

Maternal death Reviews (MDRs)AUDOBEM

Training Programme for
Health Professionals

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I. Introduction

“Medical audits are one of the mechanisms that can help health professionals to maintain or improve quality of care and to provide the best possible services to patients”

MEDICAL AUDITS

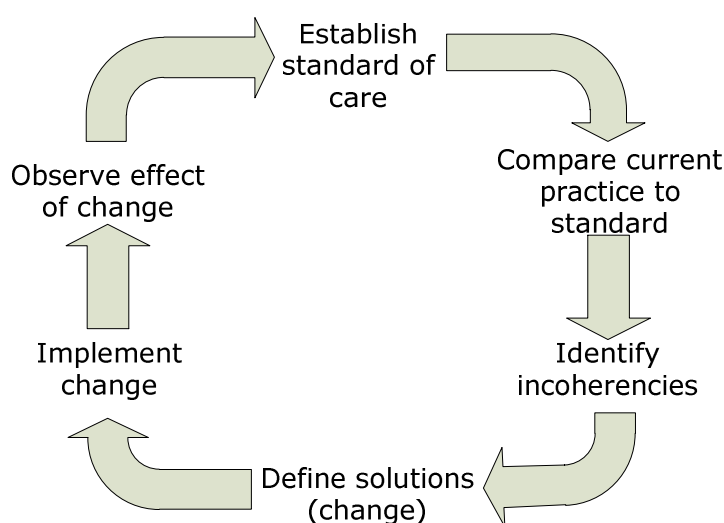
Among the variety of existing methods to improve quality of care, medical audit is considered to be particularly efficient (1). In 2004, the WHO recommended the introduction of medical audit in all maternity facilities (2). Conducting audits was presented as a useful way of improving the management of obstetric emergencies (3-8), although its impact on the survival of mother and child has never been clearly demonstrated (9).

Medical audit is an internal process which relies on a series of hypotheses as described by P. Bailey et al. (10). According to these authors, conducting effective audit sessions can enable a maternity facility team to reduce maternal case fatality and perinatal deaths, to better meet mothers' needs, and to increase service use. This is achieved through the improvement of practice, more efficient use of resources, and the boosting of staff morale and motivation.

During the audit process, current clinical practices are compared against best practices or “what should have been done”. Therefore, it is important that health professionals identify standards of best practice before commencing an audit (Figure 1).

Standards are explicit statements of how a patient should be managed. They facilitate the identification of shortcomings by providing a description of the care that ought to have been given, against which the care that was actually given can be compared (10).

Figure 1. The audit cycle



Once gaps in care provision have been identified, it is possible to define solutions for the problems which are likely to have the most significant impact on maternal and neonatal outcomes. The next steps are to implement solutions and to follow up on implementation, in order to verify that the problem has been solved (and observe the effect of change). These steps constitute what is known as the audit cycle, illustrated in Figure 1.

It is possible for a new audit cycle to start by addressing the same problem if it has not been solved, or a new problem can be tackled.

CASE REVIEWS – MATERNAL DEATH REVIEWS

There are several types of clinical audit. The main ones are:

- Individual case reviews
- Criterion-based clinical audits
- Confidential enquiries into patient deaths.

Maternal Death Reviews (MDRs) belong to the first type of approach, the individual case review.

MDRs represent the simplest form of audit, which involves reviewing the management of individual cases in health facilities (11). *“It is a qualitative, in-depth investigation of the causes of, and circumstances surrounding, maternal deaths which occur in health care facilities”* (2, p.4).

Initially, deaths are identified at the facility level. However, these reviews are also concerned with identifying the combination of factors that contributed to the death. These may relate to both the facility and community levels (2).

Objectives of Maternal Death Reviews

- Promoting the ongoing assessment of quality of care in relation to established standards
- Making change happen, in order to improve patient care
- Improve clinical performance and provide the best possible services to patients
- Increase adherence to standards of best practice
- Reduce maternal and neonatal morbidity and the case fatality rate related to obstetric complications
- Contribute to the development of a national database on the causes and circumstances surrounding maternal deaths. This should be used to inform regional and national policymakers about progress in the implementation of strategies for the reduction of maternal mortality.

II. Training objectives

- Making health staff capable of conducting a review of maternal death cases that occurred in the health facility through a structured approach. At the end of the session, each participant should be able to carry out the following specific steps:
 - *Preparing an MDR session: identifying and selecting participants, making standards available, identifying cases, putting together a file for each death, preparing clinical case summaries and organising a session*
 - *Conducting an MDR session: introducing the session, re-assessing results from the previous session, presenting a clinical summary, carrying out a systematic analysis of the case, developing a session report and planning the next session.*
- Adapting the tools provided to the local context.

III. Training material and methods

This training on MDRs is based on competency-based learning and is intended to be as interactive as possible. Much time will be dedicated to practical exercises. Practice examples should be based on “real” maternal death cases (made anonymous) which occurred at any maternity at national level, or in the hospital where the training takes place.

A variety of learning methods will be used:

- Interactive presentations:
 - A theoretical introduction on maternal and neonatal mortality, medical audits, different approaches to audit, with special emphasis on MDRs
 - Short presentations introducing the guidelines that will be used as reference at the various stages of the MDR
- Practical exercises (individual and group) in carrying out the various steps of the MDR, based on “real” but anonymised case records. The last exercises will use patient records (of near miss cases or deaths) from the hospital where the training takes place. Role plays are essential so that participants can start to adopt the attitude needed to conduct a review session and practise approaching each stage of the MDR systematically.

Note:

The last part of the training programme will be dedicated to creating an MDR committee, and to planning future MDR sessions and follow-up and supervision visits by the trainer team.

The training material includes:

- The FIGO guidelines which describe best practice in conducting MDRs step by step ("How to conduct Maternal Deaths Reviews: Guidelines for health professionals"). The guidelines will be introduced during the practical exercises.
- Following a general information section on the rationale for introducing medical audit and maternal death reviews, these guidelines are structured in two phases. The first contains guidance on how to prepare an MDR session in 6 steps, and the second on how to conduct a session, also in 6 steps. A variety of templates and tools are also provided for use during the various steps.
- Additional resources:
 1. Three anonymised maternal death files prepared by the training team
 2. Two medical records selected in facility where the training takes place
 3. PowerPoint presentations (PP) for interactive presentations
- Questionnaire for evaluation of the training session
- Standards and guidelines on best practice in patient care should be available and used as a reference during review sessions.

IV. People involved in the training programme

TRAINERS

Training is provided by individuals who have been trained in medical audit and have practical experience of conducting Maternal Deaths Reviews.

PARTICIPANTS

This course is designed:

1. For health professionals: gynaecologist-obstetricians, anaesthetists, intensive care practitioners, paediatricians and/or neonatologists, general practitioners, midwives, nurses, pharmacists and laboratory technicians.
2. For management and administration staff, or hospital directors.

The aim is to constitute a multidisciplinary team.

The recommended maximum number of people per session is 15 to 20, in order to facilitate active participation.

Note:

Because the main objective of these sessions is to improve maternal and newborn health, it is important that participants are people who are in a position to implement the recommended changes (2).

TRAINING SITES

The training sites are Comprehensive Emergency Obstetric & Neonatal Care facilities, i.e. referral maternity hospitals (district, provincial, regional, national).

V. Training content and schedule

DESCRIPTION OF TRAINING CONTENT

An introductory session on communication strategies and rights-based and gender-based approaches is recommended before starting the MDR training programme. This should include interactive sessions and role plays aimed at improving teamwork. The objective is to raise awareness on how gender affects access to health care services, staff attitude towards women and the quality of care individuals receive, and to encourage staff to view events through a “gender lens” when reviewing cases. This session can be provided by a social scientist or other professional who is familiar with communication, teamwork, sexual and reproductive health and rights, gender and other determinants of health.

The audit training programme itself consists of three main modules, and lasts three full days (from 9:00 to 17:30).

Module I: General Introduction (Day 1, AM)

Learning objectives

At the end of the module, participants should be able to:

1. Give a short overview of the importance of maternal and neonatal mortality as public health issues, both globally and in the country/region where the training takes place
2. Present the main types of audits (process, advantages/disadvantages) with the most emphasis placed on Maternal Deaths Reviews (MDRs)
3. Explain the general principles and prerequisites to conducting successful MDRs

Content

- Opening, welcome and introduction of participants. Identification of participants' expectations in relation to the programme. Housekeeping rules on the use of mobile phones, break time, bathroom location, etc. Selection of rapporteurs in charge of summarizing each training day.
- Presentation of the MDR training programme (**PowerPoint Presentation, PP 1.1**)
 - Objectives
 - Programme
 - Methods
- Overview of maternal and neonatal mortality (**PowerPoint Presentation, PP 1.2**)
 - Defining maternal & neonatal mortality
 - The importance of maternal & neonatal mortality as public health issues in general and in the country where the training is taking place
- Medical audits (**PowerPoint Presentation, PP 1.3**)
 - Introduction
 - The audit cycle
 - The main types of audit
- Maternal deaths reviews (**PowerPoint Presentation, PP 1.4**)
 - Particular features
 - Principles and essential prerequisites for conducting MDR sessions

Learning objectives

At the end of this module, each participant should be able to conduct an audit/review of maternal death cases that occurred at the health facility by using a structured approach. This includes the following steps:

- *Preparing an MDR session: identifying and selecting participants, making standards available, identifying cases, putting together a file for each death, preparing clinical case summaries and organising a session*
- *Conducting an MDR session: introducing the session, re-assessing results from the previous session, presenting a clinical summary, carrying out a systematic analysis of the case, developing a session report and planning the next session.*

Content

Practical exercises, during which the guidelines and the tools relevant to the various MDR steps will be introduced.

- **Preparing an MDR session Steps 1 and 2: The different roles in carrying out maternal death reviews – Standards of good practice (PowerPoint Presentation, PP 2.1)**
 - The role of the MDR Committee and its members; the role of the three facilitators of the MDR session: the Case Presenter, the Moderator or Chair, and the Secretary (in charge of drafting and disseminating the session report), and other participants.
 - Guidelines and standards of good practice.
- **Preparing an MDR session Steps 3 and 4: Identifying maternal death cases – putting together a complete maternal death file (PowerPoint Presentation, PP 2.2)**
 - How to identify deaths at facility level?
 - Documents required and procedures for preparing a complete file for a maternal death case.
- **Preparing an MDR session Steps 5 and 6: Developing a clinical case summary using Case study 1 (individual exercise)¹ – Organizing a session**
 - A copy of an anonymised maternal death record is given to each participant.
 - Participants read through the record to become familiar with its content.
 - The trainer introduces the MDR guideline and presents the section on how to summarize a case (**PowerPoint Presentation, PP 2.3**); then s/he distributes copies of the relevant tool: **“MDR: Clinical summary form”**.

¹ For practical reasons, the case used for the first individual exercise on Day 1 could be a maternal death example prepared by the training team.

- Based on the guideline and the patient record, each participant prepares a clinical summary of the case.

- **Holding an MDR session based on Case study 1: Steps 1 (and 2): setting the scene – (re-evaluating the results)²**
 - For this exercise, a trainer is the Moderator and leads the session.
 - The trainer reminds participants of the main principles of audits: "no blame, no name".
 - The trainer provides a list to be circulated so participants can register with their name, qualification and place of work ("**List of participants**").

- **Holding an MDR session based on Case study 1: Step 3: Presenting a clinical case summary**
 - One participant is chosen by the moderator to present her/his clinical case summary. Feedback is encouraged on how to improve the preparation and presentation of the summary, and the other participants draw comparisons with their own work.
 - Finally, if necessary, another trainer could provide an example of the correct way of presenting the case summary, before proceeding to the analysis of the case.

- **Holding an MDR session based on Case study 1: Step 4: Conducting an MDR session**
 - **Step 4.1: Carrying out a systematic analysis of the case**
 - The trainer-moderator presents the section of the guideline on how to analyze and conduct an MDR session (**PowerPoint Presentation, PP 2.4**).
 - The analysis of the case is led by the trainer based on a systematic, step by step approach. This is supported by the use of a specific tool: "**Grid analysis of clinical case management**".
 - **Step 4.2: Preparing a case analysis summary**
 - The analysis ends with a summary of the most significant findings related to the case management: problems, strong points, causes of dysfunctions and contributing factors.
 - Each participant writes a summary based on to the model proposed
 - One participant is selected to present their summary of the analysis, which is discussed and compared with the work of other participants
 - The trainer-moderator then presents an optimal model of a summary
 - The formal elaboration of a written summary report is discussed in Step 6

² This step is not applicable for this first session.

Step 4.3: Formulating recommendations and plan of action

- Following presentation of the summary, the moderator leads the debate aimed at selecting priority problems and proposing recommendations for actions aimed at solving identified problems.
 - A plan of action is developed which includes a list of actions, deadlines for implementation, the names of people responsible for implementation and of people responsible for follow-up.
-
- **Conducting an MDR session based on Case study 1: Steps 5 (and 6): Preparing a session report – (Plan the next session)**³
 - The exercise ends with the preparation of a written session report, following the presentation of the relevant guidance (**PowerPoint Presentation, PP 2.5**) and a specific tool: **“MDR: Session report form”**.
 - Usually, preparing the session report is part of the Secretary’s role. However, for this exercise it is carried out in a participatory manner by all participants, guided by a trainer.
 - A standard report on the case can also be prepared in order to provide information to be entered into the relevant database on maternal deaths. This may be kept at different levels (hospital, district, region and country). A specific **“Standard information form per reviewed case”** will be presented and filled in.
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- **Preparing and conducting an MDR session based on Case study 2 and Case study 3 (group exercise)**
 - Participants are split into groups of 4-6 people.
 - Copies of the same maternal death case file are given to each group.
 - In each group, the MDR session facilitators are designated: a case presenter who will make the clinical case summary, a moderator and a secretary.
 - Each group conducts their own session, following one step at a time, in the presence of a trainer (one per group), who will observe and answer questions from participants.
 - At the end of the session, a report is prepared and presented to all participants and the results are discussed and compared.
 - A second file is distributed to the groups and the whole process starts again, with three ‘new’ facilitators (these should be participants who were not involved as facilitators in the first round).
 - At the end of this stage, a discussion between participants and trainers is encouraged with questions and answers about the process, including possible suggestions on how to adapt or improve the tools.

³ This step is done during Module 3

- **Preparing and conducting an MDR session based on Case study 4 and 5 (group exercises with the entire group- full MDR session)**
 - The Presenter, the Moderator and the Secretary are selected by the trainers the day before (participants selected did not play these roles in the previous exercises)
 - A case of maternal death or a near miss case is selected and the file is given to the Presenter so that she/he can prepare a clinical summary the day before.
 - A full MDR session is performed up till the report stage of the session without the intervention of the trainers.
 - At the end, the trainers evaluate the session and the various stages and share their views with the participants.
 - After a break, the group will review Case study 5 with another trio of facilitators selected the day before.

Module III: Committee and MDR implementation (D3 PM)

Objectives

- 1) *Establish a committee which will be in charge of organising MDRs*
- 2) *Plan the implementation of MDRs (calendar) based on the number of maternal deaths and the number of sessions that need supervision*
- 3) *Provide feedback on the training programme*

Content

- MDR Committee: interactive session between participants, moderated by trainers
 - Define the various categories of people who should be included as members of the committee (including health personnel, management, staff from peripheral health facilities, community) and the optimum number of representatives per category.
 - Select the members of the committee.
 - Establish the statutes and internal regulations of the committee based on the examples provided. Remind everyone of the MDR principles on confidentiality and 'no name, no blame'.
 - Approve and vote in the committee.

- Planning future MDR sessions: interactive session between participants, moderated by the chair of the newly formed committee
 - Choice of dates and number of cases.
 - Choice of facilitators (case presenter, moderator, secretary).
 - Plan the number of sessions where further supervision (trainers' presence and assistance during MDR sessions) is necessary.

- Evaluation of training programme.

1. Training programme schedule

<i>Consider scheduling an introductory session on teamwork and communication strategies; sexual and reproductive health and rights; gender and health.</i>				
Day 1 : MODULE I and MODULE II				
Time	Topic	Leader	Length	Material
08.30 – 09.30	Welcome and introduction of participants Official opening	Organiser/MOH representative Trainers	60'	
09.30 – 09.40	Training objectives, schedule and methods	Trainers	10'	PP 1.1
09.40 – 10.10	Module I Maternal and neonatal mortality: definitions, global burden and significance in the local context	Trainers	30'	PP 1.2
10.10 – 10.40	Medical audit: introduction, audit cycle and main types of audit	Trainers	30'	PP 1.3
10.40 – 11.00	Coffee break		20'	
11.00 – 12.00	Maternal Death Reviews: particular features, principles and prerequisites	Trainers	60'	PP 1.4
12.00 – 12.45	Questions and answers session on audit and case reviews	All	45'	
12.45 – 14.00	Lunch break		75'	
14.00 – 14.15	Module II. 1. Preparing an MDR session: Presentation of Steps 1 and 2: roles and standards	Trainers	15'	PP 2.1
14.15 – 14.25	Preparing an MDR session: Presentation of Steps 3 and 4: Identifying cases and preparing a complete maternal death file	Trainers	10'	PP 2.2
14.25 – 14.45	Preparing an MDR session: Presentation of Steps 5 and 6: Preparing a clinical summary and organising a session Individual exercise based on Case Study 1: - Distribution of an anonymised case file to all participants - Presentation of steps - Distribution of the form	Trainers	20'	File of case 1: x copies PP 2.3 Clinical summary form

14.45 – 15.25	Case Study 1: Each participant prepares a clinical summary	Participants	40'	
15.25 – 15.30	2. Conducting an MDR session: Step 1: Initiating the MDR session. One trainer acts as Moderator, s/he leads the session, reminds participants of the principles and provides a list for participants' registration	Participants and trainers	5'	List of participants
15.30 – 16.00	Conducting an MDR session: Step 3: Presenting a clinical case summary Case Study 1: One participant is selected to present his/her summary, followed by a debate, discussions and comparisons between the different summaries	Participants and trainers	30'	
16.00 – 16.15	Coffee break		15'	
16.15 – 16.30	Conducting an MDR session: Step 4 : Conducting a session Presentation of the relevant guidance for that step and distribution of the relevant tool	Trainer	15'	PP 2.4 Grid analysis of clinical case management
16.30 – 17.30	Case Study 1: Step 4 is carried out, led by the moderator (trainer) - Systematic analysis of the case - Case analysis summary - Recommendations and action plan	Participants and trainers	60'	
Before leaving the venue, prepare case studies for D2: divide participants into groups of 4-6, provide two cases files (Cases studies 2 and 3) and appoint two presenters per group who will present a case summary the next day				

DAY 2 : MODULE II continuation				
Time	Topic	Leader	Length	Material
08.45 – 09.00	Summary report of the previous day. Questions/answers	Participant	15'	
09.00 – 09.15	Conducting an MDR session: Step 5: Preparing a session summary report. Presentation of relevant guidance and distribution of corresponding tools	Participants and trainers	15'	PP 2.5 MDR Session report form and Standard information form
09.15 – 09.45	Case Study 1: Step 5 is led by the moderator (trainer) and a participant presents a summary	Participants and trainers	30'	
09.45 – 10.15	Case Study 1: Presentation of the action plan by a participant and discussion	Participants and trainers	30'	
10.15 – 10.30	Conducting an MDR session: Case Study 2: Presentation of exercise to be done in groups of 4-6, selection of a Moderator and Secretary in each group	Trainers	15'	
10.30 – 10.45	Coffee break		15'	
10.45 – 12.30	Conducting an MDR session : steps 3, 4 and 5 (Case study 2)	Participants	105'	Tools for MDR
12.30 – 13.30	Lunch break		90'	
13.30 – 14.30	Reporting from the groups, comparisons of results and discussion	Participants	60'	
14.30 – 16.00	Conducting an MDR session: Case Study 3: Same exercise in groups of 4-6 and selection of new facilitators	Participants	90'	Tools for MDR
16.00 – 16.15	Coffee break		15'	
16.15 – 17.15	Reporting of sessions by different groups, comparisons of results and discussions	Participants	60'	
17.15 – 17.30	Introduction to the exercises of Day3 (Case Study 4 & 5 with the entire group): Selection of the Presenters who will receive a file in order to prepare the summary in the evening. Selection of Moderators and Secretaries	Trainers and participants	15'	Patient files for case studies 4 & 5

DAY 3 : MODULE II and MODULE III				
Time	Topic	Leader	Length	Material
08.45 – 09.00	Summary report of the previous day. Questions/answers	Participant	15'	
09.00 – 11.00	Conducting an MDR session <i>Case Study 4: Exercise for the entire group: steps 3, 4 and 5 (Trainers observe but do not participate)</i>	Participants	120'	Tools for MDRs
11.00 – 11.15	Coffee break		15'	
11.15 – 11.45	Trainers comment on the MDR session carried out by participants	Trainers	30'	
11.45 – 13.00	Conducting an MDR session <i>Case Study 5: Exercise for the entire group: steps 3, 4 and 5 (Trainers observe but do not participate)</i>	Trainers and participants	75'	Tools for MDR
13.00 – 14.00	Lunch break		60'	
14.00 – 14.20	Trainers comment on the MDR session carried out by participants	Trainers	20'	
14.20 – 15.00	Group discussions and debate. Questions/answers.		40'	
15.00 – 15.30	Module III Establish MDR Committee: number and names of members, their roles, status and regulations	Participants and Trainers	30'	Guidelines
15.30 – 15.45	Plan the calendar of future MDR sessions, select the 3 facilitators and decide the number of supervised sessions required	Participants	15'	Calendar
15.45 – 16.00	Coffee break		15'	
16.00 – 16.30	Evaluation of the training programme by participants	Participants	30'	Questionnaire
16.30 – 17.00	Official closing and distribution of certificates of attendance	Officials	30'	Certificates

References

1. Rowe AK, de Savigny D, Lanata CF, Victoria CG. How can we achieve and maintain high quality performance of health workers in low-resource settings? *Lancet* 2005; 366:1026-1035.
2. World Health Organization. *Beyond the numbers: reviewing maternal deaths and complications to make pregnancy safer*. Geneva: WHO; 2004.
3. Filippi V, Brugha R, Browne E, Gohou V, Bacci A, De Brouwere V, Sahel A, Goufodji S, Alihonou E, Ronsmans C. Obstetric audit in resource poor settings: lessons from a multi-country project auditing 'near miss' obstetrical emergencies. *Health Policy Plan* 2004; 19 (1) : 57-66.
4. Wagaarachchi P, Graham W, Penney G, McCaw-Binns A, Yeboah K, Hall M. Holding up a mirror: changing obstetric practice through criterion-based clinical audit in developing countries. *Int J Gynecol Obstet* 2001;74, 119-130.
5. Supatriko G, Wirth M, Achadi E, Cohen S, Ronsmans C. A district-based audit of the causes and circumstances of maternal deaths in South Kalimantan, Indonesia. *Bull World Health Organ* 2002; 80 (3) : 228-235.
6. Weeks A, Alia G, Ononge S, Otolorin E, Mirembé F. A criteria-based audit of the management of severe pre-eclampsia in Kampala, Uganda. *Int J Gynecol Obstet* 2005; 91:292-297.
7. Dumont A, Gaye A, de Bernis L, Chaillet N, Landry A, Delage J, Bouvier-Colle MH. Facility-based maternal death reviews: effects on maternal mortality in a district hospital in Senegal *Bull World Health Organ* 2006; 84: 218-224
8. Okong P, Byamugisha J, Mirembe F, Byaruhanga R, Bergstrom S. Audit of severe maternal morbidity in Uganda – implications for quality of obstetric care. *Acta Obstet Gynecol* 2006; 85: 797-804.
9. Pattinson RC, Say L, Makin JD, Bastos MH. Critical incident audit and feedback to improve perinatal and maternal mortality and morbidity. *Cochrane Database Syst Rev* 2005; 4 :CD002961.
10. Bailey P; Fortney JA, Freedman L, Goodburn EA, Kwast BE, Mavalankar D, Money Penny B. Améliorer les Soins Obstétriques d'Urgence grâce à l'Audit reposant sur des Critères. Mailman School of Public Health, Columbia University, 2003.
11. Ronsmans C. What is the evidence for the role of audits to improve the quality of obstetric care. In: *Safe motherhood strategies: a review of the Evidence*. Ed De Brouwere V & Van Lerberghe W. ITG Press Antwerp, Studies in Health Services Organisation and Policy, 17, 2001: 207-227.
12. *The WHO application of ICD-10 to deaths during pregnancy, childbirth and puerperium*: ICD MM.
<http://www.who.int/reproductivehealth/publications/monitoring/9789241548458/en/>