to prioritize severely ill patients (triage)   |           |          |
| Assessment is done in a timely manner and not hindered by registration procedures, payment etc. before lifesaving action takes place  |           |          |
| A wall chart or job aid for identifying children by severity of condition is located in the emergency admissions area.  |           |          |
| A Staff is designated to do triage and is trained in the ETAT guidelines and can implement them appropriately when the emergency room gets busy during peak hours   |           |          |
| A health professional is always available to manage patients with emergency conditions and is skilled in the management of common emergency conditions and starts treatment without delay: Management of convulsions, lethargy, severe respiratory distress, shock and severe dehydration |           |          |
| Essential drugs for emergency conditions (anticonvulsants, glucose, iv fluids) are always available and free of charge to the family  |           |          |
| Essential lab tests (glucose, Hb or PCV) are available and results are obtained timely  |           |          |

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| Standards and criteria   | Score 1-5 | Comments |
|--|-----------|----------|
| Essential equipment (needles and syringes, nasogastric tubes, oxygen equipment, self-inflating resuscitation bags with masks of different sizes, nebulisers or spacers) is available |           |          |
| Case Management (see below)  |           |          |

1 Information is mainly obtained by direct case observation and through interviews with staff about the routine practice. If no cases with emergency conditions are observable, staff is interviewed about how they would manage such conditions.

2 Please refer to the tables in the section “Essential paediatric drugs, equipment and supplies”. Please note when judging the adequacy of supplies that some drugs (e.g. oxygen, anticonvulsants) need to be immediately available, whereas for others (e.g. antibiotics) it is sufficient that availability is assured.

### 1.4 Case management

**Source:** Information is obtained by case observation of cases presenting, as far as possible, and through interviews with staff about the routine practice. If you cannot observe one to two cases, describe scenarios to staff of two to three cases with convulsions, severe respiratory distress, and shock.

Cases include neonates and children presenting with danger signs (i.e. severe respiratory distress, severe dehydration). Case management is observed during working hours and after hours. If no cases with emergency conditions present, staff are interviewed about how they would manage such conditions. Enquire about the management of a child presenting with convulsions, with lethargy, with severe respiratory distress, or with severe dehydration.

### 1.5 Summary - Emergency paediatric care

| Summary                                 | Score 1-5 | Comments |
|---|-----------|----------|
| Patient flow                            |           |          |
| Staffing                                |           |          |
| Layout and structure                    |           |          |
| Case management of emergency conditions |           |          |

#### Score

|   |          |          |          |          |          |
|---|----------|----------|----------|----------|----------|
| <b>Summary score</b><br>- Emergency paediatric care |          |          |          |          |          |
| <b>(to be circled)</b>                              | <b>5</b> | <b>4</b> | <b>3</b> | <b>2</b> | <b>1</b> |

Please indicate the quality of support by marking one of the 5 numbers; 5 indicates good quality of care i.e. well-staffed emergency department with experienced and trained staff available on hand at all hours to help manage emergency cases, 4 to 1 indicating

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levels of necessary improvement (4=small need for improvement, 1=urgent need for improvement/life threatening practices)

### *Main strengths*

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### *Main weaknesses*

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## 2. Paediatric wards

### 2.1 Staffing

**Source:** Observation during the visit to the ward, and interviews with staff and persons accompanying the patients.

|                         | # on day shift | # on night shift | # on weekend shifts |
|-------------------------|----------------|------------------|---------------------|
| Paediatricians          |                |                  |                     |
| Medical Officers        |                |                  |                     |
| Nurses                  |                |                  |                     |
| Medical assistants      |                |                  |                     |
| Auxiliary staff         |                |                  |                     |
| Others (please specify) |                |                  |                     |

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### 2.2 Hygiene and accident prevention

| Standards and criteria   | <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> | <u>5</u> | Comments |
|--|----------|----------|----------|----------|----------|----------|
| Patient toilets are accessible to patients and separate from public, or staff, toilets               |          |          |          |          |          |          |
| Toilets are clean  |          |          |          |          |          |          |
| Beds are safe, clean, well maintained and have mattresses  |          |          |          |          |          |          |
| Patients have access to clean bed linen  |          |          |          |          |          |          |
| Staff have regular access to hand washing facilities (refer to Section 16.1.)                        |          |          |          |          |          |          |
| Patients have access to clean running water, soap and an appropriate space by the ward, to be washed |          |          |          |          |          |          |
| Mosquito nets are available for use by patients (if relevant)  |          |          |          |          |          |          |
| Ward is kept clean   |          |          |          |          |          |          |
| Dangerous items are inaccessible to patients   |          |          |          |          |          |          |
| Sharps are disposed of in a special container to prevent accidents                                   |          |          |          |          |          |          |

### 2.3 Attention to the most seriously ill patients

Is there an emergency management area in or near to each ward?      Y      N

Are the most seriously ill patients cared for in a section close to the nursing station where they receive closer attention?      Y      N

Is there a heat source on the ward, and room temperatures kept above 25C?      Y      N

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Comments:

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## 2.4 Summary - Paediatric wards

*Score*

|  |          |          |          |          |          |
|--|----------|----------|----------|----------|----------|
| <b>Summary score</b><br>- The paediatric wards |          |          |          |          |          |
| <b>(to be circled)</b>                         | <b>5</b> | <b>4</b> | <b>3</b> | <b>2</b> | <b>1</b> |

Please indicate the quality of support by marking one of the 5 numbers; 5 indicates adequately staffed, clean and well-equipped paediatric ward; 4 to 1 indicating levels of necessary improvement (4=small need for improvement, 1=indicates significant deficiencies in one or more of the wards)

*Main strengths*

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*Main weaknesses*

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### 3. Infection control and supportive care in the paediatric ward

#### 3.1 Infection control

##### Hand hygiene

| Standards and criteria  | Score 1- 5 | Comments |
|---|------------|----------|
| Hand washing stations are well organized and equipped: <ul style="list-style-type: none"><li>- soap<sup>1</sup></li><li>- single-use towels</li><li>- containers for used towel collection</li></ul>  |            |          |
| Alcohol-based hand rub is available at the point of care  |            |          |
| Written protocols on hygiene for hands are available and information on hand washing technique <i>How to handwash and How to handrub</i> are put above or near the sinks and the alcohol based formulation dispensers respectively (WHO Guidelines on Hand Hygiene in Health Care page 154/155)   |            |          |
| Protocols on hand washing and disinfection for various procedures are available and all staff has been briefed  |            |          |
| HCWs have a dedicated time available for infection control training, including sessions on hand hygiene   |            |          |
| HCWs' adherence to recommended hand hygiene practices are monitored and performance feedback is provided to them  |            |          |
| Hands are washed with soap and water when visibly dirty or visibly soiled with blood or other body fluid or after using the toilet - <ul style="list-style-type: none"><li>- hands are wet with water and amount of product necessary to cover all surfaces is applied</li><li>- hands are rinsed with water and dried thoroughly with a single-use towel.</li><li>- a towel is used to turn off tap/faucet</li></ul> |            |          |

<sup>1</sup> Liquid, bar, leaf or powdered forms of soap are acceptable. WHO Guidelines on Hand Hygiene in Health Care

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| Standards and criteria  | Score 1- 5 | Comments |
|---|------------|----------|
| <ul style="list-style-type: none"> <li>- hands are dried thoroughly using a method that does not recontaminate hands.</li> <li>- towels are not used multiple times or by multiple people</li> </ul>  |            |          |
| <p>Alcohol-based handrub is used as the preferred means for routine hand antisepsis in all other clinical situations, if hands are not visibly soiled</p>   |            |          |
| <p>Soap and alcohol-based handrub are not used concomitantly</p>  |            |          |
| <p>Hand hygiene is performed:</p> <ol style="list-style-type: none"> <li>a. before and after touching the patient</li> <li>b. before handling an invasive device for patient care, regardless of whether or not gloves are used</li> <li>c. after contact with body fluids or excretions, mucous membranes, non-intact skin, or wound dressings</li> <li>d. if moving from a contaminated body site to another body site during care of the same patient</li> <li>e. after contact with inanimate surfaces and objects (including medical equipment) in the immediate vicinity of the patient</li> <li>f. after removing sterile or non-sterile gloves</li> </ol> |            |          |
| <p>Surgical scrub or surgical hand and forearm disinfection are performed for:</p> <ul style="list-style-type: none"> <li>- severely immuno-compromised patients (&lt;500 WBC/ml), multiple trauma, severe burns, organ transplant</li> <li>- surgery or high-risk invasive procedures (e.g. central venous catheter, manual removal of placenta, endotracheal intubation)</li> </ul>   |            |          |
| <p>Surgical hand preparation is carried out appropriately:</p> <p>rings, wrist-watch, and bracelets are removed before beginning</p> <p>artificial nails are prohibited</p> <p>if hands are visibly soiled, hands are washed with plain soap before surgical hand preparation</p> <p>debris are removed from underneath fingernails using a nail cleaner, preferably under running water</p>  |            |          |

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| <b>Standards and criteria</b>  | <b>Score 1- 5</b> | <b>Comments</b> |
|--|-------------------|-----------------|
| <p>no brushes are used for surgical hand preparation (a suitable antimicrobial soap or suitable alcohol-based handrub is used</p> <ul style="list-style-type: none"> <li>- when an antimicrobial soap is used hands and forearms are scrubbed for 2–5 minutes</li> <li>- surgical hand scrub and surgical handrub with alcohol-based products are not applied sequentially</li> <li>- after application of the alcohol-based handrub hands and forearms are allowed to dry thoroughly before donning sterile gloves</li> </ul> |                   |                 |
| If hands touch a contaminated surface during procedure or care of patient, surgical scrub is repeated  |                   |                 |

### Use of gloves

| <b>Standards and criteria</b>  | <b>Score 1-5</b> | <b>Comments</b> |
|--|------------------|-----------------|
| Sterile gloves are used for surgical operations, minor surgical operations on skin, any procedure that may penetrate into tissues and mucous membranes, inserting sterile catheters, gavages etc., or any contact with sterile tissue or body fluids (blood, amniotic fluid) |                  |                 |
| The use of gloves does not replace hand hygiene by either handrubbing or handwashing   |                  |                 |
| Gloves are used when it can be anticipated that contact with blood or other potentially infectious materials, mucous membranes, or non-intact skin will occur  |                  |                 |
| Gloves are removed after caring for a patient. The same pair of gloves are not used for the care of more than one patient.   |                  |                 |
| Gloves are changed or removed during patient care if moving from a contaminated body site to either another body site (including non-intact skin, mucous membrane or medical device) within the same patient or the environment  |                  |                 |
| The reuse of gloves is not recommended: In the case of glove reuse, the safest reprocessing method is implemented  |                  |                 |

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| Standards and criteria  | Score 1-5 | Comments |
|---|-----------|----------|
| Gloves are used when handling soiled instruments and when disposing of contaminated waste items |           |          |

### Practices for infection control

| Standards and criteria   | Score 1-5 | Comments |
|--|-----------|----------|
| Routine disinfection of premises performed, facilities are closed regularly for disinfection                               |           |          |
| Ultra-violet lamp is routinely used for disinfection   |           |          |
| Routine policy of changing dress and footwear by staff observed  |           |          |
| Bandages on aseptic wound/IV catheter are changed daily  |           |          |
| There is an infection control policy for visitors in the hospital, that may require restriction of access to some patients |           |          |
| Caps and masks are routinely used by staff   |           |          |

### Summary – Infection control

| Summary                         | Score 1-5 | Comments |
|---------------------------------|-----------|----------|
| Appropriate hand hygiene:       |           |          |
| Use of Gloves                   |           |          |
| Practices for infection control |           |          |

### Score

|   |          |          |          |          |          |
|---|----------|----------|----------|----------|----------|
| <b>Summary score</b><br>- Infection control |          |          |          |          |          |
| <b>(to be circled)</b>                      | <b>5</b> | <b>4</b> | <b>3</b> | <b>2</b> | <b>1</b> |

Please indicate the quality of support by marking one of the 5 numbers; 5 indicates excellent infections control practices are being used at all times in all wards; 4 to 1 indicating levels of necessary improvement (4=small need for improvement, 1=urgent need for improvement/life threatening practices)

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### Main strengths

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### Main weaknesses

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## 3.2 Supportive care

### Nutritional needs of admitted patients

| Standards and criteria  | Score 1-5 | Comments |
|---|-----------|----------|
| Nutritional needs of all patients are met, according to age and ability to feed   |           |          |
| IV-glucose should not be used as calorie source for more than maximum 24 hours  |           |          |
| Breastfed infants continue to receive breast milk from mother <b>p 262</b> - see also Section 13.1.3  |           |          |
| Appropriate complementary feedings is offered at least 3 times a day to breastfed infants of 6-12 months of age <b>p 262</b>                |           |          |
| Feedings are offered at least 5 times a day to non-breast-fed infants of 6 to 24 months of age <b>p 271</b>                                 |           |          |
| All children admitted receive their full caloric requirement unless there is good medical reasons for not giving it <b>p 270</b>            |           |          |
| A sufficient caloric intake (100 calories/kg for children under 10 kg) is provided; for children too sick to feed, feed by nasogastric tube |           |          |

### Use of Intravenous fluids

| Standards and criteria   | Score 1-5 | Comments |
|--|-----------|----------|
| Intravenous fluids are given only when indicated by international guidelines |           |          |
| Appropriate fluids are chosen  |           |          |
| The flow rate is monitored closely   |           |          |

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### Drug treatment

| Standards and criteria   | Score 1-5 | Comments |
|--|-----------|----------|
| Routine use of drugs/ supplements of unproven effectiveness are NOT used                                   |           |          |
| Drugs are only given for an established or highly suspected diagnosis, or under clear indication for usage |           |          |
| Routine use of sedative drugs or anti-histamines are NOT used  |           |          |

### Blood transfusion

| Standards and criteria             | Score 1-5 | Comments |
|------------------------------------|-----------|----------|
| Blood is only given when indicated |           |          |
| Only screened blood is used        |           |          |
| The flow rate is monitored         |           |          |

### Summary- Supportive care for sick children

| Summary                | Score 1-5 | Comments |
|------------------------|-----------|----------|
| Nutritional needs      |           |          |
| Intravenous fluids use |           |          |
| Drug treatment         |           |          |
| Blood transfusion      |           |          |

### Score

|   |          |          |          |          |          |
|---|----------|----------|----------|----------|----------|
| <b>Summary score</b><br>- Supportive care |          |          |          |          |          |
| <b>(to be circled)</b>                    | <b>5</b> | <b>4</b> | <b>3</b> | <b>2</b> | <b>1</b> |

Please indicate the quality of support by marking one of the 5 numbers; 5 indicates good quality of care, 4 to 1 indicating levels of necessary improvement (4=small need for improvement, 1=urgent need for improvement/life threatening practices)

### Main strengths

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### Main weaknesses

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## 4. Paediatric essential drugs, equipment and supplies

### 4.1 Drugs

**Source:** This information should ideally be collected before the visit, and be available for reference during the visit. If it has not been collected before, collect the information early during the visit from the emergency and ward areas.

Availability of drugs varies considerably in different regions. Please indicate the drugs available. For some drugs, local adaptations of use might exist (specify in note). If drugs are only available for sale in the emergency area and not freely available for patients, make a note. Check for the presence of drugs and enquire with staff whether drugs are regularly available. Check expiry dates.

|   | Emergency area | Paediatric Ward | Comments |
|---|----------------|-----------------|----------|
| Glucose 30-50% IV   |                |                 |          |
| Glucose 10 % IV   |                |                 |          |
| Glucose 5 % IV  |                |                 |          |
| Normal saline IV  |                |                 |          |
| Ringer's lactate IV                                       |                |                 |          |
| Epinephrine (Adrenaline) subcutaneously                   |                |                 |          |
| Corticosteroids IV or oral                                |                |                 |          |
| Furosemide IV   |                |                 |          |
| First line anticonvulsant:<br>Diazepam/Paraldehyde IM, IV |                |                 |          |
| Phenobarbital IM, IV.                                     |                |                 |          |
| Ampicillin / Amoxicillin                                  |                |                 |          |
| Benzylpenicillin  |                |                 |          |
| Antistaphylococcal penicillin (e.g. Flucloxacillin)       |                |                 |          |
| Ceftriazone   |                |                 |          |

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|   |  |  |  |
|---|--|--|--|
| Chloramphenicol   |  |  |  |
| Ciprofloxacin   |  |  |  |
| Gentamicin  |  |  |  |
| Co-trimoxazole  |  |  |  |
| All anti-malaria drugs needed according to national malaria control programme |  |  |  |
| Vitamin K IM injection  |  |  |  |
| ORS   |  |  |  |

Are there any expired drugs in the ward?

Y

N

### 4.2 Equipment and Supplies

Is the following equipment available in the emergency area, or on the ward? If a postal questionnaire was sent, cross check the information obtained in advance. Check the information during the visit to the ward, and the emergency area. Ask the person in charge of the area/ward for the items to be shown to you, and check that they are safe, hygienic, and in good working order. Check that the size is adequate for use in infants and children

|  |                 | Emergency area | Ward     | Comments |
|--|-----------------|----------------|----------|----------|
| Resuscitation table/area   |                 |                |          |          |
| Torch  |                 |                |          |          |
| Otoscope   |                 |                |          |          |
| Scales for children  |                 |                |          |          |
| Measuring board to measure length and height (lying/standing according to age) |                 | (length)       | (length) |          |
|  |                 | (height)       | (height) |          |
| Stethoscopes   |                 |                |          |          |
| Thermometers   |                 |                |          |          |
| Heat source  |                 |                |          |          |
| Oxygen source  | oxygen cylinder |                |          |          |
|  | oxygen          |                |          |          |

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|  |  |  |  |  |
|--|--|--|--|--|
|  | concentrat<br>or<br>central<br>supply                                    |  |  |  |
| Flow-meters for oxygen                           |  |  |  |  |
| Equipment for the administration of oxygen       |  |  |  |  |
| Indicate which equipment you use                 | nasal<br>prongs<br><br>catheters<br><br>masks                            |  |  |  |
| Self-inflating bags for resuscitation            |  |  |  |  |
| Masks  | __ infant size<br>__ child size<br>__ adult size                         |  |  |  |
| IV-giving sets with chambers for paediatric use  |  |  |  |  |
| Butterflies and/or cannulas of paediatric size   |  |  |  |  |
| NG-tubes, paediatric size                        |  |  |  |  |
| Equipment for intra-osseous fluid administration |  |  |  |  |
| Suction equipment                                |  |  |  |  |
| Chest tubes                                      |  |  |  |  |
| Nebulisers for administration of salbutamol      |  |  |  |  |
| Indicate type of nebulizer:                      | __ electricity driven<br><br>__ oxygen driven<br><br>__ foot pump driven |  |  |  |

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|  |  |  |  |
|--|--|--|--|
| Spacers with masks for administration of metered doses (spray) of salbutamol |  |  |  |
|--|--|--|--|

|  |   |   |
|--|---|---|
| Is all the equipment safe?                           | Y | N |
| Is all the equipment cleaned regularly and sanitary? | Y | N |
| Is all the equipment kept in good working order?     | Y | N |

**4.3 Summary- Essential drugs, equipment and supplies**

*Score*

|   |          |          |          |          |          |
|---|----------|----------|----------|----------|----------|
| <b>Summary score</b>                      |          |          |          |          |          |
| - Essential drugs, equipment and supplies |          |          |          |          |          |
| <b>(to be circled)</b>                    | <b>5</b> | <b>4</b> | <b>3</b> | <b>2</b> | <b>1</b> |

Please indicate the quality of support by marking one of the 5 numbers; 5 indicates an adequate amount and quality of all essential drugs, equipment and supplies and also that drugs are not expired/expiring, 4 to 1 indicating levels of necessary improvement (4=small need for improvement, 1=indicates chronic shortages of essential drugs, equipment and supplies or recurrent lapses in the quality leading to potential dangerous and life threatening situations to both patients and staff)

*Main strengths*

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*Main weaknesses*

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## 5 Case management of common paediatric diseases

**Source:** This information should be collected by observing the treatment and care of children with the relevant condition and interviewing staff and carers.

**Please note:** the page references refer to the English version of the WHO Pocket Book of Hospital care for Children

### 5.1 Cough/difficult breathing

#### Assessment and treatment of pneumonia

| Standards and Criteria  | Score 1-5 | Comments |
|---|-----------|----------|
| Health workers correctly diagnose pneumonia and classify/ recognize severity by observing the patient's clinical signs <b>p 69-74, 78</b> |           |          |
| Signs such as chest-indrawing, respiratory rate, presence of cyanosis and general condition are used<br><b>p 70-73</b>                    |           |          |

#### Administration of antibiotics

| Standards and Criteria   | Score 1-5 | Comments |
|--|-----------|----------|
| Antibiotics are given ONLY to children with a diagnosis consistent with significant bacterial infection <b>p 74,75,79, 80</b>                            |           |          |
| Appropriate antibiotics are administered for the proper diagnosis at the correct dosage for weight <b>p 74,75,79,80</b>                                  |           |          |
| If child has not improved after two days or condition worsens, a health professional looks for complications or considers other diagnoses <b>p 76,79</b> |           |          |

#### Administration of oxygen therapy

| Standards and Criteria   | Score 1-5 | Comments |
|--|-----------|----------|
| Oxygen is administered ONLY to children who demonstrate signs of hypoxemia. <b>p 75, 79, 281-284</b> |           |          |

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|  |  |  |
|--|--|--|
| Oxygen is administered correctly (prongs or catheter, correct flow, no interruptions) and monitored appropriately<br>Oxygen mask and headbox are avoided due to waste of oxygen and risks <b>p 281-284</b> |  |  |
|--|--|--|

### Use of chest X-ray

| Standards and Criteria  | Score 1-5 | Comments |
|---|-----------|----------|
| <b>Chest x-rays are performed when clinically indicated ONLY:</b><br>Young infants cases with suspected complications (e.g. empyema, pneumothorax, abscess)<br>patients not responding to appropriate antibiotic treatment after > 48 hours |           |          |
| Chest x-ray is NOT performed in patients with uncomplicated pneumonia or cough and cold unless there is a clear indication <b>pp 76-77</b>  |           |          |

### Management of wheezing

| Standards and Criteria  | Score 1-5 | Comments |
|---|-----------|----------|
| Children in need of bronchodilators are correctly identified/ diagnosed <b>p 87,88</b>  |           |          |
| Inhaled bronchodilators are correctly administered (method, dosage and frequency) by spacer or nebulizer <b>p 88-89</b><br>Inhaled bronchodilators are affordable (free of charge or available through an exemption scheme) |           |          |
| Children who are discharged have follow-up treatment prescribed and explained to parents <b>p 91</b>  |           |          |

### TB treatment

| Standards and Criteria  | Score 1-5 | Comments |
|---|-----------|----------|
| Correct anti-TB treatment is given to children with suspected TB, according to national guidelines <b>p 101-104</b> |           |          |
| TB is considered part of the differential diagnosis of un-resolving pneumonia and                                   |           |          |

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|  |  |  |
|--|--|--|
| malnutrition <b>p 76</b>   |  |  |
| Every child with malnutrition receives anti-TB treatment <b>ONLY</b> if indicated <b>p 192</b> |  |  |

### Summary - Cough/difficult breathing

|  | <b>Score 1-5</b> | <b>Comments</b> |
|--|------------------|-----------------|
| 1. Assessment and treatment of pneumonia |                  |                 |
| 2. Administration of antibiotics         |                  |                 |
| 3. Administration of oxygen therapy      |                  |                 |
| 4. Use of Chest X-ray                    |                  |                 |
| 5. Management of wheezing                |                  |                 |
| 6. TB treatment                          |                  |                 |

### Score

|  |          |          |          |          |          |
|--|----------|----------|----------|----------|----------|
| <b>Summary score</b><br>-Cough and difficult breathing |          |          |          |          |          |
| <b>(to be circled)</b>                                 | <b>5</b> | <b>4</b> | <b>3</b> | <b>2</b> | <b>1</b> |

Please indicate the quality of support by marking one of the 5 numbers; 5 indicates good quality of care, 4 to 1 indicating levels of necessary improvement (4=small need for improvement, 1=urgent need for improvement/life threatening practices)

### Main strengths

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### Main weaknesses

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### 5.2 Diarrhoea

#### Assessment of dehydration

| Standards and Criteria   | Score 1-5 | Comments |
|--|-----------|----------|
| The degree of dehydration is assessed in all patients with diarrhoea <b>p 111</b>  |           |          |
| Dehydration is correctly classified based on recommended signs, according to guidelines <b>pp 18,111-113</b>               |           |          |
| Children with dysentery and severe malnutrition and infants with dysentery are properly assessed and admitted <b>p 127</b> |           |          |

#### Management of rehydration and diarrhoea

| Standards and Criteria  | Score 1-5 | Comments |
|---|-----------|----------|
| The correct rehydration plan is chosen based on the severity of dehydration (Plan A, Plan B, Plan C) <b>p 114,117,120</b>                         |           |          |
| Rate of rehydration is correctly calculated for weight (Plan B and C) and administered appropriately <b>p 114,117</b>                             |           |          |
| Signs of dehydration are monitored during rehydration, and fluid intake and rate of infusion are monitored and adjusted, if necessary <b>p115</b> |           |          |
| Zinc supplementation is given <b>p118</b>   |           |          |

#### Antibiotics use

| Standards and Criteria   | Score 1-5 | Comments |
|--|-----------|----------|
| Antibiotics are given ONLY to children with bloody diarrhea or suspected cholera <b>p 110, 128, 129</b>                                    |           |          |
| Antibiotics are NOT given to children with only watery diarrhea and without any other condition requiring antibiotic treatment <b>p122</b> |           |          |
| Correct choice of antibiotics according to WHO guidelines and national standards given <b>p 128-129</b>                                    |           |          |
| Antidiarrheal drugs are NOT given <b>p110</b>  |           |          |

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**Continued feeding**

| Standards and Criteria   | Score 1-5 | Comments |
|--|-----------|----------|
| Feeding (breast milk and/or other food) is continued and encouraged <b>p 118-119</b> |           |          |
| Frequent small feedings are offered <b>p 118-119</b>                                 |           |          |

**Summary – Diarrhoea**

| Summary                                 | Score 1-5 | Comments |
|---|-----------|----------|
| Assessment of dehydration               |           |          |
| Management of rehydration and diarrhoea |           |          |
| Antibiotic use                          |           |          |
| Continued feeding                       |           |          |

*Score*

|                                     |          |          |          |          |          |
|-------------------------------------|----------|----------|----------|----------|----------|
| <b>Summary score</b><br>- Diarrhoea |          |          |          |          |          |
| <b>(to be circled)</b>              | <b>5</b> | <b>4</b> | <b>3</b> | <b>2</b> | <b>1</b> |

Please indicate the quality of support by marking one of the 5 numbers; 5 indicates good practice complying to standard of care, 4 to 1 indicating levels of necessary improvement (4=small need for improvement, 1=urgent need for improvement)

*Main strengths*

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### 5.3 Fever

#### Differential diagnosis and investigations

| Standards and Criteria  | Score 1-5 | Comments |
|---|-----------|----------|
| Appropriate assessment and investigations are undertaken for all children presenting with fever, with appropriate consideration of potential differential diagnoses. <b>p 133-137</b> |           |          |
| Children admitted with fever have a differential diagnosis for possible and likely conditions considered <b>p135</b>  |           |          |
| Appropriate investigations are undertaken to establish a diagnosis (LP, blood film for malaria, urine examination, chest x-ray) <b>p137</b>   |           |          |

#### Diagnosis and management of meningitis

| Standards and Criteria  | Score 1-5 | Comments |
|---|-----------|----------|
| Lumbar puncture is performed without delay when meningitis is suspected <b>p 149</b>  |           |          |
| Adequate antibiotic treatment is started without delay when bacterial meningitis is suspected. <b>p 150</b>                             |           |          |
| Complications of meningitis are diagnosed and treated appropriately:<br>- Convulsions<br>- Hypoglycaemia <b>p 153</b>                   |           |          |
| Appropriate patient monitoring is performed and charted: <b>p 153</b><br>- State of consciousness<br>- Respiratory rate<br>- Pupil size |           |          |

#### Diagnosis and management of severe/complicated malaria

| Standards and Criteria  | Score 1-5 | Comments |
|---|-----------|----------|
| Malaria diagnosis is confirmed by microscopy or a rapid diagnostic test <b>p 137</b>  |           |          |
| For possible cerebral malaria and malaria-associated respiratory distress, alternative diagnoses are ruled out <b>p 139-140</b> |           |          |
| Correct anti-malarial treatment is given <b>p 140-141</b>   |           |          |

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| <b>Standards and Criteria</b>   | <b>Score 1-5</b> | <b>Comments</b> |
|---|------------------|-----------------|
| Complications are anticipated, monitored for and treated appropriately, and prevented if possible <b>p 142-144</b><br>Coma<br>Severe anaemia<br>Hypoglycaemia<br>Acidosis<br>Aspiration pneumonia |                  |                 |

### Diagnosis and management of measles

| <b>Standards and Criteria</b>  | <b>Score 1-5</b> | <b>Comments</b> |
|--|------------------|-----------------|
| Children admitted with measles are isolated on the ward, and all staff and patients are checked for their immunization status and immunized if necessary <b>p157</b> |                  |                 |
| Vitamin A is given to all patients with measles <b>p 155</b>   |                  |                 |
| Appropriate nutritional support is given <b>p 155</b>  |                  |                 |
| Complications are anticipated, monitored for and treated appropriately, and prevented if possible <b>p 154</b>   |                  |                 |

### Diagnosis and management of dengue haemorrhagic fever

| <b>Standards and Criteria</b>  | <b>Score 1-5</b> | <b>Comments</b> |
|--|------------------|-----------------|
| Children are correctly assessed for Dengue, where the risk exists.                       |                  |                 |
| The severity of dengue is correctly classified, according to guidelines <b>p 166-168</b> |                  |                 |
| Correct management and monitoring of severe dengue occurs <b>p 168-169</b>               |                  |                 |
| Complications are anticipated, monitored for and treated appropriately <b>p 171</b>      |                  |                 |

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### Other severe febrile conditions

| Standards and Criteria  | Score 1-5 | Comments |
|---|-----------|----------|
| Appropriate assessment and differential diagnosis performed. Appropriate treatment and monitoring given. <b>p 133-138</b> |           |          |
| Correct Treatment is given  |           |          |

### Summary - Fever

| Summary Fever   | Score 1-5 | Comments |
|---|-----------|----------|
| 1. Differential diagnosis and investigations                |           |          |
| 2. Diagnosis and management of meningitis                   |           |          |
| 3. Diagnosis and management of severe / complicated malaria |           |          |
| 4. Diagnosis and management of measles                      |           |          |
| 5. Diagnosis and management of dengue haemorrhagic fever    |           |          |
| 6. Other severe febrile conditions                          |           |          |

### Score

|                        |          |          |          |          |          |
|------------------------|----------|----------|----------|----------|----------|
| <b>Summary score</b>   |          |          |          |          |          |
| -Fever                 |          |          |          |          |          |
| <b>(to be circled)</b> | <b>5</b> | <b>4</b> | <b>3</b> | <b>2</b> | <b>1</b> |

Please indicate the quality of support by marking one of the 5 numbers; 5 indicates good quality of care, 4 to 1 indicating levels of necessary improvement (4=small need for improvement, 1=urgent need for improvement/life threatening practices)

### Main strengths

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### Main weaknesses

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### 5.4 Malnutrition

#### Assessment of nutritional status

| Standards and Criteria  | Score 1-5 | Comments |
|---|-----------|----------|
| Scale available and calibrated regularly, weight for height correctly calculated <b>p 174</b> |           |          |
| An appropriate history is taken and laboratory exams done <b>p174-175</b>                     |           |          |
| Clinical examination for signs and complications of severe malnutrition done <b>p174-175</b>  |           |          |
| Differential diagnoses for malnutrition considered and ruled out, if needed <b>p 174-175</b>  |           |          |

#### Management of infection and micronutrient supplementation

| Standards and Criteria   | Score 1-5 | Comments |
|--|-----------|----------|
| Broad spectrum antibiotics are administered to all severely malnourished patients <b>p 182-183</b> |           |          |
| If needed, measles vaccination   |           |          |
| Treatment of worms with mebendazole  |           |          |
| Vitamin/mineral supplementation given, with particular emphasis on Vitamin A <b>p 183,184</b>      |           |          |
| Iron ONLY given in the recovery phase <b>p 183</b>   |           |          |

#### Management of dehydration

| Standards and Criteria  | Score 1-5 | Comments |
|---|-----------|----------|
| ReSoMal given orally or NG- tube for rehydration. IV fluid NOT given except for shock and inability to take orally <b>p 179-181</b> |           |          |
| Potassium and magnesium supplement given <b>p 181-182</b>   |           |          |
| Use of low sodium rehydration fluid and food preparation without salt <b>p182</b>   |           |          |

#### Prevention and management of hypoglycaemia and hypothermia

| Standards and Criteria  | Score 1-5 | Comments |
|---|-----------|----------|
| Routine procedures in place to prevent hypoglycaemia and hypothermia <b>p 177-178</b> |           |          |
| Frequent feeding of malnourished children from  |           |          |

## Module D – Paediatric Care

*Improving the Quality of care for Reproductive, Maternal, Neonatal, Child and Adolescent Health in South-East Asia Region*

|   |  |  |
|---|--|--|
| admission and even at night. <b>p177</b>                          |  |  |
| If a child is deteriorating, blood glucose is checked <b>p177</b> |  |  |

### Feeding of severely malnourished children

| <b>Standards and Criteria</b>  | <b>Score 1-5</b> | <b>Comments</b> |
|--|------------------|-----------------|
| Appropriate (caloric intake and frequency) feeding regimen is started in all severely malnourished children <b>p 184</b> |                  |                 |
| Frequent feeding-day and night <b>p184,187</b>   |                  |                 |
| Daily monitoring of intake and weight gain <b>p 188</b>  |                  |                 |
| Follow up is organized for children discharged before recovery <b>p 193-194</b>  |                  |                 |

### Management of associated conditions and supportive care

| <b>Standards and Criteria</b>  | <b>Score 1-5</b> | <b>Comments</b> |
|--|------------------|-----------------|
| Correct treatment of associated conditions: eye problems, severe anaemia, dermatitis, diarrhoea, TB, etc. <b>p 190-192</b> |                  |                 |
| Sensory stimulation, emotional support and social support is provided <b>p 189-190</b>                                     |                  |                 |

### Summary - Malnutrition

| <b>Summary</b>  | <b>Score 1-5</b> | <b>Comments</b> |
|---|------------------|-----------------|
| 1. Assessment of nutritional status                           |                  |                 |
| 2. Management of infection and micronutrient supplementations |                  |                 |
| 3. Management of dehydration                                  |                  |                 |
| 4. Prevention and management of hypoglycaemia and hypothermia |                  |                 |
| 5. Feeding of severely malnourished children                  |                  |                 |
| 6. Management of associated conditions and supportive care    |                  |                 |

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*Improving the Quality of care for Reproductive, Maternal, Neonatal, Child and Adolescent Health in South-East Asia Region*

### Score

|  |          |          |          |          |          |
|--|----------|----------|----------|----------|----------|
| <b>Summary score</b><br>- Malnutrition |          |          |          |          |          |
| <b>(to be circled)</b>                 | <b>5</b> | <b>4</b> | <b>3</b> | <b>2</b> | <b>1</b> |

Please indicate the quality of support by marking one of the 5 numbers; 5 indicates good practice complying to standard of care, 4 to 1 indicating levels of necessary improvement (4=small need for improvement, 1=urgent need for improvement)

### Main strengths

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### Main weaknesses

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## 5.5 HIV/AIDS

### Counselling and diagnosis of paediatric HIV/AIDS

| <b>Standards and criteria</b>   | <b>Score 1-5</b> | <b>Comments</b> |
|---|------------------|-----------------|
| Counselling is done by a formally-trained, well-supervised HIV counsellor in a separate room and confidentiality is ensured. Proper documentation is done <b>p 201-203</b>  |                  |                 |
| In choosing which method to feed baby, mothers are counselled on the importance of exclusive breastfeeding until 6 months of age, as well as the risks of HIV transmission. If bottle feeding is considered, the financial and hygienic requirements are considered and explained <b>p 219, 220</b> |                  |                 |
| Counsellors receive formal training in HIV counselling, are regularly updated and do get  |                  |                 |

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| <b>Standards and criteria</b>  | <b>Score 1-5</b> | <b>Comments</b> |
|--|------------------|-----------------|
| adequate supervision and support <b>p202</b>   |                  |                 |
| Detailed counselling-documentation is done   |                  |                 |
| Pregnant women found to be HIV positive counselled on pediatric transmission. Follow-up is arranged for both mother and child post-partum. |                  |                 |
| HIV tests are offered routinely for children presenting with clinical signs of possible HIV infection <b>p 200, 201</b>                    |                  |                 |
| HIV testing without the informed consent of the parent/guardian is NOT done  |                  |                 |
| All family members of children with a positive HIV test are offered HIV testing and counselling <b>p 201</b>                               |                  |                 |
| A high proportion of current in-patients with severe malnutrition or TB show a documented offer of HIV screening                           |                  |                 |
| DNA/RNA tests are used for children <18 months and HIV antibody tests for those >18months <b>p 203, 204</b>                                |                  |                 |
| The staging is done according to the WHO pediatric clinical staging system <b>p 204-206</b>  |                  |                 |

### **Antiretroviral treatment (ARV) and monitoring**

| <b>Standards and criteria</b>   | <b>Score 1-5</b> | <b>Comments</b> |
|---|------------------|-----------------|
| Antiretroviral regimens are initiated and changed according to national guidelines <b>p 207-209</b>   |                  |                 |
| If possible, pediatric formulations and fixed-dose combinations are given <b>p 207</b>  |                  |                 |
| On all follow-up visits weight and height are taken. In children < 24 months the head circumference is also recorded to detect growth failure. The dosing of ARV is done correctly and adjusted for weight-gain regularly |                  |                 |
| CD4 count and/or clinical monitoring is done according to national guidelines <b>p 210</b>  |                  |                 |

## Module D – Paediatric Care

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### Opportunistic infections and supportive care

| Standards and criteria  | Score 1-5 | Comments |
|---|-----------|----------|
| Immunization status is checked and updated except for Yellow Fever and BCG in symptomatic disease<br>Measles vaccine is added at age 6 months <b>p214</b> |           |          |
| All mothers receive nutritional advice before discharge <b>p 216</b>  |           |          |
| Correct treatment of opportunistic infections <b>p 216-219</b>  |           |          |
| Initiation of ARV is deferred until patient has been stabilized and opportunistic infections are treated (incl. TB) <b>p 209</b>                          |           |          |

### Supportive care and follow-up of HIV infected children

| Standards and criteria  | Score 1-5 | Comments |
|---|-----------|----------|
| Carers are referred to home based care-/palliative care-/support before discharge <b>p 221-224</b>      |           |          |
| Terminal care focuses on symptom control <b>p 221</b>   |           |          |
| Follow-up is ensured for all HIV infected children discharged from the ward <b>p 220</b>                |           |          |
| Prophylactic Co-trimoxazole is offered to all children at risk of or suspected of HIV <b>p 214, 215</b> |           |          |

### Summary - HIV/AIDS

| Summary  | Score 1-5 | Comments |
|--|-----------|----------|
| Counselling and diagnosis of paediatric HIV/AIDS       |           |          |
| Antiretroviral (ARV) treatment and monitoring          |           |          |
| Opportunistic infections and supportive care           |           |          |
| Supportive care and follow up of HIV infected children |           |          |

### Score

| Summary score<br>- HIV/AIDS |          |          |          |          |          |
|-----------------------------|----------|----------|----------|----------|----------|
| <b>(to be circled)</b>      | <b>5</b> | <b>4</b> | <b>3</b> | <b>2</b> | <b>1</b> |

## Module D – Paediatric Care

*Improving the Quality of care for Reproductive, Maternal, Neonatal, Child and Adolescent Health in South-East Asia Region*

Please indicate the quality of support by marking one of the 5 numbers; 5 indicates good quality of care, 4 to 1 indicating levels of necessary improvement (4=small need for improvement, 1=urgent need for improvement/life threatening practices)

### *Main strengths*

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### *Main weaknesses*

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## 6. Monitoring and follow-up

### 6.1 Monitoring of individual progress

| <b>Standards and criteria</b>  | <b><u>Score 1-5</u></b> | <b><u>Comments</u></b> |
|--|-------------------------|------------------------|
| Nutritional status is assessed in all admitted children  |                         |                        |
| At the time of admission, a monitoring plan is made according to the severity of the patient's condition   |                         |                        |
| A standard monitoring chart is used with the following information: patient details, vital signs, clinical signs depending on condition, treatments given, feeding and outcome |                         |                        |

## Module D – Paediatric Care

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### 6.2 Monitoring by nurses

| <b>Standards and criteria</b>  | <b><u>Score 1-5</u></b> | <b><u>Comments</u></b> |
|--|-------------------------|------------------------|
| Key risk signs are monitored and recorded by a nurse twice a day and at least 4 times a day for critically ill patients  |                         |                        |
| Dosages and time are recorded for every patient receiving medications and IV fluids given by the nurse   |                         |                        |
| Additional special monitoring is performed and recorded appropriately when needed to follow the progress of particular conditions:<br>e.g. coma scale for unconscious children, etc. |                         |                        |
| Nurses use the results of patient monitoring to alert the physicians of problems or changing patient status warranting their attention   |                         |                        |

### 6.3 Reassessment by physicians

| <b>Standards and criteria</b>   | <b><u>Score 1-5</u></b> | <b><u>Comments</u></b> |
|---|-------------------------|------------------------|
| Seriously ill patients are assessed by a doctor upon admission and reviewed at least twice daily until improved |                         |                        |
| All patients are reassessed daily during working days by a doctor   |                         |                        |
| Sick patients or new admissions are also reviewed by a physician on weekends and holidays                       |                         |                        |

### 6.4 Follow up

| <b>Standards and criteria</b>   | <b><u>Score 1-5</u></b> | <b><u>Comments</u></b> |
|---|-------------------------|------------------------|
| If needed, follow up is arranged before discharge in the health facility closest to the patient's home that can provide the necessary follow up treatment |                         |                        |
| All mothers/caretakers receive a discharge note explaining their condition and providing information for the staff at the follow up facility              |                         |                        |

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**6.5 Summary - Monitoring and follow up**

| <b>Summary</b>                       | <b>Score 1-5</b> | <b>Comments</b> |
|--------------------------------------|------------------|-----------------|
| 1. Monitoring of individual progress |                  |                 |
| 2. Monitoring by nurses              |                  |                 |
| 3. Reassessment by physicians        |                  |                 |
| 4. Follow-up                         |                  |                 |

*Score*

|                            |          |          |          |          |          |
|----------------------------|----------|----------|----------|----------|----------|
| <b>Summary score</b>       |          |          |          |          |          |
| - Monitoring and follow up |          |          |          |          |          |
| <b>(to be circled)</b>     | <b>5</b> | <b>4</b> | <b>3</b> | <b>2</b> | <b>1</b> |

Please indicate the quality of support by marking one of the 5 numbers; 5 indicates good quality of care and excellent monitoring and follow/up procedures of all patients occurs; 4 to 1 indicating levels of necessary improvement (4=small need for improvement, 1=urgent need for improvement/life threatening practices)

*Main strengths*

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*Main weaknesses*

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## Module D – Paediatric Care

*Improving the Quality of care for Reproductive, Maternal, Neonatal, Child and Adolescent Health in South-East Asia Region*

# 7. Paediatric surgery and rehabilitation

**Source:** This information should be collected by observing the treatment and care of children undergoing surgical treatment, interviewing staff and carers and reviewing guidelines, if available.

## 7.1 Paediatric size anaesthesia-equipment

| Paediatric size.....are | available, in good working condition | not always available | not available |
|-------------------------|--------------------------------------|----------------------|---------------|
| Tracheal tubes          |                                      |                      |               |
| Face masks              |                                      |                      |               |
| Laryngoscope blades     |                                      |                      |               |
| Oropharyngeal airways   |                                      |                      |               |
| Breathing valves        |                                      |                      |               |
| Resuscitation bags      |                                      |                      |               |
| Blood pressure-cuffs    |                                      |                      |               |

## 7.2 Pre-operative care

| Standard and Criteria   | Score 1-5 | Comments |
|---|-----------|----------|
| Standard procedures are in place to prepare a child for surgery: weight, haemoglobin level, blood group of the child and consent of the carer is recorded <b>p 228-229</b>                |           |          |
| Starving is kept to a minimum (8hrs no solids/6hrs no formula/4 hrs no milk or clear liquids) and children are put first on the operating list to avoid unnecessary starving <b>p 228</b> |           |          |

## 7.3 Intraoperative Care

| Standard and Criteria  | Score 1-5 | Comments |
|--|-----------|----------|
| The child is kept warm during surgery and IV-fluids containing glucose are given for long procedures (e.g. 0.45% NaCl + 5% glucose) <b>p 231</b> |           |          |
| Guidelines are in place for the safe use of local anaesthetic (weight adjusted) <b>p 229</b>   |           |          |
| Blood loss is monitored <b>p 231</b>   |           |          |

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### 7.4 Post-operative care and monitoring

| <b>Standard and Criteria</b>  | <b>Score 1-5</b> | <b>Comments</b> |
|---|------------------|-----------------|
| There are specific notes from the surgeon on the procedure performed, necessary monitoring and treatment. There is a handover for the nurses from theatre staff                                   |                  |                 |
| Fluid status is closely monitored post-operatively with urine output being recorded <b>p 232-233</b>  |                  |                 |
| Post-operatively, children are closely observed in a safe place and frequent recording of vital signs (blood pressure, pulse, respiration rate every 15-30 min initially) is ensured <b>p 232</b> |                  |                 |
| Oxygen and equipment for resuscitation/ suction are readily available and working   |                  |                 |
| Nursing staff have adequate guidelines on post-operative pain relief <b>p 233</b>   |                  |                 |
| Children are allowed to eat as soon as they have fully recovered from anaesthesia <b>p 233</b>  |                  |                 |

### 7.5 Rehabilitation

| <b>Standard and Criteria</b>   | <b>Score 1-5</b> | <b>Comments</b> |
|--|------------------|-----------------|
| Basic rehabilitation equipment is locally manufactured or provided for to children (crutches...) |                  |                 |
| Some form of organized physiotherapy is available to children                                    |                  |                 |
| The surgical ward is child friendly, provides food for children and opportunities to play        |                  |                 |

### 7.6 Summary - Paediatric surgery and rehabilitation

| <b>Summary</b>                           | <b>Score 1-5</b> | <b>Comments</b> |
|--|------------------|-----------------|
| 1. Paediatric size anaesthesia-equipment |                  |                 |
| 2. Pre- operative care                   |                  |                 |
| 3. Intraoperative care                   |                  |                 |
| 4. Post-operative care and monitoring    |                  |                 |
| 5. Rehabilitation                        |                  |                 |

**Module D – Paediatric Care**

*Improving the Quality of care for Reproductive, Maternal, Neonatal, Child and Adolescent Health in South-East Asia Region*

**Score**

|  |          |          |          |          |          |
|--|----------|----------|----------|----------|----------|
| <b>Summary score</b><br>-Paediatric surgery and rehabilitation |          |          |          |          |          |
| <b>(to be circled)</b>   | <b>5</b> | <b>4</b> | <b>3</b> | <b>2</b> | <b>1</b> |

Please indicate the quality of support by marking one of the 5 numbers; 5 indicates good support, 4 to 1 indicating levels of necessary improvement (4=small need for improvement, 1=urgent need for improvement)

**Main strengths**

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**Main weaknesses**

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## Module D – Paediatric Care

*Improving the Quality of care for Reproductive, Maternal, Neonatal, Child and Adolescent Health in South-East Asia Region*

### 8. Summary scores – Module D: Paediatric care

| Summary scores  |   | 5 | 4 | 3 | 2 | 1 |
|-----------------|---|---|---|---|---|---|
| D.1.            | Paediatric emergency care               |   |   |   |   |   |
| D.2.            | Paediatric wards                        |   |   |   |   |   |
| D.3.            | Infection control and supportive care   |   |   |   |   |   |
|                 | Infection control                       |   |   |   |   |   |
|                 | Supportive care                         |   |   |   |   |   |
| D.4.            | Essential drugs, equipment and supplies |   |   |   |   |   |
| D5              | Maternal case management                |   |   |   |   |   |
|                 | Cough/ difficult breathing              |   |   |   |   |   |
|                 | Diarrhoea                               |   |   |   |   |   |
|                 | Fever                                   |   |   |   |   |   |
|                 | Malnutrition                            |   |   |   |   |   |
|                 | HIV/AIDS                                |   |   |   |   |   |
| D.6.            | Monitoring and follow up                |   |   |   |   |   |
| D.7.            | Paediatric surgery and rehabilitation   |   |   |   |   |   |
| <b>Module D</b> | <b>TOTAL SCORE</b>                      |   |   |   |   |   |

**Comments on the summary scores/ total score:**





**Summary Evaluation of  
the Hospital**



## Assessment Tool – Summary Evaluation of the Hospital

*Improving the Quality of care for Reproductive, Maternal, Neonatal, Child and Adolescent Health in South-East Asia Region*

### Summary evaluation of the Hospital

This summary helps identifying the most critical areas as a basis for identifying priorities and work plan to guide the discussion with senior hospital staff at debriefing.

| Summary scores                 |   | 5 | 4 | 3 | 2 | 1 |
|--------------------------------|---|---|---|---|---|---|
| A.2.                           | Infrastructure                                  |   |   |   |   |   |
| A.3.                           | Staffing and training                           |   |   |   |   |   |
| A.5.                           | Health information system and medical records   |   |   |   |   |   |
| A.6.                           | Essential drugs and blood products              |   |   |   |   |   |
| A.7.                           | Laboratory                                      |   |   |   |   |   |
| A.8.                           | Policies  |   |   |   |   |   |
| A.9.                           | Referral  |   |   |   |   |   |
| A.10.                          | Guidelines and auditing                         |   |   |   |   |   |
| <b>Module A</b>                | <b>TOTAL SCORE</b>                              |   |   |   |   |   |
| Summary scores – Maternal Care |   | 5 | 4 | 3 | 2 | 1 |
| B.1.                           | Emergency obstetric care                        |   |   |   |   |   |
| B.2.                           | Maternity wards                                 |   |   |   |   |   |
| B.3.                           | Infection control and supportive care           |   |   |   |   |   |
|                                | Infection control                               |   |   |   |   |   |
|                                | Supportive care                                 |   |   |   |   |   |
| B.4.                           | Essential drugs                                 |   |   |   |   |   |
|                                | Equipment and supplies                          |   |   |   |   |   |
| B5                             | Maternal case management                        |   |   |   |   |   |
|                                | Management of pre-eclampsia and eclampsia       |   |   |   |   |   |
|                                | Management of infections                        |   |   |   |   |   |
|                                | Normal labour and vaginal delivery              |   |   |   |   |   |
|                                | Preterm labour                                  |   |   |   |   |   |
|                                | Caesarean section                               |   |   |   |   |   |
|                                | Postpartum haemorrhage                          |   |   |   |   |   |
|                                | Management of unsatisfactory progress of labour |   |   |   |   |   |
| B.6.                           | Monitoring and follow up                        |   |   |   |   |   |
| <b>Module B</b>                | <b>TOTAL SCORE</b>                              |   |   |   |   |   |
| Summary scores - Neonatal Care |   | 5 | 4 | 3 | 2 | 1 |
| C.1.                           | Neonatal resuscitation                          |   |   |   |   |   |
| C.2.                           | Nursery facilities                              |   |   |   |   |   |
| C.3.                           | Infection control and supportive care           |   |   |   |   |   |
|                                | Infection control                               |   |   |   |   |   |
|                                | Supportive care                                 |   |   |   |   |   |

## Assessment Tool – Summary Evaluation of the Hospital

*Improving the Quality of care for Reproductive, Maternal, Neonatal, Child and Adolescent Health in South-East Asia Region*

|   |                                       |          |          |          |          |          |
|---|---------------------------------------|----------|----------|----------|----------|----------|
| C.4.                                    | Essential drugs                       |          |          |          |          |          |
|   | Equipment and supplies                |          |          |          |          |          |
| C.5                                     | Routine neonatal care                 |          |          |          |          |          |
| C.6.                                    | Case management of the sick newborn   |          |          |          |          |          |
| C.7.                                    | Monitoring and follow up              |          |          |          |          |          |
| <b>Module C</b>                         | <b>TOTAL SCORE</b>                    |          |          |          |          |          |
| <b>Summary scores - Paediatric Care</b> |                                       | <b>5</b> | <b>4</b> | <b>3</b> | <b>2</b> | <b>1</b> |
| D.1.                                    | Paediatric emergency care             |          |          |          |          |          |
| D.2.                                    | Paediatric wards                      |          |          |          |          |          |
| D.3.                                    | Infection control and supportive care |          |          |          |          |          |
|   | Infection control                     |          |          |          |          |          |
|   | Supportive care                       |          |          |          |          |          |
| D.4.                                    | Essential drugs                       |          |          |          |          |          |
|   | Equipment and supplies                |          |          |          |          |          |
| D5                                      | Maternal case management              |          |          |          |          |          |
|   | Cough/ difficult breathing            |          |          |          |          |          |
|   | Diarrhoea                             |          |          |          |          |          |
|   | Fever                                 |          |          |          |          |          |
|   | Malnutrition                          |          |          |          |          |          |
|   | HIV/AIDS                              |          |          |          |          |          |
| D.6.                                    | Monitoring and follow up              |          |          |          |          |          |
| D.7.                                    | Paediatric surgery and rehabilitation |          |          |          |          |          |
| <b>Module D</b>                         | <b>TOTAL SCORE</b>                    |          |          |          |          |          |

|                 |                    |  |  |  |  |  |
|-----------------|--------------------|--|--|--|--|--|
| <b>Module A</b> | <b>TOTAL SCORE</b> |  |  |  |  |  |
| <b>Module B</b> | <b>TOTAL SCORE</b> |  |  |  |  |  |
| <b>Module C</b> | <b>TOTAL SCORE</b> |  |  |  |  |  |
| <b>Module D</b> | <b>TOTAL SCORE</b> |  |  |  |  |  |



## **Assessment Tool – Summary Evaluation of the Hospital**

*Improving the Quality of care for Reproductive, Maternal, Neonatal, Child and Adolescent Health  
in South-East Asia Region*

# **Comments on the Summary Score**



## ***Annexes***



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## **Annexes**

### **1. Guidelines for conducting the interviews**

We would like to record interviewees' honest opinions. It is important that health care workers, caregivers and mothers understand the aim of the survey and trusts that the information will be used confidentially. Please let them know that they will not be identified in any way in reports to the hospital.

Please do not leave forms lying in places that people who are not members of the team can read them.

Ask the questions in a face-to-face interview in a suitable private place. Try to record comments *as they are spoken* rather than trying to summarize the view expressed. Recording the real words used often helps to properly represent what the person is trying to say. When doing this please put the comments in quotation marks.

For example:

*“we have a real problem with the water supply, sometimes days go by without piped water, how can we wash our hands to prevent spreading infection”*

Before thanking the interviewee, please ensure that all questions are correctly answered. If an interviewee does not want to answer a particular question please note and proceed to the next question.

At the end of the interview you should offer the interviewee to read what you have written. If they wish, they should be allowed to make changes and clarifications.

Please thank them for providing the interview.

### **2. Interview with patients**

The purpose of the interview is to evaluate the quality of the contact between the patients or caregiver and the hospital staff; and to see if appropriate counselling has been provided and find out about their feelings and opinion on what can be done to improve the wellbeing of new mothers, newborn babies and older children that seek care at the facility. It also serves to complement information from the hospital assessment on whether case management that is being provided has met the minimum standard recommendation.

For the purposes of the hospital assessment, a total of at least 6 interviews should be carried out with new mothers and caregivers of sick children:

- At least one mother who had vaginal birth and a healthy baby

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- At least one mother who had a caesarean section
- At least one mother with a preterm baby
- At least three different caregivers of three different sick children

Where possible, one additional mother should be interviewed 3 months after vaginal birth and a normal baby. Just after birth the experience might be related in a different way, women could be affected by hormones and in shock if they had a bad experience. In these conditions some women say everything went fine, and later they realize they do not feel satisfied with the services provided.

### 2.1 How to carry out the interview and complete the form

Make sure your attitude is positive in both words and action.

Do not conduct the interview during a clinical session to avoid influencing case management practices of other health providers.

Do not conduct the interview in the presence of other mothers/caregivers whom you are going to interview and as far as possible conduct the interview without other clinical staff around, in order to avoid influencing the answers received.

Hold the form upright, out of the view of the person being interviewed as the different options provided in it might influence the answer given.

Take as much time as necessary to talk to the new mother or caregiver of the sick child and make sure questions asked are understood.

Ask the question as they are written down in the interview form and repeat it in your own words only if the original question has not been understood.

Do not read the different answers that appear after each question. They are there only to facilitate your work. Instead, listen to the answers, asking the interviewee to be as precise as possible, and tick [X] when the answer provided matches one of the listed points. Sometimes it will be necessary to tick an answer that is close, but not exactly, the one listed. If the answer provided does not match any of the listed points, write a brief summary, as appropriate, in the space provided under "Other (Specify)".

As you complete the form, make brief notes of your observations to be discussed with health workers during the feedback session. Also, underline or circle points in any of the issues you feel need commenting on. This will remind you to bring up problems or positive issues during the feedback session.

Make notes of the discussion during the interview and write summaries of important points under "Comments, discussions, problems". Use these notes at the feedback session. Please write clearly in print characters so that the form is easy to read.

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### 2.2 Questionnaire – new mother

(print at least 4 times)

| <b>A. Personal data</b>       |   |  |   |
|-------------------------------|---|--|---|
| 1.                            | Age of mother:  | 2. Number of children:                 | 3. Level of education attained by mother: |
| 4.                            | Partner or relative present at delivery?  | 5. Type of birth (vaginal, C-section): |   |
| 6.                            | How far away do you live from the hospital?   | 7. Kilometres:                         | 8. Hours:                                 |
| 9.                            | What type of transport did you use to get to the hospital?                                      |  |   |
| <b>B. Antenatal care</b>      |   |  |   |
| 10.                           | How many antenatal visits did you make during your pregnancy?                                   |  |   |
| 11.                           | How many ultrasounds did you receive during your pregnancy?                                     |  |   |
| <b>C. Admission</b>           |   |  |   |
| 12.                           | How long before your delivery were you admitted to the health facility?                         |  |   |
| 13.                           | Did you have a family member/friend with you at all times during admission?                     | Y/N                                    |   |
| 14.                           | Were you examined vaginally at admission?   | Y/N                                    |   |
| 15.                           | Was the baby's heart rate listened to at admission?   | Y/N                                    |   |
| <b>D. Labour and delivery</b> |   |  |   |
| 16.                           | a) How long were you in labour? (hours, days)<br>b) How long did you push for the baby? (hours) |  |   |
| 17.                           | Did you have a vein punctured during labour?  | Y/N                                    |   |

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|     |   |     |
|-----|---|-----|
| 18. | Were you examined vaginally during labour? Do you remember how many times? Were you asked for your consent prior to being examined? | Y/N |
| 19. | How did they listen to the baby?  |     |
| 20. | Did each member of the delivery team introduce and identify him or herself when they came into the room?                            | Y/N |
| 21. | What methods of pain relief were you offered?<br><br>Were they effective?   | Y/N |
| 22. | Was your baby healthy at delivery?<br><br>If YES, go to question 26.<br><br>If NO, what was the problem:                            | Y/N |
| 23. | Birth asphyxia  | Y/N |
| 24. | Preterm birth   | Y/N |
| 25. | Other: please describe  |     |
| 26. | What was baby's weight?   |     |
| 27. | Was your baby in skin to skin contact immediately after delivery  | Y/N |
| 28. | Was your baby kept with you in your room for almost the whole time you were in the hospital?  | Y/N |
| 29. | Was your baby separated from you at birth?  | Y/N |
| 30. | If YES in 29, do you know the reasons why? Can you explain what happened?   |     |

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| <b>E. Newborn care</b>   |  |                 |                                |                 |
|--|--|-----------------|--------------------------------|-----------------|
| 31.  | What are you feeding your baby? (breast milk, formula, expressed milk, other)  |                 |                                |                 |
| 32.  | If you are breastfeeding, who from the hospital team has given you the most support and education about breastfeeding (doctor, midwife, nurse, etc.)?                          |                 |                                |                 |
| 33.  | When were you asked to initiate breastfeeding after delivery?  |                 |                                |                 |
| 34.  | How often were you advised to breastfeed our baby?   |                 |                                |                 |
| 35.  | How did you find the quality of the facilities (labour room, ward room, place to wash, toilet, etc.)?  |                 |                                |                 |
| 36.  | How often, and for how long, did you interact with staff? How much support did you feel? Did you feel that you could ask questions, and that your questions would be answered? |                 |                                |                 |
| <b>F. Attitude of staff</b>  |  |                 |                                |                 |
| We are interested in what you thought about the staff looking after your child |  |                 |                                |                 |
| 37.  | What was the attitude of the staff towards you and your child most of the time?  | Polite, helpful | Good or bad at different times | Rude, unhelpful |
|  | a) Doctors   |                 |                                |                 |
|  | b) Nurses  |                 |                                |                 |

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|                                   |  |  |  |  |
|-----------------------------------|--|--|--|--|
|                                   | c) Cleaning/kitchen/other non-medical staff  |  |  |  |
|                                   | d) Other hospital staff (e.g. nutritionists, physiotherapists, pharmacists)  |  |  |  |
| 38.                               | Can you think of any examples when you were spoken to or dealt with well/badly?<br><br>Explain the incident  |  |  |  |
| <b>G. Discharge and follow up</b> |  |  |  |  |
| 39.                               | Were you given instructions on how to care for baby when you returned home? What kinds of instructions?  |  |  |  |
| 40.                               | Were you given instructions as to under what circumstances you should bring baby back to hospital?   |  |  |  |
| 41.                               | Were you given instructions on how to care for yourself when you returned home? What kinds of instructions?  |  |  |  |
| 42.                               | What drugs, if any, were you given on discharge from the hospital?   |  |  |  |
| 43.                               | Were you given information about birth control options after birth? Were you given information as to where you could access different forms of birth control? Do you feel that birth control is an option for you? |  |  |  |

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|   |  |
|---|--|
| 44.   | What areas, if any, do you think need the most improvement to make the admission and stay easier to bear for yourself and for your child?                        |
| 45.   | Overall, how satisfied are you with your care at the hospital?   |
| <b>H. Access to hospital care</b>                               |  |
| <b>a. Traditional medicine</b>                                  |  |
| 46.   | Did you consult a traditional practitioner prior to going to hospital?   |
| 47.   | Why did you prefer the traditional practitioner to hospital care (fees, transport, culture, etc)?  |
| 48.   | What treatment did you received?   |
| 49.   | How much did you pay for the traditional services (including goods)?   |
| 50.   | What contributed to your decision to come to the hospital? How much of a time did pass between the onset of your symptoms and your presentation at the hospital? |
| <b>b. Referral by first level or primary health care worker</b> |  |
| 51.   | Did a first level or primary health care provider refer you to the hospital refer you?   |
| 52.   | Did you receive any treatment before being referred? Which?  |
| 53.   | Did you receive a referral note from the health care provider?   |

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|                                     |   |
|-------------------------------------|---|
| 54.                                 | How much of a time did pass between the referral and your presentation at the hospital? |
| <b>c. Transport to the hospital</b> |   |
| 55.                                 | Was it difficult for you to organize your transport to the hospital?<br>If, yes why?    |
| 56.                                 | How much did you pay for transport to the hospital?                                     |
| 57.                                 | How long did it take you to get to the hospital?  |

### Summary

| Standards and criteria  | Score 1-5 | Comments |
|-------------------------|-----------|----------|
| Antenatal care          |           |          |
| Admission               |           |          |
| Labour and delivery     |           |          |
| Newborn care            |           |          |
| Attitude of staff       |           |          |
| Discharge and follow up |           |          |
| Access to hospital care |           |          |

### Score

|                             |          |          |          |          |          |
|-----------------------------|----------|----------|----------|----------|----------|
| <b>Summary score</b>        |          |          |          |          |          |
| - Interview with new mother |          |          |          |          |          |
| <b>(to be circled)</b>      | <b>5</b> | <b>4</b> | <b>3</b> | <b>2</b> | <b>1</b> |

Please indicate the quality of support by marking one of the 5 numbers; 5 indicates Mother fully satisfied with the support she has received; 4 to 1 indicating levels of necessary improvement (4=small need for improvement, 1=mother totally unsatisfied with support she has received and there is an urgent need to improve)

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### 2.3 Questionnaire - Caregiver or family members

(Print at least 3 times)

| A. Personal data of the care taker and the child |  |                     |  |                      |      |
|--|--|---------------------|--|----------------------|------|
| 1.   | Age of caregiver:  | Age of child:       | 3. Level of education attained by caregiver: |                      |      |
| 4.   | Relationship to child:   |                     | 5. Date child was admitted:                  |                      |      |
| 6.   | Length of stay:  |                     | 7. Where admitted?                           |                      |      |
| 8.   | % time on ward with child (please circle) :  | <25%                | 25-50%                                       | 50-75%               | >75% |
| 9.   | How far away do you live from the hospital?  | 10. Kilometres:     |  | 11. Hours:           |      |
| 12.  | What type of transport do you use to get to the hospital?  |                     |  |                      |      |
| B. General OPD/ER care                           |  |                     |  |                      |      |
| 13.  | After arrival at the hospital, how were you treated in the OPD/ER?   |                     |  |                      |      |
| 14.  | Were there any good things/bad things about the time your child spent in OPD/ER?   |                     |  |                      |      |
| 15.  | How do you feel about the care obtained in the OPD/ER (check all that apply)?  | Worse than expected | As expected                                  | Better than expected |      |
|  | a) The actual time you had to wait was ___ hours. This was:  |                     |  |                      |      |
|  | b) The extend of politeness and respect with which you were treated was  |                     |  |                      |      |
|  | In your opinion, how thorough was the assessment done by the physician during your child's review and clinical examination |                     |  |                      |      |
| 16.  | Was the reason for admission explained to you?   |                     |  |                      | Y/N  |

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|   |   |                     |             |                      |
|---|---|---------------------|-------------|----------------------|
| 17.   | What was the reason for admission?  |                     |             |                      |
| <b>C. Care received in the paediatric ward</b>                                      |   |                     |             |                      |
| We are interested in learning what you think about the ward and care for your child |   |                     |             |                      |
| 18.   | Once your child was on the ward, what do you think about (check all that apply)                                 | Worse than expected | As expected | Better than expected |
|   | a) The amount of space for you and your child to stay   |                     |             |                      |
|   | b) The place/bed you and your child slept? Comments on quality:   |                     |             |                      |
|   | c) The space to wash and the toilet? Comments on quality:   |                     |             |                      |
|   | d) The cleanliness of the ward  |                     |             |                      |
|   | e) The number of nurses that are available to look after sick children. Number of nurses noted:                 |                     |             |                      |
|   | f) The thoroughness of the child's assessment by the admitting physician during review and clinical examination |                     |             |                      |
|   | g) The frequency of daily monitoring checks by nurses/doctors   |                     |             |                      |
|   | h) Attention to detail paid by the nurses/doctors during each check   |                     |             |                      |
|   | i) Was any information given about the child's condition during the checks?                                     |                     |             |                      |
| 19.   | Do you have any other concerns about the ward or the hospital?  |                     |             |                      |

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| <b>D. Case management</b>   |   |                 |                                |                 |     |
|---|---|-----------------|--------------------------------|-----------------|-----|
| We are interested in learning what you think about the medical care that has been provided to your child. |   |                 |                                |                 |     |
| 20.   | What is your child's diagnosis?   |                 |                                |                 |     |
| 21.   | a) From whom did you receive most information about your child's admission?<br>b) Who was the person you could most easily ask about your child's admission?        |                 |                                |                 |     |
| 22.   | What did you think about the medical treatment your child received: (check all that apply)  | Too much        | OK                             | Too few         | N/A |
|   | a) Blood was taken ___ times. This was:   |                 |                                |                 |     |
|   | b) Injections were given ___ times. This was:   |                 |                                |                 |     |
|   | Intravenous fluids were given ___ times : This was  |                 |                                |                 |     |
| 23.   | What other tests have been done? How did you feel about each of these (was any explanation given on why they had to be done? Do you think it was necessary/useful)? |                 |                                |                 |     |
| 24.   | Did you learn anything new on how to keep your child healthy while the child was admitted to hospital?<br><br>IF yes, what did you learn and how did you learn it?  |                 |                                |                 | Y/N |
| <b>E. Attitude of staff</b>   |   |                 |                                |                 |     |
| We are interested in learning what you think about the staff looking after your child                     |   |                 |                                |                 |     |
| 25.   | What was the attitude of the staff towards you and your child most of the time (check all that apply)?  | Polite, helpful | Good or bad at different times | Rude, unhelpful |     |
|   | a) Doctors  |                 |                                |                 |     |
|   | b) Nurses   |                 |                                |                 |     |

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|  |  |           |            |            |
|--|--|-----------|------------|------------|
|  | c) Cleaning/kitchen/other non-medical staff  |           |            |            |
|  | d) Other hospital staff (e.g. nutritionists, physiotherapists, pharmacists)  |           |            |            |
| 26.  | Can you think of any examples when you were spoken to or dealt with well/badly?<br>Explain what happened                                       |           |            |            |
| <b>F. Discharge and follow up</b>  |  |           |            |            |
| We are interested in what you thought about your discharge from hospital |  |           |            |            |
| 27.  | How do you think your child is doing now (at the time of discharge) (circle that which applies)?   | Very good | OK         | Still poor |
| 28.  | The amount of time spent in hospital was (circle that which applies)   | Too long  | Just right | Too short  |
| 29.  | Is your child being sent home on medication?   |           |            | Y/N        |
| 30.  | Did the staff explain to you how much medicine to give?  |           |            | Y/N        |
| 31.  | Did the staff explain to you how often to give the medicine?   |           |            | Y/N        |
| 32.  | Did the staff tell you how many days to give the medicine in total?  |           |            | Y/N        |
| 33.  | Did you receive a follow up appointment to see how your child is doing?<br><br>If yes, why do you have to go?<br><br>If no, go to question 37. |           |            | Y/N        |
| 34.  | Did the doctor/ward staff tell you where to go for the follow-up?  |           |            | Y/N        |
| 35.  | Do you know when to go to the follow up appointment?   |           |            | Y/N        |

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|                                   |  |     |
|-----------------------------------|--|-----|
| 36.                               | Did you receive a discharge/follow up note explaining the illness of your child and providing information for the staff at the follow up clinic?     | Y/N |
| 37.                               | What do you think about the cost of treatment at the hospital? (How did the family finance the hospital admission? Were costs clearly communicated?) |     |
| 38.                               | What areas, if any, do you think need most improvement to make the admission and stay easier to bear for yourself and for the child?                 |     |
| 39.                               | Overall, how satisfied are you with the care of your child at the hospital?  |     |
| <b>I. Access to hospital care</b> |  |     |
| <b>Traditional medicine</b>       |  |     |
| 40.                               | Did you consult a traditional practitioner prior to going to hospital?   |     |
| 41.                               | Why did you prefer the traditional practitioner to hospital care (fees, transport, culture, etc)?  |     |
| 42.                               | What treatment did your child receive?   |     |

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|     |   |
|-----|---|
| 43. | How much did you pay for the traditional services (including goods)?  |
| 44. | What contributed to your decision to come to the hospital? How much of a time did pass between the onset of the symptoms and your presentation of your child at the hospital? |
|     | <b>b. Referral by first level or primary health care worker</b>   |
| 45. | Did a first level or primary health care provider refer your child to the hospital refer you?   |
| 46. | Did your child receive any treatment before being referred? Which?  |
| 47. | Did you receive a referral note from the health care provider?  |
| 48. | How much of a time did pass between the referral and your presentation at the hospital?   |
|     | <b>Transport to the hospital</b>  |
| 49. | Was it difficult for you to organize your transport to the hospital?<br>If, yes why?  |
| 50. | How much did you pay for transport to the hospital?   |
| 51. | How long did it take you to get to the hospital?  |

## Summary

| Standards and criteria               | Score 1-5 | Comments |
|--------------------------------------|-----------|----------|
| General OPD/ER care                  |           |          |
| Care received in the paediatric ward |           |          |
| Case management                      |           |          |
| Attitude of staff                    |           |          |
| Discharge and follow up              |           |          |
| Access to hospital care              |           |          |

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### Score

|  |          |          |          |          |          |
|--|----------|----------|----------|----------|----------|
| <b>Summary score</b><br>- Interviews with caregivers or family members of children |          |          |          |          |          |
| <b>(to be circled)</b>   | <b>5</b> | <b>4</b> | <b>3</b> | <b>2</b> | <b>1</b> |

Please indicate the quality of support by marking one of the 5 numbers; 5 indicates Mother/caregiver fully satisfied with the support that has been received; 4 to 1 indicating levels of necessary improvement (4=small need for improvement, 1=mother/caregiver totally unsatisfied with support that has been received and there is an urgent need to improve)

## 3. Interview with health workers

All groups of health professionals (nursing assistants, nurses / midwives, medical officers and doctors) working in the maternal, newborn and paediatric wards should be considered for this interview. Try to interview 2 staff each from the above mentioned categories of health professionals so that a minimum of 6-8 forms should be filled during the assessment visit.

### 3.1 How to carry out the interview and complete the form

We would like to record the health workers honest opinions. It is therefore important that the health workers understand the aim of the survey and know and trust that the information will be stored and used while maintaining confidentiality. Please let them know that their names or initials will not be mentioned in any report or to supervisors in the hospital and inform them that interviews would be lasting between 40-60 minutes.

The aim is to complement information that will be gotten from the assessment and possibly shed more information on aspects of quality of care for patients that may not have emerged or cannot be captured solely by the assessment tool. The interviewer should also explain that this interview will be inquiring about their opinion on care provided to patients and on the organisation and management of resources (human or otherwise) that directly or indirectly affect the quality of care provided to patients in hospitals.

To start, please fill in the date, the hospital name and the health worker initials on all five sheets. After this, please fill the little information on the interviewee, so that the answers in the questionnaire can be put in better perspective.

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The interview should begin with an open question. Some health workers may have several things to say without prompting them with specific questions. For these people it is important to allow them to speak and record what they say.

For some question you are asked to mark the quality of the facilities of the maternal, newborn and paediatric wards. Please see the criteria below for the three possible grades:

For the scale "Satisfactory/Good" to "Usually inadequate/Not available" consider the following as an explanation:

**Table 1**

|                           |  |
|---------------------------|--|
| Usually inadequate/absent | On four or more out of ten times when something is used or wanted or on four or more out of ten visits to an area things are unavailable or not of an acceptable standard. |
| Occasionally inadequate   | On up-to four occasions when something is used or wanted/or on up-to four out of ten visits to an area things are unavailable or are not of an acceptable standard.        |
| Satisfactory/good         | Only rarely are things unavailable or are not of an acceptable standard.   |

Please ensure that all questions have been correctly answered. If a health worker does not want to answer a particular question, please note and proceed to the next question. Offer the health worker to read what you have written and if he wishes he should be allowed to make changes. And at the end of the interview, thank the health-worker for the time taken in giving the information.

### 3.2 Questionnaire – Health worker

(Print at least 8 times)

|  |  |                                   |
|--|--|-----------------------------------|
| <b>A. Personal data - Health worker</b>                      |  |                                   |
| 1.   | Initials   | 2. Position:                      |
| 3.   | Current service and responsibilities:  | 4. Length of service at hospital: |
| <b>B. Wards</b>  |  |                                   |
| We are interested in your views on the ward/nursery/hospital |  |                                   |
| 5.   | Which area aspects of the hospital buildings/wards that are good, which could be improved? |                                   |

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|                                     |   |              |                         |                                   |
|-------------------------------------|---|--------------|-------------------------|-----------------------------------|
| 6.                                  | For mothers, babies and children admitted to hospital (check what applies):   | Satisfactory | Occasionally inadequate | Usually inadequate/ Not available |
|                                     | a) The accommodation for patients is:   |              |                         |                                   |
|                                     | b) The toilets and washing facilities for patients are:   |              |                         |                                   |
|                                     | c) The cleanliness of the ward is:  |              |                         |                                   |
|                                     | d) The food given to patients is:   |              |                         |                                   |
|                                     | We are interested in the aetiologies of patient deaths in the hospital in the past 6 months   |              |                         |                                   |
| <b>C. Mortality data and causes</b> |   |              |                         |                                   |
| 7.                                  | In your opinion, what are the most common illnesses resulting in patient death in your ward (i.e. maternal death, neonatal death, paediatric death)?<br>Number 1: _____ Number 2: _____ |              |                         |                                   |
| 8.                                  | Why do you think these patients died (for cause number 1)?  |              |                         |                                   |
|                                     | a) Nature of the disease  |              |                         |                                   |
|                                     | b) Late presentation of patient to hospital   |              |                         | Y/N                               |
|                                     | c) Unavailable or poor quality laboratory facilities for this disease   |              |                         | Y/N                               |
|                                     | d) Unavailability of drugs  |              |                         | Y/N                               |
|                                     | e) Inadequate equipment   |              |                         | Y/N                               |
|                                     | f) A lack of staff for care and monitoring (adequate number/qualified)  |              |                         | Y/N                               |
|                                     | g) Wrong treatment given or patients not being adequately monitored by staff in charge  |              |                         | Y/N                               |
|                                     | h) Other reasons<br>Please explain  |              |                         | Y/N                               |
| 9.                                  | Why do you think these patients died (for cause number 2)?  |              |                         |                                   |
|                                     | a) Nature of the disease  |              |                         | Y/N                               |
|                                     | b) Late presentation of patient to hospital   |              |                         | Y/N                               |
|                                     | c) Unavailable or poor quality laboratory facilities for this disease   |              |                         | Y/N                               |
|                                     | d) Unavailability of drugs  |              |                         | Y/N                               |
|                                     | e) Inadequate equipment   |              |                         | Y/N                               |
|                                     | f) A lack of staff for care and monitoring (adequate number/qualified)  |              |                         | Y/N                               |
|                                     | g) Wrong treatment given or patients not being adequately monitored by staff in charge  |              |                         | Y/N                               |

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|   |  |                    |                         |                                   |
|---|--|--------------------|-------------------------|-----------------------------------|
|   | h) Other reasons<br>Please explain   | Y/N                |                         |                                   |
| <b>D. Quality of care</b>   |  |                    |                         |                                   |
| We are interested in the care provided to patients in the hospital            |  |                    |                         |                                   |
| 10.   | What do you think about the quality of care provided to patients?  |                    |                         |                                   |
|   | Check what applies   | Satisfactory       | Occasionally inadequate | Inadequate                        |
|   | a) The quality of information and education about their condition given to patients and their families is:   |                    |                         |                                   |
|   | b) The time available to explain patient's conditions to them and their families is:   |                    |                         |                                   |
|   | c) The perception that families have of the quality of the care that the staff provides to patients is:  |                    |                         |                                   |
| 11.   | In what ways could your ward aid in improving patient's understandings of their conditions?  |                    |                         |                                   |
| 12.   | Can you recall a patient that you recently cared for in your ward and you were pleased with the clinical outcome? IF yes, were you satisfied with the quality of care you had provided? What aspects of your own care satisfied you? |                    |                         |                                   |
| 13.   | Can you recall a patient that you recently cared for in your ward and you were not satisfied with the clinical outcome? IF yes, what aspects of the care do you feel went poorly and why do you feel that occurred?                  |                    |                         |                                   |
| <b>Drugs and supplies</b>   |  |                    |                         |                                   |
| We are interested in availability of drugs and supplies in this ward/hospital |  |                    |                         |                                   |
| 14.   | The availability of the following are (check what applies):  | Satisfactory/ Good | Occasionally inadequate | Usually inadequate/ Not available |
|   | a) Medications   |                    |                         |                                   |
|   | b) Oxygen  |                    |                         |                                   |

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|   |  |                        |                            |   |
|---|--|------------------------|----------------------------|---|
|   | c) Blood for transfusion   |                        |                            |   |
|   | d) IV fluids   |                        |                            |   |
|   | e) Food/special milk for malnutrition  |                        |                            |   |
|   | f) Laboratory tests  |                        |                            |   |
| 15.   | <p>What do you think about the availability or functionality of equipment?</p> <p>Do you feel that you are adequately supplied?</p>  |                        |                            |   |
| <b>F. Staffing</b>                                      |  |                        |                            |   |
| We are interested in learning how staffing is organized |  |                        |                            |   |
| 16.   | Staff availability<br>(check what applies):  | Satisfactory<br>/ Good | Occasionally<br>inadequate | Usually<br>inadequate/<br>Not available |
|   | a) The number of staff available at any time to care for patients is:  |                        |                            |   |
|   | b) The time available to provide the best care for a patient (the way you were trained)?   |                        |                            |   |
|   | c) The number of nursing staff available during night hours are:   |                        |                            |   |
|   | d) The number of nursing staff available on weekends and holidays are:   |                        |                            |   |
| 17.   | <p>Is there a fixed rotation of nursing staff within the hospital at regular intervals?</p> <p>a) If yes, how often do you rotate?</p> <p>b) What do you think about this?</p> | Yes / No               |                            |   |
| 18.   | <p>What do you think about the number and qualification of staff available for optimal care in your ward?</p> <p>Are there any key staff missing?</p>                          |                        |                            |   |

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| <b>G. Guidelines, auditing and in-service training</b>   |   |                       |                            |                       |
|--|---|-----------------------|----------------------------|-----------------------|
| We are interested on how you feel about working in this facility, available in-service training opportunities for staff and the level of support provided to staff |   |                       |                            |                       |
| 19.  | Are you clear on what your job description is? Were you provided with terms of reference?   |                       |                            | Y/N                   |
| 20.  | Do you perform any functions outside of what your role and responsibilities should be?  |                       |                            | Y/N                   |
| 21.  | Knowledge and skills<br>Check what applies  | Good/<br>Satisfactory | Occasionally<br>inadequate | Usually<br>inadequate |
|  | a) How confident do you feel with your knowledge of maternal/neonatal/paediatric illnesses (as applicable to your discipline):                                |                       |                            |                       |
|  | b) IF you feel that your knowledge is occasionally/usually inadequate, what areas do you think would benefit most from training?                              |                       |                            |                       |
| 22.  | What kinds of continuing professional education and trainings are there available in your hospital?   |                       |                            |                       |
|  | Are opportunities for training based on need or related to job performance?<br><br>Explain your response and what you think about this                        |                       |                            |                       |
| 23.  | If you have problems getting help when you think you need it is it because:   |                       |                            |                       |
|  | a) There are not enough skilled people to call?   |                       |                            | Y/N                   |
|  | b) You are unable to contact the right people?  |                       |                            | Y/N                   |
|  | c) The response to your request is too slow?  |                       |                            | Y/N                   |
|  | d) Any other reason?<br>Please explain  |                       |                            | Y/N                   |
| 24.  | What kinds of guidelines are provided to you to do your work?   |                       |                            |                       |
| 25.  | Are you satisfied with the available supportive supervision and mentorship provided from senior clinical staff to help manage sick patients in this hospital? |                       |                            | Y/N                   |
| 26.  | Do you participate in regular staff meetings?<br>IF yes, which ones (i.e. nurses/doctors/midwives)?   |                       |                            | Y/N                   |

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|   |  |        |
|---|--|--------|
|   | How often?   |        |
|   | What for?  |        |
| 27.   | Are there forums/avenues where you can make suggestions or inform supervisors/management on issues that affect/improve the quality of care provided to patients in your hospital?  | Y/N    |
| 28.   | Have you made suggestions to matrons/doctors/management?<br><br>If yes, what was the result?   | Y/N    |
| 29.   | Is feedback on decisions of senior management /supervisors provided to staff?  | Y/N    |
| 30.   | Are audits to examine quality of care and/or patient mortality carried out in your ward/department?<br><br>If yes, what kind?  | Y/N    |
|   | When was the last audit done (for each type of audit identified in Question 30b)?  |        |
| 31.   | Overall, do you feel that the quality of care this hospital is providing to patients is good:  |        |
|   | Always   | Often  |
|   | Sometimes  | Rarely |
|   | Never  |        |
| 32.   | Do you have any other suggestions that could improve the care provided to patients in this hospital?<br>IF yes, please explain:  | Y/N    |
| 33.   | Do you think that the majority of your colleagues are generally satisfied with their work in the hospital?<br>IF no, why are people dissatisfied with their work?<br><br>What could be done to improve job satisfaction? | Y/N    |
| <b>H. Referral by first level or primary health care provider</b> |  |        |
| 34.   | Referred patients receive appropriate pre-referral treatment when indicated  |        |
|   | Always   | Often  |
|   | Sometimes  | Rarely |
|   | Never  |        |
| 35.   | Referred patients are provided with referral notes stating the condition, reason for referral and any treatment given  |        |
|   | Always   | Often  |
|   | Sometimes  | Rarely |
|   | Never  |        |

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|                                    |   |       |           |        |       |
|------------------------------------|---|-------|-----------|--------|-------|
| 36.                                | Patient gets to hospital without major delay when advised by first level health staff that they are in need of referral care  |       |           |        |       |
|                                    | Always  | Often | Sometimes | Rarely | Never |
| 37.                                | Children referred from first level facilities are correctly assessed and classified with the most common conditions requiring referral (IMCI standards for districts where IMCI has been implemented) |       |           |        |       |
|                                    | Always  | Often | Sometimes | Rarely | Never |
| <b>I. Care seeking by patients</b> |   |       |           |        |       |
| 38.                                | Patients and caregivers adequately recognize signs and symptoms that require contact with health services   |       |           |        |       |
|                                    | Always  | Often | Sometimes | Rarely | Never |
| 39.                                | Patients and caregivers are given adequate information and advice by primary care services about where and how to refer to hospital   |       |           |        |       |
|                                    | Always  | Often | Sometimes | Rarely | Never |
| 40.                                | Sick children and women are brought to health services without significant delay  |       |           |        |       |
|                                    | Always  | Often | Sometimes | Rarely | Never |

### Summary

| Standards and criteria                                  | Score 1-5 | Comments |
|---|-----------|----------|
| Wards   |           |          |
| Mortality data and causes                               |           |          |
| Quality of care   |           |          |
| Drugs and supplies                                      |           |          |
| Staffing  |           |          |
| Guidelines, auditing and in-service training            |           |          |
| Referral by first level or primary health care provider |           |          |
| Care seeking by patients                                |           |          |

### Score

|                             |          |          |          |          |          |
|-----------------------------|----------|----------|----------|----------|----------|
| <b>Summary score</b>        |          |          |          |          |          |
| - Interviews health workers |          |          |          |          |          |
| <b>(to be circled)</b>      | <b>5</b> | <b>4</b> | <b>3</b> | <b>2</b> | <b>1</b> |

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Please indicate the quality of support by marking one of the 5 numbers; 5 indicates Mother/caregiver fully satisfied with the support that has been received; 4 to 1 indicating levels of necessary improvement (4=small need for improvement, 1=mother/caregiver totally unsatisfied with support that has been received and there is an urgent need to improve)

## 4. Postal Questionnaire

Please fill in the information required prior to assessment visit. If some information is not available, please indicate "unknown", and add an explanation why the information is not available, if possible. If an indicator is not applicable for your context, please indicate "N/A".

Please mail the filled in questionnaire back to assessment team as soon as possible and in advance of the hospital visit. Thank you.

### 4.1. General Hospital Information

|   |
|---|
| Date of planned assessment                    |
| Town, province, country                       |
| Facility name (hospital, specific service(s)) |
| Name of director/manager of hospital          |
| Name of head of maternity ward                |
| Name of head of paediatric ward               |
| Name of head of neonatal unit                 |
| Survey number                                 |
| Name of evaluator                             |

### 4.2. Staffing

| Type of staff | during core working hours (8.00-17.00)<br>(number available) | after working hours and on the weekend<br><i>Present/ not present</i><br><i>If present, number</i> | Remarks |
|---------------|--|--|---------|
|---------------|--|--|---------|

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| Type of staff                      | during core working hours (8.00-17.00)<br>(number available) | after working hours and on the weekend<br><i>Present/ not present</i><br><i>If present, number</i> | Remarks |
|------------------------------------|--|--|---------|
| Advanced level associate clinician |  |  |         |
| Obstetrician-gynaecologist         |  |  |         |
| Paediatrician                      |  |  |         |
| Associate clinician                |  |  |         |
| Non- specialist doctor             |  |  |         |
| Nurse                              |  |  |         |
| Auxiliary Nurse                    |  |  |         |
| Auxiliary nurse midwife            |  |  |         |
| Midwife                            |  |  |         |
| Lay health worker                  |  |  |         |

### 4.3. Hospital statistics

#### **Maternal and neonatal statistics**

Please use the figures for the last available year. If data are available for a different period, please specify.

Year.....Any other period .....

| <b>MATERNAL/ NEONATAL</b>                           |  |
|---|--|
| Number of deliveries                                |  |
| Number of live births <sup>1</sup>                  |  |
| Number of low birth weight newborn babies (<2500 g) |  |

<sup>1</sup> Reference WHO definition for live births: Live birth refers to the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of the pregnancy, which, after such separation, breathes or shows any other evidence of life - e.g. beating of the heart, pulsation of the umbilical cord or definite movement of voluntary muscles - whether or not the umbilical cord has been cut or the placenta is attached. Each product of such a birth is considered live born. Please specify if other definition is used

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|  |  |
|--|--|
| Number of very low birth weight newborn babies (<1500 g)   |  |
| Number of extremely low birth weight babies (<1000g)   |  |
| Number of deliveries: <37 completed weeks  |  |
| Number of deliveries: < 32 weeks   |  |
| Number of deliveries: < 28 weeks   |  |
| Number of babies diagnosed with birth asphyxia <sup>2</sup>  |  |
| Number of babies with Apgar score <3 at 5 minutes  |  |
| Number of neonatal deaths  |  |
| Number of still births   |  |
| Number of perinatal deaths (number of stillbirths plus neonatal deaths in hospital)                                    |  |
| Number of maternal deaths in hospital  |  |
| Maternal mortality ratio (number of maternal deaths per 100,000 live births) <sup>3</sup>                              |  |
| Caesarean section deliveries as % of all births  |  |
| Episiotomies as % of all births  |  |
| Instrumental deliveries as % of all births   |  |
| Inductions as % of all births  |  |
| Augmentations (stimulations) as % of all births  |  |
| Prevalence of anaemia (defined as Hb concentration of less than 110g/l or 11g/dL) per 1000 pregnant women <sup>4</sup> |  |
| Average length of stay for vaginal delivery (number of days)   |  |
| Average length of stay for operative vaginal delivery (number of days)   |  |
| Average length of stay for caesarean section (number of days)  |  |
| Number of women transferred to higher level of care  |  |

---

<sup>2</sup> Criteria: live birth with an Apgar score at 5 minutes of <3, depression at birth requiring resuscitation with a mask for >3 minutes and/or intubation. World Federation of Neurology Group 1993

<sup>3</sup> The maternal mortality ratio can be assessed with a denominator of 10,000 births, if it is anticipated to be very high.

<sup>4</sup> From MPS/PEPC assessment and follow up after training-Manual and Interview form Feb 2006-form 7 page

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### **Paediatric statistics**

Please use the figures for the last available year. If data are available for a different period, please specify.

Year.....Any other period.....

| PAEDIATRIC  |  |
|---|--|
| Number of children under-5 hospitalized in the facility                                     |  |
| Number of under-5 child deaths in the facility  |  |
| Under-5 mortality rate in facility  |  |
| Number of child deaths reviewed in the health facility                                      |  |
| Number of hospitalized children with pneumonia  |  |
| Number of children who are correctly prescribed an antibiotic for pneumonia                 |  |
| Number of child deaths caused by pneumonia in facility                                      |  |
| Number of children hospitalised with diarrhoea  |  |
| Number of child deaths caused by diarrhoeal disease in facility                             |  |
| Number of children admitted in facility with severe malnutrition                            |  |
| Number of child deaths caused by severe malnutrition in facility                            |  |
| Number of children needing referral who receive correct pre-referral treatment and referral |  |

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### **Patient load, deaths and fatality rates**

Indicate the total number of outpatient visits in pregnancy / puerperium / neonatal / paediatric period, emergency visits and admissions per year (indicate year; if any other period of time, e.g. semester, is used, indicate the exact period) for women and children. Include all medical diagnosis but exclude patients dead on arrival.

Year: .....

| <b><u>MATERNAL</u></b>                    | <b>Outpatient visits</b> | <b>Emergency visits</b> | <b>Inpatients / admissions</b> | <b>Number of total deaths</b> |
|---|--------------------------|-------------------------|--------------------------------|-------------------------------|
| Pregnant women (including women under 19) |                          |                         |                                |                               |
| Pregnant adolescents (women under 19)     |                          |                         |                                |                               |
| Number of deliveries                      |                          |                         |                                |                               |
| Number of deliveries (adolescents)        |                          |                         |                                |                               |

| <b><u>PAEDIATRIC</u></b> | <b>Outpatient visits</b> | <b>Emergency visits</b> | <b>Inpatients / admissions</b> | <b>Number of deaths</b> | <b>Age-specific fatality rate</b> |
|--------------------------|--------------------------|-------------------------|--------------------------------|-------------------------|-----------------------------------|
| 0-7 days                 |                          |                         |                                |                         |                                   |
| 7-28 days                |                          |                         |                                |                         |                                   |
| 1-12 months              |                          |                         |                                |                         |                                   |
| 1-5 years                |                          |                         |                                |                         |                                   |
| >5 years                 |                          |                         |                                |                         |                                   |

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### **Reasons for hospital visits and admissions, deaths and case fatality rates**

From the hospital records, list the five most important medical reasons (diagnoses) for outpatient visits (excluding routine ANC visits), emergency visits, and hospital admissions in pregnancy/puerperium (excluding labour). Similarly, list the five most important medical reasons for neonates and for children.

Year: .....

| <b>MATERNAL<br/>Most<br/>frequent<br/>diagnosis</b> | <b>Outpatient<br/>visits</b> | <b>Emergency<br/>visits</b> | <b>Hospital<br/>admissions</b> | <b>Deaths</b> | <b>Case fatality<br/>rate</b> |
|---|------------------------------|-----------------------------|--------------------------------|---------------|-------------------------------|
| First   |                              |                             |                                |               |                               |
| Second  |                              |                             |                                |               |                               |
| Third   |                              |                             |                                |               |                               |
| Fourth  |                              |                             |                                |               |                               |
| Fifth   |                              |                             |                                |               |                               |
| <b>NEONATAL<br/>Most<br/>frequent<br/>diagnosis</b> | <b>Outpatient<br/>visits</b> | <b>Emergency<br/>visits</b> | <b>NICU<br/>admissions</b>     | <b>Deaths</b> | <b>Case fatality<br/>rate</b> |
| First   |                              |                             |                                |               |                               |
| Second  |                              |                             |                                |               |                               |
| Third   |                              |                             |                                |               |                               |
| Fourth  |                              |                             |                                |               |                               |
| Fifth   |                              |                             |                                |               |                               |

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### 4.4. Essential drugs and blood products

| <b>Drugs</b>  | <b><u>Emergency area</u></b> | <b><u>Labour ward</u></b> | <b><u>Peds ward</u></b> | <b><u>Neonatal</u></b> | <b><u>Pharmacy</u></b> |
|---|------------------------------|---------------------------|-------------------------|------------------------|------------------------|
| <b>General anaesthetics and oxygen</b>                                  |                              |                           |                         |                        |                        |
| Halothane inhalation  |                              |                           |                         |                        |                        |
| Ketamine injection  |                              |                           |                         |                        |                        |
| Oxygen inhalation   |                              |                           |                         |                        |                        |
| Nitrous oxide inhalation  |                              |                           |                         |                        |                        |
| Thiopental iv   |                              |                           |                         |                        |                        |
| <b>Local anaesthetics</b>   | <b><u>Emergency area</u></b> | <b><u>Labour ward</u></b> | <b><u>Peds ward</u></b> | <b><u>Neonatal</u></b> | <b><u>Pharmacy</u></b> |
| Lidocaine injection   |                              |                           |                         |                        |                        |
| Lidocaine + epinephrine injection                                       |                              |                           |                         |                        |                        |
| Ephedrine injection   |                              |                           |                         |                        |                        |
| <b>Preoperative medications and sedations for short term procedures</b> | <b><u>Emergency area</u></b> | <b><u>Labour ward</u></b> | <b><u>Peds ward</u></b> | <b><u>Neonatal</u></b> | <b><u>Pharmacy</u></b> |
| Atropine iv   |                              |                           |                         |                        |                        |
| Promethazine iv   |                              |                           |                         |                        |                        |
| <b>Analgesics, antipyretics, non-steroidal anti-inflammatory drugs</b>  | <b><u>Emergency area</u></b> | <b><u>Labour ward</u></b> | <b><u>Peds ward</u></b> | <b><u>Neonatal</u></b> | <b><u>Pharmacy</u></b> |
| Acetylsalicylic acid po/pr  |                              |                           |                         |                        |                        |
| Ibuprofen lysine (for PDA)  |                              |                           |                         |                        |                        |
| Indomethacin (for PDA)  |                              |                           |                         |                        |                        |
| Paracetamol/acetaminophen po/pr   |                              |                           |                         |                        |                        |
| Morphine po/im/iv   |                              |                           |                         |                        |                        |
| <b>Anti-histamines/anti-anaphylactics</b>                               | <b><u>Emergency area</u></b> | <b><u>Labour ward</u></b> | <b><u>Peds ward</u></b> | <b><u>Neonatal</u></b> | <b><u>Pharmacy</u></b> |
| Chlorphenamine po/iv  |                              |                           |                         |                        |                        |

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| <b>Drugs</b>  | <b><u>Emergency area</u></b> | <b><u>Labour ward</u></b> | <b><u>Peds ward</u></b> | <b><u>Neonatal</u></b> | <b><u>Pharmacy</u></b> |
|---|------------------------------|---------------------------|-------------------------|------------------------|------------------------|
| Epinephrine injection                                   |                              |                           |                         |                        |                        |
| <b>Corticosteroids</b>                                  |                              |                           |                         |                        |                        |
| Betamethasone im  |                              |                           |                         |                        |                        |
| Dexamethasone im  |                              |                           |                         |                        |                        |
| Hydrocortisone po/iv                                    |                              |                           |                         |                        |                        |
| Prednisolone po   |                              |                           |                         |                        |                        |
| <b>Antidotes and other substances used in poisoning</b> | <b><u>Emergency area</u></b> | <b><u>Labour ward</u></b> | <b><u>Peds ward</u></b> | <b><u>Neonatal</u></b> | <b><u>Pharmacy</u></b> |
| Calcium gluconate injection                             |                              |                           |                         |                        |                        |
| Naloxone injection                                      |                              |                           |                         |                        |                        |
| <b>Anticonvulsants and antiepileptics</b>               | <b><u>Emergency area</u></b> | <b><u>Labour ward</u></b> | <b><u>Peds ward</u></b> | <b><u>Neonatal</u></b> | <b><u>Pharmacy</u></b> |
| Diazepam po/iv/pr                                       |                              |                           |                         |                        |                        |
| Magnesium sulphate injection                            |                              |                           |                         |                        |                        |
| Phenobarbital   |                              |                           |                         |                        |                        |
| <b>Anti-infective medicines</b>                         | <b><u>Emergency area</u></b> | <b><u>Labour ward</u></b> | <b><u>Peds ward</u></b> | <b><u>Neonatal</u></b> | <b><u>Pharmacy</u></b> |
| Mebendazole   |                              |                           |                         |                        |                        |
| <b>Antibacterials</b>                                   | <b><u>Emergency area</u></b> | <b><u>Labour ward</u></b> | <b><u>Peds ward</u></b> | <b><u>Neonatal</u></b> | <b><u>Pharmacy</u></b> |
| Amoxicillin   |                              |                           |                         |                        |                        |
| Ampicillin iv   |                              |                           |                         |                        |                        |
| Benzathine benzylpenicillin injection                   |                              |                           |                         |                        |                        |
| Cefixime  |                              |                           |                         |                        |                        |
| Ceftriaxone im  |                              |                           |                         |                        |                        |
| Ciprofloxacin po/iv                                     |                              |                           |                         |                        |                        |
| Ceftazidime   |                              |                           |                         |                        |                        |
| Cefotaxime  |                              |                           |                         |                        |                        |

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| <b>Drugs</b>   | <b><u>Emergency area</u></b> | <b><u>Labour ward</u></b> | <b><u>Peds ward</u></b> | <b><u>Neonatal</u></b> | <b><u>Pharmacy</u></b> |
|--|------------------------------|---------------------------|-------------------------|------------------------|------------------------|
| Co-trimoxazole   |                              |                           |                         |                        |                        |
| Doxycycline  |                              |                           |                         |                        |                        |
| Erythromycin po/iv   |                              |                           |                         |                        |                        |
| Gentamicin iv  |                              |                           |                         |                        |                        |
| Nitrofurantoin   |                              |                           |                         |                        |                        |
| Metronidazole po/iv  |                              |                           |                         |                        |                        |
| Spectinomycin po   |                              |                           |                         |                        |                        |
| <b>All anti-TB drugs needed according to the national TB control program</b>       | <u>Emergency area</u>        | <u>Labour ward</u>        | <u>Peds ward</u>        | <u>Neonatal</u>        | <u>Pharmacy</u>        |
| <b>Antifungal medicines</b>  | <u>Emergency area</u>        | <u>Labour ward</u>        | <u>Peds ward</u>        | <u>Neonatal</u>        | <u>Pharmacy</u>        |
| Amphotericin injection   |                              |                           |                         |                        |                        |
| Clotrimazole cream/tablet  |                              |                           |                         |                        |                        |
| Miconazole   |                              |                           |                         |                        |                        |
| Fluconazole po/injection   |                              |                           |                         |                        |                        |
| Nystatin topical/po  |                              |                           |                         |                        |                        |
| <b>Antiviral medicines</b>   | <u>Emergency area</u>        | <u>Labour ward</u>        | <u>Peds ward</u>        | <u>Neonatal</u>        | <u>Pharmacy</u>        |
| Aciclovir po   |                              |                           |                         |                        |                        |
| <b>All Anti-HIV drugs according to HIV program</b>                                 |                              |                           |                         |                        |                        |
| <b>All anti-malaria drugs needed according to national malaria control program</b> |                              |                           |                         |                        |                        |
| <b>Anti-pneumocystis and antitoxoplasmosis medicines</b>                           |                              |                           |                         |                        |                        |
| Pentamidine po   |                              |                           |                         |                        |                        |

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| <b>Drugs</b>                                   | <b><u>Emergency area</u></b> | <b><u>Labour ward</u></b> | <b><u>Peds ward</u></b> | <b><u>Neonatal</u></b> | <b><u>Pharmacy</u></b> |
|--|------------------------------|---------------------------|-------------------------|------------------------|------------------------|
| <b>Medicines affecting the blood</b>           | <u>Emergency area</u>        | <u>Labour ward</u>        | <u>Peds ward</u>        | <u>Neonatal</u>        | <u>Pharmacy</u>        |
| Ferrous salt + Folic acid po                   |                              |                           |                         |                        |                        |
| Iron syrup po                                  |                              |                           |                         |                        |                        |
| Low molecular weight heparin (LWMH) injection  |                              |                           |                         |                        |                        |
| <b>Respiratory Drugs</b>                       | <u>Emergency area</u>        | <u>Labour ward</u>        | <u>Peds ward</u>        | <u>Neonatal</u>        | <u>Pharmacy</u>        |
| Aminophylline                                  |                              |                           |                         |                        |                        |
| Caffeine citrate                               |                              |                           |                         |                        |                        |
| Surfactants                                    |                              |                           |                         |                        |                        |
| <b>Plasma substitutes</b>                      | <u>Emergency area</u>        | <u>Labour ward</u>        | <u>Peds ward</u>        | <u>Neonatal</u>        | <u>Pharmacy</u>        |
| Dextran 79 injection                           |                              |                           |                         |                        |                        |
| <b>Cardiovascular medicines</b>                | <u>Emergency area</u>        | <u>Labour ward</u>        | <u>Peds ward</u>        | <u>Neonatal</u>        | <u>Pharmacy</u>        |
| Glyceryl trinitrate spray/po                   |                              |                           |                         |                        |                        |
| Digoxin injection/po                           |                              |                           |                         |                        |                        |
| Hydralazine injection/po                       |                              |                           |                         |                        |                        |
| Methyldopa po                                  |                              |                           |                         |                        |                        |
| Furosemide iv/po                               |                              |                           |                         |                        |                        |
| <b>Dermatological medicines (topical)</b>      | <u>Emergency area</u>        | <u>Labour ward</u>        | <u>Peds ward</u>        | <u>Neonatal</u>        | <u>Pharmacy</u>        |
| <b>Disinfectants and antiseptics (topical)</b> | <u>Emergency area</u>        | <u>Labour ward</u>        | <u>Peds ward</u>        | <u>Neonatal</u>        | <u>Pharmacy</u>        |
| Chlorexidine                                   |                              |                           |                         |                        |                        |
| Polyvidone iodine                              |                              |                           |                         |                        |                        |
| <b>Insulins and other antidiabetic agents</b>  | <u>Emergency area</u>        | <u>Labour ward</u>        | <u>Peds ward</u>        | <u>Neonatal</u>        | <u>Pharmacy</u>        |
| Insulin injection (soluble)                    |                              |                           |                         |                        |                        |
| Intermediate acting insulin                    |                              |                           |                         |                        |                        |

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| <b>Drugs</b>  | <b><u>Emergency area</u></b> | <b><u>Labour ward</u></b> | <b><u>Peds ward</u></b> | <b><u>Neonatal</u></b> | <b><u>Pharmacy</u></b> |
|---|------------------------------|---------------------------|-------------------------|------------------------|------------------------|
| <b>Immunologicals</b>   | <u>Emergency area</u>        | <u>Labour ward</u>        | <u>Peds ward</u>        | <u>Neonatal</u>        | <u>Pharmacy</u>        |
| Anti-D Immunoglobulin (human) injection                                   |                              |                           |                         |                        |                        |
| Anti-tetanus immunoglobulin (human) injection                             |                              |                           |                         |                        |                        |
| <b>Vaccines</b>   | <u>Emergency area</u>        | <u>Labour ward</u>        | <u>Peds ward</u>        | <u>Neonatal</u>        | <u>Pharmacy</u>        |
| BCG vaccine   |                              |                           |                         |                        |                        |
| Diphtheria + tetanus vaccine  |                              |                           |                         |                        |                        |
| Measles vaccine   |                              |                           |                         |                        |                        |
| Rubella vaccine   |                              |                           |                         |                        |                        |
| Hepatitis B vaccine   | <u>Emergency area</u>        | <u>Labour ward</u>        | <u>Peds ward</u>        |                        | <u>Pharmacy</u>        |
| Poliomyelitis vaccine   |                              |                           |                         |                        |                        |
| Pertussis vaccine   |                              |                           |                         |                        |                        |
| <b>Muscle relaxants and cholinesterase inhibitors</b>                     | <u>Emergency area</u>        | <u>Labour ward</u>        | <u>Peds ward</u>        | <u>Neonatal</u>        | <u>Pharmacy</u>        |
| Suxamethonium injection   |                              |                           |                         |                        |                        |
| <b>Ophthalmological preparations (topical)</b>                            | <u>Emergency area</u>        | <u>Labour ward</u>        | <u>Peds ward</u>        | <u>Neonatal</u>        | <u>Pharmacy</u>        |
| Tetracycline  |                              |                           |                         |                        |                        |
| <b>Oxytocics and antioxytocics</b>  | <u>Emergency area</u>        | <u>Labour ward</u>        | <u>Peds ward</u>        | <u>Neonatal</u>        | <u>Pharmacy</u>        |
| Ergometrine injection   |                              |                           |                         |                        |                        |
| Oxytocin injection  |                              |                           |                         |                        |                        |
| Misoprostol tablets   |                              |                           |                         |                        |                        |
| Nifedipine tablets  |                              |                           |                         |                        |                        |
| <b>Solutions correcting water, electrolyte and acid-base disturbances</b> | <u>Emergency area</u>        | <u>Labour ward</u>        | <u>Peds ward</u>        | <u>Neonatal</u>        | <u>Pharmacy</u>        |

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| Drugs  | <u>Emergency area</u> | <u>Labour ward</u> | <u>Peds ward</u> | <u>Neonatal</u> | <u>Pharmacy</u> |
|--|-----------------------|--------------------|------------------|-----------------|-----------------|
| Glucose 5-10-50%                               |                       |                    |                  |                 |                 |
| Glucose with sodium chloride                   |                       |                    |                  |                 |                 |
| Sodium chloride 0.9% isotonic                  |                       |                    |                  |                 |                 |
| Ringer's lactate                               |                       |                    |                  |                 |                 |
| Water for injection                            |                       |                    |                  |                 |                 |
| Commodities for managing diarrhoea in children |                       |                    |                  |                 |                 |
| ORS  |                       |                    |                  |                 |                 |
| Zinc Sulphate                                  |                       |                    |                  |                 |                 |
| <b>Vitamins and minerals</b>                   | <u>Emergency area</u> | <u>Labour ward</u> | <u>Peds ward</u> | <u>Neonatal</u> | <u>Pharmacy</u> |
| Vitamin A oral                                 |                       |                    |                  |                 |                 |
| Vitamin K IM                                   |                       |                    |                  |                 |                 |

### 4.5. Laboratory

Are the following laboratory investigations and their results readily available? If available, indicate average time to get results.

#### Laboratory tests

| Lab test                           | Not available | Available | Time to get results | Comments |
|------------------------------------|---------------|-----------|---------------------|----------|
| Blood glucose                      |               |           |                     |          |
| Haemoglobin                        |               |           |                     |          |
| Haematocrit (PCV)                  |               |           |                     |          |
| Immature to total neutrophil ratio |               |           |                     |          |
| Leukocyte count                    |               |           |                     |          |
| Blood gas analysis                 |               |           |                     |          |
| Blood grouping and crossmatch      |               |           |                     |          |

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| Lab test   | Not available | Available | Time to get results | Comments |
|--|---------------|-----------|---------------------|----------|
| Bilirubin  |               |           |                     |          |
| Rhesus antibodies  |               |           |                     |          |
| Urine dipstick   |               |           |                     |          |
| Urine microscopy   |               |           |                     |          |
| Bacteriology (culture)   |               |           |                     |          |
| Bacterioscopy (smear)  |               |           |                     |          |
| Full blood count   |               |           |                     |          |
| Coagulation tests  |               |           |                     |          |
| Liver function tests   |               |           |                     |          |
| Bilirubin  |               |           |                     |          |
| Renal function tests   |               |           |                     |          |
| Electrolytes   |               |           |                     |          |
| HIV test   |               |           |                     |          |
| CD4 count or HIV plasma viral loads according to national guidelines |               |           |                     |          |
| Coombs' test: direct and indirect                                    |               |           |                     |          |
| Serum protein and albumin  |               |           |                     |          |
| Urinalysis   |               |           |                     |          |
| Rapid test for syphilis  |               |           |                     |          |
| Microscopy or rapid diagnostic test (RDT) for malaria parasites      |               |           |                     |          |
| CSF microscopy   |               |           |                     |          |

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### 4.6. Maternity staffing and supplies

#### Emergency maternal ward

| Type of staff                      | during core working hours (8.00-17.00)<br>(number available) | after working hours and on the weekend<br><i>Present/ not present</i><br><i>If present, number</i> | Remarks |
|------------------------------------|--|--|---------|
| Advanced level associate clinician |  |  |         |
| Obstetrician-gynaecologist         |  |  |         |
| Associate clinician                |  |  |         |
| Non- specialist doctor             |  |  |         |
| Nurse                              |  |  |         |
| Auxiliary Nurse                    |  |  |         |
| Auxiliary nurse midwife            |  |  |         |
| Midwife                            |  |  |         |
| Lay health worker                  |  |  |         |

How many beds does the ward have? \_\_\_\_\_

Are healthy newborns roomed-in with their mothers?

Y N

#### Maternity ward staffing

| Type of staff                      | during core working hours (8.00-17.00)<br>(number available) | after working hours and on the weekend<br><i>Present/ not present</i><br><i>If present, number</i> | Remarks |
|------------------------------------|--|--|---------|
| Advanced level associate clinician |  |  |         |
| Obstetrician-gynaecologist         |  |  |         |
| Paediatrician                      |  |  |         |
| Associate clinician                |  |  |         |
| Non- specialist doctor             |  |  |         |
| Nurse                              |  |  |         |
| Auxiliary Nurse                    |  |  |         |

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| <b>Type of staff</b>    | <b>during core working hours (8.00-17.00)</b><br><i>(number available)</i> | <b>after working hours and on the weekend</b><br><i>Present/ not present</i><br><i>If present, number</i> | <b>Remarks</b> |
|-------------------------|--|---|----------------|
| Auxiliary nurse midwife |  |   |                |
| Midwife                 |  |   |                |
| Lay health worker       |  |   |                |

### ***Equipment and supplies***

|   | <b><u>Delivery room (normal labour)</u></b> | <b><u>Delivery room (caesarean section)</u></b> | <b><u>Comments</u></b> |
|---|---|---|------------------------|
| Adequate lighting                           |   |   |                        |
| Examination light (flashlight ok)           |   |   |                        |
| Wall clock                                  |   |   |                        |
| Delivery pack                               |   |   |                        |
| Blank partographs                           |   |   |                        |
| Heating lamp for neonates                   |   |   |                        |
| Towels for drying newborn babies            |   |   |                        |
| Oxygen source: oxygen cylinder              |   |   |                        |
| Oxygen source: oxygen concentrator          |   |   |                        |
| Oxygen source: central supply               |   |   |                        |
| Flow-meters for oxygen                      |   |   |                        |
| Equipment for the administration of oxygen  |   |   |                        |
| via nasal prongs                            |   |   |                        |
| via catheters                               |   |   |                        |
| via masks                                   |   |   |                        |
| Self-inflating bags for respiratory support |   |   |                        |
| Bags and Masks (adult and                   |   |   |                        |

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|   | <b><u>Delivery room (normal labour)</u></b> | <b><u>Delivery room (caesarean section)</u></b> | <b><u>Comments</u></b> |
|---|---|---|------------------------|
| neonatal size)                                |   |   |                        |
| Anaesthetic equipment                         |   |   |                        |
| Normal thermometer (body temperature)         |   |   |                        |
| Sterile gloves (re-sterilized or disposable?) |   |   |                        |
| Sterile gauze                                 |   |   |                        |
| Foetal stethoscope                            |   |   |                        |
| Stethoscope                                   |   |   |                        |
| Sphygmomanometer                              |   |   |                        |
| Infusion sets                                 |   |   |                        |
| Infusion pumps/dosimeters                     |   |   |                        |
| IV catheters                                  |   |   |                        |
| Urinary catheter                              |   |   |                        |
| Syringes                                      |   |   |                        |
| Needles                                       |   |   |                        |
| Suturing set (scissors, needles holder)       |   |   |                        |
| Suturing material                             |   |   |                        |
| Balance for baby                              |   |   |                        |
| Cord cutting/cord clamping set                |   |   |                        |
| Episiotomy scissors                           |   |   |                        |
| Vacuum extractor                              |   |   |                        |
| Forceps                                       |   |   |                        |
| Vacuum aspirator                              |   |   |                        |
| Beds – delivery beds                          |   |   |                        |
| Beds – regular beds                           |   |   |                        |
| Beds – operating theatre beds                 |   |   |                        |

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|   | <b><u>Delivery room (normal labour)</u></b> | <b><u>Delivery room (caesarean section)</u></b> | <b><u>Comments</u></b> |
|---|---|---|------------------------|
| Neonatal equipment:   |   |   |                        |
| resuscitation table (with heat source) (for newborn resuscitation)          |   |   |                        |
| incubator   |   |   |                        |
| tracheal tubes  |   |   |                        |
| newborn bag and mask size 1 for term babies (for newborn resuscitation)     |   |   |                        |
| newborn bag and mask size 0 for pre-term babies (for newborn resuscitation) |   |   |                        |
| laryngoscope blades   |   |   |                        |
| oropharyngeal airways   |   |   |                        |
| breathing valves  |   |   |                        |
| electric suction pump (for suction apparatus)                               |   |   |                        |
| suction catheter (for suction apparatus)                                    |   |   |                        |
| suction bulb, single use (for suction apparatus)                            |   |   |                        |
| suction bulb, sterilizable multi-use (for suction apparatus)                |   |   |                        |
| baby scales   |   |   |                        |

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### 4.7. Neonatal ward staffing and supplies

| Type of staff                      | during core working hours (8.00-17.00)<br>(number available) | after working hours and on the weekend<br>Present/ not present<br>If present, number | Comments |
|------------------------------------|--|--|----------|
| Advanced level associate clinician |  |  |          |
| Paediatrician<br>Neonatologist     |  |  |          |
| Associate clinician                |  |  |          |
| Non- specialist doctor             |  |  |          |
| Nurse                              |  |  |          |
| Auxiliary Nurse                    |  |  |          |
| Auxiliary nurse midwife            |  |  |          |
| Midwife                            |  |  |          |
| Lay health worker                  |  |  |          |

#### ***Equipment and supplies***

|   | <u>Y</u> | <u>N</u> | <u>Number</u> | <u>Comments</u> |
|---|----------|----------|---------------|-----------------|
| Incubators                                  |          |          |               |                 |
| Radiant warmers                             |          |          |               |                 |
| Heated mattress cots                        |          |          |               |                 |
| Phototherapy lamps                          |          |          |               |                 |
| Ambu Bag                                    |          |          |               |                 |
| Oxygen supply/concentrator                  |          |          |               |                 |
| Appropriate sized face masks (sizes 0 an 1) |          |          |               |                 |
| CPAP systems                                |          |          |               |                 |

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|                          | <u>Y</u> | <u>N</u> | <u>Number</u> | <u>Comments</u> |
|--------------------------|----------|----------|---------------|-----------------|
|                          |          |          |               |                 |
| Multi-function monitors  |          |          |               |                 |
| Pulse-oximeters          |          |          |               |                 |
| Breast pumps             |          |          |               |                 |
| Nasogastric tubes        |          |          |               |                 |
| Micdroppers              |          |          |               |                 |
| Exchange transfusion kit |          |          |               |                 |
| Stethoscope              |          |          |               |                 |
| Glucometers              |          |          |               |                 |
| Suction apparatus        |          |          |               |                 |
| Thermometers             |          |          |               |                 |
| Weighing scale           |          |          |               |                 |

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### 4.8. Paediatric staffing and supplies

#### **Emergency paediatric unit staffing**

| Type of staff                      | during core working hours (8.00-17.00)<br>(number available) | after working hours and on the weekend<br><i>Present/ not present</i><br><i>If present, number</i> | Remarks |
|------------------------------------|--|--|---------|
| Advanced level associate clinician |  |  |         |
| Paediatrician                      |  |  |         |
| Associate clinician                |  |  |         |
| Non- specialist doctor             |  |  |         |
| Nurse                              |  |  |         |
| Auxiliary Nurse                    |  |  |         |
| Auxiliary nurse midwife            |  |  |         |
| Midwife                            |  |  |         |
| Lay health worker                  |  |  |         |

#### **Paediatric ward**

How many beds does the ward have? \_\_\_\_\_

#### **Paediatric ward staffing**

| Type of staff                      | during core working hours (8.00-17.00)<br>(number available) | after working hours and on the weekend<br><i>Present/ not present</i><br><i>If present, number</i> | Remarks |
|------------------------------------|--|--|---------|
| Advanced level associate clinician |  |  |         |
| Obstetrician-gynaecologist         |  |  |         |
| Paediatrician                      |  |  |         |
| Associate clinician                |  |  |         |
| Non- specialist doctor             |  |  |         |
| Nurse                              |  |  |         |

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| Type of staff           | during core working hours (8.00-17.00)<br>(number available) | after working hours and on the weekend<br><i>Present/ not present</i><br><i>If present, number</i> | Remarks |
|-------------------------|--|--|---------|
| Auxiliary Nurse         |  |  |         |
| Auxiliary nurse midwife |  |  |         |
| Midwife                 |  |  |         |
| Lay health worker       |  |  |         |

### **Equipment and supplies**

|  |                     | Emergency area           | Ward                     | Comments |
|--|---------------------|--------------------------|--------------------------|----------|
| Resuscitation table/area   |                     |                          |                          |          |
| Torch  |                     |                          |                          |          |
| Otoscope   |                     |                          |                          |          |
| Scales for children  |                     |                          |                          |          |
| Measuring board to measure length and height (lying/standing according to age) |                     | (length)<br><br>(height) | (length)<br><br>(height) |          |
| Stethoscopes   |                     |                          |                          |          |
| Thermometers   |                     |                          |                          |          |
| Heat source  |                     |                          |                          |          |
| Oxygen source  | oxygen cylinder     |                          |                          |          |
|  | oxygen concentrator |                          |                          |          |
|  | central supply      |                          |                          |          |

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|  |   | Emergency area | Ward | Comments |
|--|---|----------------|------|----------|
| Flow-meters for oxygen                           |   |                |      |          |
| Equipment for the administration of oxygen       |   |                |      |          |
| Indicate which equipment you use                 | nasal prongs<br><br>catheters<br><br>masks                  |                |      |          |
| Self-inflating bags for resuscitation            |   |                |      |          |
| Masks  | ___ infant size<br><br>___ child size<br><br>___ adult size |                |      |          |
| IV-giving sets with chambers for paediatric use  |   |                |      |          |
| Butterflies and/or cannulas of paediatric size   |   |                |      |          |
| NG-tubes, paediatric size                        |   |                |      |          |
| Equipment for intra-osseous fluid administration |   |                |      |          |
| Suction equipment                                |   |                |      |          |
| Chest tubes                                      |   |                |      |          |

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|  |  | Emergency area | Ward | Comments |
|--|--|----------------|------|----------|
| Nebulisers for administration of salbutamol                                  |  |                |      |          |
| Indicate type of nebulizer:  | <input type="checkbox"/> electricity driven<br><input type="checkbox"/> oxygen driven<br><input type="checkbox"/> foot pump driven |                |      |          |
| Spacers with masks for administration of metered doses (spray) of salbutamol |  |                |      |          |





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