In-depth interview (IDIs) with health workers who care for Small and Sick Newborns (SSNBs)

Instructions to the research team:
Participants in these IDIs are health workers who are responsible for care of SSNBs (nurse / midwife / doctor / obstetrician / pediatrician/ facility administrator) at birth, at admission and/or until discharge. It is preferable to interview at least one of each type of health worker listed here.

They should work in health facilities that have a Special Newborn Care Unit (SNCU) or Neonatal Intensive Care Unit (NICU) , or health facilities that offer only SNCU / NICU services.
Please select those facilities that provide services to the greatest number of newborns in the district, based on the mapping of health facilities in the district.

We will ask you to show a video on iKMC to the participant, so please make sure you can do this from either your mobile phone or a tablet at the location of the interview.

Introduction
Thank you for taking the time to speak to me today. My name is [interviewer name], and I am one of the iKMC-IR team members. Before we begin, can I please confirm that you have received a copy of the study information sheet and consent form?

As a reminder, this study aims to explore how KMC is currently practiced and how preterm births and low birth weight babies are managed in health facilities like yours. We are interested in hearing your views and experiences about what currently happens in practice, and what factors influence how premature / LBW/ babies who are in the NICU/SNCU are cared for. You are free to:

- answer in as much or as little detail as you wish,
- skip over any questions you do not wish to answer,
- pause or stop the interview at any time if needed.

Please remember there are no right or wrong answers. Everything you say will be treated confidentially and will not be shared with any of your colleagues, or anyone outside of the iKMC-IR study team.

This interview will take approximately 45 minutes to 1 hour- depending on how much you have to say. Can I please check if you are free now to spend this amount of time so that I can ask you these questions?

I would also like to record our conversation- so that I can capture your responses accurately, and so that I can listen to you rather than take many notes. Can I confirm you are comfortable for me to start recording?

Thank you.

Data collection information: (to be completed by the interviewer):

- Activity code:
- Date of interview:
- Place of interview:
- Interview start time:
- Interview end time:
- Duration of interview:
- Interviewer name:

Information about the health facility:

- Name of health facility:
- Code number of the facility (as per facility mapping information if available):
- Area:
- Type of facility (public, private, NGO etc.):
- Level of facility:
- Type of newborn unit : NBSU/SNCU/NICU
-
- How many of beds does this facility have in the SNCU?
-
- What is the average occupancy in the unit?
-
- What is the catchment area of this SNCU?

Information about participants (to be taken prior to starting):
Socio-demographic information

Community/Region	
of discussion	
Age (in years)	
Gender	
Education (completed class/level)	
Profession	
Current role	
Name of facility	
How long worked in current role at this site	
Overall duration of work experience	
Role in care of the newborn	

Discussion Guide

***[Note to research team:** You will need to adapt the questions according to the role of the health worker you are interviewing.]*

Care in NICU/SNCU

a. Are most babies that come into the unit born in this facility? If not, where do they come from? What are the most common conditions that you manage in this unit?
b. Are there costs per day for being admitted in the SNCU/ NICU? Who pays for it? What happens if a family does not have money to pay for this? (**Probe**: are they sent somewhere else; do they provide care anyway?)
c. Did you receive any training on care of the baby in the NICU/SNCU in the last year?
    i. If so on what areas/ topics?
    ii. Are there any other specific areas you feel you require additional training? What are these?

I would like to ask about some specific interventions for care of preterm and LBW babies and other babies in the SNCU/NICU and hear about how these babies are managed:

Respiratory support & monitoring:

If the preterm/ low birth weight baby does not breathe or cry at birth, continues to have breathing difficulty or the baby was admitted to the SNCU/NICU with breathing difficulty:

- What is usually done for the baby?
- How do you identify a baby who needs respiratory support?
    - Are there any specific ways you use to identify respiratory distress in your unit?
    - What are some of the challenges you face in identifying respiratory distress in preterm/LBW babies?
- What is the usual practice in the SNCU/NICU for managing such a baby with respiratory problems? (e.g. oxygen or CPAP or a combination of both)
    - Who decides whether to use oxygen or CPAP?
    - When would you use oxygen, why?
    - When would you use CPAP, why?
    - If CPAP is not used, what is the main reason why?
    - We have heard from studies in different places that health workers prefer oxygen to CPAP, can you tell me why this would be the case? How does your practice compare?

[If CPAP is used, then ask questions below, if CPAP is not used, go to the section for all health workers below]

- Is the equipment for CPAP usually functional or in working condition in the newborn care unit / SNCU of your health facility?
- What is your view on using CPAP for SSNBs with respiratory distress?
- Some HWs think it is challenging to treat preterm/LBW babies with CPAP in SNCUs/NICUs– what's your view?

    - What are some of the challenges to use CPAP in your unit? (Probe: oxygen supply, equipment supply, maintenance; staffing/workforce; keeping baby calm, feeding baby, monitoring baby)
    - Do these challenges reduce use of CPAP by you and the team?
    - Can you give an example of when you've been unable to put a baby on CPAP?
    - How do you overcome these challenges?
- What makes CPAP use work well in your unit?
- Do families sometimes refuse CPAP? If so, why ? Probe reasons, including not understanding benefits or procedures, costs, others.
- How do you wean off a baby from CPAP? Who decides to start weaning off CPAP?
- How are nurses involved in the decision-making about CPAP use? Do you think they should have more involvement? Why or why not?

[*For all health workers*]

- Have you had any training in CPAP use? [*If you get a response YES, ask the following questions so that the health worker describes the training]*
    - Did you feel the training was sufficient to give you skills to provide CPAP? Why or why not?
    - Would you like additional training? On what topics?

Infection control:

- What measures or steps do you take to prevent infection for babies born premature or LBW
- in the SNCU/NICU?
- How well do you think the unit complies with hand hygiene practices NICU? What are the challenges you face in maintaining hand hygiene practices? (*Explore: availability of hand hygiene materials – sanitiser, soap and running water, hand towels or separate clean tissue)*
- How can these challenges be addressed?
- What procedures are followed in your facility if you suspect infection in a baby?
- What challenges do you face in managing infection in a SSNB? (Probe: availability of tests, access to lab, lab results, availability of antibiotics, cost of treatment) Are there any challenges in relation to staff (e.g. recognising infection, knowing how to diagnose and treat)? Any challenges in relation to parents and families (e.g. cost of tests or antibiotics)?
- How do you overcome these challenges? Can you give examples?

Feeding:

- How do you support the mothers of preterm/LBW babies or other babies in the SNCU/NICU to exclusively breast milk feed/ breastfeeding ?
- How do you monitor breastfeeding frequency and quality?
- Are there any mothers who need additional support? (*Explore: young, preterm, LBW, etc.*) What kind of additional support is provided to these mothers?
- What challenges do you face in the unit in supporting feeding of these babies? (e.g. in relation to infrastructure/equipment, staff, educational materials, mother or family resistance)
- How do you overcome these challenges? Can you give examples?

Kangaroo Mother Care including skin-to-skin contact and breastfeeding:

- What do you know about Kangaroo Mother Care?
    a. Which babies receive KMC?
    b. When is it initiated?
    c. Who is involved in providing support for KMC?
- Is it implemented at your unit?
    a. If not, what are main reasons why KMC isn't implemented?
- If KMC is implemented at the unit:
    a. How do you support skin-to-skin contact between mother and baby?
- What are the challenges to this? c. What are the key challenges to implementing KMC with babies in the NICU/SNCU?
    a. Mothers (.e.g. are mothers allowed into the NICU/SNCU, why not? What happens if not?)
    b. Families (e.g. are families allowed in? Why not? What concerns are there about families entering NICU/SNCU?)
    c. Infrastructure (e.g. bed, chair, space for mother?)
    d. Staff (e.g. shortages, skills, confidence)
    e. Educational materials
- Are there any mothers who need additional support to provide skin-to-skin contact? (*Explore: young, preterm, LBW, etc.*) What kind of additional support is provided to mothers who have difficulties?
- Have you and others in the facilities had any training on KMC? Was this training pre-service, or in- service training? How recent was that?
- Was the training adequate? Are there areas you feel you still need training on?

Challenges in provision of care to SSNBs

- What are the main challenges you face in providing care to the preterm/LBW baby in the SNCU/NICU?
- What are the challenges you face related to the following [Probe:]:
    - Equipment? Supplies? – (which specifically? What is the main problem (stock, repair, maintenance)? Health workforce – (shortages, rotations, transfers to other facilities, absence) is t
    - Health workers skills - (Are health workers prepared to provide this care? Empowered/confident to provide this care? Availability of training and mentoring support of nurses? Training and mentoring support of doctors?)
    - Cost of care for families – (do families request for discharge due to financial reasons?)
    - Cost to the facility? Which costs are the biggest barrier?
    - Lack of amenities – do women request for discharge due to lack of amenities such as e.g. lack of food, running water, comfortable place to stay, beds etc.)?
    - Do mothers request early discharge for other reasons? What are they?
    - Do you have any suggestions to address these challenges in provision of care for preterm or LBW babies? (**Probe** for solutions to the different challenges mentioned)

Immediate Kangaroo Mother Care:

[Note to research team: *There are three different videos available, please review and determine which video and which sections are best for you to use]*

Longer multi country video: https://vimeo.com/664053272/d139fc81bc about 9 and a half minutes (with Ebun, Dr Chellani!)

Malawi video: https://vimeo.com/694111105/8b9ca535df - about 4 minutes

iKMC trial video: http://ultra-early-intervention.creo.tv/i/AhC8hUX8DHljFXInaKLZiw - about 18 minutes (**Note**: you may wish to skip the first part of the video that discusses iKMC trial including randomization – and go to showing practice of iKMC which starts at about 1:37 and goes to about 3 minutes).

[Note to research team: *You will need to adapt the questions according to the role of the health worker you are interviewing. Please show the video and then have a discussion on what they think about iKMC, what would be their concerns and what changes do we need to make in this facility to be able to provide iKMC. Please probe to understand their concerns and suggestions. You may think of some of the challenges they have already presented in the discussion above and build these in the conversation.]*

I would like to show you a short video about immediate Kangaroo Mother Care, which is about starting KMC immediately after birth, while the baby is in the NICU/SNCU and then I would like to have a conversation with you about what is shown in the video

- I would like to hear your general reaction after seeing the video. [**Note**: Encourage the participant to express initial feedback.]
    - What did you note that was positive about this practice?
    - What did you note that may be challenging about this practice?
- What do you think about starting KMC before the baby is stable and while in the NICU?
    - What could be the advantages?
    - What could be the risks?
- How would you feel if we asked you to provide skin-to-skin contact before the baby is stable? if we asked you to provide skin-to-skin while the baby is still on CPAP? Or receiving medicines?
    - What concerns would you have?
    - How could these concerns be overcome?
- How would your colleagues react?
    - What would need to be done to create support for iKMC among your colleagues?
- Do you think that practice would be feasible in this facility? Why or why not?
- What changes would we need to make in this facility in order to provide iKMC?
    - **Probe**: policy or protocols
    - Health workers – training, support, mentoring
    - Infrastructure/space, equipment,
    - mother and family – IEC, support, special equipment
- How do you think mothers would react to providing iKMC?
    - What kind of additional support would they need?
- Would you be open to receive training on this topic? Why or why not?

***[Note to research team:** If time allows you can also discuss the topics below. Or you may interview additional health workers in this facility who manage birth and ask them these questions. Otherwise please see the wrap up and closing at the end of the document.]*

Care at birth

- Who takes care of a baby that is preterm/ is low birth weight / at birth? **Probe** further (For normal vaginal childbirth? For an assisted vaginal childbirth? For caesarean section?)
- Who is the dedicated person to look after the baby? What is the role of the person who takes care of the small baby at birth? ***Probe***
    - what all activities does s/he need to complete in the first few minutes of life?
    - First few hours of life?
    - How do you decide if this baby needs to be referred to the SNCU or in the Postnatal Ward? (**Probe**…gestational age /birth weight - monitoring and documentation?)
    - What is done if the baby is sick? What kind of prereferral care do you provide?
- Do all babies get weighed at birth? What type of scale do you use? Do you inform the mother of the birth weight? If a LBW baby, what do you tell her?
- Are all babies put to the breast in the first hour after birth? Even preterm or LBW babies? Are there any babies that you would not put to the breast in this time? Why is that?
- Are all babies put in skin-to-skin position after birth ? Even preterm or LBW babies? Are there any babies that you would not put in this position? Why is that?
- Did you receive any training on care at birth of newborn in the last year? ***Probe***
    - If so on what areas/ topics?
    - Did you receive any specific training on care of babies who are preterm/LBW/in need of NICU/SNCU care?
    - Are there any other specific areas you feel you require additional training? What are these?

- What might be some of the challenges / problems you have in providing birth care or taking care of a preterm or LBW baby at birth? Have you faced any problem when managing the baby and mother alone (elaborate)?

Referrals

- What type of cases do you manage in this hospital? When would you refer a baby born preterm/ LBW/ in need of NICU/SNCU care from your facility to a higher-level facility such as a tertiary? Do you determine when to refer based on clinical signs? Do you usually wait a determined time after birth before referring?
- Who are involved in the process of referral – at the health facility? Who from the family do you involve in the process of referral?
- What steps do you take to inform the higher centre? How do you ensure important communication about the baby /mother/ family is shared?
- How would you transport a preterm or LBW baby to the tertiary facility? Does the mother or family travel with the baby? Who ensures the transport is available and who pays for the transport?
- What challenges are faced in transferring these babies? **Probe**: on whether they face issues related to - Lack of staff? Access to transport? Financial constraints for the family? Family refusal to go to a higher-level facility?
- If the family refuses referral, what do you do? (**Probe** – keep the baby in the postnatal ward, discharge?) How often does this happen? (**Probe** in the last month or two)

- If the mother is not well, how do you refer the mother and baby?
- I would also like to ask about mothers and babies referred into your facility – what happens if a baby is transferred to your facility who is preterm/LBW/sick and requires NICU/SNCU care? How do you manage these babies? Does this occur frequently? Are these babies transferred to you with any information from the community health worker or from another facility?

Discharge

- When does a baby get sent from NICU/SNCU to the postnatal ward or to a KMC unit? What criteria do you use? Or are babies discharged to home directly from NICU/SNCU?
- How long do babies usually stay in the postnatal care /KMC ward thereafter ? How are they monitored? Do their mothers stay there with them?
- When is a preterm / LBW usually discharged from your health facility to the home? What is the average length of stay in the facility for these preterm or LBW babies, from birth to discharge in the home?
- What would you check before such a baby is discharged? **Probe**: encourage the participant to discuss the different physical, family, and social components they check.
- What are the criteria used for discharge of such a baby? Who makes the decision?
- What would you check with the mother / family member to make sure the baby can be cared for at home?
- Do you or someone else provide information to the mother and family prior to discharge? What information do they receive? Does the mother and parents receive any health education material you give any or other documents with key messages at discharge?
- How do you ensure that this baby is followed up after discharge, either in the community or by the facility?
- What are some ideas you have to strengthen discharge procedures so that mothers and families are better prepared to care for the baby in the home?
- Do you have any suggestions for improving the care provided to these babies?

Wrapping up

- Are there any other issues that you feel are important in relation to improving care of SSNBs that you want to mention today before closing the session?

Closing

Thank you for your time today. Your contributions will support the health services in better understanding how to improve care of newborns particularly those babies who are preterm/LBW or need care in the NICU/SNCU.