

Context Adapted Obstetric Training

CAOT

...a new culture, context and need based adapted (Em)ONC training for low- and middle income countries to reduce maternal and newborn mortality.

By

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Introduction

You may ask, especially if you are working in the field of Sexual and Reproductive Health in countries of the global south: Why another (Emergency) Obstetric and Newborn Care (Em)ONC training? EmONC has been trained successfully since over 20 years in low- and middle-income countries, mainly in Sub-Sahara Africa but also Middle East and Asia to reduce maternal and newborn mortality. (3,4) But, maternal and newborn mortality reduction stagnated since 2016. It's time to think new and further.

What are the implementation barriers? EmONC trainings used in middle- and low-income countries are standardized and hardly show any differences to EmONC trainings in high-income countries, are not culture or context adapted and are definitely not adapted to requirements. Recently the WHO published a new road map to Postpartum Hemorrhage to emphasize the urgent requirement of a new thinking in pre- and in-house training of health care worker. "...by developing and maintaining a full suite of tools to support enhanced quality of care, leveraging in-person training and digital tools as required. This will involve developing mentoring networks...and creating local communities of practice to share experiences and learnings, hosting webinars on a regular basis, promoting remote coaching, organizing hands-on teamwork training and simulation exercises, particularly for obstetric emergency response teams." (14)

CAOT was developed as a culture, context and need based (Em)ONC training based on a previous exploration and need assessment in cooperation with focal persons on site. The training focuses on the **main causes of maternal and neonatal morbidity and mortality** as well as **the implementation barriers**, defined by the trainees through observation and data, in cooperation with the need and data assessment.

The training toolbox contains **evidence-based practices** which are easily **adaptable for each country, context and need**. In addition, the training includes the implementation of a mentorship program and a **post-training remote coaching and follow-up period**.

The aim of this new culture and context-based training is to sustainably strengthen the skills and competencies to provide high quality care in individual obstetric settings.

Hence, CAOT will fill another gap in reducing the maternal and neonatal mortality.

Background

In 2020, still, an estimated **287 000 women** globally died from a maternal cause (equivalent to almost **800 maternal deaths every day**) and **2.4 million newborn** deaths (equivalent to 6700 newborn deaths every day). (1,2)

The main **causes** for maternal death are **complications during pregnancy and childbirth**. They account for nearly 75% of all maternal deaths. The major complications are:

- severe bleeding (mostly bleeding after childbirth)
- infections (usually after childbirth)
- high blood pressure during pregnancy (pre-eclampsia and eclampsia)
- complications from delivery
- unsafe abortion

In addition, every year **2.6 million babies die** before turning one month old, another 2.6 million are stillborn. At least 46% (1.2 million) of the stillbirths are intra-partum deaths (4). The top three causes of neonatal death are birth **asphyxia (27%), newborn sepsis (28%) and prematurity (29%)**. **Maternal and newborn health are therefore inextricably linked** (4).

Most of these complications are preventable or treatable. Factors that prevent women from receiving and seeking care for these situations are poverty, distance to health facilities, **lack of**

knowledge, cultural beliefs and practices, but also **inadequate healthcare services**. Barriers in these services include **poor management of emergency obstetric care provision**, delayed referral practices, and **limited coordination among staff** (12)

Previous successes in **reducing in maternal mortality** that occurred during 2000 and 2015 (33 % reduction) have **stagnated between 2016 to 2020** (2 % reduction). Similar figures can be found for newborn mortality with 36 % reduction (2000 to 2015) respectively 10 % (2016-2020).

The United Nations has set the Sustainable Development Goals (SDGs) that is aimed at **reducing the global maternal mortality (MMR) to less than 70 per 100,000 live births** and having no country with more than twice the global target by 2030.

One of many strategies of the WHO to **reduce MMR** and neonatal death is **to improve the quality of maternal and newborn care** from pregnancy to the entire postnatal period, including strengthening midwifery (16).

There is a need to build the capacity of health-care providers to recognize and manage complications during pregnancy, childbirth and the post-partum period.

Skills-and-drills **competency-based training** in skilled birth attendance, emergency obstetric care and early newborn care (EmONC) is an approach that is successful in improving knowledge and skills (4).

A number of **in-service EmO(N)C training packages** have been developed and implemented in many low-and middle-income countries over the years, (e.g. ALARM – 2003, ALSO -2000, LSTM- 2006, ESS-EMNH – 2007, ESMOE – 2008, PROMPT – 2009, PRONTO (2009), ENCC – 2010, HBB – 2011, HMS-BAC – 2013, MiH. (3,9,10, 11)

A number of surveys have shown that the majority of health-care facilities in low- and middle-income settings, although designated to provide either basic or comprehensive EmONC, are unable to do so and reveals still a huge gap in maternal practice (4,5).

Health facilities are often understaffed and lack material resources for lifesaving obstetric and neonatal care. Although numerous protocols and guidelines exist, they often differ, leading to inconsistencies across guidelines and variability in recommended clinical practice (11,14).

How could we achieve a better outcome in obstetric and newborn care in low and middle income countries to reach the SDGs by 2030 ?

Looking closer at the origin of the EmONC trainings mentioned above we recognize, that all these trainings (e.g. ALSO,1992 US, HBB, 90's US, PROMPT, 2006, UK) were developed in high income countries with an in-comparison luxury health care system (including comprehensive antenatal care and detection of risk factors) to improve an already low MMR and NMR.

Although the content e.g. for an **ALSO training** has been modified for the epidemiological, medical, technological, pedagogical and cultural contexts and mostly are hands-on and practice oriented, they are, from the authors' point of view, **strongly standardized and show a lack of contextual adaptation**.

An (Em)ONC training need in South Sudan will differ from a training need in Yemen or Nepal. An obstetric emergency like postpartum hemorrhage (PPH) is the same adverse event all over the world, but the prerequisites for management differ from context to context, such as:

- pre-training competencies, skills and experiences of the health care provider
- ability of transfer of theoretical knowledge into practice
- status, acceptance and power of the health care provider
- infrastructure of the training site
- availability and quality of equipment, material and commodities
- cultural and religious background

Or, how the WHO claims it, "...implementing an effective clinical practice requires not just training health workers, but also reconfiguring clinical workflows, integrating multidisciplinary teams, engaging facility leadership, broadening legal authorizations regarding the scope of practice, and/or adjusting health sector budgets. The highly contextual nature of many implementation barriers means that they may not be easily amenable to change in response to global-level campaigns, but will need **locally tailored solutions**. (14)

Another aspect of the existing trainings is the strong standardization, not encouraging critical reflexive thinking and acting, but rather reproducing what was taught by the trainers. This pedagogical approach is associated with less sustainability and entails the risk, that the lessons learned are not fully put into practice.

The CAOT therefore puts high emphasis on context adaptation, on involvement of field staff during the development and implementation phase as well as on remote coaching and follow-up phases.

Training concept

The CAOT – Training encompass in total seven phases during a period of around 12 months.

1. Phase – Data collection and Analysis

National guidelines, clinical protocols, data concerning health facility, infrastructure, obstetric outcomes, maternal and neonatal morbidity and mortality of the project site will be collected and analysed.

This phase will be homebased, realized via desk review, virtual meetings and key informant interviews, followed by a report for the client and the project site.

2. Phase – Assessment of the project site

The next phase takes place on the project site and involves an assessment of the quality of care, by participatory observation of the daily hands-on work, with the participation of the staff on site. A checklist of equipment and material, key informant interviews and focus group discussions will complete the assessment.

3. Phase – Recommendation

Based on the results of the assessment, recommendations will be formulated and discussed with the client and the project site.

By end of this phase it will be clarified whether a training is needed or not. It may turn out, that the main barriers address other aspects than the lack of competencies and skills.

4. Phase – Adaptation of the training in cooperation with focal person

According the findings, the training will be adapted to the culture, the circumstances and conditions of the project site. A mentoring network will be developed by identifying focal persons assuming responsibility for specific training content and teaching method.

The adapting process takes place in close cooperation between the consultants and the focal persons of the project site.

5. Phase – Facilitation of the Training

In this phase the actual training will be facilitated by the focal persons with background support of the consultants. The training should include lectures, hands-on exercises with mannequins and simulation-based team training. Each training session will be accompanied by supervision and evaluation.

6. Phase – Remote Coaching and Follow up

In the following 12 months the focal persons will facilitate a regular training of specific topics.

This phase will be supervised by the consultants at quarterly intervals or on demand. The remote coaching and follow-up will be facilitated by case discussions, near miss cases and maternal and neonatal death audits via webinars.

7. Phase – Evaluation

After 12 months the project will end with a final evaluation of the effectiveness of the training.

Scope of Training

Aim:

The goal of the course is to ensure that health facilities have competent providers who can offer high quality obstetric and newborn care adapted to the context on project site.

Objectives and Competencies:

- Identify obstetric and newborn complications through a rapid and effective assessment
- Identify implementation barrier
- Distinguish between physiological and pathological processes in labour, delivery and newborn care
- Provide evidence-based obstetric care interventions where needed
- Understand and use the clinical decision-making process (informed consent)
- Utilize positive interpersonal communication techniques with clients and their family (respectful maternity care)
- Formulate action plans to institutionalize evidence-based obstetric knowledge and skills in their own health facilities

Methodology and Character

The training is characterized by the following attributes:

- Training tailored around the predominant causes of maternal and neonatal morbidity and mortality of the training setting.
- Training based on evidence-based recommendations.
- Training adapted to the context, taking account of infrastructural conditions of the project site, resource limitations and differences in cultural practices and beliefs.
- Engagement of facility leadership: health care providers assume responsibility for their individual learning process via involvement in the adaptation process and peer-to-peer teaching and learning
- Acknowledging that people show variable knowledge base and learn in different ways. Mistakes are considered as a valuable resource for learning.
- The learning process involves the four domains: cognitive, sensory, emotional, and intuitive.
- Training including a variety of interactive teaching and learning methods with focus on hands-on teamwork and simulation exercises.
- Remote coaching and supportive follow-up

Duration of training

The duration of the training may vary between 5 and 9 weeks, depending on the results of the need assessment.

Overview

Defining terms of reference prior to the project phases

	Phase	Comment	Work site	Timeline
Assessment				
1	Data collection and analysis of the project site	Desk review Virtual meetings Key informant interviews	home	2 weeks
2	Assessment of the project site	Participatory observation Checklists Key informant interviews Focus group discussion	Project site	3 weeks
3	Recommendation	Clarification of training needs Decision whether training or not	Project site	
Training				
4	Adaptation of the training in cooperation with focal person of the project site	Adapt training to context (culture, conditions and circumstances)	Project site	1 week
5	Facilitation of the training	Training by focal person with support of consultants	Project site	1-3 weeks
6	Remote Coaching and follow-up	Regular training by focal person, supervision by consultants	home	12 months
7	Evaluation	Evaluation of the effectiveness of the training	home	

Training toolbox

The training toolbox contains components of physiological birth and postpartum care as well as common obstetric emergencies. However, as causes of obstetric emergencies are often interdependent and difficult to capture the contents may be extended, depending on the needs of the training site. (15)

The following table shows a range of topics, typical for (Em)ONC settings, that could be covered by the training provider.

Content Area	Course Comment
Managing physiological labour, delivery and postpartum care	<ul style="list-style-type: none"> - Respectful maternity care - Admission (fast and effective) - Triage and prioritisation - Physiological labour and delivery - Postpartum mother and newborn care - Repair of laceration
Managing abortion	<ul style="list-style-type: none"> - Medical abortion - Manual vacuum aspiration - Septic abortion
Managing hypertensive disorders	<ul style="list-style-type: none"> - Pregnancy Induced Hypertension (PIH) - Pre-Eclampsia and Eclampsia - HELLP-Syndrome
Managing vaginal bleeding in the peripartal period	<ul style="list-style-type: none"> - First trimester bleeding - Late pregnancy bleeding - Antepartum haemorrhage - Postpartum haemorrhage
Managing infection in pregnancy and delivery	<ul style="list-style-type: none"> - Triple-I - Sepsis
Managing labour dystocia	<ul style="list-style-type: none"> - Prolonged labour - Obstructed labour - Malpresentation - Shoulder dystocia - Prevention of obstetric fistula - Vacuum extraction - Breech presentation
Managing depressed foetus and newborn, asphyxia	<ul style="list-style-type: none"> - Intrapartum fetal surveillance - Neonatal resuscitation
Managing preterm birth	<ul style="list-style-type: none"> - Premature rupture of membranes - Preterm labour - Cord prolapse

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