

Uganda

Results from the 2002 Survey

Worldwide, more than 500,000 women and girls die of complications related to pregnancy and childbirth each year. Over 99 percent of those deaths occur in developing countries such as Uganda. But maternal deaths only tell part of the story. For every woman or girl who dies as a result of pregnancy-related causes, between 20 and 30 more will suffer short- and long-term disabilities such as obstetric fistula, a ruptured uterus, or pelvic inflammatory disease (see box on page 2).

Uganda's maternal mortality rate continues at an unacceptably high level. Although maternal mortality figures vary widely by source and are highly controversial, the best estimates for Uganda suggest that roughly 10,000¹ women and girls die each year due to pregnancy-related complications. Additionally, approximately another 200,000² women and girls will suffer from injuries or disabilities caused by complications during pregnancy and childbirth each year.

The tragedy—and opportunity—is that most of these deaths can be prevented with cost effective health care services. Reducing maternal mortality and disability will depend on

identifying and improving those services that are critical to the health of women and girls, including antenatal care, emergency obstetric care, adequate postpartum care for mothers and babies, and services for family planning and sexually transmitted infections (STIs), including HIV/AIDS. With this goal in mind, the Maternal and Neonatal Program Effort Index (MNPI) is a tool that reproductive health care advocates, providers, and program planners can use to

- assess current health care services
- identify program strengths and weaknesses
- plan strategies to address deficiencies
- encourage political and popular support for appropriate action
- track progress over time

Health care programs to improve maternal health must be supported by strong policies, adequate training of health care providers, and logistical services which facilitate the provision of those programs. Once maternal and neonatal programs and policies are in place, all women and girls must be ensured equal access to the full range of services.

At-a-Glance: Uganda

Population, mid-2004	25,300,000
Average age at first marriage, all women	18 years
Births attended by skilled personnel	38%
Total fertility rate (average number of children born to a woman during her lifetime)	6.9
Females giving birth by age 20	66%
Children who are exclusively breastfed at ages less than 6 months	57%
Contraceptive use among married women, ages 15-49, modern methods	18%

Sources: Population Reference Bureau – 2002 *Women of Our World*; 2004 *World Population Data Sheet*; *The World's Youth, 2000*; and 1999 *Breastfeeding Patterns in the Developing World* (see www.prb.org/datafinder).



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Understanding the Causes of Maternal Mortality and Morbidity

Maternal mortality refers to those deaths that are caused by complications due to pregnancy or childbirth. These complications may be experienced during pregnancy or delivery itself, or may occur up to 42 days following childbirth. For each woman who succumbs to maternal death, many more will suffer injuries, infections, and disabilities brought about by pregnancy or childbirth complications, such as obstetric fistula.³ In most cases, however, maternal mortality and disability can be prevented with appropriate health interventions.⁴

Some of the direct medical causes of maternal mortality include hemorrhage or bleeding, infection, complications from abortion, hypertensive disorders, and obstructed labor. Other causes include ectopic pregnancy, embolism, and anesthesia-related risks.⁵ Conditions such as anemia, diabetes, malaria, STIs, and others can also increase a woman's risk for complications during pregnancy and childbirth, and, thus, are indirect causes of maternal mortality and morbidity. Because most maternal deaths occur during delivery and during the postpartum period, emergency obstetric care, skilled birth attendants, postpartum care, and transportation to medical facilities if complications arise are all necessary components of strategies to reduce maternal mortality.⁶ These services are often particularly limited in rural areas, so special steps must be taken to increase the availability of services in those areas.

Efforts to reduce maternal mortality and morbidity must also address societal and cultural factors that affect women's health and their access to services. Women's low status in society, lack of access to and control over resources, limited educational opportunities, poor nutrition, and lack of decisionmaking power contribute significantly to adverse pregnancy outcomes. Laws and policies, such as those that require a woman to first obtain permission from her husband or parents, may also discourage women and girls from seeking needed health care services—particularly if they are of a sensitive nature, such as family planning, complications from abortion, or treatment of STIs.

Traditional practices that affect maternal health outcomes include early marriage and female genital cutting. Many women in sub-Saharan Africa marry before the age of 20. Pregnancies in adolescent girls, whose bodies are still growing and developing, put both the mothers and their babies at risk for negative health consequences.

Female genital cutting, also known as female circumcision or genital mutilation, is a practice that involves removing all or part of the external genitalia and/or stitching and narrowing the vaginal opening (which is called *infibulation*). The practice is common in some parts of Africa and the Middle East. Social, cultural, religious, and personal reasons support the persistence of this practice. Some of these reasons include maintaining tradition and custom, promoting hygiene or aesthetics, upholding family honor, controlling women's sexuality and emotions, and protecting women's virginity until marriage.⁷ Many women and girls who undergo female genital cutting, particularly those who undergo Type III cutting or infibulation, experience health problems including hemorrhage, pain, infection, perineal tears, and trauma during childbirth. They often also experience psychological and sexual problems.

The consequences of maternal mortality and morbidity are felt not only by women but also by their families and communities. Children who lose their mothers are at an increased risk for death or other problems, such as malnutrition. Loss of women during their most productive years also means a loss of resources for the entire society.

Ensuring safe motherhood requires recognizing and supporting the rights of women and girls to lead healthy lives in which they have control over the resources and decisions that affect their health and safety. It requires raising awareness of complications associated with pregnancy and childbirth, providing access to high-quality health services (antenatal, delivery, postpartum, family planning, etc.), and eliminating harmful practices.

The Maternal and Neonatal Program Effort Index

In 2002, around 900 reproductive health experts evaluated and rated maternal and neonatal health services as part of an assessment in 55 developing countries.⁸ The results of this study constitute the MNPI, which provides both international and country-specific ratings of relevant services. Using a tested methodology for rating programs and services,⁹ 10 to 25 experts in each country—who were familiar with but not directly responsible for the country’s maternal health programs—rated 81 individual aspects of maternal and neonatal health services on a scale from 0–5. For convenience, each score was then multiplied by 20 to obtain an index that runs from 0–100, with 0 indicating a low score and 100 indicating a high score.

The 81 items are drawn from 13 major components:

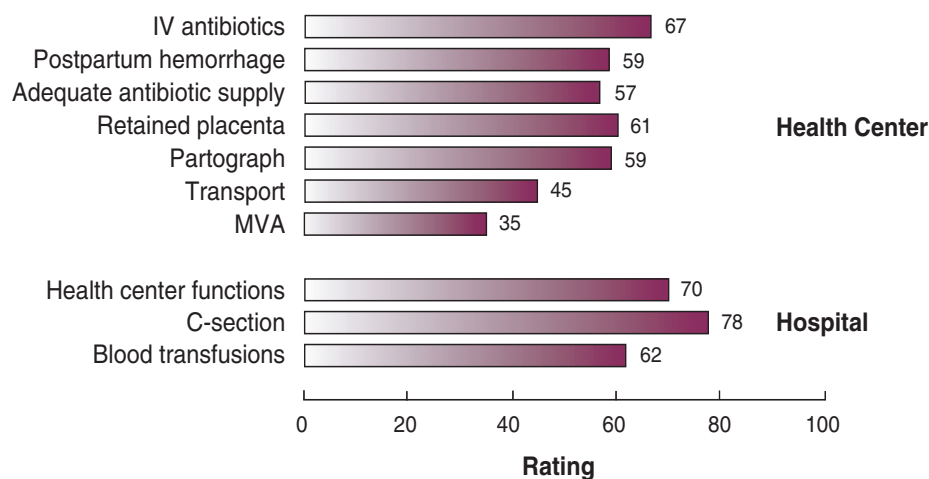
- Health center capacity
- District hospital capacity
- Access to services
- Antenatal care
- Delivery care
- Newborn care
- Family planning services at health centers
- Family planning services at district hospitals
- Policies toward safe pregnancy and delivery
- Adequacy of resources
- Health promotion
- Staff training
- Monitoring and research

Items from these categories can be further classified into five types of program effort: service capacity, access, care received, family planning, and support functions. The following five figures, organized by type of program effort, present the significant indicators from the 2002 Uganda study.

Service Capacity

Overall, Uganda’s service capacity to provide emergency obstetric care received a rating of 59 out of 100. Figure 1 shows ratings of the capacity of health centers and district hospitals to provide specific services. The least available service among those assessed at health centers is performing manual vacuum aspiration of the uterus (MVA) (35). Administration of intravenous (IV) antibiotics is one of the most commonly available services in Uganda (67). In Uganda, the least available service among those assessed in district hospitals is performing blood transfusions (62).

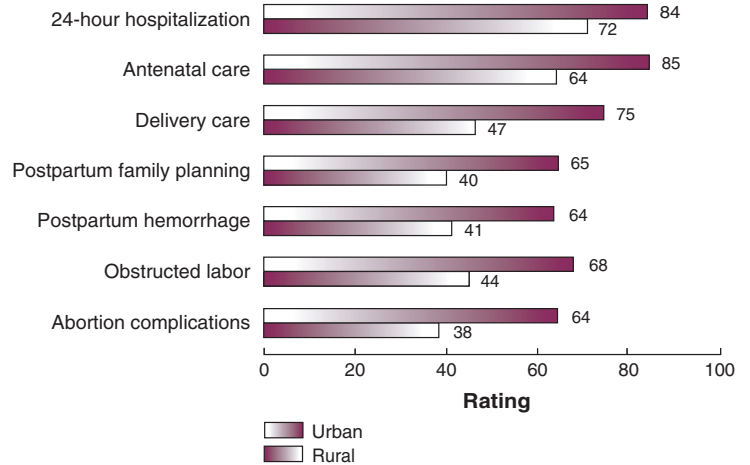
Figure 1. Service capacity of health centers and district hospitals in Uganda



Access

In most developing countries, access to safe motherhood services in rural areas is more limited than in urban areas. This issue is of particular importance to Uganda because 88 percent¹⁰ of its population lives in rural areas. Overall, Uganda received a rating of 49 for access, with an average of 46 for rural access and 68 for urban access. Figure 2 presents the rural and urban access ratings for seven services. With the exception of 24-hour hospitalization, there are large gaps in the ratings for rural and urban access to services. Not including 24-hour hospitalization, rural access scores ranged from 38 to 72—suggesting an urgent need to increase access to a variety of services. Even when considering urban access, most services received only moderate scores and they indicate much room for improvement.

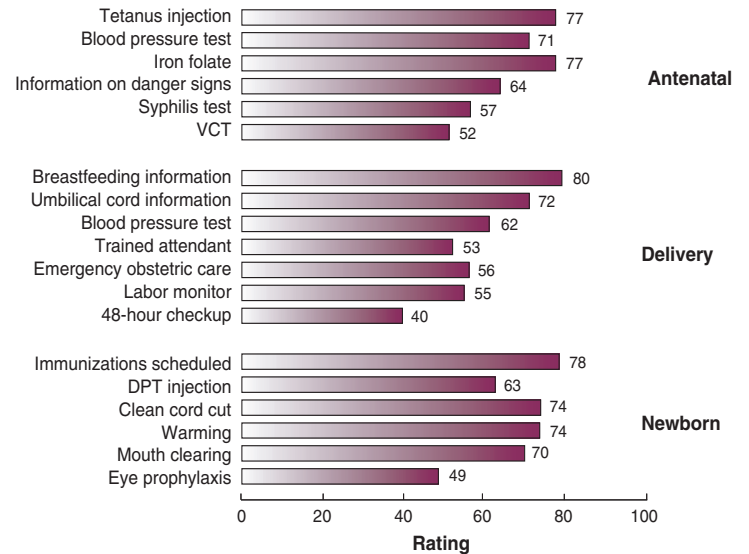
Figure 2. Comparisons of access to services for rural and urban areas in Uganda



Care Received

In most countries, newborn services are rated higher than delivery care or antenatal care, and this was the case for Uganda as well. Overall, care received was given a rating of 64, with newborn care receiving an average rating of 68 compared with 67 for antenatal care and 60 for delivery care. Figure 3 presents key indicators for each type of care. One of the more important indicators of maternal mortality is the presence of a trained attendant at birth,¹¹ which received a rating of 53. Other crucial elements that reduce maternal mortality are emergency obstetric care and the 48-hour postpartum checkup, which are rated 56 and 40, respectively. Breastfeeding advice for pregnant women received the highest rating (80).

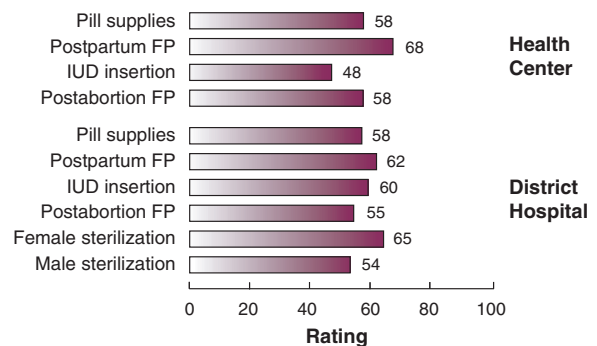
Figure 3. Antenatal, delivery, and newborn care received in Uganda



Family Planning

Uganda’s family planning services provided by health centers and district hospitals together received a rating of 59. Figure 4 presents the ratings for individual family planning services provided by health centers and district hospitals in Uganda. These ratings consider facility capacity, access, and care received. Both health centers (68) and district hospitals (62) received relatively high ratings for routinely offering family planning at postpartum visits. District hospitals also scored fairly well when it comes to IUD insertion, receiving a rating of 60. District hospitals typically perform better than health centers, but the most significant areas for improvement in district hospitals are in routinely offering family planning after abortion cases and providing sterilization to male clients, which are rated 55 and 54, respectively.

Figure 4. Provision of family planning services at health centers and district hospitals in Uganda



Policy and Support Functions

Policy and support functions in Uganda received an overall rating of 64. Ratings for support functions, shown in Figure 5, are divided into the following categories: policy, resources, monitoring and research, health promotion, and training. In relation to other support functions, policy generally received the highest ratings. Uganda's ministry-level policy on maternal health received a relatively strong rating of 74. Commitment to this policy and safe motherhood, however, needs to be reinforced through reasonable and fair policies concerning which personnel can provide maternal health services—an aspect of policy that received a rating of 69.

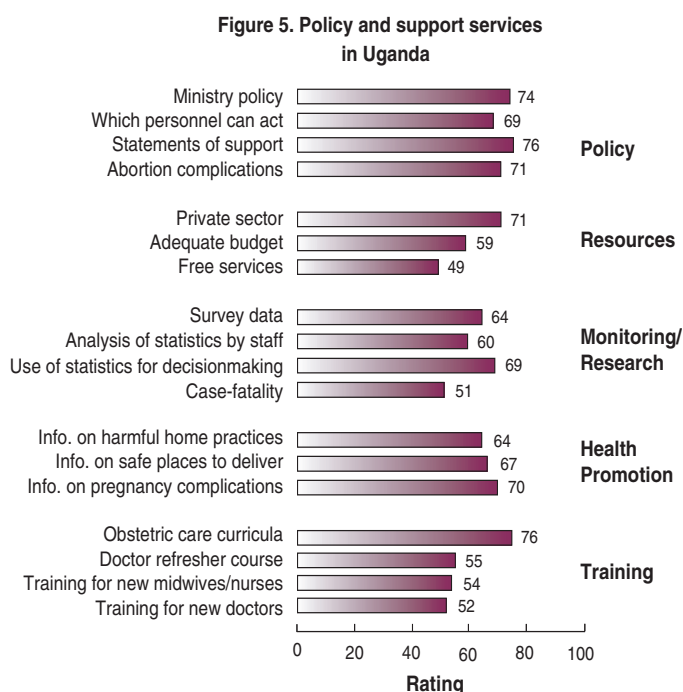
Policies, even when they have been adopted, do not automatically translate into high-quality services at the local level. Many of the support functions in Uganda, including resources, monitoring, health promotion, and training, are in need of further development. Ratings for budget resources (59) and free services (49) lag behind availability of private sector resources (71). The ratings suggest that Uganda is fairly strong in its monitoring and research capabilities, specifically in using statistical information for decisions and reconsideration of strategies for reducing maternal mortality (69), but falls short in case-fatality reviews (51) and statistical reports (60).

Health promotion and education of the public are important adjuncts to the provision of health services. Topics such as pregnancy complications (70), safe places to deliver (67), and harmful home practices (64) all require attention in Uganda. Mass media should be used to educate the public about safe pregnancy and delivery, and community-based organizations should assist these efforts through systematic programs.

Finally, the education and training of health professionals is an integral part of providing good-quality care and preventing maternal death and disability. Although ratings suggest that curricula have been developed (76), actual training in Uganda is generally poor, and was found to be weakest in the area of training for new doctors (52).

Global Comparisons

Overall, the experts gave maternal and neonatal health services in Uganda a rating of 61, compared with an average of 59 for the 55 countries involved in the MNPI study. Among the 15 developing countries studied in the non-Francophone sub-Saharan Africa region,¹² services in Uganda rank seventh. Although comparisons across countries should be made with a certain degree of caution—given the subjective nature of expert opinions and evaluations in different countries—these comparisons may help maternal health care advocates and providers in Uganda identify



priority action areas. It is also important to keep in mind that average scores may mask the differences among provinces within each country.

Table 1 compares Uganda's scores with the global averages for nine main components, two of which are broken down further, and the overall total of the MNPI. The table shows that Uganda's ratings for maternal and neonatal health services in a few key areas lag behind the global average. The greatest disparities between the global assessment and Uganda are found in rural and urban access to services (56 versus 49) and newborn care (72 versus 68). The areas in which Uganda received the lowest ratings were rural and urban access to services (49) and appointments for postpartum checkups (48). Uganda's highest ratings are for encouragement for breastfeeding (80) and maternal health policies (70).

Table 1. Component Scores for Uganda and All 55 Countries in the International Study for 2002

Selected MNPI Indicators	Uganda	All Countries
Access to safe motherhood services by pregnant women *	49	56
Rural access	46	43
Urban access	68	69
Able to receive emergency obstetric care	56	58
Provided with appointment for postpartum checkup within 48 hours	48	44
Immunizations**	73	79
Maternal tetanus	77	80
Neonatal DPT	63	78
Other neonatal immunizations scheduled	78	80
Encouraged to begin immediate breastfeeding	80	76
Offered VCT	52	38
Postabortion family planning***	57	55
Adequate maternal health policy	70	72
Adequate budget resources	60	49
Overall MNPI Rating		
Total (average score for all 13 major components of maternal and neonatal health)	61	59

*Composite scores for all rural and urban access items
 **Composite scores for maternal and neonatal immunizations
 ***Composite scores for health centers and district hospitals

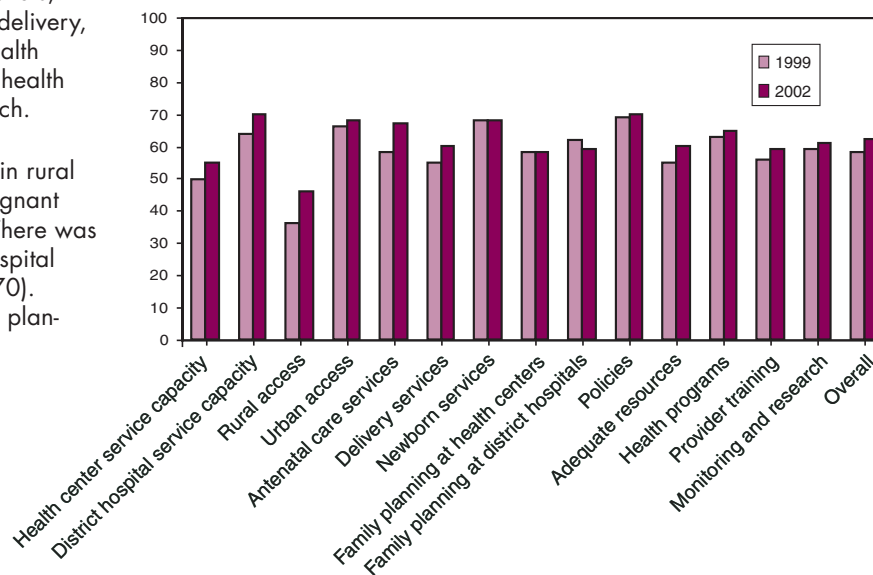
Comparison Over Time

Between 1999, when the first MNPI was conducted in Uganda, and 2002, improvements can be seen in the effort put into maternal and neonatal services. Figure 6 illustrates how Uganda rated in 1999 and 2002, in 13 main areas, including staff trained in obstetric care in both health centers and at district hospitals, percent of pregnant women who have access to care in both rural and urban areas, services provided at antenatal clinics and during delivery, neonatal services, provision of family planning at health centers and district hospitals, policies that promote safe pregnancy and delivery, adequate resources to support services, health promotion programs, obstetric training for health care providers, and monitoring and research.

Uganda showed the greatest improvement in rural access to safe motherhood services for pregnant women (a score increase from 36 to 46). There was also marked improvement in the district hospital services capacity (an increase from 64 to 70). However, there was a decline in the family plan-

ning provision scores at the district hospital level, from 62 in 1999 to 59 in 2002. There was no change in score for neonatal services and family planning at the health center level. Overall, Uganda’s score increased from 58 in 1999 to 61 in 2002.

Figure 6. Comparison of selected items for Uganda MNPI scores in 1999 and 2002



Summary

The MNPI ratings for Uganda indicate that the country is considered to have a strong policy on safe motherhood. In addition, curricula for training health care providers received a high rating. Women and babies are considered to have reasonable access to some services—including antenatal care (particularly immunization), some family planning methods (pills, IUD), and 24-hour hospitalization in case of emergency. Other aspects of maternal and neonatal care services require strengthening, particularly in rural areas where women and babies have more limited access to

services. More women need to deliver with a skilled attendant present, and more women need access to emergency obstetric care (including transportation) when the need arises. Voluntary counseling and testing for HIV is very limited, which should be a concern, as it is estimated that more than 8 percent of Uganda's adult population (age 15–49) is living with HIV/AIDS.¹³ Finally, as in most other countries, maternal and neonatal health care services in Uganda face resource shortages—from both the public and private sectors—that hamper expansion of services.

Priority Action Areas

The following interventions have been shown to improve maternal and neonatal health and should be considered in Uganda's effort to strengthen maternal and neonatal health policies and programs.

- Increase access to reproductive health, sexual health, and family planning services, especially in rural areas.** Due to the lack of access to care in rural areas, maternal death rates are higher in rural areas than in urban areas. In addition, many men and women in rural and urban areas lack access to information and services related to HIV/AIDS and other STIs.
- Strengthen reproductive health and family planning policies and improve planning and resource allocation.** Although the MNPI scores demonstrate that many countries have strong maternal health policies, implementation of the policies may be inadequate. Often, available resources are insufficient or are used inefficiently. In some cases, advocacy can strengthen policies and increase the amount of resources devoted to reproductive health and family planning. In other cases, operational policy barriers—barriers to implementation and full financing of reproductive health and family planning policies—must be removed.
- Increase access to and education about family planning.** Another feature that relates closely to preventing maternal mortality is the provision of family planning. Family planning helps women prevent unintended pregnancies and space the births of their children. It thus reduces their exposure to risks of pregnancy, abortion, and childbirth. Reliable provision of a range of contraceptive methods can help prevent maternal deaths associated with unwanted pregnancies.
- Increase access to good-quality antenatal care.** High-quality antenatal care includes screening and treatment for STIs, anemia, and detection and treatment of hypertension. Women should be given information about appropriate diet and other healthy practices and about where to seek care for pregnancy complications. The World Health Organization's recommended package of antenatal services can be conducted in four antenatal visits throughout the pregnancy.
- Increase access to skilled delivery care.** Delivery is a critical time in which decisions about unexpected, serious complications must be made. Skilled attendants—health professionals such as doctors or midwives—can recognize these complications, and either treat them or refer women to health centers or hospitals immediately if more advanced care is needed. Women in rural areas live far distances from high-quality obstetric care, so improvements depend greatly on early recognition of complications, better provisions for emergency treatment, and improved logistics for rapid movement of complicated cases to district hospitals. Increased medical coverage of deliveries, through additional skilled staff and service points, are basic requirements for improving delivery care. Reliable supply lines and staff retraining programs also are critical.
- Provide prompt postpartum care, counseling, and access to family planning.** It is important to detect and immediately manage problems that may occur after delivery, such as hemorrhage, which is responsible for about 25 percent of maternal deaths worldwide. Postpartum care and counseling will help ensure the proper care and health of the newborn. Counseling should include information on breastfeeding, immunization, and family planning.
- Improve postabortion care.** About 13 percent of maternal deaths worldwide are due to abortion complications. Women who have complications resulting from abortion need access to prompt and high-quality treatment for infection, hemorrhage, and injuries to the cervix and uterus.
- Strengthen health promotion activities.** Mass media should be used to educate the public about pregnancy and delivery, and community-level organizations should assist this through systematic programs. An important step for health promotion, in order to prevent negative maternal health outcomes, is to have the Ministry of Health supply adequate educational materials regarding safe practices.

References

- ¹ AbouZahr, Carla and Tessa Wardlaw. 2004. *Maternal Mortality in 2000: Estimates Developed by WHO, UNICEF and UNFPA*. Geneva: WHO.
- ² www.unfpa.org/mothers/index.htm
- ³ Obstetric fistula occurs as a result of a prolonged and obstructed labor, which in turn is further complicated by the presence of female genital cutting. The pressure caused by the obstructed labor damages the tissues of the internal passages of the bladder and/or the rectum and, with no access to surgical intervention, the woman can be left permanently incontinent, unable to hold urine or feces, which leak out through her vagina. (UNFPA Press Release, July 2001)
- ⁴ MEASURE Communication. 2000. *Making Pregnancy and Childbirth Safer*. (Policy Brief) Washington, D.C.: Population Reference Bureau. Available: www.prb.org/Template.cfm?Section=PRB&template=/ContentManagement/ContentDisplay.cfm&ContentID=2824
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- ⁷ Population Reference Bureau. 2001. *Abandoning Female Genital Cutting: Prevalence, Attitudes, and Efforts to End the Practice*. Washington, D.C.: Population Reference Bureau. Available: www.prb.org/pdf/AbandoningFGC_Eng.pdf
- ⁸ The MNPI was conducted by Futures Group and funded by the U.S. Agency for International Development (USAID) through the MEASURE Evaluation Project. For more information on the MNPI, see Bulatao, Rodolfo, A., and John A. Ross. 2002. "Rating Maternal and Neonatal Health Services in Developing Countries." *Bulletin of the World Health Organization* 80: 721–727. Also see Ross, John A., Oona Campbell, and Rodolfo Bulatao. 2001. "The Maternal and Neonatal Programme Effort Index (MNPI)." *Tropical Medicine and International Health* 6(10): 787–798.
- ⁹ This methodology for rating policies and programs was originally developed for family planning and has also been used for HIV/AIDS. See Ross, John A., and W. Parker Mauldin. 1996. "Family Planning Programs: Efforts and Results, 1972–1994." *Studies in Family Planning* 27(3): 137–147. Also see Stover, John, Joel Rehnstrom, and Bernhard Schwartlander. 2000. *Measuring the Level of Effort in the National and International Response to HIV/AIDS: The AIDS Program Effort Index (API)*. Geneva: UNAIDS.
- ¹⁰ United Nations Department of Economic and Social Affairs, Population Division. 2002. "Urban and Rural Areas 2002." Retrieved from www.un.org/esa/population/publications/wup2003/2003UrbanRural2003_Web.xls.
- ¹¹ In the MNPI survey instrument, the term *trained* was used (as opposed to the term *skilled*) because it is empirically concrete for the respondent. Asking respondents about skill levels would require them to judge the probable quality of the original training and the deterioration of skills over time. Although knowing about skills is really more critical, it throws more subjectivity into the data, and as a factual matter, skills weren't measured.
- ¹² Countries in the non-Francophone sub-Saharan Africa region that were included in this index are: Angola, Botswana, Ethiopia, Ghana, Kenya, Malawi, Mozambique, Namibia, Nigeria, South Africa, Sudan, Tanzania, Uganda, Zambia, and Zimbabwe.
- ¹³ UNAIDS. 2000 *Report on the Global HIV/AIDS Epidemic*. Available: www.unaids.org/epidemic_update/report/Epi_report.htm

For More Information

A complete set of results, including more detailed data and information, has already been sent to each of the participating countries. For more information, contact:

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