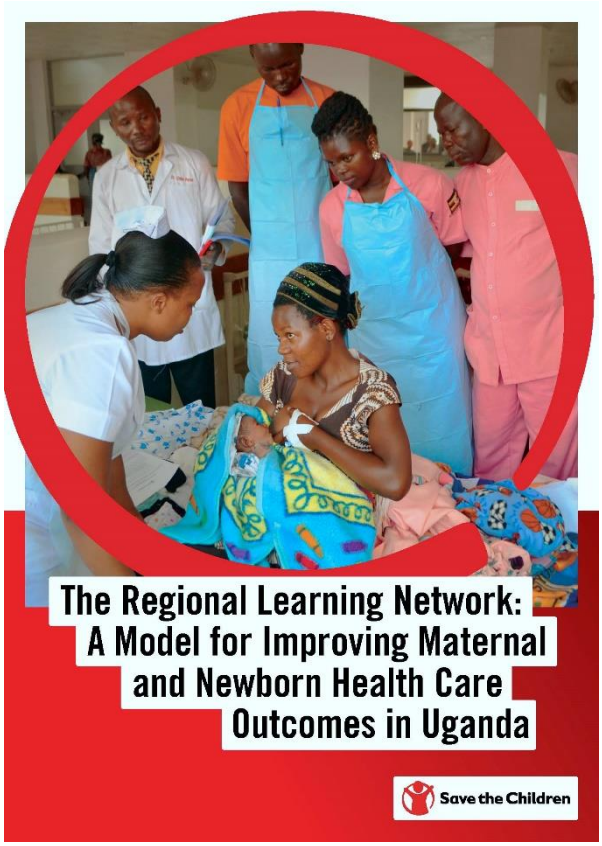
Save the Children

APPENDICES FOR THE REGIONAL LEARNING NETWORK: A MODEL FOR IMPROVING MATERNAL AND NEWBORN HEALTH CARE OUTCOMES IN UGANDA



From 2016 to 2017, Uganda's Ministry of Health (MOH) with support from Save the Children and the University Research Company (URC) piloted the Regional Learning Network initiative (RLN), a quality improvement collaborative, in the Hoima Region. Save the Children prepared a brief detailing the work and lessons learned from the RLN. This supplementary file provides appendices for additional information related to the Save the Children brief including methods, conceptual framework and How To Guides for establishing a RLN.

Access the brief at www.healthynewbornnetwork.org/resource/Uganda-RLN

Appendix I: Details on Hoima RLN assessment methods

Mix-method baseline and endline assessments included interviews with health facility staff and district stakeholders, focus group discussions, data collection through questionnaires, maternity register reviews, and direct observation of clinical processes and outcomes.

Methods

URC assessments

- Purpose: To assess critical components needed to achieve high-quality newborn care including knowledge of healthcare providers about newborn care, infrastructure and personnel, availability of drugs and supplies, existing QI activities, coverage and quality of care during labour and delivery and newborn care, including complications.
- Timeframe conducted: baseline in May 2016 and endline from May to June 2017 (details in Table 1)
- Sampling:
    - Purposefully selected the 14 facilities in RLN
    - Questionnaire: purposefully selected 58 and then 50 health workers questionnaire
    - Observation and interviews: purposefully selected health workers at facilities
    - Maternity registers and case notes: randomly selected 25 mothers in maternity register per facility who delivered in prior week for some indicators otherwise all cases reviewed
    - Direct observations of normal deliveries: All deliveries on the day of assessment
- Data collection and analysis:
    - Trained data collectors spent ~2 days at each health facility to collect data
    - Seven pre-tested data collection forms used e.g. questionnaire and checklists
    - Quantitative—descriptive

Table 1: Methods of URC assessments according to components assessed

	Component assessed	Method and data source	Sampling	Baseline sample	Endline sample
Health system readiness	Health worker knowledge and confidence	Self-administered confidential questionnaire with 20 multiple choice questions (form 1) given to health workers	Purposeful: <5 health workers in each facility representing different health cadres*	58 health workers	50 health workers
	Infrastructure and personnel in maternity and newborn wards	Data collectors recorded observations and interviewed with facility-in charge (form 2)	Purposeful	14/14 facilities	13/14 facilities
	Drugs and supplies for newborn care	Data collectors interviewed chief pharmacists/drug store manager and conducted direct observations (form 3)	Purposeful	14/14 facilities	13/14 facilities
	Existing quality improvement activities	Data collectors interviewed maternity unit-in charge and/or facility-in charge (form 4)	Purposeful	14/14 facilities	13/14 facilities
Coverage and quality of care	Monitoring of labor and action in case of prolonged labor	Data collectors reviewed maternity register, mothers' notes/files, and partographs (form 5)	*Baseline* Randomly selected 25 mothers from register who had delivered in the previous week (or all deliveries if the number was less than 25) per facility *Endline* Purposeful: identified cases in	14/14 facilities Maternity registers reviewed • 287 cases for use of partograph • 77 cases of prolonged labor identified, of these 39 cases had clinical records available for review	14/14 facilities Maternity registers reviewed • 350 cases for use of partograph • 160 cases of prolonged labor, of these 147 had clinical records available for review

			maternity register of prolonged labor in previous quarter per facility		
	Care during labour and delivery	Data collectors reviewed the maternity register and clinical records for gestational age (GA) assessment Data collectors reviewed clinical records for all cases of other conditions: newborn asphyxia, PPROM, and premature (form 6)	GA: Randomly selected 25 mothers from register who had delivered in the prior month (or all deliveries if the number was less than 25) per facility Other conditions: all cases in the previous quarter	14/14 facilities had records reviewed 315 deliveries sampled Records reviewed: • 315 cases for gestational age assessment • newborn asphyxia cases – not reported • 14 PPROM cases • 96 premature birth cases	11/14 facilities had records reviewed 275 deliveries sampled Records reviewed: • 275 cases for gestational age assessment • 547 newborn asphyxia cases • 37 PPROM cases • 275 premature birth cases
	Newborn Care	Data collectors reviewed the maternity register for documentation of ENC in the last 100 live births in the last quarter (form 6) Data collectors recorded direct observation of 12 components of ENC (form 7 – checklist)	Register review for the last 100 live births in the last quarter Observation of deliveries on the day of assessment	14/14 facilities 16 normal deliveries observed	11/14 facilities 26 normal deliveries observed
Mortality outcome	Early institutional newborn mortality rate Fresh stillbirth rate	Data collectors extracted data from DHIS2	All births	Live births: 1995 Total births: 2034	Live births: 2062 Total births: 2098

* The sample was not randomly chosen and included only the maternity staff present during the endline assessment period who routinely attended deliveries.

Table 2: Details of URC assessment by data collection form

Data collection form	Purpose	Method and data source	Baseline sample	Endline sample
Form 1: Health worker knowledge and confidence	Assessed health worker's level of knowledge on key competencies of maternal and newborn care.	Self-administered confidential questionnaire with 20 multiple choice questions <5 health workers in each facility representing different health cadres*	58 health workers	50 health workers
Form 2: Infrastructure and personnel in maternity and newborn wards	Assessed availability of infection control measures at maternal and newborn units, essential lifesaving commodities and equipment, necessary infrastructure, and staffing levels	Data collectors recorded observations and interviewed with facility-in charge	14/14 facilities	13/14 facilities
Form 3: Drugs and supplies for newborn care	Assessed availability of essential drugs and supplies present in facility pharmacy and stores.	Data collectors interviewed chief pharmacists/drug store manager and conducted direct observations.	14/14 facilities	13/14 facilities
Form 4: Existing quality improvement activities	Assessed quality improvement, activities, projects and available documentation.	Data collectors interviewed maternity unit-in charge and/or facility-in charge.	14/14 facilities	13/14 facilities
Form 5: Partograph review	Reviewed maternity register, mothers' notes/files, and partographs to assess monitoring of labor and action in case of prolonged labor.	Data collectors reviewed maternity register for week prior to the assessment, randomly selected 25 mothers who had delivered in the previous week (or all deliveries if the number was less than 25), and assessed availability and completeness of partograph. For endline only: Data collectors reviewed maternity register to identify cases of prolonged labor in the previous quarter (February-March 2017) and reviewed clinical records to assess if proper protocol was followed.	14/14 facilities Maternity registers reviewed • 287 cases for use of partograph • 77 cases of prolonged labor	14/14 facilities Maternity registers reviewed • 350 cases for use of partograph • 160 cases of prolonged labor, of

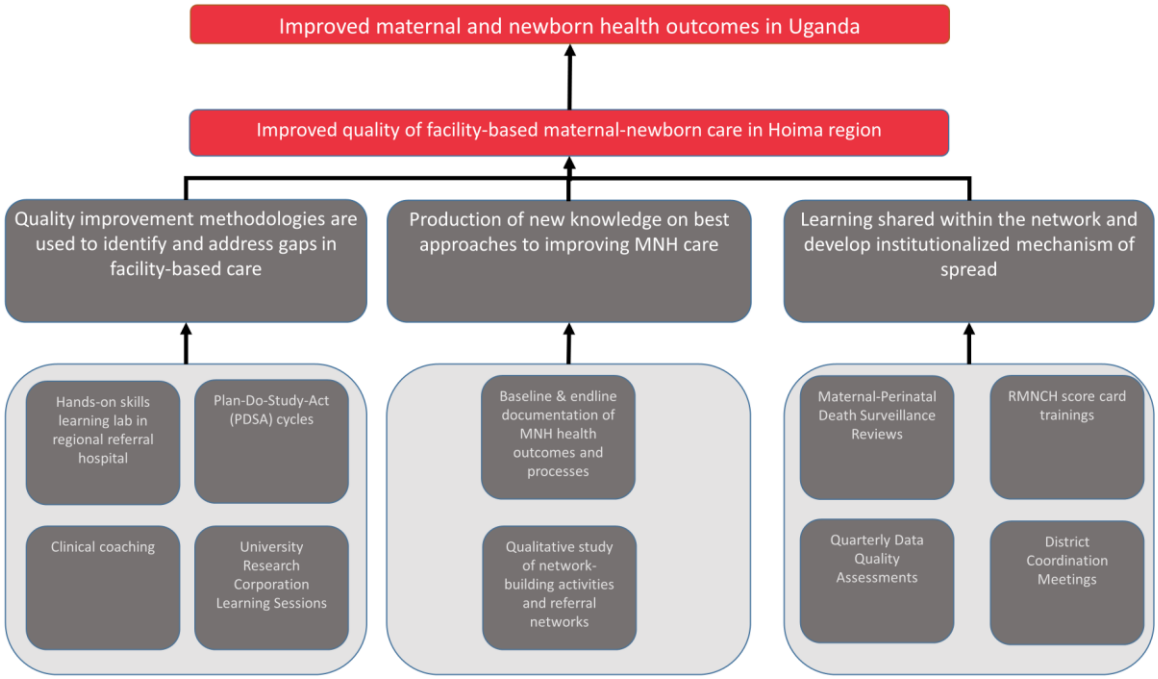
			identified, of these 39 cases had clinical records available for review	these 147 had clinical records available for review
Form 6: Maternity register and clinical record review	Collected data on assessment of gestational age, provision of antenatal corticosteroids for threatened preterm births, neonatal resuscitation and provision of KMC for low birth weight babies.	Data collectors reviewed the maternity register for the week prior to the endline assessment and randomly selected 25 mothers who had delivered in the prior month (or all if deliveries in prior week was less than 25). Clinical records were reviewed for gestational age, for all cases of newborn asphyxia, PPROM, and premature birth (275) in the previous quarter. Data collectors reviewed the maternity register for documentation of ENC in the last 100 live births in the last quarter	14/14 facilities had records reviewed 315 deliveries sampled Records reviewed: • 315 cases for gestational age assessment • newborn asphyxia cases – not reported • 14 PPROM cases • 96 premature birth cases	11/14 facilities had records reviewed 275 deliveries sampled Records reviewed: • 275 cases for gestational age assessment • 547 newborn asphyxia cases • 37 PPROM cases • 275 premature birth cases
Form 7: Essential Newborn Care checklist	Assessed provision of a complete and immediate package of ENC.	Data collectors recorded direct observation of 12 components of ENC: preparation for childbirth, immediate newborn care, cord care, initiation of early breast feeding, eye care, cord care, administration of Vitamin K, identification of the baby, thermal protection, weighing and examining the baby, decontamination/cleaning/sterilization, and documentation.	14/14 facilities 16 normal deliveries observed	11/14 facilities 26 normal deliveries observed

* The sample was not randomly chosen and included only the maternity staff present during the endline assessment period who routinely attended deliveries.

Save the Children in-depth assessment

- Purpose: To explore the perspectives of those involved in the RLN in relation to the QI activities as well as the network-building activities, including PDSA cycles, hands-on skills lab, clinical coaching, URC learning sessions, Maternal-Perinatal Death Surveillance Reviews (MPDSR), Reproductive, Maternal, Newborn, Children Health (RMNCH) scorecard trainings, District Coordination Meetings, and Data Quality Assessments (DQA), and routine referrals
- Timeframe conducted: June 2017
- Sampling:
    - Convenience sampling of 4/14 facilities, primarily based on distance from Kampala
    - Purposefully selected sample of health care workers and district management
- Data collection and analysis
    - Four focus group discussions (at four facilities: Hoima Regional Referral Hospital, Kiboga district hospital, Kigolobya HC III, and Panyadoli HC IV in Kiryandongo)
    - 11 indepth interviews including with facility heads and in-charges of maternity at each of the above health units, and core stakeholders (The mentor, URC coordinator and RLN Consultant) involved in the RLN project
    - Trained data collectors used a pre-tested interview guide
    - Audio recordings were transcribed verbatim and organized for data analysis.
    - Qualitative—inductive and deductive thematic coding by multiple team members, then summarized.

Appendix II: Hoima Regional Learning Network Conceptual Framework



Appendix III: Regional Learning Network: How to Guides

Save the Children developed a series of "How to Guides" about the ongoing processes undertaken during the RLN pilot to support MOH and other implementing partners in future implementation efforts. These guides include an overview of the topic, a step-by-step activity guide of what the RLN did, and lessons learned by the RLN.

How to Guides are available for:

- Mentorship
- Establishing and functionalizing skills labs
- Learning Sessions
- Media engagement
- RMNCAH scorecards

Regional Learning Network: How-To Guide

MENTORSHIP

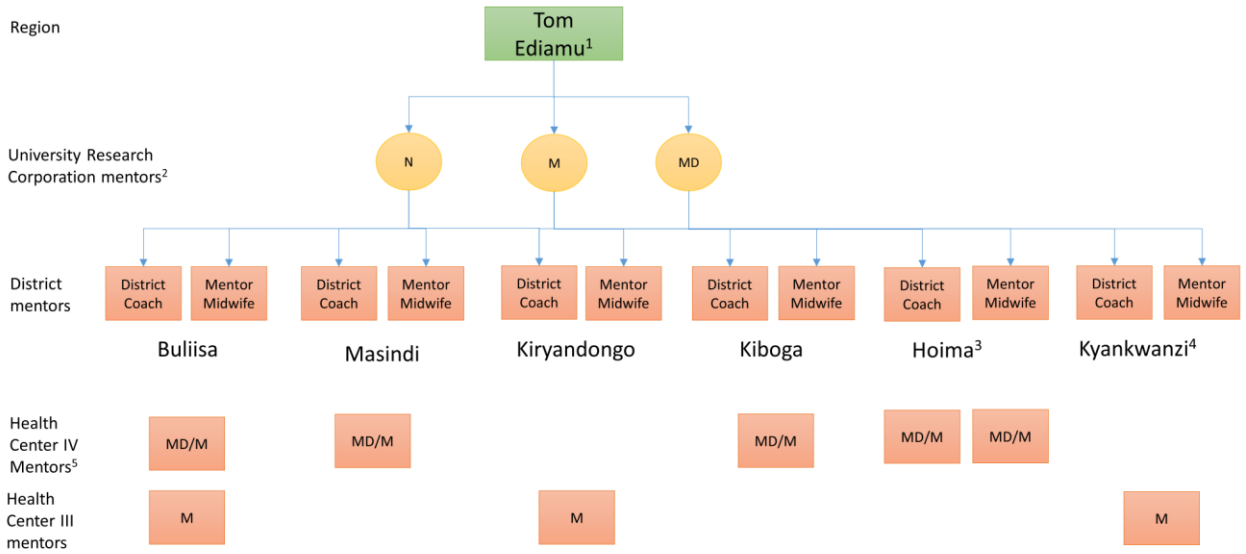
Overview

Mentorship visits were conducted every 2 weeks to 13 of the 14 facilities in the RLN (excluding the Hoima Regional Referral Hospital). Three staff on contract with University Research Corporation (a medical doctor, nurse, and midwife) served as primary mentors with oversight from lead mentor, Dr. Tom Ediamu (staff pediatrician, Hoima Regional Referral Hospital). Please see Figure 1 for a schematic of the RLN mentorship model. The URC mentors were based in three districts, one each in Kiboga, Kiryandongo, and Buliisa. From their posts, each mentor conducted visits in their respective district hospital as well as adjacent/catchment HC III and IVs and the remaining district hospitals (Masindi and Kwankwanzi). Dr. Ediamu conducted twice monthly visits to facilities needing additional support.

During the visits, mentors attended the quality improvement team meetings and reviewed plan-do-study-act (PDSA) project plans. Mentors coached district staff in quality improvement methodology and guided them in discussions for implementing their change ideas as part of the PDSA cycles. In addition to the mentorship on quality improvement, mentors reviewed clinical concepts and reviewed clinical cases as needed.

Finally, the URC mentors worked to build a new cadre of mentors native to the public health system in Uganda, consisting of *district coaches* and *mentor midwives.* URC coaches and these newly identified mentors traveled and worked together, mentoring providers in the health centers and simultaneously building capacity for mentorship.

Figure 1: RLN mentorship model schematic



1 Pediatrician/neonatology, lead mentor and champion
2 International development partner (contracted)
3 Hoima regional referral hospital serves both as regional and district hospital
4 Kwankwanzi does not have a district hospital. The HCIV serves the function of the district hospital
5 Mentors at HC IV and HC III mentored health providers within their own facility
M=midwife, MD=medical doctor, N=nurse.

Activities

Step 1: Identify a lead mentor with superior clinical knowledge, skills, and training.
The lead mentor should be senior and well-respected among health professionals in the area. Assets include special training, advanced qualifications, many years of experience, and longstanding excellent reputation in the community. Identifying a lead mentor may begin at the MOH or by querying health workers in district facilities and district management. Medical schools may have faculty that can serve as lead mentors, or may be able to help identify prominent graduates in the community.

Step 2: The lead mentor conducts a clinical skills training.
To begin training district-level workers in MNH care and identify promising candidates to serve as a cadre of mentors to work below the lead mentor, the lead mentor should begin by conducting a clinical skills training in the regional hospital. The lead mentor should also work with district leadership to identify potential mentors. Note in the RLN project, a small, additional cadre of mentors employed with URC facilitated this process and conducted mentorship themselves. To make the model sustainable, we recommend earlier, more intense investment in district-level mentors native to the public health system. (See how-to guide for clinical skills lab)

Step 3: District mentors begin mentoring health workers in their own district hospital with support and mentorship from the lead mentor.
After completing training in the skills lab with the lead mentor, district mentors begin mentoring in their own district hospital, with support and coaching from the lead mentor. This is an opportunity for district mentors to continue sharpening their clinical skills and mentorship skills under the lead mentor. Mentorship for the health workers in the facility should focus on clinical skills and knowledge and quality improvement methodologies.

Step 4: District mentors begin twice monthly mentorship visits to lower-level facilities.
Once clinical and mentorship skills solidified, district mentors should begin twice monthly mentorship visits to lower-level facilities focusing on clinical skills and knowledge and quality improvement methodologies.

Step 5: The lead mentor continues to conduct skills lab trainings
Trainings for district and health center-level staff should continue, so that eventually all MNCH staff in the region attend the training.

Step 6: Attachment mentorship at regional referral hospital
District-level mentors and staff should present to the regional hospital for attachment mentorship with the lead mentor at least once.

Step 7: Continued mentorship from the lead mentor to the cadre of district mentors
The lead mentor should travel with the district-level mentors on an as-needed basis to refresh and continue building the mentorship and clinical skills of the district-level mentors and troubleshoot refractory problems in the lower-level facilities.

Step 8: Nurture the mentor-mentee relationship.
Utilize district meetings, trainings, and any gatherings to build and nurture networks, professional relationships and friendships among the mentors and facility workers to increase rapport, facilitate communication, and increase the likelihood of seeking help.

Step 9: Consider exchange visits with other regions.
Exchange visits to other regions can be a supplement to regional mentorship activities, providing all mentors, including the lead mentor, with fresh perspective.

Key lessons learned from Hoima RLN

1.) A strong, skilled, senior, highly-qualified lead mentor is the essential foundation to building a mentorship network capable of reaching large numbers of health facilities. Lead mentors are only able to influence practice when they have solid practical

skills and knowledge AND are perceived to have superior knowledge and expertise compared to health workers in the districts and health centers.

2.) Developing robust cadres of mentors requires investment in solidifying their clinical skills, knowledge and confidence. This may require an up-front investment of their time and resources from the health system to equip and run a skills lab and conduct recurring trainings.

3.) In addition to clinical skills, district-level mentors require capacity building and mentorship in mentorship itself. The ability to teach, coach, and educate is learned, and an experience teacher, such as the lead mentor, should invest equally in building mentorship capability, along with clinical capability.

4.) Mentorship is most effective when mentors and mentees have positive, close relationships based in trust and friendship. This comes from close proximity (working together as frequently as possible in the same facility), close communication (via text, whatsapp), and the opportunity to solve problems together (reviewing PDSA cycles, clinical cases during mentorship visits). The importance of the mentor-mentee relationship should not be underestimated.

Regional Learning Network: How-To Guide

ESTABLISHING AND FUNCTIONALIZING A SKILLS LAB

Overview

The Regional Learning Network (RLN) established a Skills Lab at Hoima Regional Referral Hospital, as a means for addressing critical gaps in knowledge and skills necessary to provide high quality maternal and newborn care services. These gaps were identified through a baseline assessment conducted in the 14 facilities that are participating in the RLN pilot. They include inadequate skills and knowledge in basic essential newborn care, newborn resuscitation, use of partographs to monitor progress of labour, and care for small and sick newborns. The purpose of the Lab is to act as a regional hub and centre of excellence that provides opportunities for practical, hands-on in-service and pre-service training of health workers to build their clinical knowledge, skills and confidence in providing maternal and newborn care.

Activities

Step 1: Hold consultative discussions among stakeholders - to obtain consensus on roles and contribution of each stakeholder for the Skills lab. In the RLN context, consultative discussions were held between SNL, URC, and the Hoima RRH to agree on key requirements of the Skills Lab in terms of space, equipment and supplies, training content, and linkage to other services within the RRH, and the roles of each stakeholder.

Step 2: Identify space for the Lab
Identify premises that will be used to host the Skills Lab. Ideally this should be within a health facility or close to a health facility for easy interaction between the trainees and patients in wards to enable practicing of aspects of care learnt during the skills lab sessions. In the RLN, Hoima RRH identified and allocated space for the lab in the hospital premises, and Save the Children facilitated the renovation of the premises. URC designed the flow and set up of the Lab in the premises.

Step 3: Equip the Lab
To become functional, the skills Lab must be equipped with relevant tools to facilitate imparting of skills and knowledge on MNH care. In the RLN, Save the Children procured and supplied an assortment of equipment, mannequins, supplies and stationery that are used to conduct practical training sessions. URC supported the assembling of the equipment.

Step 4: Develop a training curriculum

Develop a comprehensive, context-specific curriculum to facilitate building the clinical skills and competencies of health workers to be able to identify, manage and appropriately refer MNH cases to the next level of care. In the RLN, the training curriculum was adopted from existing MoH, American Academy of Paediatrics, and WHO manuals. The curriculum content focuses on key skills essential in saving maternal and newborn lives including essential obstetric care, essential newborn care, neonatal resuscitation, essential care for preterm babies, and care for a sick newborns.

Step 5: Select trainers

Identify and select trainers with theoretical knowledge and practical experience in MNH care. In the RLN, trainers are selected from a pool of health workers recommended by the MoH, who have undertaken specialized training in particular topics relevant to MNH care such as the Helping Babies Breathe (HBB) protocol. They are required to have experience in practical care of newborns and mothers, and to be familiar with the MOH guidelines on MNH care.

Step 6: Select trainees

Identify and select trainees in consultation with the maternity/newborn unit in-charges, QI team members, facility in-charges, and district health officers, to ensure they participate in and own the process. In the RLN, the selection prioritises frontline health workers (midwives, nurses, clinicians, and doctors) who routinely manage expectant women and newborns at facilitates, and the district health technical staff who are involved in efforts to improve MNH care.

Step 7: Mobilise trainees to attend the training - invite identified health workers to attend the training. Mobilisation can be done through e-mails, and follow up with phone calls. In the invitations, include detailed information on their facilitation such as perdiems and meals, and the duration of the training. This enables them do proper preparations and delegation of duties and minimizes on wrong expectations.

Step 8: Conduct the training - to equip health workers with knowledge and skills necessary to provide high quality maternal and newborn care services. In the RLN, the trainings are conducted in the Skills Lab at Hoima RRH. Each training targets 30 -35 participants, and lasts five days covering theoretical sessions, hands on practicums in the lab, and supervised practical sessions on the wards with patients.

(a) **Theoretical sessions**
Hold the session in a classroom setting. Ask trainees to share expectations. Administer a pre-test to every trainee to ascertain their level of knowledge. Present an overview of the Regional Learning Network, and theoretical knowledge on guidelines, protocols, and clinical updates on particular MNH topics, in an interactive manner to encourage participation of trainees. Provide photocopies of training materials and hand-outs of lecture notes to trainees as reference materials.

(b) **Skills Lab sessions**
Move trainees to the skills lab for practical, hands-on skills training sessions. Provide them with practical guides for each session and checklists to evaluate their performance in a particular task. Demonstrate practical aspects of each module and later ask the trainees to perform the same demonstrations. Accord special attention to each trainee to ensure they master the skills at each step before moving on to the next.

(c) Supervised ward sessions
After the Skills Lab sessions, take trainees to conduct supervised ward sessions where they interact with patients and practice aspects of care learnt during the theoretical and skills lab sessions. The sessions should be conducted in the maternity, postnatal and neonatal units on alternate days. Divide trainees into groups of 8-10 members and rotate them through the above clinical stations for one hour each. Each station should be supervised by a clinical instructor who guides the trainees through the process.

Note: Before a ward session, identify the patients, obtain their consent and prepare them for this activity.

Step 9: Evaluated the training: Administer a post training theoretical test to assess trainees' acquisition of knowledge. The test should include carefully designed questions covering concepts in the training modules. Use a checklist to test each trainee's ability to demonstrate key steps of a particular procedure/ skill during the practical sessions, and score them. Share the test results and give feedback on key improvement areas. At the end of each day, ask trainees to give their assessment on how the training was conducted.

Key lessons learned from Hoima RLN

1. The training model of the RLN Skills Lab has proven to be an effective means of delivering MNH knowledge and skills to health workers because it takes trainees through three phases: theoretical sessions, practical demonstrations, and ward rounds. These enable trainees to translate theoretical knowledge into practical skills in newborn care.

2. While the training manual, equipment and job aids used by the Skills Lab were designed to cover a wide range of competencies health workers need to provide quality maternal and neonatal care, it is crucial that the training focuses specifically on areas where

gaps in knowledge and skills were identified by the baseline assessment. This ensures that the training responds to the real MNH care needs in the region.

3. Improving the health workers' knowledge and skills boosts their confidence and motivates them to care for newborns with dedication and passion.

Regional Learning Network: How-To Guide

LEARNING SESSION

Overview

Under the RLN, learning sessions are conducted to strengthen capacity and enhance cross-learning among health workers through sharing experiences, ideas and training on implementing QI activities at health facilities. The sessions are held on a quarterly basis, lasting three days each. In these sessions, updates are made on: overall RLN performance during the previous quarter, and progress of implementing of QI projects by each facility. In addition, facilitators refresh participants on the basic elements of quality improvement methods, how to run PDSA cycles; and conduct a guided discussion on data collection tools to ensure understanding and harmonization of data collection methods across all facilities, and to develop QI projects for addressing critical MNH care gaps in a specific period of time.

Continuous QI activities and quarterly learning sessions; all districts participated on the same topic. The first learning session was dissemination of baseline results/QI gaps highlighted via routine data and agreeing on content of QI cycle; Second learning session included reviewing the first QI cycle; after that it is continuous. This was a new activity introduced as part of the RLN to contribute to initiation of the process but not intended for long term implementation.

Activities

1. **Identify gaps in practice through baseline or discussions with DHO.**
   Baseline assessment on the various areas of service delivery should be done like supplies, technical skills/ trainings, equipment among others. This helps in identification of the gaps in care.

2. **Set Learning Session Topic and Objectives:**
   Each learning session is intended to meet certain objectives. It is important that these objectives are set before the session to guide the selection of content, participants and facilitators for the session. The content topics/projects for the learning sessions are selected based on the baseline report. See URC Learning Session reports in the additional information.

3. **Identify and Select Participants:**
   Participants are selected with the DHO, according to the objectives the session intends to achieve. But generally participants are drawn from the following categories: District health officers, district MNCH focal persons; facility In-charges, members of the facility-based QI teams, officials from the Ministry of Health, Regional Performance Monitoring Teams (RPMT) among others.

4. **Identify and Select Venue:**
   It is important to select a venue that is not so near to participating health facilities to allow maximum concentration by participants, and to minimize on disruptions during session. The venue should also have enough space to allow more interactive movements by participants during group movements and by facilitators who guide the groups. The sessions should be rotated in various districts every quarter.
5. **Mobilise Participants**
   Once participants have been identified and selected, they need to be mobilised early enough (at least two week before the event) with an official invitation to enable them do proper preparation and delegation of duties. During the mobilisation, details pertaining to facilitation of participation, and any items they should come along should be clearly communicated.

6. **Select of Trainers/Facilitators**
   Trainers/session facilitators are selected by the District Coaches and Midwife Mentors with the DHO due to their experience in quality improvement and expertise in capacity building in the field of maternal and newborn health

7. **Identify Content and Prepare for the Learning Session**
   The content for a given learning session depends on its learning objectives (additional information). But generally the content includes;
   Presentations on overall progress of RLN performance since the previous session
   Presentations on QI projects undertaken by each facility;
   Discussion on changes that were implemented
   Poster presentations by all facilities showcasing their improvement projects to facilitate sharing of learning with other facilities
   Basic elements of quality improvement to provide a refresher overview of improvements methods and how to run PDSA cycles
   Overview of data collection tools - guided discussion on data collection tools to ensure understanding and harmonization of data collection methods across all facilities
   Developing new QI projects for the subsequent learning cycle

8. **Participate and facilitate in the Learning Sessions** (see sample agenda in additional information)
   - ***Preparation and Presentation of Facility QI projects:*** Constitute participants from each health facility into a group, ask them to develop posters or PPTs showing how they have implemented a given QI project. The posters or PPTs highlight the quality improvement aim; the gaps that existed before the QI projects was undertaken, the changes that were tried to overcome the gaps, the changes that worked and the data that shows the success, the changes did not work and reasons why, as well as the challenges teams while implementing those changes. After each facility team has prepared a poster, pin them around the room, and divide participants into groups. These groups rotate in shifts to all the posters as one facility QI team member from each facility presents to the groups and spearheads discussion of the posters.

   - ***Way forward/ Next Steps:*** At the end of the session, Identify and agree on the next steps/way forward. This might include agreeing on QI projects for next learning cycle for each facility, and the timelines when QI facilitators will follow up with facility QI teams to refine and streamline their projects for the next learning cycle.

   - ***Evaluations of the Learning Session:*** At the end of the session, participants are invited to evaluate the session. This enables participants to provide feedback on areas what went well and where improvement is required, and to make recommendations for future consideration. This improves on the organisation of subsequent sessions.

Key lessons learned from Hoima RLN

1. The learning sessions provide a platform for various cadres of health workers – nurses, midwives, medical officer, and facility in charges etc – to freely interact and building relationships between facilities. This creates opportunities for free discussions and exchange of open feedback between the junior health staff and their superior, and subsequently contributes to improvement in working relations at the facilities.

2. Learning sessions have provided a good opportunity for inter-facility learning, especially through sharing of experiences and change ideas on implementing QI activities. For example some facilities have adopted ideas that have proven to work in a given facility, and applied them in their settings, and have realized significant QI outcomes out of them.

3. Learning sessions boost the confidence, innovation and ownership by health workers as they freely engage and discuss in the sessions. For example, when midwives stand before their colleagues to present and defend the QI projects at their facilities, their confidence to articulate issues, and ownership of the projects are enhanced.

Additional information

REPORT_1st LEARNING SESSION _

REPORT_2ND LEARNING SESSION_F

REPORT THIRD LEARNING SESSION_F


IMPROVEMENT OBJECTIVE
GRAPH SHOWING PARTOGRAPH USE AND COMPLETENESS FROM FEB MARCH 2017

Regional Learning Network: How-To Guide

RMNCAH SCORECARDS

Overview

The Uganda RMNCAH Balanced Scorecard (RMNCAH BSC) tool is a customized, dynamic management tool for MoH to strengthen accountability and drive action at different levels for improved RMNCH performance through strategic management decisions.

The scorecard represents; A management tool for the Ministry of Health to track national and subnational performance, strengthen accountability and drive action for RMNCAH improvement, Prioritized set of high-impact RMNCAH indicators selected by the Ministry that reflect country priorities and an aggregation of existing RMNCAH data on key performance indicators.

However, the RMNCAH balanced scorecard does not among others represent; A platform for comprehensive inclusion of all available RMNCAH indicators, a static scorecard that cannot be easily updated to reflect changing strategic priorities and a one-size-fit all approach with pre-defined set of indicators agnostic to country context.

Activities undertaken by RLN

Step 1: Planning meeting with MoH
Reproductive Health Division spearheads the implementation of RMNCAH Balanced Scorecard. The meeting is organized that brings together representatives from reproductive health (RH), resource center and implementing partner to have a discussion around implementation of the RMNCAH scorecard. This is the planning stage to discuss and agree on the how, where and when the activity will be implemented.

Step 2: Identifying the national trainers
The national trainers are identified to conduct the regional training for district ToT who in turn will be responsible to conduct the district training.

Step 3: Setting objectives
Objectives are set per level of training e.g. regional training the objectives are broad and geared towards building the capacity and empowering the district trainers to be able to train trainers whereas the objectives of the district training is to aid health facility staff to be able to generate the health facility scorecard and analyze the root cause of the performance. Below is an example of objectives set for regional RMNCAH Balanced Scorecard training;

- To build the support for the use of the scorecard at the district and regional level to improve performance
- To build capacity of district participants to know how to set the thresholds
- To complete the district score card along the thresholds, problem analysis and interventions

Step 4: Conduct regional training
Regional training brings together participants that include District Health Officer, Assistant District Health Officer in-charge of Maternal Child Health, Biostatistician/HMIS focal person, Surveillance focal person and Expanded Programme on Immunization focal person. This training is conducted at a regional level to prepare district trainers (ToT) for subsequent district trainings. During this training each district generates the priority indicators (lagging indicators) ranging from 6-10 which the district will be focusing on in order to improve performance.
Sample of training agenda in additional information

Step 5: Prepare materials for district training
The identified trainers prepare training materials that will be used during the training and these includes; generation of training agenda, power point presentations and preparing live demonstration. The organizer of the training prepares budget to facilitate the training (Hall hire, facilitation for trainers, transport refund for trainers and participants, meals, note books, pens and projector).

Step 6: Mobilization for district training
Through the district health office (DHO), participants from health facilities are mobilized/invited for the training and priority is given to health facilities that conduct deliveries. In cases where the district has fewer number of health facilities, all the facilities are trained including health center IIs. Invitation letter is sent to DHO's office with selection criteria for the category of people to be invited for the training. The participants include Facility in-charge, Maternity in-charge and Records Assistant.

Step 7: Conduct district RMNCAH BSC training
Training is conducted by the district trainers by participants from step 4 and it is done at district level. Participants are trained on how to set the targets basing on the cut-off point, how to extract the dashboard electronically from the DHIS2 or how to make the dashboard manually using available paper.

Step 8: Formulate action plan
At the end of the district training participants generate the action plans on the identified lagging indicators that the health facilities will be contributing to in improving the performance.
Key lessons learned from Hoima RLN

Sensitization of political leaders in RMNCAH Balanced Scorecard enhance monitoring of delivery of services at health facility. This improves the accountability of all the duty bearers and hence improving the service provision.

The nature of the training of moving from numbers to colour coding of performance makes it easy for political leaders and other stakeholders to interpret performance of the district and explanation of poor performance is sought and root causes of the poor performance is addressed.

With commitment of stakeholders (health workers, district staff, MoH and implementing partners) the service delivery would yield value for money and at the end the communities are better served.

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Regional Learning Network: How-To Guide

MEDIA ENGAGEMENT

Overview

The media plays important role in providing information to the public, in shaping public perception, and in influencing political leaders, policy makers and policy implementers. Limited involvement of the media in MNH issues affects dissemination of correct information, especially on critical issues affecting MNH service delivery. Engaging the media to proactively participate in MNH reporting enhances the flow of correct information and significantly contributes towards; influencing the political leaders, policy makers, and policy implementers to pay attention to/prioritise MNH issues; as well as sensitising the public about their rights and roles in holding the Government accountable.

Since media have a role, media engagement is a key strategy for the RLN to advance its objectives. Journalists from various media houses (radio, television and print media) operating in the six RLN districts are trained and equipped with information on MNH, key messages, new research findings and skills, in order to enhance correct and responsible reporting on MNH issues in the region. This is done through media dialogues, mentoring, and sharing of MNH data. The effort of media engagement as part of the RLN intends to contribute towards the accountability component of improving the quality of MNH services provided in the region.

This guide provides details of media engagement from the RLN experience, with sample materials in the additional information, as well as lessons learned.

Activities undertaken by RLN

Below are a list of activities Save the Children recommends undertaking when initiating and implementing media engagement as a component of a Regional Learning Network in Uganda.

Step 1: Identify media houses in the region – these include prints, TV and radio media organizations, which operate in the region. If you are not familiar with the region, you can engage the associations of journalists, such as the Health Journalist Network of Uganda (HENJU), to identify these organizations initially. Once these are identified, it is important to develop a contact list for subsequent engagement.

Step 2: Identify journalists (who report on health issues) –who are particularly engaged or interested in health reporting. Again, you can engage an associations of journalists, HENJU, to identify the journalists initially, and develop a list of their contacts for subsequent engagement.

Step 3: Identify trainers – who are technical experts on maternal and newborn health issues and health communication/reporting. These include medical doctors from hospitals and health communication specialists/journalists from media organizations.

Step 4: Develop training materials - work with the technical experts to develop the agenda and training materials for a media training using various mediums (power point presentations, handouts, workshop activities). Examples of training materials used in the RLN are available in the Additional information.

Step 4: Mobilise journalists to attend the training - invite identified journalists to attend the training. Mobilisation can be done through e-mails, and follow up with phone calls, if no confirmations are forthcoming. In the invitations, include detailed information on their facilitation, such as periderms and meals, the duration of the training, and any opportunity for them to have interviews/write stories. Providing this information up front ensures expectations are met and motivates them to turn up for the training.

Step 5: Conduct the training - to equip journalists with information, knowledge and evidence they need to report on maternal and newborn health issues as well as key MNH messages that require their attention. The training can focus on: up-to-date and accurate numbers and facts about MNH (global, national, regional), overview of key MNH issues for media attention, causes of maternal and newborn deaths, the role of media in advocating for improved MNH care (Responsible reporting), how to ensure

sustained media reporting on MNH challenges and opportunities of MNH reporting in Uganda; among others. Use of participatory methods as much as possible to ensure that journalists are able to share feedback and experiences on their work in health reports helps to identify key actions required to improve their engagement in health reporting.

Step 6: Regularly engage and follow up with journalists trained to ensure MNH issues are discussed on local talk shows, spot messages and written in newspapers– Talk shows and radio spots offer an opportunity to promote public discussion of MNCH and other health issues. After training, identify which journalists have taken forward the issue through their reporting and work with them to schedule interviews and speakers to be on their programmes. Where possible, journalists who have been trained on MHN issues should moderate the talk shows to ensure in-depth probing of issues under discussion.

Step 7: Invite trained journalists to cover and report on RLN and MNH related events – share with journalist a calendar of events; notify journalist about upcoming event through phone calls or email; develop and share media briefs/media release for them about the event/topic; follow up with the journalist after the event to encourage them to share the stories and give feedback to them (mentoring); and facilitate meals and transportation of journalist participation if necessary. See the calendar of key MNH moments in Uganda in the Additional information.

Step 8: Continuously engage journalists through established relationship – set up a mechanism to continuously engage journalists e.g. through whatsapp groups, regular outreach (e.g. calls and emails) and invitations to events. It is important to continuously equip journalists with latest updates, figures, and statistics on MNH to keep them interested and updated on MNH knowledge and information.

Key lessons learned from Hoima RLN

1. Young journalists face difficulties in accessing up-to-date MNH information, interpreting MNH data and understanding MNH jargon. These challenges sometime lower their interest in reporting and following up MNH issues. It is important, therefore, to support them on technical areas to ensure facts are accurate; to link them with various sources of MNH information; to share the latest figures and updates on MNH; and to develop a glossary of technical terminologies commonly used in MNH communication. These efforts minimize errors in reporting and enhances the journalists's understanding of and interest in MNH issues.

2. Although many journalists are targeted for the initial training, few of them tend to demonstrate persistent/sustained interest to report on MNH issues. It is important that those who demonstrate commitment are engaged regularly to sustain their interest and enhance their capacity to develop into health reporting specialists.

3. Health reporting is a sensitive area that demands exercise of responsibility by health journalists. Sometimes health workers are reluctant to share stories with journalist for fear of erroneous reporting that can lead to grave consequences. It is important to mentor and encourage health journalists to report in a responsible and constructive manner that can contribute to the flow of MNH information in the region and lead to positive changes in MNH service delivery.

Additional information about the media engagement

Glossary of terms for maternal, newborn and child health

Abortion	The termination of a pregnancy before the fetus has attained viability (20-28 weeks depending on country). An abortion can occur spontaneously, in which case it is often called a miscarriage. An abortion can also be purposely induced, which is called an induced abortion.
Accessibility of Health Services	Aspects of the structure of health services or health facilities that enhance the ability of people to reach a health care practitioner, in terms of location, time, and ease of approach.
Adolescent Fertility Rate (AFR)	The expected number of girls aged 15-19 that will become pregnant each year out of 1,000 girls in that same age group, in a given population.
Antenatal Care (ANC) also known as Prenatal Care	Care of a pregnant woman before delivery of the infant. The World Health Organization recommends a minimum of four antenatal visits during the pregnancy.
Basic Emergency Obstetric and Neonatal Care (BEmONC)	Facilities that provide the seven basic medical interventions (signal functions) to treat the main complications during delivery are called Basic Emergency Obstetric and Neonatal Care facilities (BEmONC). The 7 basic signal functions include: administration of parenteral antibiotics; administration of oxytocic drugs; administration of anticonvulsants; manual removal of placenta; removal of retained products; assisted vaginal delivery; and perform basic neonatal resuscitation These facilities are usually Health Centre IIIs, polyclinics or small hospitals. If a facility provides some but not all of the basic services it may be called Partial BEmONC.
Caesarean Section (C-Section)	Surgical procedure used to deliver the baby through an incision in the mother's abdomen and uterus.
Child Mortality Also known as Under 5 Mortality	The death of a child for any reason between birth and the child's 5th birthday. It is often measured using the under 5 mortality rate. This represents the number of deaths of children aged below five years in a particular population in a given time (usually a year) expressed as the number of deaths per 1000 live births in the same population and time period.
Continuum of Care	Care provided throughout the life cycle. Care from each stage is beneficial for a healthier next stage. The life cycle starts before conception⇒ pregnancy ⇒ childbirth-> ⇒ postnatal period ⇒ newborn period ⇒ childhood ⇒ adolescence ⇒
Comprehensive Emergency Obstetric and Neonatal Care (CEmONC)	Facilities that provide the seven basic medical interventions (signal functions) to treat the main complications during delivery and also provide blood transfusion and cesarean section services. These are usually larger facilities such as HCIV, district hospitals and referral centres.

Demographic and Health Surveys (DHS)	Nationally-representative household surveys that provide data on population, health, and nutrition, including antenatal, delivery and postnatal care and infant and child mortality rates.
Eclampsia	The development of seizures due to pregnancy induced high blood pressure or severe preeclampsia. Magnesium sulfate can be given to prevent seizures but there is no cure for preeclampsia or eclampsia other than delivery of the baby.
Gestation	The period of time between conception and birth. During this time, the baby grows and develops inside the mother's womb. It is measured in weeks.
Haemorrhage	The loss of blood following a delivery causing the patient to become symptomatic due to the blood loss. This is the most common cause of maternal death worldwide.
Health Indicators	Characteristics of a population which can be measured to describe and summarize the health of a population as a whole or of sub-groups within the population. Health indicators are often used to guide health care policy or to track progress towards a specific goal i.e. the Sustainable Development Goal Indicators.
Infant Death	The death of a child for any reason between birth and the child's 1st birthday.
Infant Mortality Rate	This represents the number of infant deaths in a particular population in a given time (usually a year) expressed as the number of deaths for each 1,000 live births in the same population and time period.
Kangaroo Mother Care (KMC)	A method of in which a premature or low birth weight baby is put in early, prolonged and continuous direct skin-to-skin contact with her mother or another family member to provide stable warmth and to encourage frequent and exclusive breastfeeding. KMC has been shown to reduce deaths from preterm birth complications, prevent infections, promote breastfeeding, regulate the baby's temperature, breathing, and brain activity, and encourage mother and baby bonding.
Life-time Risk of Maternal Death	The probability that a 15-year old woman will die eventually from a maternal cause.
Low Birth Weight	A birth weight of a newborn baby less than 2500g, irrespective of gestational age. Very low birth weight is defined as a birth weight of less than 1500g
Maternal Death Surveillance and Response (MDSR)	A form of continuous surveillance linking the health information system and quality improvement processes from local to national levels. MDSR includes the routine identification, notification, quantification, and determination of causes and avoidance of all maternal deaths, as well as the use of this information to respond with actions that will prevent future deaths. The goal of MDSR is the elimination of preventable maternal mortality.
Maternal Morbidity	Any health condition attributed to and/or aggravated by pregnancy and childbirth that has a negative impact on the woman's wellbeing.
Maternal Mortality	The death of a woman while pregnant, during childbirth, or within 42 days of the end of the pregnancy from any cause related to or aggravated by the pregnancy or its management, but not from accidental causes.
Maternal Mortality Ratio (MMR)	The number of maternal deaths during a given time period per 100,000 live births during the same time period.

Maternal Near-Miss	The near death of a woman who has survived a complication occurring during pregnancy or childbirth or within 42 days of the termination of pregnancy.
Midwifery	The health services and health workforce needed to support and care for women and newborns, including sexual and reproductive health and especially pregnancy, labour and postnatal care.
Mortality	Death, especially on a large scale (the number of deaths in a given area or period, or from a particular cause.
Neonatal Death	The death of a child who is born alive but dies within the first 28 days of life.
Neonatal Mortality Rate (NMR)	The number of neonatal deaths in a particular population in a given time (usually a year) expressed as the number of deaths for each 1,000 births in the same population and time period.
Newborn Resuscitation	An intervention after a baby is born to help him/her breathe and to help his/her heart beat. Stimulation and Bag-and-mask resuscitation with room air is sufficient for nearly all babies not breathing at birth.
Obstetrics	The medical field dealing with the care of women throughout pregnancy, including before birth, during birth, and in the period following birth.
Obstetric Complications	These are complications related to pregnancy and childbirth and can progress to become a cause of maternal death. Examples are: ▪ Severe bleeding (mostly bleeding after childbirth also known as postpartum haemorrhage or obstetrical haemorrhage) ▪ Infections (usually after childbirth also known as peuperal sepsis) ▪ High blood pressure during pregnancy (pre-eclampsia and eclampsia) ▪ Unsafe abortion
Obstetric Emergencies	Life-threatening medical conditions that occur in pregnancy or during or after labour and delivery.
Obstetric Fistula	A hole between the birth canal and the bladder or rectum caused by prolonged or obstructed labour without treatment. A fistula leads to women leaking urine and/or faeces and over time, it leads to chronic medical problems.
Obstructed Labour	Failure of the fetus to descend through the birth canal. This may be for several reasons including the head being too large to fit through the pelvis or that the fetus is in a difficult position. Obstructed or prolonged labour can be identified using a partograph. An assisted delivery or an emergency delivery by caesarean section may be necessary.
Partograph	A graphical representation of the progression of labour. They are completed by health care workers (e.g. midwives) and show when labour is proceeding at a normal rate and when care providers should begin preparing for and carrying out interventions to help deliver the baby.
Perinatal Death	The death of a foetus or newborn in the period between 28 weeks of pregnancy and 7 days after birth.

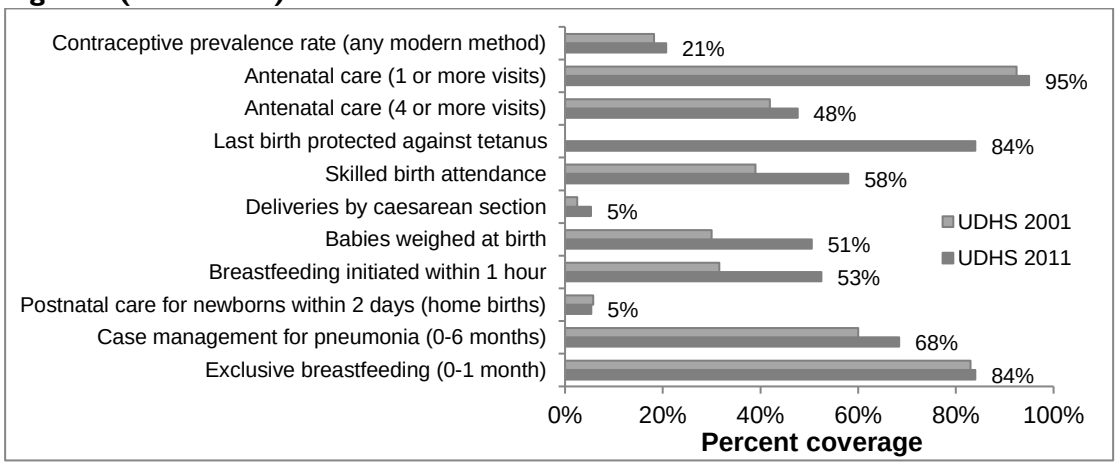
Perinatal Mortality Rate	The number of perinatal deaths in a particular population in a given time (usually a year) expressed as the number of deaths for each 1000 live births in the same population and time period.
Postnatal Care	Health care for the mother and newborn in the postnatal period - from immediately after the birth until around six weeks. (Also known as postpartum).
Pre-Eclampsia	A condition that can develop during pregnancy characterized by high blood pressure (hypertension) and protein in the urine (proteinuria). If not properly recognized and managed, pre-eclampsia can progress to eclampsia. There is no cure for preeclampsia other than delivery of the baby and no known way to prevent preeclampsia.
Preterm Birth	A baby born alive before 37 weeks of pregnancy are completed.
Quality of Care	The way individuals and clients are treated by the system providing services. According to WHO, dimensions of quality of care are: effective, efficient, acceptable/patient-centred, accessible, equitable and safe.
Sepsis	Sometimes referred to as either blood poisoning or septicaemia, sepsis is a whole-body inflammatory response to a severe infection, usually but not necessarily caused by bacteria. Symptoms of sepsis can include, fever of hypothermia, rapid breathing, elevated heart rate, confusion, and swelling. Postpartum sepsis results from infections contracted during or following childbirth.
Skilled Attendance	The process through which a woman is provided with adequate care during labour, birth, and the postpartum period requiring two key components—a skilled attendant and an enabling environment that includes adequate equipment, supplies, drugs, and transport for referral.
Skilled Attendant/ Skilled Provider	A physician, nurse or midwife trained to proficiency in the skills needed to manage normal (uncomplicated) pregnancies, childbirth and the immediate postnatal period, and in the identification, management and referral of complications in women and newborns.
Stillbirth	A baby born with no signs of life, weighing more than 1,000 g or with more than 28 completed weeks of gestation.
Stillbirth Rate	The number of stillbirths in a particular population in a given time (usually a year) expressed as the number of stillbirths for each 1,000 total births in the same population and time period.
Unsafe Abortion	Is an induced abortion that is: ▪ Done by people lacking the necessary skills ▪ Done in an environment that does not conform to minimum standards – this includes abortions that do not conform to local legal requirements Complications from unsafe abortion are a leading cause of maternal death.

Fact sheet for maternal newborn health Uganda from 2016

Indicator	Global estimate (2015*)	National estimate (2011)
Total population	9,032,000	
Millennium Development Goal status	In sufficient progress	
Mothers, Newborns and Children		
Annual births	1,665,00	
Maternal mortality ratio per 100,000 births	343	438
Annual maternal deaths	5,700	
Neonatal mortality rate per 1,000 live births	19	27
Annual number of newborn deaths	29,700	
Under 5 mortality rate per 1,000 live births	55	90
Annual number of under 5 deaths	85,300	
Annual number of stillbirths	34,150	
Proportion of under-5 deaths that occur in the neonatal period	34%	
Infants with low birthweight	12%	10%
Preterm birth rate per 100 live births	13.6	
Health System		
Health worker density (per 10,000)	14.3	
Percentage births in facility		57%
Percentage of postnatal care for newborns within 2 days		11%
Early initiation of breastfeeding	53%	

Sources: Data sources for Uganda estimates from global reports are provided at Healthy Newborn Network Newborn Numbers for the latest year available. *mortality data is from 2015. National estimates are from the *Uganda Demographic and Health Survey 2011*

Trends in coverage data for newborn-related interventions and packages, Uganda (2000–2011)



Data sources: Uganda Demographic Health Surveys

Uganda Specific Key Resources

Bergh, Anne, et al. Evaluation of Kangaroo Mother Care Services in Uganda. April 2012.

Government of Uganda, Ministry of Health. Reproductive Maternal, Newborn and Child Health Sharpened Plan for Uganda. November 2013.

Government of Uganda, Ministry of Health. Road Map for Accelerating the Reduction of Maternal and Newborn Mortality and Morbidity in Uganda, 2007 - 2015.

Government of Uganda, Ministry of Health. Newborn Component of the Child Survival Strategy in Uganda Implementation Framework. March 2010.

Government of Uganda, Ministry of Health. Newborn Health Implementation Framework Standards for Newborn Health Care Services. April 2010.

Mbonye, Anthony K. et al. Newborn Survival in Uganda: a decade of change and future implications. The London School of Hygiene and Tropical Medicine, Health Policy and Planning 2012;27:iii104–iii117

Uganda Bureau of Statistics (UBOS) and ICF International Inc. 2012. Uganda Demographic and Health Survey 2011. Kampala, Uganda: UBOS and Calverton, Maryland: ICF International Inc.

Waiswa P, Kallander K, Peterson S, Tomson G, Pariyo GW. 2010a. Using the three delays model to understand why newborn babies die in eastern Uganda. Tropical Medicine & International Health 15: 964–72.

Key annual maternal, newborn and child health events

Event	Day
International Women's Day	8th March
World Health Day	7th April
International Day of the Midwife	5th May
World Breastfeeding Week	1st – 7th August
International Day of the African Child	16th June
International Day of the Girl Child	11th October
Safe Motherhood Day	16th October
World Prematurity Day	17th November
World AIDS Day	1st December

Sample presentations from the media trainings

Technical presentation examp

Contextual analysis of newborn health a

Continuum of Care.pdf

Ethics of journalsim.pdf

Technical presentation examp

Challenges & Opportunities for M

Process Documentation- SNL Media Engagement Activities

Regional Media Dialogue to Equip Rural Journalists with Information on Maternal and Newborn Health

Dates: 15th – 16 June 2016

Duration: 1 1/2 days

Location: Crown Hotel, Hoima

Participants:
District Information Officers from Buliisa, Kyankwanzi, Masindi, and Kiboga districts; journalists from radio, television and print media operating in the districts of Hoima, Buliisa, Kiryandongo, Kyankwanzi, Masindi, Kiboga and Kibaale; and session facilitators.

Mobilisation of Participants

SNL engaged the Health Journalist Network of Uganda (HENJU) to identify and do the initial mobilisation of journalists from radio, print and TV stations in the region. This was because the project is still new in the region, and we did not have contacts for journalists who operate in the region. For any subsequent engagements with journalist in future, SNL will be able to do the mobilisation because we are in possession of the contact details of the journalist who attended the dialogue.

Description of the activity:

The activity targeted rural journalists as well as district information officers operating in the 6 districts under the RLN. The purpose was to equip them with latest information and evidence on MNH and to discuss how the RLN can engage with them to advance the agenda of improving MNH care in the region.

Objectives:

1) To equip journalists with the evidence and latest information they need as background for their reports;

2) To get feedback from the journalists on how best the RLN can work with media to promote coverage at scale of new-born health care issues in the region;

3) To promote balanced coverage of maternal and new-born health and survival in the media.

Accomplishments:
Journalist from the region were provided with information and facts on MNH – through presentations and a media pack; feedback and ideas from journalists on how best the RLN can work with them were solicited; journalists appreciated their role and responsibility to advocate for improved MNH; and a news story on the dialogue ran on a local radio (KKCR FM) from Kibaale District.

Key issues from the Dialogue:

1. Journalists face difficulties in accessing up to date data/information on time. This is attributed to bureaucracy in government offices, yet media operates on strict deadlines

2. Limited involvement of media in planning for health services

3. Journalists have difficulty in interpreting jargon used in some health information and this lowers their interest in engaging more on health issues.

4. Journalists have inadequate knowledge on maternal and newborn health issues, which undermines their capacity to engage on such issues.

5. Sometimes, journalist face threats and intimidation from authorities when they insist on running some stories that may implicate such authorities in malpractices such as corruption.

Challenges encountered in the course of implementation:

1) Two districts: Kiryandongo and Hoima do not have district information officers. Therefore, they were not represented in the dialogue. Given the crucial role played by district information officers in the districts, and the roles expected of them in linking journalists to sources of public information on MNH in the RLN, the absence of DIOs from the above two is a great miss. In the meantime, District Health Educators in those districts will be engaged in those two districts to support journalists access health information from districts.

2) Some journalist had urgent assignments from their media houses and this affected their concentration during the dialogue. Sometimes they would get out briefly to attend to their urgent assignments

Next steps/way forward/recommendation(s)

1) Save the Children to share the dialogue report with all participants, once finalized.

2) Establish a mailing list for all journalists who participated in the dialogue to avail them with updates on MNH issues.

3) Journalists will use the office of the District Information Officer in their district of operation to ease their access to public information on MNH issues in the districts

4) Save the Children will share with journalists a calendar of key events related on MNH to alert them on such events so that they can prepare to participate and file stories.

5) Journalists exhibited knowledge gaps on issues of Reproductive Health. Therefore they require training on Reproductive Health issues

6) Radio talk shows to be held on MNH in the district

7) Continuous engagement between the RNL and the media

8) Save the Children should develop a glossary of technical terminologies commonly used in MNH communication to ensure that they are presented in a language easy to understand by journalists

Radio talk shows on MNH issues in Buliisa and Hoima Districts

Dates: 12th July (Buliisa) and 13th July 2016 (Hoima)

Duration: 1 hour for each talk show

Location: Biiso FM (Buliisa District) and Hoima FM (Hoima District)

Participants:

- The Biiso FM talkshow featured: Kusemererwa Harriet (Assistant DHO Buliisa), Katusabe Gorret (Midwife, Buliisa HC IV) and Gilbert Kwarisiima (Senior Officer, SNL)

- The Hoima FM talkshow featured: Stella Kachope (Senior Nursing Officer, HRRH), Kwebiha Solomon (Hoima District Health Educator) and Richard Mayanja (KM and Advocacy Coordinator, SNL).

Description of the Activity:
The talk shows targeted communities, local leaders, and other implementing partners in the region. The content focused on key MNH issues including services available at health facilities, essential newborn care, the importance of seeking MNH care at health facilities and the role, and responsibilities of communities in MNH care.

Objectives:
1. To share information with communities on the status of MNH and services available in in the RLN catchment area and in their respective districts.

2. To provide a platform for communities (listeners) to engage with health workers (who featured in the talk shows) on issues of MNH (through phone-in calls).

3. To sensitize communities on their roles and responsibilities in MNH care

4. To draw the attention of local political leaders to MNH issues that require prioritization in their district plans and budgets.

Mobilisation of Participants:
The Knowledge Management and Advocacy Officer liaised with Hoima DHO, Buliisa DHO and Dr Tom Ediamu, to mobilise guest speakers who featured on the talk shows. In addition, Both Buliisa FM and Hoima FM ran announcements to alert their audiences on the talk shows.

Accomplishments:
1. Both talk shows took place as planned and all guest speakers turned up.

2. A brief presentation on Save the Children, and its interventions in the RLN was shared with listeners

3. The guest speakers comprised of representation from the district local government administration and frontline health workers from health facilities. This created a good balance in the discussion, and ensured that the district leadership takes note of concerns from communities.

4. A good number of phone calls were received from listeners asking questions and concerns on the delivery of MNH services. Some of the questions were: why are some nurses at health facilities proud? What causes severe bleeding after delivery? Why are mother asked to put off their cloth when they are going to deliver? Why is Buliisa General Hospital not functioning as expected? Why do women conceive even when they are on family planning? Etc.

Challenges:

1. Buliisa district is made of communities which speak different languages. This affected the floor of discussion during the talk shows as guest speakers tried to switch from one language to another to cater for all.

2. Some listeners who called the studios diverted from the major subject of discussion and went into political sentiments. The guest speakers clarified that they would only respond to questions and concerns that are related to the subject under discussion.

Way Forward:

1. More talk shows to be conducted as the 1 hour allocated was not enough to exhaust all the relevant content.

National Media Dialogue Meeting on Key MNH Issues that Require Sustained Media Attention.

Dates: 28 July 2016

Duration: Half day

Location: Kabira Country Club

Participants:
Journalists from national level media houses and from the Regional Learning Network catchment rea, MNH Specialists, and staff from Makerere University Centre of Excellency for Newborn Health (CMNHR) and Save the Children

Mobilisation of Participants

Because it was a joint activity, SNL mobilised journalists and MNH specialists from the RLN and Ministry of Health, while CMNHR mobilised national level journalists.

Description of the Activity:
This was a joint activity organised by SNL and Makerere University Centre of Excellency for Newborn Health (CMNHR). It was a dialogue meeting between MNH health workers and selected health journalists working with national level media houses, and in the RLN catchment area (from print, radio and television media). The purpose of the dialogue was to reflect on key MNH issues that require sustained media attention, and agree on a mechanism of working with health journalists to ensure sustained reporting on MNH issues in the media.

Objectives:

1. To provide a platform for MNH health workers and journalists to critically reflect on pertinent issues affecting MNH care that require media coverage to reach out to the public, the political class, policy makers and implementers.

2. To initiate a sustainable relationship with the journalists and to ensure that they are supported to cover MNH issues in a technically correct way.

3. To identify key challenges health journalists face while reporting on MNH issues and how best the RLN and CMNHR can work with them to address barriers, including the importance of effective coverage at scale of lifesaving newborn health care interventions.

4. To identify health journalists who are willing to engage in in-depth and sustained coverage of MNH issues at the national level and in the RLN.

Accomplishments:

1. All invited journalists turned up for the meeting.

2. Key MNH facts and messages that have been ignored or not known by the media were brought to the attention of journalists

3. Challenges and opportunities on MNH reporting were discussed.

4. The connection between MNH and the sustainable development goals was well explained by Prof. Peter Waiswa

5. Ideas on sustaining MNH reporting were discussed with journalists.

Challenge:

1. Invited officials from the Ministry of Health did not turn up. This was because there were other meetings on the same day, which the officials we had invited, had to attend. For example, the National Newborn Steering Committee, and meeting between MoH officials and parliamentarians happened on the same day, at the same time.

Way Forward:

- Save the Children to share the dialogue's report with all participants, once finalized.

- Journalists to share stories on MNH which run in the media, with focal persons at SNL (Knowledge Management and Advocacy Coordinator) and at CMNHR (Communication Specialist)

- Journalists whose stories on MNH, fail to get space in the newspapers, should share those stories with the CMNHR Communication Specialist so that he uploads them on the CMNHR website.

- SNL and CMNHR will regularly share with journalists, updates, online sources of information, and key events on MNH that can generate media stories.

- If resources allow, journalists will be supported with mini-grants to write stories/features on specific issues of interest on MNH.

Radio talk shows, Spot Messages and DJ mentions on Breastfeeding in Buliisa, Hoima, Masindi, Kiboga, Kyankawnzi and Kiryandongo Districts

Dates:

1. Radio Talk shows**:**
   1st August 2016 – Buliisa and Kiboga districts
   2nd August 2016 – Hoima and Kyankwanzi district
   3rd August 2016 – Masindi District
   4th August 2016 – Kiryandongo District

2. DJ mentions and radio spot messages: 1st – 7th August 2016

Duration:

- 1 hour for each talk show
- 7 days for DJ mentions and radio spot messages

Location(s):

- Biiso FM -Buliisa District
- Hoima FM - Hoima District
- Kiboga FM – Kiboga and Hoima districts
- Kitara FM – Masindi District
- Kiryandongo FM - Kiryandongo District

Participants:

- The Buliisa talk show (on Biiso FM) featured: Dr Onyait Samuel (DHO Buliisa), and Kabagenyi Sylvia Kabagenyi (Midwife Kihunga HC II) and Richard Mayanja (KM and Advocacy Coordinator, SNL)

- The Hoima talk show (on Hoima FM) featured: Stella Kachope (Senior Nursing Officer, HRRH), Kwebiha Solomon (Hoima District Health Educator) Dr Patricia Pirio (PM SNL) and Richard Mayanja (KM and Advocacy Coordinator, SNL).

- The Masindi talk show (on Kitara FM) featured: Nyandera Consolata (Midwife, Masindi Hospital), Kyakuhaire Elizabeth (MNH Focal Person, Masindi District), Berina Kamahoro (Senior Officer, SNL) and Richard Mayanja (KM and Advocacy Coordinator, SNL).

- The Kyankwanzi talk show (on Kiboga FM) featured Dr Serebe John Bosco (the DHO), Sr Ruth Nangonzi (District MNH Focal Person) and Berina Kamahoro (Senior Officer, SNL).

- The Kiboga talk show (on Kiboga FM) featured Sr. Diana Lutaaya (Acting Assistant District Health Officer), Sr. Kanyaruju Geraldine (Maternity in-charge Kiboga Hospital) and Berina Kamahoro (Senior Officer, SNL).

- The Kiryandongo talk show (on Kiryandongo FM) featured: Ada Christine (MNH Focal Person Kiryandongo District), Kansiime Rosemary (Senior Principal Nursing Officer, Kiryandongo District) Berina Kamahoro (Senior Officer, SNL) and Richard Mayanja (KM and Advocacy Coordinator, SNL).

Mobilisation of Participants:

- The Knowledge Management and Advocacy Coordinator liaised with Hoima DHO and Buliisa DHO to mobilise guest speakers who featured on the talk shows, while Berina Kamahoro (Senior Officer, SNL) liaised with the DHOs for Kiboga, Kyankwanzi, Masindi, and Kiryandongo districts to mobilise guest speakers. All station ran announcements to alert their audiences on the talk shows.

Description of the Activity:

The talk shows, DJ mentions and spot messages were intended to raise awareness on the importance of breastfeeding, during the Breast Feeding Week, 1st - 7th August 2016.

The talk shows featured participants from all the 6 districts under the RLN. They targeted communities, local leaders, and other implementing partners in the region. The content focused on:

- How breastfeeding saves children's lives
- When should mothers breastfeed children
- Common inappropriate feeding practices
- The role of parents in ensuring children are breastfed.

The radio spot messages ad DJ mentions focused on promoting exclusive breastfeeding for babies up to 6 months, the benefits of breastfeeding and the need for husbands to support their wives to ensure effective breastfeeding of their children.

Objectives:

1) To raise awareness among communities on the importance of breast feeding for newborn survival and child health.

2) To mobilize men to support their wives in breastfeeding children

3) To draw the attention of local leaders, other partners implementing health programs, and other stakeholders in the region on the need to promote breast feeding, among communities.

2. To provide a platform for communities (listeners) to engage with health workers (who featured in the talk shows) on issues of breastfeeding (through phone-in calls).

4) To equip media/ journalists with information/knowledge on MNCH.

Accomplishments:

1. All talk shows took place as planned and all guest speakers turned up.

2. All selected FM radio stations ran spot messages and DJ mentions consistently for the entire breast feeding week.

3. A brief presentation on Save the Children, and its interventions in the RLN was shared with listeners

4. The guest speakers comprised of representation from the district local government administration and frontline health workers from health facilities. This created a good balance in the discussion, and ensured that the district leadership takes note of concerns from communities.

5. Many phone calls were received from listeners who asked questions and raised concerns on the issues of breastfeeding. The most prominent questions/concerns included:
   - If a woman has HIV, is she supposed to breastfeed her child?
   - If a breastfeeding mother conceives before the baby turns 6 months, can she continue with breastfeeding?
   - What foods can a baby eat after 6 months?
   - Why do some women fail to produce breast milk?
   - Why do some women pass out breast milk when they are still pregnant?
   - Is there any problem if someone breastfeeds her child beyond 2 years?
   - If mother is HIV positive and gets wounds on her nipples can she infect the baby?
   - If the baby is not yet six months and falls sick, can she/he be fed on solid food?
   - What problems are associated with bottle feeding?
   - What are the dangers of mixed feeding?
   - Is there any effect if a mother takes alcohol while breastfeeding?
   - What is the difference between breast milk and animal milk in terms of nutrients?
   - Some children who are fed on alternative food such as soya grow faster than those fed on breast milk. Why is this the case?

This was a good indicator that communities had tuned in to the talk shows. All the above questions were responded to by the health workers who featured in the talk shows.

Challenges:

1. Buliisa and Kiryandongo districts are made of communities which speak different languages. Because of limited time and limited language capabilities of the guest speakers, it was not possible to cater for all languages. In Buliisa, a listener called to express disappointment that their language was left out.

2. Some moderators lacked in-depth understanding of breastfeeding issues, and this limited the extent to which they probed the guest speakers.

3. There was power outage during the talk show in Masindi (at Kitara FM), and the radio temporality went off air. This encroached on the time the talk show should have lasted on air and affected the flow of the deliberations.

4. In Kiboga, it was not possible to have the talk show run in prime time (7-9 pm) as all available space had been booked by other customers. Thus the radio talk show tool place from 6 – 7 pm.

Way Forward:

1. More talk shows to be conducted as the 1 hour allocated was not enough to exhaust all the relevant content.

2. In future we shall ask the management of Local FM radio to assign moderators who have some knowledge/ and or interest in health issues.

3. We need to book for the talk shows ahead of time to ensure we get the prime time.

Radio talk show on MNH issues in Kiboga, Masindi and Buliisa Districts

Dates:

- 13th September- Kiboga District
- 14th September- Masindi District
- 15th September- Buliisa District

Duration: 1 hour for each

Locations: Kiboga FM (Kiboga District), Kitara FM (Masindi District) and Biiso FM (Buliisa District) and Hoima FM (Hoima District)

Participants:
Each talk-show featured 3 guests.

- Kiboga FM talk show featured: Sr Bagabinga Fatuma (Senior Nurse, Kiboga Hospital), Sr Diana Lutaaya, (MCH Focal Person, Kiboga District) and Richard Mayanja (KM and Advocacy Coordinator, SNL)

- Kitara FM the talk show featured: Sr Nyandera Consolata (Midwife, Masindi Hospital), Mr Muddu Micheal (District Health Educator, Masindi District), and Berina Kamahoro (Senior Officer, SNL)

- Biiso FM talkshow featured: Dr Samuel Onyait, (Buliisa District Health Officer), Sr Katigume Lydia, (midwife at Bugoigo Health Centre II) and Richard Mayanja (KM and Advocacy Coordinator, SNL)

Description of the Activity:
The talk shows targeted communities and focused on key MNH issues including, essential Newborn care, danger signs among newborns, MNH services available at health facilities, and challenges facing health facilities in providing MNH services in the respective districts.

Objectives:

1. To share information with communities on the status of MNH and services available in in the RLN catchment area and in their respective districts.

2. To provide a platform for communities (listeners) to engage with health workers (who will feature in the talk shows) on issues of MNH (through phone calls).

3. To sensitize communities on their roles and responsibilities in MNH care

4. To draw the attention of local political leaders to MNH issues that require prioritization in their district plans and budgets.

5. To equip the media with information/knowledge on MNH

Mobilisation of Participants:
The Knowledge Management and Advocacy Officer liaised with Kiboga DHO, Buliisa DHO and Masindi DHO to mobilise the guest speakers who featured on the talk shows. In addition, the host FM radios ran announcements to alert their audiences on the talk shows.

Accomplishments:

1. All the talk shows took place as planned and all invited guest speakers turned up.

2. The guest speakers comprised of representatives from the district local government administration and frontline health workers from health facilities. This created a good balance in the discussion, and ensured that the district leadership takes note of concerns from communities.

3. A good number of phone calls were received from listeners asking questions and raising concerns on the delivery of MNH services. Questions and comments from callers demonstrated the knowledge gaps communities have as far as MNH issues are concerned. The prominent questions and concerns included:

   - A caller pointed out that some people in the community, advise that it is not good to feed children on the first breast milk. Is this right? In response, listeners were advised that the first milk, is the best natural immune system booster for a child and all mothers should endeavor to feed their babies on this milk.

   - Some nurses mistreat mothers who turn to deliver from health facilities, and this discourage mothers from delivering in the same facilities again. In response, the nurses clarified that they do not intend to torture mothers, but they act tough, because some mothers behave irresponsibly at the time of delivery, which may lead to death of babies and the mothers themselves. Sometimes mothers perceived this as mistreatment.

   - TBAs play a good role in communities. Why shouldn't government equip them with more skills and knowledge on delivering mothers, instead of banning their operations? In response, Sr Lutaaya clarified that most TBAs do not meet the minimum standards required of someone to be trained as midwife. Government cannot compromise on issues of quality.

   - In some facilities, nurses take long to respond to mothers who are in need of their help during labour, and sometimes mothers end up delivering on floors. In response, nurses clarified that such delays are not intended, but in most cases, the nurses/midwives are overwhelmed by the number of mothers who need their attention.

   - Why do mothers have to buy items like gloves when they go to facilities to deliver? It was clarified that sometimes, some of the essential supplies are not available in stores at facilities due stock outs. Thus patients are advised to purchase them from private suppliers because they are needed for conducting deliveries.

   - Some facilities like Bwijanga HC IV, in Masindi District, don't give Mama Kits for free, instead they sell them. In Masindi Hospital some nurses solicit for bribes from patients. The District Health Educator (DHE) for Masindi promised to pursue this matter with the DHO. In addition listeners were advised to report to hospital authorities, any health workers who asks for bribes, for disciplinary action.

   - There is need to share specific MNH statistics for Masindi District with communities, to appreciate the general MNH status in the district. The DHO promised to share data in the next talk show.

   - What happens if one does not go for all the four times recommended for ANC visits? Nurses clarified that at each visit there is specific information and care provided to mothers to ensure that they do not face any problems during pregnancy and delivery of their babies. Mothers who do not attend ANC miss out on such care.

- Why do some mothers fail to generate breast milk after giving birth? It was clarified that some mothers experience delayed onset of lactation because of separation from their babies and poor start to breastfeeding. Mothers were advised to start breastfeeding their babies early and continuously as this will prompt the production of breast milk.

- Children born at homes are as health as those born at facilities. Why do you want every woman to deliver from health facilities? Dr Onyait clarified that being healthy is beyond what we see with our eyes. The effects of not delivering under skilled care can be seen long into the future, for example some children may not be bright in academics because their brain got damaged during delivery under unskilled care.

- What should mothers do at 8 month of pregnancy? Dr Onyait advised that such mothers should seek care at health facilities and they will be advised on what to do as they draw close to their expected dates of deliveries.

Challenge:

1. Buliisa district is made of communities which speak different languages. Because of limited time and limited language capabilities of the guest speakers, it was not possible to cater for all languages.

Radio Talk-shows and DJ Mentions and Spot Messages on Preterm Birth Prevention and Care

Dates:

1. **Radio Talk shows:**
   15th November 2016 –Kiboga District
   16th November 2016 – Masindi District

2. DJ mentions and radio spot messages – 14st – 19th August 2016

Duration:

- 1 hour for each talk show
- 6 days for DJ mentions and radio spot messages

Location(s):

Radio Talk-shows

- Kiboga FM – Kiboga and Kyankwanzi districts
- Kitara FM – Masindi District

Spot Messages and DJ Motions

- Kiboga FM – Kiboga Districts
- Kitara FM – Masindi District
- Biiso FM – Buliisa District
- Hoima FM – Hoima District

Participants:

- The Masindi talk show (on Kitara FM) featured: Nyandera Consolata (Midwife, Masindi Hospital), Mr. Michael Muddu (the District Health Educator-Masindi) and Richard Mayanja (KM and Advocacy Coordinator, SNL).

- The Kiboga talk show (on Kiboga FM) featured Sr. Diana Lutaaya (Acting Assistant District Health Officer) Sr Lubega D (Senior Nurse, Kiboga Hospital) and Richard Mayanja (KM and Advocacy Coordinator, SNL).

Description of the Activity:

The talk shows featured participants from all the 6 districts under the RLN. They targeted communities, local leaders, and other implementing partners in the region. The content focused on:

- Prevalence of preterm birth in the respective districts/region
- Causes of preterm birth
- Prevention of preterm birth
- Management/care for preterm babies

The radio spot messages ad DJ mentions focused on raising awareness on how preterm birth can be prevented, how preterm babies can be managed, and the role of families and communities in caring for premature babies to enable them survive and grow.

Activity Objectives:

1) To raise awareness among communities on the causes of preterm birth, prevention of preterm birth, and care for preterm babies.

2) To draw the attention of local leaders, other partners implementing health programs, and other stakeholders in the region on the need to address preterm birth issues in communities.

3) To provide a platform for communities (listeners) to engage with health workers (who featured in the talk shows) on preterm birth issues (through phone calls).

4) Equip media/ journalists with information/knowledge on MNCH.

Mobilisation of Participants:
The Knowledge Management and Advocacy Coordinator liaised with the DHOs for Kiboga, and Masindi districts to mobilise guest speakers. In addition, the two radio station ran announcements to alert their audiences on the talk shows.

Accomplishments:

1. All talk shows took place as planned and all guest speakers turned up.

2. All selected FM radio stations ran spot messages and DJ mentions consistently for six days

3. The guest speakers comprised of representation from the district local government administration and frontline health workers from health facilities. This created a good balance in the discussion, and ensured that the district leadership takes note of concerns from communities.

4. Communities were informed of the forthcoming national commemoration of the World Prematurity Day, and its significance.

5. Many phone calls were received from listeners on issues of prematurity. The most prominent questions/concerns included:

   - How much food should be given to a preterm baby?

   - Why do health workers often prevent many people from interacting with preterm babies?

   - You are advising us to feed pregnant mothers well as one way of preventing preterm birth, but other people tell us if you give pregnant mothers a lot of food, the babies tend to grow big and the mothers face problems during delivery.

   - Can sex lead to preterm deliveries? Can a woman get a miscarriage because of too much sex?

   - What causes pregnant women to have pain in the tubes?

   - If a child is born at six months, can it grow?

   - Does a preterm baby excrete/urinate?

   - Why do premature boys tend to have no testicles?

All the above questions were responded to by the health workers who featured in the talk shows.

Challenge:

1. There was power outage during the talk show in Masindi (at Kitara FM), and the radio temporality went off air. This affected the floor of the deliberations.

2. In Kiboga, it was not possible to have the talk show run in prime time (7-9 pm) as all available space had been booked by other customers. Thus the radio talk show took place from 6 – 7 pm.

Appendix IV: URC Endline report

THE REPUBLIC OF UGANDA

Save the Children

CHS
CENTER FOR HUMAN SERVICES

Sub-Award Agreement
Saving Newborn Lives

Endline Assessment Report

Hoima, Uganda Regional Learning Network

AUGUST 2017

This report was developed by Center for Human Services/University Research Co., LLC (CHS/URC) and authored by Jorge Hermida (CHS/URC), Richard Kagimu-Musoke (CHS/URC), Juliet Namukasa (CHS/URC), Hussein Kato (CHS/URC), and Anjali Chowfla (CHS/URC) as part of the Save the Children Saving Newborn Lives (SNL) Project under contract number 84000486.

Endline Assessment Report

Hoima, Uganda Regional Learning Network

August 2017

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Acronyms

ACS	Antenatal corticosteroids
AMTSL	Active management of the third stage of labor
CHS/URC	Center for Human Services/University Research Co., LLC
CPAP	Continuous positive airway pressure
ENC	Essential newborn care
FHM	Fundal height measurement
GA	Gestational age
HBB	Helping Babies Breathe
HC	Health center
IV	Intravenous
KMC	Kangaroo mother care
LBW	Low birth weight
LMP	Last menstrual period
MNH	Maternal and newborn health
MPDR	Maternal/perinatal death review
NG	Nasogastric
PDSA	Plan-do-study-act
PPROM	Premature preterm rupture of membranes
QI	Quality improvement
RLN	Regional Learning Network
RRH	Regional Referral Hospital
SNL	Saving Newborn Lives
STS	Skin-to-skin
WHO	World Health Organization

I. INTRODUCTION

The Regional Learning Network (RLN) was designed to provide coordinated newborn health services across two levels of care, each with clear clinical roles and tasks: the first, standard newborn care, provided at Health Centers III and IV and at the District Hospital; and the second, specialized care, provided at the Regional Referral Hospital. The RLN was conceived of as a network of health facilities providing both levels of care including and within the catchment area of the Hoima Regional Referral Hospital (RRH) that are linked through an improvement collaborative to provide high quality maternal and newborn health (MNH) services based on national evidence-based standards and guidelines. The network was established in 2016 in Western Uganda, in response to a Ministry of Health (MOH) request, as part of a collaboration between Save the Children's Saving Newborn Lives (SNL) program and the Center for Human Services/University Research Co., LLC (CHS/URC). The RLN included one RRH, four hospitals, six health centers (HCs) IVs, and 3 HCs III located in Hoima, Kiboga, Kyankwanzi, Buliisa, Masindi, and Kiryandongo districts. The health facilities within the network were linked through a referral mechanism and top-down support from the RRH as well as amongst each other.

Each facility in the RLN had a MNH quality improvement (QI) team which addressed gaps in the quality of maternal and newborn care through rapid testing of changes to care delivery using the plan-do-study-act (PDSA) cycle. Teams were supported through regular coaching and mentorship visits by CHS/URC and district coaches. QI teams measured improvement against performance monitoring indicators defined by MOH and World Health Organization (WHO) guidelines and shared progress against these indicators at quarterly learning sessions. The learning component of the Regional Learning Network was aimed at building MNH clinical knowledge and skills through the establishment of a skills/learning lab at the Regional Referral Hospital. In May 2017, operation and management of the learning lab was handed over to the Hoima Regional Referral Hospital.

A. Baseline assessment findings

A baseline assessment of the 14 facilities included in the RLN was conducted by CHS/URC in May 2016 and focused on the following areas critical to high-quality newborn care:

1. Knowledge of healthcare providers about newborn care
2. Infrastructure and personnel
3. Availability of drugs and supplies
4. Existing QI activities
5. Delivery care
6. Essential newborn care
7. Initial care and referral for frequently occurring newborn complications, including maternal conditions affecting the newborn, such as premature birth/low birth weight (LBW), prolonged labor, and premature rupture of membranes

Baseline findings showed significant gaps in each area assessed. There was a noticeable deficit in specialists and nurses for obstetric and newborn care, with only two specialists in obstetrics and one Pediatrician identified in the 14 facilities evaluated (Hoima RRH and Kiboga District Hospital). 24 general practitioners, 97 midwives, and 12 nurses were identified. Only one neonatal nurse was available at the Hoima RRH. The level of knowledge of these health care professionals on key aspects of newborn care demonstrated strengths and weaknesses. For example, 84% of providers showed adequate knowledge of general measures for infection control but only 53% demonstrated understanding of diagnosis of maternal infection and use of antibiotics for treatment. While 73% of providers were able to correctly identify the components of essential newborn care, only 14% were aware of how to use antenatal corticosteroids for the prevention of respiratory distress in premature newborns and 34% were unable to correctly identify low birth weight and preterm newborns using weight and gestational age, respectively. 69% lacked knowledge of the benefits of kangaroo mother care (KMC), however 77% of providers were knowledgeable about the use of an incubator and 64% on special feeding needs. Gaps in infrastructure quality significantly impacted care. Only two out of the 14 facilities reported having electricity with no interruptions whereas 79% reported

occasional interruptions. Only 65% had a backup electricity source. 14% reported having running water with no interruptions whereas 36% had no running water at all; the remaining 50% reported running water with some interruptions. The baseline assessment indicated that the lack of/intermittent supply of running water impacted the incidence of facility-acquired infections. Only 21% of facilities had an adequate place for neonatal resuscitation and while equipment for resuscitation was available in all 14 facilities in many cases it was incomplete, non-functional, or devices were locked away in storage rooms implying that resuscitation with equipment was not being done routinely. There was a significant gap in the availability of drugs and supplies with less than 50% of facilities having the basic drugs and supplies needed for maternal and newborn care. Less than half of the facilities had basic antibiotics like ampicillin and gentamicin or phenobarbital and nasogastric tubes for neonates. Other essential supplies like sphygmomanometers, stethoscopes, partographs, fluid charts, measuring tapes, forms for clinical notes, temperature charts and disposable gloves were also missing in many, if not most, facilities. Health workers noted that they often asked families to purchase essential drugs and supplies in the open market due to the lack of availability within the facility. However, drugs such as dexamethasone, chlorpromazine, diazepam, metronidazole, $MgSO_4$, Pitocin, aminophylline, and fluids were available in more than 75% of facilities.

The baseline assessment indicated serious gaps in key processes of care affecting the quality of maternal and newborn services. Partographs were used in only 30% of deliveries and of those while 85% had the curve starting at the right point and 74% registered the fetal heart rate, only 57% registered uterine activity, 47% a dilation curve, and 32% blood pressure. Partographs were complete in only 16% of cases. Of the cases of prolonged labor identified in which there was a clinical record, only 8% had a completed partograph; 13% received antibiotics; and 21% IV fluids indicating deficiencies in the detection and management of prolonged labor. There were similar gaps in the management of Respiratory Distress Syndrome in deliveries with a threatened preterm birth. While 85% of mothers had their gestational age (GA) assessed during labor, it was not possible to ascertain by which method through the maternity register. Only 11% of cases had a written indication of GA being measured through fundal height and there was no indication in the records of measurements via the Last Menstrual Period (LMP) method. Observations revealed that GA was usually only assessed through fundal height measurement using fingers as a measure and very infrequently a tape measure. Among the 96 mothers who delivered between 24-36 weeks, only 12 received dexamethasone and only 8 received a full dose. Of the 14 cases of preterm premature rupture of membranes (PPROM) diagnosed, only four received an antibiotic and only one received the recommended dose of erythromycin.

Serious deficiencies in the management of premature babies was noted during the baseline assessment. Of the 30 newborns recorded as having been born either before 37 weeks or with a weight ≤ 2.000 grams, none had a written evaluation for GA, only 2 babies (7%) were placed in KMC, and only 12 (40%) were referred to a higher-level of care. Delivery of Essential Newborn Care (ENC) was also poor. While gloves were worn in 13 out of the 16 observed deliveries, providers did not wash their hands, severely threatening infection control. Furthermore, only 44% of instruments used in attended deliveries were sterilized in antiseptic solution for the correct amount of time and in none of the observed deliveries were gloves rinsed in antiseptic prior to use and disposed of in a contaminated waste bin upon removal. Only 37% of newborns were dried and placed skin-to-skin with the mother and only 44% received measures to ensure warmth. Temperature was not checked regularly. Tetracycline or erythromycin eye drops or ointment was used for 38% of newborns and the correct technique for application was used in only 25% of those cases. Only 20% of babies received an adequate injection of Vitamin K. No identification bands were available for use in tracking newborns and only 25% of newborns were weighed upon birth. Lastly, as part of active management of the third stage of labor (AMTSL), oxytocin was given to 96% of mothers and 100% were checked for tears. Delivering the placenta and massaging the uterus was performed in over 90% of deliveries. However, in only 50% of cases was the placenta examined. Providers waited the recommended two minutes before cutting the cord in only 31% of deliveries and in only 12% of cases was the mother helped to breastfeed the newborn within one hour of birth.

II. ENDLINE ASSESMENT

A. Methods

An endline assessment of the facilities that had participated in the Hoima Regional Learning Network was conducted from May 22nd – June 2nd 2017. The assessment covered a total of 14 sites in the Masindi,

Buliisa, Kyankwanzi, Kiryandongo, Kiboga, and Hoima Districts that included three health centers III, six health centers IV, four hospitals, and the Hoima Regional Referral Hospital (**Table 1**). Data collectors spent approximately two days at each health facility collecting data, reviewing documents, interviewing key facility staff and conducting observations of critical care processes.

Table 1. Health facilities included in endline assessment

Name of Health Facility	Level of Health Facility	District
Bwijang	HC IV	Masindi
Masindi	Hospital	Masindi
Buliisa	Hospital	Buliisa
Buliisa	HC IV	Buliisa
Biiso	HC III	Buliisa/Hoima
Butemba	HC III	Kyankwanzi
Ntwetwe	HC IV	Kyankwanzi
Kiryandongo	Hospital	Kiryandongo
Panyadoli	HC III	Kiryandongo
Kigorobya	HC IV	Hoima
Kikuube	HC IV	Hoima
Hoima	Regional Referral Hospital	Hoima
Kiboga	Hospital	Kiboga
Bukomero	HC IV	Kiboga

CHS/URC adapted data collection tools used during the baseline evaluation, which drew from national MOH and WHO guidelines and standards for quality maternal and newborn care, for use in the endline assessment. A team from CHS/URC and Save the Children along with the Hoima RRH pediatrician and records personnel reviewed a first draft of the tools to ensure relevance, feasibility, and alignment with accepted standards. Revisions were incorporated into a second draft which were pilot-tested at three selected facilities – the Hoima RRH, a district hospital, and a health center IV. Findings from the pilot-test were incorporated into the final draft of the tools that were used in the endline assessment. The complete list of endline data collection forms is presented in **Table 2**.

Table 2. Endline data collection forms

Data collection form	Purpose	Method
Form 1: Health worker knowledge and confidence	Assessed health worker's level of knowledge on key competencies of maternal and newborn care.	Self-administered questionnaire with 20 multiple choice questions. Administered to at least five health workers working in maternal/newborn care in each facility. Health workers were picked at random ensuring that at least one from each cadre were represented. Each health worker was assigned a code for identification/confidentiality of information shared.
Form 2: Infrastructure and personnel in maternity and newborn wards	Assessed availability of infection control measures at maternal and newborn units, essential lifesaving commodities and equipment, necessary infrastructure, and staffing levels.	Data collectors recorded observations and interviewed ward-in charge.

Data collection form	Purpose	Method
Form 3: Drugs and supplies for newborn care	Assessed availability of essential drugs and supplies present in facility pharmacy and stores.	Data collectors interviewed chief pharmacists/drug store manager and conducted direct observations.
Form 4: Existing quality improvement activities	Assessed quality improvement activities, projects and available documentation.	Data collectors interviewed maternity unit-in charge and/or facility-in charge.
Form 5: Partograph review	Reviewed maternity register, mothers' notes/files, and partographs to assess monitoring of labor and action in case of prolonged labor.	Data collectors reviewed maternity register for week prior to the assessment, randomly selected 25 mothers who had delivered in the previous week (or all deliveries if the number was less than 25), and assessed availability and completeness of partograph. Data collectors reviewed maternity register to identify cases of prolonged labor in the previous quarter (February-March 2017) and reviewed clinical records to assess if proper protocol was followed.
Form 6: Maternity register and clinical record review	Collected data on assessment of gestational age, provision of antenatal corticosteroids for threatened preterm births, neonatal resuscitation and provision of KMC for low birth weight babies.	Data collectors reviewed the maternity register for the week prior to the endline assessment and randomly selected 25 mothers who had delivered in the prior month (or all if deliveries in prior week was less than 25).
Form 7: Essential Newborn Care checklist	Assessed provision of a complete and immediate package of ENC.	Data collectors recorded direct observation of 12 components of ENC: preparation for childbirth, immediate newborn care, cord care, initiation of early breast feeding, eye care, cord care, administration of Vitamin K, identification of the baby, thermal protection, weighing and examining the baby, decontamination/cleaning/sterilization, and documentation.

Data collectors, comprising of three CHS/URC staff and six regional district coaches, were trained on the use of each tool and method for collecting data and then grouped into three teams comprising of at least one CHS/URC staff and one to two regional district coaches. While at the facilities, data collectors worked with the facilities in-charge, data officers, and the heads of the maternity units to obtain access to the relevant data sources, including registers and clinical records, and maternity/newborn health staff for interviews. The data collected was checked by CHS/URC staff at the end of each facility visit to ensure completeness and accuracy. **Table 3** lists the data source and sample size for each of the seven data collection tools. Facilities for which the data collected were incomplete were not included in the analysis.

Table 3. Data sources and sample size

Form	Data source	Sample
Form 1: Health Worker Knowledge and Confidence	Health workers	50 health workers across the 14 facilities received the questionnaire including: • 3 pediatricians • 3 general doctors • 12 clinical officers • 6 registered midwives • 21 registered nurses • 1 enrolled midwife • 2 enrolled nurses • 1 comprehensive nurse The sample was not randomly chosen and included only the maternity staff present during the endline assessment period who routinely attended deliveries.
Form 2: Infrastructure and personnel in maternity and newborn wards	Direct observation/interview with facility-in charge.	Direct observation/interviews in 13/14 facilities.
Form 3: Drugs and supplies for newborn care	Direct observation/interview with chief pharmacist and/or drug store in charge.	Direct observation/interviews in 14/14 facilities.
Form 4: Existing quality improvement activities	Interview with maternity unit-in charge or facility in-charge.	Interviews in 13/14 facilities.
Form 5: Partograph review	Maternity registers, partographs, clinical records.	Random selection of 25 deliveries from the previous week drawn from maternity register. Partographs reviewed for each case (350 in total). Clinical records of all cases of prolonged labor in the quarter reviewed (160 cases out of 6,919 deliveries). Records review in 14/14 facilities.
Form 6: Maternity register and clinical record review	Maternity register and clinical records.	Random selection of 25 deliveries from previous week drawn from maternity register. Records reviewed for gestational age assessment (275 in total). Clinical records reviewed for all cases of newborn asphyxia (547), PPROM (37), and premature birth (275) in the previous quarter. Maternity register reviewed documentation of ENC in last 100 live births in the last quarter (1,100 live births in total). Records review in 11/14 facilities.
Form 7: Essential Newborn Care checklist	Direct observation	All normal deliveries occurring on day of data collection (26 in total). Direct observations in 11/14 facilities.

B. Findings

1. Health worker knowledge and confidence

50 medical staff were assessed on their knowledge of and confidence in key competencies related to maternal and newborn care. Of these, 6% identified as a pediatrician, 6% as a general doctor, 24% as a clinical officer, 12% as a registered midwife, 42% as a registered nurse, 2% as an enrolled midwife, 4% as an enrolled nurse, and 2% as a comprehensive nurse. Of the 50 health workers sampled, there were no obstetricians/gynecologists, nursing assistants, students, or intern doctors. The health workers interviewed reported having 15.86 years of formal education, on average, with a maximum of 27 years reported and a minimum of 10. Health workers attended an average of 18 deliveries in the month prior to data collection, with the range spanning from between 0-80 deliveries per month. 21 identified as managers or "in-charges" of a particular clinical service.

The assessment covered health worker knowledge of and confidence in the following topics: infection prevention, maternal infections, essential newborn care, premature birth, and special care for premature babies.

Infection prevention: Health workers demonstrated sufficient knowledge of basic practices to prevent infection, including biosafety and the importance of hand washing. 100% of respondents could clearly identify the necessary steps to ensure clean delivery of a baby and the "key moments" for which hand washing is essential whereas 80% were knowledgeable of the precise steps for proper hand washing.

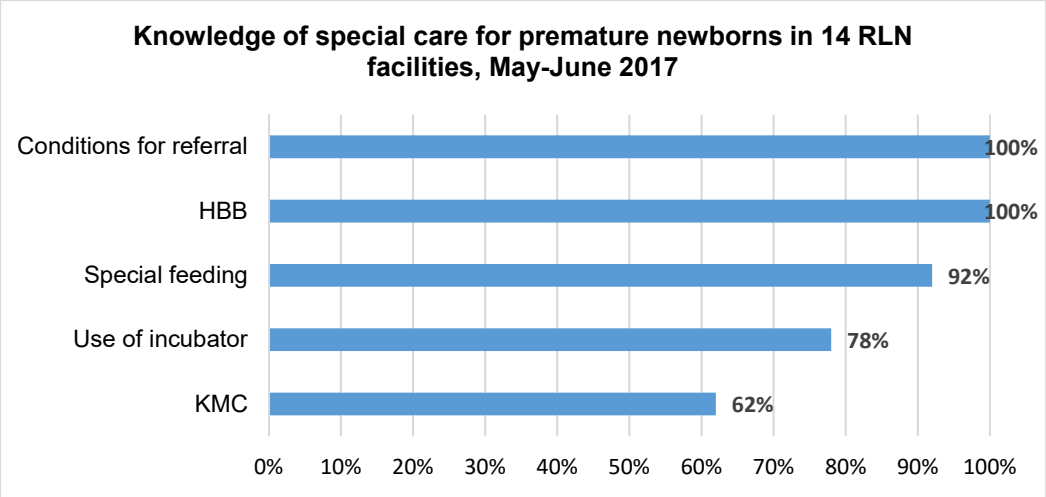
Maternal infections: Knowledge of maternal infection was less prevalent. Only 60% of health workers correctly identified the warning symptoms of chorioamnionitis and only 22% were able to specify the recommended antibiotics for mothers at risk of chorioamnionitis and PPROM.

Essential newborn care: 96% of medical staff assessed were able to correctly identify the components of essential newborn care during both the initial 60 minutes after birth and from 60-90 minutes. Similarly, 96% (48/50) of health workers were knowledgeable of the danger signs in newborns that parents should be counseled to look out for. 80% could identify reasons for which newborns should be referred to the Regional Referral Hospital.

Premature birth: Knowledge of premature birth was varied among the health workers assessed. 94% were knowledgeable about measuring fundal height using a tape measure to determine gestational age, however only 12% (6/50) showed sufficient knowledge of the use of antenatal corticosteroids to prevent respiratory distress in premature babies. While 92% knew the classification for a "small" or "preterm" baby, only 54% correctly identified "very small" or "very preterm" as a baby with a birth weight < 1500 grams or gestational age of less than 32 weeks.

Special care for premature newborns: Health workers displayed varied knowledge of the special care required for premature newborns (see **Figure 1**). While there was sufficient knowledge of conditions necessitating referral, the "Helping Babies Breathe" (HBB) protocol for resuscitating newborns with birth asphyxia, and managing newborns with special feeding needs, only 78% of health workers could identify when to use an incubator and only 62% were knowledgeable of how to initiate kangaroo mother care (KMC).

Figure 1. Health worker knowledge on special care for premature newborns in 14 RLN facilities, May-June 2017

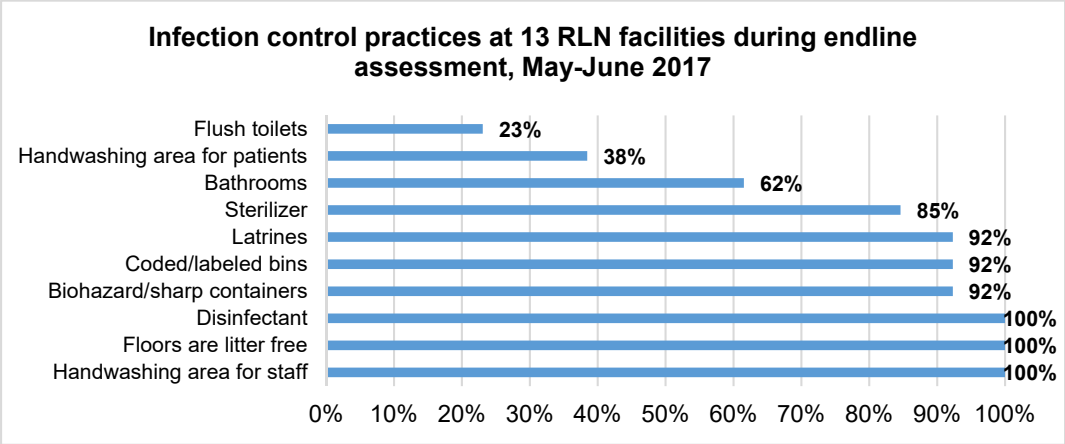


2. Infrastructure and personnel in maternity and newborn wards

Data collectors conducted direct observations and interviews of facilities in-charge in 13 of the 14 health facilities to assess the infrastructure and personnel available in maternity and newborn wards. Data collection tools were designed to capture information on infection control, space and equipment for newborn resuscitation, the privacy of the delivery room, records storage, the availability of select equipment needed for newborn care, and the regularity of energy and water supply.

Infection control: The majority of the 10 infection control measures evaluated were in place in 90% or more of the 13 RLN facilities assessed, as seen in **Figure 2**. Flush toilets (23%), handwashing areas for patients (38%), bathrooms (62%), and sterilizers (85%) continued to present a challenge to infection control.

Figure 2. Infection control practices at 13 RLN facilities, May-Jun 2017



Newborn resuscitation: 100% of facilities had an appropriate place for resuscitation of newborns with birth asphyxia within the delivery room, defined as a warm area with a flat, firm, and cushioned space that can accommodate a resuscitation tray. Functional equipment for resuscitation was available in the majority of facilities, with bags and masks available at 100% (13/13) of facilities, bulb syringes in 92% (12/13) of facilities, and penguin suction devices in 85% (11/13) facilities. Functional suction catheters were available in only 38% of facilities (5/13); one facility reported that a suction catheter existed but was locked away while the remaining seven reported that they were unavailable.

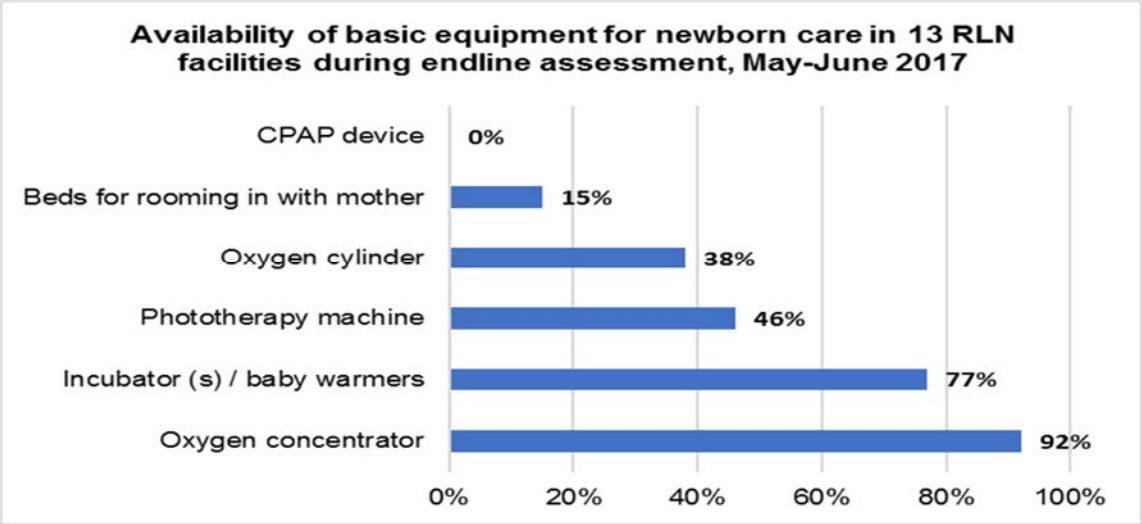
Delivery room: Data collectors observed that in 6/13 facilities (46%) delivery rooms had both visual and auditory privacy. Delivery rooms in 4 facilities (31%) were visually separated from the rest of the facility but lacked auditory privacy, and in the remaining 3 facilities (23%) they lacked both visual and auditory separation from the rest of the ward.

Records storage: Appropriate records storage was poor across the 13 facilities assessed. There was a space for storing inpatient medical records which could be locked and for which access was limited in 61% of maternity wards (8/13) and only 31% (4/13) of newborn wards.

Electricity/water supply: 31% of facilities had reliable electricity supply with no interruptions, 62% experienced occasional interruptions, and 8% experienced one interruption per day. None of the facilities reported experiencing more than one interruption on a daily basis. 77% of facilities (10/13) had a working generator that could be used as an alternative power source when the regular source was unavailable. 23% of facilities reported reliable water supply with no interruptions and 54% reported only occasional interruptions. However, three out of the thirteen facilities (23%) reported having no running water supply at all.

Essential equipment for newborn care: The newborn ward/neonatal care unit was set up in close proximity to the labor ward in 11 out of the 13 facilities (85%). Neonatal care units were assessed for the presence of six essential elements: incubators/baby warmers, oxygen concentrators, oxygen cylinders, phototherapy machines, CPAP devices, and beds for rooming-in with the mother. While the majority of newborn wards/neonatal care units had incubators or baby warmers and oxygen concentrators, oxygen cylinders, phototherapy machines, and beds for rooming-in with mothers were missing from the majority of facilities (**Figure 3**). None of the 13 facilities assessed had a CPAP device.

Figure 3. Availability of basic equipment for newborn care, May-June 2017

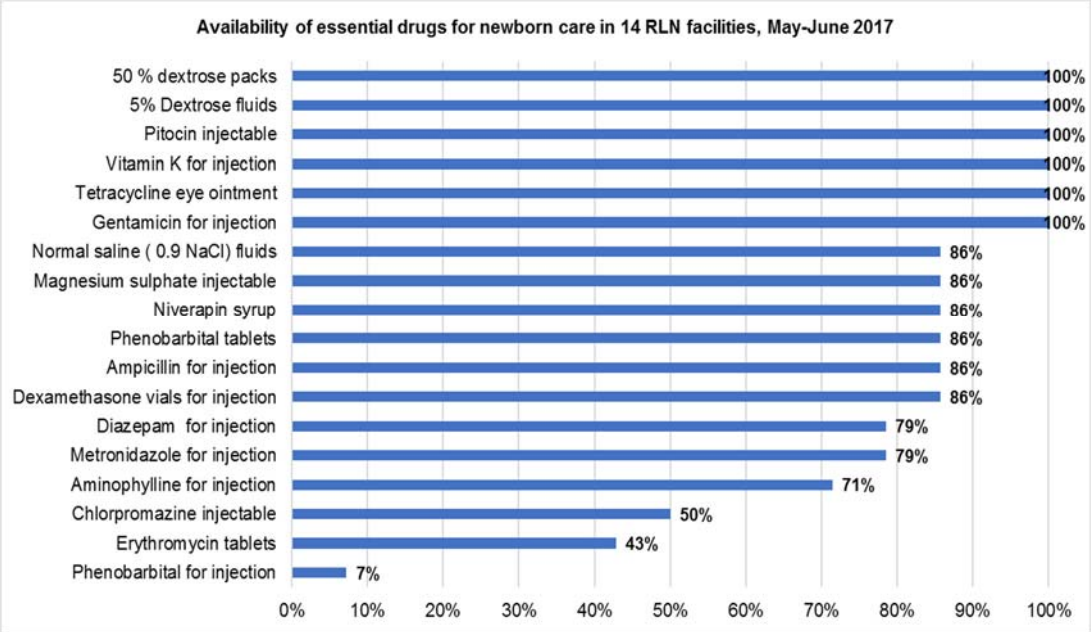


3. Drugs and supplies for newborn care

Data collectors assessed the routine availability, defined as no stock-outs in the two months prior to data collection, of essential drugs for newborn care either through direct observation or through interviewing the chief pharmacist or other staff responsible for managing the facility's drug store. 14 of the 18 drugs assessed were routinely available in over 75% of health facilities. As shown in **Figure 4**, antibiotics critical in treating newborn infections, such as ampicillin and gentamicin, were available in 86% and 100% of facilities respectively. Similarly, Vitamin K and tetracycline eye ointment, drugs necessary for the provision of essential newborn care, were available in all 14 health facilities assessed. Only 1 out of the 14 facilities

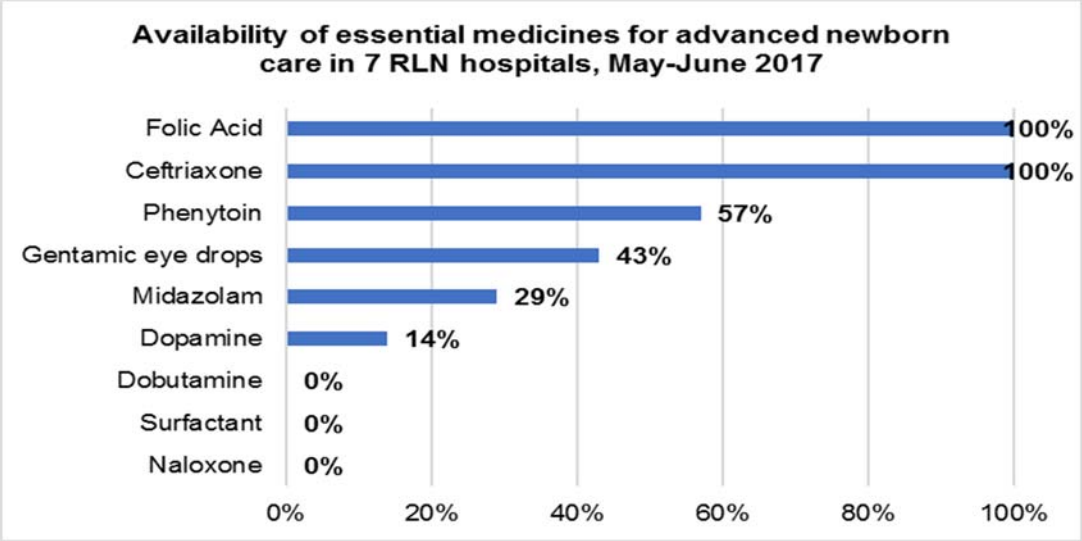
(7%) had sufficient supply of injectable phenobarbital to treat convulsions in newborns, although 11 out of 14 facilities (79%) reported routine availability of diazepam.

Figure 4. Availability of essential drugs for newborn care in 14 RLN facilities, May-June 2017



The availability of drugs necessary for advanced newborn care provided was assessed at the seven hospital level facilities included in the Regional Learning Network. Of these facilities, all seven reported routine availability of folic acid and ceftriaxone in the two months prior to data collection however none had stocks of dobutamine, surfactant, and naloxone, as seen in **Figure 5**.

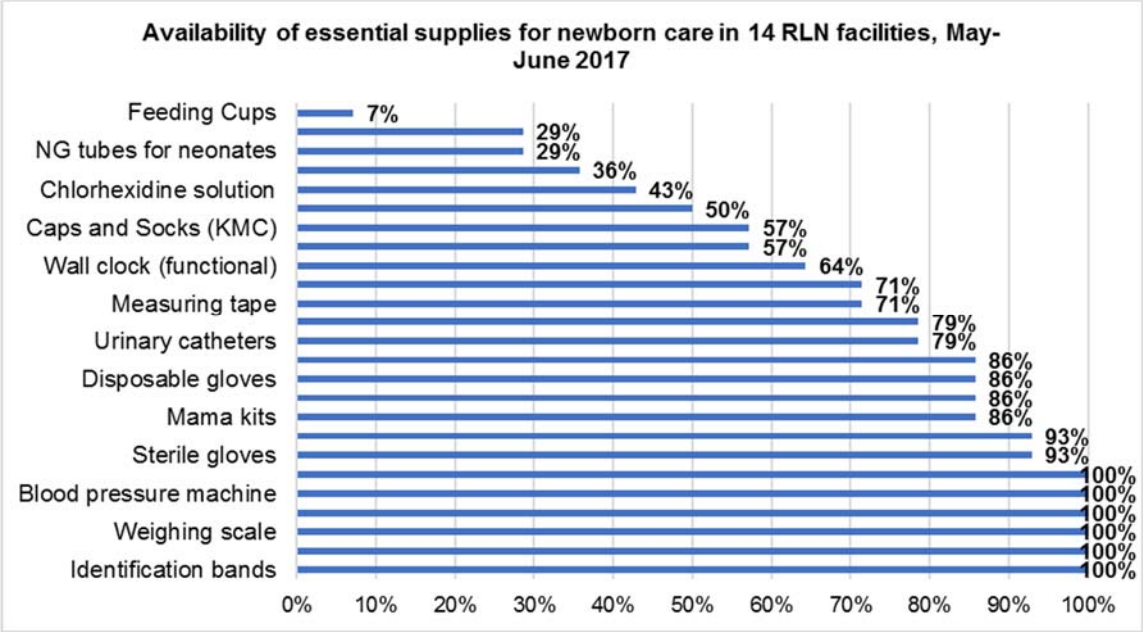
Figure 5. Availability of essential medicines for advanced newborn care in 7 RLN hospitals, May-June 2017



Identification bands for newborns, partograph forms, weighing scales, pulse oximeters, blood pressure machines, and thermometers were available in all 14 facilities assessed; sterile gloves and clinical notes forms in 13 out of 14 facilities; and mama kits, liquid soap, temperature charts, and disposable gloves in 12

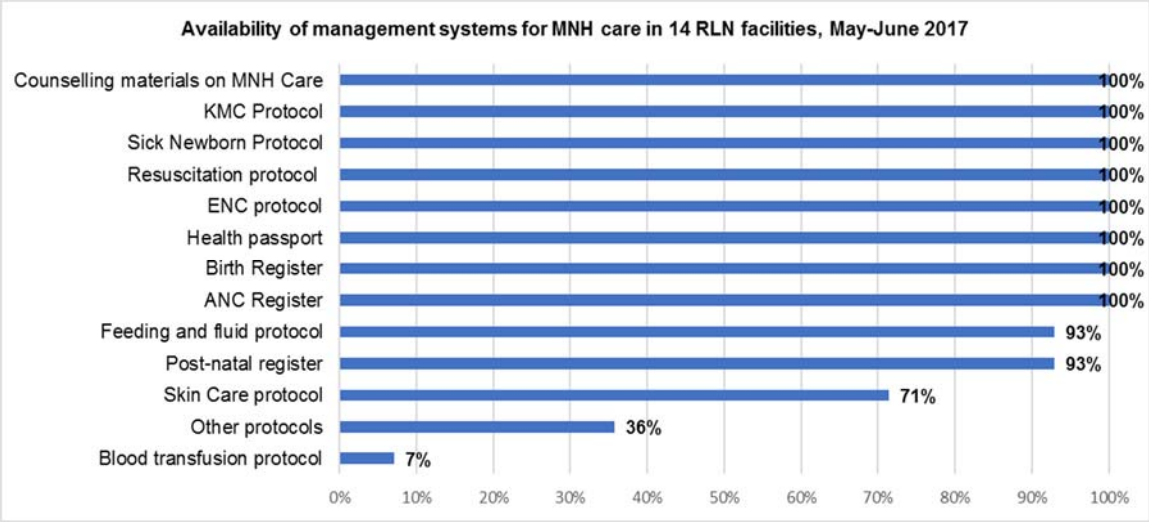
out of 13 facilities. There was a notable lack of feeding cups and NG tubes for neonates with 7% (1/14) and 29% of (4/14) facilities respectively reporting routine availability of these items (see **Figure 6**).

Figure 6. Availability of essential supplies for newborn care in 14 RLN facilities, May-June 2017



Lastly, data collectors assessed facilities for the presence or absence of management systems to guide maternal and newborn care (**Figure 7**). 100% of facilities reported having an ANC register; birth register; health passports; protocols for ENC, newborn resuscitation, sick newborn care, and KMC; and counselling material on MNH care. However, a blood transfusion protocol was available in only 1 of the 14 facilities assessed.

Figure 7. Availability of management systems for MNH care in 14 RLN facilities, May-June 2017



The head of the pharmacy was responsible for maintaining the drugs and supplies at 43% of health facilities, other hospital staff in another 43%, and the facility in-charge in the remaining 14%. Drug stocks were checked weekly in the majority of facilities (64%) and daily in the remaining 36%. The most frequent reason for stock outs of essential drugs and supplies reported by the facilities was suppliers sending less than the ordered amount; 71% of facilities reported this as a reason for stock-outs.

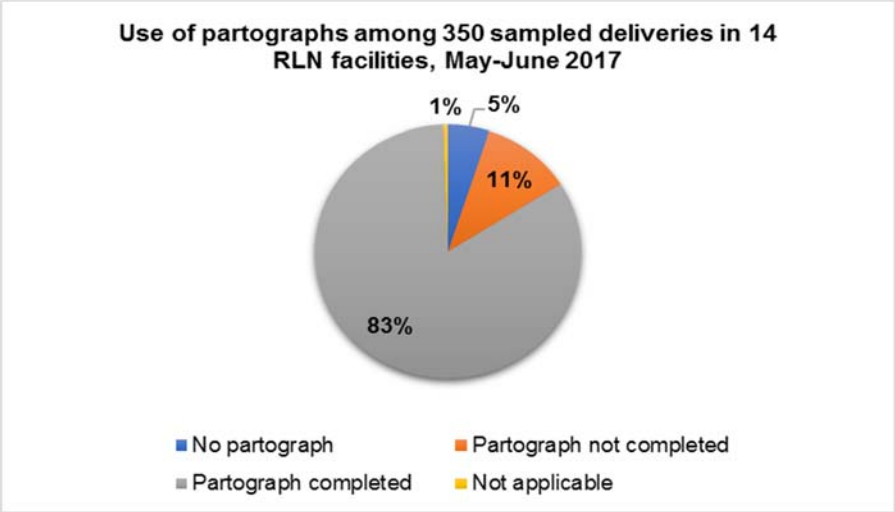
4. Quality improvement activities

All 13 of the health facilities assessed during the endline reported having a functional quality improvement team or committee which routinely documented meetings and had a written improvement plan. 100% of facilities reported tracking indicators related to deliveries performed under clean conditions; number of pregnant women with a suspected maternal intrapartum infection treated with antibiotics; number of babies receiving all components of ENC after birth; use of partographs; number of mothers at risk of preterm birth receiving antenatal corticosteroids; and provision of HBB to newborns who needed help breathing. Only 54% of facilities (7/13) reported tracking the number of parents or caretakers who were counselled on danger signs before discharge of a newborn. Individual providers were routinely given feedback on their performance on these indicators. 12 of the 13 facilities reported having a maternal/perinatal death review or audit committee (MPDR) and that an assessment had been carried out in the year prior to data collection. Of those 12 facilities, 10 had carried out a perinatal death review in the previous quarter. The maternal/newborn units met routinely to discuss quality improvement for perinatal mortality in 77% of facilities and maternal mortality in 69% of facilities.

5. Use and completeness of partographs and management of prolonged labor

Data collectors sampled 25 deliveries in all 14 RLN facilities to assess the use and completeness of partographs to monitor labor. As shown in **Figure 8**, In 83% of these deliveries a partograph was started and completed. In 11% of deliveries, a partograph was started but was not completed. 5% of cases lacked a partograph all together, and in less than 1% a partograph was not applicable, likely due to the fast progression of labor.

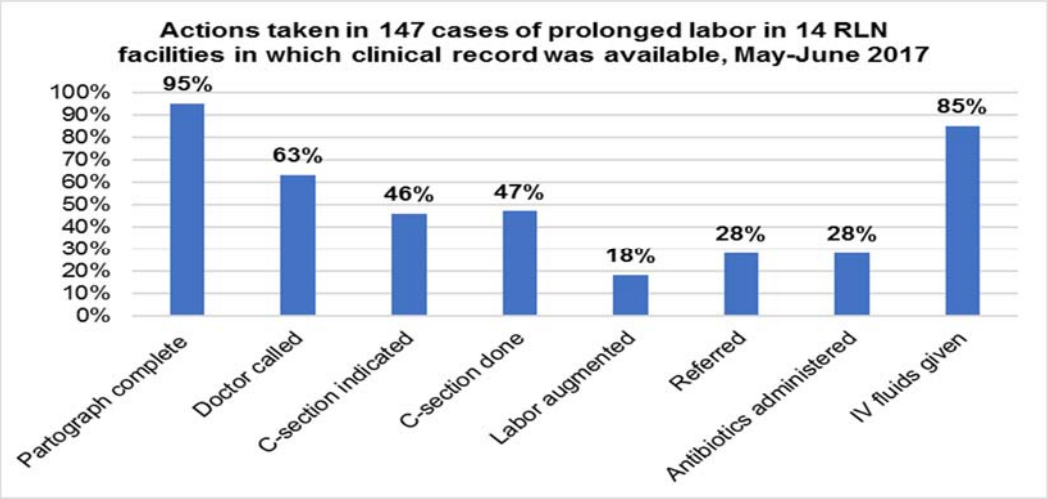
Figure 8. Use of partograph among 350 sampled deliveries in 14 RLN facilities, May-June 2017



Of those cases in which a partograph was started, 99% started the curve at the correct point; 98% registered the fetal heart rate, cervical dilation curve, and frequency and duration of uterine activity; 95% correctly documented decent on the partograph until birth; and 91% captured blood pressure.

Maternity registers for the previous quarter (March-May 2017) were also reviewed to identify cases of prolonged labor. 160 cases were identified out of 6,919 total deliveries, of which in only 147 cases was a clinical record or partograph found. As shown in **Figure 9**, among the 147 cases of prolonged labor with a clinical record, 140 (95%) had a completed partograph. A doctor was called in 63% of cases. A caesarian section was indicated for 46% of the women with prolonged labor and performed in 47% of cases. Labor was augmented in only 18% of the cases of prolonged labor. 28% of women with prolonged labor were referred for further treatment to a higher-level facility. 85% of women were given IV fluids and in 28% of cases IV antibiotics were administered as a result of fever or ruptured membranes.

Figure 9. Actions taken in cases of prolonged labor in 14 RLN facilities, May-June 2017

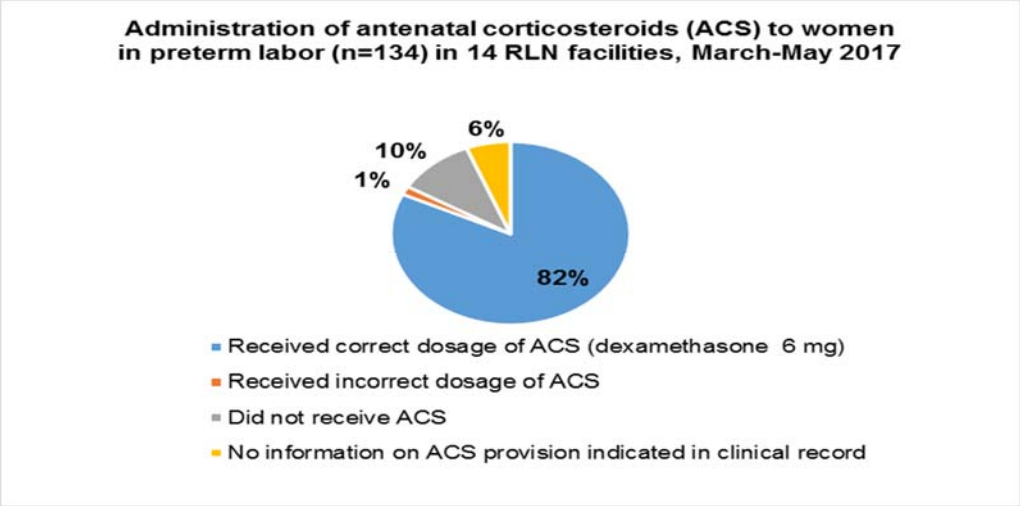


6. Assessment of gestational age and management of newborn asphyxia and preterm labor

A sample of 25 deliveries from 11 RLN facilities was drawn from the maternity registers and clinical records were reviewed to determine if, and by what means, gestational age of the fetus was assessed. Clinical records were also reviewed for detection and management of newborn asphyxia, PPROM, and premature birth in the previous quarter.

Of the 275 deliveries sampled, all but 4 (1%) were assessed for gestational age using either or both fundal height measurement (FHM) using a tape measure and Last Menstrual Period (LMP) or were assessed but the method was not indicated in the clinical records. Of the 134 women who delivered prematurely (less than 34 weeks GA), only 7 (6%) were not assessed for gestational age. Of these women, 82% (110/134) received the correct dosage of antenatal corticosteroids (dexamethasone 6 mg every 12 hours for 48 hours) (**Figure 10**).

Figure 10. Administration of antenatal corticosteroids (dexamethasone) in 14 RLN facilities, March-May 2017



Clinical records indicated a total of 547 newborns not breathing at birth between February-April 2017. Of those, 452 (83%) were resuscitated using either suction and/or stimulation and 320 (59%) with a bag and

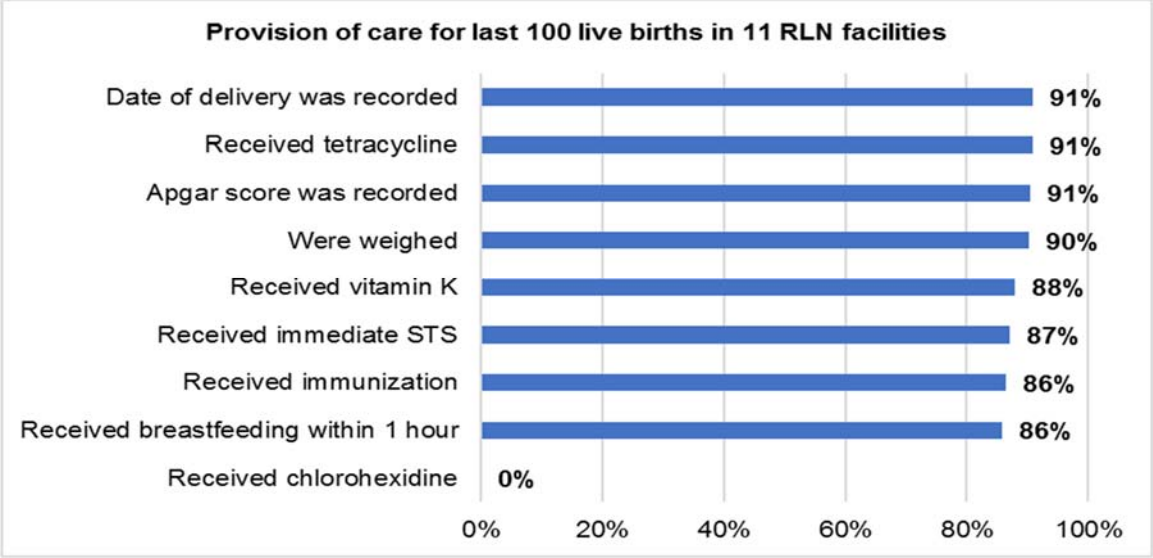
mask. 33 of the 547 newborns (6%) who were not breathing at birth died despite intervention with a bag and mask.

Of the 37 women who presented with PPROM (<37 weeks GA), 22 (59%) had their gestational age assessed by two methods (FHM and LMP), 28 were given an antibiotic (76%), and 27 (73%) received erythromycin in the correct dosage.

275 women gave birth at a gestational age below 37 weeks and/or had a baby weighing less than 2,500 grams. Of those, 40% had their gestational age assessed by two methods (FHM and LMP); 65% had their baby placed in Kangaroo Mother Care; and in eight cases (3%) when the baby weighed less than 1,500 grams, mother and baby were referred to Hoima Regional Referral Hospital. The 11 RLN facilities assessed registered a total of 26 newborn deaths (deaths within the first 30 days of life) in the quarter prior to data collection.

Assessment of the last 100 live births in each of the 11 facilities assessed for this parameter showed that in 91% of cases the baby received tetracycline and the date of delivery and Apgar score were recorded (**Figure 11**). Compliance with Vitamin K provision, immediate STS, immunization, breastfeeding within one hour, and weighing were also high, however in none of the births was chlorohexidine administered.

Figure 11. Status of the last 100 live births in 11 RLN facilities



7. Essential newborn care

Data collectors recorded direct observations of components of essential newborn care for all births occurring on the day of data collection at 11 RLN facilities including: preparation for childbirth, immediate newborn care, clamping and cutting the cord, initiation of early breastfeeding, eye care, cord care, administration of Vitamin K, identification of the baby, thermal protection, weighing and examining the baby, decontamination/cleaning/sterilization, and documentation.

Preparation for childbirth: Facilities performed well in eight dimensions of preparing for childbirth evaluated during the endline assessment. In 100% of the 26 total observations, providers wore sterile gloves, a clean plastic or rubber apron, closed toed shoes, a mask, and eye protection; they washed their hands with soap and water and dried them with a clean, dry cloth or through air drying in 92% of cases. The midwife informed the mother or caretaker about the items needed for delivery and what would occur during delivery in 96% of observations, and prepared a trolley for delivery and resuscitation in 92%. However, in only 73% of observed deliveries (19/26) did the provider explain the advantages of skin-to-skin

contact with the baby and ask the mother's permission to place the baby on her chest after birth. Emotional support and reassurance was provided in 88% of deliveries, or 23 out of 26 observed births.

Immediate newborn care: Providers initiated immediate newborn care in the majority of births observed. 96% of babies were dried and stimulated on the mothers' chest and in 100% of cases providers assessed the baby's breathing while drying and stimulating. The baby was covered with a clean, dry cloth in 96% of cases. Oxytocin was given to 100% of mothers as a part of AMTSL. 88% of babies were placed skin-to-skin with the mothers' chest. In 5 out of the 26 observed deliveries the baby was not breathing at birth; 4 were moved to the resuscitation table as soon as the cord was clamped and cut.

Clamping and cutting the cord: In 96% of observed deliveries (25/26), provides waited for two minutes, or until the cord stopped pulsating, before clamping and cutting the cord using the correct technique. The placenta was delivered in 96% of deliveries and the uterus massaged in 100%. In only 85% of deliveries was the placenta examined to ensure that it was complete, but 96% of women were examined for tears in the perineum and vagina. In only 73% of cases did providers rinse gloved hands in antiseptic solution following delivery and remove and dispose of gloves correctly into a contaminated waste container.

Initiation of early breastfeeding: 21/26 mothers (81%) were helped to breastfeed their baby within one hour of birth. Out of the nine cases in which spontaneous breastfeeding was not successful, 88% of mothers (8/9) were assisted in using an alternative method for breastfeeding or expressing breastmilk until breastfeeding could be established.

Eye care: 100% of babies were treated with tetracycline or erythromycin eye drops or ointment. The treatment was applied correctly – both eyelids inverted, one drop placed in each eye ensuring that the tip of the bottle or tube does not make contact with the baby's skin, eye, or other objects – in 100% of observations.

Cord care: The cord was tied using a double square knot or plastic clamp two fingers away from the abdomen in 92% of cases (24/26) however proper cleaning procedures (hand washing before handling the cord, applying antiseptic at birth, and regular cleaning with alcohol or chlorohexidine) were followed in only 65% of cases.

Vitamin K: The necessary supplies were present and Vitamin K was correctly administered for 100% of observed births.

Identification of baby: An identification band was placed on the wrist and ankle of the newborn noting the number of the register card, name of mother, sex of baby, and date and time of delivery in only 69% of cases (18/26).

Thermal protection: While 88% of babies were kept in continuous skin-to-skin contact for the first hour after birth with their heads and bodies covered, only 73% were regularly monitored for auxiliary temperature using a thermometer.

Weighing and examining the baby: 100% of babies were weighed in the first hour of life and 92% (24/26) were examined for any abnormalities.

Decontamination/sterilization: Delivery instruments and tray were placed in an antiseptic solution to sterilize after 88% of deliveries. Gloved hands were rinsed in an antiseptic solution and gloves were then removed and disposed of in a contaminated waste bin in 92% of cases.

Documentation: After all the observed deliveries, providers reviewed the data on the partograph, and recorded it in the necessary registers and mother/newborn cards.

III. DISCUSSION AND CONCLUSIONS

High quality maternal and newborn care is achieved when facilities have the inputs (infrastructure, personnel, equipment, drugs, and supply) and knowledgeable health care providers needed to follow evidence-based processes of care in a timely fashion for every patient, every time.

While the baseline assessment of the 14 Regional Learning Network facilities conducted in May 2016 revealed substantial gaps in inputs, knowledge of health care workers, and key processes of maternal and newborn care, as a result of quality improvement activities implemented through the RLN and the training and instruction provided through the RLN Skills/Learning Lab, significant improvement can be seen in the endline assessment results after only one year of RLN implementation.

In the baseline assessment, only 73% of providers could correctly identify the components of essential newborn care. This increased to 96% in the endline assessment, with staff able to correctly identify the necessary procedures during both the initial 60 minutes following birth and the subsequent 30 minutes. Similarly, while during the baseline assessment only 31% of respondents could accurately describe Kangaroo Mother Care this doubled to 62% in the endline assessment. Knowledge on the use of ACS and antibiotics to treat maternal infections did not improve, however, with the percentage of health workers who could correctly define when to use dexamethasone to prevent respiratory distress in premature babies declining from 14% in the baseline to 12% during endline.

Whereas during the baseline assessment only 21% of facilities had an adequate place for neonatal resuscitation and the majority of facilities lacked access to functional equipment to treat birth asphyxia, at the time of the endline assessment 100% of facilities had an appropriate place for newborn resuscitation within the delivery room. Functional bags and masks were available in 100% of facilities and bulb syringes and penguin suction devices in 92% and 85% of facilities respectively. The baseline assessment revealed a significant gap in the availability of essential drugs and supplies for maternal and newborn care, with less than half of facilities having routine supply of basic antibiotics, such as ampicillin and gentamicin. By the endline, 86% of facilities reported routine availability of ampicillin and 100% reported sufficient stocks of gentamicin. As during the baseline assessment, stocks of phenobarbital to treat convulsions in newborns and nasogastric tubes for special feeding remained insufficient at the endline assessment.

Several gaps in key processes of care were apparent during the baseline assessment, affecting the quality of maternal and newborn health services. Partographs were used in only 30% of deliveries, and while 85% had the curve starting at the right point and 74% registered the fetal heart rate, only 57% registered uterine activity, 47% a dilation curve, and 32% maternal blood pressure. Correct partograph used increased significantly by the time of the endline assessment. Endline data showed partograph use and completion for 83% of deliveries, with 99% having the curve start at the right point, and 98% recording fetal heart rate, cervical dilation, and frequency and duration of uterine activity. 91% captured maternal blood pressure. Management of prolonged labor also improved, with partographs completed for 95% of cases with a clinical record present (140/147) as opposed 8% during baseline. The percentage of women with prolonged labor who were given fluids increased, from 21% during baseline to 85% during endline, as did the provision of IV antibiotics to women with fever or ruptured membranes (28% during endline vs. 13% during baseline).

Management of preterm birth improved significantly. Of 134 cases of premature delivery included in the endline assessment, 110 (82%) received the correct dosage of dexamethasone as opposed to 67% during the baseline assessment (8/12). The increase in the total number of cases of preterm birth from baseline to endline may perhaps be a result of the increase in the number of mothers who had their gestational age assessed during labor using fundal height measurement with a tape measure and/or LMP to 99% from 85% during baseline. The percentage of women diagnosed with PPROM who received an antibiotic increased from 29% to 76% during endline.

Of the women who gave birth at a gestational age below 37 weeks and/or had a baby weighing less than 2,500 grams, 40% had their gestational age assessed using both fundal height and LMP during endline,

compared to 0% during baseline. 41% of the preterm babies were placed in KMC, up from 7% during baseline. Delivery of essential newborn care also improved significantly. Whereas during the baseline the majority of providers did not wash their hands prior to delivery, 92% complied with this infection control practice during the endline assessment. 96% of babies were dried and stimulated on their mothers' chest during the endline assessment, an increase of 59 percentage points over the baseline value. While only 38% of newborns were treated with tetracycline or erythromycin eye drops or ointment during baseline, this increased to 100% during endline. A similar increase was seen in the provision of Vitamin K (from 20% to 100%). While AMTSL (provision of oxytocin and massaging of the uterus) was provided regularly to women during both the baseline and endline assessment, the percentage of cases in which the placenta as examined increased from 50% during baseline to 85% during endline. As compared to a rate of 31% during the baseline, providers waited the recommended two minutes before clamping and cutting the cord in 96% of deliveries during the endline assessment. 81% of women were helped to initiate early breastfeeding, as opposed to only 12% initially.

Improvements in the availability of essential inputs, knowledge of evidence-based care among health care providers, and delivery of key maternal and newborn health services can make a substantial difference to improving the outcomes of mothers and newborns in Western Uganda. The experience of the Regional Learning Network in using quality improvement techniques and hands-on skills training to improve maternal and newborn care by tackling these three dimensions of quality demonstrates evidence of this and can provide useful insight to other health facilities seeking to improve MNH care in similar settings.

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