Quality Improvement for Emergency Obstetric Care

Toolbook

An Adaptation of COPE®
(Client-Oriented, Provider-Efficient Services)

ENGENDERHEALTH
Improving Women's Health Worldwide

AMDD
Averting Maternal Death
& Disability Program

Columbia University
MAILMAN SCHOOL
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Contents

Figures

Acronyms/Abbreviations

AMDD	Averting Maternal Death and Disability Program
CFA	Client flow analysis
COPE	Client-oriented, provider-efficient
CPR	Cardiopulmonary resuscitation
D&C	Dilation and curettage
EmOC	Emergency obstetric care
HLD	High-level disinfection
IV	Intravenous
MNH	*Managing Complications in Pregnancy and Childbirth: A Guide for Midwives and Doctors*
MVA	Manual vacuum aspiration
QI	Quality improvement
QM	Quality measure
TBA	Traditional birth attendant

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CHAPTER 1
INTRODUCTION: EMERGENCY OBSTETRIC CARE TOOLS AND THE QUALITY IMPROVEMENT PROCESS

This toolbook contains a set of tools and instructions for use in gathering and analyzing information to assess the quality of care in emergency obstetric care (EmOC) facilities. (For those familiar with EngenderHealth's COPE® quality improvement (QI) process, note that the tools in this toolbook are modeled on the same assessment framework.) With the information gathered through these tools, staff can work together as a team to identify problems and implement solutions according to the continuous QI process described in Chapter 3 of the companion volume, *Quality Improvement for Emergency Obstetric Care: Leadership Manua1,* and summarized later in this chapter.

QI TOOLS FOR EMERGENCY OBSTETRIC CARE

The tools in this toolbook include:

- EmOC Assessment
- Client/Family Interview
- Registers and Records Review
- Client Flow Analysis
- Brief Case Review Guidelines

Figure 1: Quality Improvement Tools for Emergency Obstetric Care

EmOC Assessment. The EmOC Assessment consists of several guides organized around the Rights Framework for Quality Emergency Obstetric Care. Each section contains questions about service appropriateness, timeliness, and adherence to established standards. Different guides assess the readiness of each room or area to support EmOC services, as well as cleanliness and organization; availability and functionality of utilities, equipment, supplies, and drugs; and adherence to clients' rights to confidentiality, dignity, and other essentials. The EmOC Assessment can be scored to yield a quality measure (QM) for tracking progress in each of these areas (recommended annually). It can also be used without scoring, as a periodic, overall assessment of quality, to identify problems and develop solutions.

Client/Family Interview. Staff conduct semi-structured, informal discussions with EmOC clients or family members to learn about their perspectives on service quality. Through these confidential discussions, staff gather information about access to care and learn clients' opinions about information, dignity and comfort, privacy and confidentiality, informed choice, freedom to express opinions, and continuity of care.

Registers and Records Review. Staff review facility registers or logs and individual client records to determine whether they contain information important to tracking obstetric emergencies and maternal deaths and if record keeping is being done correctly and completely.

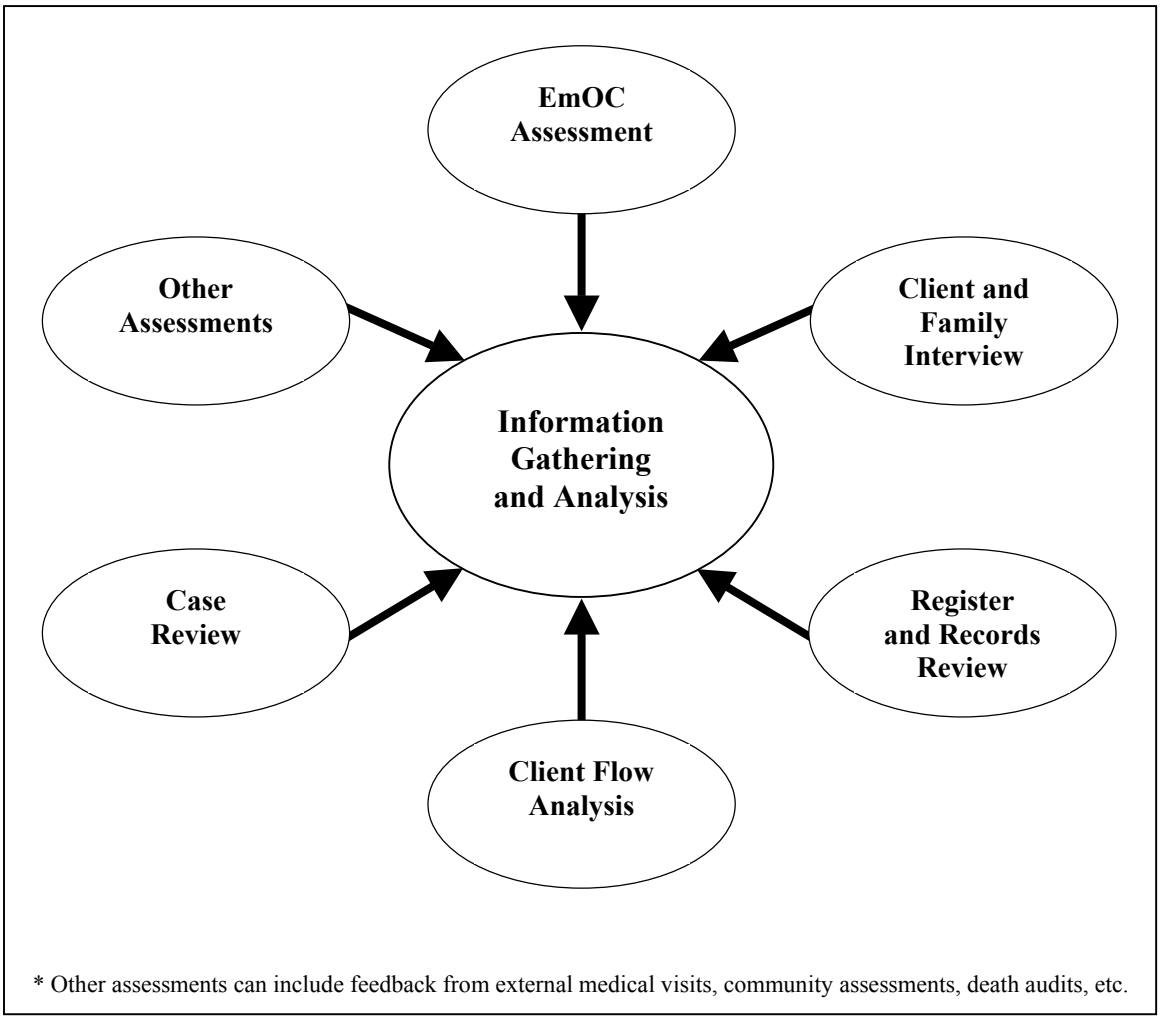
Client Flow Analysis (CFA). Staff follow emergency clients from arrival at the facility gate through key points in their visit to gather information about client waiting time. Using the CFA data, staff identify and analyze the causes of delays.

Brief Case Review Guidelines. Doctors, nurses, and supervisors meet to discuss complicated cases using case histories, records, and laboratory results in order to learn from outcomes and to determine whether system problems interfered with provision of quality care.

Each tool may be used by itself or in conjunction with the others, depending upon how comprehensive staff want the assessment to be, which issues are especially important to focus on, and time constraints. More specific recommendations about how to use each tool are included with each set of instructions.

Using the tools forms part of the first of four steps of the QI process*, information gathering and analysis.*

Figure 2: Information Gathering and Analysis



Using these tools, EmOC staff, in small working groups, gather information about the quality of the EmOC services at their facility; and, through a structured process of analysis, identify problems, examine root causes, and recommend solutions. The working groups then present their analyses to the larger group for discussion and integration into an overall action plan for EmOC service. Ultimately, the consolidated action plan will incorporate the identified problems and suggested solutions from each of these different tools.

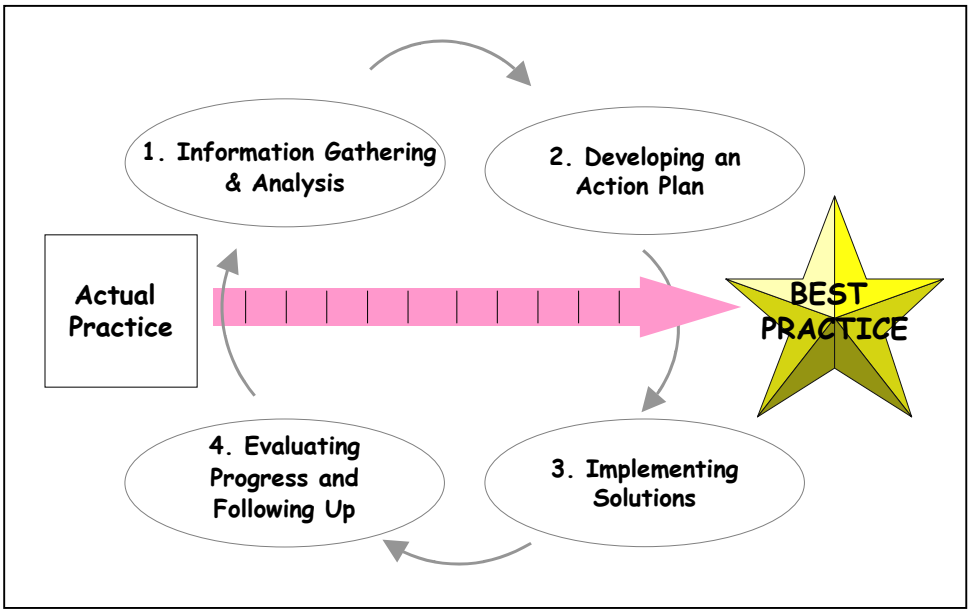
The instructions for each tool describe how to use them in the information gathering and analysis step (step 1) of the QI process and how to organize the information staff have gathered into the development of an action plan (step 2).

The next section briefly reviews these and the other two steps of the QI process.

THE QUALITY IMPROVEMENT PROCESS: A SUMMARY

- The QI process is built on four steps that are part of a repeating process:
  - Information gathering and analysis
  - Developing an action plan
  - Implementing solutions
  - Evaluating progress and following up

Figure 3: Steps in the Quality Improvement Process



The goal of this QI process is to help staff respond better to the needs and rights of clients. Quality in EmOC involves a state of *readiness* that will enable staff to *respond* appropriately to emergencies in a way that fulfills the *rights* of clients.

The key ingredient to success in using this process is involving staff individually, as teams, and as part of the facility. Over time, this process will help staff move from actual or existing practices to best (or desired) practice. Also, over time, the facilitating role for this process will change from being the responsibility of the team leader to being shared among colleagues with support from the team leaders.

Step 1: Information Gathering and Analysis

Divided into small working groups, each using a different QI tool (or portion of a tool), staff will:

- Gather information according to the instructions for the tool they are using.

- Identify problems using information gathered from the assessment.
- Identify root causes using the "multiple whys" method (see figure 4). By asking "Why?" at least three times and "Are there any other causes?," staff will get closer to the underlying reasons why a problem exists at the facility and will find it easier to arrive at an effective solution.
- Recommend solutions.
- Decide who will take responsibility for implementing solutions and by when.

Figure 4: Multiple Whys

Finding:	There is a long delay between the time a complication arises on the maternity ward and the time appropriate staff arrives on the scene.
Why?	Ward staff do not know who are on call and how to reach them.
Why?	There is no duty roster with this information posted in the client care areas.
Why?	This information is only available in the matron's office, which she keeps locked when she isn't in.

Step 2: Developing an Action Plan

Together in this meeting, staff will develop one consolidated action plan for everyone to implement. (See figure 5 for action plan format.) During this meeting, staff pull together the action plans from each working group, combine and refine problems and root causes, eliminate duplication, confirm responsibilities and timelines, and prioritize the order of implementation. To accomplish this successfully, staff should follow the same steps as before (in their small working groups), with the addition of a sixth step, prioritization:

- Agree on problems identified.
- Assess the identified root cause(s).
- Discuss whether solutions are feasible.
- Decide who will take responsibility for implementation.
- Decide when they will accomplish the task.
- Prioritize actions by problem importance and solution feasibility.

At the end of the meeting, staff will:

- Review how follow-up will be handled and what to do if staff assigned responsibility for an action are having problems.
- Post the final action plan in an area where staff can see it.

Figure 5: Action Plan Format

Problem	Root Cause(s)	Solution	By Whom	By When	Status

Steps 3 and 4: Implementing Solutions and Evaluating Progress and Following Up

The action plan serves as the staff's guide for implementing solutions (step 3). During this period, the team leader, or members of the QI committee (see Chapter 3 of the QI Leadership Manual for a discussion of the tasks of the QI committee), can check in with staff assigned to a particular intervention to determine their progress and provide any support required. The action plan can be reviewed during staff meetings for the same purposes.

During the next action plan meeting, progress is reviewed and evaluated (step 4), and plans are made to repeat assessments as evaluations reveal the need for further information gathering and analysis (step 1, again).

And so the process continues. Remember, there is no such thing as a "finished" action plan!

CHAPTER 2
EMOC ASSESSMENT

PURPOSE AND DESCRIPTION

The purpose of the EmOC assessment is to enable staff to:

- Assess the quality of EmOC services against established standards, including the current state of readiness for and response to obstetric emergencies at the facility.
- Identify areas for improvement to be included in the development of an action plan for QI.
- Establish a baseline against which progress can be measured.
- Measure their achievements periodically in a simple way.

The EmOC assessment is organized according to the Rights Framework for Quality Emergency Obstetric Care, as discussed in the introductory QI meeting. Each guide in the tool includes questions based on standards and guidelines or the "best practices" generally accepted for EmOC.

There are two ways to use this tool:

- ***With scoring:*** Conduct the EmOC assessment completely and compute the scores to establish a *baseline*. Thereafter, conduct and score it once a year for an *annual QI score* so that staff can measure progress in their improvement efforts over time. The last page of the EmOC assessment is an assessment summary sheet for use when scoring.

  Scoring the EmOC assessment annually will allow time for scores to reflect changes that staff have implemented. If the score is calculated more frequently, change may not be noticeable, and this may dampen staff's enthusiasm for the process. We recommend that scored assessment be done in the same month each year.

- ***Without scoring:*** Conduct the EmOC assessment periodically during the year, using all or selected guides, depending on service improvement needs. In this way, the tool serves as a flexible means of gathering information for QI. The tool can be used along with other QI approaches the facility may already be using, such as COPE or Appreciative Inquiry.

Using the EmOC tool should be the first information activity in the QI process. Begin this step within one month of the introductory QI meeting.

ESTIMATED TIME FRAME

The preparatory meeting should take about one hour, and the assessment activity will take about half a day (depending on staff's busyness), although the exact time frame will depend on the size of your site.

PREPARING FOR THE EMOC ASSESSMENT

Since this assessment is often the first team-led activity in the QI process, it is important for the team leader to prepare staff in advance and to keep facility management well informed of the process. Suggested steps for the team leader to follow:

- ***Select participants:*** The participants for the EmOC assessment team are clinical and support staff who either are directly mobilized for obstetric services or who support emergency services.
- ***Read*** through the instructions on how to conduct the EmOC assessment and be familiar with the questions in the tool.
- ***Determine*** whether staff will be scoring the tool or not. If they are not calculating QI scores, decide which particular guides will be used during this round of information gathering.
- ***Decide on a date*** to conduct the assessment. Consult with site management and selected clinical and support staff to determine when this is least likely to disrupt services. Have a plan to cover emergencies while staff are conducting the assessment.
- ***Inform participants*** of the time, place, and time frame for the initial meeting and subsequent assessment activities.
- As the date draws closer, ***remind*** key department heads and staff that the assessment will be taking place.
- ***Organize times and places*** for the following meetings:
  - The *preparatory meeting* with team members to describe the process, review the instructions, and establish small working groups if desired. Other on-site staff, not directly involved in the assessment, can be included if appropriate.
  - The *information-gathering and analysis meetings,* during which team members actually conduct the assessment. There may be more than one meeting if several small working groups are conducting the assessment. The leader may not be able to attend each one.
  - The *action plan meeting*, during which all small working groups get together to integrate information from all assessment activities into one overall action plan. (See Chapter 3 of the QI Leadership Manual for how to integrate EmOC assessment findings into action plan development.)
  - *A debriefing for site management* or other interested groups, such as the pediatrics department, on the findings and the action plan developed.
- ***Ensure seating arrangements*** that are comfortable and allow for maximum participation at all meetings.
- ***Review*** how to facilitate meetings as described in Chapter 4 of the QI Leadership Manual.
- ***Prepare materials for team members*****,** such as sufficient copies of the EmOC assessment forms, pens or pencils, and spare flipchart paper for draft action plans. If they are scoring the EmOC assessment, they will also need a calculator to add the scores and two large sheets of graph paper.
- ***Prepare flipcharts*** required for explaining the EmOC assessment and cover them up until they are needed in the discussion. (See Chapter 2 of the QI Leadership Manual).

USING THIS TOOL IN THE QI PROCESS

Conducting the EmOC Assessment: Information Gathering and Analysis

- ***Organize groups:*** Depending on how many people are participating, the team leader should divide staff into small teams and give each team two or three of the guides to complete. Teams should consist of a mix of different levels of staff, but they should include some staff who will be able to answer the more technical or medical questions. Each team will identify a scorer and a note taker.
- ***Answer questions in the guides:*** Team members jointly review each of the questions and answer them either "yes" or "no" through discussion among themselves, staff interviews, or direct observation. If some aspect of the tool is truly "not applicable," team members should write "N/A" in the margin, so that later it is clear that this question was not simply omitted in error. **Every** question must have either a "yes" or "no" answer or a " not applicable" indicator.
  - *Discuss and review standards:* Many of the questions on the guides can be answered in the assessment meeting. During the discussion, the team should review and clarify standards as needed by looking at the local and/or national standards or other appropriate sources.
  - *Interview and observe if needed:* If team members cannot answer a question, they should try another way of finding the answer by asking another staff member or by checking or observing something themselves. For example, if the team is unsure about whether the operating room staff follow infection prevention procedures correctly, the team can discuss the process with the operating room staff, observe what they do, and decide together whether they are doing it correctly.
  - *Answer all questions:* Assessment teams should answer all the questions, except those that pertain to services or procedures they do not provide and cannot foresee providing in the future. For example, at a small clinic, staff may not be able to carry out such procedures as cesarean sections, so some questions on the guide would be "not applicable." On the other hand, if the question is about a service or procedure that is not currently provided, but is something that team members agree might be possible in the future, they should answer the question. They might be tempted to answer "not applicable," but the team leader should encourage them to resist the temptation. The answer may be "no" the first time, but "yes" the next time, and then they will see progress.
  - *Answer all bullets:* If a question has a bulleted list of items, all items must be present or all actions must be done in order to answer "yes." If one or more items in the bulleted list are answered "no," circle those items to keep track of what was missing. These items, then, would be something to address in the action plan meeting.
  - *Add questions:* When conducting the EmOC assessment without scoring, team members may add questions to a guide that they think are important to quality service.
- ***Find root causes:*** If something is not being done, team members should determine why it is not being done. Analyzing root causes, the staff should focus on gaps in systems and processes and not blame the individuals. What is the root cause of the problem? They can use the technique of "multiple whys," described in Chapter 1 of the toolbook, to help in this process.

- ***Reach consensus:*** For each guide, the objective is to come to a consensus on whether something is being done. When the team reaches consensus, the scorer marks the answer to the question. The note-taker takes notes on issues brought up in the discussion. If the team cannot reach consensus, then the issue should be brought up in the action plan meeting, during which everyone involved in the EmOC assessment can have input.
- ***Prepare a master copy****:* Once information gathering and analysis are completed, the team prepares one master copy of responses to the EmOC assessment. The findings should be recorded on flipchart paper using an action plan format.

If the team is *not* scoring the questions, please skip the subsection below, "When Scoring the EmOC assessment," and go directly to DEVELOPING AN ACTION PLAN. If the team *is* scoring, continue first with the section below and then with the rest of the instructions.

When Scoring the EmOC Assessment

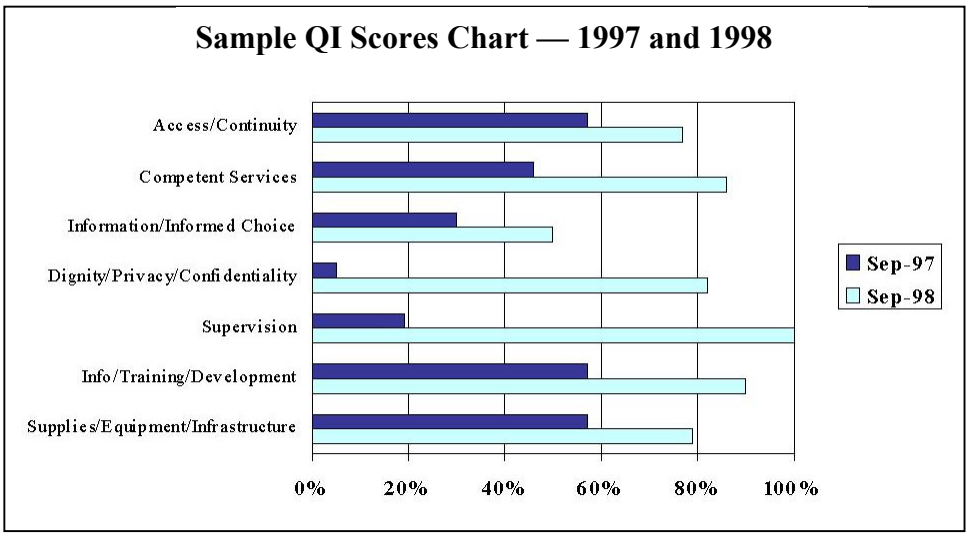
- *Calculate QI scores:* Once a year, team members should calculate a score for each guide in the assessment tool by counting the number of "yes" and "no" answers for each section. Scoring is as follows:
  - Add the number of times "yes" is answered in a section. (Reminder: If a question has a bulleted list of items, all items must be present or all actions must be done in order to answer "yes.")
  - Add the number of times "no" is answered.
  - Total the "yes" and "no" answers. Do not include questions you have determined are "not applicable."
  - Divide the number of "yes" answers by the total number of questions answered (again, do not include those deemed "not applicable") and multiply by 100 to get a percentage score. Use a calculator if necessary.
  - Below is an example of a tally sheet (Figure 6) . In this example, all the questions were answered on the Access and Continuity Guide, but on the Competent Care Guide, four of the questions were "not applicable," so the total is less than 70.

Figure 6: Summary Sheet Example

Indicators	"Yes" Answers A	"No" Answers B	Total Answers C	% "Yes" Score (A ÷ C) x 100
I. Access and Continuity	10	6	16	62.5%
II. Competent Care	44	22	66	66.6 %

- *Prepare a graph:* Team members then prepare a simple bar graph of the scores on the indicators. The graph may be roughly drawn on newsprint or on large sheets of graph paper. List the indicators along the side, and have a scale between zero and 100 along the bottom. Mark the score for each indicator, draw the bar, and shade it in. This visual representation of the team members' activity will help them compare scores from each quality area.

Figure 7: Sample Year-by-Year Graph of QI Scores



- *Prepare a year-by-year graph:* If the EmOC assessment has been scored before, team members can also prepare a year-by-year bar graph representing the changes between year one and year two; years one, two, and three; etc., for each of the indicators. This creates a visual presentation of progress made in improving quality of service over the years. The graph presented above (Figure 7) is an example of a year-by-year graph of QI scores. The team leader should keep copies of all graphs and the master copy of the EmOC assessment for future reference.

Developing an Action Plan

- ***Develop an action plan*** to address the problems identified from the EmOC assessment. This can be done initially in the small assessment teams and then brought together in the final action plan meeting for presentation and discussion. The entire group may have useful suggestions or findings from other assessment tools to integrate into the action plan. Problems and resources from other departments may also influence solutions.

  Team members must find a solution for each root cause of a problem identified. They should prioritize solutions, taking into consideration such issues as client and/or staff safety and the ease with which a solution can be carried out using existing resources. The team would then assign a person responsible for implementation and completion dates that reflect each item's priority. These steps are described in detail in Chapter 3 of the QI Leadership Manual.

  Figure 8 shows a sample action plan drawn from an EmOC assessment that team members would present to the larger group.

Figure 8: Sample Action Plan from an EmOC Assessment

Problem	Root Cause(s)	Solution	By Whom	By When	Status
Delay between occurrence of complications in delivery room and arrival of appropriate provider on the scene	• Staff in delivery room do not know who is on call. • No duty roster is posted in client-care areas. • Head sister keeps duty roster in her room.	Post duty roster in all client-care areas.	F. Castano, administrator	July 30, 2003	

Implementing Solutions

- ***Implement solutions*** as agreed upon in the action plan. Suggestions for facilitating implementation are in Chapters 3 and 4 of the QI Leadership Manual.
- The team leader or members of the QI Committee can periodically ***check in with staff*** assigned to a particular intervention on the action plan to determine their progress and provide support as needed.

Evaluating Progress and Following Up

- ***Review the action plan*** during routine staff meetings to determine progress and to discuss any modifications or additional support needed.
- ***Measure progress*** with annual assessments using the EmOC assessment and making graphs of the QI scores from year to year.
- ***Use the results*** to get external support when needed and to communicate success to staff, other departments, managers, stakeholders, the community, etc.

EMOC ASSESSMENT FORMS

Note: References to "MNH" in this tool are to *Managing Complications in Pregnancy and Childbirth: A Guide for Midwives and Doctors* (WHO, Department of Reproductive Health and Research, 2000)—also known as the "MNH Guide." The international standards from the MNH Guide referenced throughout this tool are meant to serve as a guiding principle in assessing quality of services; however, it is recognized that your facility may be using local and/or national standards and that they may differ from those referenced. If this is the case, staff are encouraged to review and clarify the referenced standards, as needed, by looking at the local and/or national standards or other appropriate sources.[*]

Reminder: If a question has a bulleted list of items, all items must be present or all actions must be done in order to answer "yes." If one or more items in the bulleted list are answered "no," answer "no" to the entire question, and circle those items to keep track of what was missing. These items, then, would be something to address in the action plan meeting.

Clients' Rights to Access to Services and Continuity of Care

Emergency obstetric care (EmOC) clients have a right to access services without facing barriers involving cost, hours of services, location, or physical or social barriers. Labor and delivery services, including the ability to handle complications, should be available 24 hours a day, 7 days a week.

EmOC clients have a right to the services, supplies, referrals, and follow-up necessary to obtain care.

		Yes	No
1.	Do clients and their families get from the entrance to each of the following areas easily and rapidly 24 hours a day, 7 days a week without encountering physical barriers (e.g., locked gates or grills): • Emergency-evaluation area? • Neonatal ward? • Maternity ward?		
2.	Do all staff, including ancillary staff in other departments, know where to direct women in labor to be assessed?		
3.	Do staff minimize procedural barriers to care for clients (e.g., requirements that clients obtain a male family member's permission to receive the service or have specific documents)?		
4.	Do obstetric clients with complications receive care immediately without encountering financial barriers (e.g., having to first pay for services or purchase supplies or drugs)?		
5.	Do all clients have access to EmOC services at your facility, regardless of their socio-demographic characteristics (e.g., age, marital status, social, or ethnic background)?		

continued

[*] A revised edition of the guide was published at the time this manual and toolbook went to press. If any changes to the standards are reflected in the 2003 edition, the tools in this toolbook may be adapted, as needed.

Clients' Rights to Access to Services and Continuity of Care *(continued)*

		Yes	No
6.	Are all obstetric clients evaluated within 15 minutes of arrival at your facility to determine if emergency care is needed, 24 hours a day, 7 days a week?		
7.	Do clients have access to labor and delivery services 24 hours a day, 7 days a week?		
8.	Are staff available to immediately recognize and initially manage (or stabilize and refer) each of the following conditions 24 hours a day, 7 days a week: • Postabortion complications? • Antepartum, intrapartum, or postpartum hemorrhage? • Hypertensive emergency, preeclampsia, or eclampsia? • Obstructed or prolonged labor? • Sepsis or infection (of the uterus, perineum, intravenous [IV] sites, incisions)? • Shock? • Ectopic pregnancy? • Neonatal asphyxia?		
9.	Do women and neonates have access to administration of IV fluids 24 hours a day, 7 days a week?		
10.	Do women and neonates have access to cardiopulmonary resuscitation (CPR) 24 hours a day, 7 days a week?		
11.	Do clients have access to each of the following basic EmOC services 24 hours a day, 7 days a week: • Injection of antibiotics? • Injection of magnesium sulfate (or diazepam if unavailable) for eclampsia? • Injection of oxytocin or ergotamine? • Assisted delivery (vacuum and forceps)? • Manual removal of placenta? • Uterine evacuation? • Repair of cervical tear?		
12.	Do clients have access to each of the following comprehensive EmOC services 24 hours a day, 7 days a week: • Blood transfusion? • Cesarean section?		
13.	Do clients have access to laboratory services 24 hours a day, 7 days a week?		
14.	Are all necessary supplies (e.g., gloves, IV fluids, oxygen), drugs (e.g., anesthesia, narcotics), and equipment available to clients 24 hours a day, 7 days a week without barriers (e.g., locked doors or cabinets or unavailable keys)?		

continued

Clients' Rights to Access to Services and Continuity of Care *(continued)*

		Yes	No
15.	Is there a referral facility or provider serving as backup in case of an emergency beyond your facility's capability (e.g., the need for a surgical procedure, a bowel or bladder injury, uncontrollable bleeding) 24 hours a day, 7 days a week?		
16.	Do staff at your facility do each of the following: • Provide or arrange transportation to a referral facility for emergency clients who cannot be treated? • Communicate with the referral facility staff to inform them about the referral?		
17.	Do staff complete client records with information essential for continued care of clients (e.g., diagnosis, complications, treatments, follow-up plan)?		
18.	When clients return for follow-up care, can staff easily retrieve their records?		
19.	Do all clients receive follow-up care at appropriate intervals (i.e., 24 hours, 48 hours, one week and four to eight weeks postpartum), either at your facility or through community-based care?		
20.	Before discharging postpartum clients, do staff provide each of the following: • Sexual and reproductive health counseling (e.g., family planning counseling, including for postabortion clients)? • Referrals for the client to other health services? • Pain control, as needed (e.g., for postabortion complications or postcesarean section)? • Referrals for neonatal services?		
Additional questions that you think are important: (DO NOT INCLUDE IN SCORING)			

Comments:

_____

_____

_____

_____

Your RIGHT TO ACCESS AND CONTINUITY Score

A. Add the number of times you answered "yes" in this section. _____
B. Add the number of times you answered "no" in this section. _____
C. TOTAL "yes" and "no" answers (A + B) _____

Clients' Right to Competent Care

Emergency obstetric care (EmOC) clients have a right to competent care that is safe, effective, and delivered promptly and skillfully in accordance with guidelines by trained staff who are skilled in routine care, management of complications and emergencies, and infection prevention.

		Yes	No
Promptness of care			
1.	For emergency clients, do staff immediately (within five minutes) perform all of the following (as needed): • Alert other labor ward clinicians? • Maintain the airway? • Assist breathing? • Stabilize circulation?		
2.	Do staff immediately (within five minutes) place a functional large bore (14–16 gauge) intravenous (IV) and give 2 L of normal saline for all clients with each of the following conditions: • Hemorrhage? • High pulse? • Low blood pressure? • Obstructed labor? • Sepsis?		
3.	Do staff immediately (within 30 minutes) perform each of the following (as needed): • Type blood? • Cross and transfuse blood (or refer to a facility that can do so)? (MNH S 23–29)		
4.	Do staff initiate surgical procedures (e.g., assisted delivery, cesarean section, uterine evacuation) within two hours of recognition of complication?		
5.	For postpartum hemorrhage, do staff perform (or refer) surgical interventions (e.g., bilateral uterine-artery ligation, hysterectomy, uterine-rupture repair) within two hours of recognition? (MNH P 95–108)		
6.	If unexpected surgical complications occur (e.g., bladder injury, bowel injury, excessive bleeding, uterine perforation), is a qualified provider always available on-site, on call, or by referral (within two hours)?		
Monitoring and evaluation			
7.	Do staff monitor all clients with an obstetric complication (e.g., hemorrhage, eclampsia, uterine rupture, obstructed labor, genital-tract sepsis) at least every 15 minutes for the first two hours of diagnosis?		
8.	Do staff keep an observation chart (including blood pressure, pulse, temperature, urine output) for all clients with obstetric complications (e.g., hemorrhage, eclampsia, uterine rupture, obstructed labor, genital-tract sepsis)?		

continued

Clients' Right to Competent Care *(continued)*

		Yes	No
Monitoring and evaluation *(continued)*			
9.	Do staff monitor clients immediately postdelivery or postsurgery for fever, vital sign instability, excessive bleeding, or uterine firmness: • Every 15 minutes for two hours? • Every four hours for at least 24 hours?		
10.	For all clients with hemorrhage or sepsis, do staff do each of the following: • Place a urine catheter to monitor output if needed? • Watch clients for signs of shock? (MNH S-1)		
11.	For all clients with hemorrhage or sepsis, do staff evaluate blood for coagulopathy by using a bedside clotting test (i.e., to check for either the failure of a clot to form after 7 minutes or for a soft clot that breaks down easily)? (MNH S-2)		
12.	Are all reproductive-age clients with abdominal pain evaluated to exclude ectopic pregnancy?		
13.	Before discharging postpartum clients, do staff check each of the following: • Clients' stability (bleeding, infection of uterus and perineum, uterine firmness, vital signs)? • Clients' ability to walk, eat, urinate, and repeat postpartum instructions?		
Normal labor MNH C-57–76			
14.	During active phase of labor, do staff do each of the following: • Monitor clients' vital signs (to look for warning signs) at least every 30 minutes? • Monitor labor progress at least every four hours? (MNH C-57)		
15.	During the second stage of labor, do staff ensure that • Clients are never left alone? • All deliveries are conducted by a skilled attendant?		
16.	Do staff practice active management of placental delivery (e.g., controlled cord traction, immediate oxytocin, uterine massage)? (MNH C-73)		
17.	Is administration of IV fluids performed to standards (e.g., proper infection prevention)? (MNH C-30)		
18.	Are vaginal-, perineal-, and cervical-laceration repair performed to standards (e.g., with anesthetic, antiseptic, absorbable suture, multiple layers)? (MNH P-73, 81, 83)		

continued

Clients' Right to Competent Care *(continued)*

		Yes	No
Normal Labor *(continued)*			
19.	Do staff ensure that each of the following neonatal services are performed to standards immediately postdelivery: • Neonatal resuscitation? (MNH S-141) • Cord care? • Eye care? • Thermal protection? • Appropriate vaccinations? • Breastfeeding-friendly counseling?		
Obstructed or prolonged labor MNH S-64–67, P-27–35			
20.	Do staff use a partogram or a labor chart to do each of the following: • Document labor progress? • Identify abnormal labor? (MNH C-65)		
21.	Do staff recognize and manage "inadequate uterine activity" (defined as fewer than three contractions in 10 minutes lasting less than 40 seconds) with oxytocin? (MNH S-64–67)		
22.	Do staff recognize obstructed labor (defined as when labor is arrested for more than two hours) and deliver the baby within two hours of diagnosis by assisted delivery or cesarean section?		
23.	Is assisted delivery (vacuum or forceps) performed to standards? (MNH P-27–35)		
24.	Is cesarean section performed to standards? (MNH P-47–52)		
Hemorrhage MNH S 13, 17–34			
25.	For antepartum hemorrhage at more than 37 weeks, do staff rule out placenta previa and then deliver the baby immediately?		
26.	For postpartum hemorrhage, is oxytocin or methergine given immediately after excluding uterine inversion?		
27.	Postpartum, do staff immediately evaluate and immediately treat all cases of continuous slow bleeding or sudden bleeding?		
28.	Are all cases of suspected ectopic pregnancy treated to standards with blood, laparotomy, and partial salpingectomy as needed? (MNH S-13, P-109)		
29.	Is administration of oxytocin or ergotamine performed to standards (e.g., with proper dilution and monitoring)?		
30.	Is manual removal of the placenta performed to standards, including the use of all of the following: • Anesthetic? • Antibiotic? • Antiseptic? • High-level disinfected [HLD]/sterile gloves? (MNH P-77)		

continued

Clients' Right to Competent Care *(continued)*

		Yes	No
Hemorrhage *(continued)*			
31.	Is blood transfusion performed to standards, including all of the following: • Confirming that blood is meant for that client? • Screening for HIV/hepatitis/syphilis? • Monitoring? • Responding to transfusion reactions? (MNH C-23–29)		
Preeclampsia, eclampsia MNH S-35–50			
32.	Are all clients with severe preeclampsia delivered within 24 hours of diagnosis by induction or cesarean section? (MNH S-47)		
33.	For all clients with preeclampsia or eclampsia, is blood pressure: • Monitored closely (at least every hour)? Controlled with antihypertensives for DP >110 mm Hg? (MNH S-46)		
34.	For all clients with severe preeclampsia and eclampsia, are each of the following obtained at least once: • Bleeding time? • Clotting time? • Platelet count?		
35.	Are all clients with eclampsia delivered within 12 hours of onset of convulsions by induction or cesarean section? (MNH S-47)		
36.	Are all clients with eclampsia treated with magnesium sulfate (or diazepam if unavailable)?		
37.	Are all clients being treated with magnesium sulfate monitored for magnesium toxicity (e.g., respiratory rate, urine output, reflexes)?		
38.	Is administration of magnesium sulfate (or diazepam if unavailable) for eclampsia performed to standards? (MNH S 44–46)		
Sepsis or infection MNH S 99–114			
39.	Do staff make all efforts to avoid unnecessary procedures that can increase the risk of infections (such as frequent vaginal exams, routine IV, routine uterine exploration after delivery, shaving)?		
40.	Do staff strictly maintain a sterile field during invasive procedures (such as cesarean section, laparotomy, injections, IV, urethral catheter insertion)?		
41.	Do staff treat all clients with clinical evidence of intrauterine infection (e.g., fever, foul amniotic fluid) as soon as it is diagnosed rather than waiting until postdelivery?		
42.	For genital-tract sepsis (e.g., perineal/wound infection, septic abortion, uterine infection), are broad-spectrum antibiotics (e.g., combination ampicillin/gentamycin and metronidazole) used?		

continued

Clients' Right to Competent Care *(continued)*

		Yes	No
Sepsis or infection *(continued)*			
43.	For genital-tract sepsis (including septic abortion), is volume status restored aggressively and immediately?		
44.	For genital-tract infections, is necrotic tissue removed?		
45.	Is administration of antibiotics performed to standards? (MNH C-35)		
Postabortion complication MNH S 9–13			
46.	For incomplete abortion and septic abortion, is uterine evacuation performed within two hours of diagnosis?		
47.	For septic abortion, are antibiotics started before uterine evacuation? (MNH S-9)		
48.	Is tetanus toxoid 0.5 mL IM given in each of the following cases: • For unhygienic conditions/procedures (e.g., incomplete abortion, septic abortion, unclean delivery, genital-tract infection)? • To unimmunized clients? (MNH S-51)		
49.	Is uterine evacuation performed to standards? (MNH P-61–68)		
Anesthesia MNH C-37–46, P 1-10			
50.	Do staff use local anesthesia whenever it is possible and safe to do so? (MNH C-38)		
51.	For local anesthesia, do staff know how to recognize signs of overdose? (MNH C-42)		
52.	For overdose from anesthesia, do staff know how to respond by: • Performing cardiopulmonary resuscitation (CPR)? • Administering drug antidote for narcotics, as needed? (MNH C-42)		
53.	Is administration of local and regional anesthesia performed to standards (e.g., with proper dosing and monitoring)? (MNH P 1–10)		
Complication rates			
54.	Is the incidence of hemorrhage and organ trauma caused by cesarean section less than 5%?		
55.	Is the incidence of uterine perforation from uterine evacuation less than 1%?		
56.	Is the incidence of uterine inversion following facility deliveries less than 5 %?		
57.	Is the incidence of infection less than 10% for each of the following procedures: • Cesarean section? • IV insertion? • Urethral catheter insertion?		
58.	Is the incidence of tetanus after hospital procedures 0%?		

continued

Clients' Right to Competent Care *(continued)*

		Yes	No
Infection prevention MNH C-17–20, 47–53			
59.	Do staff wash their hands with soap and running water: • Before each clinical procedure? • After each clinical procedure? • Before and after client contact? (MNH C-17)		
60.	Does your facility have each of the following protective wear items for staff in all client-care areas: • Aprons? • Caps? • Eyewear? • Face masks? • Shoe covers/boots? • Gloves (exam and HLD/sterile)?		
61.	Do staff change gloves when they become contaminated (i.e., between clients and with the same client if the gloves become contaminated)?		
62.	Is sterility maintained to the greatest extent possible in vaginal and manual uterine procedures (e.g., bimanual uterine compression, forceps, manual removal of placenta, vacuum, vaginal delivery) by use of each of the following: • HLD/sterile gloves? • Antiseptic prep? • Noncontamination? (MNH C-22)		
63.	Do staff vigorously rub hands together with antiseptic and water for 3–5 minutes before cesarean sections and laparotomies? (MNH C-48)		
64.	Is the surgical/procedure site (e.g., for abdominal incisions, injections, IV insertion, urethral catheter insertion, uterine evacuation) prepared from the center outward with an appropriate antiseptic solution (e.g., alcohol, cetrimide-based solution, iodine-based solution)? (MNH C-22)		
65.	If there is a break in the sterile field (such as a hole in a glove) during a procedure, do the assistants point it out and help to reestablish the sterile field?		
66.	Between clients, do staff clear medical waste and wipe down tables and contaminated surfaces with 0.5% chlorine solution in each of the following areas: • Delivery room? • Examination rooms? • Operating room?		

continued

Clients' Right to Competent Care *(continued)*

		Yes	No
Infection prevention *(continued)*			
67.	During steam sterilization, do staff measure temperature, pressure, and time according to manufacturers' instructions?		
68.	Are instruments decontaminated immediately after use in 0.5% chlorine solution for 10 minutes?		
69.	Do staff dispose of sharps in a puncture-resistant, leak-proof container in each client-care area? (MNH C-20)		
70.	Do staff use a system that ensures that medical waste (including placentas and sharp containers) is eventually safely buried or burned? (MNH C-20)		
Additional questions that you think are important: (DO NOT INCLUDE IN SCORING)			

Comments:

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Your RIGHT TO COMPETENT CARE Score

A. Add the number of times you answered "yes" in this section. _____
B. Add the number of times you answered "no" in this section. _____
C. TOTAL "yes" and "no" answers (A + B) _____

Clients' Rights to Information and Informed Choice

Emergency obstetric care (EmOC) clients have a right to accurate, appropriate, and understandable information about their diagnosis, treatment and options if any exist, postdischarge care, and warning signs. This should be delivered through counseling and materials that are available throughout the health care facility.

EmOC clients have a right to the information and support they need in order to make informed decisions about their care. However, in case of emergency, the client should be stabilized first without delaying for the purpose of obtaining informed consent.

		Yes	No
1.	Are there local-language signs from all of the entrances directing clients to each of the following: • Emergency-evaluation area? • Labor and delivery rooms? • Neonatal ward?		
2.	When clients are stable, do staff inform all clients and their families about the diagnosis, need for treatment and procedures, and possible outcomes?		
3.	On discharge, do staff tell clients and their families about warning signs that need medical attention for mothers (e.g., fever, heavy bleeding, severe pain) and neonates (e.g., difficulty breathing, fever, jaundice, lethargy, poor feeding or sucking)?		
4.	On discharge, do staff inform clients with postabortion complications about warning signs that need medical attention (e.g., fever, foul-smelling discharge, heavy bleeding, pain)?		
5.	On discharge, are clients and their families informed about where mothers and/or neonates can access medical attention 24 hours a day, 7 days a week?		
6.	Do staff provide clients and their families with written and/or pictorial information in a language that they understand regarding each of the following: • Postdischarge care? • Warning signs? • Where to seek attention?		
7.	Do staff speak a language that clients understand, or are interpreters available?		
8.	In emergency situations where client is unstable, are lifesaving procedures performed to stabilize client even if informed consent cannot be obtained?		
9.	When clients are stable, do staff perform counseling and obtain informed consent for all procedures?		
10.	Are clients and their families informed that they have the right to refuse the specified treatment without sacrificing the right to other services (e.g., anesthesia, blood transfusion, cesarean section)?		

continued

Clients' Rights to Information and Informed Choice *(continued)*

Additional questions that you think are important: (DO NOT INCLUDE IN SCORE)			

Comments:

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Your RIGHT TO INFORMATION AND INFORMED CHOICE Score

A. Add the number of times you answered "yes" in this section. _____
B. Add the number of times you answered "no" in this section. _____
C. TOTAL "yes" and "no" answers (A + B) _____

Clients' Rights to Privacy, Confidentiality, Dignity, Comfort, and Expression of Opinion

Emergency obstetric care (EmOC) clients have a right to privacy and confidentiality during physical examinations, clinical procedures, and counseling, as well as in the handling of their personal information and medical records.

EmOC clients have a right to consideration for their feelings, modesty, and comfort, along with respect for their opinions and decisions. This is one of the most important aspects of quality. If clients and their families are not treated with respect, they are unlikely to seek care even in emergencies.

		Yes	No
1.	Do each of the following areas offer clients visual and auditory privacy from other clients and staff: • Examination rooms? • Labor and delivery rooms?		
2.	Do staff keep exposure to a minimum duration and amount during each of the following procedures: • Vaginal exams? • Vaginal deliveries? • Cesarean sections?		
3.	Do staff respect clients' wishes about whether or not to provide information to partners and family members (in emergency cases, this may not be possible)?		
4.	Do staff refrain from discussing clients with people who are not directly involved in the clients' care?		
5.	When client records are not in use, do staff store them in a secure place (e.g., with access strictly limited to authorized staff)?		
6.	Are each of the following client-care areas clean and comfortable: • Examination rooms? • Female/maternity wards? • Labor and delivery rooms? • Toilets? • Waiting areas?		
7.	Does your facility provide each of the following services for clients and those who accompany them: • Clean drinking water? • Handwashing facilities? • Toilets?		
8.	Do staff ensure that clients are comfortable during labor and delivery and procedures (including treatment of postabortion complications) by offering each of the following: • Pain medications? • Emotional support?		

continued

Clients' Rights to Privacy, Confidentiality, Dignity, Comfort, and Expression of Opinion *(continued)*

		Yes	No
9.	Do staff clean labor and delivery beds and mattresses with 0.5% chlorine solution immediately after each client?		
10.	Do staff provide counseling and emotional support to clients and their families in case of complications (e.g., destructive fetal operations, maternal death or complication, miscarriage, neonatal death or abnormality)?		
Additional questions that you think are important: (DO NOT INCLUDE IN SCORING)			

Comments:

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Your RIGHT TO PRIVACY, CONFIDENTIALITY, DIGNITY, COMFORT, AND EXPRESSION OF OPINION Score

A. Add the number of times you answered "yes" in this section. _____

B. Add the number of times you answered "no" in this section. _____

C. TOTAL "yes" and "no" answers (A + B) _____

Staff's Rights to Facilitative Supervision and Management

Emergency obstetric care (EmOC) staff need supervision and management that value and encourage quality improvement (QI) and give staff the support they need to provide quality services to their clients.

		Yes	No
1.	Do off-site supervisors or technical experts visit the facility regularly to do each of the following: • Assess services? • Recognize success? • Work with staff to solve problems?		
2.	Do on-site supervisors regularly assess services (e.g., observing infection prevention, observing services, reviewing registers and records)?		
3.	Do on-site supervisors regularly mentor staff (e.g., providing staff with constructive feedback, recognizing staff efforts and accomplishments)?		
4.	Do on-site supervisors review emergency protocols with staff through periodic rehearsals and drills?		
5.	Do on-site supervisors and staff routinely review available service data (e.g., QI assessments, registers, and statistics) to identify and discuss ways to improve services?		
6.	Do on-site supervisors hold regular staff meetings (at least monthly) to do each of the following: • Share problems that staff are experiencing? • Share recommendations? • Update staff and get their input on how to facilitate the care of EmOC clients?		
7.	Do on-site supervisors encourage staff to respect and collaborate with their colleagues (including community health workers, ancillary staff, and staff from other departments)?		
8.	Do on-site supervisors encourage staff to respond to client feedback on the quality of services?		
9.	Do staff have up-to-date written job descriptions with clear expectations?		
10.	Do on-site supervisors organize work shifts so that staff are fully occupied and well utilized during the entire time they are working?		
11.	Do on-site supervisors ensure that staff are assigned clear responsibilities for each of the following, 24 hours a day, 7 days a week: • Obstetric evaluation? • Management of labor, delivery, and postpartum care? • Management of complications? • Performance of clinical procedures (including cesarean sections and uterine evacuation)? • Stabilization and referral for complications that cannot be managed on-site?		

continued

Staff's Rights to Facilitative Supervision and Management *(continued)*

		Yes	No
12.	Is there a system to ensure transport to a referral facility for clients with complications that cannot be managed on-site, 24 hours a day, 7 days a week?		
13.	Is there a system to ensure access to blood supply (including donation and/or storage), 24 hours a day, 7 days a week?		
14.	Do on-site supervisors ensure that staff are assigned clear responsibilities daily for checking each of the following in each client-care area: • Equipment? • Supplies? • Drugs?		
15.	Is a functional system in place to maintain and repair the facility daily for each of the following: • Cleaning? • Electrical problems (e.g., exposed or unsafe wiring)? • Plumbing problems (e.g., leaky or blocked drains, sinks, toilets)? • Structural problems (e.g., broken ceiling, chipping paint)?		
16.	Does the facility maintain registers that capture all of the following information: • Postabortion complications? • Ectopic pregnancy? • Duty calendar? • Obstetric complications? • Postpartum admissions? • Pregnancy-related procedures and surgeries? • Neonates born before arrival?		
17.	Does the facility keep and post a statistics chart with monthly information on each of the following: • Number of total deliveries? • Number of cesarean sections? • Number of maternal deaths? • Number of neonatal deaths?		
18.	Does the facility keep track of and share with staff statistics on each of the following: • Hemorrhage and organ trauma (from cesarean section)? • Infection (from cesarean section, intravenous [IV] insertion, urethral catheter insertion)? • Uterine perforation (from uterine evacuation)?		
19.	Is there a mechanism to identify complicated cases for review (e.g., specific columns in the registers to record complications and final diagnosis, as well as a system to flag these charts for review)?		

continued

Staff's Rights to Facilitative Supervision and Management *(continued)*

		Yes	No
20.	Are cases with poor outcomes (i.e., neonatal or maternal morbidity or mortality) regularly reviewed (e.g., by examination of records and labs, as well as discussion of such cases and recommendations for the future at staff meetings)?		
Additional questions that you think are important: (DO NOT INCLUDE IN SCORING)			

Comments:

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Your RIGHT TO FACILITATIVE SUPERVISION AND MANAGEMENT Score

A. Add the number of times you answered "yes" in this section. _____
B. Add the number of times you answered "no" in this section. _____
C. TOTAL "yes" and "no" answers (A + B) _____

Staff's Rights to Information, Training, and Development

Emergency obstetric care (EmOC) staff need knowledge, skills, and ongoing training and professional-development opportunities to remain up-to-date in their field and to continually improve the quality of the services they deliver.

Note: "Sufficient number" means enough number of staff to provide the service 24 hours a day, 7 days a week, so that there is always staff with the skills (either on-site or available to come in) to attend to clients in a timely manner (within two hours).

		Yes	No
1.	Are current EmOC guidelines and protocols available and accessible to staff (on wall charts or in writing)?		
2.	Does the facility provide regular updates (at least quarterly) and training sessions to increase staff knowledge and skill in all aspects of EmOC (including infection prevention)?		
3.	Is a sufficient number of staff trained to respond to emergencies (e.g., performing cardiopulmonary resuscitation [CPR]; asking/shouting for help; stabilizing clients with intravenous [IV]; using emergency equipment, supplies, and drugs)?		
4.	Are staff trained to perform the following examinations as their job requires: • Pelvic examination? • Fetal assessment (growth, heart rate, pregnancy dating)? • General physical (breast, cardiac, distal pulse, lung, skin)? • Vital signs (blood pressure, heart rate, respiratory rate)?		
5.	Is a sufficient number of staff trained to manage labor and delivery (including dysfunctional labor)?		
6.	Is a sufficient number of staff trained in the management, stabilization, and/or referral of the each of the following complications: • Postabortion complications? • Antepartum hemorrhage? • Genital-tract sepsis? • Obstructed labor? • Uterine rupture? • Postpartum hemorrhage? • Preeclampsia, eclampsia, high blood pressure?		
7.	Is a sufficient number of staff trained to perform each of the following procedures: • Bimanual uterine compression? • Correction of uterine inversion? • Vaginal-, perineal-, and cervical-laceration repair?		
8.	Is a sufficient number of staff trained to perform administration of antibiotics?		
9.	Is a sufficient number of staff trained to perform administration of oxytocin or ergometrine?		

continued

Staff's Rights to Information, Training, and Development *(continued)*

		Yes	No
10.	Is a sufficient number of staff trained to perform administration of magnesium sulfate (or diazepam if unavailable) for eclampsia?		
11.	Is a sufficient number of staff trained to perform manual removal of placenta?		
12.	Is a sufficient number of staff trained to perform uterine evacuation?		
13.	Is a sufficient number of staff trained to perform assisted delivery (vacuum or forceps)?		
14.	Is a sufficient number of staff trained to perform cesarean section?		
15.	Is a sufficient number of staff trained to perform blood transfusion?		
16.	Is a sufficient number of staff trained to perform neonatal resuscitation (so that during every delivery there is a staff member with these skills available immediately)?		
17.	Are all staff trained in infection prevention as required for their job?		
18.	Is a sufficient number of staff trained either to perform or to promptly refer each of the following procedures: • Surgical correction of hemorrhage? • Repair of uterine rupture? • Hysterectomy?		
19.	For clients with complications that the facility cannot manage, do staff know how to refer and arrange for transportation to a higher-level facility 24 hours a day, 7 days a week?		
20.	Are all staff oriented and/or trained on the facility's policies and protocols regarding client relations (e.g., involving partners, family members and traditional birth attendants [TBAs], and supporting nonharmful traditional practices)?		
Additional questions that you think are important: (DO NOT INCLUDE IN SCORING)			

continued

Staff's Rights to Information, Training, and Development *(continued)*

Comments:

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Your RIGHT TO INFORMATION, TRAINING, AND DEVELOPMENT Score

A. Add the number of times you answered "yes" in this section. _____

B. Add the number of times you answered "no" in this section. _____

C. TOTAL "yes" and "no" answers (A + B) _____

Staff's Rights to Supplies, Equipment, and Infrastructure

Emergency obstetric care (EmOC) staff need reliable inventories of supplies, instruments, and working equipment and the infrastructure necessary to ensure the uninterrupted delivery of quality services.

Room-by-room walk-through to determine if the following rooms are ready for an EmOC client in terms of equipment, drugs, supplies, and infrastructure:

- *Facility in general*
- *Emergency-evaluation area (any area where emergency evaluation is performed (e.g., an emergency room, a room in the labor and delivery ward, a treatment room)*
- *Labor and delivery rooms*
- *Operating room*
- *Female/maternity ward*
- *Facility entrance and waiting areas*
- *Change/scrub room*
- *Pharmacy*
- *Lab and blood bank*
- *Staff lounge*
- *Instrument-processing and autoclave room*
- *Housekeeping room*

		Yes	No
Facility in general			
1.	Are walls, paint, plumbing, electrical wires, and sockets intact and well kept?		
2.	Does the facility have a reliable supply (including back-up) of clean water AND electricity such that services have not been interrupted in the past six months for lack of water, lighting or electricity?		
3.	Is there a functional system for repair and maintenance of equipment (e.g., anesthesia machine, autoclave, oxygen cylinder, suction machine) such that services have not been interrupted in the past six months?		
4.	Is there a functional system for monitoring and reordering of drugs and supplies (e.g. inventory) such that services have not been interrupted in the past six months?		
5.	Is all of the following basic examination equipment available in or accessible to the emergency-evaluation area, labor and delivery rooms, operating room, and female/maternity ward 24 hours, 7 days a week: • Examination table? • Adjustable light? • Blood pressure apparatus and stethoscope? • Fetoscope? • Speculum? • Weighing scale?		

continued

Staff's Rights to Supplies, Equipment, and Infrastructure *(continued)*

		Yes	No
Facility in general *(continued)*			
6.	Are all of the following basic supplies available in or accessible to the emergency-evaluation area, labor and delivery rooms, operating room, and female/maternity ward 24 hours, 7 days a week: • Antiseptic solutions (cetrimide, chlorhexidine, gluconate, iodine solution or iodophors, "spirits")? • Dressing supplies (bandages, adhesive tape)? • Hypodermic needles and syringes (10–20 cc)? • IV infusion set and fluids (tubing, needles)? • Scalpel blades? • Soap? • Spare bulb and spare batteries for room lights and flashlight, endotracheal (ET) tubes? • Suture and suture needles? • Urethral catheter and bag?		
7.	Are all of the following basic obstetric drugs available in or accessible to the emergency-evaluation area, labor and delivery rooms, operating room, and female/maternity ward 24 hours, 7 days a week: • Analgesics (acetaminophen, acetyl salicylic acid, morphine, paracetamol, pethedine)? • Anesthetics (general, local)? • Anticonvulsants (magnesium sulfate, diazepam)? • Antihypertensives (hydralazine, labetalol)? • IV solutions? • Oxytocics (ergotamine, misopristol, oxytocin)?		
8.	Are all of the following items for infection prevention available in or accessible to the emergency-evaluation area, labor and delivery rooms, operating room, and female/maternity ward 24 hours, 7 days a week: • Surgical gloves? • Utility gloves? • Bucket with chlorine (0.5%) for decontamination? • Sharps-disposal containers? • Waste buckets (for medical and other waste)?		
9.	Is an emergency trolley or cart (Figure 9) accessible to each of the following areas 24 hours, 7 days a week: • Emergency-evaluation area? • Labor and delivery rooms? • Operating room? • Female/maternity ward?		

continued

Staff's Rights to Supplies, Equipment, and Infrastructure *(continued)*

		Yes	No
Facility in general (continued)			
10.	Are all necessary emergency supplies (see Figure 9) available in or accessible to each of the following areas 24 hours, 7 days a week: • Emergency-evaluation area? • Labor and delivery rooms? • Operating room? • Female/maternity ward?		
11.	Are all necessary general emergency drugs (see Figure 9) available in or accessible to each of the following areas 24 hours, 7 days a week: • Emergency-evaluation area? • Labor and delivery rooms? • Operating room? • Female/maternity ward?		
12.	Are all necessary obstetric emergency drugs (see Figure 9) available in or accessible to each of the following areas 24 hours, 7 days a week: • Emergency-evaluation area? • Labor and delivery rooms? • Operating room? • Female/maternity ward?		
13.	Is all of the equipment necessary for neonatal resuscitation (see Figure 9) available in or accessible to each of the following areas 24 hours, 7 days a week: • Emergency-evaluation area? • Labor and delivery rooms? • Operating room? • Female/maternity ward? • Neonatal ward?		
Facility entrance and waiting areas			
14.	Do the facility entrance and waiting areas contain all of the following: • Wheelchair? • Trolley? • Stretcher? • Local-language signs to the emergency-evaluation area?		

continued

Staff's Rights to Supplies, Equipment, and Infrastructure *(continued)*

		Yes	No
Change/scrub room			
15.	Is the change/scrub room ready for use with all of the following: • Surgical attire? • Lighting? • Handwashing sink and running water? • Soap? • Scrub brushes? • Storage for staff's belongings?		
Pharmacy			
16.	Is the pharmacy ready for an EmOC client with all of the following: • Available staff? • All basic obstetric drugs? • Emergency drugs (see Figure 9)? • Antibiotics? • Antiemetics? • Antimalarials?		
Lab and blood bank			
17.	Is the lab and blood bank ready for cross matching and providing blood for an EmOC client with all of the following: • Available staff? • Blood bags? • Reagents? • Specimen-collection tubes? • Running water? • Microscope? • Refrigerator?		
Staff lounge			
18.	Is the staff lounge area ready for staff to use with all of the following: • Chairs? • Tables? • Drinking water? • Sink and running water? • Safe storage?		

continued

Staff's Rights to Supplies, Equipment, and Infrastructure *(continued)*

		Yes	No
Instrument-processing and autoclave room			
19.	Is the instrument-processing and autoclave room ready for processing and sterilizing instruments and supplies with all of the following: • Working autoclave? • Deep utility sink and running water? • Brushes? • Detergent? • Chlorine? • Basins? • Utility gloves?		
Housekeeping room			
20.	Is the housekeeping room ready with all of the following: • Deep utility sink and running water? • Mops? • Buckets? • Sponges? • Detergent? • Chlorine? • Utility gloves?		
Additional questions that you think are important: (DO NOT INCLUDE IN SCORING)			

Comments:

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Your RIGHT TO SUPPLIES, EQUIPMENT, AND INFRASTRUCTURE Score

A. Add the number of times you answered "yes" in this section. _____
B. Add the number of times you answered "no" in this section. _____
C. TOTAL "yes" and "no" answers (A + B) _____

Figure 9: Emergency Trolley Equipment, Drugs, and Supplies

Emergency trolley/cart carrying all *equipment, drugs, supplies* listed below:

Emergency Equipment

Ambubag (manual resuscitator), face mask, tubing, oxygen nipple
Battery-operated backup light (flashlight)
Blanket
Emesis basin
Foley catheter (size 16 or 18), drainage bag
Mouth gag
Nonflexible (size 18) and flexible suction catheters
Oral airways (two sizes: 90 mm and 100 mm), nasal airways (two sizes) nasopharyngeal airways (two sizes: 28 and 30)
Oxygen cylinder with flow meter, flow valve, volume meter, cylinder key, tubing (easily movable, i.e., on a stand with wheels), oxygen, key
Sphygmomanometer (blood pressure apparatus)
Stethoscope
Tourniquet
Laryngoscope with spare bulb and spare battery)*
Endotracheal tubes (7 or 7.5 mm internal diameter)*
Stylet for endotracheal tube*
Syringe (5 cc) (to inflate endotracheal tube cuff with air)*

Emergency Supplies

Adhesive tape
Antiseptic solutions
Gauze sponges
Hypodermic needles, hypodermic syringes
IV fluids and IV infusion sets with large caliber (14–16 gauge) needles and tubing
Water for injection
Knife blade
Lubricant for intubation
Oxygen
Suture needles, suture, chromic gut 3.0 and 2.0 on atraumatic needles
Surgical gloves

Emergency Drugs

General emergency drugs:

- Adrenaline
- Atropine sulfate
- Dextrose
- Diazepam
- Diphenhydramine (Benadryl) or phenergan
- Ephedrine
- Flumazenil or physostigmine (needed only if using benzodiazepines, such as diazepam)
- Lidocaine
- Naloxone (needed only if using narcotics)

Obstetric emergency drugs:

- Ergotamine (injection)
- Labetalol or hydralazine (injection)
- Magnesium sulfate (injection)
- Misopristol (tablets) (if available)
- Oxytocin (injection)

Neonatal Resuscitation Equipment

Firm surface for resuscitation
Neonatal IV fluid dispenser
Neonatal ambubag (manual resuscitator), face mask (neonatal size), tubing (neonatal size), oxygen nipple (neonatal size)
Battery-operated backup light (flashlight)
Blanket
Nonflexible and flexible suction catheters (neonatal size)
Oral airways (neonatal size), nasal airways (neona-tal size), nasopharyngeal airways (neonatal size)
Stethoscope
Laryngoscope with spare bulb and spare battery*
Endotracheal tubes (neonatal size)*
Syringe (5 cc) (to inflate endotracheal tube cuff with air)*

* Appropriate only when staff trained in intubation are present.

Facility Summary Sheet

Name of facility _____

Date of EmOC Assessment (month and year)_____

Fill in the total scores from the preceding previous pages for each client right or staff right.

1. Transfer the number of times you answered "yes."
2. Transfer the number of times you answered "no."
3. Add the "yes" and "no" answers. *Remember: Do not include any questions answered "not applicable" in the total.*
4. Divide the "yes" answer by the total, and multiply by 100 to get a percentage "yes" score.

Indicators	"Yes" Answers A	"No" Answers B	Total Answers C	% "Yes" Score (A÷C) x 100
I. Access and Continuity				
II. Competent Care				
III. Information and Informed Choice				
IV. Privacy, Confidentiality, Dignity, Comfort, and Expression of Opinion				
V. Facilitative Supervision and Management				
VI. Information, Training, and Development				
VII. Supplies, Equipment, and Infrastructure				

CHAPTER 3
EMOC CLIENT/FAMILY INTERVIEW

PURPOSE AND DESCRIPTION

The purpose of this interview is to capture aspects of EmOC clients' experience (or that of their families) in your facility from their perspective, including both the things they liked and the things they did not. The instrument consists of a list of 22 questions organized according to the clients' component of the Rights Framework for Quality Emergency Obstetric Care.

WHEN TO CONDUCT CLIENT INTERVIEWS

Client interviews can be conducted periodically throughout the year. Arrange an appropriate time interval—perhaps every three months—to meet and talk with your clients through these interviews. Interviews can all be conducted on one particular day or spread out over the course of a week.

ESTIMATED TIME

A reasonable estimate is 10 to 20 minutes per interview, but this time frame is highly flexible, depending upon the individual client.

PREPARATION REQUIRED

Review and adapt the questions as appropriate to your facility and to the client you are interviewing.

Interviewers

Any member of staff may potentially conduct interviews. However, conducting client interviews can sometimes be a challenge. Often clients wish to tell staff only good things, and it takes some skill to bring out suggestions they may have, things they did not like, or stories of what went wrong for them. Active listening skills—demonstrating interest, empathy, patience, and understanding—are your best aids in obtaining the fullest picture possible. Therefore, identify staff members who have strong active listening skills to carry out the interviews.

- ***Important note:*** Please remember that women who require EmOC may have had physically and emotionally traumatic experiences. It is important for interviewers to be aware of, and sensitive to, the outcomes of their visit and to adapt or not ask questions when appropriate. (For example, if a baby died during childbirth, the interviewer should be prepared for the mother to be highly emotional and to spend more time with her if she needs it.)

Client Selection

It is important that, where possible, the clients interviewed reflect the different types of client and medical conditions seen in the EmOC services at the facility. When selecting clients for interviews, take into consideration women from different ethnic or language groups, primiparous and multiparous women, a range of obstetric complications, whether clients arrived in an

emergency state or whether complications developed while in the hospital, etc. Making an effort to interview different types of clients will provide a more realistic assessment of services provided from the clients' point of view.

USING THIS TOOL IN THE QI PROCESS

Conducting the Interview: Information Gathering and Analysis

- ***Pick a time*** when the client and/or her family members are not under stress.
- ***Ensure privacy*** as much as possible. This demonstrates respect for the client; in addition, answers will generally be more forthright if the client feels other staff or clients are not listening.
- ***Introduce yourself*** to the client.
- ***Explain the purpose*** of the interview. You want to find out how the client feels about the services offered at the facility and to get her suggestions about how services might be improved.
- ***Stress*** that this interview is *confidential*. The client's name is not needed and will not be used.
- ***Tell the client*** that she has the right not to participate in the interview if she does not wish to. If there is any question she does not want to answer, she does not have to.
- ***Engage the client/family member*** in conversation. It is not necessary to ask every question exactly as written. Try to use open-ended questions, like those beginning with: "How?" and "Why?" Use probing questions, like: "Can you please explain that?" or "Tell me more. How do you feel about that?"
- ***Write down*** any additional information the client gives to you even if it is not covered by the questions.
- ***Thank the client*** for her help.

Developing an Action Plan

If the client brings up problems about the facility that you think the team should address, bring them to your next action plan meeting to write into your action plan. These can be either concrete problems or those that, in your view, are problems of perception. Problems of perception can influence client satisfaction and willingness to return to your facility as much as "actual" problems. But remember, clients will also tell you good things about your services, and these should be recorded as well.

- Discuss with staff what the root cause of the problems or issues identified might be and identify a solution for each root cause.
- During the action plan meeting, discuss your thoughts about the root causes and potential solutions with others.
- Prepare an action plan using the standard format.

Implementing Solutions, Evaluating Progress, and Following Up

The action plan serves as the guide for implementing solutions and should be reviewed during staff meetings to check on progress. During the follow-up action plan meeting, staff review and evaluate progress and make plans to repeat particular assessments as discussions reveal the need for further information gathering and analysis.

EMOC CLIENT/FAMILY INTERVIEW FORM

(Note: These questions are written to be asked directly of EmOC clients. Interviewers should modify them as appropriate for family members.)

1. What was the medical problem that brought you to this facility? What happened to you before you came to here?

2. What made you come to this particular facility?

3. How did you get here? (What means of transport did you use?)

4. What happened from the time you first arrived at the hospital gate to the time you first saw a nurse, clinical officer, or doctor?

5. How long did you wait before seeing a doctor, clinical officer, or nurse for the first time? _____
   (a) Do you think this wait was acceptable or too long?
   Acceptable _____ Too long _____
   (b) If it was too long, please explain.

6. After you saw a doctor, clinical officer, or nurse for the first time, how long did you wait before someone gave you medical treatment for the problem? _____
   (a) Do you think this wait was acceptable or too long?
   Acceptable _____ Too long _____

   (b) If it was too long, please explain.

7. When you were being examined, did the doctor, clinical officer, or nurse explain to you what he or she was doing and why?

8. Do you feel you received enough information about your condition and about what the doctor, clinical officer, or nurse was doing?

   Yes _____ No _____

   (a) If not, what did you want to know that nobody told you?

9. Have you been given information about what to do once you leave the facility regarding

   (a) How to take care of yourself at home?

   Yes _____ No _____

   (b) What to do if your condition gets worse?

   Yes _____ No _____

   (c) What follow-up is needed (e.g., when to return to a facility and where to go)?

   Yes _____ No _____

10. Were the medications and supplies you needed available at the facility?

    Yes _____ No _____

    (a) If not, what happened? Did this delay your treatment at all?

11. Do you find this facility

    Clean? Yes _____ No _____

    Welcoming? Yes _____ No _____

12. Do you feel your privacy was respected by the staff?

    Yes _____ No _____

    Please explain:

13. Were you given something for pain if you needed it?

    Yes _____ No _____

14. How did the facility staff treat you? Please explain.

15. How were family members and others accompanying you to the hospital treated? Please explain.

16. Did you feel the staff respected your opinions? Did the staff listen to your suggestions or opinions if you made them? Please explain.

17. Could you have refused treatment if you decided you didn't want it?

18. Are you satisfied with the care you received? Please explain.

19. What do you like best about this hospital?

20. What suggestions do you have for improvement?

21. Is there anything else you'd like us to know about your experience here?

22. Is there anything else you'd like to know about your care?

CHAPTER 4
EMOC REGISTERS AND RECORDS REVIEW

PURPOSE AND DESCRIPTION

Completed registers and records are important to improving quality of service because they provide the basis for monitoring client care, tracking utilization, service delivery, and medical statistics, and for facilitating case review. The purpose of the registers and records review is to help the team that conducts the review to evaluate the current status of facility registers and client records for completeness in recording EmOC information, to identify areas for improvement, and to develop an action plan to implement solutions. Specifically, this review will help team members to:

- Identify register or record types necessary to capture complete information on clients with obstetric complications and emergencies (see examples below)
- Identify categories of essential information that need to be added to existing registers or records
- Identify registers and records not filled out correctly, completely, or in a timely fashion
- Use the four steps in the QI process to gather information, find and implement solutions to problems, and to review progress on improvements

This tool includes forms and guidance for reviewing:

- Facility registers (those that include EmOC information)
- Individual client records
- Death reports
- Statistics register

The tool also provides general guidance about how to fit this information into the QI process.

A registers and records review can be done in conjunction with the initial EmOC assessment; also, if registers and records are identified as a problem during any assessment or during a medical monitoring visit, a review can be done at any time.

Registers and records should be reviewed at least once a year. The EmOC team members should do this more frequently if other assessments identify the need. The team can choose to review one of the facility registers or client records in rotation every two months as part of routine staff meetings.

REGISTERS AND RECORDS: WHAT'S NEEDED FOR QI

The sources of EmOC information vary from facility to facility. The types of registers and client records to consider for review are:

- *Labor and delivery register:* information on each client admitted to labor and delivery
- *Maternity ward register:* information on each client admitted with antepartum and postpartum complications

- *Female ward register:* information on each client admitted with postabortion complications and ectopic pregnancy, including a column to indicate if any client is currently pregnant or was pregnant within the past 42 days
- *Operating room register:* information on each client who undergoes a procedure, including a column to indicate if the client is currently pregnant or was pregnant within the past 42 days
- *Emergency-evaluation area register* (i.e., emergency room, treatment room): information on each client admitted with postabortion complications or ectopic pregnancy, including a column to indicate if the client is currently pregnant or was pregnant within the past 42 days
- *Client record:* an individual record for each client, including those with ectopic pregnancy, abortion complication, postpartum admission, or any other obstetric complications.
- *Death report:* a record for any client who dies within the facility. This death report should have a specific space to indicate whether or not the client was pregnant at the time of death or within 42 days of death. This indication enables the capture of "maternal death," which is defined as death occurring within 42 days of the termination of a pregnancy.

Medical monitoring, case review, and tracking of statistics depend heavily on the quality of information found in registers and client records. Taken together, these documents, therefore, need to provide at a minimum:

- The client history, physical exam, and diagnosis
- The course of hospital visit, including procedures, treatment, and condition (at least daily and at discharge)

…for **all** clients who:

- Are pregnant or were pregnant within the last 42 days seen in the emergency room, operating room, or female/maternity ward; and discharged
- Have a diagnosis of ectopic pregnancy or abortion complication
- Are admitted with a postpartum complication, such as sepsis or retained placenta
- Are admitted antepartum but not in labor
- Are admitted for normal labor and delivery or a complication in labor or delivery

The quality of these data will profoundly affect the efficacy of medical monitoring, tracking statistics, and case reviews and their contribution to the QI of EmOC services.

In conjunction with this review of specific registers and records, facility management might also review the facility's system of client information recording as a whole, as well as consider reorganizing it to capture all EmOC-relevant information more efficiently. The WHO recommends **one** "maternity register," for example, as the source of all information on obstetric complications and maternal death—from admission to discharge—including such key events as delivery, ectopic pregnancy, and abortion complications. It is beyond the scope of this tool to address these larger, health information system issues; however, if team members feel systems changes are desirable, the team leader should bring these ideas to the attention of appropriate people in the health system.

PREPARING FOR REGISTER AND RECORDS REVIEW

Instructions for the Team Leader or Review Organizer

- ***Select participants:*** The team to conduct this review should include medical and supervisory staff, as well as staff who:
  - Keep registers, records, or logs
  - Admit clients (in the emergency room, labor and delivery rooms, female/maternity wards)
  - Maintain the record room
  - Maintain statistics
  - Conduct case reviews
- ***Read*** through the instructions on how to conduct the review and be familiar with the questions on each form.
- ***Determine*** which facility registers (such as labor and delivery, female/maternity ward, operating room) will need to be reviewed to capture information on the clients from different departments listed above.
- ***Make copies*** of the review forms for the team.
- ***Decide on a date to conduct the review.*** Consult with site management to determine a time when the review is least likely to disrupt services. Have a plan to cover emergencies while staff are conducting the review.
- ***Inform the review team*** of the time and place for the initial meeting and the amount of time they should expect to participate in this process.
- ***Organize times and places*** for the following meetings:
  - A *preparatory meeting* (30 minutes) to go over with the team the instructions for the review.
  - The *information gathering and analysis* meetings where team members actually conduct the review itself and analyze the findings. These meetings may take place over the course of one or two days if several different registers are being assessed, or one or two registers could be assessed every few months.
  - An *action plan development meeting* (two hours) to review the findings from the review and to integrate them into an overall action plan.
  - A *debriefing for site management* on the findings and the action plan developed.
- ***Review*** how to facilitate meetings as described in Chapter 4 of the QI Leadership Manual.
- ***Ensure seating arrangements*** are comfortable and allow for maximum participation at all meetings.
- ***Prepare flipcharts*** required for explaining the registers and records review, and cover them up until they are needed in the discussion. Collect other supplies as needed.
- ***Conduct the preparatory meeting***
  - *Advise staff* of the purpose of the registers and records review and why they were selected to conduct it.
  - *Explain how* they will conduct the review.
  - *Review samples* of each register and record type to be reviewed and discuss the important elements to look for and why they are important.
  - *Demonstrate how to fill out* review forms by using sample registers and records.
  - *Review where to access* registers and records (in the record room or client-care area).

– *Divide staff into preassigned groups*, divide the records and registers among the groups, and advise them of the assessment timeline.
– *Discuss* how and when they will analyze their findings.
– *Answer* any questions.

USING THIS TOOL IN THE QI PROCESS

Conducting the Review: Information Gathering and Analysis

Instructions for Staff

- ***Follow instructions*** included in the review form for the register or record type selected.
- ***Fill out*** the appropriate review form.
- ***Calculate the percentage*** of client record or register entries that are complete for each row of information, for each facility register or client record reviewed. For example, if 20 client entries are reviewed in a facility register, and 14 are complete for name and address, then 70% are considered complete for this information. Although the aim is to have 100% complete in the initial review, staff may choose to focus on items completed at a lower percentage decided by staff (80%, for example).
- ***Share findings*** with other staff members and begin to analyze the root causes during the initial analysis. They should focus on incomplete registers and records, on specific pieces of information within the registers or records that are below the decided cutoff, and on missing categories of information. For each deficiency found, staff should
  - *Discuss* the importance of the particular missing information
  - *Try to identify the root cause* of the missing information by asking "multiple whys" (see Chapter 3 of the QI Leadership Manual.)
  - *Brainstorm* and identify potential solutions.
- ***Use the action plan format*** below (Figure 10) to record the preliminary problem analysis. Discuss problems, find root causes, and identify solutions. Bring the draft action plan to the next action plan meeting.

Developing an Action Plan

- The ***small working groups*** that conducted the review ***present their draft action plan*** to the overall action plan meeting for discussion. The larger group may have useful suggestions or findings from other assessment tools to integrate into the action plan. Problems and/or resources from other departments may also influence solutions.
- ***Find a solution*** for each root cause of a problem identified.
- ***Prioritize solutions,*** taking into consideration such issues as client and/or staff safety and the ease with which a solution can be carried out using existing resources.
- ***Assign a person*** responsible for implementation and completion dates that reflect each item's priority. These steps are described in detail in Chapter 3 of the QI Leadership Manual.

Figure 10 shows a sample action plan drawn from a review of registers and records that would be integrated into the overall action plan for improving EmOC services.

Figure 10: Sample Action Plan from a Records Review

Problem	Root Cause(s)	Solution(s)	By Whom	By When	Status
Complication column isn't filled out in Labor and Delivery Register.	• Client record isn't filled out. • Staff don't know how to keep register. • Staff don't see utility of information from register.	• Orient staff on how to fill in registers and records correctly. • Do monthly analysis of obstetric complications from register • Discuss in staff meeting. • Orient newly hired staff. • Conduct record reviews once a month.	• Head nurse maternity • Team leader	Next month (Dec. 15) Start next month: (Dec. 21)	

Implementing Solutions

- ***Implement solutions*** as agreed upon in the action plan. Suggestions for facilitating implementation are in Chapters 3 and 4of the QI Leadership Manual.
- The team leader or QI committee members can periodically ***check in with staff*** assigned to a particular intervention on the action plan to determine their progress and provide support as needed.

Evaluating Progress and Following Up

- ***Review the findings*** from previous registers and records reviews to determine if there has been improvement. If yes, then celebrate! If not, then begin the problem analysis and action plan steps again.
- ***Review the action plan*** during routine staff meetings to determine progress and to discuss any modifications or additional support needed.
- During these meetings, ***decide on further information gathering needed,*** and repeat or use different assessment tools as appropriate.

FACILITY REGISTER REVIEW FORM

Review any register that captures information on the following type of client:

- Is pregnant or was pregnant within the last 42 days, seen in the emergency room, and discharged
- With diagnosis of ectopic pregnancy
- With diagnosis of postabortion complication
- With a postpartum admission (e.g., sepsis, retained placenta)
- With an antepartum admission who is not in labor
- With admission for a complication in labor or delivery
- With admission for normal labor and delivery

Instructions

1. At the top of the Facility Register Review Form, indicate which register (e.g., labor and delivery, female/maternity ward, emergency room) is being reviewed.
2. Fill out a separate Facility Register Review Form for each type of facility register reviewed.
3. You will be reviewing 20 entries overall, 10 each in two quarter-years.
   On initial review:
   - Select one sample page for the first and third quarters of the preceding year—for example, the fifth day of the third month and the fifth day of the ninth month.
   - Review the first 10 obstetric entries on each page. Make a note of which pages were reviewed by entering the date(s) on the form next to "Item recorded for."
4. On subsequent reviews:
   - Select one sample page for each quarter since the last review.
   - Review the first 10 entries on each page. Make a note of which pages were reviewed by entering the date(s) on the form next to "Item recorded for."
5. Check to see if the information listed in the form is filled out completely for **each** of the 10 clients per page, and put a "tick" mark (or ✓) if it is.
6. If the information is not filled out (*including if the information is only partially filled out*), put a "Ø".
7. For all information not completed (or for all Ø 's), enter comments in the "Remarks" column. For items that are partially complete, specify what is missing in the "Remarks" column.
8. Calculate the number of "ticks" (or ✓'s) for the total out of 20 for each row for analysis.
9. Calculate the % complete by multiplying the total out of 20 by 5. For example, if 20 client entries are reviewed in a facility register and 14 are complete for name and address, then 14 x 5 = 70% are complete for this information.
10. Analyze the registers from different areas separately.

Facility Register Review Form

Register type: _____ **(e.g., labor and delivery, female/maternity ward, emergency)**													
Item recorded for: _____(date)	**First Quarter First 10 Entries**												
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**			**Remarks**
Client information (name, address, age, record number)													
Date and time of admission													
Diagnosis on admission													
Date and time of any treatment or procedure (including delivery type)													
Complications either noted or stated as "none"*													
Client outcome (discharged stable or transferred to ward/recovery)													
Baby outcome if delivery (live birth, still birth, birth injury, infection)													
Attendant's name/initials (if delivery)													
Item recorded for: _____(date)	**Third Quarter First 10 Entries**												
	11	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**Total /20**	**% com-plete**	**Remarks**
Client information (name, address, age, record number)													
Date and time of admission													
Diagnosis on admission													
Date and time of any treatment or procedure (including delivery type)													
Complications either noted or stated as "none"*													
Client condition (discharged stable or transferred to ward/recovery)													
Baby outcome if delivery (live birth, still birth, birth injury, infection)													
Attendant's name/initials (if delivery)													

Individual register specifications:
Female/maternity ward: Register ***must*** include a column to indicate if any client is currently pregnant or was pregnant within the past 42 days.
Operating room: Register ***must*** include a column to indicate if the client is currently pregnant or was pregnant within the past 42 days.
Emergency-evaluation area: Register ***must*** include a column to indicate if the client is currently pregnant or was pregnant within the past 42 days.

* To receive a "✓", item *must* be filled out; a blank space is not sufficient evidence that there was no complication.

CLIENT RECORD REVIEW FORM

Client records for the following clients should be reviewed:

- Is pregnant or was pregnant within the last 42 days, seen in the emergency room, and discharged
- With diagnosis of ectopic pregnancy
- With diagnosis of abortion complication
- With a postpartum admission (e.g., sepsis, retained placenta)
- With an antepartum admission who is not in labor
- With admission for a complication in labor or delivery
- With admission for normal labor and delivery

Instructions

1. Randomly select 30 clients from the facility registers distributed over the past 12 months (or since the last record and register review). Make an attempt to choose at least one client from each category listed above.
2. Note the client record number and name and information needed to locate the client records.
3. Pull the first 20 client records you can find easily for review.
4. Review records and fill out the Client Record Review Form. Review records in a quiet area where the group can sit.
5. Check to see if the information listed in the form is filled out completely for **each** of the 20 clients, and put a tick mark (or ✓) if it is.
6. If the information is not filled out (*including if the information is only partially filled out*), put a "Ø".
7. For all information not completed (or for all Ø's), enter comments in the "Remarks" column. For items that are partially complete, specify what is missing in the "Remarks" column.
8. For each row, calculate the number of "ticks" (or ✓'s) out of the total number of records reviewed (20).
9. Calculate the % complete by multiplying the total out of 20 by 5.
10. For example, if 20 client records are reviewed in a facility register and 12 are complete for "diagnosis on admission", then 12 x 5 = 60% are complete for this information.

Client Record Review Form												
RECORDS 1–10	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**Total /10**	**Remarks**
Admission/discharge information												
Date and time of admission												
Diagnosis on admission (e.g., normal labor, eclampsia, infection)												
Vital signs on admission (blood pressure/ pulse/temperature)												
Date and time of procedure, treatment, delivery												
Date and time of discharge												
For complications												
Diagnosis (i.e., eclampsia, hemorrhage, postabortion complications, sepsis, or obstructed/prolonged labor)												
Diagnosis time												
Treatment												
Treatment start time												
For labor client												
Vaginal exam details every four hours												
Fetal heart beats												
Completed partograph												
Mode of delivery												
Birth weight												
Baby's condition												
Qualification of attendant at delivery (e.g., doctor, nurse, midwife, traditional birth attendant [TBA], family member, other)												
Medications (name, dose) used—written legibly												
For cesarean section, blood transfusion, uterine evacuation, laparotomy												
Start time and end time of procedure												
Complications during procedure												
Medications (name, dose) used—written legibly												
Informed consent signed by client and doctor (Note: This may not be done in emergencies—if so enter "not applicable" or "N/A.")												

continued

Client Record Review Form *(continued)*

Client Record Review Form												
RECORDS 11–20	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**Total /20**	**Remarks**
Admission/discharge information												
Date and time of admission												
Diagnosis on admission (e.g., normal labor, eclampsia, infection)												
Vital signs on admission (blood pressure/ pulse/temperature)												
Date and time of procedure, treatment, delivery												
Date and time of discharge												
For complications												
Diagnosis (i.e., eclampsia, hemorrhage, postabortion complications, sepsis, or obstructed/prolonged labor)												
Diagnosis time												
Treatment												
Treatment start time												
For labor client												
Vaginal exam details every four hours												
Fetal heart beats												
Completed partograph												
Mode of delivery												
Birth weight												
Baby's condition												
Qualification of attendant at delivery (e.g., doctor, nurse, midwife, traditional birth attendant [TBA], family member, other)												
Medications (name, dose) used—written legibly												
For cesarean section, blood transfusion, uterine evacuation, laparotomy												
Start time and end time of procedure												
Complications during procedure												
Medications (name, dose) used—written legibly												
Informed consent signed by client and doctor (Note: This may not be done in emergencies—if so enter "not applicable" or "N/A.")												

DEATH REPORT REVIEW FORM

Death reports should be completed for any client who dies within the facility. This death report should have a specific space to indicate whether or not the client was pregnant at the time of death or within 42 days of death. Since maternal deaths are often missed due to nonspecific diagnoses, such as "vaginal bleeding," this indication enables the capture of "maternal death," which is defined as death occurring within 42 days of the termination of a pregnancy.

Instructions

1. Select all death reports of pregnant or recently pregnant female clients in the facility over the past year.
2. Review each death report for the presence of the information in the form below. Put a "tick" mark (or ✓) if the item is completed on the death report.
3. If the item is not completed (*including if the information is only partially complete*), put a "Ø".
4. For all items not completed (or for all Ø's), enter comments in the "Remarks" column. For items that are partially complete, specify what is missing in the "Remarks" column.
5. Fill out one sheet for every 10 death reports reviewed.
6. Use the "Comments" section for any additional notes about individual cases that you think are relevant for your discussions.

Death Report Review Form											
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**Remarks**
Name and record number of client											
Noted if client was pregnant at time of death or within past 42 days											
Cause of maternal death (i.e., eclampsia, hemorrhage, postabortion complications, sepsis, or obstructed/prolonged labor)											
Neonatal outcome											
Autopsy result or note that autopsy refused (if autopsy available to facility)											
Reported to national level (if required, or put "not applicable" or "N/A")											
Case reviewed by staff											

Comments:

STATISTICS REGISTER REVIEW FORM

Service statistics showing monthly totals for deliveries, cesarean sections, etc., are gathered for review. Statistics are important for following the utilization of services and also the quality of care. They should be shared and discussed with staff. It may also be useful to present some key statistics in graph form and to post these visual representations in a place where staff can review them.

Instructions

1. For the five statistics mentioned in the Key Statistics Register Review Form below (i.e., total number of births; number of cesarean sections; total number of complications; total number of maternal deaths; and number of early neonatal deaths and stillbirths), note if they are:
   - *Tracked* and recorded on a monthly basis
   - *Presented as a graph* showing progress over time
   - *Posted* in a place where staff can review them
   - *Discussed* periodically at staff meetings to celebrate successes or to determine if action is needed to correct any problems

Note: Staff may also graph and post additional locally relevant statistics; those listed in the key statistics register review tool are meant to serve as an example of important statistics for which posting in graph form may prove useful.

2. For each set of statistics mentioned in the comprehensive statistics register review tool below, note if they are:
   - *Tracked* and recorded on a monthly basis
   - *Discussed* periodically at staff meetings to celebrate successes or to determine if action is needed to correct any problems

In using the tool below, note the following marks:

- "*" marks those statistics that should be followed in all facilities, regardless of level.
- "#" marks those statistics that should be followed in all facilities where the procedures are performed.

Key Statistics Register Review Form					
	Tracked	**Graphed**	**Posted**	**Discussed**	**Remarks**
*Total number of deliveries					
# Number of cesarean sections					
*Total number of complications**					
*Total number of maternal deaths					
*Number of early neonatal deaths and stillbirths					

Comprehensive Statistics Register Review Form			
	Tracked	**Discussed**	**Remarks**
General			
*Total number of deliveries			
* Number of maternal deaths *by cause*			
* Number of clients referred to another facility for pregnancy-related complications			
Complications			
Number of cases of hemorrhage (antepartum and postpartum)			
Number of cases of pregnancy-induced hypertension (pre-eclampsia and eclampsia)			
Number of cases of prolonged/obstructed labor			
Number of cases of ruptured uterus			
Number of cases of postpartum sepsis			
Number of postabortion complications			
Number of cases of ectopic pregnancy			
# Number of surgical complications (organ trauma)			
* Number of still births (fresh and macerated)			
* Number of early neonatal deaths			
Procedures			
* Number of assisted vaginal deliveries (breech, vacuum extraction, and forceps)			
# Number of cesarean sections			
# Number of manual removal of placentas			
# Number of postpartum hysterectomies			
# Number of repair of cervical tears			
# Number of uterine evacuation procedures (MVA and D&C)			
# Number of salpingectomies for ectopic pregnancy			
# Number of blood transfusions related to pregnancy			
Infections			
# Number of infections of abdominal incision			
# Number of infections of the bladder (catheter-related) or intravenous (IV) site			

** Includes the five major complications of pregnancy: eclampsia, hemorrhage, postabortion complications, sepsis, and obstructed labor.
* = statistics that should be followed in all facilities, regardless of level
# = statistics that should be followed in all facilities where the procedures are performed

CHAPTER 5
CLIENT FLOW ANALYSIS FOR EMOC

PURPOSE AND DESCRIPTION

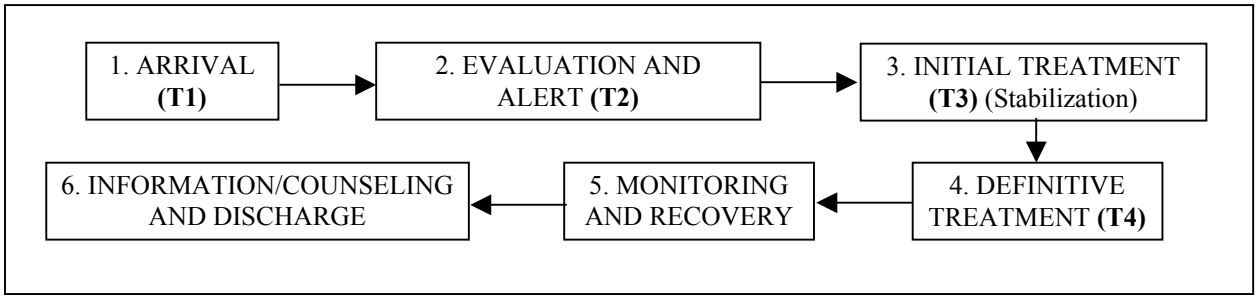
The purpose of client flow analysis (CFA) for EmOC is to gather information about care for pregnant clients with complications in order to eliminate or reduce delays in receiving care. The aim is for **all** clients to be quickly evaluated to determine if they have an emergency, and, if an emergency is identified, to proceed to stabilize the client and provide definitive treatment as soon as possible. This exercise builds on the steps of care staff defined in the introductory workshop.

This tool enables you to track the time between arrival[1] (T1) and evaluation (T2) for all clients. For clients with complications (such as those who arrive in an unstable condition or need immediate treatment), this tool also tracks the times between evaluation and *initial treatment* (T3) and between initial treatment and *definitive treatment* (T4). See Figure 11 for a summary of the steps of care for an EmOC client and Figure 12 for a definition of initial and definitive treatment. The result for each client is analyzed. Staff can use information from the CFA to identify delays in care for clients with complications or emergencies. The CFA also helps identify the physical locations of any delays and times during the day when problems are most likely to occur.

The time between arrival (T1) and evaluation (T2) should be less than 15 minutes. For clients with complications, the time between evaluation (T2) and initial treatment (T3) should be within 30 minutes. The time between evaluation (T2) and definitive treatment (T4) should be within two hours.

Note: Depending both upon how comprehensive staff want this analysis to be and on what type of information your facility would like to gather, there are a number of ways that the CFA can be used. For instance, while it is recommended that staff track the time between all steps of care in order to best determine all delays, given time constraints or other factors, staff may choose to track the time between only certain steps of care (e.g., between clients' arrival (T1), evaluation (T2), and initial treatment (T3)). The CFA may be conducted on one particular day or spread out over the course of a week. In general, conducting this exercise may also help to reveal gaps in staff's recording of interventions, and may serve to improve case-record note taking.

Figure 11: Critical Steps in Caring for an EmOC Client



[1] For the purpose of the CFA, "arrival" refers to arrival at the reception/registration area for the emergency evaluation.

The tool includes a CFA Client Data Form, a CFA Summary Table, and CFA graphs to facilitate the collection and analysis of data regarding the times between arrival, evaluation, initial treatment, and definitive treatment. (The forms and sample graphs are at the end of this chapter.)

ESTIMATED TIME FRAME

The preparatory meeting should take about one hour. To do this exercise, you should be ready to monitor client flow over a 24-hour period, so you will need to plan well in advance to do this.[2] This is important to ensure that client flow is tracked at different times during the day because of the nature of the services. The action plan meeting should take about two hours.

Figure 12: Definitions of Initial Treatment and Definitive Treatment for EmOC Clients

INITIAL TREATMENT (T3) refers to stabilizing treatment, including:

- Asking/shouting for help
- Intravenous (IV) fluids
- Cardiopulmonary resuscitation (CPR)
- Administering drugs (oxytocin, magnesium sulfate, antibiotic dose)
- Sending lab tests (blood type and cross match, coagulation parameters, hematocrit)
- Alerting providers in labor and delivery
- Preparing for definitive treatment

DEFINITIVE TREATMENT (T4) includes:

- Cesarean section
- Vacuum/forceps delivery
- Hysterectomy
- Laparoscopy
- Uterine evacuation
- Manual placenta removal
- Nonroutine provision of antibiotics, or oxytocin or ergometrine
- Blood transfusion
- Provision of IV fluids
- Laceration repair
- Observation and determined treatment plan

PREPARING FOR THE CFA

The CFA can be a complex process to coordinate, especially over a 24-hour period. It is important, therefore, for the team leader to prepare staff in advance and to keep facility management well informed of the process. Suggested steps follow:

- ***Select participants:*** The participants for the CFA are primarily those who are providers for the clients' care during the first four steps outlined in Figure 11 (though all staff should be informed of the process). This includes staff from reception/registration areas, the emergency room or emergency-evaluation area, as well as staff who initially evaluate

[2] If it is difficult to coordinate the CFA through one consecutive 24-hour period, it is possible that this process could be carried out for each staff shift during a one-week period. For example, if there are three eight-hour shifts in a day, you might conduct CFA for the first shift on Monday, the second shift on Wednesday, and the third shift on Friday. You could conduct an action plan meeting on each shift.

clients, provide initial treatment to stabilize clients, and provide definitive treatment. Staff responsible for recovery and discharge may be included at your discretion.

- ***Select CFA organizers:*** In addition, the facility should appoint CFA organizers. You will need enough organizers to cover the periods when CFA will be done. These individuals should be people who are not involved in EmOC and can devote some time to ensure that blank copies of the CFA Client Data Form are available for staff, that staff are filling out the forms correctly, and that all staff are wearing synchronized watches.
- ***Read*** through the instructions on how to conduct the CFA and familiarize yourself with the tools.
- ***Determine*** what data will be collected. It is suggested that for the first CFA, you gather data only for all clients from the time of arrival at the reception/registration or the emergency evaluation area (T1) to the time evaluation begins (T2). After six months, perform a complete CFA. This includes T1 and T2 as above, and for clients with complications includes the time initial treatment begins (T3) and the time definitive treatment begins (T4).
- ***Organize the materials required:*** You will need the toolbook with these instructions on how to do the CFA, sufficient copies of the Client Data Form available for each client over a 24-hour period, the CFA Summary Table on large flipchart paper, and sample CFA graphs on large flipchart paper. You will also need pens or pencils, graphed flipchart paper or plain flipchart paper and a ruler, markers, and a calculator.
- ***Review the general guidance*** on how to facilitate meetings and the QI process in the QI Leadership Manual.
- ***Decide on dates and times*** to conduct the assessment by consulting with site management and selected clinical and support staff. The CFA should assess services over a full, consecutive 24-hour period.
- ***Inform participants*** of the time and place for the initial meeting and the amount of time they should expect to participate in this process.
- ***Place a "drop box"*** in each area needed for staff to place the completed CFA Client Data Forms.
- ***Organize the following meetings:***
  - **A preparatory meeting** (two hours) to review the instructions on how to do this with staff. You can include more staff than will participate in the CFA in this meeting if you think it will be helpful for other staff to know what is happening. During this meeting, you will describe the purpose of the CFA to participants and explain how and when it is to be conducted, indicating which data are being collected in this particular activity (T1 and T2 only, or T1, T2, T3, and T4). Review with participants the definitions of "initial treatment" and "definitive treatment" (see Figure 12 above) for clients with complications. Review the forms to be completed, using the sample filled-in forms. Show staff the location of the "drop boxes." A group of volunteers should collect all forms, fill out a summary form, and draw a graph, to be presented at the action plan meeting.
  - **An action plan meeting** (two hours) to review the findings from the CFA and to prepare an action plan. This meeting should include the staff who participated in the CFA only.
  - **A debriefing** for the QI Committee or site management on the findings and the action plan developed.

USING THIS TOOL IN THE QI PROCESS

Using the Client Data Form: Information Gathering and Analysis

- Synchronize the watches of everyone participating in the CFA with the facility clock. Instruct participants that by the end of 24 hours, all clients who have been given a client number should have been followed to completion. Ask staff to note any difficulties they encounter in filling out the forms.

For All Clients:

- Data is collected for all clients in labor, with complaints, with complications, or with an emergency (e.g., hemorrhage, obstructed labor, infection, eclampsia). Pregnant clients coming for antenatal care or other services are excluded.
- T1: A designated person in the reception/registration area for emergency evaluation notes the date, client name and code letter, and time of arrival (T1) on a blank CFA Client Data Form (see end of this chapter). This is given to the client or included with the client's record if one is started.
- T2: The initial evaluator notes the start time of the evaluation (T2), complaint/ diagnosis using the client code (see Figure 13), any treatment, and staff initials. The comment section should be used to provide a brief explanation of any delays beyond the times noted at the beginning of these instructions (e.g., locked drug cabinet, missing on-call roster, unavailable staff, unavailable room, equipment).
- For clients in labor or without complication, Client Data Forms are completed for T1 and T2. The staff member completes these forms by writing "no" in the "Complications" column and "X" through all remaining spaces and then places the forms in the "drop box." Only clients with complications will be tracked for the initial treatment (T3) and/or definitive treatment (T4).

For Clients with Complications:

- *T3:* The provider in charge of initial treatment notes the *start time* (T3) of the initial treatment and the time of service completion. The provider also notes treatment provided and adds his or her initials (see Figure 13).
- *T4:* The provider in charge of definitive treatment notes the *start time* (T3) of the definitive treatment and the time of service completion. The provider also notes treatment provided and adds his or her initials (see Figure 13).
- The comment section should be used to provide a brief explanation of any delays beyond the standards noted at the beginning of these instructions (e.g., locked drug cabinet, missing on-call roster, unavailable staff, unavailable room, equipment).

Figure 13: Sample Client Data Form

CFA Client Data Form				
Client Code: **L=Labor, H=Hemorrhage, O=Obstructed labor, I=Infection, E=Eclampsia, X=Other (please specify)**				
Name: S. Polly **Date:** October 17, 2003 **Client Number (1, 2, 3, etc.)**: _____				
	Start Time	**Finish Time**	**Client Code/ Treatment**	**Staff Initials**
Arrival at Reception/Registration for Emergency Evaluation	**T1** *8:00 a.m.*			SP
Initial Evaluation	**T2** *8:12 a.m.*	*8:20 a.m.*	Client code: *X-placenta retained*	*KB*
Initial Treatment	***T3*** *9:22 a.m.*	*9: 40 a.m.*	Treatment: *IV fluids*	*CC*
Definitive Treatment	***T4*** *9:52 a.m.*	*10:30 a.m.*	Treatment: *Manual placenta removal*	*AS*
Comments: *IV fluids were delayed because there was no IV set in the area.*				

Preparing the CFA Summary Table: Information Gathering and Analysis

Preparing a CFA summary table will enable you to tabulate and calculate times between services (arrival, evaluation, initial treatment, definitive treatment).

- Once the CFA Client Data Forms (see Figure 13) for each client are collected, use them to calculate the times between service points by subtraction. (This activity may occur on the following day). This information is filled in the CFA Summary Table (see Figure 14).
- Once the information gathering is completed, staff prepares one master copy of the CFA Summary Table for the analysis and for the on-site supervisor/team leader to keep for future reference.

Figure 14: Sample CFA Summary Table

CFA Summary Table								
	Arrival	Evaluation		Complication Yes/No	Initial Treatment		Definitive Treatment	
	T1 Arrival Time	T2 Start	T2-T1		T3 Start	T3-T2	T4 Start	T4-T2
Client 1	8 a.m.	8:12 a.m.	12 min	yes	9:22 a.m.	70 min	9:52 a.m.	100 min
Client 2	10:00 a.m.	10:20 a.m.	20 min	no	XX	XX	XX	XX
Client 3	1:00 p.m.	1:45 a.m.	45 min	no	XX	XX	XX	XX
Client 4	8:00 p.m.	8:30 p.m.	30 min	yes	9:50p.m.	80 min	8:10 a.m.	11 hr, 40 min
Client 5	2:30 a.m.	3:30 a.m.	60 min	yes	3:45 a.m.	15 min	9:30 a.m.	6 hr

Preparing Graphs to Aid in Analysis of CFA EmOC Findings

There are three critical time intervals to analyze:

- Time from arrival to evaluation (should be within 15 minutes)
- Time from evaluation to initial treatment (should be within 30 minutes)
- Time from evaluation to definitive treatment (should be within 2 hours)

Use the CFA Summary Table and the Client Data Forms to prepare graphs to assist staff in analyzing the data. Chart client flow according to arrival time (T1). Some of the charts that may be used include:

- *Figure 15: Sample comparing time of arrival to evaluation (T2 – T1) (time from arrival to evaluation at different times of the day)*
- *Figure 16:* Time from evaluation to definitive treatment (T4 – T2) (time from evaluation to definitive treatment at different times of the day)
- *Figure 17:* Individual client flow (charting of the flow of each individual client from arrival to definitive treatment to compare what is happening to all clients at the same time)

Examples of the analysis of these graphs are contained under analysis of data. Blank graph forms for Figures 15, 16, and 17 should be prepared on flipchart paper for the actual analysis conducted at your site.

Figure 15: Sample Comparing Time of Arrival to Evaluation (T2 – T1)

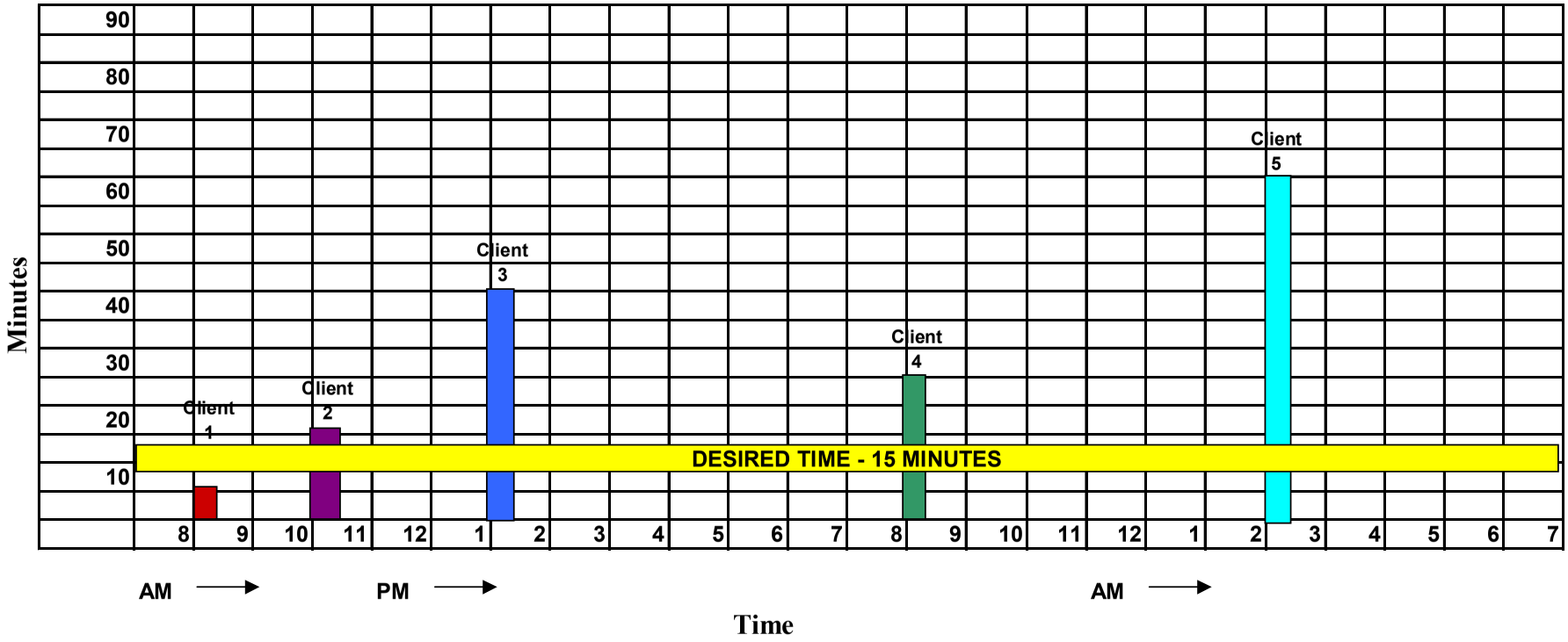


Figure 16: Time from Evaluation to Definitive Treatment (T4 – T2)

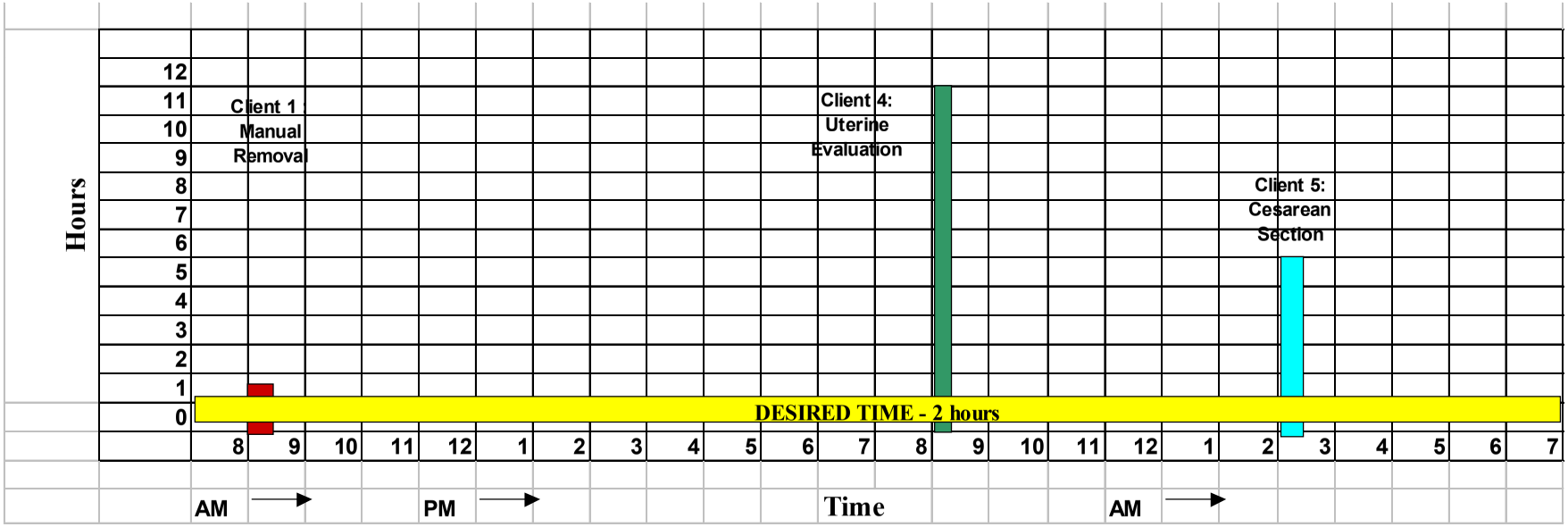
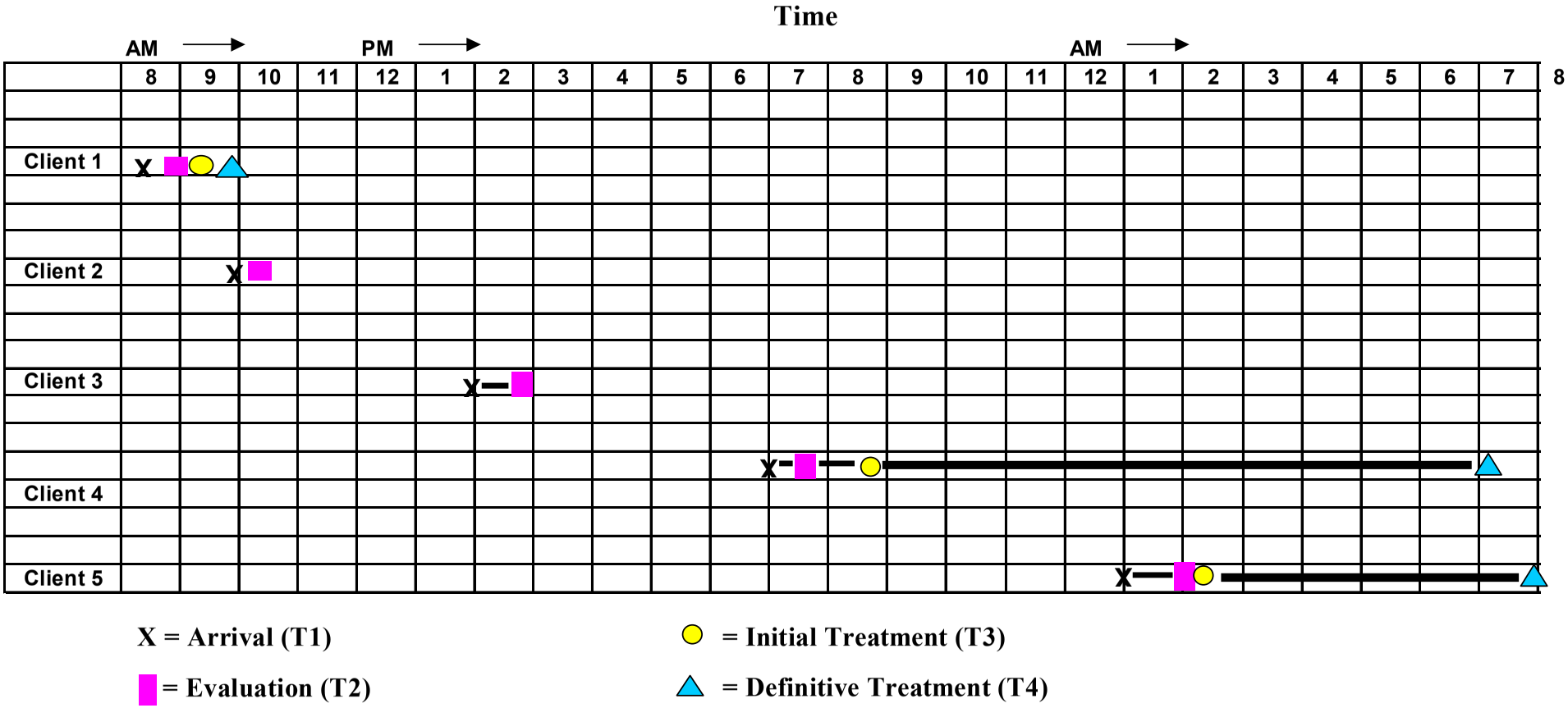


Figure 17: Individual Client Flow



Options:

1. Analyze without graphs. Although it may be visually easier to look at graph data, you may save time by analyzing the data from the Client Summary Table and Client Data Forms directly.
2. Graph clients with different diagnoses in different colors.

Analyzing Data

From the CFA Summary Table, CFA Client Data Forms and the CFA graphs, analyze the time elapsed, the variations between different shifts of the 24-hour period, and the time that is spent on evaluation or treatment.

For delays, the specific Client Data Form should be reviewed to discuss the root cause:

- Are specific procedures often delayed?
- What times of the day do delays occur: around lunch breaks, shift changes, at night?
- Use the "multiple whys" technique (see the introduction to the toolbook) to discuss the root cause of the delays. For example: Was the delay due to shortage of staff with specific skills, lack of clearly assigned duties during specific shifts, or locked equipment and supplies?

Specific data to analyze include

1. **Arrival to evaluation time (T2 – T1): This should be less than 15 minutes.**
   Example: Analysis of the sample CFA graph (see Figure 15) reveals that clients are evaluated within 15 minutes of arrival only in the morning (Client 1 and Client 2). The data for clients who exceed the 15-minute time limit should be analyzed individually. A discussion about why these delays occur could reveal that there are no staff at the reception or evaluation area during the lunch break (accounting for the delay with Client 3) and during the night (accounting for the delay with Client 4 and Client 5). A solution might be for staff to rotate breaks, instead of all staff taking breaks at the same time.

2. **Evaluation to initial treatment time (T3 – T2): This should be less than 30 minutes.**
   Example: Direct analysis of the CFA Summary Table (see Figure 14) shows that there is a delay of 80 minutes for Client 4 at 8 p.m. During the analysis of this CFA Client Data Form, it is found that a dose of antibiotic was delayed because of a locked drug cupboard. Direct analysis of the CFA Summary Table shows that there is a delay if 70 minutes for Client 1 due to the lack of IV infusion sets in the emergency-evaluation area.

3. **Evaluation to definitive treatment time (T4 – T2): This should be less than two hours.**
   Example: Analysis of the sample CFA graph (see Figure 16) or CFA Summary Table (see Figure 14) reveals that clients are not treated within two hours at night (Client 4 and Client 5). Discussion about the cause of this delay could reveal that for the 7 p.m. to 7 a.m. shift, the on-call staff are midwives who have not been trained to perform cesarean section or uterine evacuation. Solutions might include ensuring that on-call staff on the 7 p.m. to 7 a.m. shift have these skills, either by reassigning the duties or by training the midwives to perform cesarean section and uterine evacuation.

4. **Delays occurring due to many clients at one time.**
   Example: Analysis of the sample CFA graph (see Figure 17) shows that Client 4 and Client 5 overlapped while awaiting definitive treatment, creating the need to choose which client to care for first. This chart can be used to discuss how such decisions were made and how they should be made.

Develop a preliminary action plan to address any identified problems. Bring the identified problems to the action plan meeting.

Developing an Action Plan

- ***Develop an action plan*** to address the problems identified through the CFA. This can be done initially in the small assessment teams and then brought together in the final action plan meeting for presentation and discussion. The larger group may have useful suggestions or findings from other assessment tools to integrate into the action plan.

  Team members must find a solution for each root cause of a problem identified. They should prioritize solutions, taking into consideration such issues as client and/or staff safety and the ease with which a solution can be carried out using existing resources. The team would then assign a person responsible for implementation and completion dates that reflect each item's priority. These steps are described in detail in Chapter 3 of the QI Leadership Manual.

  Below is a sample action plan drawn from an EmOC assessment that team members would present to the larger group.

Figure 18: Sample Action Plan

Problem	Root Cause(s)	Solution	By Whom	By When	Status
There is a delay between occurrence of complications in delivery room and arrival of appropriate provider on the scene.	• Staff does not know who is on call. • No duty roster is posted in client-care areas.	Post duty roster in all client-care areas.	F. Castano, administrator	July 30, 2003 (today)	

Implementing Solutions

- ***Implement solutions*** as agreed upon in the action plan. Suggestions for facilitating implementation are in Chapters 3 and 4 of the QI Leadership Manual.
- The team leader can periodically ***check in with staff*** assigned to a particular intervention on the action plan to determine their progress and provide support as needed.

Evaluating Progress and Following Up

- ***Review the action plan*** during routine staff meetings to determine progress and to discuss any modifications or additional support needed.

CFA CLIENT DATA FORM

Client Code: L=Labor, H=Hemorrhage, O=Obstructed labor, I=Infection, E=Eclampsia, X=Other (please specify)				
Name: _____ **Date: _____ Client Number (1, 2, 3, etc.):_____**				
	Start Time	**Finish Time**	**Client Code/Treatment**	**Staff Initials**
Arrival at Reception/Registration for Emergency Evaluation	**T1**			
Initial Evaluation	**T2**			
Initial Treatment	**T3**		**Treatment**	
Definitive Treatment	**T4**		**Treatment**	
Comments:				

CFA SUMMARY TABLE

	Arrival	Evaluation		Complication Yes/No	Initial Treatment		Definitive Treatment	
	T1 Arrival Time	T2 Start	T2 – T1 Elapsed		T3 Start	T3 – T2 Elapsed	T4 Start	T4 – T2 Elapsed
Client 1								
Client 2								
Client 3								
Client 4								
Client 5								
Client 6								
Client 7								
Client 8								
Client 9								
Client 10								
Client 11								
Client 12								
Client 13								
Client 14								
Client 15								
Client 16								
Client 17								
Client 18								
Client 19								
Client 20								
Client 21								
Client 22								
Client 23								
Client 24								
Client 25								

CHAPTER 6
BRIEF CASE REVIEW

PURPOSE AND DESCRIPTION

During case review, staff discuss complicated cases to identify system strengths and to pinpoint ways to improve outcomes by addressing system delays and inefficiencies.

Case reviews are an important part of the QI process, as well as powerful learning tools. Case reviews can help staff identify *system* problems that need to be addressed and offer a forum for constructive problem solving. Case reviews are not meant to place blame on individuals but to show how to better achieve the desired end result, which is to save the lives of EmOC clients and their babies.

Case reviews should be a regular component of staff meetings and can be incorporated into medical monitoring visits when appropriate. The key to integrating case reviews into routine staff meetings is to keep discussions *brief and focused*, limited to 10 to 15 minutes per case, each centered around one or two key issues.

The case review guidelines described below are meant specifically for the "brief case review" that takes place during regular staff meetings. These guidelines are not meant either for comprehensive case studies or for the review of maternal death.

HOW TO SELECT CASES

1. Identify complicated cases as they occur. Diagnoses to be considered for case review include:
   - Postabortion complications
   - Breech presentation
   - Ectopic pregnancy
   - Hemorrhage (antepartum, intrapartum, or postpartum)
   - Hypertensive disease (preeclampsia or eclampsia)
   - Neonate needing resuscitation or special care
   - Obstructed or prolonged labor
   - Retained placenta
   - Ruptured uterus
   - Sepsis, or infection of the uterus, perineum, IV sites, incisions

2. Discuss no more than two cases per meeting. Choose cases that provide the greatest learning potential:
   - Emphasize cases where good management helped to save the client's life and those that illustrate system inefficiencies.
   - Avoid cases with gross mismanagement, especially when it is largely attributable to one staff member. Such cases should be reviewed in private.

CASE REVIEW PRESENTATION

1. For each case, assign a provider to review the case history and prepare the case presentation for the next staff meeting. (See Case Review Form below.)

2. Set aside approximately 10 to 15 minutes per case during the meeting. It is the meeting facilitator's responsibility to keep the discussion focused on the most important issues.

3. In addition to regular meeting attendees (including the maternity staff of nurses, midwives, and doctors) participants could include representatives from other departments, such as pediatrics, anesthesia, or the emergency room, and anyone else connected with the cases to be discussed. Where appropriate, external medical monitors can also participate.

4. The discussion facilitator should be someone other than the provider who presents the case. Usually, the team leader facilitates the discussion. He or she should ensure staff that the case review will not result in punitive measures but will rather help all staff, including supervisors, to learn how their system is handling complications.

5. Case presentations should be brief (less than five minutes long) and should include:
   - History (presenting complaints, diagnosis, and hospital course, including labs and studies)
   - Main procedures and treatment
   - Outcome

6. After each case presentation, the facilitator should lead the discussion to:
   - Identify good management procedures that saved the client's life
   - Identify system problems that need to be addressed (limit to one or two major ones)
   - Analyze those problems, determine root causes, and come up with solutions, as described in the action plan meeting
   - Incorporate those solutions into the facility action plan

CASE REVIEW FORM

Case Review: Summary Sheet

Please ensure that no information is included on this form that could identify an individual client.

History:

- Client's age, obstetric history

- Client's presenting complaints

- Initial diagnosis

- Hospital course, including labs and studies, number of days in the hospital

Main Procedures and Treatment Provided:

Level of staff providing care

Outcome final diagnosis:

Case Review: Discussion Summary Sheet

- Good management procedures that saved the client's life—describe.

- System problems that need to be addressed (limit to one or two major ones)—briefly state.

- Analyze those problems, determine root cases, and come up with solutions using a standard action plan format.

Problem	Root cause	Solution	By whom	By when	Status