MOMENTUM
Country and Global Leadership

Technical Brief

LEARNING RESOURCE PACKAGE FOR THE WORLD HEALTH ORGANIZATION LABOUR CARE GUIDE

Field Test in Rwanda

GOAL

To improve the quality of care during labor and childbirth, facilitate effective implementation of the 2018 *World Health Organization (WHO) recommendations: Intrapartum care for a positive childbirth experience*,[1] and promote a shift toward improving the experience of childbirth, WHO developed the *WHO Labour Care Guide* (LCG) and an accompanying *WHO Labour Care Guide: User's Manual*.[2] The WHO LCG facilitates implementation of quality, evidence-based, woman-centered care for a positive childbirth experience within the context of a broader, rights-based approach.[2]

Quick Facts:

- On-site training for groups of six to eight participants
- Interactive
- Includes low dose, high frequency post-training activities
- Includes quality improvement activities

To facilitate implementation of the LCG at a country level, MOMENTUM Country and Global Leadership and Laerdal Global Health developed an onsite learning resource package to train providers to complete and interpret the LCG. MOMENTUM and Laerdal Global Health co-developed the facilitator's guide, participant worksheets, and action plan; and MOMENTUM developed the supplementary materials to accompany them. The learning materials were adapted for the Rwanda LCG and field tested in Nyamata and Byumba Hospitals in Rwanda. The purposes of the field test were to 1) evaluate the usability, feasibility, and acceptability of the package of learning materials; 2) evaluate the effectiveness of the package to render participants capable of completing and interpreting the LCG and making a plan of care based on findings on the LCG; 3) confirm that the package is a valid learning resource that enables providers to correctly utilize the LCG; and 4) make improvements to the package based on the field test. The learning package was evaluated at three intervals: 1) immediately after the training activity, 2) six weeks following the initial training activity, and 3) five months following the initial training activity. Evaluation tools used immediately and six weeks following the training activity included a course evaluation, self-reported confidence assessment, and exercise to complete the LCG; an audit of three LCGs was conducted by the MOMENTUM/Rwanda midwives/trainers six weeks after the training activity; and a self-reported questionnaire was completed by a sample of managers and providers five months after the training activity.

This brief gives an overview of select results of the field test of the MOMENTUM/Laerdal Global Health package of learning materials in Rwanda.

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OVERVIEW OF THE RWANDA FIELD TEST

The learning materials were adapted from the WHO learning materials to reflect the style and approach of the Helping Mothers Survive (HMS) materials.[3] They are intended to be delivered as a one-day, facility-based training for groups of six to eight participants, followed by low dose, high frequency (LDHF) activities to help ensure participants have the required knowledge, skills, and confidence to correctly complete and interpret the LCG, and use findings on the LCG to provide timely, quality care for women in labor and during childbirth. The training methodology is interactive, and includes opportunities to complete and interpret the LCG, "knowledge check" questions to check understanding of key issues, and discussion questions to prompt reflection on current practice and areas where the facility needs improvement.

The Rwanda LCG has additional parameters for respiratory rate and urine volume, and monitoring of the second stage of labor is on a separate page from monitoring of the first stage of labor. To adapt materials for the Rwanda LCG, text was added in the facilitator's guide and all case studies used the Rwanda LCG. In addition, participants shared that they did not feel confident to assess decelerations, fetal position, caput, and moulding. To close gaps in providers' ability to assess these parameters, peer practice coordinators (PPCs) were provided with a session guide and job aids to reinforce skills during post-training LDHF sessions. Where needed, PPCs coordinated with an obstetrician/gynecologist to assist with these sessions.

TRAINING PLAN

Mentoring as part of developing and qualifying LCG trainers is essential to the implementation of LCG training activities at the facility level. Mentoring includes helping candidate trainers prepare, guiding candidate trainers as they conduct the training activity, answering questions, and providing an extra set of hands when needed on training days. The training plan was as follows:

- **LCG master trainers:** For the field test, two HMS master trainers traveled to Rwanda to train and certify the national Rwandese trainers selected to participate in the field test.
- **Training of MOMENTUM/Rwanda and hospital LCG trainers:** Eight candidate LCG trainers selected by the hospitals and four MOMENTUM/Rwanda candidate trainers participated in the one-day LCG "champion" training and one-day training on facilitation and orientation of PPCs conducted by LCG master trainers. All trainers were midwives. Candidate trainers were then mentored by HMS master trainers as they conducted their first LCG champion training onsite and orientation of PPCs.
- **Training of champions:** All maternity providers in both hospitals completed the champion course. Thirty-two providers received training at Byumba Hospital: 13 registered nurses, 14 registered midwives, four medical officers, and one obstetrician/gynecologist. At Nyamata Hospital, 34 providers received the training: one registered nurse, 24 registered midwives, and nine medical officers. Trained providers were instructed to immediately begin using the LCG once they returned to duty, so providers who had not yet been trained were exposed to the LCG prior to going through the training activity themselves.

TRAINING PROVIDERS AT BYUMBA HOSPITAL

Photo credit: Adelphine Murekatete

PROVIDERS AT NYAMATA HOSPITAL PRACTICING COMPLETION OF THE LCG DURING TRAINING

Photo credit: Angelique Uwineza

- To minimize service disruptions, trainers conducted training activities for six to eight providers weekly or twice a week until all providers were trained. Each training activity was facilitated by two trainers, with one MOMENTUM/Rwanda trainer present at each activity. The MOMENTUM/Rwanda trainers entered participant characteristics, post-module questionnaire scores, course evaluations, and confidence assessments for all participants in Excel files stored on SharePoint. In addition, WhatsApp groups that included trainers, PPCs, and the HMS master trainers were established for each hospital.

  Participants did not receive continuing medical education credits for completing the course. Neither hospital had a formal plan for updating staff but pledged to train any new staff on the LCG using the MOMENTUM/Laerdal Global Health learning resource package.

PROVIDERS RECEIVING "CHAMPION" CERTIFICATES AT NYAMATA HOSPITAL

Photo credit: Angelique Uwineza

- **Orientation of facility-level PPCs:** Trainers and maternity in-charges selected three providers at each hospital who had completed the first champion training to serve as PPCs: two midwives (one was the hospital's nurse and midwife director) and one medical officer at Nyamata Hospital, and two midwives and one medical officer at Byumba Hospital. PPCs participated in a half-day orientation to prepare them for their role, which they held for six weeks following the training activity. The PPCs agreed to carry out the tasks voluntarily and without any financial remuneration.

DEVELOPING A FACILITY ACTION PLAN TO IMPROVE CARE AT BYUMBA HOSPITAL

Photo credit: Adelphine Murekatete

FACILITY ACTION PLAN

A key aspect of the learning approach is the development of a facility action plan to improve the quality of care for women in labor and during childbirth and to facilitate consistent, correct use of the LCG. At the end of the one-day training activity, providers worked together to develop SMART (specific, measurable, achievable, relevant, and time-bound) objectives and plans to improve care around areas identified as needing improvement at the facility.

LDHF POST-TRAINING SESSIONS

Six LDHF sessions were scheduled weekly following the training activity. These post-training LDHF activities were led by the PPCs and undertaken to promote transfer of learning to the workplace following the training activity. LDHF sessions included case studies to review completed LCGs, skills sessions to assess selected parameters (fetal decelerations, fetal position, caput, and moulding), review of progress and updates on the facility action plan, and weekly team audits of completed LCGs and group problem-solving to improve completion, interpretation, and appropriate action based on findings on the LCG. The LCG audits aim to 1) motivate providers who correctly completed the LCG and 2) identify problems and collectively address them to improve care.

TEAM LCG AUDIT AT BYUMBA HOSPITAL

Photo credit: Adelphine Murekatete

SELECT FINDINGS FROM THE RWANDA FIELD TEST

PREPARATORY ACTIVITIES

Although the learning materials clearly state that facilities and providers must prepare prior to commencing training on the LCG, no preparations were made at either hospital. As a result, important impediments to using the LCG were existing infrastructure (e.g. inadequate space to accommodate a companion, separate rooms for each stage of labor, inadequate number of toilets and handwashing stations for patients), inadequate quantities of equipment and commodities, and non-coverage by health insurance of routine testing for proteinuria and acetonuria during labor. In addition, as noted earlier, adaptations had to be made to accommodate providers' admitted lack of confidence in assessing fetal heart rate decelerations, fetal position, caput, and moulding.

The choice to implement the LCG was made at the Ministerial level. Hospital management and matrons (in charge of the maternity unit) at both hospitals were highly motivated to implement the LCG and clearly saw its benefits for quality and the experience of care. Providers, however, did not have a choice to participate in training activities, nor was providers' motivation assessed or considered, although they are the ones directly involved in implementing the LCG and changing their behavior and how they provide care.

ACCEPTABILITY OF THE LEARNING RESOURCES

Based on observations by master trainers, trainers were able to use the package of learning materials competently after the training of trainers activity. In WhatsApp and phone conversations during implementation of the training at the hospitals, trainers expressed that they were able to use the materials with relative ease.

Five months after the initial training activity, 17 trainers/managers and 52 providers from both facilities completed questionnaires. All 17 trainers/managers agreed or strongly agreed that they would recommend using the MOMENTUM/Laerdal Global Health package of learning materials in other facilities. All respondents also stated that they felt providers were able to competently and correctly complete the LCG and make decisions about provision of care based on the findings after completing the training.

DURATION AND SCOPE OF TRAINING

The training activity was classroom based, which meant that:

- While participants had the opportunity to problem-solve using case studies and review alert signs and how to respond in theory, they did not have the opportunity to practice on real cases during the training activity.
- Trainers did not have the opportunity to model the behaviors they hoped to promote, and participants did not have the opportunity to practice the behaviors with coaching/mentoring by trainers.
- Trainers could not validate if what a participant recorded on the LCG was accurate and reflected actual findings without observing providers as they assessed a woman and completed the LCG.

In course evaluations completed at the end of the training activity, 12 of the 78 participants (15.4%) disagreed or strongly disagreed that one day is sufficient to orient them to using the Rwanda LCG, and 20 of the 78 (25.6%) wrote that the time for training should be increased.

FEASIBILITY OF TRAINING SIX TO EIGHT PROVIDERS OVER A PERIOD OF TIME

Trainers identified the following challenges:

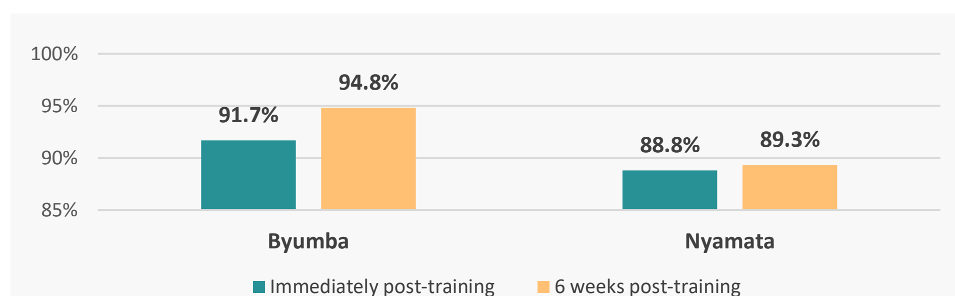
- The training schedules were challenging:
  - At times, participants attended sessions post-call (following night shifts). Trainers had to compromise on the content and duration and check how tired participants were and whether they could train them for a few hours or shorten the day.
  - At times, participants were scheduled to work a night shift on the day of the training activity, with obvious disadvantages.
- With staggered training activities, there was a mix of providers who had received training on the LCG and those who had not. This could be a problem when a trained provider starts an LCG and the care is taken over by an untrained provider.
- Many of the midwives at Nyamata Hospital were pregnant during the training and within three months many would be on maternity leave. Without a program to orient new providers, including training on the LCG, the hospital will have a problem.

EFFECTIVENESS OF LEARNING MATERIALS

ABILITY TO COMPLETE THE LCG BASED ON A WRITTEN CASE STUDY

Based on the results from participants completing the LCG using a written case study (see Figure 1), it appears that the one-day training activity equips participants with the requisite knowledge and skills to complete an LCG from a case study. However, it is important to note that the case study provided information on the type of decelerations, fetal position, degree of caput, and degree of moulding to record on the LCG.

FIGURE 1: ABILITY TO COMPLETE THE LCG BASED ON A WRITTEN CASE STUDY



Sections of the LCG where participants had difficulty included:

- Section 1: Identifying information and labor characteristics at admission: onset of labor.
- Section 2: Supportive care: Difficulty deciding whether the woman "declined" care ("D") or was not receiving the supportive care recommended ("N").
- Section 3: Care of the baby: Identifying types of decelerations.
- Section 6: Medication: Remembering to record "N" if oxytocin, IV fluids, or other medicines were not given.

It is unclear why there is a difference in scores between the facilities, particularly given a larger percentage of the participants at Byumba Hospital were registered nurses rather than midwives.

SELF-REPORTED CONFIDENCE ASSESSMENT

The same self-reported confidence assessment was given immediately post-training and six weeks post-training. Figures 2, 3, and 4 give results of the self-reported confidence assessments. Overall, the large majority of providers felt somewhat confident, very confident, or extremely confident in their ability to correctly complete the Rwanda LCG, interpret findings on the Rwanda LCG and take action, and coach others in using the Rwanda LCG.

FIGURE 2: SELF-REPORTED CONFIDENCE ASSESSMENT: ABILITY TO CORRECTLY COMPLETE THE RWANDA LCG

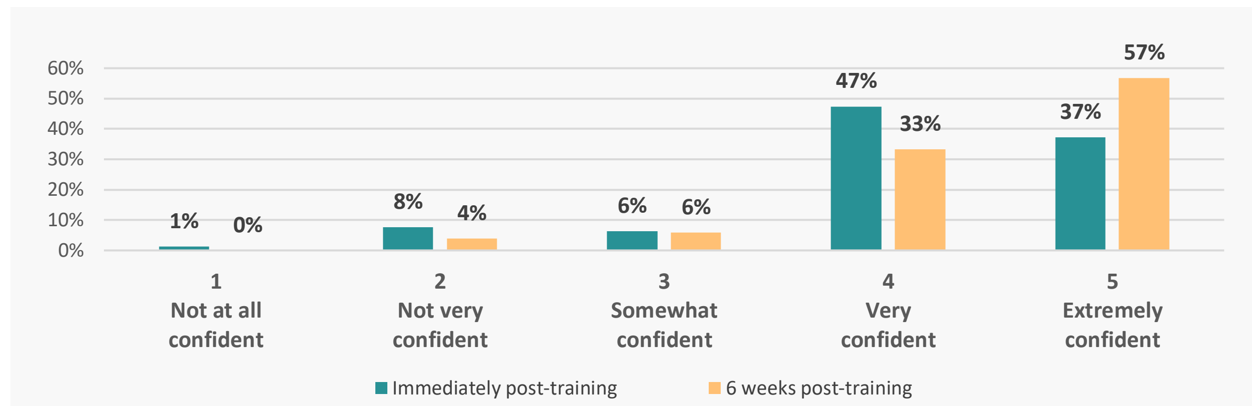


FIGURE 3:. SELF-REPORTED CONFIDENCE ASSESSMENT: ABILITY TO INTERPRET FINDINGS ON THE RWANDA LCG AND TAKE ACTION

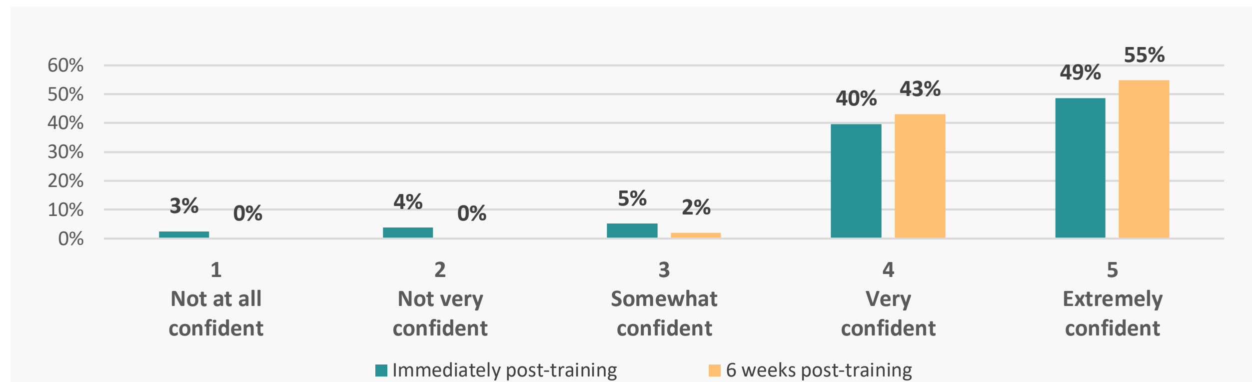
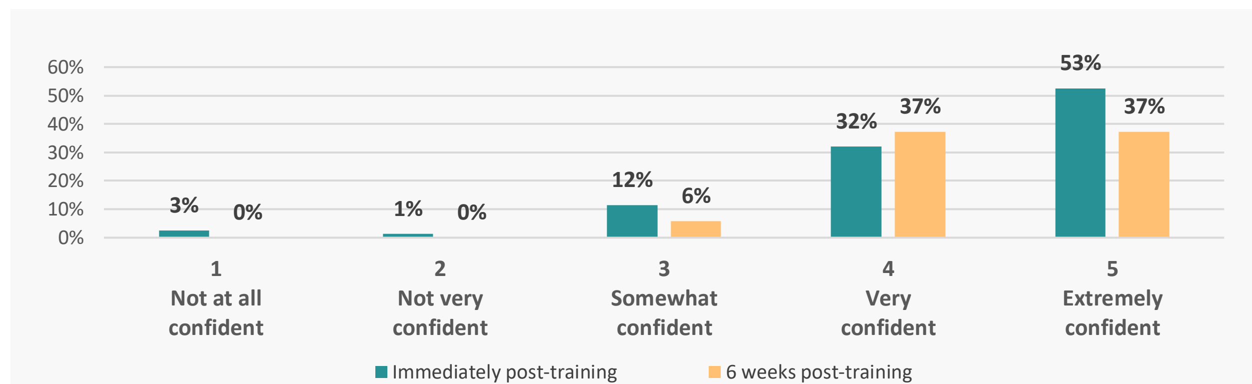


FIGURE 4: SELF-REPORTED CONFIDENCE ASSESSMENT: ABILITY TO COACH OTHERS IN USING THE RWANDA LCG



AUDITS OF COMPLETED LCGS SIX WEEKS POST-TRAINING ACTIVITY

Audits were conducted on three randomly chosen completed LCGs in each hospital six weeks after the initial training activity by MOMENTUM/Rwanda midwives (see Tables 1 and 2).

TABLE 1: AUDITS OF THREE LCGS SIX WEEKS POST-TRAINING – BYUMBA HOSPITAL

Section	Byumba Hospital			Reasons for scores <100%
	LCG 1	LCG 2	LCG 3	
Admission	40%	0.0%	100%	• Identifying information not complete • Date and time of ruptured membranes not recorded • Risk factors not recorded • Labor onset not recorded • Date of active labor onset not recorded
Supportive care – First stage	100%	100%	66.7%	• Alert signs not circled • Appropriate action not taken to respond to alert signs
Well-being of the baby – First stage	75%	100%	66.7%	• State of the membranes or color of the liquor not recorded in first stage • Presence of moulding not recorded in first stage • Alert signs not circled • Appropriate action not taken to respond to alert signs
Well-being of the woman – First and second stage	100%	100%	33.3%	• Proteinuria and acetonuria not recorded • Urine volume not recorded
Labor progress – First stage	100%	100%	100%	
Labor progress – Second stage	90.9%	100%	100%	• Contractions not recorded at least every 15 minutes in second stage
Medications	66.7%	66.7%	66.7%	• "N" not recorded for oxytocin (labor was not augmented)
Shared decision-making	60%	100%	80%	• Assessment did not reflect the results recorded on the LCG

TABLE 2: AUDITS OF THREE LCGS SIX WEEKS POST-TRAINING – NYAMATA HOSPITAL

Section	Nyamata Hospital			Reasons for scores <100%
	LCG 1	LCG 2	LCG 3	
Admission	50%	80%	100%	• Identifying information not complete • Date of active labor onset not recorded • Risk factors not recorded
Supportive care – First stage	100%	100%	100%	
Well-being of the baby – First stage	100%	100%	100%	
Well-being of the woman – First and second stage	100%	100%	66.7%	• Frequency of checking vital signs was not adapted to the woman's condition
Labor progress – First stage	100%	100%	100%	
Labor progress – Second stage	100%	100%	100%	
Medications	100%	100%	100%	
Shared decision-making	100%	100%	100%	

It is important to note that audits cannot validate if what is recorded on the LCG is accurate and reflects actual findings. Experience with the partograph has certainly taught us that lesson. The only way to verify how the LCG is completed and if parameters recorded are accurate is to observe providers as they complete the LCG for a real case.

EFFECTIVENESS OF QUALITY IMPROVEMENT ACTIVITIES

Providers stated that LCG action plans posted in the labor and delivery wards, copies of the WHO LCG user's manual in the labor and delivery wards, and the WHO LCG quick guide in the participant worksheets were extremely helpful and facilitated correct completion and use of the LCG. Of the 17 trainers/managers and 52 providers who completed the questionnaire five months after completion of training activities:

- All agreed or strongly agreed that they would recommend using the LDHF activities in other facilities and that developing the facility action plan to improve quality resulted in positive changes in the facility.
- All felt that the following recommendations for care and monitoring recommended in the LCG **IMPROVED** after implementing the LCG:
  - Encouraging women in active labor to be mobile.
  - Facilitating the presence of a labor companion of the woman's choice for ALL women in active labor.
  - Providing pain management (pharmaceutical and nonpharmaceutical methods) for women in active labor.
  - Ensuring women in active labor have access to food and drinking water.
  - Responding quickly when alert signs are identified.

RESPONSE TO FINDINGS FROM THE FIELD TEST

RECOMMENDATIONS FOR ACTIONS PRIOR TO BEGINNING TRAINING ACTIVITIES

- Conduct advocacy efforts with providers to convince them of the advantages of using the LCG, bringing them on board and motivating them to participate in training activities and implementing the LCG. Refer to the document Key points for considering adoption of the WHO labour care guide: Policy brief.
- Follow recommendations in the learning materials to:
  - Assess providers' capacity to assess all parameters on the LCG. Where there are gaps, there are three possible options: 1) require a course on essential care during labor and childbirth before training on the LCG; 2) include training on the identified parameters as part of the training on the LCG (obviously lengthens the training time); or 3) include training on/reinforcement of these skills during LDHF activities following the training.
  - Visit the labor and delivery rooms, compare existing infrastructure and equipment/supplies to Annex 5 in the WHO LCG user's manual*,* and begin plans with managers to address needs to facilitate implementation of the LCG and ensure conditions are optimal once training activities have begun.
- Ensure availability of or coverage for dipsticks to test for protein and acetone during labor.
- Use available MOMENTUM resources to assist with preparation for implementation of and training on the LCG.

CHANGES MADE TO LEARNING MATERIALS FOR THE GLOBAL AND RWANDA LEARNING RESOURCE PACKAGES

- The facilitator's guide, participant worksheets, and action plan have been reviewed/adapted to ensure they are designed with accessibility in mind and meet level AA compliance standards set forth by the web content accessibility guidelines.
- Training has been lengthened to two days. Including an additional day will allow time for:
  - Clinical practice: This will allow observation of trainers and ensure that they are modeling the desired behaviors when caring for women and can correctly assess all parameters, complete and correctly interpret findings on the LCG, and make sound decisions based on the results. Inclusion of a clinical day during the training of providers will allow participants to observe trainers demonstrating use of the LCG and participants can also practice using the LCG with coaching by the trainer.
  - Additional exercises to practice completing the LCG using a case study.
- Content in the facilitator's guide was enhanced for Sections 1, 2, and 6 to improve understanding and correct completion of the LCG.
- Additional exercises were included in post-training activities to promote development of care plans based on risk factors and presence of alert values.
- Although participants appreciated the action plan and gave no feedback, the action plan was revised to include timing of assessments and second stage of labor after feedback from WHO.

RECOMMENDATIONS FOR FUTURE TRAINING ACTIVITIES

- Managers, trainers, and providers felt that the facility action plan to improve quality was helpful in promoting change to care provision. They also felt that post-training LDHF activities and LCG audits facilitated by PPCs were useful in helping to implement the LCG. These activities should therefore continue to be integral parts of the training activity.

- Managers, trainers, and providers felt that the facility action plan to improve quality was helpful in promoting change to care provision. They also felt that post-training LDHF activities and LCG audits facilitated by PPCs were useful in helping to implement the LCG. These activities should therefore continue to be integral parts of the training activity.

- In large facilities with more than six or eight maternity providers, trainers should work with managers and providers to develop a schedule for training sessions. It is important to avoid scheduling staff for a training activity who have just come off night duty or are scheduled to go on night duty following the training activity.
- Advocate to grant continuing medical education credits for completion of the module on the LCG by national nursing/midwifery/medical councils.

References

1. *WHO recommendations: Intrapartum care for a positive childbirth experience*. Geneva, Switzerland: World Health Organization; 2018. https://apps.who.int/iris/handle/10665/260178.
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