

Nairobi Newborn Study

Standard Operating Procedure 3 [SOP3]: **Structural assessment**

Written by Georgina Murphy

Version 2: 03.08.15

1. Purpose and scope

Standard Operating Procedures (SOPs) are required to assure quality, to reduce errors, and to standardise activities and tasks throughout the Nairobi Newborn Study. This SOP provides instruction on how to conduct the facility structural assessment. Following this SOP involves speaking to the clinicians or nurses-in-charge of the neonatal unit (or equivalent) and delivery ward and conducting an infrastructure and equipment audit in the neonatal unit, delivery ward, and maternal surgical theatre (where applicable).

2. Staffing, equipment, and resources

The structural assessment will be performed by the study research assistant. It is therefore that person's responsibility for following SOP3. The structural assessment questionnaire will be recorded on paper for later data entry using RedCap.

3. Procedure

For the purposes of this SOP, the place in which a sick inpatient newborn is cared is referred to as the neonatal unit. However, this need not be a physically distinct unit.

3.1 Orientation

- i. Begin by orientating yourself with the facility to understand where inpatient newborn care is delivered (hereon referred to as the neonatal unit) and where newborns are delivered (hereon referred to as the delivery ward).
- ii. Ask the manager to introduce you to the clinician or nurse-in-charge of the neonatal unit and of the delivery ward. In some facilities this will be the same person, in other facilities these will be separate roles.

3.2 Conducting the assessment

You may choose to conduct the full assessment in one unit/ward followed by the other unit/ward or to complete each section for both the neonatal unit and delivery ward before progressing to the next section. You should choose the approach which minimises disruption to the work in the facility and makes most sense for time efficiency and accuracy of data collection.

Begin by filling in the facility details at the top of page 1 of the assessment form. If more than one person was interviewed for information about the facility, note the positions of each of those interviews and note the sections for which they provided information.

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Section 1: Staffing and records

Section 1.1: Staffing and records

- i. Request this information from the medical supervisor or nurse-in-charge of the facility. If this person is not available, then seek out the nurses in charge of the delivery ward and newborn unit or another senior member of staff. Choose the person(s) that will give you the most accurate information. If different questions or sections are answered by different members of staff (avoid if possible), note the position of the person giving the information in the comment box when different to the position of the person listed at the top of page 1 of the tool.
- ii. The purpose of this section is to get as much detail about the staffing for the facility as a whole, the neonatal unit, and the delivery ward as possible. Ask for elaborations and descriptions until you are satisfied that you have a good overview of staffing. The questions are merely guides of the information we need.
- iii. For total staffing at the facility, please consider all of the staff at the facility, not just within the delivery ward and newborn unit.
- iv. Avoid using terms that you do not seek clarification for. Note clarifications. For example, what does the nurse mean by 'on-call' staff? How often and for how long do these staff work? How do they compare to other staff?
- v. If you run out of space for writing notes, please use the reverse side of the sheet.
- vi. For the age limit, clarify the minimum and maximum age of new born allowed to be admitted to NBU. We are also interested to know if there are any weight criteria considerations or restrictions when admitting in NBU.

Section 1.2: Referrals

- i. Request this information from the nurse-in-charge.
- ii. Request information about referrals. If information is given about referrals that does not fit into the structure of these questions, please make a comment on the sheet explaining these extra details.
- iii. If more than 4 referral facilities are listed, please include these in the comment boxes.

Section 1.3: Record keeping

- i. Request to see the admissions and medical records for maternity patients and neonatal patients.
- ii. Review a minimum of five medical records and provide an answer to the questions based on an overall impression of these records. If there is a lot of variation, please explain in the comment box.
- iii. In facilities with electronic medical records, ask for details about what is captured in the electronic system and what is recorded as well or instead on paper. Provide a description of record keeping in the comment box.

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Section 2: Infrastructure

Section 2.1: Basic infrastructure and services

- i. Request this information from the nurse-in-charge.
- ii. You may need to explain what is meant by kangaroo mother care “by kangaroo mother care I mean the practice of holding the baby in skin-to-skin contact to the mother’s chest and wrapped the baby in this position’. Some facilities may provide kangaroo mother care but only when the mother is visiting the newborn on newborn ward, others may have a dedicated ward for kangaroo mother care. Please describe that the facility does with regard to the provision of this intervention.
- iii. After completing section 2.1 of the questionnaire, ask to be shown around the neonatal unit and delivery ward by a member of staff.

Section 2.2

- i. In order to answer questions in section 2.2, you will need to discuss with staff as well as observing for yourself.
- ii. When in the newborn unit, ask the staff about the organisation with reference to the questions in 2.2. Repeat this process when in the delivery ward for section 2.2. In each of these units, ask that the answer be shown to you. For example, if they say that the most seriously ill babies are nearest the nursing station, then ask to be shown where these sick babies are cared for and where the nursing station is so that you can confirm. Similarly, ask how many beds/cots are available but also count these yourself once shown. If you notice any discrepancies, ask the staff to clarify and note the response in the comment box.
- iii. With regard to ‘surgery provided for congenital malformations’ provide examples ‘such as cleft lip and palate, congenital heart defects, neural tube defect, etc’. Ask for details on what services they can and can’t do. Note as much information as possible. You do not need to see evidence of surgery being provided for congenital malformations, just ask the staff.

Section 2.3

- i. In order to answer questions in section 2.3, ask to speak to the person in charge of laboratory services or to be brought to the laboratory to speak with staff on duty. Ask the laboratory staff whether or not the services in section 2.3 are available. If there is no one available from the laboratory to speak to you but a clinician or nurse-in-charge is confident that they know what services are provided, then obtain the answers from that staff member.
- ii. Availability is defined as available at the time of assessment, if the service is temporarily out of service or being ordered, this does not qualify as being available. However, in such circumstances, please write a note in the comment box.

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Section 3: Equipment for delivery ward and newborn unit

- i. In each location, check for the availability of items in the lists.
- ii. Only tick equipment as present if the equipment is BOTH present AND working.
- iii. Only tick a drug or feed as being present if it is BOTH present AND accessible. I.e. a drug must be quickly and easily accessible to staff at the time that they require it. A drug or feed is NOT considered to be accessible if money needs to be paid to access it, if it is in stores that are not easily and readily accessible to the staff (e.g. store in a different building, permission and/or key required to access it, etc.), if they are only available from the main pharmacy, or permission must be gained from uneasily available staff in order to access it.
- iv. You may consult with staff at the facility to confirm the presence, absence, accessibility and working order of an item. Confirm whether or not an item is in working order by attempting to operate it, if not already in operation.
- v. Depending on the structure of the facility, some equipment might be shared between the delivery ward and the neonatal unit. In these cases, tick 'yes' for shared and also the location in which you have found the equipment at the time of assessment. For example, if a facility has only one rapid HIV test shared between the delivery ward and neonatal unit, then tick 'yes' on shared. If you found that the HIV test was located in the delivery ward when you did the assessment, then also tick 'yes' for the delivery ward and 'no' for the neonatal unit.
- vi. A shaded box on the assessment form indicates that it is not necessary to check for that item/drug in the specific location. E.g. do not check for sterile cord clamps in the neonatal unit.
- vii. Where comments need to be made alongside data collection, please write clearly and avoid abbreviations.

Section 3.1

- i. Follow general instructions above.

Section 3.2

- i. In this section we are interested in equipment that is available for the mother. If there is an item available on the delivery ward but it is reserved for use for newborns and staff are unable to use it for mothers, then tick 'no'.
- ii. In the case where the same equipment is used for both mothers and newborns and appears in both section 3.2 and 3.3, then select 'yes' for both sections.

Section 3.3

- i. In this section we are interested in equipment that is available for the newborn. If there is an item available on the delivery ward but it is reserved for use for mothers and staff are unable to use it for newborns, then tick 'no'.
- ii. In the case where the same equipment is used for both mothers and newborns and appears in both section 3.2 and 3.3, then select 'yes' for both sections.

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Section 3.4

- i. In this section we are interested in drugs that is available for the newborn and the mother. There are, however, separate sections for drugs for newborns and drugs for mothers. Be sure to only tick if the drug is available for that group. E.g. if a drug is on the delivery ward, clarify if it is available for the newborn or mother or both. Select answers as appropriate. In the case where a drug is used by both mothers and newborns and appears in both lists, then select 'yes' from both the newborn and mother list.
- ii. As mentioned in the general instructions, these drugs are only to be selected as 'yes' available if they are found on the ward/in the unit or rapidly accessible without protocol (i.e. prescription, waiting for other staff, or payment). However, for some drugs, if the drug is not available on the ward/unit, we are interested to know if it is at least available in the stores. A drug is considered to be 'in store' if it is available within the facility and within 2 hours of request but not immediately accessible in an emergency situation (e.g. a prescription is required or documentation must be organised by the pharmacist). Where indicated in the comment box, if a drug is not available on a ward/unit, select 'no' but also ask if the drug is in the stores and accessible within 2 hours of requesting for it. Ask to see the drugs in the store. If you have seen the drug in the store and the staff have said that it is available within 2 hours of request, then tick 'in store'. The 'in store' drugs must be available free of charge. For the 'in store' drugs, make a comment on the distance of the pharmacy from the newborn unit or maternity ward. Also make a comment on the accessibility of the drug with/ without any protocol i.e. a doctor's prescription.

Section 3.5

- i. Follow general instructions above.
- ii. Job aides MUST be visible either in a file or on the wall.

Section 4: Equipment and supplies for maternity or general surgical theatre (if applicable)

- i. In facilities with a dedicated maternal surgical theatre OR access to a general theatre for women with pregnancy complications, check for these items inside and in accessible perimeter of the theatre.
- ii. In cases where you are not able to enter the theatre because there is surgery taking place or there are strict hygiene procedures, make a note of this and try to arrange for another time when it might be possible to do the assessment.

3.3 Data entry and storage

- i. Once the assessment has been completed at a facility, return the form to the office for data entry. Be sure to store the form securely within the study filing cabinet within the folder for that facility. Do not give the form directly to the data entry officer.

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- ii. A RedCap tool has been created for data entry. Data entry is to be carried out twice by two separate data entry officers. The data are then compared and discrepancies are first checked against the paper form, if not resolved, then checked with the data collection officer, if not resolved, then reassessed at the facility.
- iii. The data entry officers must obtain the assessment form directly from the facility folder from the study filing cabinet and return the form to that same location. In an effort to reduce the likelihood of forms being misplaced, they will not be handed from person to person or left overnight in any location apart from the study file.
- iv. See SOP6 for data management and storage of data once entered.

4. Related procedures and documents

5. SOP-user signature log

By signing in the table below, I confirm I have read and am familiar with the SOP for structural assessment.

Name	Signature	Date