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

A systematic standard based participatory approach

Second Edition (2014)

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PREFACE

This tool and the process of using it can assist hospitals and health authorities towards providing quality health care to mothers and newborn babies. The tool adopts a participatory approach that facilitates wide involvement and sustained improvement of practice.

Rationale of the tool

After being neglected for too long, quality of care has been recognized by the international community as a key aspect of the unfinished mother newborn and child health agenda, particularly with respect to care around childbirth (1). This is true globally both in developed and developing countries. Besides hampering the achievement of desired health outcomes, low quality of care impedes the fulfilment of the right to health of women and babies and may causes inefficiency and unjustified direct and indirect costs for both the health systems and individual households.

To achieve a substantial reduction in maternal and neonatal mortality improvements are needed both in coverage and in the quality of care. Programs that have improved coverage alone have failed to achieve the expected reduction of maternal and neonatal mortality and morbidity (2, 3). The WHO Multicounty Survey on Maternal and Newborn Health examined data from more than 300,000 women attending 357 health care facilities in 29 countries. It found a poor correlation between coverage of 'essential interventions' (e.g. the proportion of the target population who received an indicated intervention such as women with eclampsia who received magnesium sulphate) and maternal mortality in health facilities. This finding suggests that high coverage by itself is not enough to decrease mortality, and that to achieve a substantial reduction in maternal and neonatal mortality and morbidity quality improvements in the whole continuum of care around birth are needed (2).

Various approaches to quality assessment and quality improvement have been proposed over time (4, 5). However, the evidence-base is still relatively weak on the effectiveness and efficiency of different quality improvement approaches and tools at hospital level in high mortality countries (1). Some of these approaches, and particularly those used in Western Europe, North America and Australia for accreditation to excellence, require important financial and human resource investments and are not affordable by the majority of low-resource health systems. Approaches focusing on single or few aspects of care have been used as a way to introduce the concept of quality improvement but have lacked a systematic evaluation of the whole continuum of care particularly during labour and birth and in the post-partum period, which is essential to ensure good quality of care (2). Many approaches focus on the availability of the essential infrastructure, equipment, commodities, and/or on the existence of written procedures and protocols, but fail to assess the actual case management. Evidence shows that even when all the necessary structural components are available the quality of care may still be poor, since what ultimately matters is the appropriate use of the available infrastructure, staff and commodities to ensure effective case management (3, 6). Finally, quality assessment alone cannot guarantee that any change will take place; use of the information gathered during the assessment to develop an action plan is a necessary step in every quality improvement process.

Previous experience with the tool and lessons learnt

The first version of this tool was published in 2009 (7). It built on the experience gathered with the paediatric hospital assessment tool that was developed by WHO in 2001 and extensively used in several countries (8-11) and on the experience gathered through criterion base audits of obstetric care (12). The tool has been used in several countries in Europe Africa and the Middle East by a variety of international agencies, donors and NGOs, within country-wide programs as well as in single facilities, after adaptation for use in different epidemiological and health system contexts (3, 13-18). A systematic, participatory, action-oriented approach to quality improvement can be an important agent of change through a variety of mechanisms. These mechanisms include improved knowledge of international guidelines and

recommendations, peer review of hospital practices through a multi-professional and supportive approach, and detailed action plans developed with clear time-lines and responsibilities at facility level.

When used within country-wide programs this tool produced recommendations for health authorities at national level to improve the health system performance across its main functions, (i.e. governance, financing, human resources, essential medical products and technologies, health information systems, and service delivery) (3, 19). Most importantly, when a second assessment could be organized to evaluate the effects of the quality improvement process, sustained improvement in quality of care was documented (13).

Since this tool was first developed there have been changes in evidence-based practice, and new emphasis given in patients' rights and equity (20). The revised version of this tool has also taken into account previous experiences and lessons learned on how to best use it.

The guiding principles on which the tool is based are summarized in Box 1.

Box 1. Guiding principles of the tool

1. Coverage needs to be complemented by quality of care to achieve the desired health outcome.
   ► *The tool is aimed at assessing and improving quality of care*.
2. Checking availability of basic equipment and supplies is necessary but not sufficient to evaluate quality of care; appropriate use of resources and case management also need to be assessed.
   ► *The tool is divided into sections, evaluating availability <u>and</u> appropriate use of resources, case management, and key hospital policies.*
3. Focusing on single key interventions is not enough; quality perinatal care requires systematic attention to all main components that can guarantee a continuum of care.
   ► *The tool evaluates many different aspects of health care, at different times points (from access, to case management in hospital, monitoring, case referral, discharge and follow up) and across different services.*
4. Safe childbirth is critical to the health and wellbeing of both the woman and the newborn child.
   ► *The tool evaluates services and practices relevant to women health together with services and practices relevant to the newborn health.*
5. Effective clinical management alone is not enough to ensure quality of care; holistic and culturally appropriate care is necessary. A health system should ensure all the rights of patients are met, not only the right to effective clinical management.
   ► *Users' view, together with health staff views are collected by the tool through structured interviews. A chapter is dedicated to the assessment of meeting the rights of women and infants.*
6. A participatory approach is needed for raising awareness of problems and for building commitment.
   ► *The tool is based on a problem-solving, participatory approach.*
7. A blaming attitude and punitive approach causes denial and /or hiding of problems, decreases work satisfaction and motivation, and increases barriers to quality improvement.
   ► *The focus of the tool is on the system, and not on the individual, with a non–blaming, supportive approach.*

8. Assessment is the first step for triggering a quality improvement cycle and to be effective it should be combined with planning for action.
   ► *The assessment is undertaken in an action-oriented way that facilitates identification and prioritisation of problems and developing a plan for action. Matrixes for planning are included in the tool.*
9. Both capacities and commitment are needed to improve quality of care.
   ► *The assessment is also a training and motivating activity; international standards and best practices are presented during the assessment through a peer-to-peer approach to serve as models for improvement. Local capacity is developed as a result of the process at both facility and national level.*
10. Health system factors need to be considered when planning quality improvement interventions.
    ► *When applied over a representative sample of health facilities, the assessment indicates gaps in key health system functions that need to be addressed at the national level.*

Technical update for the 2014 edition

This is the second edition of WHO *Hospital care for mothers and newborn babies: quality assessment and improvement tool*. The tool was updated during 2013 with the technical support of WHO Collaborating Centre in Mother and Child Health, Trieste, Italy, which developed the first version of the tool (2009). The update process included eight main steps:

1. review of main lessons learnt in the use of the tool since first developed
2. definition of guiding principles
3. systematic review of scientific sources to be used as reference standards
4. development of the first draft
5. field testing in hospitals in eastern Europe with both international and local assessors
6. development of the final version incorporating suggestions from the field testing
7. external review by a panel of international experts
8. tool finalization

Substantial changes were made in many chapters of this second edition (2014) compared to the first edition of the tool (2009) in order to update the tool in line with newer WHO guidelines and recommendations as well as with other international standards.

Many new references were added to each chapter. In selecting references, priority was given to WHO guidelines and recommendations. If no guideline or recommendation from WHO was retrieved during the search process references were evaluated using the following pre-defined order of importance: other high quality guidelines or recommendations based on evidence; systematic reviews; primary studies. When no scientific evidence was available, position papers or other official recommendations from international societies or agencies were used. In a very few instances expert opinion was adopted when none of the previous evidence was available.

Some sections were added or removed or otherwise reorganized, and editorial changes were made on the basis of feedback from users and from external referees. Drawing from the positive experience with the paediatric tool (7, 9), a new chapter was added to this second edition of the tool specifically assessing the rights of the mother and the newborn. The structure and content of this second edition of the tool are explained in the following section.

Structure and content of the tool

The tool is organized in five main sections:

1) Hospital support services

This section includes an assessment of the physical infrastructure, staff, availability of medicines, equipment and supplies.

2) Case management

This section includes six chapters assessing essential case management practices for the pregnant women, mothers and newborn in the hospital, plus a chapter dedicated to clinical monitoring. Overall, more than 50% of the total items of the tool relate to case management. This section also contains annexes to evaluate the appropriate use of medicines.

3) Policies and organisation of services

This section includes four chapters, assessing the existence, quality and use of relevant hospital policies and the organization of services. Policies to ensure infection prevention, guidelines development and dissemination, staff training, audit systems, access to hospital and continuity of care, and patient's rights in hospital are evaluated in this section.

4) Interviews with the staff and interviews with pregnant women and mothers

This section collects information on case management, organisational aspects of care, rights, and overall services from the perspective of service users and individual care providers. The section was restructured since the first edition of the tool. Incorporating the views of women on aspects of care reinforces the need to respect their perspective and value their input.

5) Feedback of findings and plan for action

The importance of a feedback meeting with the facility's staff and managers at the end of the assessment is emphasized. This feedback facilitates staff involvement in discussing the findings and in proposing actions for quality improvement. Through the whole process, and particularly through the final session, a problem-solving approach is used to build awareness among staff and managers about quality issues as well as specific actions needed to improve quality. In comparison with the first edition of the tool, this section was expanded to include new instruments for facilitating team discussion at the end of the assessment, structured feedback to the hospital staff and development of an action plan.

Each key practice/item contributes to the final score for each chapter and subchapter. Reference standards for relevant key practices/items were selected from WHO guidelines and other international recommendations, and are listed in each chapter. For each key practices/item a set of evidence-based criteria are provided (for example, a set of eleven criteria are given for 3.2 on the appropriateness of caesarean section).

The focus on case management and organization is crucial to promote the idea that in many cases substantial change is possible with the existing resources, without major external input.

How to use the tool

Purpose of the tool

Country assessment and single hospital assessments

- The primary use of the WHO *Hospital care for mothers and newborn babies: quality assessment and improvement tool* is to aid Ministries of Health (MoHs), key partners and stakeholders to carry out an evaluation of the quality of care provided at hospital level, to identify key areas that need to be improved, and to develop specific action plans. When the tool is used for country-wide assessment, an adequate sample of hospitals should be assessed to represent all levels of care, regional differences and managerial features (public, private-no-profit and private-for-profit). This sample will provide results that can be generalized to the whole network and/or to specific subgroups of health facilities. For assessing quality of care at outpatient level, the WHO *Assessment tool for the quality of outpatient antepartum and postpartum care for women and newborns* (21) can be used to complement the hospital tool.
- The tool can also be used in a single facility for internal audit purposes.

Additional functions

The assessment tool is also useful to:

- introduce the concept and the contents of international guidelines and evidence-based health care and to promote the implementation of WHO recommendations and of other international standards in the clinical practice;
- introduce the concepts of quality improvement supportive supervision, participatory assessment, peer review and professional case reviews;
- build capacity among national experts and local staff in leading a process of quality improvement;
- monitor progress when conducting follow-up visits focused on selected priority items and comprehensive assessment;
- provide information for certification and accreditation schemes and performance-based incentives for health facilities or specific departments and units.

Using the tool in practice

Step 1. Preliminary arrangements and selection of the assessment team

- This tool has been mainly used in collaboration between WHO Regional and Country offices and MoHs for country evaluations. Other agencies, institutions, and NGOs have also used it. Possible partners to support the activity should be identified, contacted and involved at an early stage. General timelines for the activity and the number of facilities to be assessed are discussed at this stage.
- At least in the initial phase of a country-wide assessment, it is recommended that an international team of experts works together with a national team, to provide guidance and coaching and to build the capacity for quality assessment.
- Key expertise (obstetrics, midwifery, nursing, and paediatrics/neonatology) should be represented in both the international and local assessors. Professionals with capacity to interview women and staff in their own language should also be part of the team.
- The international team is usually composed of an obstetrician-gynaecologist, a midwife, and a neonatologist, among whom a team leader is appointed. The national team may include a greater number of specialist (e.g. 2-3 obstetricians, 2-3 midwives, 2-3 neonatologist, and 2-3 interviewers) to allow for capacity building, and ensure that a pool of national experts will be available for subsequent activities.

- National assessors should not be staff members or have management responsibility for the hospitals that they are going to assess.
- It is crucial that the members of the assessment team are professionally competent and recognized as such to ensure that a peer-to-peer process is maintained during the assessment. International assessors should have experience in implementing evidence based practices and WHO recommendations in maternal and neonatal health care. Ideally all of the international assessors should have previous experience in the use of the tool (this experience is mandatory for the team leader). National assessors should have sufficient clinical experience in maternal or neonatal health care, and if possible experience in staff training, knowledge of the principles of evidence based health care, and should be able to easily access and keep up to date with the WHO recommendations and international standards of health care.
- If the assessment is organized by the WHO Country Office it is recommended that one representative from the office takes part at least in a some assessments' visits to provide support and to fully understand the approach and its implications. Similarly, if the evaluation is organized by other agencies, bodies etc, the participation of a representative will allow a better understanding of the findings and actions to be implemented, as well as acquaintance with the professionals involved in the process.

Step 2. Local adaptation

- The tool was developed as a generic framework to be adapted to the epidemiology and health system structure at country/local level. The tool can be used in hospitals of different levels, from small district hospitals to tertiary care centres. When planning the assessment the team of national and international assessors identifies the sections of the tool to be used at the different levels of care.
- The adaptation may include selecting or deleting some chapters or subchapters of the tool. For example, the chapter on advanced neonatal care is for use where a neonatal intensive care unit is present. Another example is the subchapter of the tool covering malaria, which should be deleted from the assessment in countries where malaria is not relevant to local epidemiology. With regards to criteria, the same selection should be done, base on the local setting (for example, in key practice 2.11 “Fetal heart rate monitoring during labour”, the criteria on cardiotocography are deleted in hospitals where cardiotocography is not available, and only those on intermittent fetal heart rate auscultation are used).
- If translation of the tool into the local language is needed for the national assessors or for the interviews make sure that translation is performed by a professional translator and then reviewed by an expert in the perinatal field. During the assessment make note of any errors in translation and correct them before using the tool in subsequent assessments.

Step 3. Preparing for the assessment visit

- Preliminary information on the objectives and methods of the assessment needs to be communicated to the local health authorities before contacting the management of the facility or facilities to be assessed.
- Criteria for selection of hospitals should be discussed and agreed upon, particularly when seeking representativeness for country-wide assessments.
- A detailed timetable of the assessment visit needs to be developed, usually by local authorities, in close collaboration with the assessment team leader.
- The average time needed to evaluate one facility is one and half to two full days depending on the hospital size. When developing the timetable, include travel time and consider local working hours and holidays.
- Written information should be sent prior to the visit to all hospitals and services that will be assessed detailing the purpose of the assessment, its supportive, action-oriented approach, and the proposed timetable.

- The first chapter of the tool should be sent to the hospital management before the visit with a request for providing the relevant information. This will help to raise awareness regarding the assessment. However, this does not substitute for the external assessment. Information provided before the visit needs to be checked directly by the assessors so that any discrepancy can be discussed and addressed
- An adequate number of copies of the tool (at least one copy for each hospital for each assessor, plus one for the hospital managers) should be printed, as well as an adequate number of interview forms.
- A one day workshop is necessary to train the national assessors. During the workshop make sure that every assessor understands the tool structure and use. If needed, provide clarification about the evidence underpinning the reference standards. The existence of some overlap among chapters should be explained as a measure to ensure a multidisciplinary evaluation of some items. A common understanding of the scoring system should be examined using some examples. Distribution of the various chapters among the team needs also to be agreed upon. Interviewers should attend the workshop and principles and methods of interviewing women and staff should be discussed. Ensure adequate time for discussion among national and international assessment team members before the start of the hospital assessment to clarify any doubts about the methods of the assessment.
- New team members will need to be supervised during the assessment by experienced assessors until they are fully acquainted with the tool and have acquired the appropriate principles, skills, practice and attitude of confidential and supportive peer-to-peer assessment.
- If one or more interpreters are needed, ensure that they receive a copy of the tool prior the start of the assessment and that they have adequate expertise with medical terms.

Step 4. Presenting the aim, objectives and methods of the assessment at hospital level

- The visit starts with an introductory briefing to staff and managers on the objectives and methods of the assessment.
- The presentation should first put the assessment of the single facility in the context of ongoing quality assessment programs to support the hospitals in improving the quality of care by identifying areas of care that need to be improved and then actions that should be taken at local and at higher administrative level.
- It should be explained that both staff and women (service users) will be interviewed about hospital routines and practices, that the assessor(s) will need to observe clinical practice directly, and examine documents, recent and past clinical records and logbooks.
- During the presentation, the participatory, non-blaming (neither for the individuals nor for the work areas involved), supportive and confidential approach needs to be emphasized. Implications need to be discussed and fears of punishment in case of unsatisfactory results need to be discussed with managers and MoH prior to the visit and again when introducing the assessment to the hospital staff. It should be explained that results will be reported to the MoH in an anonymous way, without quoting names of the hospitals, or of single individuals.
- The importance of participation of both managerial (hospital director and/or deputy, heads of departments and head nurse/midwife) and clinical staff in the assessment should be emphasised. However, care should be taken that the presence of the manager/s does not interfere in routine practices. The assessment team will try to make all efforts to minimize any disturbance created by the assessment. Any concerns about the assessors' presence during clinical care should be addressed.
- All documents (protocols, medical records, etc) needed for the assessment should be made available. The timing for the final debriefing meeting, as well as other logistics (e.g. lunches) should be set at the start of the assessment.

- After the presentation of the purposes and methods of the assessment, and introduction of the assessors, the visit can start.

Step 5. Assessment visit

- The assessment visit should include all relevant services: admission, labour and birth areas, units for normal and for complicated pregnancy, postpartum, special care nursery, neonatal intensive care unit (if existing), outpatient and emergency area, pharmacy, laboratory, blood bank, etc.
- The assessment includes different sources of information: hospital statistics, medical records, direct observation of real cases, and interviews with staff and with women/users. Through a combination of different sources, the tool allows a comprehensive assessment of quality of care and the identification of gaps in the quality of care, including factors that may put at risk the quality of case management.
- Assessment team members will focus on various units and departments according to their expertise. There may be instances where two or three team members will assess the same department or unit using the section of the tool relevant to their expertise (e.g. the midwife, the neonatologist and the obstetrician will observe a birth from different and complementary perspectives). In most cases, assessors will work in parallel in different departments.
- It is not necessary to follow the sequence of the chapters strictly. The sequence of the assessment will depend on convenience factors, organizational needs, and on the occurrence of real cases. If there is an emergency or a birth, it is strongly recommended to give priority to the direct observation of case management.
- It is suggested to spend as much time as possible on the ward to gain first hand information by direct observation, especially on the management and care of mothers and babies in the maternity hospital.
- Case observation should not be intrusive. Permission from women, or other caregivers when observing an infant, should be sought for attending real cases and for interviews.
- Assessors should always be respectful, seek permission from women and staff, keep silent, try to make themselves unnoticed, avoid comments, and politely avoid engaging in dialogue/discussion with staff and managers during observation of clinical practice. They should observe all people involved, exchanges, situations and actions, and check the timing (e.g. duration of caesarean section, time required to deal with an emergency, call for help and arrival time , etc...), write main notes in real time, and take some time to finalize the assessment (including scores and comments) before the next observation.
- Remember that capacity building and a participatory approach is a key feature of the assessment process. During the observation of clinical practice the local staff can raise issues/questions and assessors should be prepared to discuss them. Of course it could not be possible or appropriate to provide these clarifications in the clinical setting, therefore take notes, and ensure that these issues will be discussed before the end of the visit, during the final meeting, or in small groups or one-to-one, as more appropriate.
- If direct observation of case management it is not possible for some conditions different techniques such as practical exercises, routines for emergency case, role-play, and scenarios (e.g. what would you do if…, let's imagine a women is brought to the hospital with…) may contribute to information on care and case management. Observation of services at night can be useful to assess care during childbirth and emergency routines if not observed during the day.
- The assessors should establish by direct observation if clinical protocols exist and are implemented, whether medicines, equipment and supplies are available and appropriately used and whether they are actually available free when they are included in essential packages for MCH.
- An adequate number of clinical records, as specified in the tool chapters, need to assessed to judge how a specific condition is usually managed.

- A minimum number of confidential interviews with women should be made as these are an essential part of the assessment and verify the information provided by the hospital staff. The interviewers will talk with pregnant women, mothers in the post-partum ward and mothers of sick newborns. Health care providers (doctors, midwives and nurses, chief doctors and heads of departments) will be interviewed also. Information on how to conduct the interview is detailed in ANNEX A-B.
- The assessment usually identifies key staff members who may represent driving forces for the internal process of quality improvement.
- 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.

Step 6. Assessment and scoring by each team member

- Each assessor will take notes of strengths and weakness in each topic and attribute a score to each item he/she is assessing using the information gathered from different sources.
- At the end of each subchapter and chapter, the overall score for the section will be recorded as well as the main strengths and weakness, which provide inputs for the feedback session.
- Each key practice/item is scored using 4 possible categories, with the following meaning:
  3 = care corresponding to international standards (no need for improvement or need of minor improvements only)
  2 = substandard care but no significant direct hazard to health or violation of human rights (need for some improvement to reach standard care)
  1 = *inadequate care with consequent serious health hazards or violation of women's and/or children's rights,* (e.g. omission of evidence based interventions or information with consequent risk to health or violation of human rights of the woman or child (need of substantial improvement to reach standard care)
  0 = very poor care with consequent systematic and severe hazards to the health of mothers and/or newborns (e.g. systematic omission of potentially life-saving interventions or lack of essential safety requisites for key procedures such as CS, blood transfusion, neonatal resuscitation, etc and need for thorough revision of the specific item or area)
- The score for each subchapter and chapter is calculated as the arithmetical mean of the score of each key practice on the summary tables provided in the tool). Therefore, overall scores for subchapter and chapter are likely to include decimals.
- When parts of the tool or key items are judged as not relevant to the local context and marked “not applicable”, there will be no score given to these specific items. The remaining items in that part will be assessed and scored.

Step 7. Team discussion and overall score

- At the end of the assessment, the assessors' team meet to discuss findings and agree on final assessment conclusion: scoring, strengths and weakness.
- Each assessor will suggest strengths and weaknesses in his/her own area of expertise and add comments to indicate specific issues as well as possible solutions to discuss in the feedback session. Assessors with the same areas of expertise working together as a sub-team (e.g. midwife and obstetrician observing birth practices) share their views and scores, while the whole team will discuss other chapters. The templates provided in Section 5 of the tool can be used for this purpose (Templates 1 and 2).
- The team will jointly prepare the feedback to be given to the facility, which will focus on main strengths and weakness.
- The international team leader will supervise the preparation of the feedback, and support team members to deliver the presentation in an appropriate way.
- The time needed for team scoring and discussion may vary from one and a half hour to two hours.

Step 8. Providing feedback at facility level

- It is crucial that a feedback meeting is held in each facility at the end of the assessment. Managers and staff members should be all invited, with priority to personnel in charge of the various units, both doctors and nurses. The time and place for this meeting should be agreed in advance to ensure staff participation.
- The feedback is a sensitive process, which needs to be handled with an appropriate attitude. Assessors should always remember that the ultimate aim is to motivate to change and show that improvement is possible. The general attitude should be supportive, stressing what is being done appropriately and the potential for improvement, and emphasizing hat identifying individual responsibilities is not the objective of the assessment,
- The hospital staff and managers should be reminded that the assessment looks at their single facility in the context of other ongoing quality assessment programs (e.g. at country or regional level) and that the assessment is part of an initiative to support hospitals in improving the quality of care. A confidential report will be sent to higher authorities describing the assessment findings without linking specific findings to specific hospitals. The report will indicate health system changes and specific support needed from local and national authorities.
- Emphasize that identifying individual responsibilities is not the objective of the assessment, and avoid any form of blaming.
- Plans for follow up and/or for supportive supervision should be described, if follow up is included in the program.
- Provide feedback by main area of care (i.e. support services, birth care, and neonatal care) and include the relevant views of pregnant women and mothers who have been interviewed. National assessors should be encouraged to present the results with the support of the international assessors.
- The feedback should be provided in a concise way focusing on priorities with details of findings used to illustrate key points.
- Local managers and staff should be allowed to provide their views about the findings. Varieties of reasons are usually brought to justify this or that specific gap, and views of service users may not always be welcome or valued by the staff. Assessors should accept explanations and at the same time encourage staff members to take into account the users' view. It may be helpful to provide examples from other countries and facilities.
- Clarifications, explanations and appropriate references in existing guidelines/scientific literature should be provided by the assessors, if needed, on specific issues or controversies identified during the visit.

Step 9. Developing an action plan at facility level

- In the second part of the feedback session, the managers and staff are invited to develop a list of priority issues that can be addressed at facility level, based on the findings.
- The tool provides a template (Section 5, template 3) that can be used for developing a draft plan for action. Adequate time (2 to 4 weeks) should be allowed for finalizing it and presenting it to relevant authorities.
- The development of the action plan should be facilitated by helping the local staff in identifying and prioritizing: a) what can be done based on the existing resources, and b) what will need additional resources and will require that steps are taken with higher authorities in charge
- The action plan should include the identification of staff members in charge of specific actions, a timeline, and the commitment of hospital managers to provide support and the necessary authorizations.
- Shortly after the assessment visit, a written report should be given to hospital managers including all main findings: scores, strengths, weaknesses, comments, and the draft action

plan. It is suggested to provide also a copy of the assessment tool with all the notes compiled; this will require that all notes from the various assessors are combined, possibly in a digital copy of the tool. These documents represent the basis for implementation of changes and should be used for further developing the plan of action, for follow up and supervision, and as a comparison for subsequent assessments.

Step 10. Providing feedback to regional/national level and developing a national action plan

- A workshop of all assessors (one and a half days) should be organized at end of all the assessment visits to discuss the overall findings, identify overall strengths and weaknesses, prepare the presentations for the final meeting with Ministry of Health and other stakeholders, and finalize the reports to be given to each hospital.
- A one day official meeting should be organized to present and discuss the overall national results of the assessment with all involved parties. Participants to the meeting should include MoH representatives, health authorities, hospital managers and all relevant national and international partners, including members of the academia/scientific and professional societies, and other key stakeholders, and of course all the assessors. Representatives of service user associations should be invited, if these associations exist.
- The meeting starts with a presentation of the findings of the assessments. It is recommended to present results in a confidential way without linking the names of the facilities with specific scores and emphasizing that the main purpose is to identify systemic issues that need to be addressed. Tables and figures may be used to summarize the findings of the assessment and a number or a letter may indicate the various hospitals. It is recommended to include the findings from the interviews with pregnant women and mothers.
- In the second part of the meeting the assessor team will facilitate the identification of the actions needed using the WHO health system framework (governance, financing, human resources, essential medical products and technologies, health information systems, and service delivery modes)(19). The tool provides a template for this purpose.
- Timelines and responsibilities should be identified as well as future steps (which may include, for example, a workshop to develop further the national plan of action) and the role of partners.
- The meeting may include defining a follow-up plan and a discussion on mechanisms that could be developed (or improved if already existing) to ensure sustainability (e.g. accreditation certification, incentives) and to maintain and expand the national capacity in quality assessment and improvement.
- After the end of the country assessment task the team leader will coordinate the preparation of a report document including all the recommendations to be presented to MoH (or local) authorities and other relevant partners. The final written report should include a summary of the findings in all the main areas, individual scores in each main area for each hospital (in a confidential way), overall strengths and weaknesses, and recommendations for improvement, according to the WHO health system framework.
- After a period of implementation (one to two years), a second assessment should be proposed and planned, using the same tool and team of assessors (at least some of the members should be the same, to ensure consistency and facilitate their work at facility level) to assess progress, identify obstacles and propose further steps to be taken.

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IDENTIFICATION

Date: _____ Country: _____

City: _____

District: _____ Region: _____

Facility name: _____

Name of Director/Manager of the Hospital: _____

Name of the Head of Maternity *: _____

Name of the Head of Neonatal Unit **: _____

* or Obstetric Department, Obstetric ward or whatever is the name of the specific service providing care to mothers

** or Intensive care or Neonatology or whatever is the name of the specific service providing newborn care to infants

TYPE OF HOSPITAL

- o Public Hospital
- o Private (church, NGO others)
- o Mixed (describe)

□

□ Describe type of funding for the hospital:

_____

_____

Members of the assessment team:

_____

_____

_____

_____

REGIONAL AND COUNTRY DATA

Collect information on the population and health system context to understand better the role of the facility within the health system.

CATCHMENT AREA

Population

- Total population in the hospital catchment area _____
- Women in the fertile age in the hospital catchment area _____

Health facilities providing mother and child care

- Only outpatient (antenatal care) _____
- Inpatient care (delivery care) _____
- Describe whether other health facilities are private or public, and if there is any restriction of access to care

_____

_____

Any external event e.g. conflict, environmental disaster or infectious outbreak, with impact on access to hospital care and/or to quality of care due to lack of commodities, staff etc.

_____

_____

COUNTRY INDICATORS

Discuss with the health facility staff how the indicators in their health facility related to the global maternal and child health indicators (such as the 2015 MDG countdown indicators)

	Country Indicator
1. Maternal mortality ratio	
2. Under-five child mortality (and proportion of newborn deaths)	
3. Stunting prevalence	
4. Demand for family planning satisfied (met need for contraception)	
5. Antenatal care (four or more visits)	
6. Antiretrovirals for HIV-positive pregnant women*	
7. Skilled attendant at birth	
8. Postnatal care for mothers and babies within two days of birth	
9. Exclusive breastfeeding (0–5 months of age)**	
10. Three doses of combined diphtheria-tetanus-pertussis vaccine immunization coverage	
11. Antibiotic treatment for childhood pneumonia	

* This indicator comprises antiretroviral medicines for HIV-positive pregnant women to both reduce the risk of mother-to-child transmission of HIV and for their own health. ** Up to the last day of the fifth month of life

SECTION 1
HOSPITAL SUPPORT SERVICES

1.1 Physical structures, staffing, and basic services

Objective: To evaluate the appropriateness of the overall maternal and newborn facilities, staffing levels and basic services in the facility

Source of data and instructions:

- Documents and records such as staff rosters, log book for basic service breakdowns
- Observation of facility layout and functioning of services
- Interviews with manager of facility, basic services manager, unit clinical managers

Some information can be collected before the visit (as a questionnaire) and be available for reference to aid the evaluation, and discussed during the hospital assessment.

1.1.1 Standards on physical structures and staffing are followed	**Score: Mother areas**	**Score: Newborn areas**	**Comments**
□ If there are national standards on physical infrastructures, these standards are implemented in the hospital □ If there are national standards on staffing, these standards are implemented in the hospital			
1.1.2 Existing physical and human resources are adequate according to the volume of work			
□ Use ANNEX 1.1.2a to evaluate existing facilities □ Use ANNEX 1.1.2b to review number and type of staff □ Use ANNEX 1.1.2c to review number and type of staff on shifts			
1.1.3 Basic services (power, water, heating, cooling) are available			
□ Use ANNEX 1.1.3 to check availability of basic services			

ANNEX 1.1.2a Evaluate existing facilities

List the departments and wards relevant to maternal and newborn care in the hospital:

_____

_____

_____

Obstetric facilities

Number of labour rooms? ____

□ Number of labour beds in total? ____ Note: Birth rate_____

Number of birth rooms? ____

Number of birth beds in total? ____ Note: Birth rate_____

□ Is there a dedicated theatre to perform caesarean sections?

□ Is the operating theatre is part of the labour area?

□ Is a (dedicated) operating theatre available 24 hours?

If no, what hours is it open? From ____ to ____

□ Is there is an Intensive Care Unit which can admit women with obstetric complications?

If no, where women in need of intensive care are transferred? _____-

□ Is there is a separate room or ward for admitting "infectious" pregnant women or mothers of newborns (isolation ward)

If yes, how many beds? _____

What types of cases are admitted to the isolation room?

□ Newborn special care facilities

□ Is there is a unit to take care of sick newborns.

If yes, how many cots/beds? _____

□ Up to which age are babies admitted to the special care unit?

Age in months _____

□ Is there is a separate ward or room for admitting out-born babies.

If yes, how many cots/beds? _____

□ Mothers of sick newborns are allowed to stay with their babies.

If yes, how many beds for these mothers? _____

□ Is there is a Neonatal Intensive Care Unit (NICU)?

If yes, how many cots/beds? _____

If no, where are newborns in need of intensive care transferred to?

□ Is there is an emergency or outpatients for discharged infants open 24 hours ?

If no, what opening hours / days? From ____ to ____

ANNEX 1.1.2b Review number and type of staff

Staff type	Total Number	Division by departments/units
Obstetricians		
Neonatologists		
Paediatricians		
Specialist in training: Obstetric Paediatric/ Neonatologist		
Non specialist doctors*		
Midwives *		
Nurses* dedicated to obstetric care		
Nurses* dedicated to newborn care		
Other clinical Staff* (specify):		
Pharmacy staff(specify) Qualified Other		
Laboratory staff (specify) Qualified Other		

* Registered by a state regulatory body or similar. List auxiliary nurses, skilled birth attendants, clinical officers and any other staff providing clinical care under “Other Clinical Staff” and describe.

ANNEX 1.1.2c Review number and type of staff on shifts

Are specialists in maternal and newborn health available or on-call at evenings/nights? Yes/No *If no*, how are they called:			
Are specialists in maternal and newborn health available or on-call over the weekend? Yes/No *If no*, how are they called:			
Intensive Care Unit for obstetric issues This area exist in the facility: Yes/No_____ Number of beds_____			
Indicate the number of staff available Time of shifts:	**morning shift**	**afternoon shift**	**night shift**
Specialist doctors			
Non specialist doctors (including specialist in training)			
Nurses dedicated to obstetric care			
Nurses dedicated to intensive care			
Other clinical Staff (specify)			
What is the nurse to patient ratio?			
Newborn Intensive Care Unit This area exist in the facility: Yes/No_____ Number of beds_____			
Indicate the number of staff available Time of shift	**morning shift**	**afternoon shift**	**night shift**
Specialist doctors			
Non specialist doctors (including specialist in training)			
Nurses dedicated to newborn care			
Nurses dedicated to paediatric intensive care			
Other clinical Staff (specify)			
What is the nurse to patient ratio ?			

ANNEX 1.1.3 Check availability of basic services

Describe the system in place, including existing back-up systems	Any problems in availability of service during the last year?		If any problem, describe
	Areas for mother care	**Areas for newborn care**	
Power	Yes: ___ No: ___	Yes: ___ No: ___	
Water	Yes: ___ No: ___	Yes: ___ No: ___	
Heating (if relevant)	Yes: ___ No: ___	Yes: ___ No: ___	
Cooling (if relevant)	Yes: ___ No: ___	Yes: ___ No: ___	

SCORE FOR 1.1. PHYSICAL STRUCTURE, STAFFING, BASIC SERVICES

KEY PRACTICES/ITEMS	Score: Mother areas	Score: Newborn areas
1.1.1 Standards are followed		
1.1.2 Physical and human resources		
1.1.3 Basic services are available		

SUBCHAPTER SCORE

1.2 Statistics, health management information systems and medical records

Objective: To evaluate the quality of the health management information systems. Review of hospital statistics will provide insight useful to evaluate case management also.

Source of data and instructions:

- Documents and records: statistics, medical records (at least 30), reports
- Observation of equipment and process, and of their use
- Interview with service providers and users

This information can be collected before the visit (as a questionnaire) and be available for reference during the visit. All the information needs to be directly evaluated and discussed during the hospital assessment.

1.2.1 Relevant statistics and information are available	**Score: Mother areas**	**Score: Newborn areas**	**Comments**
□ Use ANNEX 1.2.1 to evaluate information on patient load □ Use ANNEX 1.2.2 to evaluate information on reasons for admission □ There are effective systems recording accurate information on patient flow (admissions, outpatients, etc.) o paper based o computer based □ There are no errors or inconsistencies in statistical data □ Diseases are grouped according to a standard classification, such as ICDR □ Indicators of quality of care are used (e.g. case fatality rate, length of hospitalisation, proportion of caesarean section, etc) □ There is periodic review and evaluation of usefulness of the information systems.			
1.2.2 Use of statistics is appropriate	**Score: Mother areas**	**Score: Newborn areas**	**Comments**
□ There is a periodical review and evaluation of statistics and indicators of care o at each department level o by the relevant professional teams, including doctors and nurses □ Data is used to identify and plan actions to improve quality of care □ Senior staff are aware of how the hospital statistics and indicators relate to regional and national indicators □ Use ANNEX 1.2.3 to evaluate information on indicators			

1.2.3 Quality of medical records is adequate	Score: Mother areas	Score: Newborn areas	Comments
□ Records are accurate, clear and legible: o Patient identification details are correct and entered on all forms o The date is recorded o The admission and discharge diagnoses are explicit o Diagnostic examination are clearly reported o Medicines are clearly prescribed (dose, duration, route of administration, timing) o Intravenous fluids are clearly prescribed (dose, duration, route of infusion, timing) o Treatment administration is explicitly recorded o The anaesthetic form (if any), has been completed and signed o The operation form (if any) has been completed and signed o Referral or follow-up needs are clearly recorded □ The medical record officer or other staff member responsible for coding has accurately coded the main diagnosis			
1.2.4 Information flow is effective	**Score: Mother areas**	**Score: Newborn areas**	**Comments**
□ Referral notes are available □ Information from previous admissions are available □ Information from antenatal records is available to staff providing care during labour and birth □ Antenatal and intrapartum records are available to staff providing care during postpartum period (care to mother and care to newborn)			
1.2.5 Access to records is suitable	**Score: Mother areas**	**Score: Newborn areas**	**Comments**
□ Mother can have access to her own medical records □ Mother can have access her infant's medical records □ Records are stored in a way that keeps information confidential			

Use the following tables to evaluate health facility statistics. Ask the management to show you the statistical reports**.**

ANNEX 1.2.1 Patient load during year _____

Record the hospital figures for the last available year in the tables below. If data are available for a different period, please specify time period _____

Women	**Number**	**Comment**
Women transferred from other hospitals/health centres for obstetric care		
Total deliveries		
Women admitted for obstetric care		
Women readmitted for obstetric care		
Women transferred for obstetric care to other health facility		
Newborn 0-28 days		
Inborn live birth		
Inborn sick		
Outborn admitted		
Newborn readmitted		
Newborn transferred to other health facility		

ANNEX 1.2.2 Reasons for admission during year _____

List the four most important medical diagnoses for hospital admissions in the last year. If data are available for a different period, please specify time period _____

	Pregnancy/Puerperium (Excluding Labour)	**Newborns 0-28 Days**
1.		
2.		
3.		
4.		

ANNEX 1.2.3 Hospital indicators

During year _____

Use the hospital figures for the last available year. If data are available for a different period, please specify time period _____.
Use definitions as specified in brackets. Please specify if other definition is used.
Start by collecting data as absolute numbers. As a second step, you can calculate rate, ratio or percentages by using the definition highlighted with an asterisk

Hospital indicators	**Number**	**Comments**
Number of births		
Number of live births (infant breathes or shows any signs of life, irrespective of duration of pregnancy)		
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 (<1000g)		
Number of births <37 completed weeks		
Number of births < 34 completed weeks		
Number of births < 28 completed weeks		
Number of Apgar score at 5^{th} min $\leq$3		
Total number of neonatal deaths * Neonatal mortality rate (number of live-born newborn death, including both early and late neonatal mortality)		
Number of deaths in live inborn newborn before discharge		
Total number of still births *Still birth rate (number of stillbirths per 1000 inborn neonates, including live births and stillbirths)		
Total number of perinatal deaths * Perinatal mortality rate (number of stillbirths plus early (i.e. within 7 days) neonatal deaths per 1000 total births)		
Number of maternal deaths * Maternal mortality ratio (number of maternal deaths that result from reproductive process per 100.000 live births) not applicable for single maternity level		
Number of direct maternal death (death of the mother resulting from obstetrical complications of pregnancy, labour or the puerperium, and from interventions, omissions, incorrect treatment, or a chain of events resulting from any of these factors)		
Number of indirect maternal death (death not directly due to an obstetrical cause but resulting from previously existing disease, or a disease that developed		

during pregnancy, labour, or the puerperium but which was aggravated by maternal physiological adaptation to pregnancy)		
Number of caesarean section *Percentage: Caesarean section deliveries as % of all births		
Number of episiotomies * Percentage: Episiotomies as % of all births		
Number of instrumental deliveries * Percentage: Instrumental deliveries as % of all births		
Number of inductions * Percentage: Inductions as % of all births		
Number of HIV positive woman * Percentage: number of HIV + as % women giving birth, or in fertile ages, if only this information is available)		
Number of woman positive on syphilis screening * Percentage: number of women positive at screening as % pregnant women screened		
Average length of hospitalisation after vaginal birth (in days)		
Average length of hospitalisation after caesarean birth (in days)		

SCORE FOR 1.2. STATISTICS, HEALTH MANAGEMENT INFORMATION SYSTEMS AND MEDICAL RECORDS

KEY PRACTICES/ITEMS		**Score: Mother areas**	**Score: Newborn areas**
1.2.1	Relevant statistics and information		
1.2.2.	Use of statistics		
1.2.3	Quality of medical records		
1.2.4	Information flow		
1.2.5	Access to records		

SUB-CHAPTER SCORE

1.3 Pharmacy management and medicine availability

Objective: To evaluate the health facility policy and procedures related to selection, procurement, distribution, purchasing and stock management for medications and pharmaceutical supplies.

Sources of data and instructions: Check this section in the central pharmacy

- Review of documents: pharmacy records, ward records, patient files
- Observation of organisation, practices and procedures
- Talking with staff provides a complementary source of information

1.3.1 An essential medicine list exists and is used	**Score:**
□ WHO list of essential medicines □ National list of essential medicines or other list (check if the list includes all medicines for the management of common conditions)	Comments
1.3.2 Medication storage areas are orderly, clean and secure and with proper system	**Score:**
□ General medication storage is at room temperature unless there is a specific requirement for a particular medicine □ Direct sunlight is avoided, there is sufficient light to read labels □ Storage of medicines in high humidity rooms is avoided □ Cupboards and containers are available for storage □ Medications are not stored on the floor or touching walls to protect from dampness and insects and rodents □ Ventilation in/outlet is covered with nets □ Internal use and injectable medications are separated from disinfectants or toxic medication □ Medication are properly secured from theft, no free access, door with lock □ Narcotics are kept in a separate locked cupboard □ Medications remain in original package or are labelled adequately □ Medications are stored with proper systems o In alphabetical order o By International Common Denomination (ICD) o By Groups (classes or administration)	Comments
1.3.3 Cold chain is maintained for specific medications	**Score:**
□ Medication refrigerator temperature are maintained within acceptable limits □ There are working thermometers in all refrigerators □ Storage temperature is recorded in a log at least daily □ There is a backup power supply	Comments
1.3.4 Pharmacy has current and accurate records of medicine storage and usage	**Score:**
□ There are clear and well maintained records of supplies	Comments

received and dispensed □ There are written purchase procedures □ Donation are separately recorded from purchases □ There are clear and well maintained in-out records of narcotics □ There are no stock-outs (no stocks of an essential medicine) □ There are no overstocks □ There are no expired products □ There are procedures to dispose of expired or damage pharmaceutical products □ There are written procedures on how supplied to the ward (check if supply is per named patient, or with standard ward stocking, or by other systems)	
1.3.5 System is in place to track adverse medicines reactions and medication error	**Score:**
□ Written procedures exist and are followed	Comments
1.3.6 Suitable medicines are available in the hospital pharmacy	**Score:**
□ Check ANNEX 1.3.6 to asses medicines availability	Comments
1.3.7 Suitable medicines are available in the clinical areas where likely to be needed	**Score:**
□ Check ANNEX 1 3.7 to asses medicines availability	Comments

ANNEX 1.3.6 – 1.3.7 Medicines availability checklist

Sources of data and instructions:
This information should ideally be collected before the visit (questionnaire filled in by health facility), and be available for reference during the visit. Check for the presence of medicines and enquire with staff if medicines are regularly available.
If not collected before, collect this information early during the visit from the emergency area, the wards and the pharmacist.

Availability of medicines varies considerably in different regions. Please indicate the medicines available. *(Mark as yes or no)* Note in comment column if:

- Local adaptations of the medicine are used
- Medicines are only available for sale and not freely available for patients
- Medicines are within their expiry dates. Check if medicines with the earliest expiry date are for first use (in the front-row).

Available in	1.3.6 Hospital pharmacy	1.3.7 clinical areas where likely to be needed	Comments
General anaesthetics and oxygen			
Halothane			
Ketamine injection			
Nitrous oxide			
Thiopental			
Oxygen			
Local anaesthetics			
Lidocaine			
Lidocaine + epinephrine			
Complementary medicines			
Ephedrine			
Preoperative medications and sedations for short term procedures			
Atropine			
Diazepam			
Promethazine			
Morphine			
Analgesics, antipyretics, non steroidal anti-inflammatory			
Acetylsalicylic acid			
Paracetamol			
Ibuprofen			
Anti-allergics and medicines used in anaphylaxis			
Chlorphenamine			
Dexamethasone			

Epinephrine			
Hydrocortisone			
Prednisolone			
Antidotes and other substances used in poisoning			
Atropine			
Calcium gluconate			
Naloxone			
Anticonvulsants and anti-epileptics			
Diazepam			
Magnesium sulphate			
Phenobarbital			
Phenytoin			
Anti-infective medicines			
Mebendazole			
Pyrantel			
Anti-bacterials			
Amoxicillin			
Ampicillin			
Benzathine benzylpenicillin			
Benzylpenicillin			
Cefixime			
Cloxacillin			
Ceftriaxone			
Azithromycin			
Chloramphenicol			
Ciprofloxacin			
Doxycicline			
Erythromycin			
Gentamicin			
Nitrofurantoin			
Metronidazole			
Spectinomycin			
Sulphamethoxazole-trimethoprim			
Clindamycin			
Sulfadiazine			
Anti-tuberculosis medicines			

Ethambutol			
Isoniazid			
Isoniazid+ethambutol			
Pyrazinamide			
Rifampicin			
Rifampicin+isoniazid			
Rifampicin + isoniazid + pyrazinamide			
Rifampicin + isoniazid + pyrazinamide + ethambutol			
Anti-fungal medicines			
Clotrimazole			
Luconazole			
Nystatin			
Anti-viral medicines			
Aciclovir			
Anti-retro virals			
Abacavir			
Didanosine			
Lamivudine			
Stavudine			
Zidovudine			
Efavirenz			
Nevirapine			
Indinavir			
Ritonavir			
Lopinavir + Ritonavir			
Nelfinavir			
Saquinavir			
Anti malarial medicines			
Chloroquine			
Quinine			
Artemether			
Artesunate			
Mefloquine			
Sulfadoxine + pyrimetamine			
Proguanil			

Anti pneumocystis and anti toxoplasmosis medicines			
Pyrimetamine			
Sulfamethoxazole+trimethoprim			
Pentamidine			
Medicines affecting the blood			
Ferrous salt			
Ferrous salt + Folic acid			
Folic acid			
Vitamin K			
Heparin sodium			
Protamine sulphate			
Blood products and plasma substitutes			
Dextran 79			
Cardiovascular medicines			
Glyceryl trinitrate			
Digoxin			
Epinephrine			
Lidocaine			
Hydralazine			
Methyldopa			
Furosemide			
Dermatological medicines (topical)			
Miconazole			
Methylrosanilinium chloride			
Disinfectants and antiseptics			
Chlorexidine			
Ethanol			
Polyvidone iodine			
Chlorine base compound			
Oral rehydration			
Oral rehydration salts (for glucose-electrolyte solution)			
Medicines for diarrhoea in children			
Zinc sulfate			
Insulins and other anti-diabetic agents			
Insulin injection (soluble)			
Intermediate acting insulin			

Immunologicals			
Anti-D Immunoglobulin (human)			
Anti-tetanus immunoglobulin (human)			
Vaccines			
BCG vaccine			
Diphtheria vaccine			
Hepatitis vaccine			
Poliomyelitis vaccine			
Tetanus vaccine			
Muscle relaxants and cholinesterase inhibitors			
Suxamethonium			
Ophthalmological preparations			
Tetracyclin			
Oxytocics and anti-oxytocics			
Ergometrine			
Oxytocin			
Misoprostol			
Mifepristone-misoprostol			
Nifedipine			
Solutions correcting water, electrolyte and acid-base disturbances			
Glucose 5-10-50%			
Glucose with sodium chloride			
Sodium chloride 0.9% isotonic			
Sodium lactate, compound solution			
Water for injection			
Vitamins and minerals			
Retinol			

SCORE FOR 1.3 PHARMACY MANAGEMENT AND MEDICINE AVAILABILITY

KEY PRACTICES/ITEMS		**Score: Mother areas**	**Score: Newborn areas**
1.3.1	An essential medicine list exists and is used		
1.3.2	Medication storage areas are orderly, clean and secure and with proper system		

1.3.3	Cold chain is maintained for specific medications		
1.3.4	Pharmacy has current and accurate records		
1.3.5	System in place to track adverse medicines reactions and medication error		
1.3.6	Suitable medicines are available in the hospital pharmacy		
1.3.7	Suitable medicines are available in the clinical areas where likely to be needed		

SUB-CHAPTER SCORE

1.4 Equipment and supplies

Objective: To evaluate if the equipment and supplies for maternal and newborn clinical care are available and well maintained and the staff has adequate knowledge on how to use them properly and safely.

Source of data and instructions:
Use multiple sources of information:

- Documents and records– purchase records, reports
- Observation of equipment and supplies and of their use
- Talking with service providers and users
- Checking procedures and process for procurement and maintenance

All the following aspects need to be assessed:

- o Availability: check the number of devices / supplies present in the hospital (evaluate if the hospital in under-equipped or over-equipped)
- o Maintenance: check the number of those properly functioning and the quality of the maintenance process
- o Knowledge: evaluate the staff capacity to use the equipment adequately and safely
- o Practice: if possible, evaluate how the equipment is used in real clinical practice (this needs to be linked with chapters on case management)

1.4.1 Equipment is available	**Score: Mother areas**	**Score: Newborn areas**	**Comments**
□ Use ANNEX 1.4a and 1.4b to assess equipment availability			
1.4.2 Equipment is well maintained	**Score: Mother areas**	**Score: Newborn areas**	**Comments**
□ Use ANNEX 1.4a and 1.4b to assess equipment maintenance			
1.4.3 There is adequate knowledge on how to use the equipment	**Score: Mother areas**	**Score: Newborn areas**	**Comments**
□ Use ANNEX 1.4a and 1.4b to assess equipment availability and maintenance			
1.4.4 Adequate supplies are available	**Score: Mother areas**	**Score: Newborn areas**	**Comments**
□ Use ANNEX 1.4c to assess supplies			

ANNEX 1.4a Mother equipment

Cardiotocograph (CTG)
□ Number of CTG in the obstetric units : _____ o Number is adequate for birth rate
□ Number of CTG properly functioning:_____
□ Supplies of paper strips are available
□ Process of effective maintenance exists: o Scheduled calibration o Spare parts and repair available if needed o Record of maintenance exists
Appropriate use: □ Guidelines are available on the appropriate use of CTG □ The staff knows how to properly use the equipment □ The equipment is correctly used in clinical practice
Vacuum extractor
□ Number vacuum extractors present in the labour ward: _____ o Number is adequate for birth rate
□ Number of vacuum extractors properly functioning: _____
□ There is an adequate number of tubes and cups in relation to birth rate
□ Process of effective maintenance exists: o Adequate sterilisation system o Scheduled calibration o Spare parts and repair available if needed o Record of maintenance exists
Appropriate use □ Guidelines are available on the appropriate use of vacuum extractor □ The staff knows how to properly use the equipment □ The equipment is correctly used in clinical practice
Infusion pumps (maternal)
□ Number of infusion pumps present in the obstetric units : _____ o Number is adequate for birth rate
□ Number of infusion pumps properly functioning._____
□ Consumable supplies are available
□ Process of effective maintenance exists: o Scheduled calibration o Spare parts and repair available if needed o Record of maintenance exists

Appropriate use □ Guidelines are available on the appropriate use of infusion pump □ The staff knows how to properly use the equipment □ The equipment is correctly used in clinical practice
Ultrasound
□ Number of ultrasounds present in the obstetric units _____ o Number is adequate for birth rate
□ Number of ultrasounds properly functioning: _____
□ Consumable supplies are available □ An adequate number of transducers / probes (at least 1 linear and 1 vaginal) are present
□ Process of effective maintenance exists: o Scheduled calibration o Spare parts and repair available if needed o Record of maintenance exists
Appropriate use □ Guidelines are available on appropriate use of ultrasound □ The staff knows how to properly use the equipment □ The equipment is correctly used in clinical practice o Outputs are plotted on locally appropriate charts for fetal growth

ANNEX 1.4b Newborn Equipment

Incubators
□ Number of incubators present in neonatal units _____ o Number is adequate for birth rate
□ Number of incubators properly functioning: _____
□ Process of effective maintenance exists: o Scheduled calibration o Spare parts and repair available if needed o Record of maintenance exists
Appropriate use □ Guidelines are available on appropriate use of incubators o Written procedures for cleaning exist □ The staff knows how to properly use the equipment □ The equipment is correctly used in clinical practice o Only one baby in each incubator o No use of hot water containers to maintain heat o Cleanliness (internal water tanks) o Temperature (control, probes, records) o Alarms used, distance from 'nurses station' o Facilitation of mother access ad breastfeeding o Incubator is not used when maternal skin to skin contact can provide adequate warmth
Radiant warmer, other heating systems
□ Number of warmers present in the neonatal units _____ o Number is adequate for birth rate
□ Number of warmers properly functioning: _____
□ Process of effective maintenance exists: o Scheduled calibration o Spare parts and repair available if needed o Record of maintenance exists
Appropriate use □ Guidelines are available on appropriate use of warmers □ The staff knows how to properly use the equipment □ The equipment is correctly used in clinical practice o Cleanliness o Temperature (control, probes, records) o Alarms used, distance from 'nurses station' o Warmer is not used when maternal skin to skin contact can provide adequate warmth o Pre-use heating of the warmer when used at the birth
Phototherapy lamps

- □ Number of phototherapy lamps present in the neonatal units _____
  - o Number is adequate for birth rate

- □ Number of phototherapy lamps properly functioning: _____

- □ Process of effective maintenance exists:
  - o Scheduled calibration
  - o Spare parts and repair available if needed
  - o Record of maintenance exists

Appropriate use
- □ Guidelines are available on appropriate use of phototherapy lamps
- □ The staff knows how to properly use the equipment
- □ The equipment is correctly used in clinical practice
  - o Distance between lights and skin: depending on equipment (usually 45-60cm)
  - o Monitoring baby's hydration and temperature
  - o Monitoring time of use of lamps (check if still effective)
  - o Check whether medicines without proven efficacy for reducing jaundice are used, together with phototherapy
  - o Facilitation of mother's access and breastfeeding

Glucometer

- □ Number of glucometers present in the neonatal units _____
  - o Number is adequate for birth rate

- □ Number of glucometers properly functioning: _____

- □ Consumable supplies are available

- □ Process of effective maintenance exists:
  - o Scheduled calibration
  - o Spare parts and repair available if needed
  - o Record of maintenance exists

Appropriate use
- □ Guidelines are available on appropriate use of glucometers
- □ The staff knows how to properly use the equipment
- □ The equipment is correctly used in clinical practice
  - o The results are reported in medical records

Equipment for the delivery of oxygen

- □ Number of different types of devices (oxygen bomb, compressor present in the neonatal units _____
  - o Number is adequate for birth rate

- □ Number of devices properly functioning: _____

- □ Consumable supplies are available

- □ Process of effective maintenance exists:
  - o Scheduled maintenance, turnover of tubes

- o Spare parts and repair available if needed
- o Record of maintenance exists

Appropriate use
- □ Guidelines are available on appropriate use of oxygen delivery devices
  - o humidification methodology and hygiene
- □ The staff knows how to properly use the equipment
- □ The equipment is correctly used in clinical practice
  - o Cleanliness of water tanks

Pulse-oximeters

- □ Number of pulse-oximeters present in the neonatal units ____
  - o Number is adequate for birth rate

- □ Number of pulse-oximeters properly functioning: _____

- □ Process of effective maintenance exists:
  - o Scheduled calibration
  - o Spare parts and repair available if needed
  - o Record of maintenance exists

Appropriate use
- □ Guidelines are available on appropriate use of pulse-oximeters
- □ The staff knows how to properly use the equipment
- □ The equipment is correctly used in clinical practice
  - o Appropriate positioning of probes, alarms used
  - o Recording checked
  - o Clear target value for the oxygen saturation specific for gestational ages
  - o Nurses are allowed to change FiO_2 following the guidelines
  - o If a pulse-oximeters is available, it must be in use on a baby in O_2 therapy

Multi-functions monitors

- □ Number of monitors present in the neonatal units _____
  - o Number is adequate for birth rate

- □ Number of monitors properly functioning: _____

- □ Process of effective maintenance exists:
  - o Scheduled calibration
  - o Spare parts and repair available if needed
  - o Record of maintenance exists

Appropriate use
- □ Guidelines are available on appropriate use of monitors
- □ The staff knows how to properly use the equipment
- □ The equipment is correctly used in clinical practice
  - o Appropriate positioning of leads, alarms used
  - o Recording checked

Infusion pumps: peristaltic and syringe (neonatal)
□ Number of infusion pumps present in the units _____ o Number is adequate for birth rate
□ Number of infusion pumps properly functioning: _____
□ Consumable supplies are available
□ Process of effective maintenance exists: o Scheduled calibration o Spare parts and repair available if needed o Record of maintenance exists
Appropriate use □ Guidelines are available on appropriate use of pumps □ The staff knows how to properly use the equipment □ The equipment is correctly used in clinical practice o Alarms used o Clinical records include prescription, liquid balance, weight, glycaemia, etc.
Non invasive ventilation (CPAP or other)
□ Number of CPAP or other devices in the units _____ o Number is adequate for birth rate
□ Number of CPAP devices properly functioning: _____
□ Consumable supplies are available
□ Process of effective maintenance exists: o Scheduled calibration o Spare parts and repair available if needed o Record of maintenance exists
Appropriate use □ Guidelines are available on appropriate use □ The staff knows how to properly use the equipment □ The equipment is correctly used in clinical practice o Observe nursing sequence; medical prescriptions. o Presence and functionality of the medical air source
Mechanical ventilators
□ Number of ventilators present in the units _____ o Number is adequate for birth rate
□ Number of ventilators properly functioning: _____
□ Consumable supplies are available
□ Process of effective maintenance exists: o Scheduled calibration

o Spare parts and repair available if needed o Record of maintenance exists
Appropriate use □ Guidelines are available on appropriate use of pumps □ The staff knows how to properly use the equipment □ The equipment is correctly used in clinical practice o Observe the nursing sequence for aspiration procedures, use of alarms o In the clinical records check the clarity of medical prescriptions and clinical notes, parameters recording, use of medicines for sedation

Presence of other equipments (without specific score):

Type of equipment	In total	In use	Maintenance	Comments
Arterial blood gas analyzer				
High frequency oscillatory ventilation (HFOV)				
Echo-sonography				
Neonatal X-ray equipment				
Transport incubator (with ventilator)				

ANNEX 1.4c Supplies

For supplies not found in the wards, check the hospital pharmacy, (note this information under "comments"). Some of this equipment may be available only in 3rd level hospitals*

Common to mother and newborn	Mother	Newborn
Venous access		
□ Disposable needles □ Peripheral Intravenous Central Catheter lines (PICC) □ Syringes + set for infusion pump □ Syringes 1 ml □ Infusion set for volumetric infusion pump □ Infusion set □ Infusion set with filter for blood □ Blood lancet	□ IV cannula G 21-18-16-14 □ Spinal needle adult □ Intraosseus needle adult	□ IV cannula G 22-24 □ Butterfly 19 (for lumbar puncture) □ Butterfly 21-23 □ Umbilical catheters □ Exchange transfusion kit
Comments		

Airways		
□ Antimicrobic filter □ Oxygen prolong □ Respiratory circuit with heated humidifier □ Suction probe with fingertip control or fingertip control valve □ Pipe for suction machine □ Chest drain tubes □ Oxygen concentrator □ Oxygen cylinder □ Central Oxygen Supply □ Medical air compressor *	□ SpO_2 sensor □ Self-inflating bag for adult □ Mask for adult □ Guedel for adult □ Laryngoscope with blades □ Endotracheal Tube (E.T) for adults □ Oxygen mask adult □ Oxygen mask with reservoir * □ Chest drainage system adult	□ Stethoscope (newborn or at least children size) □ SpO_2 sensor □ Self-inflating bag 250/500 ml □ Mask nr. 00-0-1 □ Guedel nr. 00-0-1 □ Laryngoscope with blades nr 0 – 1 □ Endotracheal Tube (E.T) nr 2.5-3-3.5 □ Nasal cannula newborn □ Continuous Positive Air Pressure (CPAP) complete circuit * □ CPAP nasal prongs * □ Chest drainage system for newborn *
Comments		
Gastrointestinal		
□	□ Naso gastric tube for adults	□ Naso gastric tube for feeding Ch 5-6-8 □ Cups/spoons for feeding □ System for feeding pump
Comments		
Urinary system		
□ Urine dipstick strips	□ Adhesive urine bag □ Closed urinary drainage system □ Foley catheter	□ Adhesive urine bag newborn size
Comments		
Dressing and surgery		
□ Suture non-absorbable □ Blades □ Gauze sterile/not sterile □ Gloves sterile/not sterile □ Dressing kit □ Wound drainage system □ Disposable sterile gowns □ Disposable surgical mask □ Disposable surgical drapes	□ Clean razors □ Suture absorbable □ Episiotomy scissors	□ Cord cutting/cord clamping set

Other		
□ Tape measure □ ECG sensor □ Thermometers □ Sterile tubes (for cerebrospinal puncture)	□ Obstetric forceps/ventouse □ Speculum □ Pinard stethoscope □ Breast pumps □ Sphygmomanometer □ Adult weighing scale	□ Ophthalmoscope □ Baby weighing scale
Comments		

SCORE FOR 1.4 EQUIPMENT AND SUPPLIES

Type of equipment	**Score: Mother areas**	**Score: Newborn areas**
1.4.1 Equipment available		
1.4.2 Equipment well maintained		
1.4.3 Adequate knowledge on how to use the equipment		
1.4.4 Adequate supplies		

SUB-CHAPTER SCORE

1.5 Laboratory support

Objective: To evaluate if the laboratory services are adequate

Source of data and instructions:
Use multiple sources of information:

- Discuss with doctors, and chief laboratory tech
- observe of patient's charts and real cases

1.5.1 Availability of priority tests for managing emergency conditions		**Score:**
	Average time	Comments
□ Blood glucose		
□ Haemoglobin		
□ Haematocrit (PCV)		
□ Full blood count		
□ Leukocytes count		
□ Immature to total neutrophil ratio		
□ Blood grouping and cross-match		
□ Coombs' test direct and indirect		
□ Rhesus antibodies		
□ Blood bilirubin		
□ Blood gases analysis		
□ Electrolytes		
□ Coagulation tests		
□ Liquor microscopy		
□ Malaria rapid test or blood smear (if applicable)		
□ HIV rapid test (if applicable)		
□ Quick test for Urine protein		
□ Transaminases (AST, ALT)		
1.5.2 Availability of micro sampling methods		**Score:**
□	□ Average time	Comments
□ Micro sampling quick methods for glucose, haemoglobin, and bilirubin are available		
1.5.3 Availability of other lab tests		**Score:**

□	**Average time**	Comments
□ Serum protein		
□ Liver function tests		
□ Renal function tests		
□ Urine protein		
□ Total Urine protein from 1 day urine collection		
□ Urine biochemistry		
□ Urine microscopy		
□ Urine culture		
□ Blood culture		
□ Liquor culture		
□ Culture for Group B Streptococcus		
□ Sputum smear for TBC		
□ Other tests for TBC		
□ Liquor biochemistry		
□ HIV test		
□ Protein C reactive		
□ Serologic test for syphilis		
□ Antibodies for HBV		
□ Antibodies for HCV		
□ Antibodies for CMV		
1.5.4 Availability of blood		**Score:**
□ Blood is available at hospital level in case that a blood transfusion is needed □ Blood is adequately screened before transfusion (HIV, HBV, HCV, malaria, etc)		Comments
1.5.5 Quality Control		**Score:**
□ The laboratory of the hospitals has a system of quality control, such as routine check of inter-laboratories agreement		Comments
1.5.6 Use of tests in clinical practice		**Score:**
□ Staff is able to interpret laboratory tests and the results of the tests and this is taken into account for clinical management (both diagnosis and treatment).		Comments
1.5.7 Access and cost		**Score:**

□ At least emergency laboratory tests are free of charge □ No unofficial payment should is due when officially tests are free of charge	Comments

SCORE FOR 1.5 LABORATORY SUPPORT

KEY PRACTICES/ITEMS	Score
1.5.1 Availability of priority tests	
1.5.2 Availability of micro sampling methods	
1.5.3 Availability of other lab tests	
1.5.4 Availability of blood	
1.5.5 Quality Control	
1.5.6 Use of tests in clinical practice	
1.5.7 Access and cost	

SUB-CHAPTER SCORE

1.6 Ward infrastructure

Objective: To evaluate the infrastructures and the organization of the areas dedicated to maternal and newborn care

Source of data and instructions:

- Observation of organisation, practices and procedures
- Interview with mothers
- Talking with staff provides a complementary source of information

1.6.1 Hygienic conditions	**Score: Maternity areas**	**Score: Neonatal areas**	**Comments**
□ Ward is clean with no visible soil □ Toilets and washing areas are clean and warm □ Waste are collected properly □ Cupboard, shelves and trolleys are clean and orderly			
1.6.2 Beds are adequate	**Score: Maternity areas**	**Score: Neonatal areas**	**Comments**
□ Each mother has her own bed with mattress that is large enough for safe co-bedding with her infant □ Beds are safe, clean and well maintained □ Bed linen is provided by the hospital □ Each bed is protected by a mosquito net (insecticide) □ Each infant in the neonatal unit has their own cot □ Each infant cot (neonatal unit) is protected by a mosquito net (insecticide)			
1.6.3 Specific area is dedicated to the most seriously ill or infectious women or newborn	**Score: Maternity areas**	**Score: Neonatal areas**	**Comments**
□ High need beds are close to the nurse station □ Single room for infectious patients □ Emergency management area in or near to the ward			
1.6.4 The room temperature is controlled	**Score: Maternity areas**	**Score: Neonatal areas**	**Comments**
□ No cold draught are presents □ Air conditioner or heater and/or fans are used □ Wall working thermometer is available □ Windows are protected from sun or cold			

1.6.5 Hygiene facilities are sufficient and adequate	Score: Maternity areas	Score: Neonatal areas	Comments
□ Easily accessible facilities □ Adequate number and type of toilet □ Adequate number and type of showers □ Adequate sources of water for hand washing □ Safe surface for washing and for changing baby's nappy □ Hot water available continuously □ Privacy is respected □ Separate from the staff services			
1.6.6 Hospital accommodation	**Score: Maternity areas**	**Score: Neonatal areas**	**Comments**
□ Food is provided at least 3 times a day □ If food is not provided, a clean dedicated area to prepare food is available □ Washing facilities for women and baby clothes □ Visitors are allowed □ Relatives are allowed to stay overnight with woman/infant to provide care, if needed □ Space exists for staff to talk to mother/family in privacy, if needed □ Space exists for clinical treatment to be given in privacy			
1.6.7 Ward pharmacy			
□ Cupboard is clean □ No expired medicines □ Medicines in their original package □ Narcotics or dangerous medicines are locked □ No access to medicine cupboard by unauthorized staff □ There is a fridge were to store medicines that need refrigeration			
1.6.8 A proper system for the identification of patient is in place.			
□ The newborn/mother couple are clearly identified □ Patient is identified prior to interventions (e.g. blood test, therapy, surgical procedure)			

SCORE FOR 1.6: WARD INFRASTRUCTURE

KEY PRACTICES/ITEMS		Score Maternity areas	Score Neonatal areas
1.6.1	Hygienic conditions		
1.6.2	Beds are adequate		
1.6.3	Specific area for seriously ill or infectious women or newborn		
1.6.4	The room temperature is controlled		
1.6.5	Hygiene facilities are sufficient and adequate		
1.6.6	Hospital accommodation		
1.6.7	Ward pharmacy		
1.6.8	A proper system for the identification of patient is in place		

SUB-CHAPTER SCORE

SCORE FOR 1 HOSPITAL SUPPORT SERVICES

SUBCHAPTERS		Score: Mother areas	Score: Newborn areas
1.1	Physical structures, staffing and basic services		
1.2	Statistics, health management information systems (HMIS) and medical records		
1.3	Pharmacy management and medicine availability		
1.4	Equipment and supplies		
1.5	Laboratory support		
1.6	Ward infrastructure		

CHAPTER 1 SCORE

CHAPTER 1 SUMMARY

MAIN STRENGTHS: **1.** **2.** **3.** **4.** **5.**
MAIN WEAKNESS: **1.** **2.** **3.** **4.** **5.**
COMMENTS: **1.** **2.** **3.** **4.** **5.**

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SECTION 2
CASE MANAGEMENT

2. Care for normal labour and vaginal birth

3. Care for caesarean section

4. Management of maternal complications and emergency care

5. Newborn infant care

6. Sick newborn care

7. Advanced newborn care

8. Monitoring and follow-up

2. Care for normal labour and vaginal birth

Objective: To evaluate the practices related to care for normal labour and birth.

Sources of data and instructions:

- Documents and records:
  - Written policies, guidelines, and protocols
  - Clinical logs: number of vaginal births, vacuum, episiotomy – notice if there are patterns/stereotypes which can indicate low quality of data recording
  - Patient files: review a minimum of 25 files of normal births randomly chosen from the last 1-3 months
- Observation of care practices, equipment and its use in admission area, labour and birth area, postnatal area. Give observation of birth a priority, ask permission of the women to observe the birth, ensure "non-intrusive" observations
- Structured interviews with women and staff
- Informal talking with women and staff provides a complementary source of information

2.1 Case identification and admission	**Score:**
DEFINITIONS AND GUIDANCE □ Guidelines define standards for routine practice in normal labour, childbirth and puerperium □ Definitions of what constitutes normal and complicated labour are clearly laid out in guidelines which are known by staff and applied □ Criteria for referral and for requesting review are well defined in guidelines	Comments
CHOOSING A PROFESSIONAL □ All women are attended during labour and birth by a midwife or another professional who qualifies as skilled birth attendant □ The midwife is the lead care professional for normal pregnancy and birth □ Care is shared between midwifery and medical staff for complicated pregnancy and birth	
LOCATION □ Where referral systems are reliable, women with no complications have the option of labouring and birthing at home or in a stand-alone birth centre □ Where primary care in the community or referral systems are unreliable, referral centres have a functioning Maternity Waiting Home for use by women from remote areas or those with complicated pregnancies, free of charge □ If present, the Maternity Waiting Home is as similar as possible to home and daily assessment of obstetrical conditions is carried out	
2.2 Care at admission	**Score:**
BIRTH PLAN □ All women before being assessed in labour have their plan for birth discussed and documented in the birth notes	Comments

INITIAL ASSESSMENT □ Staff listen to the woman and take an accurate history □ Antenatal records and birth plan are reviewed □ Maternal and fetal conditions are appropriately assessed, including observations of vital signs, abdominal palpation and auscultation of fetal heart □ A vaginal exam is offered if the woman appears to be in labour □ Cardiotocography (CTG) is not routinely performed on admission in the absence of complications	
TIME OF ADMISSION □ Where referral and transfer systems are reliable, services facilitate women in early labour to stay at home, go to a birth centre, or attend a triage facility (avoiding hospital labour ward if possible). □ When a woman is not in established labour she is offered individualised support and offered early assessment at home where possible. □ If the woman is discharged home, she is provided with clear instructions: o Incorporating available supports o When to return to the birthing facility	
2.3 Appropriate conditions for the birth	**Score:**
PRIVACY □ Women's privacy is respected with a single room for labour and birth, or curtains/screens are available if there is more than one woman per room □ Bed is positioned away from doors or windows (not in front of them) □ Staff introduce themselves to the woman □ Woman's consent is obtained for attendance of any people to be present other than needed staff (i.e. students)	Comments
INFORMATION □ The woman is informed about the purpose of every procedure and her consent is sought □ Staff listen to the woman's preferences and involve her in decisions surrounding her care □ The woman has opportunities after birth for discussing any questions with members of staff	
EATING and DRINKING □ Women may drink during established labour, and may be informed that isotonic drinks may be more beneficial than water □ Women may eat a light diet in established labour unless they have received opioids or they develop complications that make a general anaesthetic more likely	

□ Acid suppressive medicines to prevent gastric aspiration and its consequences are not routinely administered during normal labour	
2.4 Infection prevention	**Score:**
CLEAN BIRTH □ Staff wash their hands before assisting with birth □ Staff use sterile gloves during birth □ Staff use gloves while disposing of waste □ Staff use sterile instruments	Comments
INAPPROPRIATE PRACTICES □ Enema is not performed routinely □ Pubic shaving is not performed □ Vagina is not swabbed with antiseptics during labour	
COMFORTABLE ENVIROMENT FOR MOTHERS AND NEWBORN □ There is an appropriate temperature in the birth area (should not be below 25° C) □ There is access to a functioning shower and toilet	
2.5 Labour support	**Score:**
COMPANIONSHIP □ At least one birth companion of her choice is encouraged to remain with women constantly during labour and birth to provide support	Comments
PROFESSIONALS □ There is at least one professional staff member present during labour and birth □ There is an established policy for “one-to-one care” (i.e. one midwife or skilled birth attendant for each labouring woman)	
ROLE OF PROFESSIONALS Components to be present: □ staying present at women side as much as possible □ verbally explaining labour progress □ encouraging, praising and/or reassuring □ encouraging and helping into comfortable position □ encouraging and helping with walking □ encouraging and helping into an upright position □ working in cooperation with the labour support companion □ actively offering oral fluids and light food □ encouraging voiding as needed □ keeping the mother clean and dry □ offering warm/cool compress □ assisting with shower □ helping with relaxation techniques	

□ explaining breathing techniques □ offering massage (if culturally acceptable)	
PAIN RELIEF □ Women who choose to use breathing and relaxation techniques, massage techniques, acupuncture, acupressure and hypnosis are supported in their choice □ The opportunity to labour in water (if available) is recommended for pain relief □ The playing of music of the woman's choice in the labour ward is supported □ Before choosing epidural analgesia, women are informed about the risks and benefits, and the implications for their labour □ Nitrous Oxide is available	
2.6 Partograph	**Score:**
USE OF PARTOGRAPH □ Partograph is used □ The WHO partograph with a four-hour action line is used □ A protocol/standard/algorithm for the appropriate use of the partograph is available	Comments
DATA COLLECTION AND USE Following data are properly measured and recorded with correct frequency: □ patient information □ foetal heart rate □ moulding □ cervical dilatation □ descent of head □ time □ uterine contractions □ oxytocin, medicines, IV fluids □ maternal blood pressure, temperature, pulse, urine □ additional notes (such as tired, drinks, eats, walking, shower, massage, etc)	
INTERPRETATION □ Partograph's information is collected, recorded and interpreted by the midwife / skilled birth attendant	
PLACE AND USE □ Partograph is placed near the labouring woman □ The use of partograph supports labour management interventions	
2.7 Care during first stage	**Score:**
POSITIONS □ Women are free to walk and encouraged to choose	Comments

different position	
VAGINAL EXAMINATIONS □ Woman consent is sought and an explanation of its purpose is given before a vaginal examination □ Digital vaginal examination is not performed unless in labour and/or unless induction is indicated □ Avoid routine use of disinfectant for cleaning the genital area (clean water can be used) □ A clear plan of care will be documented after each vaginal examination	
AMNIOTOMY □ Amniotomy is not performed as routine care □ Clinical intervention is not offered or advised where labour is progressing normally and the woman and baby are well	
2.8 Care during second stage	**Score:**
POSITIONS □ Women are allowed/encouraged to choose positions other than lying on her back during birth □ Midwife/skilled birth attendant physically helps women to find most comfortable position	Comments
LOCATION □ The woman is not moved to a specific birthing room or area but can stay in the same place as during the first stage	
PUSHING □ Once the woman is fully dilated, staff wait until she feels the spontaneous urge to push □ Women are not routinely forced to push during birth, if they do not feel the urge to push □ Second stage duration is calculated from the start of active pushing	
TIMING □ Duration of the second stage is not reduced unless there is foetal distress □ If a nulliparous woman has not given birth within 2 hours a senior review is requested (3 hours with epidural) □ If a parous woman has not given birth within 1 hour a senior review is requested (2 hours with epidural)	
KRISTELLER MANEUVER AND PRESSURE ON THE ABDOMEN □ Pressure on the abdomen is not used to support the birth of the baby	
PERINEUM GUARDING - RITGEN'S MANEUVER - HANDS ON HANDS OFF □ Two techniques can be used to facilitate spontaneous	

birth: the ‘hands on’ technique (guarding the perineum and flexing the baby’s head) or the ‘hands poised’ technique (with hands off the perineum and baby’s head, but ready to intervene)	
EPISIOTOMY □ Episiotomy is not routinely performed (only if foetal distress/operative birth with forceps) □ Local anaesthesia is given for episiotomy □ Where an episiotomy is performed, it is a mediolateral episiotomy □ There is a policy/guideline aiming at avoiding routine episiotomy	
2.9 Third stage management	**Score:**
TIMING □ The third stage of labour is defined as prolonged if: o not completed within 30 minutes of the birth of the baby with active management o not completed within 60 minutes with physiological management	Comments
COUNSELLING □ Women are informed about risks and benefits of physiologic versus active management of third stage and are involved in decision for management □ Active management of third stage is performed unless the woman’s choice is different	
ACTIVE MANAGEMENT □ Active management of third stage is appropriately performed giving oxytocin 10 IU i.m. after expulsion of shoulders or within 1 minute after birth of baby □ Cord traction is not routinely performed □ Uterine massage is not routinely performed □ Cord Traction and uterine massage are performed only by experienced professionals in selected cases	
OTHER MEASURES TO PREVENT POST PARTUM HAEMORRAGE □ Midwife or skilled birth attendant check fundus and contraction of the uterus after the placenta is delivered □ Any abnormality detected is reported to the physician in charge and documented in the birth notes □ A system to assess blood loss is in place □ Placenta and membranes are inspected for completeness after birth	
2.10 Fourth stage - early puerperium management	**Score:**
INITIAL ASSESSMENT OF THE NEWBORN BABY AND MOTHER–INFANT CONTACT □ Women should be encouraged to have skin to skin contact with their babies as soon as possible after the	Comments

birth □ The newborn is immediately placed in skin to skin contact with their mother and dried within the first 30 seconds after birth □ In the first minute after birth the assessment of gestational age, start of breathing, tone and reactivity, and presence of major malformations is carried out whilst the baby is skin to skin with the mother □ Umbilical cord is clamped after at least one minute unless there is an immediate clinical need to clamp early □ Mothers and babies remain in skin to skin contact and are not separated for routine procedures (weighing, bathing, dressing) for a minimum of one hour (irrespective of feeding choice) and until after the first breastfeed" SUTURES □ Minor tears are not stitched if not bleeding □ Episiotomy/tears are repaired with local anaesthesia □ Continuous, knotless repair is used for episiotomy or perineal tear □ Absorbable synthetic suture instead of catgut is used for episiotomy or perineal tear □ Gel pads and non-steroidal anti-inflammatory medicines are treatments of choice for perineal trauma and perineal pain	
ROUTINE CHECK-UPS AFTER BIRTH - ROUTINE POSTPARTUM CARE □ In the first 2-6 hours after birth, mothers and newborns are kept in an area where their conditions can be closely monitored □ Postnatal check-ups are performed to monitor maternal and newborn conditions after birth □ Check-ups take place frequently in the first few hours and regularly thereafter, and are well documented □ Maternal check-ups include at least the following key elements: o observations of vital signs o uterine palpation o assessment of blood loss o ensuring the woman passes urine within 6 hours and regularly thereafter o perineum inspection if sutured o breast inspection o questions on key symptoms □ Cervix is not routinely checked after birth □ Staff encourage and if necessary assist with breastfeeding within the first hour when the mother and baby are ready □ The woman is allowed to eat freely or refreshments are	

offered in the first few hours after birth	
DISINFECTION □ Vagina is not routinely swabbed with antiseptics after birth □ Disinfectant is not put on the perineum after birth	
OTHER MEASURES □ Ice is not placed on the mothers' abdomen after birth □ Bladder catheterization is not routinely performed post-partum	
DISCHARGE FOLLOWING NORMAL BIRTH □ Where postpartum care is available and reliable in the community, women are able to leave the facility after at least 18 hours from (normal) birth and when the woman feels ready and is willing to go home □ Where postpartum care is not available or reliable in the community, women are encouraged to stay in the facility an adequate time, and they are discharged when they feel ready and willing to go home □ Women are given information at discharged about at least the following key elements: o maternal and newborn danger signs and what to do o advice on breastfeeding and signs of adequate intake o advice on hygiene for themselves and their baby o perineal hygiene and exercises o good nutrition o pain relief o mobilization o return to work o family planning o psychological health	
2.11 Fetal heart rate (FHR) monitoring during labour and birth	**Score:**
PRESENCE □ A form of assessment of foetal wellbeing is available in the hospital	Comments
QUALITY OF MONITORING □ Guidelines for intermittent auscultation are in place stating in which way the auscultation should be performed □ Guidelines for performing and interpreting cardiotocography (CTG) are in place, known and used by the staff □ Intermittent auscultation of foetal heart beat is performed in normal labour □ Continuous CTG is used only in complicated pregnancies	

□ There is a local protocol for continuous CTG, which is based on evidence and local availability of resources	
TIMING OF INTERMITTENT FETAL HEART RATE (FHR) AUSCULTATION □ Fetal heart rate is checked for 60 sec after contraction: o at least every 20-30 minutes in the first stage of labour o at least every 5 minutes or after every contraction during active second stage (active pushing)	
CLINICAL SKILLS FOR INTERMITTENT FHR AUSCULTATION □ Midwives or skilled attendants performing intermittent auscultation are skilled enough to recognize the fetal heart beat pattern and the maternal uterine activity □ Maternal pulse is checked when performing intermittent auscultation	
PLAN OF ACTION □ In the presence of an abnormal FHR, a senior review is requested and, if available CTG monitoring is commenced	
INDICATIONS FOR CONTINUOUS CTG MONITORING (other than complicated pregnancies) □ Continuous CTG is started if FHR >160 bpm or <110 bpm; if presence of any deceleration; if complications become apparent (i.e. meconium, oxytocin infusion started)	
CONDITIONS OF CTG MACHINES AND QUALITY OF TRACES □ CTG machines are in good conditions and correctly working □ Day and time are correctly set in the CTG machine □ There is a standard setting of the machines for speed of paper, sensitivity and range of FHR □ CTG tracings are of good quality □ Women do not lie on their back when undergoing CTG □ Uterine activity is always registered together with the FHR during continuous CTG, baseline setting is appropriate	
NOTES ON CONTINUOUS CTG MONITORING TRACES □ Name of the woman, day and time are registered on the paper trace □ Mode of birth, date and time are registered on the trace □ CTG trace is stored with the notes after birth □ Any intra-partum event that can influence fetal heart rate is written in the notes or on the CTG trace.	
INTERPRETATION OF CONTINUOUS CTG TRACES □ The staff dealing with the CTG correctly identifies the	

CTG features and is able to categorize the CTG tracings as reassuring, non-reassuring or abnormal on the basis of these features and using specific guidelines for interpretation □ When called to review a CTG, members of the staff register their analysis by describing the CTG features and the overall CTG pattern □ If medical staff is called to review the CTG, the evaluation is written in the notes or on the trace	
PLAN OF ACTION □ In presence of a non reassuring/abnormal CTG a specific plan of reaction is started □ Ancillary tests for evaluation of fetal wellbeing are available and used in case of non-reassuring or abnormal CTG (fetal blood sampling, fetal Electrocardiography (ECG) with attention to the ST tract (if available), scalp/vibro-acoustic stimulation...) □ If the abnormal CTG suggests the need to expedite birth, an urgent/emergency caesarean section/operative vaginal birth is performed within 30 minutes	

SCORE FOR 2. CARE FOR NORMAL LABOUR AND VAGINAL BIRTH

KEY PRACTICES/ITEMS	SCORE
2.1 Case identification and admission	
2.2 Care at admission	
2.3 Appropriate conditions for the birth	
2.4 Infection prevention	
2.5 Labour support	
2.6 Partograph	
2.7 Care during first stage	
2.8 Care during second stage	
2.9 Third stage management	
2.10 Fourth stage - early puerperium management	
2.11 Fetal monitoring during labour and birth	

CHAPTER 2 SCORE

SUMMARY

MAIN STRENGTHS: **1.** **2.** **3.** **4.** **5.**
MAIN WEAKNESS: **1.** **2.** **3.** **4.** **5.**
COMMENTS: **1.** **2.** **3.** **4.** **5.**

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3. Care for caesarean section

Objective: to evaluate the practices of care for caesarean section

Sources of data and instructions:

- Documents and records:
  - Written policies, guidelines, and protocols
  - Clinical logs: number of caesarean-sections – notice if there are patterns/stereotypes which can indicate low quality of data recording
  - Patient files: review a minimum of 15 files of caesarean section births randomly chosen from the last 1-3 months
- Observation of care practices, equipment and its use in labour and birth area, theatre and recovery area, postnatal area. Give observation of caesarean section births a priority, ask permission of the women to observe the birth, ensure “non-intrusive” observations
- Structured interviews with women and staff
- Informal talking with women and staff provides a complementary source of information

3.1 Emergency caesarean section (CS) can be performed without delay	**Score:**
□ A protocol is available for emergency CS stating what the staff should do □ Emergency caesarean section can be performed in less than 30 minutes o Theatre is always ready to perform emergency CS (equipment for surgery, electricity...) o Operating theatre staff is immediately available for emergency caesarean section o Anaesthesiologist is immediately available for emergency CS o Surgeon is immediately available for emergency CS o Laboratory is immediately available and blood test results readily available o Blood is readily available if blood transfusion needed o 0-negative blood is always present in the facility	Comments
3.2 Caesarean section (CS) is not performed without indication or with inappropriate indication	**Score:**
□ Elective CS is not performed routinely in uncomplicated twin pregnancies (performed only if first twin is not vertex lie) □ CS is not routinely offered to women with a previous caesarean □ CS is not routinely offered in preterm pregnancies □ CS is not routinely offered in pregnancies complicated by small for gestational age babies □ CS is performed for placenta previa only if it partly or completely covers the internal cervical os □ CS is not routinely offered for maternal viral infections with the exception of primary HSV infection in the 3rd trimester □ CS is not offered on the grounds of HIV status to prevent mother-to-child transmission of HIV to: o women on highly active anti-retroviral therapy (HAART)	Comments

with a viral load of less than 400 copies per ml or o women on any anti-retroviral therapy with a viral load of less than 50 copies per ml □ CS on maternal request is allowed only in very specific circumstances o When there is a maternal request for CS, the risks and benefits of vaginal birth versus CS are discussed with the woman and discussion is documented in the notes. Other members of the obstetrics team (obstetrician, midwives and anaesthetist) are involved in the discussion o Women requesting CS with no clinical indication are referred for a second opinion after discussion o Psychological counselling is offered to women worried about labour/vaginal birth o If after counselling and offer support a vaginal birth is still not an acceptable option, a planned CS is offered or the woman sent to another obstetrician	
3.3 Policies to reduce the likelihood of caesarean section are implemented	**Score:**
□ Vaginal birth after CS is recommended if no contraindications and after informed consent of the woman □ All women with breech presentation are offered the option of an external cephalic version □ Continuous support during labour is offered □ Fluids and light foods are offered in uncomplicated labours □ Walking around and positions of maternal choice are encouraged during labour □ Induction of labour for pregnancy beyond 41 weeks is offered □ Partograph with a 4-hour action line is used □ Consultant obstetrician is always involved in the decision about caesarean section □ Ancillary tests for abnormal cardiotocography (CTG) tracing are used to reduce the incidence of CS for foetal distress, if available (foetal blood sampling, foetal electrocardiography (ECG) with attention to the ST tract …)	Comments
3.4 Procedures related to caesarean section are in agreement with the international standards	**Score:**
□ Elective CSs are performed after 39 weeks of pregnancy □ Informed consent is obtained from women undergoing CS □ Haemoglobin assessment is performed in all women undergoing CS □ High risk CS (antepartum haemorrhage, uterine rupture, placenta previa) are always performed in a Unit with transfusion available on site □ Cross match and clotting are not routinely requested □ An indwelling urinary catheter is placed if CS performed under epidural/spinal	Comments

□ Regional anaesthesia is offered as a first choice to all women undergoing CS □ Pre-load with fluids (crystalloids, colloids) and intravenous ephedrine or phenylephrine are offered to women having CS under epidural/spinal □ The operating table is tilted 15° until the birth of the baby □ Women are given their infant to hold in skin to skin contact immediately (within 5 minutes) of birth, or as soon as the mother is alert and infant is stable, continuing for at least 60 minutes (irrespective of feeding choice) and until after the first breastfeed, unless there is a medical indication for separation. If the mother is unable to provide skin to skin contact this is provided by a close relative □ Women are kept informed of their infant's wellbeing at regular intervals if mother and infant are separated	
3.5 Surgical technique is appropriate	**Score:**
□ A transverse abdominal incision is routinely performed □ The uterine incision is extended bluntly □ Forceps used only if there is difficulty delivering the baby's head □ IV oxytocin is given at delivery of placenta □ Controlled cord traction (not manual removal) is used to deliver the placenta □ Visceral and parietal peritoneum are not sutured □ Subcutaneous tissue is sutured only if > 2 cm thick □ Superficial wound drains are not routinely used □ Antibiotic prophylaxis is appropriately given after cord clamping	Comments
3.6 Postoperative care of women after caesarean section is appropriate	**Score:**
□ After caesarean section women are closely observed by a properly trained member of staff until they have regained airway control and cardio-respiratory stability and are able to communicate □ Oxygen, suction and resuscitation equipment are readily available and functioning □ After recovery from anesthesia, observations (respiratory rate, heart rate, blood pressure, pain and sedation) are continued every half hour for 2 hours, and regularly thereafter if the observations are stable or satisfactory. If these observations are not stable, more frequent observations and medical review are done □ Nursing staff have adequate guidelines on post-operative pain relief □ There are specific notes from the surgeon on the procedure performed, required monitoring and necessary treatment □ Theatre staff give a complete patient handover to ward staff □ Women who are recovering well after CS and do not have complications can eat and drink when they feel hungry or	Comments

thirsty. □ If complications prevent oral food and fluids, IV fluid nutrition should be commenced within 6 hours □ Removal of the urinary bladder catheter is carried out once women are mobile after a regional anaesthetic and not sooner than 12 hours after the last 'top up' dose □ A protocol for prophylaxis of deep vein thrombosis after CS is in place	
3.7 Care of women after the first 24 hours is appropriate	**Score:**
□ Women who have had a CS are offered the opportunity to discuss with their healthcare providers the reasons for the CS and implications for the child, future pregnancies, and for their own health □ Women who are recovering well and do not have fever or complications following CS are offered early discharge from hospital and follow-up at home. □ Women who have a CS are prescribed and encouraged to take regular oral analgesia for postoperative pain □ Temperature is monitored to exclude fever □ Wound is assessed for signs of infection, separation or dehiscence □ Women are encouraged to wear comfortable clothes and gently clean and dry wound daily □ Women who have had a CS are informed when they can resume activities such as driving a vehicle, carrying heavy items, formal exercise and sexual intercourse (including any physical restrictions or distracting effect due to pain) □ 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 □ A discharge letter is given	Comments

SCORE FOR 3. CAESAREAN SECTION

KEY PRACTICES/ITEMS		Score
3.1	Emergency caesarean section can be performed without delay	
3.2	Caesarean section is not performed without indication or with inappropriate indication	
3.3	Policies to reduce the likelihood of caesarean section are implemented	
3.4	Procedures related to caesarean section are in agreement with the international standards	
3.5	Surgical technique is appropriate	
3.6	Postoperative care of women after caesarean section is appropriate	
3.7	Care of women after the first 24 hours is appropriate	

CHAPTER 3 SCORE

SUMMARY

MAIN STRENGTHS: **1.** **2.** **3.** **4.** **5.**
MAIN WEAKNESS: **1.** **2.** **3.** **4.** **5.**
COMMENTS: **1.** **2.** **3.** **4.** **5.**

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4. Management of maternal complications

Objective: To evaluate the practices related to management of maternal obstetric complications

Sources of data and instructions:

- Documents and records:
  - Written policies, guidelines, and protocols
  - Clinical logs: number of complications and outcomes – notice if there are patterns/stereotypes which can indicate low quality of data recording
  - Patient files: review a minimum of 25 files of maternal complication randomly chosen from the last months. Review all files of maternal death from the last 12 months
- Observation of practices, equipment and its use in admission area, labour and birth area, postnatal area. Give observation during medical round in the ward a priority, ask permission of the women to check files, ensure “non-intrusive” observations
- Structured interviews with women and staff
- Informal talking with women and staff provides a complementary source of information

4.1 Emergency preparedness for maternal complications

4.1.1 Layout and structure of the emergency department are appropriate	**Score:**
□ There is a consultation area for moderately ill women/newborn babies □ The consultation area is separate from the normal outpatient facility dealing with patients □ There is an emergency management area equipped to take care of women/newborn babies □ Emergency area is easy to find and easy to reach (no physical barriers) □ Internal transport of the woman from the consultation area to the emergency area and to the labour ward /theatre is quick and easy	Comments
4.1.2 There is a system in place for prioritizing emergencies (triage)	**Score:**
□ Women are assessed for severity/ priority signs (triaged) immediately on arrival □ Women do not have to wait for registration, payment, their turn etc. before a first assessment is done and action taken	Comments
4.1.3 Staff is adequate to deal with emergencies	**Score:**
□ A qualified staff member is designated to carry out triage □ Staff in charge of triage is adequately trained and is able to apply triage criteria □ A health professional is immediately available and has adequate skills to manage women with an emergency condition □ A process of continuous medical education and training of the staff is in place □ Drills (practice) for emergencies are regularly organised	Comments

4.1.4 Adequate equipment, medicines and supplies are readily available in the emergency area	**Score:**
□ The emergency area is appropriately equipped to deal with emergencies □ Essential tests (glucose, haemoglobin or haematocrit, urine stick for proteinuria) are available and results are obtained timely □ Essential medicines for emergency conditions (anticonvulsants, glucose, IV fluids) are always available and free of charge to the family □ Essential equipment (needles and syringes, nasogastric tubes, oxygen equipment, self inflating resuscitation bags-AMBU bags- with masks of different sizes, nebulizers or spacers) is available □ Medicines, equipment and supplies are well organised and rapidly accessible in case of emergency □ An emergency trolley is available with everything that is needed to deal with the most relevant emergency conditions (i.e. maternal emergency kits, newborn emergency kit) □ Blood supplies are available at hospital level	Comments
4.1.5 Management of emergencies is efficient and appropriate	**Score:**
□ Women come with referral notes when they have been referred from primary care units □ Monitoring charts are available □ Team work is efficient in case of emergency (every member of the staff knows her/his duties) □ Diagnosis and management of cases are appropriate □ There are job aids (wall charts, chart booklets) displayed for the management of obstetrics emergencies and protocols are available □ Discharge letter is given to the woman or family or to the referral unit	Comments

SCORE FOR 4.1 EMERGENCY PREPARDNESS FOR MATERNAL COMPLICATIONS

KEY PRACTICES/ITEMS	**Score**
4.1 Layout and structure of the emergency department are appropriate	
4.2 There is a system in place for prioritizing emergencies (triage)	
4.3 Staff is adequate to deal with emergencies	
4.4 Adequate equipment, medicines and supplies are readily available in the emergency area	
4.5 Management of emergencies is efficient and appropriate	

SUBCHAPTER SCORE

4.2 Postpartum Haemorrhage (PPH)

4.2.1 The unit has adequate organization to cope with a major PPH	**Score:**
□ A local protocol for preventing and managing PPH is available □ A formal protocol for referral of woman to a higher level of care is available □ A written procedure is in place to alert the relevant staff: senior obstetrician, senior midwife, anaesthesiologist on call, blood bank and haematologist □ Pre-service and in-service simulation programmes are routinely in place □ Adequate equipment, medicines and personnel are readily available in case of PPH □ The blood bank is available 24 hours and blood can be obtained without delay □ Operating theatre and skilled staff (anaesthesiologist and senior obstetrician) are available 24 hours to perform a postpartum hysterectomy or other surgical interventions	Comments
4.2.2 Early recognition and initiation of measures to reduce bleeding are in place	**Score:**
□ After childbirth, blood loss and other clinical parameters are closely monitored □ Uterine tonus is adequately checked after birth	Comments
4.2.3 Case management is in line with international standards	**Score:**
□ Call for help □ Assess airway, breathing, circulation □ Insertion of one or two large bore (14-16 Gauge) IV lines □ Blood sent for FBC, coagulation, ABO and cross-match, □ Fluid infusion started immediately (rapid administration of warm fluid) □ Oxygen administration by mask 10-15 l/min □ Woman kept warm □ Blood pressure, pulse, respiratory rate, oxygen saturation and urine output monitored (bladder catheterized) □ Uterus explored (check for atony, retained placental fragments, rupture) and lower genital tract checked for trauma □ Presence of an abnormality of the coagulation or extra-genital bleeding considered	Comments
4.2.4 Initial resuscitation is correctly managed	**Score:**
□ Crystalloids are infused in a volume at least 3 times the volume lost □ Warmed up IV fluids are given as rapidly as possible up to a maximum of 3.5 L while awaiting compatible blood □ The use of isotonic crystalloids is preferred to the use of	Comments

colloids □ If blood loss is >1000 and is continuing, red cells for transfusion are readily available □ In the acute scenario, decision about transfusion is guided by the clinical picture (heavy, continuing bleeding or clinical signs of acute severe anaemia/hypoxia) not by the laboratory results □ Blood transfusion is usually performed also if Hb<7 and continued blood loss □ Transfusions are kept to a minimum and prescribed only when benefits outweigh the risks □ Informed consent is obtained for transfusion □ Fresh frozen plasma (4 U for every 6 U of red cells transfused or 12-15 ml/Kg, maximum dose of 1 litre) is given in the presence of minor continuous bleeding upon specific criteria (if APTT and PT exceed 1.5 times the control level) or in case of massive bleeding even before clotting results are available □ Platelets are given if platelets <$50x10^9$ /Litre □ Cryoprecipitate given if fibrinogen<1gr/ Litre	
4.2.5 Uterine atony is correctly managed	**Score:**
□ Temporizing measures to reduce/stop bleeding are known and used (uterine massage, bimanual uterine compression, external aortic compression) □ Non-pneumatic anti-shock garments are used as a temporizing measure if available □ Uterine packing is not performed □ Intravenous oxytocin given at the adequate dose 20-40IU/500-1000 mls normal saline □ If intravenous oxytocin is unavailable or if bleeding does not respond to oxytocin, the use of intravenous ergometrine, oxytocin-ergometrine fixed dose, or a prostaglandin medicine (including misoprostol 800mcg sublingual/1000mcg rectal) is recommended □ If bleeding does not stop after oxytocin administration, a second line uterotonic (see above) is used. □ Tranexamic acid is used if oxytocin and other uterotonics fail to stop the bleeding or if it is thought that the bleeding may be partly due to trauma (1g IV over 1 minute; repeat 1g after 30 minutes) □ Use of factor VIIa is limited only to women with specific haematological indications	Comments
4.2.6 Refractory haemorrhage after medical treatment is treated according to the international standards	**Score:**
□ Anaesthesiologist and blood bank alerted □ Call for help: senior staff should come for surgery □ One staff monitors and records the findings □ One person is responsible for delivery and preparation of blood □ One staff is responsible of blood transfusion	Comments

□ Bimanual compression of the uterus and compression of the aorta are done □ Balloon or condom tamponade are used □ Tranexamic acid is given □ Embolization of the uterine arteries is offered and rapidly performed if other measures have failed, and resources are available □ Surgical conservative approaches are tried first (compression sutures, then artery(uterine/hypogastric) ligation) □ Hysterectomy is used as the last surgical resort □ The level of skill of the health care providers guides the selection and sequence of surgical interventions	

SCORE FOR 4.2 POSTPARTUM HAEMORRHAGE (PPH)

KEY PRACTICES/ITEMS		**Score**
4.2.1	The unit has adequate organization to cope with a major PPH	
4.2.2	Early recognition and initiation of measures to reduce bleeding are in place	
4.2.3	Case management is in line with international standards	
4.2.4	Initial resuscitation is correctly managed	
4.2.5	Uterine atony is correctly managed	
4.2.6	Refractory haemorrhage after medical treatment is treated according to the international standards	

SUBCHAPTER SCORE

4.3 Preeclampsia

4.3.1 Only interventions of proven effectiveness are in place to prevent preeclampsia	**Score:**
□ In areas where dietary calcium intake is low, calcium supplementation during pregnancy (at doses of 1.5–2.0g elemental calcium/day) is given in all women, but especially to those at high risk of developing pre-eclampsia. □ Low-dose acetylsalicylic acid (aspirin, 75mg) is given in women at high risk □ Low-dose acetylsalicylic acid (aspirin, 75mg) is initiated before 20 weeks of pregnancy in women at high risk □ Advice to rest at home is not recommended □ Strict bed rest is not recommended for improving pregnancy outcomes in women with hypertension (with or without proteinuria) in pregnancy □ Restriction in dietary salt intake is not recommended. □ Vitamin D supplementation during pregnancy is not given to prevent the development of pre-eclampsia and its complications □ Individual or combined vitamin C and vitamin E supplementation during pregnancy is not used to prevent the development of pre-eclampsia and its complications □ Diuretics, particularly thiazides, are not used for the prevention of pre-eclampsia and its complications	Comments
4.3.2 All women are screened for preeclampsia at their antenatal assessments and preeclampsia is correctly diagnosed	**Score:**
□ Pre-eclampsia and severe pre-eclampsia are correctly diagnosed (see Box 4.3.2) □ Blood pressure is taken in all pregnant women seen in the antenatal clinic □ Urine are always checked for protein in women assessed in the antenatal clinic □ A quick urine check (Dipstick or other, checking for protein) is immediately performed in women coming to hospital with hypertension □ 24h proteinuria or urinary protein:creatinine ratio is assessed in women with a diagnosis of hypertension	Comments
4.3.3 There is an adequate organization to manage preeclampsia and eclampsia	**Score:**
□ There is a protocol in place to manage severe preeclampsia and eclampsia □ A kit is ready for eclampsia and staff skilled enough to manage the emergency are readily available	Comments

4.3.4 Supportive treatment, monitoring and diagnostic workup are correct in case of severe preeclampsia	**Score:**
□ Blood pressure is checked as appropriate □ Blood is checked for full blood count, liver and renal function three times a week when the woman is stable □ Clotting studies are done only if platelet count less than 100x106/L □ Fluid balance (input and output) checked □ Fluid restriction regimen (80ml/h IV) maintained in the intra and postpartum period (unless there is haemorrhage) □ Volume expansion and colloids are not routinely used □ Foetus is assessed with cardiotocograph (CTG) if feasible) in the acute setting □ Continuous CTG monitoring is performed in labour if CTG is available	Comments
4.3.5 Antihypertensive treatment and prevention/treatment of eclamptic fits are correctly performed	**Score:**
□ Women with severe hypertension during pregnancy receive treatment with antihypertensive medicines □ Appropriate treatment at the appropriate dosage is given □ Intravenous antihypertensive medicines are available □ Medicines used for treating hypertension in pregnancy include methyldopa, labetalol and nifedipine. Beta-blockers (possibly causing foetal growth retardation if given in early pregnancy) and diuretics (in pre-existing reduction of plasma volume) are used with caution. All agents interfering with the renin-angiotensin system (ACE inhibitors, ARBs, renin inhibitors) are avoided □ Magnesium sulfate is used for the prevention and treatment of eclampsia in women with severe pre-eclampsia in preference to other anticonvulsants □ The full intravenous or intramuscular magnesium sulfate regimens are used for the prevention and treatment of eclampsia □ Prophylaxis with magnesium sulphate is immediately started, continued till birth and at least for 24 hours after birth or after the last seizure □ If magnesium sulphate is used, regular assessment of urine output, maternal reflexes, respiratory rate and oxygen saturation is done □ Calcium gluconate 10% is readily available to reverse the effect of magnesium sulphate □ For settings where it is not possible to administer the full magnesium sulfate regimen, magnesium sulfate loading dose is given followed by immediate transfer to a higher level health-care facility	Comments

4.3.6 Decisions regarding timing and mode of birth are in agreement with current recommendations	**Score:**
□ Induction of labour is recommended for women with severe pre-eclampsia at a gestational age when the foetus is not viable or unlikely to achieve viability within one or two weeks o N.B. the gestational age threshold of fetal viability should be agreed locally. In establishing this, the local context, the availability of resources, and the local newborn survival rates by gestational age, should be considered □ In women with severe pre-eclampsia, a viable foetus and between 34 and 36 (plus 6 days) weeks of gestation, a policy of expectant management may be used, provided that uncontrolled maternal hypertension, increasing maternal organ dysfunction or fetal distress are absent and can be monitored □ In women with severe pre-eclampsia at term (from 37 weeks of gestation) and a viable foetus, immediate induction of labour is chosen □ In women with mild pre-eclampsia or mild gestational hypertension at term, induction of labour is chosen □ The decision on the route of birth is made on a case-by-case basis, taking into account, among other factors, gestational age, foetal and cervical status, and urgency	Comments
4.3.7 Women diagnosed with preeclampsia are correctly managed in the postpartum period	**Score:**
□ Women are carefully monitored after birth (close monitoring for women with severe pre-eclampsia or eclampsia) □ Treatment with antihypertensive medicines is given for severe postpartum hypertension □ In women treated with antihypertensive medicines antenatally, continued antihypertensive treatment postpartum is given □ Alpha methyldopa is not given after birth □ In women diagnosed with mild pre-eclampsia antenatally, but not treated with antihypertensive medicines, the initiation of antihypertensive treatment postpartum is considered for minimizing the risk of complications of severe high blood pressure □ Stepwise reduction of antihypertensive therapy is done □ Women with severe pre-eclampsia or eclampsia are kept in the hospital for at least 4 days postpartum □ Women are given discharge instructions including education concerning the signs and symptoms associated with postpartum hypertension □ Follow-up is planned at 6 weeks for women with pre-eclampsia and further investigation implemented if there is persistent hypertension or proteinuria	Comments

SCORE FOR 4.3 PREECLAMPSIA

KEY PRACTICES/ITEMS		Score
4.3.1	Only intervention of proven effectiveness are in place to prevent preeclampsia	
4.3.2	All women are screened for preeclampsia at their antenatal assessments and preeclampsia is correctly diagnosed	
4.3.3	There is adequate organization to manage preeclampsia and eclampsia	
4.3.4	Supportive treatment, monitoring and diagnostic workup are correct in case of severe preeclampsia	
4.3.5	Antihypertensive treatment and prevention/treatment of eclamptic fits are correctly performed	
4.3.6	Decisions regarding timing and mode of birth are in agreement with current recommendations	
4.3.7	Women diagnosed with preeclampsia are correctly managed in the postpartum period	

SUBCHAPTER SCORE

Box 4.3.2 Preeclampsia – criteria for diagnosis

Hypertension

Diastolic blood pressure ≥ 90 mmHg on two occasions or systolic blood pressure ≥ 140 mmHg on two occasions

Severe hypertension

Diastolic blood pressure ≥ 110 mmHg on two occasions or systolic blood pressure ≥ 160 mmHg on two occasions

Preeclampsia

Hypertension associated with proteinuria (> 0.3 g in 24 hours) ± oedema. Virtually any organ system can be affected

Severe preeclampsia

Severe hypertension plus proteinuria, OR
Any hypertension plus proteinuria, plus one of following symptoms:

- Severe headache
- Visual disturbance
- Epigastric pain and/or vomiting
- Signs of clonus
- Papilloedema
- Liver tenderness
- Platelet count falling to below 100 x 106/l
- Abnormal liver enzymes (ALT or AST rising to above 70 iu/l)
- HELLP syndrome

4.4 Poor progress in labour

4.4.1 Progress of labour is adequately assessed and poor progress of labour is adequately diagnosed	Score:
□ There is a protocol in place stating how to assess the progress of labour and how to diagnose poor progress □ The protocol for managing the poor progress of labour is in agreement with the international guidelines and the available evidence □ Clinical intervention is not offered or advised where labour is progressing normally and the woman and baby are well □ Partograph with a 4 hour action line is used to guide management □ Diagnosis and management of poor progress of labour are consistent between different labour attendants □ Onset of labour is correctly diagnosed (presence of uterine contractions leading to effacement and dilatation of the cervix) □ Latent phase is correctly defined (presence of painful uterine contractions and some cervical change, including effacement and dilatation up to 4 cm) □ 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, and after evaluation of foetal wellbeing □ Vaginal examination is performed at least every 4 hours during active phase	Comments
4.4.2 Prolonged active phase	**Score:**
□ Prolonged active phase is correctly diagnosed according to the local protocol and the international guidelines (cervical dilatation to the right of the action line/cervical dilatation less than 1 cm in1-2 hours/ irregular and infrequent contractions after latent phase or cervix poorly applied to the presenting part): o Uterine contractions are assessed o Signs of obstructed labour are identified o Cephalo-pelvic disproportion, obstruction, malposition or malpresentation are identified o Every complication is correctly managed □ Supine position in labour is not encouraged; woman is encouraged to adopt the position where she is most comfortable □ If there is a prolonged active phase, contractions are inefficient and cephalo-pelvic disproportion /obstructed labour excluded: o Amniotomy (artificial rupture of membrane) is offered unless contraindicated ** o Oxytocin infusion started after 1-2 hour from artificial rupture of membrane if good labour is not established o Progress is reassessed after at least 2 hours of good uterine contractions(4 hours after oxytocin started) o Cervix is reassessed after 2-4 hours if there is progress	Comments

o CS performed if no progress □ Routine early amniotomy is not performed to prevent poor progress in labour □ Amniotomy is safely and correctly performed, if needed: o Sterile gloves and instruments used o Foetal heart rate checked before and after the procedure o Amniotic fluid colour observed □ ** In areas where HIV and/or hepatitis are highly prevalent, it is prudent to leave the membranes intact for as long as possible to reduce perinatal transmission of HIV	
4.4.3 Oxytocin augmentation is correctly performed	**Score:**
□ There is a protocol in place, in agreement with the international standards, to administer oxytocin stating the initial dose, the infusion rate, the timing and rate of increments, and the maximum dose □ Augmentation of labour in the multigravid labour proceeds only after careful assessment and then with caution as it carries the particular risk of uterine rupture which is exceedingly uncommon in the primigravida □ Women are informed that oxytocin will increase the frequency and strength of their contractions and that its use will mean their baby should be monitored continuously. □ Amniotomy is performed if not contraindicated before starting infusion □ Oxytocin is used only IV □ When oxytocin is used: o Continuous fetal monitoring is started (or heart rate checked frequently at least every 15 minutes if cardiotocography not available) o Woman's blood pressure, pulse and uterine contractions are monitored o Oxytocin infusion is stopped if fetal heart beat is less than 100/min or abnormal cardiotocography □ Oxytocin is delivered through an infusion pump or via a syringe driver with a non-return valve: o Maximum dose does not exceed 32 mu/min o Minimum effective dose is used (reaching 3-4 contractions in 10 min lasting at least 40 sec) o Infusion rate doubled every 30 min □ If more than 4-5 contractions in 10 min are present, oxytocin infusion rate is reduced □ If more than 4-5 contractions in 10 min are present with foetal heart rate abnormalities o Oxytocin is stopped and tocolysisis given o Woman placed on her left side	Comments

SCORE FOR 4.4 POOR PROGRESS IN LABOUR

KEY PRACTICES/ITEMS		Score
4.4.1	Progress of labour is adequately assessed and poor progress of labour is adequately diagnosed	
4.4.2	Prolonged active phase	
4.4.3	Oxytocin augmentation is correctly performed	

SUBCHAPTER SCORE

4.5 Preterm birth

4.5.1 Prevention of preterm birth (PTD) is in agreement with the international standards	**Score:**
□ Interventions without proven effectiveness are not implemented □ Bed rest and hospitalization are not currently recommended for women at risk of PTD □ Sexual activity is not prohibited in women at risk □ Prophylactic oral betamimetics/magnesium sulphate/calcium supplementation are not given to women at risk □ Prophylactic progestogens are given in singleton gestations in women with a previous history of preterm birth or a short cervical length measured by ultrasound at < 24 weeks □ Progesterone is not given in multiple pregnancies □ Tests, such as fetal fibronectin screening, bacterial vaginosis testing, and home uterine activity monitoring, are not used as screening strategies	Comments
4.5.2 Antibiotics are appropriately used in management of preterm labour	**Score:**
□ Prophylactic antibiotics (erythromycin) are given to women with premature rupture of membranes for 10 days, when prolongation of pregnancy is planned □ Prophylactic antibiotics (penicillin or ampicillin) are given to all women in established preterm labour for prevention of GBS neonatal infection o Antibiotics given in labour for prevention of GBS neonatal infection are used with correct indications, timing, dose, type □ Antibiotics are not given to women with threatened preterm birth and intact membranes who are not in established labour	Comments
4.5.3 Tocolysis is used in agreement with international standards	**Score:**
□ Tocolytic medicines are used at correct doses: □ Nifedipine/Atosiban as first choice □ Betamimetics only if no contraindications □ NSAIDs up to 32 weeks □ Magnesium sulphate is not used as tocolytic □ Tocolytics are used only in the first 48 hours to allow corticosteroids administration/ transfer of the woman □ Maintenance therapy with tocolytics is not given after 48 h treatment □ Oral betamimetics/magesium for maintenance therapy are not used	Comments
4.5.4 Antenatal corticosteroids are given according	**Score:**

to international standards	
□ Given to all women with a diagnosis of preterm labour/ premature rupture of membranes between 24-34 (34+6) weeks, unless birth is imminent □ Appropriate corticosteroids (betamethasone/ dexamethasone) given at the right dose □ Administration can be considered between 23 and 23+6 weeks after appropriate counselling □ Repeated courses are not routinely used, but a single rescue course (of either two 12-mg doses of betamethasone given intramuscularly 24 hours apart or four 6-mg doses of dexamethasone every 12 hours administered intramuscuarly) should be considered if previous course was administered more than 7 days previously (in pregnancies where the initial course was given at less than 26 weeks)	Comments
4.5.5 Magnesium sulphate can be given to women for foetal neuro-protection according to international standards	**Score:**
□ Given from viability up to 31+6 weeks if birth is imminent □ If magnesium sulphate is used, tocolysis is discontinued □ Magnesium sulphate is discontinued if birth is no longer imminent or after maximum of 24 hours of treatment □ Appropriate dose is used □ Appropriate monitoring of women is in place (according to protocols for preeclampsia)	Comments
4.5.6 Choice of the birth method is in agreement with evidence	**Score:**
□ Vaginal birth is allowed in any case of PTD, including very low birth weight foetus □ Episiotomy is not routinely performed	Comments

SCORE FOR 4.5 PRETERM BIRTH

KEY PRACTICES/ITEMS		**Score**
4.5.1	Prevention of preterm birth is in agreement with the international standards	
4.5.2	Antibiotics are appropriately used in management of preterm labour	
4.5.3	Tocolysis is used in agreement with international standards	
4.5.4	Antenatal corticosteroids are given according to international standards	
4.5.5	Magnesium sulphate can be given to women for fetal neuro protection according to international standards	
4.5.6	Birth of preterm foetuses is in agreement with evidence	

SUBCHAPTER SCORE

4.6 Sepsis

4.6.1 There is an adequate policy in place to prevent streptococcus group B (GBS) neonatal infection and to treat clinical chorioamnionitis	**Score:**
□ A policy of culture or risk-based screening for GBS neonatal infection is observed □ If culture-based screening is performed, all women are screened with a rectal and vaginal swab at 35-37 weeks for GBS colonization □ At the time of labour or rupture of membranes, intrapartum antibiotic prophylaxis is given to all pregnant women who tested positive for GBS colonization □ Antimicrobial agents are not used before the intrapartum period to eradicate GBS genito-rectal colonization unless a GBS urinary tract infection is diagnosed □ Women with GBS isolated from the urine at any time during the current pregnancy or who had a previous infant with invasive GBS disease receive intrapartum antibiotic prophylaxis and do not need to undergo third trimester screening for GBS colonization □ Immediate induction of labour and intrapartum antibiotic prophylaxis are offered to all women who tested positive for GBS who present with prelabour rupture of membranes at 37+0 weeks of gestation or more □ In circumstances in which screening results are not available at the time of labour and birth or where a policy of risk-based screening is not implemented, intrapartum antibiotic prophylaxis is given to women who are <37 weeks and 0 days' gestation, have a duration of membrane rupture ≥18 hours, or have a temperature of ≥100.4°F (≥38.0°C) □ Penicillin is given at appropriate dose and timing for intrapartum antibiotic prophylaxis, with ampicillin as an acceptable alternative □ Penicillin-allergic women, depending on the type of allergic reaction and antimicrobial susceptibility testing, can be treated with cefazolin, clindamycin, vancomycin □ Antimicrobial susceptibility testing is ordered for antenatal GBS cultures performed on penicillin-allergic women at high risk for anaphylaxis □ If chorioamnionitis is suspected, broad-spectrum antibiotic therapy including an agent active against GBS replaces GBS-specific intrapartum antibiotic prophylaxis and induction of labour is considered	Comments
4.6.2 The system is able to implement early diagnosis, early referral, expert advice and prompt treatment for suspected maternal sepsis	**Score:**
□ All healthcare professionals are aware of the symptoms and signs of maternal sepsis and critical illness and of the rapid, potentially lethal course of severe sepsis and septic	Comments

shock □ Women presenting to the hospital after birth are assessed clinically and, if unwell or with dehydration or vomiting, admission is considered □ A general history and examination is carried out to try to identify the source of sepsis. Any recent illness or exposure to illness in close contacts is noted, particularly streptococcal infections □ Antibiotics are given and senior clinical review requested if abdominal pain, fever (greater than 38°C) and tachycardia (greater than 90 beats/minute in the puerperium) are present □ There is a system in place for urgent referral of severe cases to a higher level of care if the hospital is not equipped to treat these cases □ Urgent referral to the critical care team in severe or rapidly deteriorating cases is sought. The presence of shock or other organ dysfunction in the woman is an indication for admission to the ICU □ The expert advice of a consultant microbiologist or infectious disease physician, if available, is sought urgently when serious sepsis is suspected	
4.6.3 Diagnostic management and monitoring are appropriate	**Score:**
□ Regular observations of all vital signs (including temperature, pulse rate, blood pressure and respiratory rate) are recorded □ Blood cultures are obtained prior to antibiotic administration but antibiotic treatment is started without waiting for microbiology results □ Other samples are taken guided by the clinical suspicion of focus of infection as appropriate. Any woman with symptoms of tonsillitis or pharyngitis should have a throat swab sent for culture □ Routine blood tests including full blood count, urea, electrolytes and C-reactive protein (CRP) are done □ Serum lactate (if available) is measured within six hours of the suspicion of severe sepsis in order to guide management □ Relevant imaging studies are performed promptly in an attempt to confirm the source of infection	Comments
4.6.4 Prompt and appropriate treatment is implemented	**Score:**
□ Broad-spectrum intravenous antibiotics at adequate dosage are administered within one hour of recognition of severe sepsis o ampicillin 2 g IV every six hours PLUS gentamicin 5 mg/kg body weight IV every 24 hours PLUS metronidazole 500 mg IV every eight hours are given if microorganism not known and woman not critically ill o A combination of either piperacillin/tazobactam or	Comments

carbapenem plus clindamycin is given if available since it provides one of the broadest ranges of treatment for severe sepsis. o MRSA may be resistant to clindamycin, hence if the woman is or is highly likely to be MRSA-positive, a glycopeptide such as vancomycin or teicoplanin may be added until sensitivity is known o Non-steroidal anti-inflammatory medicines are avoided for pain relief in cases of sepsis □ Measures to correct hypotension are readily implemented (IV fluids initially 20 ml/kg and vasopressors if needed) to keep mean blood pressure above 65 mm Hg □ Intravenous immunoglobulin (IVIG) is given for severe invasive streptococcal or staphylococcal infection if other therapies have failed. □ In the puerperium, the focus of infection is sought and dealt with. This may be by uterine evacuation or by drainage of a breast, wound or pelvic abscess. Broad-spectrum antibiotics are given to cover these procedures □ In a critically ill pregnant woman, birth of the baby is considered if it would be beneficial to the mother or the baby or to both. A decision on the timing and mode of birth is made by a senior obstetrician following discussion with the woman if her condition allows □ If preterm birth is anticipated, cautious consideration is given to the use of antenatal corticosteroids for foetal lung maturity in the woman with sepsis	
4.6.5 Measures for infection control are appropriately implemented	**Score:**
□ The woman is isolated in a single room with en-suite facilities to reduce the risk of transmission of infection □ Healthcare workers wear personal protective equipment including disposable gloves and aprons when in contact with the woman, equipment and their immediate surroundings □ Breaks in the skin of the woman or carer must be covered with a waterproof dressing □ Fluid-repellent surgical masks with visors must be used at operative debridement /change of dressings of Group A Streptococcus necrotising fasciitis and for other procedures where droplet spread is possible □ Visitors should be offered suitable information and relevant personal protective equipment while the woman is isolated	Comments

SCORE FOR 4.6 SEPSIS

KEY PRACTICES/ITEMS		Score
4.6.1	There is an adequate policy in place to prevent streptococcus group B (GBS) neonatal infection and to treat clinical chorioamnionitis	
4.6.2	The system is able to implement early diagnosis, early referral, expert advice and prompt treatment for suspected maternal sepsis	
4.6.3	Diagnostic management and monitoring are appropriate	
4.6.4	Prompt and appropriate treatment are implemented	
4.6.5	Measures for infection control are appropriately implemented	

SUBCHAPTER SCORE

4.7 Malaria

4.7.1 Implementation of national guidelines and measures to prevent malaria	Score:
□ A national policy and guidelines on prevention, diagnosis and treatment of malaria in pregnancy are available and are correctly implemented □ Health providers have been trained and are competent in: malaria-related risks during pregnancy; administration of IPT(intermittent preventive treatment); advising on the use of ITNs (insecticide treated mosquito nets); and diagnosis and treatment of malaria during pregnancy, birth and the postpartum period □ Antimalarials for IPT and treatment of symptomatic malaria and ITNs are available and affordable □ Health education activities are carried out to increase community awareness of malaria prevention and treatment □ Any pregnant woman with anaemia and/or fever who has been exposed to malaria is assessed and treated for malaria according to country guidelines □ Advice on preventive measures is given to all pregnant women living in or travelling to malarious areas	Comments
4.7.2 Diagnosis and treatment	**Score:**
□ Microscopic diagnosis or rapid diagnostic tests are available to diagnose malaria □ Pregnant women with uncomplicated malaria are admitted to hospital and pregnant women with severe and complicated malaria to an intensive care unit □ Intravenous artesunate is given as first choice for severe falciparum malaria. Intravenous quinine is used if artesunate is not available □ Quinine and clindamycin are used to treat uncomplicated P. falciparum (or mixed, such as P. falciparum and P. vivax). □ Chloroquine is given to treat P. vivax, P. ovale or P. malariae □ Primaquine is not used in pregnancy □ Oral therapy is not given if vomiting is persistent □ Fever is treated with antipyretics	Comments
4.7.3 Monitoring, follow-up and management of complications	**Score:**
□ Women with malaria are screened for anaemia and treated appropriately □ A written management plan for follow-up is available to ensure detection of relapse □ Hypoglycaemia is monitored regularly as it can be profound and persistent in malaria in pregnancy and can be exacerbated by quinine □ Mortality from pulmonary oedema and acute respiratory	Comments

distress syndrome is prevented by clinical assessment of jugular venous or central venous pressure, aimed at keeping right arterial pressure less than 10 cm H_2O □ If pulmonary oedema is present, it is treated by propping woman up at an angle of 45 degrees, giving oxygen, a diuretic, stopping intravenous fluids, and, if possible, by intubation and adding positive end-expiratory pressure/continuous positive airway pressure in life-threatening hypoxaemia □ Women who are severely anaemic are transfused slowly, preferably with packed cells and intravenous furosemide 20 mg. Alternatively, exchange transfusion may be considered in centres where this can be performed safely □ Secondary bacterial infection are suspected if the woman becomes hypotensive	
4.7.4 Malaria and fetal monitoring, management of labour and post-partum period	**Score:**
□ Regular foetal growth assessment is advised and, if growth restriction is identified, routine obstetric management for this condition applies □ There is no indication for induction of labour in cases of uncomplicated malaria □ Pharmacological thromboprophylaxis is weighed up against the risk of haemorrhage and is withheld if the platelet count is falling or less than 100, indicating thrombocytopenia □ Peripartum malaria is an indication for placental histology and placenta, cord and baby blood films to detect congenital malaria at an early stage □ Women are informed of the risk of vertical transmission and, in the presence of positive placental blood films, that fever in the infant could indicate malaria; a blood film from the baby is required for confirmation □ Women are informed about the risk of relapse, action to try to prevent it and developing a clear plan with the woman in the event of symptom recurrence □ All neonates whose mothers developed malaria in pregnancy are screened for malaria with standard microscopy of thick and thin blood films at birth and weekly blood films for 28 days	Comments

SCORE FOR 4.7 MALARIA

KEY PRACTICES/ITEMS	**Score**
4.7.1 Implementation of national guidelines and measures to prevent malaria	
4.7.2 Diagnosis and treatment	
4.7.3 Monitoring, follow-up and management of complications	
4.7.4 Malaria and fetal monitoring, management of labour and post-partum period	

SUBCHAPTER SCORE

4.8 HIV

4.8.1 Diagnosis	**Score:**
□ There is adequate screening of pregnant women for HIV	Comments
4.8.2 Initiation of anti-retroviral therapy (ART) in pregnant women	**Score:**
□ The initiation of ART for their own health is recommended for all pregnant women who have CD4 cell counts of ≤350 cells/mm^3, irrespective of WHO clinical staging o Start ART as soon as feasible irrespective of gestational age and continue throughout pregnancy, birth and thereafter o The preferred first-line ART regimen should include an AZT + 3TC backbone combined with an NNRTI: AZT + 3TC + NVP or AZT + 3TC + EFV. Alternative recommended regimens include TDF + 3TC (or FTC) + EFV and TDF + 3TC (or FTC) + NVP.	Comments
4.8.3 Prevention of HIV transmission during labour, birth and in the early postpartum	**Score:**
□ A short-course zidovudine and single-dose nevirapine are offered to all women tested as HIV positive for reducing mother-to-child transmission of HIV at term of pregnancy □ CS is routinely offered to all women HIV positive for reducing mother-to-child transmission of HIV at term of pregnancy □ Hospital follows the national/local policy on feeding for infants born to mothers who are HIV-positive □ Where national authorities promote breastfeeding and ARVs, mothers tested as HIV positive are recommended to exclusively breastfeed for 6 months and continue to breastfeed their infants until at least 12 months of age (with appropriate complementary foods). □ Mothers tested as HIV positive are only advised to use commercial infant formula milk as a replacement feed to their HIV-uninfected infants or infants who are of unknown HIV status, when specific conditions are met that ensure use is acceptable, feasible, affordable, sustainable and safe.	Comments
4.8.4 Follow up	**Score:**
□ Adequate follow up and treatment is organised for women tested HIV positive and for their children	Comments
4.8.5 Internal procedures	**Score:**
□ Appropriate screening and identification of cases (in a confidential way) □ Use of doubles gloves for any surgical procedure (including sutures) in a woman or infant with HIV	Comments

□ Availability and correct use of post contact short course prophylaxis	

SCORE FOR 4.8 HIV

KEY PRACTICES/ITEMS		Score
4.8.1	Diagnosis	
4.8.2	Initiation of ART in pregnant women	
4.8.3	Prevention of HIV transmission during labour, birth and in the early postpartum	
4.8.4	Follow up	
4.8.5	Internal procedures	

SUBCHAPTER SCORE

4.9 Appropriate Medicine Use

4.9 Appropriate use of medicines	Score:
□ Only medicines of proven efficacy are used o Use ANNEX 4.9 to asses if medicine use is appropriate	Comments

SUBCHAPTER SCORE

ANNEX 4.9 Medicines used without appropriate indications

Check clinical files to assess correctness of medicines prescription, in terms of indications and dosage. Is not necessary to cover all the list of medicines, just check indications and dosages of the medicines recorded in the clinical records you analyze. Use the following table as a reference.

Medicines (example of commercial name)	**Example of inappropriate use**	**Specify inappropriate use detected**
Alcohol intravenous	e.g. tocolitic	
Allylestrenol (GESTANON, GESTORMONE)	e.g. threatened abortion/premature labour	
Ambroxol hydrochloride (MUCOSOLVAN)	e.g. given to mothers at risk of premature birth to improve foetal lung maturation	
Atropin	e.g. to accelerate cervical dilatation	
Betamimetics	e.g. threatened abortion/premature labour	
Cocarboxilase	e.g. for body stress during birth	
Dextrane 10% RHEOPOLIGLUCIN	e.g. anti-haemorrhagic	
Dibasol or tiabendazole (BENDAZOL)	e.g. reduce high blood pressure	
Diethylstilbestrol dipropionate (SYNOESTROL)	e.g. used for breast engorgement	
Diphenhydramine hydrochloride (BENADRYL, DIMEDROL, NYTOL)	e.g. antiemetic and sedative	
Drotaverin (NOSPA-FORTE)	e.g. spasmolytic and for pain treatment	
Drotaverin and metamizol (QUARELIN)	e.g. accelerate cervical dilatation	
Magnesium	e.g. tocolitic	
Metamizol sodium (DIPYRONE, ANALGIN, NOVALGIN)	e.g. used for pain and fever	

Neostigmine methylsulfate (PROSERIN-DARNITSA)	e.g. pregnancy test/delayed menstruation	
Papaverin	e.g. used for pain and fever, preterm birth	
Protein extract of calf blood like EPO (ACTOVEGIN)	e.g. for mild anaemia in pregnancy	
Sodium hydroxybutyrrate	e.g. prevent hypoxia in cases of preeclampsia	
Vitamins	e.g. threatened abortion/premature labour, fetal growth restrictions	
Others- specify in the lines below		

SCORE FOR 4. MANAGEMENT OF MATERNAL COMPLICATIONS

SUBCHAPTERS		Score
4.1	Emergency preparedness	
4.2	Postpartum Haemorrhage (PPH)	
4.3	Preeclampsia	
4.4	Poor progress in labour	
4.5	Preterm birth	
4.6	Sepsis	
4.7	Malaria	
4.8	HIV	
4.9	Appropriate medicine use	

CHAPTER 4 SCORE

SUMMARY

MAIN STRENGTHS:

1.

2.

3.

4.

5.

MAIN WEAKNESS:

1.

2.

3.

4.

5.

COMMENTS:

1.

2.

3.

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5.

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5. Newborn infant care

Objective: To evaluate the readiness of the hospital staff to provide appropriate and timely care to the newborn infant at birth, both by vaginal and caesarean births**,** and in the early days, to ensure a safe start to life and a physiological adaptation period for the infant, avoiding dangerous or inappropriate procedures.

Note there are three chapters that are divided into the appropriate weight infant and the low birth weight infant who are healthy, the newborn with some health needs, and the newborn in an intensive care nursery. Not all hospitals will have all three levels of care.

Source of data and instructions:

- Documents and records
  - Written policies, guidelines, and protocols
  - Clinical logs: number of births, newborns with health concerns, etc – notice if there are patterns/stereotypes which can indicate low quality of data recording
  - Patient files: review a minimum of 15 files for healthy appropriate weight infant, and a minimum of 10 files for premature or low birth weight randomly chosen from the last 1-3 months. If 80% of the files reviewed indicate correct practices, this can be considered a 'good standard'. Information on healthy newborns may be recorded in the mother's file rather than a separate infant file.
- Observation of care practices, treatments, equipment and its use, environment, and procedures in all areas where newborn infants are cared for. Give observation of birth a priority, ask permission of the women to observe the birth, ensure "not-intrusive" observations
- Structured interviews with women and staff
- Informal talking with women and staff provides a complementary source of information

5.1 Neonatal care at the birth and in the first 2 hours of life

5.1.1 Preparedness for the birth	**Score:**
□ The room temperature is appropriate (25°C) o There is wall thermometer in the room and temperature is recorded □ There is a wall clock □ The birth attendant's gloves (or hands if appropriate) are clean □ An alcoholic solution is available for cleaning hands quickly □ Sterile instruments are ready for use □ Cloths to dry and warm blankets to cover the infant are ready □ A clean and pre-warm surface is provided for resuscitation □ Resuscitation kit and suctioning device are clean, complete and ready to be used □ Cord clamping devices are present □ Eye prophylaxis ointment and intramuscular Vitamin K are available □ The standards for preparation are similar for birth in a delivery room and in a surgical theatre	Comments

5.1.2 Newborn infant assessment and immediate care	**Score:**
□ The newborn is immediately dried after birth □ Newborn is placed on mother's abdomen or chest in skin to skin contact □ The baby is assessed in the first 30 seconds after birth: start of breathing, tone and reactivity, gestational age, presence of major malformations □ Appropriate actions are started, if needed, according to the clinical evaluation □ Umbilical cord is clamped after at least one minute unless there is an immediate clinical need to clamp early □ Stump of the umbilical cord is left without dressing □ Routine mouth and nose suctioning is not performed □ Routine catheterization to check patency of the oesophagus is not done □ Mother and baby are covered together with a pre-warmed blanket, with the infant head turn to the side □ A warm cap is put on the baby's head □ The standards for care are similar for infants born in the delivery room and those born in the surgical theatre	Comments
5.1.3 Neonatal Resuscitation	**Score:**
□ Written guidelines for resuscitation and care of the newborn are available, clearly visible in the delivery room and implemented o There is a resuscitation bed with a heating source and a suction equipment ready to use o A functioning self-inflating bag with relief valve is available o Term and premature size masks are available o Suctioning device are available, in good working conditions and are adequately used □ If a newborn infant is not breathing, resuscitation is initiated according to WHO guidelines □ There is a written procedure to have a senior health professional present or immediately available for resuscitation in case of deliveries at risk of neonatal asphyxia □ Trained and skilled personnel (at least one professional) is available at every birth □ Sequence, time and interventions performed during a resuscitation are recorded in the infant file	Comments
5.1.4 Initiation of breastfeeding	**Score:**
□ The infant is in skin contact with the mother immediately after birth and remains in skin contact for at least 60 minutes (irrespective of feeding decision) and until after the first breastfeed □ A quiet atmosphere is provided without rushing the infant and mother □ Bathing and weighing are postponed as not to interfere	Comments

with skin to skin contact, stabilization, and the first breastfeed □ Infant is given time to self-attach to the breast and signs of infant readiness to initiate breastfeeding are pointed out to the mother □ Initiation of breastfeeding is encouraged within the first hour with additional support when birth is by caesarean section □ If infant and mother need to be moved from the delivery room before the first feed is completed they are moved together remaining in skin contact □ The standards for care are similar for infants born in the delivery room and those born in the surgical theatre □ If there is an immediate medical need to separate the infant and mother then skin to skin contact and support to initiate breastfeeding is provided as soon as the infant/mother is stable	
5.1.5 Routine procedures and prophylaxis	**Score:**
□ The mother and the newborn infant are kept together in a warm room for 2 hours, with regular assistance and surveillance □ The infant vital signs, including temperature, are checked and recorded in a specific part of the mother file or newborn file, if existing (at 30 minutes and at 2 hours) □ Clear identification system for mother and infant is in use □ Every birth is recorded in the delivery room register □ Warm transport of the infant is ensured if needed □ Bathing or washing the infant is postponed to 6-8 hours of life □ Eye prophylaxis is provided at the end of the first hour □ Vitamin K intramuscular is administered to all babies □ Immunizations are administered according to the local policy □ Information is provided to the mother regarding all procedures	Comments

SCORE FOR 5.1NEONATAL CARE AT THE BIRTH AND IN THE FIRST 2 HOURS

KEY PRACTICES/ITEMS	**Score**
5.1.1 Preparedness for the birth	
5.1.2 Assessment and immediate care	
5.1.3 Neonatal resuscitation	
5.1.4 Initiation of breastfeeding	
5.1.5 Routine procedures and prophylaxis	

SUBCHAPTER SCORE

5.2 Newborn care in the maternity ward

5.2.1 Care in the maternity ward	Score:
□ Rooming-in 24 hours/day is routine, also after caesarean section □ Separation of infant and mother only occurs for immediate medical need and the separation is kept as short as possible □ Mothers are encouraged to provide care to their babies with assistance from staff □ Appropriate place for infant, bed or cot (if used), with bed linen provided □ Adequate facilities for hygienic care for the baby: space, water, cleaning cloths, etc □ "Dry care" of the stump: without dressing, and kept clean and dry □ Clear identification system for mother and infant couple	Comments
5.2.2 Breastfeeding	**Score:**
□ There are no restrictions on the frequency or length of breastfeeding □ Artificial teats and pacifiers are not used □ Tight swaddling is not used □ Infant formula, glucose water, water or other fluids or foods are not given to the infant unless there is an evidenced based medical need. □ If the staff recommend any exception to exclusive breastfeeding, the reason and the amount to be given is recorded in the mother/infant record and signed. □ If the mother is considering not to breastfeed exclusively information is discussed with her to ensure she is aware of the risks and is able to feed her infant adequately and in a safe manner □ There is no advertising or promotion of infant formula on the ward and samples are not distributed to mothers or staff	Comments
5.2.3 Clinical evaluation and monitoring	**Score:**
□ The following aspects are checked and/or monitored and recorded in a specific part of the mother's file, or newborn's file if used, (or list for term appropriate weight infants): o The infant vital signs and general conditions in the first day of life o Infant body temperature measured on arrival in the postnatal ward then one time per day o Breathing rate assessed at least one time in the first day o Breastfeeding effectiveness and the frequency assessed at least two times in the first day o Urine and faeces output o Skin colour and absence or presence of jaundice o The absence of major malformations and normality of genital area and anus o The body weight is measured at least one time before	Comments

deciding for the discharge o The newborn is clinically assessed before discharge	
5.2.4 Prevention of pathological jaundice	**Score:**
□ Mothers' Rh status and serum anti-D usually is known before birth (before 28 wks) □ If mothers' Rh status is not known before, it is checked after birth (together with serum anti D and newborn baby's Rh status) □ The newborn baby's Rh status is checked after birth if mother is Rh negative □ Appropriate anti-D prophylaxis is given to mothers within 72 hours after birth when needed □ Jaundice at discharge is evaluated (using percentiles of unconjugated bilirubin levels, such as Bhutani curves or other valid methods)	Comments
5.2.5 Information and counselling to mother, discharge procedures	**Score:**
□ Staff provide information, discuss the individual situation and teach skills to the mother/family in a supportive manner □ Care recommendations are shared with father if available o How to care for the baby at home o What are the "Danger signs" in the newborn age o Safe sleeping – "Back to sleep" position o Vitamin D 400 IU a day is prescribed o Exclusive breastfeeding is recommended until the age of 6 months and continued thereafter with appropriate complementary foods into the second year o Vaccinations o Follow-up o Any referral if needed □ Counseling is provided in case of HIV or other maternal pathology and appropriate management is planned □ Discharge within 3 days is the policy of the hospital after normal birth; discharge is not routinely given before 12 hours □ Discharge documents provided to mothers should include at least: type of birth, gestational age, weight at birth and weight at discharge	Comments

SCORE FOR 5.2 NEWBORN CARE IN THE MATERNITY WARD

KEY PRACTICES/ITEMS	**Score**
5.2.1 Care in the maternity ward	
5.2.2 Breastfeeding	
5.2.3 Clinical evaluation and monitoring	
5.2.4 Prevention of pathological jaundice	
5.2.5 Information and counselling to mother, discharge procedures	

SUBCHAPTER SCORE

5.3 Care of premature and low birth weight (LBW) infants

5.3.1 Setting for the care of premature and low birth weight (LBW) infants	Score:
□ Existence of a dedicated area to facilitate closer observation □ 'Rooming-in' is continuous with their mothers □ Heat loss is minimized by kangaroo-care; babies wearing a cap on their head and socks □ Attention to environment (avoid overheating, draughts, cold air, etc) □ Infants are protected from animals and insects □ Mosquito nets for infants in malaria endemic areas	Comments
5.3.2 Nutrition of premature and LBW infants	**Score:**
□ There are guidelines in use to prevent, detect and treat neonatal hypoglycaemia, and they are followed □ There are no restrictions on the frequency or length of breastfeeding □ If the infant is unable to feed at the breast, the mother is supported to start expressing within 4-6 hours of the birth, and given information on effective techniques □ Expressed milk is given by cup or nasal-gastric tube when the infant is unable to feed or if the mother cannot stay with the infant all the time □ Mother is supported to establish and maintain her milk supply by milk expression, and assistance with positioning and attachment for her infant's individual situation □ Sterile containers for expressed milk are provided by the hospital and mothers have facilities to express in a clean and comfortable area □ If breast pumps are used they are good quality, functioning, instructions how to use, a process for cleaning, and pumps are not shared unless they are designed to be adequately decontaminated (and are decontaminated) between users □ Infant formula, glucose water, water or other fluids or foods are not given to the infant unless there is an evidenced based medical need □ If any exception to exclusive breastfeeding is recommended by the staff, the reason and the amount to be given is recorded in the infant record and signed □ Intravenous feeding is not used as a substitute for enteral feeds unless for very specific medical indications	Comments
5.3.3 Clinical evaluation and monitoring	**Score:**
□ All items included in the healthy newborn list should be checked □ In addition: □ Use an individual infant record for LBW infants □ Heart rate and breathing rate are checked and recorded	Comments

every 8-12 hours, according to the clinical situation □ Temperature is recorded at least every 8-12 hours, according to the clinical situation □ Weight is recorded at least daily	
5.3.4 Kangaroo Care (KMC) Unit*	**Score:**
□ Existence of a dedicated area where KMC can take place □ The area is equipped with adequate services for the mother (hygiene, meals, space for contact with the family) □ Fathers are allowed to visit the unit □ KMC - Skin to skin contact of the babies with their mothers: takes place for at least for 18 hours a day □ KMC times and observations are recorded regularly in the infant file □ Trained staff are assigned to the area □ *Use only if kangaroo care is provided in line with international guidance	Comments
5.3.5 Information and counselling at discharge of LBW infant	**Score:**
□ All items included in the healthy newborn list should be checked □ Information and discussion should focus on the situation of this individual LBW infant: o Wellness o Feeding and nutrition o Care o Prophylaxis, vaccination o Planned follow-up	Comments

SCORE FOR 5.3 CARE OF PREMATURE AND LOW BIRTH WEIGHT INFANTS

KEY PRACTICES/ITEMS	**Score**
5.3.1 Setting for the care of premature and low birth weight (LBW) infants	
5.3.2 Nutrition of premature and LBW infants	
5.3.3 Clinical evaluation and monitoring	
5.3.4 Kangaroo Care (KMC) Unit	
5.3.5 Information and counselling at discharge of LBW infant	

SUBCHAPTER SCORE

SCORE FOR CHAPTER 5 NEWBORN INFANT CARE

SUBCHAPTERS	Score
5.1 Care at the birth and in the first 2 hours of life	
5.2 Care in the maternity ward	
5.3 Care of premature and LBW infants	

CHAPTER 5 SCORE

SUMMARY

MAIN STRENGTHS: **1.** **2.** **3.** **4.** **5.**
MAIN WEAKNESS: **1.** **2.** **3.** **4.** **5.**
COMMENTS: **1.** **2.** **3.** **4.** **5.**

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6. Sick newborn care

Objective: To evaluate the appropriateness and safety of the standard approach to newborn infants with health problems, given the local situation.

This chapter is appropriate for units/maternities providing care for sick and low birth weight (LBW) infants but not for NICU (neonatal intensive care units), which are addressed in the next chapter. Referral centres may have distinct areas for low intensity care for sick or moderately preterm babies and for intensive care. If this is the case both chapter 6 and 7 should be filled in.

Source of data and instructions:

- Documents and records
  - Written policies, guidelines, and protocols
  - Clinical logs: number of births, newborns with health concerns, etc – notice if there are patterns/stereotypes which can indicate low quality of data recording
  - Patient files: review a minimum of 15 files for healthy appropriate weight infant, and a minimum of 10 files for premature or low birth weight randomly chosen from the last 1-3 months. If 80% of the files reviewed indicate correct practices, this can be considered a 'good standard'.
- Observation of care practices, treatments, equipment and its use, environment, and procedures. Sick newborn babies might be admitted in different areas, the maternity ward or the infant ward, so check both areas.
- Structured interviews with women and staff
- Informal talking with women and staff provides a complementary source of information

6.1 General care

6.1.1 Setting for the care of sick newborn infants	**Score:**
□ Existence of a dedicated area for sick infant care □ Out-born infants if sick are admitted in the hospital □ No routine separation from the mother; 'Rooming-in' is continuous with their mother □ Easy access for mothers to their babies, if separation is required □ Attention to environment (avoid overheating, overcrowding, overstimulation, i.e. unnecessary light, noise and touch) □ Infants are protected from animals and insects □ Mosquito nets for infants in malaria endemic areas □ Pain relief (non-pharmacological and pharmacological) in case of painful procedures □ Fathers are allowed to visit the unit □ Babies are dressed and nested to feel secure	Comments
6.1.2 Nutrition of sick infants	**Score:**
□ Nutritional prescriptions and notes are in infant file □ The milk volume or calorie intake are monitored □ If the infant is unable to feed at the breast, the mother is supported to start expressing within 4-6 hours of the birth, and given information on effective techniques □ Expressed milk is given by cup or nasal-gastric tube	Comments

when the infant is unable to feed or if the mother cannot stay with the infant all the time □ Mothers' milk is given in adequate amounts and frequency (at least 8 feeds per day) according to needs (age, weight, clinical condition) □ Mother is supported to establish and maintain her milk supply by milk expression, and assistance with positioning and attachment for her infant's individual situation □ Sterile containers for expressed milk are provided by the hospital and mothers have facilities to express in a clean and comfortable area □ If breast pumps are used they are good quality, functioning, instructions how to use, a process for cleaning, and pumps are not shared unless they are designed to be adequately decontaminated (and are decontaminated) between users □ Infant formula, glucose water, water or other fluids or foods are not given to the infant unless there is an evidenced based medical need □ If any exception to exclusive breastfeeding is recommended by the staff, the reason and the amount to be given is recorded in the infant record and signed □ Intravenous feeding is not used as a substitute for enteral feeds unless for very specific medical indications □ If IV fluids are given, they are recorded, the infusion speed is checked, and precautions are taken to prevent fluid overload	
6.1.3 Clinical evaluation and monitoring	**Score:**
□ All items included in the healthy newborn list should be checked In addition: □ Use an individual infant record for sick infants □ Heart rate and breathing rate are checked and recorded at minimum every 8 hours, according to the clinical situation □ Temperature is recorded at least every 8 hours, according to the clinical situation □ Weight is recorded at least daily (twice daily in Very Low Birth Weight)	Comments
6.1.4 Information and counselling at discharge	**Score:**
□ All items included in the healthy newborn list should be checked □ Information and discussion should focus on the situation of this individual sick infant: o Wellness o Feeding and nutrition o Care o Prophylaxis, vaccination o Planned follow-up	Comments

SCORE FOR 6.1 GENERAL CARE

KEY PRACTICES/ITEMS	Score
6.1.1 Setting for the care of sick newborn infants	
6.1.2 Nutrition of sick infants	
6.1.3 Clinical evaluation and monitoring	
6.1.4 Information and counselling at discharge	

SUBCHAPTER SCORE

6.2 Specific conditions

6.2.1 Hypoglycaemia, hypocalcaemia and jaundice	Score:
□ Guidelines for prevention of hypoglycaemia in LBW, small for gestational age, large for gestational age and in infants of diabetic mothers are available and implemented □ Guidelines for recognition and treatment of hypoglycaemia are available and implemented □ In case of “convulsions” or “lethargy” blood glucose (‘Gluco test’) and, if possible, calcium and magnesium are checked and corrected, if needed □ Procedures are in place to check the bilirubin level □ Phototherapy equipment and guidelines when to use it are available and adequate hydration is monitored □ Facilities for exchange transfusion are available, or there are guidelines when to transfer a seriously jaundiced baby	Comments
6.2.2 Neonatal sepsis	**Score:**
□ Neonatal sepsis is suspected in neonates with signs such as difficulty feeding, pathological breathing patterns, hypotonia, lethargy, or with no other otherwise explanation for abnormal temperature □ Appropriately investigation plan is prescribed (e.g. cell blood count, blood culture, search for foci of infection) □ Lumbar puncture is done to rule out or confirm meningitis □ Newborn babies receive oxygen if cyanotic or in severe respiratory distress □ Effective antibiotics are given according to age and weight of the baby □ Temperature, capillary refilling time, and white cells count are monitored □ The clinical status and the response to treatment is reassessed regularly	Comments
6.2.3 Monitoring and treatment for resuscitated infants	**Score:**
□ No routine separation from the mother □ There is a plan for monitoring heart rate, breathing rate, $SatO_2$, temperature, blood glucose, and urine output □ Special attention to fluid balance is included in the clinical plan and recorded	Comments
6.2.4 Oxygen therapy	**Score:**
□ Guidelines for the use and monitoring of oxygen therapy in newborns are available and implemented □ No routine use of oxygen in preterm infants without medical need □ Oxygen need is assessed using a pulse-oximeter before starting O_2 therapy □ Infants on oxygen therapy have $SatO_2$ monitored routinely	Comments

6.2.5 Unnecessary use of medicines and treatments	Score:
□ No routine medications or treatments are given without specific indications that they are needed for the treatment of clinical conditions or diseases □ No routine medications or treatments are given without evidence of benefit for the infant	Comments

SCORE FOR 6.2 SPECIFIC CONDITIONS.

KEY PRACTICES/ITEMS	Score
6.2.1 Hypoglycaemia, hypocalcaemia and jaundice	
6.2.2 Neonatal sepsis	
6.2.3 Monitoring and treatment for resuscitated infants	
6.2.4 Oxygen therapy	
6.2.5 Unnecessary use of medicines and treatments	

SUBCHAPTER SCORE

SCORE FOR 6. SICK NEWBORN CARE

SUBCHAPTERS	Score
6.1 General care	
6.2 Specific conditions	

CHAPTER 6 SCORE

SUMMARY

MAIN STRENGTHS: **1.** **2.** **3.** **4.** **5.**
MAIN WEAKNESS: **1.** **2.** **3.** **4.** **5.**
COMMENTS: **1.** **2.** **3.** **4.** **5.**

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7. Advanced newborn care

Objective: To evaluate the appropriateness and safety of the standard approach in the hospital Neonatal Intensive Care Unit (NICU) (if existing) to Low Birth Weight Infants (LBWI:<2500g.), very LBWI (VLBWI<1500g.), extremely LBWI (ELBW<1000g.), and term newborn infants with major diseases.

Referral centres may have distinct areas for low intensity care for sick or moderately preterm babies and for intensive care. If this is the case both chapter 6 and 7 should be filled in.

Source of data and instructions:

- Documents and records
  - Written policies, guidelines, and protocols
  - Clinical logs: number of births, newborns with health concerns, etc – notice if there are patterns/stereotypes which can indicate low quality of data recording
  - Patient files: review a minimum of 10 files for infants randomly chosen from the last 1-3 months. If 80% of the files reviewed indicate correct practices, this can be considered a 'good standard'.
- Observation of care practices, treatments, equipment and its use, environment, and procedures in all areas where there are infants needing extra care.
- Structured interviews with women and staff
- Informal talking with women and staff provides a complementary source of information

7.1 Clinical records for Neonatal Intensive Care Unit (NICU)	**Score:**
□ There are 'intensive care' records, specifically designed for NICU; possibly with distinct parts for nursing care notes and medical notes □ Records are appropriately filled in and indicate that: ○ The baby's clinical records routinely include a complete perinatal history ○ Weight and fluid intake are checked at least daily in infants with any severe illness; twice if Very Low Birth Weight Infants (VLBW) infant ○ Specific growth charts for preterm infants are used throughout hospital stay □ There is an adequate information transfer between shifts of personnel including written information transfer	Comments
7.2 Enteral nutrition	**Score:**
□ There are protocols or guidance documents on nutrition of newborns in NICU □ Records are appropriately filled in and indicate : ○ Daily records of enteral fluid intake ○ Daily calculation and recording of caloric intake ○ If there is no contraindication, minimal enteral feeding, started within the first 72 hours, with own mother's milk used as optimal ○ Use of infant formula is only on specific medical indication ○ The minimum caloric intake at the end of 1st week in preterm infants is 90-100 Kcal/kg/day ○ No provision of Na, K, Cl in the first 48 hours of life in term infants, in the first 48 to 72 hour in preterm infants	Comments

○ The amino acid supply for preterm infants starts soon after birth and gradually increases achieving an intake of 3 or 4 g/kg from the 4th day □ For infants < 1500 grams: availability of human milk fortifier or preterm formulas (80 Kcal/100 mL)	
7.3 Parenteral infusions, Total Parenteral Nutrition	**Score:**
□ There are written protocols for the appropriate parenteral intakes for weight and gestational age, and they are followed in practice □ Fluids and caloric intakes are recorded daily □ Parenteral amino acid solution is available □ Parenteral lipids solution is available □ Written protocols for placement and proper tip position of central catheters are used □ Written protocols for management of central lines are used □ Disposable materials (e.g. catheters and lines) are available □ The parenteral infusion is prepared by trained staff	Comments
7.4 Nutritional outcome indicators	**Score:**
Use the following indicators to assess the quality of nutrition care in the NICU: □ Percentage of weight loss at any point during the hospital stay is greater than 10% for infants of birth weight 1500-2499g *(weight loss in less than10% of infants: 'good', in greater than 50%: 'poor performance')* □ Number of cases (%) of Necrotizing Enterocolitis (NEC) in infants <1500g cared for NICU. Review the statistics for the previous year or check the Unit logbook for discharge diagnosis and causes of death. *(less than 5% of children: 'good', greater than 20%: 'poor performance')*	Comments
7.5 Infection control and treatment	**Score:**

□ Written protocols are available for antibiotic treatment for specific infections (early-onset and late-onset sepsis) □ Records are appropriately filled in and indicate: ○ Protocols are always implemented ○ Antibiotic treatment is modified according to clinical response, and to antibiotic sensitivity tests when available ○ Blood culture (1-2 mL) is done prior to starting any antimicrobial ○ Empiric antibiotic treatment is discontinued within 48-72 hours if blood culture is negative (if blood culture available) ○ Lumbar puncture is routinely performed to rule out or confirm meningitis in infants with signs/symptoms suggesting bacterial meningitis and in late-onset sepsis ○ Microbiological testing is available within a timeframe suitable for decision making: clarify with the Laboratory □ Rate and type of nosocomial infection are monitored (from the hospital files)	Comments
7.6 Treatment of respiratory problems	**Score:**
□ Check infant clinical records and by observation to assess if care of infants with respiratory distress syndrome includes: ○ Pulse oximeter routinely used for monitoring ○ Respiratory rate, heart rate, and possibly blood pressure are checked and recorded at least every 3 hours ○ Weight and fluid intake are checked at least daily ○ X-rays results and interpretation recorded ○ In case of mechanical ventilation the ventilator setting is reported in the baby's file ○ Blood Gas Analyzer is available: ventilation settings are modified according to results of blood gas analysis □ Instructions for use of all equipment are immediately available and near the equipment □ Availability of equipment for needle aspiration or chest tube drainage of pneumothorax	Comments
7.7 Other specific conditions	**Score:**
□ There are written protocols, which are followed, for: ○ Assessment of patent ductus arteriosus (clinical and/or echocardiography criteria) ○ Assessment and treatment of neonatal seizures ○ Acute and late preterm anaemia ○ Transfusion of blood components	Comments
7.8 Appropriate use of medicines	**Score:**
□ Only medicines of proven efficacy are used □ Medicine dosages are appropriate for age and weight ○ Use the ANNEX 7.8 at the end of this chapter to asses if use is appropriate	Comments
7.9 Pain avoidance and control	**Score:**

□ Painful procedures are kept to a minimum □ Non pharmacological and pharmacological approaches to reduce pain are used	Comments
7.10 Neonatal developmental care	**Score:**
□ Postural care is routine (nesting or other approaches aimed at promote baby wellbeing and development) □ Environmental stress to babies (light, noise, etc) is minimized □ Physiotherapy for babies with long term admission and at risk of motor/muscular tone disorders is available □ Kangaroo care is implemented for LBW infants	Comments
7.11 Communication with parents	**Score:**
□ Parents are involved in the care of the babies to the extent the clinical condition allows this care □ There is a place close to ward where the parents can rest during the day when visiting their infant □ Information and options for treatment are discussed with parents □ Privacy is provided for parents to discuss their infants health with medical staff	Comments
7.12 Transport of critical infants	**Score:**
□ There is a written check-list to organize the transport □ There is a format for the clinical report and the documentation to accompany the referred infant □ There are written protocols to define in-hospital and inter-hospital transfer of infants, including back transfer □ Regional or inter-hospital transports are monitored and evaluated	Comments
7.13 Discharge procedures	**Score:**
□ Records are appropriately filled in and indicate: ○ The final diagnosis, written in the medical record, is complete and clear ○ Pre-discharge information has been discussed with the parents on 'danger signs', feeding, care, prophylaxis, vaccination, and follow-up that is specific to the individual infant □ Written documentation given to parents includes at a minimum: type of birth, gestational age, weight at birth, weight at discharge, any diagnosis and follow-up details □ The Unit provides follow-up for high-risk infants or has a clear referral system for follow-up	Comments
7.14 Quality improvement and audit	**Score:**
□ Nursing and medical procedures are periodically (yearly) reviewed □ Organizational issues are periodically discussed by the whole team	Comments

□ In each case of perinatal death (critical events) audits are held	

ANNEX TO 7.8. APPROPRIATE DOSAGE OF MEDICINES

Check 10-15 clinical files to assess correctness of medicines prescription in terms of indications and dosage. Is not necessary to check for all the list of medicines; check indications and dosages of the medicines recorded in the clinical records that you review for other items. Use the following tables as a reference.

Medicine (use) recommend dosage	Comments
1. ACETAMINOPHEN (Analgesia) 7.5 mg/kg/dose IV or PO every 8 h, given over 15 minutes. Maximum cumulative dose: 40 mg/kg/day. IV not recommended for infants born before <32 wks.	
2. ACYCLOVIR (Mucocutaneous HSV: 14 days. Systemic/CNS Infection: 21 days) 20 mg/kg/dose EV every 8 hours, given as IV infusion over 60 minutes, even longer if EG < 34 sett, renal or hepatic failure.	
3. ADENOSINE (Sustained paroxysmal supraventricular tachycardia) 50 mcg/kg rapid IV push (1-2 seconds) in big vessels. Repeated dose of 50 mcg/kg every 2 minutes until return of sinus rhythm. Usual maximum dose: 250 mcg/kg. Monitor ECG and blood pressure. Do not refrigerate.	
4. AMINOPHYLLIN/THEOPHYLLIN (Prevention of renal failure in asphyxia) 5-8 mg/Kg single dose as soon as possible after birth (within 1 hour)	
5. AMPICILLIN (Neonatal sepsis/meningitis/pneumonia also in combination with tobramycin for empiric treatment before blood culture). Dose: 50 mg/kg/dose IV, a) every 12 hours in preterm infants; b) every 8 hours in term infant *(see following table).*	
6. AMPHOTERICIN (Fungal neonatal infections) 5 mg/kg/dose every 24 h, given as IV infusion over 120 minutes. Protect from light.	
7. CAFFEINE (Prevention and treatment of apnea): loading dose: 10-20 mg/kg caffeine base (equivalent to 20-40 mg/kg of caffeine citrate) given over 30 minutes. Maintenance dose: 2.5-5 mg/kg (equivalent to 5-10 mg/kg of caffeine citrate) IV or PO every 24 h.	
8. CEFOTAXIME (Neonatal sepsis/meningitis): 50mg/kg/dose, IV or IM, a) every 12 hours in infants < 2000 g or age 0-7 days; b) every 8 hours in infants > 2000 g or age > 7 days.	
9. CEFTRIAXON (Second line treatment in children with severe bacterial infection with failure on the first line treatment, 1st line in meningitis) 50mg/kg/dose, IV or IM; a) every 12 hours in infants < 2000 g or age 0-7 days; b) every 8 hours in infants > 2000 g or age > 7 days.	
10. DEXAMETHASONE: (May be given to infants on mechanical ventilation, and is more effective after 14 days of age. Reduces BPD but not mortality, and adversely affects long-term outcome). Avoid concurrent Indomethacin/Ibuprophen. Duration of treatment varies, but a short course, starting at 0.25 mg/kg/day and tapered over 5 to 7 days may be sufficient.	

11. DIGOXIN (Treatment of heart failure caused by myocardial contractility) Treatment of supra ventricular tachycardia, atrial flutter and fibrillation): dose: see following table 1. Therapeutic serum concentration is 1 to 2 ng/mL.	
12. DOPAMINE (Treatment of hypotension. increases systemic vascular resistance): dose: 2-20 micrograms/kg/minute by continuous IV infusion, in central line or large vein. Calculations: mg of Dopamine needed for 50 mL solution = 3 x desired dose (microgram/Kg/min) / desired fluid rate (mL/hour) x weight (Kg).	
13. EPINEPHRINE (Cardio pulmumary resuscitation) take a vial content (1ml = 1 mg) to 10 ml by sterile water -> 1 ml=0.1 mg. (1:10,0000 solution). 0.1-0.3 mL/kg IV/ET (ET: after administer also NS, 1ml). Continuous IV infusion: 0.1-1 mcg/kg/min. Protect from light.	
14. FENTANYL (Analgesia, sedation): 1-4 micrograms/kg/dose IV slow push. Repeat as required (usually every 2-4 hours). May be given as a continuous infusion: 1-5 micrograms/kg/hour.	
15. FERROUS SULFATE: (Prevention of anaemia of prematurity). 2-3 mg/kg/day of elemental iron in one or two divided doses. Therapy may begin after 2 weeks of life in growing preterm infants.	
16. FUROSEMIDE (Congestive heart failure, renal failure): 1mg/kg/dose IV or PO every 12 to 24 hours. In acute renal failure, consider higher dose (2-4 mg/kg). Monitor weight changes and serum electrolytes. Potentially ototoxic with concurrent amino glycoside therapy.	
17. IBUPROPHEN (Closure of patent ductus arteriosus, preferred to indomethacin, not indicated as prophylaxis) first dose: 10 mg/Kg IV or PO, followed by two 5 mg/kg doses at 24 hour intervals. Protect from light.	
18. INDOMETHACIN (Closure of patent ductus arteriosus): dose: a) age < 48 hours of age: 0.2 mg/kg IV, followed by two 0.1 mg/kg doses at 12 hour intervals; b) age 2 to 7 days: three 0.2 mg/kg doses IV, at 12 hour intervals; c) age > 7 days: three 0.25 mg/kg doses IV, at 12 hour intervals. Close monitoring of urine output: discontinue or delay subsequent doses in case of anuria or severe oliguria.	
19. METRONIDAZOLE (Serious intra-abdominal infections; resistant to penicillin, anaerobes infections) initial dose 15 mg/kg/min, PO or IV, maintenance dose 7.5 mg/kg/min every 12 hours (pump infusion over 60 minutes)	
20. MIDAZOLAM (Sedation): 0.05 to 0.15 mg/kg/dose IV or 0.2 mg/kg intranasally. Can be repeated every 2 to 4 hours, as required. Can be given as continuous intravenous infusion at 10-60 micrograms/kg/hour. Monitor for respiratory depression and hypotension.	

21. PHENOBARBITAL (Seizures): Loading dose: 20 mg/kg by slow IV infusion or IM. Additional 5-10 mg/kg doses up to a total dose of 40 mg/kg, in case of refractory seizures. Respiratory depression does not usually occur at concentrations < 60 micrograms/mL. Maintenance dose: 3-5 mg/kg/day IV, IM or PO, beginning at 12-24 hours after the loading dose	
22. PROSTAGLANDIN E1 (Promote dilation of ductus arteriosus) Continuous IV infusion: initial dose 0.05-0.1 mcg/kg/min, maintenance dose may be as low as 0.01 mcg/kg/min (dilute before administration to a concentration ≤20mcg/mL)	
23. SILDENAFIL (Persistent pulmonary hypertension refractory to conventional therapies) 0.3-1 mg/kg dose via orogastric tube every 6 to 12 hours	
24. SODIUM BICARBONATE (Neonatal resuscitation):1-2 mEq/kg by slow IV push, over at least 2 minutes, a) in case of documented metabolic acidosis, b) during prolonged resuscitation but only after establishing effective ventilation.	
25. SURFACTANT (Respiratory insufficiency in the premature) Should be given to infants with RDS as soon as possible after intubation irrespective of antenatal steroid exposure, or gestational age. Prophylactic (<30min of life) surfactant replacement should be considered for extremely preterm infants at high risk of RDS especially if they have not been exposed to antenatal steroids. Examples of dosages: Curosurf 100-200mg/kg via endotracheal tube. A second dose (100 mg/kg) can be given after 6 to 12 hours. Survanta 100 mg of phospholipids/kg birth weight (4 mL/kg). via endotracheal tube. Four doses of Survanta can be administered in the first 48 hours of life. Doses should be given no more frequently than every 6 hours.	
26. TOBRAMYCIN (Neonatal sepsis/meningitis/pneumonia also in combination with ampicillin for empiric treatment before blood culture) for dose see the following table 2. Final concentration < 1 mg/ml, given as IV infusion over 60 minutes. Potentially nephrotoxic, neurotoxic and ototoxic, expecially with concurrent amino glycoside or vancomicin therapy	
27. VANCOMYCIN (Infection with methicillin-resistant staphylococci, coagulase-negative staphylococci, staphylococcus aureus): dose: 15 mg /kg/dose (Meningitis); 10 mg/kg/dose (Bacteremia), given as IV infusion over 60 minutes. Dosing interval: a) Weight < 1200 grams every 24 hours; b) Weight: 1200 – 2000, every 12 hours; c) Weight > 2000 grams, every 8 hours.	
28. VITAMIN D (dietary supplement): 400 IU/day in both preterm and term infants	

Example of tables with dosages according to gestational age of the infant
The following tables provide some examples of medicines that need dose adjustment based on gestational age**.**

Ampicillin

Gestational Age (weeks)	Days after birth		Intervals (h)	
≤ 29	0-28	> 28	12	8
30-36	0-14	> 14	12	8
37-44	0-7	> 7	12	8
≥ 45	always		6	

Digoxin
Loading dose

Gestational Age (weeks)	IV (mcg/kg)	OS (mcg/kg)
≤ 29	15	20
30-36	20	25
37-48	30	40
≥ 49	40	50
Divide in 3 doses a day		

Maintenance dose

Gestational Age (weeks)	IV (mcg/kg)	OS (mcg/kg)	Intervals (h)
≤ 29	4	5	24
30-36	5	6	24
37-48	4	5	12
≥ 49	5	6	12

Tobramicine

Gestational Age (weeks)	Days after birth	Dose (mg/kg)	Intervals (h)
≤ 29	0-7 8-28 ≥ 29	5 4 4	48 36 24
30-34	0-7 ≥ 8	4.5 4	36 24
≥ 35	Always	4	24

SCORE FOR 7. ADVANCED NEWBORN CARE

KEY PRACTICES/ITEMS		Score
7.1	Clinical records for NICU	
7.2	Enteral nutrition	
7.3	Parenteral infusions	
7.4	Nutritional outcome indicators	
7.5	Infection control and treatment	
7.6	Treatment of respiratory problems	
7.7	Other specific conditions	
7.8	Appropriate use of medicines	
7.9	Pain avoidance and control	
7.10	Neonatal developmental care	
7.11	Communication with parents	
7.12	Transport of critical infants	
7.13	Discharge procedures	
7.14	Quality Improvement and audit	

CHAPTER 7SCORE

SUMMARY

MAIN STRENGTHS: **1.** **2.** **3.** **4.** **5.**
MAIN WEAKNESS: **1.** **2.** **3.** **4.** **5.**

COMMENTS:

1.

2.

3.

4.

5.

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8. Monitoring and follow-up

Objective: To evaluate the practices related to monitoring and follow-up for sick newborn babies and to women with obstetric complications.

Source of data and instructions:

- Review patient files
- Observation of clinic practice
- Gather the data for this chapter in conjunction with clinical chapters

8.1 Monitoring of individual progress	**Score: Mother**	**Score: Newborn**	**Comments**
□ At the time of admission, a monitoring plan is prescribed according to the severity of the women/infant's condition □ A standard monitoring chart is used with the following information: women/infant details; vital signs; clinical signs depending on condition; treatments given, feeding, and outcome			
8.2 Reassessment and monitoring by nurses/midwives	**Score: Mother**	**Score: Newborn**	**Comments**
□ Key risk signs are monitored and recorded by the nurse/midwife twice a day and at least 4 times a day for critically ill women/infants □ Doses and time of administration are recorded by the nurse/midwife in the medical records for each medication given to each women/infant □ If IV fluids or medicines are given, the following relevant information are recorded in the medical recorded: type of infusion, total amount, infusion speed, time of start and time of end of infusion □ Additional special monitoring is performed and recorded appropriately when needed to follow the progress of particular conditions □ Nurses/midwives use the results of woman/infant monitoring to alert the physicians of problems or changing status warranting their attention			
8.3 Reassessment by doctors	**Score: Mother**	**Score: Newborn**	**Comments**
□ Woman/infant are re-assessed by a doctor after admission and reviewed at least once a day, twice for seriously ill woman/infant (if there is a specific policy, this professional could be an experienced midwife/nurse)			

8.4 Follow up after discharge	Score: Mother	Score: Newborn	Comments
□ If needed, follow up is arranged before discharge in the health facility closest to the woman/infant's home that can provide the necessary follow up treatment □ Every woman/infant receives a discharge note providing information on the condition and on the hospitalisation period			

***Note**: This chapter applies to sick newborn babies and to women with complications.*

SCORE FOR 8. MONITORING AND FOLLOW-UP

SUBCHAPTERS		Score: Mother	Score: Newborn
8.1	Monitoring of individual progress		
8.2	Reassessment and monitoring by nurses/midwives		
8.3	Reassessment by doctors		
8.4	Follow up after discharge		

CHAPTER 8 SCORE

SUMMARY

MAIN STRENGTHS: **1.** **2.** **3.** **4.** **5.**
MAIN WEAKNESS: **1.** **2.** **3.** **4.** **5.**
COMMENTS: **1.** **2.** **3.** **4.** **5.**

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SECTION 3
POLICIES AND ORGANISATION OF SERVICES

9. Infection prevention

10. Guidelines and audit

11. Access to hospital care and continuity of care

12. Mother and newborn rights

9. Infection prevention

Objective: To evaluate the integrated prevention, control and management of hospital associated infections for both curative and preventive activities.

Source of data and instructions:

- Documents and records: policies, protocols and guidelines, case files
- Observation of equipment and of practice in all areas that serve pregnant women, new mothers and newborns
- Informal talking with staff provides a complementary source of information

9.1 Infection control policies

9.1 Infection control policies	Score: Mother	Score: Newborn	Comments
□ National or regional infection control programme is implemented in the hospital □ Infection control committee is in place □ Key data are collected, such as % infection, infection site, and a proper definition is given for indicators that are monitored □ Infection control policies are developed and disseminated □ There are clearly defined procedures/protocols for cleaning and disinfection □ A system is in place for incident monitoring (accidental exposure, needle puncture, etc) □ Environmental sampling is not performed routinely □ Regular staff training and supervision on infection prevention occurs □ Staff health check-up policy is in place □ There is a policy for staff personal hygiene (nails, uniforms, shoes) □ Policies do not contain ineffective and resources wasting procedures, such as: o Ultraviolet lamp for disinfection o Restriction of family visits o Routine policy of changing clothing and footwear when entering intensive care units			

SCORE FOR 9.1 INFECTION CONTROL POLICIES

KEY PRACTICES/ITEMS	Score: Mother	Score: Newborn	Comments
9.1 Infection control policies			

SUBCHAPTER SCORE

9.2 Hospital support services

9.2.1 Laundry	Score: Mother areas	Score: Newborn areas	Comments
□ Clean linen is stored separately from soiled linen □ Clean linen is transported separately from soiled linen □ Used linen (sheets, cotton blankets) are washed in hot water (70°C to 80°C) with detergent and disinfectant			
9.2.2 Management of wastes	**Score: Mother areas**	**Score: Newborn areas**	
□ Clearly defined procedures and protocols for collection and handling of wastes are applied □ Waste is transported in a dedicated trolley which is not used for any other purpose and is cleaned regularly □ Incinerator is functioning □ Sharps are collected and stored in sharps containers (plastic or metal box, lid closed, marked with appropriate label) □ Waste storage areas are clearly identified			
9.2.3 Sterilization	**Score: Mother areas**	**Score: Newborn areas**	**Score:** Comments
□ Steam or heat sterilization is available □ Instruments/equipment are cleaned or decontaminated before sterilization □ Sterilized instruments and equipment are stored protected from dust, moisture, humidity, insects, animals □ Storage system clearly indicates which items are sterile □ Sterilization system is used in proper way: o Time o Temperature o Packing o Monitoring and tracking o Quality control			

SCORE FOR 9.2 HOSPITAL SUPPORT SERVICES

KEY PRACTICES/ITEMS	Score: Mother areas	Score: Newborn areas
9.2.1 Laundry		
9.2.2 Safe management of wastes		
9.2.3 Sterilization		

SUBCHAPTER SCORE

9.3 Hand washing

9.3 Hand washing	Score: Mother areas	Score: Newborn areas	Comments
□ Hand washing written procedure or flow chart is attached near or above washing basins (WHO, National/Regional, local language) □ Adequate facilities and supplies for proper hand washing: o Clean water o Soap bar and soap rack which drains o Soap dispenser cleaned thoroughly on regular basis o Waterless, alcohol based hands rub o Disposable towels or clean towels □ Hand washing is performed by health staff o Before and after medical and nursing procedures o Between patient contact □ Plain soap is used for routine hand washing (not a disinfectant)			

SCORE FOR 9.3 HAND WASHING

KEY PRACTICES/ITEMS	Score: Mother areas	Score: Newborn areas
9.3 Hand washing		

SUBCHAPTER SCORE

9.4 Standard precautions

9.4.1 Use of gloves	Score: Mother areas	Score: Newborn areas	Comments
□ Non sterile gloves are available □ Non sterile gloves are used in a proper way: o Separate pair for each patient o When handling soiled instruments o When touching blood, body fluids o No touching “around” with dirty gloves □ Sterile gloves are available □ Sterile gloves are used for aseptic techniques □ Double gloving if high risk of gloves perforation or in presence of high prevalence of HIV, HBV, HCV			
9.4.2 Isolation	**Score: Mother areas**	**Score: Newborn areas**	**Comments**
□ A specific area is dedicated for infectious patients □ Isolation precautions are used following evidence based guidelines □ Dedicated containers to separate infectious waste and linen are marked with appropriate label/colour			
9.4.3 Catheter associated urinary tract infection	**Score: Mother areas**	**Score: Newborn areas**	**Comments**
□ Urinary catheter (U.C.) used only as necessary with appropriate indications □ U.C. inserted using aseptic technique and sterile equipment □ U.C. removed as soon as possible (preferably within 24 hrs) □ A close drainage system is used □ Peri-urethral area is not cleaned with antiseptic when U.C. is in place			
9.4.4 Prevention of nosocomial pneumonia	**Score: Mother areas**	**Score: Newborn areas**	**Comments**

□ Hand powered resuscitation (e.g. Ambu bag) is sterilized or subject to high level disinfection between uses on different patients □ Ventilator circuit with humidifiers are changed at least every 48 hrs □ Sterile water is used for humidifiers □ Endotracheal suction is performed using aseptic technique*:* o gloves o close system o single use catheter o no normal saline instillation			
9.4.5 Intravenous catheter related infection	**Score: Mother**	**Score: Newborn**	**Comments**
□ Aseptic technique is maintained when inserting and caring for central catheter □ IV fluid/therapy is prepared using aseptic technique (no-touch) □ Topical antibiotic ointment or cream are not used on umbilical catheter insertion site □ Daily care of insertion site is recorded □ Any intravascular catheter is promptly remove when no longer essential			

SCORE FOR 9.4 STANDARD PRECAUTIONS

KEY PRACTICES/ITEMS	**Score: Mother areas**	**Score: Newborn areas**
9.4.1 Use of gloves		
9.4.2 Isolation		
9.4.3 Catheter associated urinary tract infection		
9.4.4 Prevention of nosocomial pneumonia		
9.4.5 Intravenous catheter related infection		

SUBCHAPTER SCORE

9.5. Surgical patients

9.5 Surgical patients	Score: Mother areas	Score: Newborn areas	Comments
□ Patients are required to bath or shower, using soap, either the day before or the operative day □ Hair is not routinely removed □ Mechanical bowel preparation (enema) is not used routinely □ Antibiotic prophylaxis is administered only when indicated □ Antibiotic for surgery patients is selected by efficacy, published recommendation, timing and pharmacokinetics □ Postoperative incision is protected with sterile dressing for at least 24 hours			

SCORE FOR 9.5 SURGICAL PATIENTS

KEY PRACTICES/ITEMS	Score: Mother areas	Score: Newborn areas
9.5 Surgical patients		

SUBCHAPTER SCORE

SCORE FOR 9. INFECTION PREVENTION

SUBCHAPTERS		Score: Mother areas	Score: Newborn areas
9.1	Infection control policies		
9.2	Hospital support services		
9.3	Hand-washing		
9.4	Standard precautions		
9.5	Surgical patients		

CHAPTER 9 SCORE

SUMMARY

MAIN STRENGTHS: **1.** **2.** **3.** **4.** **5.**
MAIN WEAKNESS: **1.** **2.** **3.** **4.** **5.**
COMMENTS: **1.** **2.** **3.** **4.** **5.**

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10. Guidelines, training and audit

Objective: To evaluate the existence, dissemination and use of evidence based guidance in clinical practice; to assess audit and use of case reviews to improve quality of care.

Source of data and instructions:

- Documents and records: policies, protocols and guidelines; training outlines and records; case files; records of audit meetings
- Observation of practice, availability of guidelines and supporting material to assist implementation of the guidelines in all areas that serve pregnant women, new mothers and newborns
- Interviews with randomly selected staff (see section on interviews); informal talking with staff provides a complementary source of information
- Score as related to the areas or staff that provide care for pregnant women and new mothers, and areas or staff that provide care for serve newborns

10.1 Guidelines and protocols

10.1.1 Guidelines are available	**Score: Mother areas**	**Score: Newborn areas**	**Comments**
□ Use Annex 10.1 to review availability □ Guidelines and protocols are available on an appropriate range of topics □ Job aids or other material to assist implementation to clinical practice are available			
10.1.2 Guidelines are used	**Score: Mother areas**	**Score: Newborn areas**	**Comments**
□ Guidelines and protocols are printed, distributed, and easily available for use in the area where they are relevant □ Staff has been trained on the guidelines and protocols, or adequate mechanisms have been putted in place to ensure guideline diffusion among the staff □ New staff are orientated to key guidelines and protocols when the commence work □ There is a committee (group of people) responsible for periodical review and update of protocols and job aids			

Annex 10.1 Availability of guidelines and protocols

Use the following table to check if national guidelines, policies, standards, local protocols, or materials to assist implementation of guidelines such as job aids, pocket instructions, wall charts, or other items are available and easily accessed in the areas where they would be used.

Definitions:

- National guideline/protocol/policy: developed at country level.
- Local protocol/procedures: developed at hospital level. These take into account the availability of services at the hospital level (e.g. lab working hours, availability of intensive care and subsequent need for case-referral or not etc)

Guideline or protocol	**National**	**Local**	**Job Aids (describe)**
Essential medicine list maternal			
Essential medicine list infant			
Pharmacy product procurement			
Disposal of expired or damaged pharmaceutical products			
Use of Blood for transfusions (including blood screening)			
Adverse medicine reaction			
Ward management of medicine supplies			
Use and maintenance of equipment			
Cardiotocograph (CTG)			
Vacuum extractor			
Infusion pumps (maternal)			
Ultrasound			
Incubator			
Radiant warmer, other heating systems			
Phototherapy lamps			
Glucometer			
Equipment for the delivery of oxygen			
Pulse-oximeters			
Multi-functions monitors			
Infusion pumps: peristaltic and syringe (neonatal)			
Mechanical ventilators			
Other neonatal or maternal equipment (Specify)			
Normal pregnancy			
Normal labour			

Partograph			
Normal birth			
Normal puerperium			
Breastfeeding/Infant feeding			
Provision of health information to the pregnant woman and new mother (her own health and her infant)			
Obstetric conditions			
Pregnancy induced hypertension			
Preeclampsia and eclampsia			
Preterm birth			
Intermittent auscultation (fetal heart monitoring)			
Progress of labour			
Oxytocin augmentation			
Prolonged active phase of labour			
Episiotomy			
Emergency caesarean section			
Prophylaxis of deep vein thrombosis after CS			
Neonatal resuscitation			
Postpartum haemorrhage			
Procedure to alert relevant senior staff in cases of obstetric emergency			
Infections			
Streptococcus group B infection			
Malaria in pregnancy or puerperium			
Neonatal infections			
Prevention of nosocomial infections			
Antibiotic treatment for specific neonatal infections (early-onset and late-onset sepsis)			
Neonatal conditions			
Hypoglycemia			
Hyperbilirubinemia / jaundice			
Oxygen therapy			
Nutrition of newborns in NICU			
Neonatal parenteral nutrition			

Placement of central catheters			
Management of central lines			
Patent ductus arteriosus			
Neonatal seizures			
Preterm anaemia			
Transfusion of blood components			
Infection control			
Use of detergents and disinfectants			
Staff health check-up			
Staff personal hygiene			
Collection and handling of wastes			
Hand washing / hand hygiene			
Isolation precautions			
Others			
Case referral			
Audit and review of case management			
Counselling and communication and respectful care according to mother and baby rights			
Procedures for birth registration			
Procedures in case of an abandoned child			
Procedures for collecting complaints from hospital users			
Procedures for producing educational materials for users			

SCORE FOR 10.1 GUIDELINES AND PROTOCOLS

KEY PRACTICES/ITEMS	**Score: Mother areas**	**Score: Newborn areas**
10.1.1 Guidelines are available		
10.1.2 Guidelines are used		

SUBCHAPTER SCORE

10.2 Continuous learning

10.2.1 Learning resources are available	Score: Mother areas	Score: Newborn areas	Comments
□ At least one recent midwifery textbook is readily available (not older than 5 years) □ At least one recent obstetric textbook is readily available (not older than 5 years) □ At least one recent neonatal textbook is readily available (not older than 5 years) □ At least one recent general nursing textbook is readily available (not older than 5 years)			
□ There is a computer with a working internet connection to ensure access to update health care literature and sources of e-learning □ There is a computer which can be used to access to the WHO - Reproductive Health Library and other WHO guidelines and recommendation			
10.2.2 In service training occurs	**Score: Mother areas**	**Score: Newborn areas**	**Comments**
□ There is a overall programme for in service training for all relevant staff □ Training update sessions related to practice take place regularly: include drills (simulated practice), use of emergency charts, equipment etc □ Training includes practical sessions such as role plays □ There is a period of supervision or mentoring for newly appointed staff			
10.2.3 Continuous professional education occurs	**Score: Mother areas**	**Score: Newborn areas**	**Comments**
□ There is a national continuous education and professional development program endorsed by the hospital □ Doctors, nurse and midwives are actively encouraged by the administration of the facility to follow national continuous education and professional development program			

10.2.3 Team working is encouraged	Score: Mother areas	Score: Newborn areas	Comments
□ Regular staff meetings are held to discuss organizational aspects of care □ All staff are involve are involved in these meetings o Nurses and midwives o Doctors o Other health workers □ Nurses and midwives and other specific disciplines run their own periodic meetings			

SCORE FOR 10.2 CONTINUOUS LEARNING

KEY PRACTICES/ITEMS	Score: Mother areas	Score: Newborn areas
10.2.1 Learning resources are available		
10.2.2 In service training occurs		
10.2.3 Continuous professional education occurs		
10.2.3 Team working is encouraged		

SUBCHAPTER SCORE

10.3 Audit and case reviews

10.3.1 Audit and review process is in place	Score: Mother areas	Score: Newborn areas	Comments
□ A policy or protocol requires regular audits and reviews to take place □ There is a committee (group of people) responsible for organizing audits and case reviews: o as routine o in response to an incident or concern			
10.3.2 Audit and case reviews are conducted	**Score: Mother areas**	**Score: Newborn areas**	**Comments**
□ Case reviews are conducted to analyse and discuss all cases of deaths □ Case reviews are conducted to analyse and discuss cases of severe complications □ Case reviews involve all team members including midwives and nurses □ Case reviews are conducted based on updated, evidence-based clinical guidelines and local protocols □ Case reviews are conducted in a setting of confidentiality and no-blame □ Case reviews discuss contributing factors and causes of substandard care □ Recommendations from reviews are developed and implemented □ A quantitative method is used to evaluate adherence of clinical management of cases to evidence based guidelines			

SCORE FOR 10.3 AUDIT AND CASE REVIEWS

KEY PRACTICES/ITEMS	Score: Mother areas	Score: Newborn areas
10.3.1 Audit and review process is in place		
10.3.2 Audit and case reviews are conducted		

SUBCHAPTER SCORE

SCORE FOR 10. GUIDELINES AND AUDIT

SUBCHAPTERS		Score: Mother areas	Score: Newborn areas
10.1	Guidelines and protocols		
10.2	Continuous learning		
10.3	Audit and case reviews		

CHAPTER 10 SCORE

SUMMARY

MAIN STRENGTHS: **1.** **2.** **3.** **4.** **5.**
MAIN WEAKNESS: **1.** **2.** **3.** **4.** **5.**
COMMENTS: **1.** **2.** **3.** **4.** **5.**

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11. Access to hospital care and continuity of care

Objective: to evaluate whether there are gaps in access to care and in continuity of care for both mothers and newborns

Source of data and instructions:

- Documents and records: guidelines/procedures on referral process from primary care to hospital and from the hospital to higher levels of care; individual records for referral notes, appropriateness of referral and compliance with guidelines (minimum 20 records)
- Interviews with staff members and with women, mothers and other caregivers about their experience of access to care and continuity of care (see section on interviews)

* When evaluating economical barriers (point 11.2 and 11.4), ask about all types of fees, such as admission fees, or cost of medicines or laboratory investigations examinations, equipment, and supplies. A "critical barrier" is defined as a cost high enough to represent, for some families, a barrier to seek and obtain hospital care or the need for the woman/family to borrow money to be able to have access to care.

11.1 Coordination with primary health care (PHC)	**Score: Mother**	**Score: Newborn**	**Comments:**
□ There are explicit guidelines/procedures agreed with PHC on case referral, including: o Explicit criteria for case referral to the hospital and other health services o Use of referral note (i.e. a note specifying reasons for referral and treatment given) o Adequate information to women/families regarding services available, opening times, cost, and where services are located o Criteria and procedures for hospital transport o Hospital procedures to asses/triage referred cases □ Systems are in place to provide regular communication with PHC (e.g. meetings are organised with PHC to discuss statistics on case referral and to audit specific cases, such as all mortality/severe cases) □ The hospital management, or specific departments/units (such as ob/gynae or paediatrics) carry out activities (training and or supervision, development of protocols) aimed at improving the quality of case management at PHC level and of referral from PHC facilities			

11.2 Access to hospital	**Score: Mother**	**Score: Newborn**	**Comments:**
□ Access to hospital is not restricted on race, ethnicity, cultural or religious grounds □ Lack of hospital transport is not a barrier to hospital access □ Cost of transport is not a barrier to hospital access* □ Hospital fees are not a critical barrier to hospital access* □ Information about hospital fees is clearly provided to women and family members and fees are displayed in the ward/hospital □ There are no unofficial payments requested by staff from women or families □ User's perception of quality of hospital care is not a barrier to hospital access			
11.3 In hospital continuity of care	**Score: Mother**	**Score: Newborn**	**Comments:**
□ There are systems in place to ensure appropriate communication among clinical staff members on case management, (e.g. procedure to ensure communication on staff shifts; clinical meetings, etc) both for doctors and nurses □ There are system in place to ensure communication among different clinical services in the hospital for integrating case management of women and their newborn (e.g. labour room and newborns units, including NICU) □ There are systems in place to ensure communication among different health services, e.g. clinical services with social services			
11.4 Referral to a higher level of care or to other health services	**Score: Mother**	**Score: Newborn**	**Comments:**
□ There are explicit guidelines/procedures agreed with other hospitals/health services on case referral, including: o Explicit criteria for case referral (including for referral to social services) o Use of referral note (i.e. a note specifying reasons for referral and			

treatment given) o Adequate information to women/families regarding services to where the case is transferred, cost (if any), and where services are located o Criteria for hospital transport o Hospital procedures to asses/triage referred cases □ Lack of transport is not a barrier to referral (including a cause of delayed referral) □ Cost for transport is not a barrier to referral (including a cause of delayed referral)* □ Fees or other costs are not a critical barrier to referral* □ Systems are in place to provide regular communication with other hospitals/health services (e.g. meetings are organised with other hospital and health services to discuss statistics on case referral and to audit specific cases, such as all mortality/severe cases) □ Continuity of care is not compromised by separation of service provision based on age (e.g. newborn older than 1 month), or common condition (e.g. patients with diarrhoea are referred to infectious disease hospital)			

SCORE FOR 11. ACCESS TO HOSPITAL CARE AND CONTINUITY OF CARE

KEY PRACTICES/ITEMS	Score: Mother	Score: Newborn
11.1 Coordination with primary health care (PHC)		
11.2 Access to hospital		
11.3 In hospital continuity of care		
11.4 Referral to a higher level of care or to other health services		

CHAPTER 11 SCORE

SUMMARY

MAIN STRENGTHS: **1.** **2.** **3.** **4.** **5.**
MAIN WEAKNESS: **1.** **2.** **3.** **4.** **5.**
COMMENTS: **1.** **2.** **3.** **4.** **5.**

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12. Mother and newborn rights

Objective: To evaluate the acknowledgment and respect for patients' rights, in particular those rights relevant to pregnant women, new mothers and newborns.

Source of data and instructions:

- Documents and records: policies, protocols and guidelines
- Observation of practice, availability and visibility of policies
- Interviews with randomly selected mothers (see section on interviews); informal talking with mothers and their relatives staff provides a complementary source of information

12.1 Charter or policy of mother and newborn rights

12.1 Charter is implemented	Score: Mother	Score: Newborn	Comments
□ The management has adopted a charter or policy that specifies the rights of the mother and of the newborn □ The adopted charter is based on international standards □ The charter was developed with a participatory approach, involving hospital staff and management as well as representation of other interest groups (Ombudsman, patients' rights groups, NGOs, etc) □ Staff is aware of the existence of the charter, the contents and their role in implementing the charter □ A process exists to regularly monitor implementation of the charter, examine breaches of the charter, act on breaches, and update charter as needed □ The full charter, or a summary, is written to be understandable to service users including literacy level and the use of local language □ The full charter is available in all areas that serve mothers and newborns (in a file) □ The full charter or a summary of the main points is posted visibly in the wards. Areas with summary visibly posted: o Out-patients o Emergency o Labour area o Birth area o Postnatal o Area for sick infants o Other:			

SCORE FOR 12.1. CHARTER OR POLICY OF MOTHER AND NEWBORN RIGHTS

KEY PRACTICES/ITEMS	Score: Mother	Score: Newborn
12.1 Charter or policy is implemented		

SUBCHAPTER SCORE

12. 2 Availability and accessibility

12. 2.1 Services are available	Score: Mother	Score: Newborn	Comments
□ Care is provided both for the mother and for the newborn □ Appropriately trained staff is available at all times □ Necessary medicines, equipment and supplies are available at all times			
12.2.2 Continuity of care is available	**Score: Mother**	**Score: Newborn**	**Comments**
□ Functioning links exist between primary care services and the hospital for maternal and newborn care: o From primary care to this hospital o From this hospital to primary care o From this hospital to higher level hospital □ Results of tests and diagnosis are shared between services to avoid re-testing and delays in care □ Mothers hold basic information on their health and care and that of their infant (baby card or book, mother's book, or similar)			
12.2.3 Care is physically accessible	**Score: Mother**	**Score: Newborn**	**Comments**
□ Out-patient services are open at times that facilitate easy access □ Waiting times are monitored to avoid excessive waiting: o Waiting time to get an appointment o Waiting time at clinic o Waiting time for referral appointment □ Access is facilitated for women (and accompanying family) with mobility needs (no long stairs, narrow entrances or other restrictions) □ If the newborn has any health problem, the mother (or other family member) is offered a place to stay in the hospital			
12.2.4 Care is economically accessible	**Score: Mother**	**Score: Newborn**	**Comments**
□ Hospitalization, treatment, and transport do not require significant costs for the family (costs that would			

be a barrier to care) □ If there are costs, there are mechanisms to provide free care for those unable to afford these costs □ Clear information is provided regarding services that are free of cost, and services that have a cost (including hospitalization, laboratory tests, medicines, food, bed linen etc for the mothers and the newborn) □ Unofficial payments to individual staff or hospital are prohibited			
12.2.5 Access is non-discriminatory	**Score: Mother**	**Score: Newborn**	**Comments**
□ Care is provided without limitation by age, race, ethnicity, cultural or religious belief □ Attention is given to providing signage and information in ways that are inclusive of those with literacy or language differences			
12.2.6 Access to information, discussion and support is provided	**Score: Mother**	**Score: Newborn**	**Comments**
□ Health personnel are trained in communications skills □ Health personnel listens to the mother's perceptions of the problems and needs □ Information is provided in a way that allows for discussion of how the information can be used by the individual □ Opportunities to ask questions or for further information are encouraged □ The mother receives information regarding the care of her infant and regarding her own health at appropriate times: o Antenatal o Labour and birth o Postnatal o Discharge □ Mothers know and are able to recognize signs and symptoms related to them or to their newborn that require contact with health services □ Information and support is provided in a way that is cultural appropriate and			

easy to understand □ Mothers likely to have additional needs receive particular attention to information and support: o Physical or sensory needs o Intellectual needs o Psychological needs o Adolescent mother o Very poor social or economic conditions o Infant with health conditions or special needs			

SCORE FOR 12.2. AVAILABILITY AND ACCESSIBILITY

KEY PRACTICES/ITEMS	**Score: Mother**	**Score: Newborn**
12. 2.1 Services are available		
12.2.2 Continuity of care is available		
12.2.3 Care is physically accessible		
12.2.4 Care is economically accessible		
12.2.5 Access is non-discriminatory		

SUBCHAPTER SCORE

12.3 Acceptability and respect

12.3.1 Privacy, confidentiality and respect is given	Score: Mother	Score: Newborn	Comments
□ Care is person-centred and adapted to the individual situation □ Cultural and religious beliefs and practices are respected □ If beliefs and practices are likely to result in risks to health or safety (of mother or infant or others) these beliefs are discussed with the mother in an informed and supportive manner □ Pregnant women are examined by doctor or nurse and communicate with staff without being seen or overheard □ Women (if requested and possible) are examined by a female doctor □ Access to patient files and information is limited to only those staff requiring this access □ Information is not shared with family members without the permission of the women □ Special attention is given to women with special need, such as women victim of violence □ Staff have the skills to respond to the physical and emotional concerns of women and families □ Effective treatments, as based on international standards are provided at the highest attainable level □ There are processes in place to monitor and improve quality of health care			
12.3.2 Pain is avoided and correctly managed	**Score: Mother**	**Score: Newborn**	**Comments**
□ Painful procedures are avoided when less invasive alternatives are available □ Procedures are planned so to minimize pain and discomfort: o Blood testing (frequency of blood draws and number of separate draws) o Quiet times are provided for sick infants (reduced lighting and noise, no routine procedures) o Fasting for procedures is kept to a minimum			

□ During painful procedures and situations, pain is managed: (for both mothers and for infants) o Pain evaluation is done regularly o Pain relief is provided o Non-pharmacological pain management is supported			
12.3.3 Unnecessary procedures and treatments are avoided	**Score: Mother**	**Score: Newborn**	**Comments**
□ Unnecessary hospitalization are avoided □ Unnecessary long hospitalizations are avoided □ Unnecessary investigations and treatments are avoided □ Unnecessary medicines are not prescribed □ Movement is not restricted unless there is a medical need for restriction □ Unrestricted access of parents to their infant is facilitated			
12.3.4 Participation in care is encouraged	**Score: Mother**	**Score: Newborn**	**Comments**
□ The health personnel ask the mother about her condition and about the infant's condition and value the viewpoint of the mother □ The mother is encouraged to ask for staff assistance in caring for herself and for her infant □ If a mother is too ill to care for herself or her infant, a family member is encouraged to be in the hospital to provide non-medical care and support □ The involvement of the woman in decision making is routine, such as when discussing different options for care □ The father or other support person is encouraged to stay with the mother and with the newborn as needed during the hospital stay, including during labour and birth □ If the newborn has any health problem that requires hospitalization, the mother is offered a place to stay in the hospital and encouraged to be involved in the care of her infant □ If the mother is unable to remain with her hospitalized infant another family member is encouraged to stay with the			

infant □ Clear information is provided regarding the organization of care (such as documents needed for the hospitalization, hospitals rules, access to services and facilities) □ Informed consent is obtained for major interventions and procedures □ Procedures are in place to capture user's views			

SCORE FOR 12.3. ACCEPTABILITY AND RESPECT

KEY PRACTICES/ITEMS	**Score: Mother**	**Score: Newborn**
12.3.1 Privacy, confidentiality and respect is given		
12.3.2 Pain is avoided or managed		
12.3.3 Unnecessary procedures and treatments are avoided		
12.3.4 Participation in care is encouraged		

SUB-CHAPTER SCORE

SCORE FOR 12. MOTHER AND NEWBORN RIGHTS

SUBCHAPTERS		Score: Mother	Score: Newborn
12.1	Charter is implemented		
12.2	Availability and accessibility		
12.3	Acceptability and respect		

CHAPTER 12 SCORE

SUMMARY

MAIN STRENGTHS: **1.** **2.** **3.** **4.** **5.**
MAIN WEAKNESS: **1.** **2.** **3.** **4.** **5.**
COMMENTS: **1.** **2.** **3.** **4.** **5.**

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SECTION 4
Interviews

Annex A: Interview with staff

Annex B: Interview with pregnant women and mothers

Annex A: Interview with staff

The interviews are an essential part of the assessment process and the interviewers are an integral part of the assessment team. The interviews should receive adequate support and training to familiarise themselves with the interview tools, how to conduct the interviews in a way that will gain the trust of the person being interviewed and obtain the necessary information, and to do the summary of staff interviews, including significant quotes, which will be used for giving feedback and reporting on findings.

Inform hospital managers that the interviewers will be approaching staff for interview during the assessment and that the interviewers will select whom to interview. This is to make sure that the choice is not biased or a potentially critical point of view is censored. Ask managers to facilitate the interviewers in finding a suitable place for the interviews. The rest of the assessment team should be available to support and assist the interviewers during their work.

Prepare for interviewing

Review the questionnaire: Please read the whole questionnaire before you start interviewing so that you are familiar with it. If anything is not clear or if you don't understand the meaning of any questions please ask the assessors for help. You can practise the questionnaire with another member of the team if you are new to this type of interviewing. Some questions/sections are applicable only to staff and others only to students. Where it is not specified the question/section applies to both staff and students.

Find where to interview: During the interview it is important that nobody else can hear what the member of staff is saying, that he/she feels secure and comfortable, and that he/she can concentrate on your questions. Therefore, before you start it is best to select an office or other suitable space where you and your respondent can talk alone and where disturbance is kept to a minimum. You may need to use different rooms to be near where the staff are working to keep to a minimum the time staff are away from their clinical duties. Ask staff and managers to help you if you have difficulties in finding a suitable place.

Choose who to interview: Consider interviewing members of all staff categories that exist in the maternity and neonatal care departments (such as nurses, midwives, obstetricians, neonatologists, and student health professionals) and try to interview **at least 2 staff from each category**. Consider including some ancillary staff also (porters, cleaners etc) if these people have a high level of contact with mothers. Ask for the list of staff in service during the days of the assessment; this was requested also in the first part of the assessment. In order to maintain privacy and confidentiality look for each member of staff individually rather than give the list of names to a manager or other staff member to gather the people on the list to be sent to you for interview.

Prepare the required number of interview forms.

Conduct the interview

How to approach staff: We would like to record the honest opinions of hospital staff. For this reason, it is important that each member of staff you approach understands the aims of the interview, knows and trusts that the interview is completely confidential. Make sure you explain to him/her, that:

- the interview aims to find out directly from staff about their experience working for this hospital and their opinions about how things can be improved,
- he/she is free to choose to take part or not,
- the interview will be conducted in a private space, at a time suitable to them,
- there are no "correct" answers, and he/she is free to refuse to answer particular questions,
- colleagues and managers will NOT be told what he/she says in the interview,
- what he/she says in the interview may be used to report and give feedback on working conditions and quality of care in the hospital, however his/her name will NOT be mentioned and will NOT appear in any written document.

Conduct the interview: The questionnaire is a guide for your conversation with the respondent. Please do not show him/her the questionnaire during the interview to avoid influencing his/her answers. Read out one question at a time. Only if the meaning is unclear to the respondent then use your own words to explain. At the end of certain questions, there are "Examples". These aim to help you understand the kind of information we are looking for, however you should not read them aloud to the respondent to avoid influencing their answer. These examples are not the only "correct" answers.

Write the respondent's answer to each question in the box on the right hand side. Do not pressurize the respondent to answer if they feel uncomfortable with any of the questions. Simply make note of this in the answer box and proceed to the next question. Often the respondent may only give a short answer, such as "yes", "no". When he/she gives longer answers, try to record answers using the interviewee's own words**,** rather than trying to summarise the view expressed. Recording the actual 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?"

If you need more space to write, please continue on a separate sheet.

Finish the interview: If the respondent wishes, at the end of the interview, you can read out to him/her what you wrote, and he/she is free to make changes. Staff are often very busy, so make sure you thank each respondent for giving you their time.

Please do not leave forms lying about or in a place where people who are not members of the assessment team can read them.

After each interview, make sure you read through the respondent's answers and underline or circle sentences and quotations which appear particularly important and you think may be significant later when summarising all the interviews and giving feedback. You can also use the "strengths", "weaknesses" and "comments" boxes at the end of the form to help you in this.

Staff / Student Interview

Country:	Region:	Town:
Facility code:	Interview number:	

PART 1: PROFESSIONAL DETAILS	
FOR STAFF ONLY:	Responses
Profession/main professional qualification	
Department or clinical area Role and responsibilities	
In this job, are you using your main professional qualification?	
In what year did you obtain your main professional qualification?	
Have you obtained any further professional special qualifications? Please give details (title, year)	
How many years have you practiced in this profession?	
How long have you been working in this hospital?	
How long have you been working in your department/area/role within the hospital?	
FOR STUDENTS ONLY:	Responses
Title of course	
Year of enrolment	
Expected time when you will qualify	
When did you start your practical placement in this hospital and when will you finish?	
Current department/clinical area of work	
When did you start your practical placement in this current ward/clinical area and when will it finish?	
Are there specific skills you are required to gain during your placement in this clinical area, and how will these be assessed? Please explain briefly:	
Do you have an assigned tutor or mentor among the clinical staff? *If yes:* o How many other students is this person mentoring at the moment? o How often do you work shifts together with your tutor/mentor?	

Who can you ask for explanations or support during your work here?	
Do you think there are too many/too few students?	
Do you feel you have too much/too little autonomy in your work here?	
PART 2: HOSPITAL SUPPORT SYSTEMS	
Staffing	**Responses**
Do you think there is a sufficient number of staff in your clinical area?	
Is there a good combination of more and less experienced staff on duty at every shift?	
Is there a lack of any particular type of professional (e.g. midwives, specialist doctors)?	
If staffing is inadequate, is this worse at certain times (e.g. weekend, night)?	
If this is a teaching hospital, do you think there is a sufficient number of staff to support students adequately?	
Do you feel staff are here (at least in part) to help students, or are students here to help staff?	
Is there often new staff (high turnover)? If so, what is your opinion of this?	
Other comments on staffing	
Working conditions/staff incentives	**Responses**
Is work far from your home? *If yes,* is your travel difficult or expensive?	
Does the hospital provide you with free or low cost accommodation?	
If you have children, does the hospital provide you with any support with childcare or schooling?	
Are you satisfied with your work schedule and shift patterns?	
FOR STAFF ONLY: Do you think you receive a fair salary?	
FOR STAFF ONLY: Do you feel satisfied with your entitlement to sick leave and holidays?	

FOR STAFF ONLY: Are there any rewards available to staff who perform particularly well? *If yes:* Please describe:	
FOR STAFF ONLY: Are staff who don't perform well punished in any way? *If yes:* Please describe:	
Equipment and supplies	**Responses**
Based on your experience, please comment on the availability and quality of the following items in your clinical area. If there are any deficiencies, please give specific examples:	
Laboratory tests	
Equipment (e.g. bag and mask, fetal monitor, ultrasound scan machine)	
Medicines, i.v. fluids, blood products	
Disposable care supplies (e.g. syringes, gauze)	
Water and electricity	
Cleaning and disinfecting products	
Beds, cots, linen	
Food for women	
Toilets and washing facilities for women	
Items for documenting care	
Other	
System constraints/access	**Responses**
Do women often present late (in advanced labour or already with complications)? If yes, why do they present late? *Examples-DO NOT READ OUT LOUD:* o Cultural reasons o Cost o Transport o Women's lack of decision-making power	
Are there problems when you receive women referred from lower levels of care? If yes, what type of problems? *Examples-DO NOT READ OUT LOUD:* o Lack of standard criteria for referral o Timing of decision o Inadequate treatment before referral o Transport time o Resistance by families because of	

cultural reasons or cost	
Are there problems when you have to make referrals from this hospital to higher levels of care? If yes, what type of problems? *Examples-DO NOT READ OUT LOUD:* o Lack of standard criteria for referral o Timing of decision o Difficulties giving adequate treatment before referral o Transport time o Resistance by families because of cultural reasons or cost	
PART 3: GUIDELINES, CASE MANAGEMENT, AND PATIENT'S RIGHTS	
Case management/Clinical guidance	**Responses**
Do you think you have sufficient information and guidance available in your clinical practice?	
Do you feel that lack of standards for case management is a problem in your area of work?	
Are there any wall charts/job aids in the clinical area where you work? *If yes,* where are they kept and can you access them freely?	
Are there any copies of full clinical guidelines/protocols available in the clinical area where you work? *If yes,* where are they kept and can you access them freely?	
If clinical guidelines are not available in your area, from where would you obtain further guidance if needed? *Examples-DO NOT READ OUT LOUD:* o Senior colleagues o Library o Internet resources	
Have you ever been involved in the development of local guidelines or protocols? *If yes,* please describe:	
Audit and reviews	**Responses**
Do you know if audit/risk meetings take place in this hospital to discuss clinical cases? *If yes:* Do they take place regularly and if so how	

often? When was the last meeting? Did you attend? Do you think these meetings are useful?	
Do any practical solutions emerge from these meetings on how to improve care?	
Do you think these solutions have been implemented? *If yes,* have things improved?	
Are members of staff who make mistakes in the management of clinical cases reprimanded or punished? *If yes,* how?	
Aside from audit/risk meetings, have you ever made any suggestions to managers or senior colleagues on how to improve care? *If yes,* please describe:	
If yes you made suggestions, were you listened to? Were any actions taken?	
Do you feel you are given enough opportunities to participate and express your opinions on: o possible risks or concerns o how to improve care	
Facility accreditation or supervision visits	**Responses**
Do external accreditation/supervision visits take place in this hospital? *If yes,* how often do these take place and who conducts them? When did the last one take place?	
Were you told beforehand when the visit would take place? *If yes*, did you have to prepare for the visit? Please describe preparation undertaken:	
After the visit, were any changes implemented in your workplace? *If yes,* please give a brief description:	
What is your opinion of accreditation/supervision visits?	
Patient information and rights	**Responses**
Do you think women attending the hospital are well informed generally about how to look after their health/their baby's health?	
During the time in hospital, when do you think it is important or useful to provide information to women?	

Do you think obtaining a woman's consent is always required?	
If the woman and her family have different opinions, who should you listen to?	
Do you feel you have enough time to provide information to women?	
Do you have materials/job aids/leaflets, which can help you to provide information to women?	
Do you think pain relief methods available to women and infants are adequate?	
Do you know if there is a patient's charter of rights (or policy) in this hospital?	
What are the hospital procedures to preserve privacy in data collection?	
Do you know if there are procedures to collect users' views ?	
PART 4: PROFESSIONAL DEVELOPMENT AND WORKING CONDITIONS	
FOR STAFF ONLY: In-service training	**Responses**
Are you required to complete a certain amount of in-service training or updates (e.g. continuous medical education)? *If yes:* o How many hours of training/credits do you need to obtain, and in what timeframe? o Is this standard set by the hospital or at the national level?	
Have you taken part in any training updates organized by the hospital in the last year? *If yes:* please give details: o Title and duration o Did you attend in work time, have to take unpaid time off work to go, go in personal time? o Who paid the course fee (e.g. yourself, the hospital, an external sponsor)? o Did you receive extra money for taking part (e.g. per diem)?	
Have you attended any training updates organized outside the hospital in the last year? *If yes:* please give details: o Timing and duration o Did you attend in work time, have to take unpaid time off work to go, go in personal time? o Who paid the course fee (e.g. yourself, the hospital, an external sponsor)?	

o Did you receive extra money for taking part (e.g. per diem)?	
What is your opinion of the quality of the courses you have attended in the last year?	
How useful and relevant to your practice have these courses been?	
FOR STAFF ONLY: Staff rotation	**Responses**
Do you regularly rotate between different clinical areas/wards? *If yes,* how often do you rotate?	
If you rotate, do you like this system? In your view, what are its advantages and disadvantages?	
FOR STAFF ONLY: Career progression	**Responses**
Are there any opportunities for progressing in your career in this hospital? *If yes:* please describe:	
How do you feel about this?	
FOR STAFF ONLY: Teamwork and personal support in the workplace	**Responses**
Do you feel supported by colleagues? *If yes:* in what ways do you support each other?	
Do you feel supported by your manager(s)? *If yes:* in what way do they support you?	
Do you feel supported by members of other professions? *If yes:* in what way do they support you?	
Have you witnessed any interpersonal conflicts arising among staff?	
What steps are usually taken to resolve this kind of conflicts?	
Have you been formally assigned a colleague/senior member of staff (not your manager) who you can go to in confidence to discuss all or some of the following: o Your professional development needs o Conflicts or problems in your workplace o Professional/ethical issues arising from the management of clinical cases	
If yes: how often do you have a meeting with this person?	
Overall job satisfaction:	**Responses**
FOR STAFF ONLY: Are you thinking of	

staying in this job indefinitely, or would you prefer to leave? Why?	
FOR STUDENTS ONLY: After qualifying, would you like to work here or elsewhere? Why?	
Is there anything else that could be changed in order to improve your experience of working here? *If yes:* Please describe:	
Any further comments you would like to make?	

SUMMARY OF STAFF INTERVIEW

MAIN STRENGTHS: **1.** **2.** **3.** **4.** **5.**
MAIN WEAKNESS: **1.** **2.** **3.** **4.** **5.**
COMMENTS: **1.** **2.** **3.** **4.** **5.**

Annex B: Interview with pregnant women and mothers

The interviews are an essential part of the assessment process and the interviewers are an integral part of the assessment team. The interviews should receive adequate support and training to familiarise themselves with the interview tools, how to conduct the interviews in a way that will gain the trust of the person being interviewed and obtain the necessary information, and to do the summary of staff interviews, including significant quotes, which will be used for giving feedback and reporting on findings.

Inform hospital managers that the interviewers will be approaching staff for interview during the assessment and that the interviewers will select whom to interview. (This is to make sure that the choice is not biased or a potentially critical point of view is censored). Ask managers to facilitate the interviewers in finding a suitable place for the interviews. The rest of the assessment team should be available to support and assist the interviewers during their work.

Prepare for interviewing

Review the questionnaire: Please read the whole questionnaire before you start interviewing so that you are familiar with it. If anything is not clear or if you don't understand the meaning of any questions please ask the assessors for help. You can practise the questionnaire with another member of the team if you are new to this type of interviewing. At the beginning of certain questions, it is specified to which categories of women the question is applicable. However, in general, you should also use your own judgment in deciding which questions are relevant to an individual woman's situation.

Find where to interview: During the interview, it is important that no members of staff can hear what the woman is saying because this might influence her answers. If possible, she should be able to speak freely without other mothers or relatives around. (This is also important in case you wish to interview any of the other mothers.) The mother should feel secure and comfortable so that she can reflect on her experience and concentrate on your questions. However, in the case of mothers who cannot move easily or have to stay in bed, do as best you can to maintain privacy and ensure you pick a quiet moment when disturbance is likely to be minimal.

Therefore, before you start it is best to select an office or other suitable spaces where you and your respondent can talk alone (of course, she can bring her newborn with her to the interview). You may need to use different spaces as you interview women in different services or units. If you plan to take the women away from the ward for interview, inform duty staff that some women may be with you if they are looking for someone. Ask staff and managers to help you if you have difficulties in finding a suitable place.

Choose whom to interview: You should plan to interview women who are admitted to the maternity unit or have just been discharged. This should include women in different situations to hear as many points of view as possible. **Aim to interview at least 10 women**. Prepare yourself to interview mothers in different situations, for example:
Women who are admitted in pregnancy or are in early labour: when interviewing these mothers, it will be necessary to skip PART 3: Care in childbirth and the postnatal period" and go straight to PART 4.
Women who have already given birth: Ideally, these should include women who have had different experiences of birth, such as:

- mothers who had a "normal" baby and vaginal birth;
- mothers who had a caesarean section;
- mothers whose baby is preterm, unwell or has been admitted to a special unit for sick babies. Speaking to these mothers can provide useful information. However, the interviewer needs to use a high degree of tact and sensitivity in asking the mother about her baby's health and the support she is receiving.
- Ideally, a mother who had a vaginal birth about 3 months ago and has a healthy baby should be interviewed also. This is because women's perception of their experience may be different after some time.

Prepare the required number of interview forms.

Conduct the interview

How to approach the women: We would like to record the honest opinions of women. For this reason, it is important that each woman you approach understands the aims of the survey and knows and trusts that the interview is completely confidential. Make sure you explain to her that:

- the interview aims to find out directly from mothers about their experience of being cared for in this hospital, and their opinions about how things can be improved,
- she is free to choose to take part or not,
- as far as possible, the interview will be conducted in a quiet space so that other people can't hear, at a time suitable to her,
- there are no "correct" answers, and she is free to refuse to answer particular questions,
- she can stop the interview completely at any time or if she just needs a break it can be continued later,
- members of staff looking after her will NOT be told what he/she says in the interview: reassure her that participating won't have any negative impact on the care she receives during the rest of her stay,
- what she says in the interview may be used to report and give feedback on mothers' experiences and quality of care in the hospital, however her name will NOT be mentioned and will NOT appear in any written document.

Conduct the interview: The questionnaire is a guide for your conversation with the woman. Please do not show her the questionnaire during the interview to avoid influencing her answers. Read out one question at a time. Only if the meaning is unclear to her then use your own words to explain.

Write the woman's answer to each question in the box on the right hand side. Make sure you maintain an encouraging, friendly and non-judgemental attitude. Do not pressurize her to answer if she feels uncomfortable with any of the questions. Simply make note of this in the answer box, and proceed to the next question. Often the woman may only give a short answer, such as "yes", "no". When she gives longer answers, try to record answers using the interviewee's own words, rather than trying to summarise the view expressed. Recording the actual words used often helps to represent accurately what the person is trying to say. When doing this, please put the comments in quotation marks. For example:

"I really wanted my mother to stay in the delivery room and hold my hand, but the midwife told her to go outside, and I felt really scared"

If you need more space to write, please continue on a separate sheet.

Finish the interview: If the woman wishes, at the end of the interview, you can read out to her what you wrote, and she is free to make changes. Women can get tired easily at this time, so make sure you thank them for giving you their time.

Please do not leave forms lying about or in a place where people who are not members of the assessment team can read them.

After each interview, make sure you read through the respondent's answers and underline or circle sentences and quotations which appear particularly important and you think may be significant later when summarising all the interviews and giving feedback. You can also use the "strengths", "weaknesses" and "comments" boxes at the end of the form to help you in this.

Mother Interview

Country:	Region:	Town:
Facility code:	Interview number:	

PART 1: PERSONAL INFORMATION AND ACCESS	
Personal details/obstetric history	**Responses**
How old are you?	
What is your occupation?	
Is this your first baby? *If no,* how many other children do you have?	
Were your other children born in this hospital? *If no,* where were they born?	
Before this pregnancy, have you ever had a caesarean section?	
Birth and complications preparedness/access	**Responses**
Did you attend antenatal care during your pregnancy? *If yes,* how many visits did you attend?	
Where did you attend antenatal appointments?	
Did you experience any medical problems during pregnancy? *If yes,* please explain briefly:	
At your antenatal appointments, did you receive any advice on how to prepare yourself for birth? *If yes,* what advice were you given?	
Did you have to pay any money during antenatal visits? *If yes,* was this cost a burden for you?	
Did a health worker tell you to come and have your baby in this hospital? *If yes,* who told you and when? *If no,* why did you choose to come and have your baby here?	
Were you transferred into this hospital from another hospital? *If yes,* explain your experience	
Do you live far from this hospital, and how did you travel here?	

Did you have to obtain permission from your husband or other members of your family to attend for care? *If yes,* when, and was this difficult?	
Did you have to ask for/borrow money for any transport to attend the hospital?	
In general, was it easy or difficult to access this hospital?	
PART 2: CARE IN LABOUR	
Admission	**Responses**
What was the reason why you came to hospital the day you were admitted? Please explain briefly:	
When you arrived at the hospital, how long did you have to wait before a health worker examined you?	
Was a friend or family member allowed to stay in the same room with you during the initial examination?	
Did the health workers explain what they were doing?	
Could you understand what they were doing?	
Did the health workers explain what would happen next?	
Did you feel comfortable and carded for during the admission procedures? *If no,* how could it have been better?	
Labour environment	**Responses**
Have/did any medical problems occur(ed) during your labour? *If yes,* please explain briefly:	
Are/were you allowed to drink during labour?	
Are/were you allowed to eat during labour?	
Are/were you allowed to move freely and walk around during labour?	
Is/was a health provider in the room with you for most your labour?	
During each shift, is there mainly one member of staff taking care of you, or many?	
Is/was a friend or family member allowed to stay in the room with you all the time during labour?	

Is/was another labouring woman in the same room with you?		
Overall, do/did you feel comfortable in the environment where you are/were labouring? *If yes,* please explain:		
Support techniques	**Responses**	
During your labour, did/has the staff support(ed) you in any of the following ways:		
Present at your side as much as possible	Yes [ ] No [ ]	
Ensured privacy	Yes [ ] No [ ]	
Explained labour progress	Yes [ ] No [ ]	
Verbally encouraged, praised and/or reassured	Yes [ ] No [ ]	
Encouraged and helped into comfortable position	Yes [ ] No [ ]	
Encouraged and helped with walking	Yes [ ] No [ ]	
Helped friend/family member	Yes [ ] No [ ]	
Offered/encouraged to take oral fluids	Yes [ ] No [ ]	
Offered/encouraged to take light food	Yes [ ] No [ ]	
Kept clean and dry	Yes [ ] No [ ]	
Warm/cold compress	Yes [ ] No [ ]	
Assisted with warm shower/bath	Yes [ ] No [ ]	
Breathing/relaxation techniques	Yes [ ] No [ ]	
Massage	Yes [ ] No [ ]	
Use of music	Yes [ ] No [ ]	
Attention focusing/visualisation	Yes [ ] No [ ]	
Overall, are you happy with the support you received from health professionals during labour? Do you feel they could have done more to support you? *If yes,* please explain:		

Pain relief	**Responses**
Was there any treatment/procedure/special situation causing you pain? *If yes, p*lease describe	
Were you offered pain relief *If yes* – what types were you offered? o Epidural o Nitrous oxide inhaled (gas and air) o Lying in warm water o Others:	
Were you offered or did you use any other methods for pain relief? *If yes,* what other methods	
Was there any treatment, procedure or special situation causing pain to your newborn? *If yes,* please describe, describe what was done to relieve the pain	
PART 3: CARE DURING BIRTH AND THE POSTNATAL PERIOD *(Skip for women who have not yet given birth)*	
Care during birth	**Responses**
Did any medical problems occur during the birth of your baby? *If yes,* please explain briefly:	
How did you give birth – vaginally, caesarean section or forceps/vacuum?	
If vaginal birth: o Were you allowed to start pushing when you wanted? o Were you told in which way to push? o Were you asked to lie flat during pushing? o Were you allowed to choose in which position to give birth? o In which position did you give birth?	
Did the health professional(s) explain what was happening to you? *If yes,* could you understand the explanation?	
Was another woman delivering in the same room as you? *If yes,* how did you feel about this?	
Was a friend or relative allowed to stay by your side during the birth of your baby?	
If you had prepared a birth plan, were your wishes respected?	

Overall, did you feel comfortable and supported during the birth? Please explain:	
Newborn care	**Responses**
Is your baby healthy? *If no,* please explain:	
Was your baby placed on your chest/abdomen immediately after the birth?	
Was your baby taken away just after birth? *If yes,* o Where did they take baby and why? o After how much time did they bring baby back?	
Does your baby stay in the same room with you? *If no,* where does baby stay?	
Have staff encouraged you to practice skin-to-skin contact with your baby?	
Is your baby very small or born very early? *If yes,* have you been encouraged to practice kangaroo care?	
Have staff involved you or helped you with diaper changing and bathing?	
Are you able to ask questions about your baby at any time or only at a specific time?	
Infant feeding	**Responses**
How do you feed your baby (only breastfeeding, formula, other)?	
If you are not breastfeeding, can you tell me why?	
If breastfeeding: Were you able to start breastfeeding in the delivery room?	
If breastfeeding: Have you had any problems with breastfeeding? *If yes* what kind of problems:	
If breastfeeding: *If you had problems*, has the staff given you advice on how to solve these problems?	
If breastfeeding: If your baby is staying in a special area for sick babies, are you allowed to breastfeed baby there?	
If breastfeeding: If your baby is too small or ill to suck, have staff shown you how to express your milk?	

Overall, do you feel you have received enough support from staff with feeding your baby? Please explain:	
Care of the sick newborn	**Responses**
Did your baby have any problem*?* *If yes,* how was this managed?	
Do you know what type of medicines or treatment was given to your baby?	
Do you know what the plan is for discharge of your baby and if there is any plan for follow up after discharge?	
Are you satisfied with the care provided to your baby?	
Postpartum care and contraception	**Responses**
Did you have any medical problems after giving birth? *If yes, p*lease explain briefly:	
Are you satisfied with the help you received in coping with pain after birth?	
For caesarean section mothers: Are you satisfied with the help you received in breastfeeding, changing diapers, washing yourself and mobilising?	
Were you using contraceptives before this pregnancy? *If yes,* which method?	
Would you like to use contraception in the future, so that you do not become pregnant again too soon?	
Did health staff discuss contraception with you during your stay? *If yes,* do you feel satisfied with the advice you received?	
PART 4: MATERNAL SATISFACTION AND RESPECT FOR RIGHTS	
Continuity of care, acceptability and respect	**Responses**
Do/did you already know some of the staff looking after you? *If yes,* when and where had you met them before?	
Do/did new staff introduce themselves to you?	
Are/were there other people in the room during labour or birth (such as students)? *If yes*, was your permission asked first?	
Do/did staff asked your permission before carrying out clinical procedures, such as vaginal examinations?	

Have any procedures been carried out without your consent? *If yes*, please describe:	
Have you asked the staff any questions about your health or your baby's health? *If yes*: o Could you understand their answers? o How was their attitude towards you?	
Have you ever felt confused because different members of staff have given you conflicting advice or information?	
Did you had any change to discuss your treatment with the staff?	
Have you asked to read your medical documentation or the records of your baby (case records)? *If yes*, were you allowed to read the records?	
Would know how and where to complain if you feel that you were not treated with respect and dignity?	
Maternity stay/Overall satisfaction	**Responses**
Have you been allowed to have visitors?	
Are the toilets and showers functional and clean?	
If you had hospital food, was it enough and was it good?	
Have you had to pay for any services or products during your stay? Will you have to pay before you leave? *If yes,* please specify how much you paid (will pay), and for what items:	
Has it been/is it expensive for you to have your baby in this hospital? Did you have to borrow money?	
ONLY for women who have given birth: Has the stay been longer/shorter than you would have liked? *If yes*, why?	
Overall, do you feel you have received enough help by staff in taking care of yourself during your stay?	
ONLY for women who have given birth: Overall, do you feel you have received enough help by staff in taking care of your baby?	

Overall, do you feel staff have treated you with respect? Have they respected your personal wishes, your culture, your religion? Please explain:	
Overall, are you satisfied with the pain relief you, and in needed your baby, were offered and chose to have? Please explain:	
Do you have any other comments or suggestions on how care can be improved for mothers and babies in this hospital?	

SUMMARY OF MOTHER INTERVIEW

MAIN STRENGTHS: **1.** **2.** **3.** **4.** **5.**
MAIN WEAKNESS: **1.** **2.** **3.** **4.** **5.**
COMMENTS: **1.** **2.** **3.** **4.** **5.**

SECTION 5
DELIVERING FEEDBACKS AND DRAWING A PLAN FOR ACTION

Delivering the assessment results and drawing a plan for action

TEMPLATE 1. Synthesis tables

Each team of specialists can use one of the following tables for synthesizing his/her findings and preparing for the final team scoring, discussion and feedback session.

Midwifery

STRENGTHS: **1.** **2.** **3.** **4.** **5.**
WEAKNESS: **1.** **2.** **3.** **4.** **5.**
COMMENTS: **1.** **2.** **3.** **4.** **5.**

Obstetrics

STRENGTHS: **1.** **2.** **3.** **4.** **5.**
WEAKNESS: **1.** **2.**

3. **4.** **5.**
COMMENTS: **1.** **2.** **3.** **4.** **5.**

Neonatology

STRENGTHS: **1.** **2.** **3.** **4.** **5.**
WEAKNESS: **1.** **2.** **3.** **4.** **5.**
COMMENTS: **1.** **2.** **3.** **4.** **5.**

User's views

STRENGTHS: **1.** **2.** **3.** **4.**

5.
WEAKNESS: **1.** **2.** **3.** **4.** **5.**
COMMENTS: **1.** **2.** **3.** **4.** **5.**

TEMPLATE 2. Summary evaluation scores

Use this table for the final team scoring. Identify the most critical areas for quality improvement. Based on this and on the previous table, decide what feedback you are going to give.

Hospital support system	**Score: Mother areas**	**Score: Newborn areas**
1.1 Physical structure, staffing and basic services		
1.2 Statistics, health management information system, medical records		
1.3 Pharmacy management and medicine availability		
1.4 Equipment		
1.5 Supplies		
1.6 Laboratory support		
1.7 Ward infrastructures		
Case management		
2. Normal labour and vaginal birth		
3. Caesarean section		
4. Maternal complications and emergencies		
5. Routine neonatal care		
6. Sick newborn care		
7. Advanced newborn care		
8. Monitoring and follow-up		
Policies and organisation of services		
9. Infection prevention		
10. Guidelines and audit		
11. Access to hospital care and continuity of care		
12. Mother and newborn rights		

TEMPLATE 3. Action plan at hospital level

Discuss the above summary of hospital findings with the senior hospital management, giving details and providing real examples more as appropriate. Discuss their perception of the findings, and how action could be taken to improve services for mothers and babies. Discuss importance and feasibility of each action. Write down a plan of action, using the following matrix (expand as needed).

PRIORITY PROBLEMS	ACTION NEEDED (INCLUDING REMOVAL OF BARRIERS)	RESPONSIBLE PERSON AND TIMETABLE

TEMPLATE 4. Action plan at national level

When the findings of the evaluation are discussed at a national/central level, it may assist to use this matrix. Expand the matrix as needed.

HEALTH SERVICE FUNCTION	PRIORITY PROBLEMS	ACTIONS NEEDED (INCLUDING REMOVAL OF BARRIERS)	RESPONSIBLE PERSON AND TIMELINES
1. Stewardship and Governance			
2. Service Delivery			
3. Infrastructure And Commodities			
4. Human Resources			
4. Financing			
5. Information System			