

Maternal and Neonatal Program Effort

MNPI 2005

Senegal

Results from the 2005 survey

Worldwide, over 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 Senegal. 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 develop short- and long-term disabilities, such as obstetric fistula, a ruptured uterus, or pelvic inflammatory disease.

Senegal'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 Senegal suggest that some 2,500 women and girls die each year due to pregnancy-related complications¹. Additionally, approximately another 50,000 women and girls will suffer from injuries or disabilities caused by complications during pregnancy and childbirth each year².

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 Senegal's 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 that 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: Senegal

Population (2005)	11,700,000
Births attended by skilled personnel	58%
Total fertility rate (average number of children born to a woman during her lifetime)	4.8
Contraceptive use among married women, ages 15-49, modern methods	8%
Children who are exclusively breastfed at ages <6 months	24%

Sources: Population Reference Bureau— Women of our World 2005; The World's Youth 2006; UNFPA—State of World Population 2005; UNICEF Global Database on Breastfeeding Indicators 2006; World Health Organization Global Monitoring and Evaluation Indicators 2006.

Understanding the Causes of Maternal Mortality and Morbidity

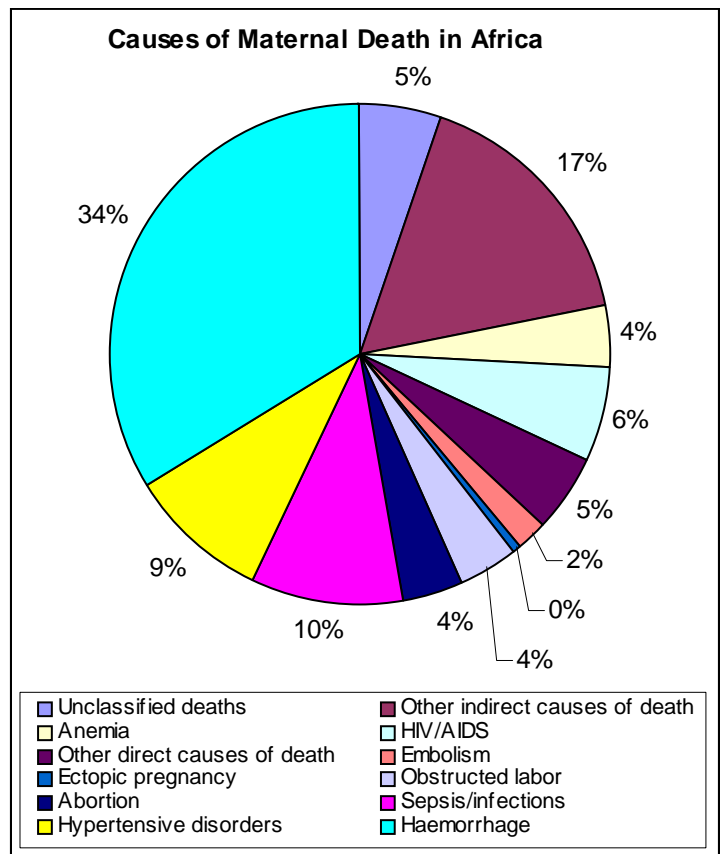
Maternal mortality refers to those deaths that are caused by complications due to pregnancy or childbirth. These complications may be experienced during pregnancy or delivery itself, or may occur up to 42 days following childbirth. For each woman who succumbs to maternal death, many more will suffer 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. Differences in regional contexts, including differences in societal, cultural and economic factors and barriers to access, are reflected in the significant variance of maternal mortality indicators by region (see box). In Africa, hemorrhage, sepsis and the impact of HIV/AIDS contribute significantly to maternal deaths (see chart).

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.⁵ These services are often particularly limited in rural areas, so special steps must be taken to increase the availability of services in those areas.

Social, cultural, religious, and personal reasons support the persistence of some traditional practices that can negatively affect women's health outcomes, such as female genital cutting and early marriage. Efforts to reduce maternal mortality and morbidity must 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 decision-making 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.

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.



Source: Khan, Kalid S, Daniel Wojdyla, Lale Say, A Metin Gülmezoglu, Paul F.A. Van Look. 2006. "WHO analysis of causes of maternal death: a systematic review." *Lancet*; 367:1066-74.

Region	Maternal mortality ratio (per 100,000 live births)	Number of maternal deaths	Lifetime risk of maternal death, 1 in:
World Total	400	529,000	74
Developed Regions*	20	2,500	2,800
Europe	24	1,700	2,400
Developing Regions	440	527,000	61
Africa	830	251,000	20
Northern Africa	130	4,600	210
Sub-Saharan Africa	920	247,000	16
Asia	330	253,000	94
Eastern Asia	55	11,000	840
South-central Asia	520	207,000	46
South-eastern Asia	210	25,000	140
Western Asia	190	9,800	120
Latin America and the Caribbean	190	22,000	160
Oceania	240	530	83

Includes Canada, USA, Japan, Australia, and New Zealand, which are not included in regional totals.
Source: AbouZahr, Carla and Tessa Wardlaw. 2004. WHO, Maternal Mortality in 2000.

The Maternal and Neonatal Program Effort Index

In 2005, around 900 reproductive health experts evaluated and rated maternal and neonatal health services as part of an assessment in 50 developing countries.⁶ The results of this study constitute the MNPI, which produced both international and country-specific ratings of relevant services. Using a tested methodology for rating programs and services,⁷ 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 14 major components, the scores for which are presented at the right.

Items from the 14 components can be further categorized into five types of program effort, each of which is presented below with scores for Senegal shown for selected indicators of interest.

A comprehensive and interactive database containing all 81 indicator scores for the 2005 Senegal survey is available at:

<http://www.policyproject.com/pubs/mnpi.cfm>.

Component Scores for Senegal and All 50 Countries in the International Study for 2005		
14 MNPI Components	Senegal	All Countries
Health center capacity	68	46
District Hospital Capacity	80	61
Access to services: Rural	25	36
Access to services: Urban	73	70
Antenatal care	76	63
Delivery care	73	55
Newborn care	81	68
Family Planning services at health centers	77	56
Family planning services at district hospitals	70	58
Policies towards safe pregnancy and delivery	72	64
Adequate resources	53	47
Health promotion	65	48
Staff training	63	51
Monitoring and research	65	56
Total score (mean)	67	56

Select Program Effort Scores for Senegal		
Program Effort Type	Selected Indicators	2005 Score
Service Capacity of Health Facilities (health center level)	Trained staff able to provide management of postpartum hemorrhage	72
	Transportation available to district hospital in case of obstructed labor	52
Adequate Access to Services for Women (rural/urban)	Access to treatment for abortion complications	22/69
	Access to delivery care by a trained professional attendant	24/80
Care Received (antenatal visits, delivery services, newborn care)	Receive needed tetanus injection (antenatal visit)	87
	Offered VCT for HIV (antenatal visit)	57
	Able to receive emergency obstetric care as needed (delivery services)	68
	All newborn's mouth and nasal passageways cleared (newborn care)	68
Family Planning (at health center and district hospitals)	Routinely offer postabortion family planning (health center/ district hospital)	68/77
	Routinely offer postpartum family planning (health center/ district hospital)	70/85
Policy and Support Functions	Adequate Ministry policies towards pregnancy and delivery services	72
	Government budget is adequate	62

Summary

The MNPI ratings indicate that Senegal's program efforts for better maternal and neonatal health have come a long way but still have far to go. While favorable policies are common in the developing world, implementation typically lags behind. Senegal needs to ensure that wise intentions are translated into high-quality, accessible services and programs at the local level. In some respects there are large disparities in access to services between rural and urban populations.

Priority Action Areas

The following interventions have been shown to improve maternal and neonatal health and should be considered in Haiti'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. 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. Improved provision of a range of contraceptive methods can 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. Some women in rural areas lack easy access to 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. 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.

To access the comprehensive and interactive database that displays all 81 indicator scores for all countries and all survey years, please visit <http://www.policyproject.com/pubs/mnpi.cfm>. Copies of past MNPI survey reports by country and associated papers are also available at the website.

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

5 Dayaratna, V., W. Winfrey, K. Hardee, J. Smith, E. Mumford, W. McGreevey, J. Sine, and R. Berg. 2000. *Reproductive Health Interventions: Which Ones Work and What Do They Cost?* (Occasional Paper No. 5) Washington, D.C.: POLICY Project. Available: www.policyproject.com/pubs/occasional/op-05.pdf

6 The MNPI was conducted by the Futures Group International 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.

7 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.

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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