Distance Learning System on Population Issues

Course 6

Reducing Maternal Deaths: Selecting Priorities, Tracking Progress

MODULE 3:
Targeting Maternal Deaths through Policies and Programmes

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Module 3
Targeting Maternal Deaths through Policies and Programmes

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Introduction

This is the third and final module of our course on maternal deaths. This module will help you use the Process Indicators to analyse policies and programmes so as to ensure that they target maternal deaths. It will take you about 12 hours to cover the material in these pages.

By the end of this module, you will be able to identify the elements of a Safe Motherhood policy that will contribute to reducing maternal deaths.

You will also be able to assess needs in a country or in a specific area within the country, and to identify the components of programmes to reduce maternal deaths. You will learn how to choose priorities for interventions and to weigh interventions for cost-effectiveness.

In addition, you will learn about the 3 delays that lead to maternal deaths, how to plan the phasing and timing of programmes, and using Process Indicators to monitor your programmes in order to address problems that arise in implementation.

In the two previous modules, I gave you an introduction to the reasons for the continued high numbers of maternal deaths in developing countries (Module 1), as well as indicators to use in assessing progress and problems (Module 2).

In this module, as in the other two modules, I have included a number of self-assessment questions (SAQs), so that you can test yourself on how well you have mastered the material. I have also provided suggested answers in the back of this book. You should make a fair attempt to answer the SAQs before looking at my answers. If you get them wrong, please consider re-working the previous section and trying them again before moving on. This module is a little different from modules 1 and 2, because much of the material consists of hypothetical case studies for you to work through, so as to apply the material you have learned to date.

Aim and objectives of Module 3

Aim

Analyse policies and improve programme design to address maternal deaths

Objectives

At the end of this module, you will be able to:

1. Identify the elements in a sample Safe Motherhood policy that will contribute to reducing maternal deaths (SAQ2, SAQ3)
2. Compare selected interventions in terms of strategic resource allocation (SAQ 4, SAQ 5, SAQ 6, SAQ 7, SAQ 8, SAQ 9, SAQ 10, SAQ 11)
3. Give examples of policies that can act as barriers to the provision of emergency obstetric care (SAQ 8, SAQ 14)
4. Conduct needs assessments to identify the factors that prevent use of emergency obstetric care (SAQ 14)
5. Understand the reasons for the 3 Delays that lead to maternal deaths (SAQ 12)
6. Identify the components of programmes to reduce maternal deaths (ACTIVITY 1)
7. Choose priorities for programme interventions (SAQ 13)
8. Plan the phasing and timing of a programme to address maternal deaths
9. Explain why it is important to ensure the standard of emergency obstetric care is adequate before mobilizing the community to use emergency obstetric care
10. Select indicators to monitor the programme (ACTIVITY 2)

Section 1:
Situating Maternal Deaths

1.0 Introduction

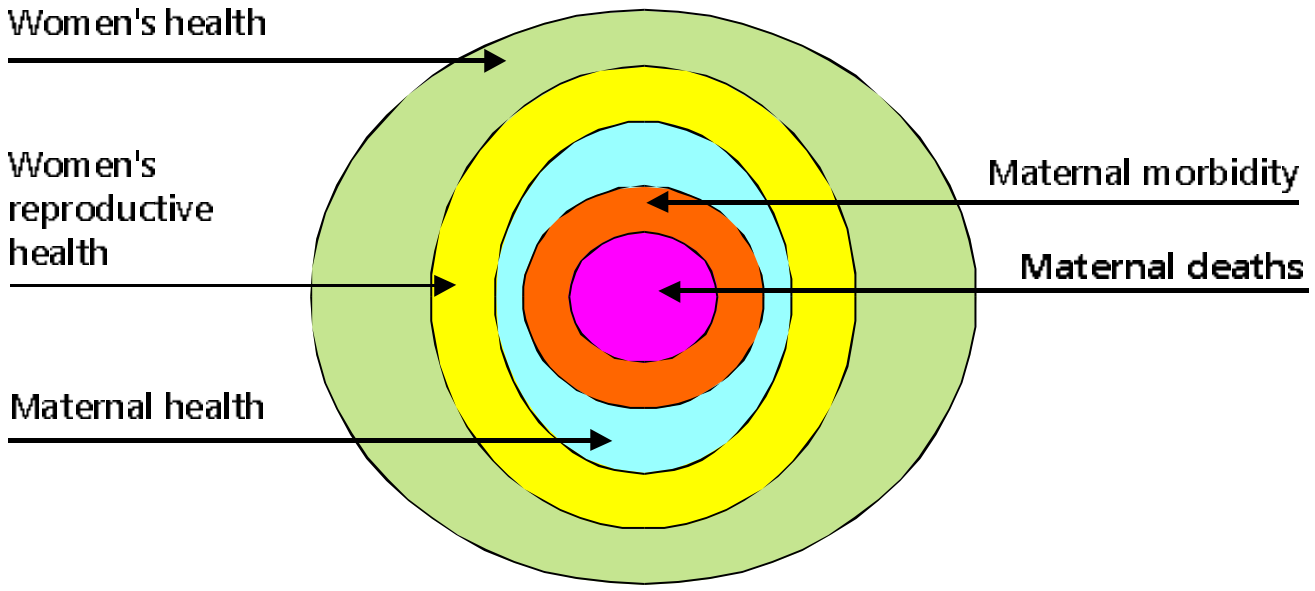
In this short section, I will briefly look at where maternal deaths fall within the overall range of issues related to women's health and to reproductive health. I will also describe the policy framework in the wake of the International Conference on Population and Development in Cairo.

1.1 Overall Health Issues

When you want to address maternal deaths, it is useful to keep in mind the broader range of health issues to which they are related. This is set out in Figure 1.

As you can see, the broadest circle is women's health. Within that, is the set of issues related to women's reproductive health, which will be particularly relevant to women during their reproductive years (generally 15 to 49), whether they decide to have children or not.

Figure 1
Situating Maternal Deaths



Yet there is a point during most women's lives when they will become pregnant and have children. At these times, talking about maternal health applies, and women within this circle will need appropriate services. Much of the time, women have healthy and safe pregnancies and deliveries. For this, regular antenatal and postnatal care as well as regular delivery services are helpful.

However, there is a smaller group of women who will face serious illness, or maternal morbidity, as a result of pregnancy. In the majority of cases, this is due to direct obstetric complications; in a minority, it is the result of existing conditions worsened by pregnancy. In developing countries, the number of women who will suffer from maternal morbidity is estimated at between 18 and 60 million a year (UNICEF, 1999).

And, within that circle of women who will face illness due to pregnancy-related factors, there is a group of women who will die. In developing countries, this number is estimated at 515,000 a year (WHO/UNICEF/UNFPA, 2001). The majority of these women, 75% will die as a result of the direct obstetric complications they experience; the remaining 25% will die because of pre-existing conditions like anaemia, malaria, and HIV/AIDS which are made worse by pregnancy.

As you know by now, the means to treat most obstetric complications have existed for decades, but these are not yet fully available in developing countries. In these countries, women still do not receive emergency obstetric care in time, and, as a result, they die.

As I explained in Modules 1 and 2, it is often assumed that maternal deaths will be prevented through policies and programmes designed to cover reproductive health or maternal health. However, since the majority of maternal deaths are caused by obstetric complications, the provision of emergency obstetric care (EmOC) is central to saving women's lives. The same care will also help to address the needs of the majority of women who suffer pregnancy-related illness.

The existence of EmOC cannot be assumed; provision for it must be clearly spelled out in policies and plans, and translated into programmes. In other words, planners must zero in on the maternal deaths circle and directly target it through policies and programme interventions.

1.2 The Evolving Policy Framework

You will remember that safe motherhood was adopted as a major international goal at the 1987 Safe Motherhood Conference in Nairobi, Kenya. Prior to 1987, the issue of maternal mortality was included in overall government plans and policies on population, family planning, and other areas. After 1987, governments also began to frame policies and plans around safe motherhood.

The International Conference on Population and Development held in Cairo in 1994 shifted the focus of debate away from family planning and towards reproductive health as an issue of concern to both women and men. Safe motherhood was recognized within this framework, and the goal of reducing maternal mortality by half between 1990 and the year 2000 was adopted by the conferees.

Indeed, as you can see in Box 1, in their definition of reproductive health, the conferees affirmed that reproductive health was not just a matter of concern, but that it was a matter of human rights.

Box 1

Reproductive health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and its functions and processes. Reproductive health therefore implies that people have the capability to reproduce and the freedom to decide if, when and how often to do so. Implicit in this last condition are the rights of men and women to be informed and to have access to safe, effective, affordable and acceptable methods of family planning of their choice, as well as other methods of their choice for regulation of fertility which are not against the law, and the right of access to appropriate health care services that will enable women to go safely through pregnancy and childbirth and provide couples with the best chance of having a healthy infant. In line with the above definition of reproductive health, reproductive health care is defined as the constellation of methods, techniques, and services which contribute to reproductive health and well-being through preventing and solving reproductive health problems.

Paragraph 7.2, ICPD Programme of Action

For the purposes of the problem addressed by this course - maternal deaths - the key words in the paragraph quoted in Box 1 are: “the right of access to appropriate health care services that will enable women to go safely through pregnancy and childbirth”. As you can see, the conferees recognized access to appropriate health care services as a human right.

Since EmOC is necessary to prevent death from obstetric complications in the majority of maternal deaths, it is the appropriate health care to prevent maternal deaths. Indeed, the provision of EmOC addresses women’s right to life, which is the most basic of human rights, and is enshrined in the Universal Declaration of Human Rights of 1948.

In the next section, I will present you with an example of a national policy for safe motherhood, and ask you to what extent this policy addresses the problem of maternal deaths.

1.3 Summary of Section 1

In this short section I explained how the issue of maternal deaths is at the centre of a range of issues relating to women’s health, including their reproductive health, maternal health, and maternal morbidity. Of the women who become pregnant, some will suffer illness as a result of pregnancy or delivery, and, of these women, some will die as a result of obstetric complications if they do not receive EmOC in time.

It is often assumed that health policies or action plans dealing with family planning, safe motherhood, or reproductive health will automatically address maternal deaths, but in fact these will not do so if they do not make specific provision for EmOC. You learned how the ICPD Programme of Action recognized the right of access to appropriate health care services that enable safe pregnancy and delivery.

SAQ 1

Explain in your own words why EmOC can be considered to be a basic Human Right.

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Section 2:
Policy Priorities: Reading the Fine Print

2.0 Introduction

In this section, I will tell you what national policies normally include. Then I will give you an example of a national policy and ask you to analyze it and identify both the gaps and the positive aspects that relate to maternal deaths. You will also examine the issue of resource allocation to different interventions, and list the kinds of policies that can act as barriers to the provision of EmOC.

2.1 What National Policies Include

National policies on reproductive health deal with a broad range of issues. A recent review of such policies in different countries identified 12 reproductive health issues, one or more of which had found their way into these policies.

The 12 issues are:

- family planning
- post-abortion care
- safe motherhood
- reproductive tract infections
- sexually transmitted diseases
- HIV/AIDS
- services for adolescents
- maternal and infant nutrition
- cancers of the reproductive tract
- infertility
- female genital mutilation
- gender-based violence.

I have listed these 12 issues just to give you a sense of the kinds of issues that may be grouped within one or more national policies. I don't expect you to memorize these 12 areas! I simply want to indicate that for most national policy makers and planners the issue of "safe motherhood" is just one of several issues generally dealt with.

You may ask, at this point, what is covered by "safe motherhood"? Is EmOC included? This is a good question, which will be addressed when you have a chance to review a sample safe motherhood policy in Section 2.2. For now, I just want to let you know what kind of national policies in different countries include a reference to safe motherhood. Here are the kinds of policies that exist today in five countries:

- In Bangladesh, safe motherhood is referred to in the draft Reproductive Health policy of 1997;
- India has included this issue in a 1992 Child Survival and Safe Motherhood Policy;
- In Jordan, it is included in a 1996 National Population Strategy;
- Jamaica has noted it in the 1995 Population Policy and Plan of Action (1995 - 2015); and
- Peru has included it in the 1996 Programme of Reproductive Health (1996- 2000).

While almost every country has some kind of policy statement on safe motherhood, there is usually no one national policy dedicated entirely to the actual prevention of maternal deaths. In countries that do have "safe motherhood" policies, such as India above, children's health is also included. Moreover, in the India policy, maternal and child nutrition are included in addition to health care.

Clearly many issues like Safe Motherhood, Reproductive Health and Rights, Children's Health and others are inter-related. It is often difficult to consider one issue without another. I should clarify that it is not a bad thing, to have an overview of inter-related issues. Not only are health issues themselves inter-related, as we saw in Section 1.1, but these issues are also linked to economic and social ones.

For example, a family that does not have enough money for shelter or sufficient food is more likely to experience ill health than a family that does. A woman who lives in a part of the world where the husband or mother in law makes the decisions about when and whether she can leave the house is likely to have more problems in seeking health care than a woman who does not.

A comprehensive analysis of the situation is important to understand and address what really goes on in a society. However, at the same time, it is important to properly target specific problems like maternal deaths, if progress is to be made.

For example, as we saw in Module 1, the reasons for infant mortality and maternal mortality are very different. The health and mortality of children is greatly influenced by overall socio-economic and environmental conditions, whereas the mortality of pregnant women is directly related to whether women receive EmOC on time.

Throughout the world, health and development planners face this challenge: to undertake comprehensive analysis of inter-related issues at the same time as designing approaches that are correctly targeted at specific issues.

SAQ 2

What are three reproductive health issues national policy makers may consider alongside maternal deaths?

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SAQ 3

Why is it important to target approaches to specific problems? Give an example.

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2.2 Example of a National Policy

In this section, I will set out in some detail the national Safe Motherhood Policy adopted by the fictitious developing country of Rondonia, which has a population of 100 million people. According to data collected in 1996, the maternal mortality ratio is 650 per 100,000 live births.

Because the maternal mortality ratio was so high, the Government of Rondonia decided to formulate a policy to directly target this issue. The King himself expressed the government's determination to take action on the high maternal mortality ratio in the country.

A team of Government officials visited developing countries in other regions, and identified some elements which came up again and again in national policies, whether they were in countries in Asia, Africa, Arab States, or Latin America. In fact, there were four common elements that kept reappearing in different policies, when it came to the issue of safe motherhood. Many officials referred to these elements as the "components" of safe motherhood policies.

The officials came back home and formulated a Safe Motherhood Policy for Rondonia, which was issued in 1998. The policy was based on the four "components" of safe motherhood, which are:

- Family Planning
- Antenatal Care
- Clean, Safe Delivery
- Emergency Obstetric Care

Here are the details for each of the components, as set out in the Rondonia Safe Motherhood Policy.

A. **Family Planning.** This was designed to build on an already active national family planning programme, which aimed to bring the birth rate down from 40 to 20 births a year per 1,000 population by the year 2002. In the new policy, family planning services are to be delivered by Family Health Workers, assigned on the basis of one for each commune (population: 10,000). The Workers have one year's basic training on all family planning methods - such as condoms, the contraceptive pill, the coil, and others - and will receive three months training on maternal and child health to expand their role.

B. **Antenatal Care:** The Policy provides for all women to receive antenatal care, which is to be provided by the Family Health Workers. The Workers are supposed to schedule the first visit as early as possible in pregnancy, and then to make at least five other visits. The areas covered during the visits would include: health education, detection and prevention of complications, advice on nutrition, personal hygiene, and delivery by a trained attendant.

C. **Clean, Safe Delivery:** The national policy includes plans to train two Traditional Birth Attendants (TBAs) for each village. They will be trained on hand washing, dealing with the birth cord, and referrals. They will be supervised by the Family Health Workers.

D. **Emergency Obstetric Care:** EmOC is to be provided at all District Hospitals. Each District Hospital covers a population of about 500,000. There will be eight dedicated staff at the hospital. They will include an obstetrician, an anaesthetist and paediatrician and 4 midwives. An ambulance will be available for referrals.

Now, before we move on to consider the effectiveness of the above policies with a view to allocating resources to each policy, I want you to reconsider some of the work you did in modules 1 and 2. Based on what you learned in Modules 1 and 2, please answer the following SAQs.

SAQ 4

In the Rondonia Safe Motherhood Policy, will Component A - family planning - reduce the number of maternal deaths? Will it reduce the maternal mortality ratio?

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SAQ 5

How will Component B - antenatal care - contribute to reducing the problem of maternal deaths?

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SAQ 6

What about Component C - clean, safe deliveries - what contribution can this make to reducing maternal deaths?

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SAQ 7

And Component D? What contribution does this make to reducing maternal deaths?

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SAQ 8

Is the EmOC provided for in Component D enough to target the problem of maternal deaths? Please use the six Process Indicators you learned in Module 2 to answer this question. I suggest you use table 1, given below with the six Process Indicators given in the first column. Answer yes or no in the relevant boxes; if you feel you don't have enough information to answer the question, please write "Don't know".

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Table 1
Policy Analysis

Safe Motherhood Policy	Component D
Process Indicators (Minimum/maximum acceptable levels)	
1. Amount of EmOC (For every 500,000 population) Comprehensive EmOC facilities 1 Basic EmOC facilities 4	
2. Geographical distribution of EmOC facilities (Subnational distribution per 500,000 population)	
3. Proportion of all births in Basic and Comprehensive EmOC Facilities (At least 15% of all births in the population)	
4. Met need for EmOC (At least 100% of women estimated to have obstetric complications are treated in EmOC facilities)	
5. Caesarean sections as a % of all births in the population (Not less than 5% and not more than 15%)	
6. Case fatality rate among women (Less than 1%)	

2.3 Resource Allocation

As you probably know, it is not enough to design a policy to address a given problem. Unless a policy is translated into a programme through the allocation of appropriate financial and human resources, as well as good management and supervision arrangements, then the policy will remain a set of good intentions - just another document that gathers dust on a shelf until the next international conference.

By the way, even if the right resources are assigned, there is no guarantee that a programme will deliver the results envisaged. Human beings and their environment are often unpredictable, and do not respond the way planners thought they would when they designed their programmes. This is why monitoring is so important to ensure that development programmes stay on track, a point I will return to towards the end of Section 3.

The point I want to address here is how to translate policies into programmes. No country - developed or developing - has infinite resources, and therefore planners must carefully weigh

the cost-effectiveness of different interventions before they assign resources. How should officials assign resources to the different components of a Safe Motherhood policy such as the one designed in Rondonia?

For the sake of this discussion, I want to assume that the Rondonia Ministry officials have used the Process Indicators to analyze Component D of their Safe Motherhood policy. Having used the Process Indicators to review Component D, the Rondonia officials have realized that this Component is missing the element of Basic EmOC.

Therefore, they have revised Component D to include both Basic as well as Comprehensive EmOC. So, for a population of 500,000, they are now planning for 1 Comprehensive and 4 Basic EmOC facilities, well-distributed geographically, thus meeting the minimum acceptable levels for Process Indicators 1 and 2.

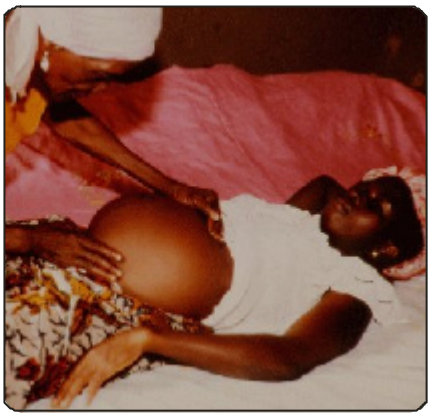
The planners don't intend to build new facilities. They intend to upgrade existing health centres to provide Basic EmOC, as well as upgrading existing district hospitals to provide Comprehensive EmOC. By the way, both the health centres and the district hospitals that need upgrading will be in the rural areas, since the hospitals in urban areas already provide EmOC.

So the Rondonia Ministry officials are now looking at their Revised Safe Motherhood Policy. They decide to pilot their policy in just one district of 500,000 people, and they have a budget of $1 million. They carefully calculate all the relevant costs of each component, in terms of staff salaries, equipment, and supplies, as well as transport and other costs related to activities. Here is the cost of each component:

- Component A (family planning) will cost $370,000
- Component B (antenatal care) will cost $460,000
- Component C (clean, safe delivery through TBAs) will cost $320,000
- Component D (Basic and Comprehensive EmOC on the basis of four health centres and one district hospital) will cost $600,000.

Clearly, that adds up to much more than a million dollars. In fact, it's closer to two million dollars, at $1,755,000. The Rondonia planners are going to have to make some tough choices. In the next few paragraphs, I would like to walk you through some of the ways to weigh the costs and benefits of different decisions, keeping in mind the aim is to reduce maternal deaths.

The first thing to do in weighing the costs and benefits of different interventions to reduce maternal deaths is to remind the Rondonia planners that, if Basic and Comprehensive EmOC are not available, then women will continue to suffer and/or die as a result of obstetric complications.



This is a powerful argument for the allocation of the full $600,000 to Component D, with complete confidence that this directly targets maternal deaths by providing EmOC. Component D provides for the appropriate staff - such as nurse/midwives - equipment and supplies to the four Basic EmOC health facilities, as well as physicians with obstetric skills and other staff and equipment to the Comprehensive EmOC district hospital.

Then, together with the Rondonia planners, we would look at the other three components to see where to allocate the remaining $400,000. Having studied Components A, B, and C again, we note that Components B and C overlap. Is there really any value added to a separate component to train TBAs, as envisaged in C, given the antenatal care elements already planned in B? According to what is planned in B, both Family Health Workers and TBAs would be trained on how to recognize obstetric complications when these occur.

Neither Family Health Workers nor TBAs are going to be able to deal with any kind of emergency delivery or complication during pregnancy. They simply don't have the skills or training - if they did, they'd be nurse/midwives, obstetricians, or other qualified medical practitioners, which they are not. Good antenatal and postnatal care will be provided by the Family Health Workers. There may some issues regarding safe deliveries to bring to the attention of TBAs. The training already envisaged under Component B can easily cover this. So we can cross out Component C, and in this way, save Rondonia $320,000.

Now let's examine Components A and B more closely. We know that through the money allocated to Component D, we will have made Basic EmOC facilities available within two hours' reach of most of the population. So why would we invest such a large amount of money ($460,000) as planned in B in having the Family Health Workers make as many as six visits to each pregnant woman at home? They certainly aren't going to predict or prevent obstetric complications, which is what's killing my countrywomen.

And, as far as regular antenatal care is concerned, isn't it more cost-effective to have the women and their families come to the health facility? Especially now that we have skilled nurse/midwives available at the Basic EmOC facilities, where they can share antenatal care with the Family Health Workers. We can do much of what we want at the facility, including education on clean, safe delivery and early recognition of obstetric complications. In this way, we can also keep good records on women's health in the community.

Moreover, in Component A, the Family Health Workers are supposed to receive additional training on maternal and child health care. So when they are conducting their family planning work and visits, they can keep an eye on pregnant women's health and advise them to visit the facilities as and when necessary. There is certainly a case to be made for merging Components A and B, and planning them as a single Component, saving on training and the number of visits, and making better use of the enhanced facilities. In this way, we can allocate the full $370,000 to a merged Component A and B, and save Rondonia the $460,000 which had been planned for Component B.

This is where we stand at this point:

- Component D - allocation of $600,000
- Component C - crossed out, with a few elements incorporated into Component B
- Component B - merged with Component A
- Component A - allocation of $370,000

We have $30,000 left over. It would be a good idea to use this $30,000 for an information and mobilization campaign in the community to brief them about the enhanced services available for both EmOC and family planning, about the types of complications that lead to morbidity and death, and about ways the community can organize to ensure that women receive appropriate treatment on time. In fact that would be a very important part of the initiative, and should be added as a separate component. All in all, that's Rondonia's million dollars well spent.

SAQ 9

Why wouldn't you allocate resources to Component C? Do not write more than 60 words.

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SAQ 10

What is the most you can expect from Family Health Workers, when it comes to reducing maternal deaths? Answer in 30 words or less.

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SAQ 11

This policy is still in the planning stage. From what you have studied in Sections 2.2 and 2.3, would you expect the programme designed to implement this policy to remain exactly the same? Why not? 80 words or less.

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2.4 Policy Barriers to EmOC

As I pointed out above, health issues are inter-related, and, accordingly, national health policies and programmes are also designed to address multiple issues. These policies are likely to include maternal deaths as one of the issues to be addressed.

At the same time, there are several national policies that are not specifically targeted at maternal deaths or other reproductive/women's health problems, and which relate to the functioning of the health system as a whole. Nevertheless, some of these policies may have an impact on maternal deaths. For example, in some countries, only obstetricians are allowed to perform Caesarean sections, and physicians are not allowed to do so, even if they receive appropriate additional training.

However, what if there are 2,000 physicians in the whole country, and only 80 obstetricians? The impact of such a policy on women's lives can easily be imagined. Even if the obstetricians were willing to serve in rural areas, there would simply not be enough to go around. And, indeed, this is recognized in some countries where skilled medical practitioners are allowed to perform Caesarean section without being medical doctors or specialist obstetricians.

Another example: in some cases, nurse/midwives are not allowed to perform procedures for which they are well qualified, and which would save women's lives, such as administering intravenous fluids or drugs, and manual removal of placentas. In many cases, nurse/midwives are repeatedly overlooked for training programmes that could substantially enhance their skills at little additional cost and result in saved lives.

These are just a few examples. I don't know what policies and procedures have been formulated in your country. But if you are a planner aiming to reduce maternal deaths, you would want to look for policies that may not be directly related to maternal deaths but that do have an impact on the issue, and that need to be amended.

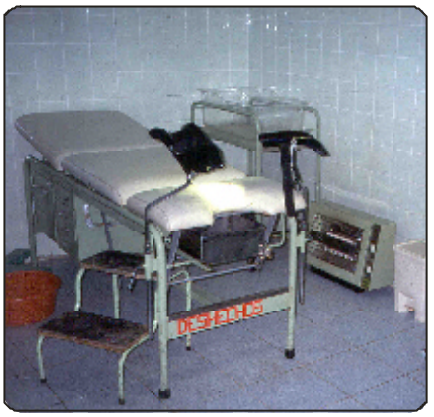
I am listing below the kinds of policies and procedures that would be useful for a planner to review as she or he prepares to address the issue of maternal deaths in the country. This is not by any means an exhaustive list, just an indication of the kinds of things to think about:

A. Staffing policies: Who is allowed to perform specific obstetric procedures? Who receives training and how is training then applied and recognized in promotions and salaries? What staffing levels are required to perform certain tasks? Are there other staffing issues?

B. Clinical management: Are certain practices required - or certain practices prohibited? What rules govern hospital admission? How are blood banks managed? How about management of drug supplies? How are records managed? Are there other clinical issues?

C. Payment: Are services free or do patients and families have to pay for services provided? Are services free for emergencies, or for low income groups? Are supplies (drugs, gloves, intravenous bottles, etc) provided or do patients have to provide them? What insurance programmes are in place and how do they affect emergency care? Are there other payment issues?

D. Institutional infrastructure: Are the budgets for equipment adequate? Are the budgets for maintenance and repair adequate? Are there other infrastructure issues?



As I mentioned above, this is not a complete list, just an indication of the kinds of policies that might be in place and which need to be re-examined. Looking at policies A to D, what is likely to be the set of policies that poses the most serious barrier to saving women's lives? If I had to rank the four policy areas in terms of the nature of the obstacle they present to saving women's lives, I would rank them as follows: payment issues (most serious obstacle), staffing, clinical management, and supplies and equipment.

But, of course, the barriers depend on the situation in the country or area where programme interventions are planned. In some cases, it might be possible to address problematic policies through creative interventions. For example, if a hospital has to abide by a government's cost-recovery policy, there is still an opportunity for the hospital, government and community to work together to establish funds that members of the community can draw on in an emergency and then replenish later, or innovative insurance schemes to ensure coverage.

Perhaps the most important point on which to conclude this section is this: obstetric emergencies must be dealt with within the existing health system, and not as part of standalone initiatives. These are amongst the regular services that a health system is established to provide. This is why policy and programme interventions should focus on ways to ensure that the health system meets it responsibilities. And this is why it is so useful to have indicators that monitor the performance of obstetric services.

2.5 Summary of Section 2

In Section 2, I have reviewed the kinds of policies that will include references to maternal deaths - policies such as family planning, reproductive health, mother and child health, and, of course, safe motherhood. You analyzed a case study of a sample Safe Motherhood Policy as regards the elements directly related to saving women's lives, using the Process Indicators.

You learned a little about the question of resource allocation, and how to weigh which interventions are likely to be most effective. I also provided a short overview of the kinds of policies which may not on the surface appear to be related to maternal deaths, but which a planner also needs to keep in mind to address the problem. The final point is that the health system is responsible for dealing with obstetric emergencies as part and parcel of its day-to-day work.

Section 3:
Programme Priorities: Choosing Interventions

3.0 Introduction

In this Section, I will be reviewing the kinds of delays that may result in maternal deaths, and which should be addressed through programme interventions. I will also be providing you with three case studies, each one of which deals with a different set of issues that programme managers have to face in dealing with maternal deaths.

Each case study deals with a population of 950,000 people. The four questions addressed through these three case studies are: Do EmOC services exist? Are these services located where women can access them? Are the services being used by women who really need them? Is the standard of service adequate?

As you will remember from Module 2 (2.2), these are the four main questions that a planner or programme manager needs to be able to answer in designing policies or choosing programme interventions. The case studies will help you practice using the Process Indicators to conduct a needs assessment, design a programme intervention, and monitor your programme.

3.1 Dealing with Delays

Before moving on to the case studies, I want to walk you through a key issue that a programme planner should consider in formulating his or her programme interventions. You know from Modules 1 and 2 that time is of the essence in dealing with obstetric complications. You remember that the major obstetric complications which lead to maternal deaths if they remain untreated take between two hours and six days to lead to death (see Table 3 in Module 1 or Table 3 in Module 2).

Clearly, there is time to treat these complications if they can be addressed before they lead to serious morbidity or death. However, it is also very clear that any delay at any stage will lead to death. There are three types of delays that can occur when it comes to obstetric complications (see Maine et al, 1997).

The 3 Delays are:

1 Delay in deciding to seek treatment (1st Delay)

2 Delay in reaching treatment at the facility (2nd Delay)

3 Delay in receiving treatment (3rd Delay)

Figure 2:
The 3 Delays

	1st Delay	2nd Delay	3rd Delay	
Onset of complication	Decide to seek Care	Reach an EmOC facility	Receive Treatment	Outcome: Death, Disability, Recovery

The 1st Delay occurs when a woman and her family leave it too late to decide to seek treatment. This may be because they or the local health care worker do not recognize the danger signs of obstetric complications. It may be because they are poor and are worried about costs. Or it may be that the husband is absent and nobody else wants to take the decision to transport the wife to the facility. Or it may be that the community has no faith in the services at the facilities, and/or find the staff unqualified, rude or arrogant. Or services are too far away.

In this case, as a health planner you would want to find out the reason by, for example, using participatory group discussions in the community. You may then decide on a programme intervention to educate the community about the danger signals, or to a community fund to address financial constraints.

The 2nd Delay occurs if the decision has been made to seek treatment but the woman cannot get to the health facility. The reasons can include: the distance of the health facilities from the population; bad roads; the lack of transport, such as ambulances, or the reluctance of taxi or bus drivers to convey a bleeding woman case to hospital; and other reasons. In this case, as a health planner you will want to work with the community and with other government departments to address these different issues.

The 3rd Delay occurs at the health centre or hospital itself, due to inadequate care. The reasons include: the woman may be kept waiting for treatment because of disorganization; there may be insufficient staff coverage for emergencies; staff may not have the appropriate skills to deal with obstetric complications; there may be problems with equipment, drug supplies or blood supplies; national policies may insist on payment before services or supplies are provided; and so on.

As a health planner, you would conduct a thorough inventory of conditions at the facility - staff, management, equipment, supplies, record-keeping, and other areas - and you would also conduct participatory group discussions in the facilities to dig deeper into the reasons why things happen as they do.

If you want to address the reasons for delays and need more information, consult the Columbia University *Prevention of Maternal Mortality Network Abstracts* book that I list in the Reference section. If you want checklists to conduct a review of conditions at the facility, consult the UNICEF/WHO/UNFPA *Guidelines for Monitoring the Availability and Use of Obstetric Services* (1997).

The issue I want to address here is this: until and unless the facilities are in good shape, there is very little point in educating the community to use them, or in mobilizing the community and government to address the problems in reaching the facility. In other words, it is important to deal with the 3rd Delay first.

Planners need to get the facilities up to standard first, and then - and only then - make sure the community can and do use them. Otherwise, you will invest time and money in programme interventions in the community but the community will be reluctant to invest time and money in using inadequate facilities.

Now, this may seem to you like such common sense that you wonder why I even bother to raise it here. The reason I am raising this is because, even though it is common sense, many programme interventions are designed in just the opposite way. This seems unbelievable, but it is true: many programme interventions focus on getting the women to the health facility but not on making sure that they will get appropriate treatment at the health facility.

Let's revisit Figure 2, but add the programme interventions that are often carried out in many countries. The Figure would look like this:

Figure 3:
The Three Delays and Programme Interventions

	1st Delay	2nd Delay	3rd Delay	
Onset of complication	**Decide to seek Care**	**Reach an EmOC facility**	**Receive Treatment**	**Outcome: Death, Disability Recovery**

PROGRAMMES **WOMEN**

This is clearly not the way programmes should go. To give women the lifesaving treatment they need, the priority must be to bring the facilities up to standard in terms of the EmOC they provide. After that, you can turn to eliminating the social, economic, or physical obstacles in women's way to getting treatment. The 3rd Delay must be dealt with first.

SAQ 12

In about 50 words, describe each of the 3 Delays, and say who is responsible for each delay and the resulting loss of life or health.

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SAQ 13

Cluster the following programme interventions into two sets, A for higher priority, and B for lower priority: staff training on people skills; inform the community about ways to recognize danger signs; weekly meetings of medical staff to discuss problem cases; increase availability of transport; improve equipment; improve supply of drugs.

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3.2 Case Studies

In this section, I will present the three case studies, and then ask you some questions based on them. I will also work through some needs assessments with you.

Case Study One

For the people of Caio District (population 950,000), access to health care is difficult. There are only two health centres in the district, and only one has a maternity ward. The rural hospital is more than a six-hour walk away, and it is situated outside the district.

During the rainy season, neither the two health centres nor the rural hospital are accessible to the majority of the population of Caio district.

Once a month, a nurse comes on a motorbike to organise antenatal care and to vaccinate children and pregnant mothers. These services are organized on a regular basis with the help of a non-governmental organization. They function well, and attendance is high.

Case Study Two

Aware District is in a very fertile region (population 950,000), and the inhabitants are primarily farmers and cattle keepers. The area is mainly Muslim, and women play less of a role in public life than in other parts of the country. Polygamy is common.

The area is not very densely populated but there is a good network of health centres with maternity wards that provide the basic care. There are two rural hospitals to which these centres can refer complicated cases. Each hospital has an operating theatre, a surgeon and three midwives, providing 24-hour services in the maternity wards.

As part of an ongoing health system reform, a fee for the use of health services has been introduced. A small amount of money has to be paid to receive prenatal care or deliver a baby at the hospital. To ensure supplies for Caesarean sections or other major obstetric interventions, a kit system has been introduced. Patients have to pay for every single item in the kit that is used for the intervention. The total cost equals what a family is generally able to earn during two months.

The introduction of this fee system has generated a lot of controversy, and the population of Aware District is not at all happy about the new system. The majority of the people complain that the fees are too high, and they do not always have cash available to pay for health care.

Case Study Three

Ekom District is very close to the country's capital and is densely populated (population 950,000). The health infrastructure is sufficient to deal with most health problems that arise, including the provision of obstetric care. The use of public health services by the population is high, yet the services provided are of poor quality.

There are many reasons for the poor quality of service, including: low pay and poor working conditions; lack of supplies; poorly functioning equipment; migration of skilled personnel; and the impact of deaths from AIDS, which has led to many deaths amongst health practitioners and managers.

In addition to the public service network, which is free, there is a private health care provision system. However, the legislation to regulate private health care provision is not very strong.

Doctors staff many of the public service health centres and maternity wards. They are very protective of their jobs, and do not allow midwives to perform simple life-saving procedures, such as removal of placentas or the administration of antibiotics by injection. The administrative staff do not deal in an adequate manner with this or other management issues.

The public sector health staff works only part time in government-run facilities, and the midwives prefer to work in private clinics. Some of them have even organized private maternity wards. There is very little medical equipment in the health centres, and most of the centres do not even have a thermometer. The sterilization machine in the hospital has not been working for the last two years. Most of the maternity wards do not even have the basic drugs to deal with obstetric complications.

SAQ 14

a. In Case Study One on Caio District, what do you think the main problem is with obstetric care provision?

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b. What is the main problem with obstetric care provision in Case Study Two on Aware District?

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c. What is the main problem with the provision of obstetric care in Case Study Three on Ekom District?

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SAQ 15

In which of the three situations do you think maternal deaths are probably the highest? Give reasons for your answers.

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3.3 Conducting Needs Assessments

Now, I would like to work with you on needs assessments to apply the Process Indicators to each of the three case studies in Section 3.2. As you know from Module 2, Process Indicators help to assess the functioning and use of the health services as regards provision of EmOC to reduce maternal deaths, and to show what areas need further study and action.

I have made up Table 2 using the six Process Indicators. Before we go further, why don't you fill in each of the boxes of the table showing whether the indicator is Met or Not Met, according to the information provided in the case studies. You can use NA (not applicable) if you think the indicator is not relevant. I have filled in a couple of the boxes as an example. Please complete Table 2 with the information you have for each case study.

Table 2
Starting Your Needs Assessment

Indicator	Case Study One	Case Study Two	Case Study Three
Indicator 1. Amount of EmOC	**Not Met**	**Met**	
Indicator 2. Geographical distribution of EmOC facilities			**Met**
Indicator 3. Proportion of all births in EmOC facilities			
Indicator 4. Met need for EmOC			
Indicator 5. Caesarean sections as a % of all births			
Indicator 6. Case fatality rate			

On the next page, I have filled in Table 2 based on the data I have available at this stage. In general, I can say that for Case Study Two and Three, the indicators look better than for Case Study One.

Table 2
Starting Your Needs Assessment (blanks filled in)

Indicator	Case Study One	Case Study Two	Case Study Three
Indicator 1. Amount of EmOC	**Not Met**	**Met**	**Met**
Indicator 2. Geographical distribution of EmOC facilities	**Not Met**	**Met**	**Met**
Indicator 3. Proportion of all births in EmOC facilities	**Not Met**	**Not Met**	**Met**
Indicator 4. Met need for EmOC	**Not Met**	**Not Met**	**Met**
Indicator 5. Caesarean sections as a % of all births	**Not Met**	**Not Met**	**Met**
Indicator 6. Case fatality rate	**NA**	**Met**	**Not Met**

In Study Two and Three, both Basic and Comprehensive EmOC are available, whereas in Study One they are not. That's why Indicators 1 and 2 are Not Met in Study One, but are in Study Two and Three. In fact Study One ranks Not Met on everything except case fatality rates, where I have put NA because it is not a relevant question. Why not? Well, there are no facilities available at all, so there is nowhere to check the rates.

In Study Two, the facilities exist, but the use is not likely to be high because the facilities are expensive, so Indicators 3, 4 and 5 are Not Met. However, in Study Two the case fatality rate is likely to be low because the services are good, thus Indicator 6 is Met. Even though the case fatality rate is low, you will know this is not good news because people are not using the facilities and women are probably dying at home, with Indicators 3, 4, and 5 Not Met.

In Study Three, the facilities are there and use is high, so Indicators 3, 4, and 5 are Met, but the services are of poor quality so the case fatality rate is likely to be high, so that Indicator 6 is Not Met.

What conclusions can you draw from these data for your needs assessment? And where do the Process Indicators reveal that you need more information?

For Case Study One in Caio District the assessment is pretty simple. The main problem here is the poor health infrastructure. There are simply no health facilities providing EmOC within reasonable access of the population.

As regards Case Study Two in Aware District, the services are available but the population is not using them. The minimum acceptable level according to the Process Indicators is apparently met, but the introduction of user fees for cost recovery is a factor that prohibits people from going to health centres or to the hospitals. The cost of the kit for Caesarean sections is especially prohibitive.

Yet there might be other factors in Case Study Two that prevent people from using the facilities, as is shown by the indicators, and for which there it would be good to have more information. There might be cultural factors, for example, a woman may not be the main decision-maker in the household. The population might dislike the attitude of the health staff.

So as regards Case Study Two, you might find it useful to have additional information on people's perception of the health services and get their opinion. This information is not available within the health system, and so you would have to organize the collection of additional data, using, for example, participatory group discussions.

Case Study Three in Ekom District is a situation where there are a sufficient number of health facilities, and people are using them, but the quality of service is poor, which is reflected in the case fatality rate. You have some information about the poor quality of service - the absenteeism of doctors and midwives, the lack of equipment, the refusal of doctors to delegate procedures like removals of placentas to midwives.

Yet you might also find it useful here to do a more thorough study to fully review the services and equipment at the facilities, as well as conduct participatory group discussions with staff.

3.4 Designing Programme Interventions

In the previous section, you studied some aspects of conducting needs assessments, and together we analyzed the three case studies to understand the information provided by the Process Indicators , and to identify areas where we might need to know more. In this section, I would like to follow a similar approach, and to use the case studies to identify possible programme interventions to address maternal deaths in each of the three districts (Caio, Aware, and Ekom). I have listed several possible programme interventions in Table 3.

Table 3
Proposed Programme Interventions

	Case Study One Caio	Case Study Two Aware	Case Study Three Ekom
1. Increase health facilities that provide EmOC			
2. Ensure availability of basic medical equipment to provide EmOC			
3. Increase the number of midwives and/or doctors			
4. Organize a refresher training programme for midwives			
5. Organize weekly meetings of medical staff to discuss maternal deaths and other problem cases			
6. Improve management skills			
7. Increase availability of transport			
8. Inform and mobilize the community.			
9. Increase antenatal care visits			
10. Train TBAs in the community			

ACTIVITY 1

From what you have learned in the previous sections, please go ahead and decide which of these interventions you would include in a programme to address the needs identified in each of the three case studies. Place a circle in Table 3 above to indicate where you would take action, given the information you have at the moment. My answer is given in Table 4 based on my understanding of the needs assessments, and I will walk you through the reasons for including or not including each intervention - but you should have a go first before looking at my answer.

Table 4
Proposed Programme Interventions (blanks filled in)

	Case Study One Caio	Case Study Two Aware	Case Study Three Ekom
1. Increase health facilities that provide EmOC	●		
2. Ensure availability of basic medical equipment to provide EmOC	●		●
3. Increase the number of midwives and/or doctors	●		
4. Organize a refresher training programme for midwives			●
5. Organize weekly meetings of medical staff to discuss maternal deaths and other problem cases	●	●	●
6. Improve management skills			●
7. Increase availability of transport	●	●	
8. Inform and mobilize the community.	●		
9. Increase antenatal care visits			
10. Train TBAs in the community			

You will see immediately that I have not put a circle in either of the two proposed programme interventions 9 or 10. I know from what I have learned that training TBAs does not address maternal deaths. As for antenatal visits, these are important for a woman's overall health. In addition, during such visits, some complications can be spotted at an early stage (eg. hypertension, minor bleeding) However, antenatal visits do not enable us to address the majority of obstetric complications that cause maternal deaths.

You will also see that I have placed circles in box 5 for all three case studies. As regards proposed intervention 5, this is clearly important for all three districts. The medical profession - doctors, nurses/midwives, and other medical practitioners - need to learn from the medical causes of maternal deaths. Are the right skills available at the facility? Are sufficient blood supplies on hand for transfusions in case of haemorrhage? Is the necessary equipment in place? Are there enough supplies of the right drugs?

In what condition did a woman needing a Caesarean reach the hospital? Does this mean there was a delay in sending her from the health centre to the hospital? Or a delay in the decision to seek treatment by her family? Are the delays at the health facility caused by bad management, or by insufficient medical expertise? Are the delays in the community caused by financial issues or social issues? These are all questions that the programme planner should seek to answer.

You will see most of the circles are placed in Case Study One, where the population needs as much help as it can get in terms of increasing availability of and access to EmOC. Clearly, intervention 1 is a must for Caio District. This can be done at a first stage by upgrading the two existing health facilities, and then by adding the facilities needed according to the minimum levels established by the indicators (this means 2 Comprehensive EmOC and 8 Basic EmOC functioning facilities).

Upgrading the health facilities means more staff with the right experience (intervention 3) and the appropriate equipment (intervention 2) as well as supplies.

Intervention 7 is also important in order to save lives, so that the women reach EmOC in time. This may involve the provision of special transport facilities, or improvement of roads, given the conditions during the rainy season. The issue of transport is one which the community could either handle on its own, or by working together with government.

For example, the community could organize maintenance and spare parts for existing vehicles to transport women from health centres to hospitals. Or it could lobby government for an ambulance or 4-wheel drive that can be used as an ambulance. I have also placed a circle in intervention 8, since once the facilities are upgraded it would be important to invite the community to visit them and see for themselves that services have improved.

In Case Study Two, where the health facilities are good, the major obstacle to patient use of the system is the increase in costs for the population. Even so, it might be important to invest in ensuring appropriate transport (intervention 7) to enable women to reach EmOC services on time.

In Case Study Three, the main problem is the quality of service. Basic equipment is necessary (intervention 2) and staff need

more training to enhance their skills (intervention 4). There is a need for other interventions focused on improving the standard of care, such as intervention 6 on improving the management of the facilities to address obstacles to care (attitudes, timeliness, good records, and so on).

Other Options

Of course, these are not the only interventions that you might consider to address maternal deaths in each of these case studies. They are just used to give an indication of the areas you might cover through programme interventions. In particular, you might want to think about the kinds of policies that may be obstacles to EmOC (a subject we touched on in Section 2).

For example, in Case Study Two, the policy for cost recovery actively discouraged the community from using the services, and was strongly opposed by the community. Unless this is addressed, women experiencing obstetric complications will not get the life-saving treatment they need.

In Case Study Three, the policy of allowing medical staff to work in both public and private health facilities in an unregulated and badly managed fashion made the standard of service at the government facilities inadequate. Of course, this was not the only reason why staff took on two jobs - other reasons included low salaries and poor working conditions.

Also, in Case Study Three, the doctors were “jealous” or “protective” of their jobs, and did not allow nurse/midwives to perform life-saving procedures like removal of placentas, which a trained nurse/midwife is perfectly capable of doing. Since there are rarely enough doctors to staff all facilities on a 24-hour basis, it is important for health planners to ensure that steps are taken to delegate life-saving services to appropriate staff so that women receive the treatment they need on time. This delegation should be reflected in national legislation.

Before turning to the question of monitoring programme interventions in the next section, it would be good to give some thought as to how to sequence the programme interventions in each of the case studies, in order to address priorities. Good sequencing is an important part of programme management, since some things need to be put in place before others can be done. Moreover, there is generally more urgency to carry out some actions than others.

Perhaps you have already noted, in fact, that there is a certain priority of interventions in the list in Tables 3 and 4. This priority was made based on the 3 Delays. Interventions 1 to 6 deal with issues in the health facility, addressing the 3rd Delay first, as it is important to do. Interventions 7 and 8 address the 2nd and 3rd Delays which, in a sense, go hand in hand. Informing the community about danger signs increases the level

of awareness and understanding of what needs to be done to ensure that women receive EmOC on time - and the community is an important actor in organizing appropriate transport.

However, in Case Study One, I would leave intervention 8 until the very end. In this - and in every other case - until and unless the facilities are in order, there is no point conducting an information campaign to get the community to use them. In Case Study One, I would prioritize intervention 1, then 2, and then 3, 5, and 7, since it is clearly so important to upgrade the facilities in every way. In Case Study Two, I would give 7 priority over 5, since I believe it is important to enable the community to reach the facilities, which are in reasonably good order. In Case Study Three, I would prioritize 2, followed by 4, 6, and 5, since the facilities badly need equipment and staff need better skills.

3.5 Monitoring the Progress of Programme Interventions

Just as the Process Indicators have proven their worth in identifying needs and designing programmes, they can be used to monitor the progress of programme interventions. And, for this purpose, you can use the same table (table 3) constructed in Section 3.4.

ACTIVITY 2

As before, I will complete the table, showing how the indicators help to monitor each intervention, but I encourage you to do so on your own first, based on what you have learned so far.

Use the table given below. It is a copy of table 4 and shows a circle for each of the programme interventions we decided to support for each of the three case studies in the Districts of Caio, Aware and Ekom.

We only decided to support a possible eight out of 10 programme interventions, because 9 and 10 did not address the complications that cause maternal deaths. What you need to do is to add to each box with a circle, which of the six indicators you need to monitor progress. I've filled in the first one as an example. Like Activity 1, my answer is reproduced with an explanation overleaf. Do attempt the activity on your own before you look at my answer!

Table 5
Monitoring the Progress of Programme Interventions (blanks filled in)

	Case Study One Caio	Case Study Two Aware	Case Study Three Ekom
1. Increase health facilities that provide EmOC	Indicators 1, 2 show amount and geographical distribution of EmOC		
2. Ensure availability of basic medical equipment to provide EmOC	●		●
3. Increase the number of midwives and/or doctors	●		
4. Organize a refresher training programme for midwives			●
5. Organize weekly meetings of medical staff to discuss maternal deaths and other problem cases	●	●	●
6. Improve management skills			●
7. Increase availability of transport	●	●	
8. Inform and mobilize the community.	●		
9. Increase antenatal care visits			
10. Train TBAs in the community			

Table 6, below is a copy of my answer to Activity 2.

Table 6
Monitoring the Progress of Programme Interventions (blanks filled in)

	Case Study One Caio	Case Study Two Aware	Case Study Three Ekom
1. Increase health facilities that provide EmOC	● Indicators 1, 2 show amount and geographical distribution of EmOC		
2. Ensure availability of basic medical equipment to provide EmOC	● Indicators 1 and 2 show functioning facilities Indicators 3, 4, 5 show more use by community		● Indicators 1 and 2 show functioning facilities
3. Increase the number of midwives and/or doctors	● Indicators 1 and 2 show functioning facilities		
4. Organize a refresher training programme for midwives	●		● Indicators 3, 4, 5 show more use by community
5. Organize weekly meetings of medical staff to discuss maternal deaths and other problem cases	● Indicator 6 shows standard of care Indicators 3, 4, 5 show more use by community	● Indicator 6 shows standard of care Indicators 3, 4, 5 show more use by community	● Indicator 6 shows standard of care Indicators 3, 4, 5 show more use by community
6. Improve management skills			● Indicator 6 shows standard of care Indicators 3, 4, 5 show more use by community
7. Increase availability of transport	● Indicators 3, 4, 5 show more use by community	● Indicators 3, 4, 5 show more use by community	
8. Inform and mobilize the community.	● Indicators 3, 4, 5 show more use by community		

The indicators help you know if you're on track. You will notice that for many activities aimed at improving services, the result is judged by increased use, especially indicators 3 and 4. As noted on other occasions, you may need more specific information on individual areas to retarget your programme interventions.

I would like to repeat here the benefits of Process Indicators that I highlighted in Module 2, because the earlier discussion is very relevant to programme monitoring.
The benefits of the Process Indicators include:

Sensitivity to change

For example, if you invest in enhancing your health facilities, you will be able to use Process Indicators to monitor progress within 6 - 12 months, through an increase in the number of people using the facilities, or a drop in the case fatality rate. You can imagine the positive impact on staff morale, and on relations with the community.

Low maintenance

Once you've made the initial investment in improving record systems so that they generate data for calculating the process indicators, monitoring is inexpensive and can be factored into day-to-day work, although data quality should be monitored periodically.

Internal consistency

You will have noticed that several of the indicators reinforce each other, so you have several ways of checking the validity of the information you receive. For example, if the district health director reports that Indicator 4 has gone up, but no other indicators appear to have changed, you will wonder if there is not more to this than meets the eye.

3.5 Summary of Section 3

In this section, I have walked you through the reasons for three delays that lead to maternal deaths: delay in taking the decision to seek treatment, delay in reaching the facility, and delay in treatment at the facility. You learned how programme interventions should address the problems that cause the 3rd Delay, which relate to the standard of care at the facility, before seeking to address the 1st and 2nd Delays.

I also gave you three case studies dealing with the availability of EmOC, access and use of EmOC, and standard of EmOC, and worked with you on using the Process Indicators to identify, select, sequence, and monitor programme interventions.

Section 4: Summary of Module 3

In this Module, I situated maternal deaths within the range of issues related to reproductive health and women's health. I explained how, of the women who become pregnant, some will suffer illness as a result of pregnancy or delivery. Of these women, some will die as a result of obstetric complications if they do not receive EmOC in time.

It is often assumed that health policies or action plans dealing with family planning, safe motherhood, or reproductive health will automatically address maternal deaths, but in fact these will not do so if they do not make specific provision for EmOC. You reviewed the evolution of the policy framework before and after the International Conference on Population and Development.

There are many kinds of policies that include reference to maternal deaths - policies such as family planning, reproductive health, mother and child health, and, of course, safe motherhood. You examined in more detail a case study on a sample Safe Motherhood Policy and analyzed it for the elements that directly relate to regard maternal deaths, using the Process Indicators .

You also learned a little about how to determine resource allocations, and about the kinds of policies which may not on the surface appear to be related to maternal deaths, but which a planner also needs to keep in mind to address the problem.

I set out the reasons for three delays that lead to maternal deaths: delay in taking the decision to seek treatment, delay in reaching the facility, and delay in treatment at the facility. You learned that programme interventions should address the 3rd Delay before moving on to addressing the 1st and 2nd Delays.

The module contained three case studies dealing with the availability of EmOC, access to and use of EmOC, and standard of EmOC. Together, we applied the Process Indicators to identify and select possible programme interventions, sequence the programme interventions, and monitor progress.

Section 5:
Summary of Complete Course

This is the end of our course on maternal deaths. I hope you have learned as much from studying this course as I have from writing it. I'm neither a medical professional or statistician. I'm a writer and development analyst, used to dealing with policies and programmes - and I've learned a lot! It would be very useful at this point to review the material covered in the whole course and how it links to the objectives we listed at the begining.

In Module 1, you learned about the five main direct causes of death, how to define many of the terms used in dealing with the issue. You acquired the knowledge to explain why EmOC is central to reducing maternal deaths. I explained why the complications that cause maternal deaths can neither be predicted nor prevented - yet can be successfully dealt with once they occur. Case studies were presented to show how lack of EmOC sustains a high incidence of maternal mortality, while availability of EmOC reduces maternal deaths.

You covered the reasons why community-based initiatives alone would not be sufficient to reduce maternal deaths. You identified the ways in which maternal mortality differs from other health problems, such as infant mortality, and understood some of the reasons for the continued high incidence of maternal mortality in developing countries.

Module 2 provided you with the tools to assess both the extent of the problem as well as progress towards a solution - the indicators issued by the UNICEF, WHO, and the UNFPA. You learned some of the terms used in discussions around this problem.

You addressed the methodological issues relating to the measurement of maternal mortality, learning why impact indicators were not helpful for programme design and monitoring, and the difference between impact indicators and process indicators. I gave you examples of the questions that can be answered by using Process Indicators , and began to use Process Indicators to choose appropriate intervention strategies, and to track progress in reducing maternal deaths.

In the third and final module of this course on maternal deaths, you gained much more experience in using Process Indicators to analyze policies and programmes. Specifically, you used these indicators to review the elements of a Safe Motherhood policy that contribute to reducing maternal deaths, to assess needs in a country or in a specific area within the country, and to identify the components of programmes to reduce maternal deaths.

I explained how to choose priorities for interventions and to allocate resources, and covered policies that can act as barriers to the provision of emergency obstetric care. You also learned about the 3 Delays that lead to maternal deaths, how to plan the phasing and timing of programmes, and how to select service indicators to monitor your programmes in order to address problems that arise in implementation. An important message was ensuring that the standard of EmOC is adequate before mobilizing the community to use it.

Overall, the main message I have carried away from this course is this: we can save women's lives if we focus directly on the causes of maternal deaths. It's true that we need to understand what's going on in society and in the medical system and its institutions when we want to design solutions. But the main causes of death are clear: obstetric complications. If EmOC exists, if it is of adequate standard and if it is used, then we will prevent maternal deaths. Unless and until that happens, women will die.

What is the main message you have carried away?

SAQ Answers

SAQ 1

Paragraph 7.2, ICPD Programme of Action states that men and women have:

'the right of access to appropriate health care services that will enable women to go safely through pregnancy and childbirth'

The conferees recognized that access to appropriate health care services as a human right.

Since EmOC is necessary to prevent death from obstetric complications, it is the appropriate health care to prevent maternal deaths. Indeed, the provision of EmOC addresses women's right to life, which is the most basic of human rights, and is enshrined in the Universal Declaration of Human Rights of 1948.

SAQ 2 Answer

If you answered any three of the following, you were correct: family planning, post-abortion care, reproductive tract infections, sexually transmitted diseases, HIV/AIDS, services for adolescents, maternal and infant nutrition, cancers of the reproductive tract, infertility, female genital mutilation, gender-based violence.

SAQ 3 Answer

Although health, social and economic issues are inter-related, the problems may have completely different causes. For example, the reasons for infant mortality are closely related to nutrition and living conditions, whereas the reasons for maternal deaths are primarily obstetric complications and the inability of the health care system to deal with them.

SAQ 4 Answer

If more women use contraceptive methods, there will, of course, be fewer pregnancies, and, as a result, fewer deaths in absolute terms. Thus, the maternal mortality rate will be reduced. However, as I explained in Section 3.1 of Module 2, of the women who do become pregnant, about 15% will experience obstetric complications. This is as true of Europe and America as it is of Asia and Africa.

If women who experience obstetric complications do not receive appropriate care in time, they will die. Since Component A does not deal with the question of EmOC, then it will not reduce the maternal mortality ratio. There will be fewer pregnancies and fewer deaths, but the ratio will remain about the same.

SAQ 5 Answer

Antenatal care - Component B - will only marginally contribute to reducing maternal deaths. Amongst their other tasks, the Family Health Workers are supposed to visit pregnant women and, during these visits, they are supposed to predict and prevent obstetric complications that might arise. This component of the policy is also supposed to ensure delivery by a trained attendant.

As regards predicting and preventing obstetric complications, you will remember from Section 3.1.1 in Module 1, that it is not possible to either predict or prevent most obstetric complications. It is only possible to treat these when they happen.

As for delivery by a trained attendant, this will not help. You will remember that 75% of maternal deaths are directly caused by obstetric complications. Trained attendants do not have these skills and equipment and will therefore not contribute to the reduction of maternal deaths.

All that the trained attendants can do is to avoid harmful practices and ensure the immediate referral of women who develop complications, and help to stabilize their condition, if they have the skills and drugs to do so. This is why this Component makes only a marginal contribution to reducing maternal deaths.

SAQ 6 Answer

The same answer applies to Component C as to Component B: marginal. The only activity envisaged for Traditional Birth Attendants which has any relevance to obstetric complications is referral, plus they can avoid harmful practices. TBAs cannot provide EmOC services since, by definition, TBAs are not medical professionals. So the contribution this Component makes to addressing the problem of maternal deaths is marginal.

SAQ 7 Answer

Component D is the only component of the Safe Motherhood Policy which contributes to the reduction of maternal deaths because it directly targets the problem and its solution: the availability of EmOC. If my aim is to reduce maternal deaths, then Component D - and only Component D - will do so.

SAQ 8 Answer

This is how I would fill in Table 1 to show whether the policy designed by the Rondonia health officials would reduce maternal deaths.

Table 1 Policy Analysis

Safe Motherhood Policy	Component D
Process Indicators (Minimum/maximum acceptable levels)	
1. Amount of EmOC (For every 500,000 population) Comprehensive EmOC facilities 1 Basic EmOC facilities 4	 Yes No
2. Geographical distribution of EmOC facilities (Subnational distribution per 500,000 population)	No
3. Proportion of all births in Basic and Comprehensive EmOC Facilities (At least 15% of all births in the population)	No
4. Met need for EmOC (At least 100% of women estimated to have obstetric complications are treated in EmOC facilities)	No
5. Caesarean sections as a % of all births (Not less than 5% and not more than 15%)	Don't Know
6. Case fatality rate among women (Less than 1%)	Don't Know

From Component D in the Ronodnia Safe Motherhood Policy, I know that one District Hospital is planned for every 500,000 population, so I know that the target for Comprehensive EmOC will be met, which is excellent. However, I also know that for every 500,000 population I would need at least four Basic EmOC facilities, because otherwise I will not have

facilities that are geographically accessible to the population. This is not provided for, so I answer no to the second part of obstetric service indicator 1 as well as to obstetric service indicator 2. I also keep in mind that the Basic EmOC facilities do not need to have the same level of staff and services as the Comprehensive EmOC facilities, an important factor when it comes to programming resources.

Since I don't have the right amount of EmOC, I know that I am not going to reach the estimated 15% of all births that will need such services, or the met need for EmOC, and so I also answer no to Process Indicators 3 and 4. Process Indicators 5 and 6 refer directly to the facility, and I don't have enough information to answer those.

To sum up, I find that Component D - the only component in the Rondonia safe motherhood policy that directly provides what is needed to reduce maternal deaths - does not sufficiently address the problem. Maternal deaths will be reduced, but not to the extent hoped for by the planners. Women will still die in unacceptably high numbers.

SAQ 9 Answer

From everything I have studied in this course, I know that TBAs do not have the skills or equipment to treat obstetric complications, which cause maternal deaths if left untreated. The most they can do is recognize the complications and refer women to health facilities, as can other members of the community.

SAQ 10 Answer

The most I can expect Family Health Workers when it comes to reducing maternal deaths is to recognize obstetric complications and refer women experiencing these complications to the facility.

SAQ 11 Answer

I would not expect the programme to remain the same once it is implemented. Even the policy itself had to be revised, because the first draft did not provide for Basic EmOC. And already there are indications that we might need to reallocate some of our resources from Component A to Component D, to allow for additional tasks. This is why programme monitoring is so important, to adjust plans to real life.

SAQ 12 Answer

The 1st Delay is delay in deciding to go for treatment (the family and community are responsible); the 2nd Delay is delay in reaching an EmOC facility (the community and government are responsible); the 3rd Delay is delay at the EmOC facility itself (the medical practitioners and government are responsible).

SAQ 13 Answer

Set A (higher priority): weekly meetings of medical staff to discuss problem cases; improve equipment; improve supply of drugs; staff training on people skills. Set B (lower priority): increase availability of transport; inform the community about ways to recognize danger signs.

SAQ 14 Answer

These are some of the elements your answer should contain. Don't worry if your answer and mine are the not the same, because we may have thought things through in different ways, even if we are both correct.

a. *The main problem in Caio District is the limited availability of both Basic and Comprehensive EmOC facilities. This of course means that the population does not have sufficient access to these services. The fact that the midwife comes and organises prenatal care does not make EmOC more accessible to the population. Obstetric emergencies can happen at any time of the day, and can't wait for the midwife's next visit.*

b. *The main problem in Aware District is caused by the recent introduction of user fees, which means that the population is less able to afford the services. The availability of Basic and Comprehensive EmOC is sufficient, but the available services are not being used.*

c. *In Ekom District, which is very close to the country's capital, the health infrastructure is sufficient and people are using the services. However, there might be a serious problem regarding the quality of care. There seems to be insufficient medical equipment. Moreover, the medical staff are hardly available for the public-run services, and spend most of their time in the privately-run services.*

SAQ 15 Answer

Maternal deaths are probably highest in Case Study One. In this situation, the population has no access to any type of EmOC at all. This means that most of the obstetric complications such as bleeding, obstructed labour and eclampsia that could lead to maternal deaths cannot be treated. As you know, access to EmOC is central to reducing maternal deaths.

It is true that attendance is good at the antenatal services organized by the nurse on the motorbike, but as you learned in Module 1 this does not address maternal deaths since obstetric complications can neither be predicted nor prevented, but can only be treated when they occur.

The population in Case Study Two and Case Study Three do have some access to EmOC, even it is expensive, as in Two, or of inadequate quality, as in Three.

Course Glossary

Anaemia	abnormally low level of red blood cells or low levels of haemoglobin
Antepartum	occurring before childbirth
Antepartum haemorrhage	loss of blood that occurs at any time before delivery
Anti-convulsants	drugs to prevent or relieve convulsions (such as valium)
Basic EmOC	Functions that can be provided by an experienced nurse/midwife or physician, saving the lives of many women, and stabilizing women who need to go further for more sophisticated treatment.
Catchment area	official description of the population and area a health facility is meant to serve
Caesarean section	removal of the foetus by means of an incision into the uterus
Case fatality rate	the number of deaths from a specific condition divided by the number of people with that condition.
Childbearing years	a woman's childbearing years are generally considered to be between ages 15 and 49.
Comprehensive EmOC	includes Basic EmOC functions as well as blood transfusions and Caesarean sections.
Crude birthrate	the births per 1,000 population per year
Direct obstetric death	one due to complications of pregnancy, delivery or the postpartum period.
Eclampsia	coma and convulsive seizures that occur in pregnancy, often around delivery
Ectopic pregnancy	the fertilized egg becomes implanted outside the uterus - to the abdominal cavity, ovary, fallopian tube or cervix
Embolism	obstruction of a blood vessel, usually by a blood clot
Fistula	an abnormal passage between two cavities (vagina/bladder, vagina/rectum)

Haemorrhage	loss of blood
Hepatitis	inflammation of the liver of viral or toxic origin
Hypertension	high blood pressure, usually above 140/90.
Impact indicators	these give an indication of changes in the target event, eg in the numbers of maternal deaths
Indicators	Measurements or statistics used for assessing needs, tracking implementation, and evaluating progress
Indirect obstetric death	one due to existing medical conditions that are made worse by pregnancy or delivery
Lifetime risk of maternal death	the likelihood that an average woman will die of maternal causes. This is calculated using both the average risk associated with pregnancy, and the average number of times a woman becomes pregnant
Live births	a term used for statistical purposes indicating an infant born with signs of life
Maternal deaths	the death of a women while pregnant or within 42 days of termination or pregnancy.
Maternal morbidity	pregnancy-related illness and/or disability
Maternal mortality	a statistic based on the number of maternal deaths
Maternal Mortality Rate	the number of maternal deaths per 100,000 women of reproductive age per year
Maternal Mortality Ratio	the number of maternal deaths per 100,000 live births
Met need for EmOC	the proportion of women who need treatment for obstetric complications that receive such treatment
Midwife	a professional practitioner who has undergone comprehensive training in an accredited midwifery programme, and is equipped to assist normal births and to diagnose and manage complications during childbirth
Needs assessment	a review to gain a deeper understanding of the problems a population, or a health facility, or government ministry faces in order to design programmes that address these specific problems.

Obstetric services indicator	a statistic that measures the availability , utilization, or quality of obstetric care
Obstructed labour	occurs when the infant cannot pass through the mother's pelvis, either because the infant's head is too large, or the infant is incorrectly positioned for the journey through the birth canal
Oxytocic drugs	a term applied to any drug that stimulates contractions of the uterus in order to induce or accelerate labour
Parenteral	any route other than the alimentary canal, eg. intravenous
Placenta	the spongy structure in the uterus through which the foetus derives its nourishment
Postpartum	occurring after childbirth
Postpartum haemorrhage	excessive loss of blood that occurs after childbirth, usually in the first two days after delivery
Participatory group discussion	this brings together the range of people involved in a given problem to better understand the nature of the problem.
Pre-eclampsia	a condition in pregnancy characterized by hypertension, headaches, and swelling of the feet and legs
Process indicators	these measure changes in activities that contribute to or prevent a specific occurrence, such as maternal deaths.
Ruptured uterus	split in wall of uterus, often due to unrelieved obstructed labour
Signal functions	those functions that are absolutely necessary to save women's lives in case of obstetric complication
Total Fertility rate	average number of children per woman at current fertility rates
Traditional birth attendant	person without formal medical training who assists women during pregnancy or at delivery

Further Reading

These five publications are suggested further reading for this course:

Columbia University, Prevention of Maternal Mortality Network: PMM Results Conference Abstracts, New York, 1996.

Healthlink Worldwide, HIV and Safe Motherhood, 2000

Maine, Deborah, Safe Motherhood Programs: Options and Issues, Columbia University, New York, 1991

UNICEF/WHO/UNFPA, Guidelines for Monitoring the Availability and Use of Obstetric Services, UNICEF, New York, October 1997.

UNICEF, Programming for Safe Motherhood: Guidelines for Maternal and Neonatal Survival, New York, October 1999.

References

Maine, Deborah, Akalin, Murat Z., Ward, Victoria M., and Kamara, Angela, The Design and Evaluation of Maternal Mortality Programmes, Columbia University, 1997