The Averting Maternal Death & Disability Program

Improving the availability, quality and use of emergency obstetric care in developing countries

Columbia University
MAILMAN SCHOOL
OF PUBLIC HEALTH

Heilbrunn Department for Population and Family Health

Funded by the Bill and Melinda Gates Foundation

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Why Women Still Die Avoidable Deaths

Out of every 100 pregnant women, the World Health Organization estimates that 15 are likely to experience serious obstetric complications (1994). This is a fact of life for women worldwide. In high income countries, where women have had access to life-saving treatment (such as antibiotics and blood transfusions) since the 1940s, lives are saved. In countries where many women do not, lives are lost. Each year, more than 500,000 women die needlessly. Millions more are disabled.

The international community has recognized that such deaths can and must be prevented. World leaders made the reduction of maternal mortality by 75% by 2015 one of the Millennium Development Goals adopted at their United Nations summit in the year 2000.

Most maternal deaths result from five major complications—hemorrhage, infection, obstructed labor, hypertension, and complications of abortion. In developing countries, women with major complications face many barriers to obtaining care.

Danger signs for obstetric complications: if women experiencing complications can make it to a functioning health facility in time, almost all lives can be saved.
Poster: Government of Bangladesh and UNICEF

These barriers fall into three categories, known as the 3 Delays: (1) delay in deciding to seek treatment, (2) delay in reaching a health facility that provides treatment, and (3) delay in receiving treatment at the facility (Columbia, 1993).

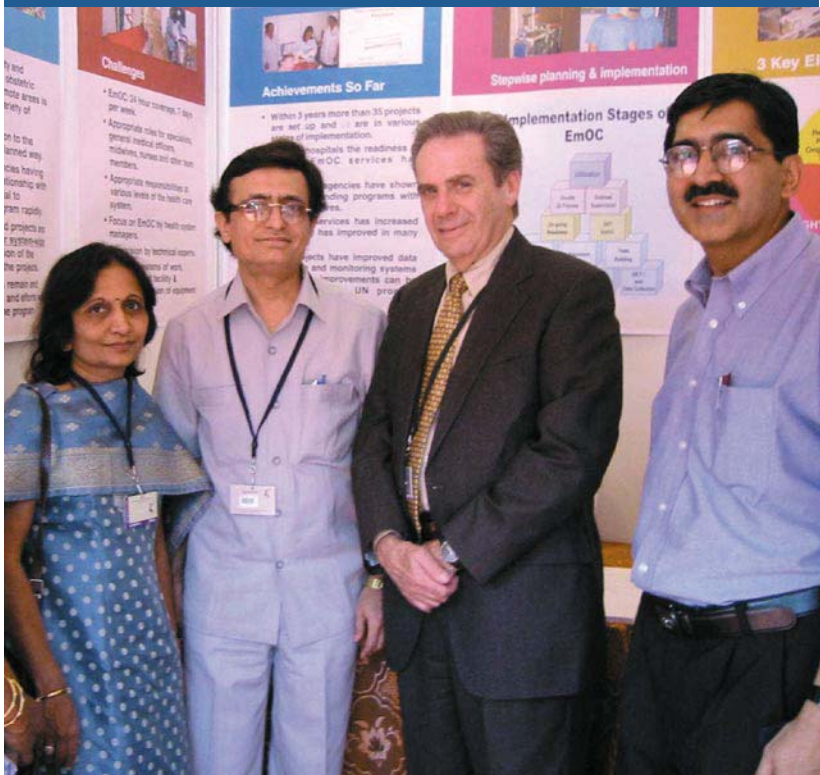
The evidence shows that most life-threatening complications cannot be predicted or prevented, but almost all can be treated successfully with good, timely medical care. Therefore, addressing the 3rd Delay should have priority: unless enough health facilities provide emergency obstetric care to the women who need them, tackling the other two delays will do little to decrease death and disability.

A Global Partnership to Save Women's Lives

The Averting Maternal Death and Disability (AMDD) Program was established at the Columbia University Mailman School of Public Health in 1999 with generous support from the Bill and Melinda Gates Foundation.

AMDD works in partnership with United Nations agencies and non-governmental organizations that already have field operations, recognized expertise, and close working relations with governments and communities. This strategy facilitates efficient use of available resources and quick project start-up. AMDD project partners are now implementing 56 projects in 43 countries.

At the 2003 All-India Congress of Obstetricians and Gynecologists in Bangalore (left to right): Dr. Asha Bhatt and Dr. Prakash Bhatt, joint winners of the AMDD-FIGO Distinguished Community Service Award; Dr. Allan Rosenfield, Dean of Columbia University's Mailman School of Public Health and Dr. Dileep Mavalankar, AMDD Senior Management Advisor.



Looking to a brighter future in the Atlas mountains of Morocco: the Government, UNFPA and AMDD are upgrading facilities in the 13 provinces of the Marrakech region and have conducted needs assessments nationwide Photo: Czikus Carriere

- **United Nations Children's Fund (UNICEF)**: field projects in Afghanistan, Bangladesh, Bhutan, India, Nepal, Pakistan and Sri Lanka; needs assessments in Benin, Chad, Guinea Conakry, Mali and Uganda.
- **United Nations Population Fund (UNFPA)**: field projects in India, Morocco, Mozambique, and Nicaragua; needs assessments in Cameroon, Cóte d'Ivoire, Mauritania, Niger, Senegal, El Salvador and Guatemala.
- **Regional Prevention of Maternal Mortality (RPMM) Network**: teams and projects in Angola, Benin, Burkina Faso, Chad, Congo, Cóte d'Ivoire, Ghana, Guinea, Kenya, Lesotho, Liberia, Nigeria, Mali, Senegal, Sierra Leone, Tanzania, Togo, Uganda, Zambia and Zimbabwe.
- **CARE**: projects in Ethiopia, Rwanda, Tanzania, Peru, and Tajikistan.
- **Save the Children**: projects in Mali and Vietnam.

- **Reproductive Health for Refugees (RHR) Consortium**: 12 projects in Bosnia, Democratic Republic of Congo, Kenya, Kosovo, Liberia, Pakistan, Sierra Leone, Sudan, Tanzania and Thailand.

AMDD supplements its small Columbia University core team with a network of experienced advisers from

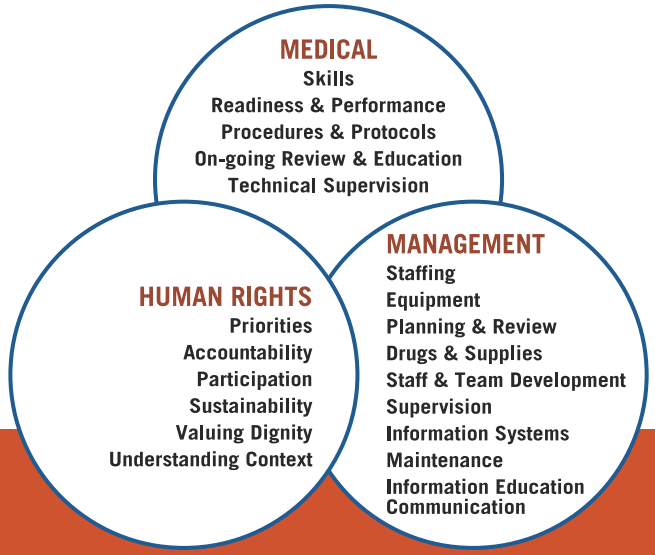
- **Family Health International**,
- **the Indian Institute of Management at Ahmedabad**, and
- **John Snow International**,

and also draws on the expertise of

- **EngenderHealth,** and
- **JHPIEGO**, a Johns Hopkins-affiliated organization.

Competency-based training course for participants from six Asian countries at the Bangladesh Maternal and Child Health Training Institute: Dr. Harshad Sanghvi (center) and Ms. Marisabel Gouverneur (center right) of JHPIEGO review trainee operations with MCHTI Director Dr. S. M. Jahangir (standing). Photo: Dileep Mavalankar

Principal Components of the AMDD Program



The AMDD Approach

AMDD-supported projects deal with three key dimensions of care – medical, management and human rights. All three should be taken into account if women are to have access to good quality emergency obstetric care (EmOC) 24 hours a day, seven days a week.

Drawing on field experience, AMDD has also identified the major stages of improving the availability and quality of services at health facilities, prerequisites to greater use by women.

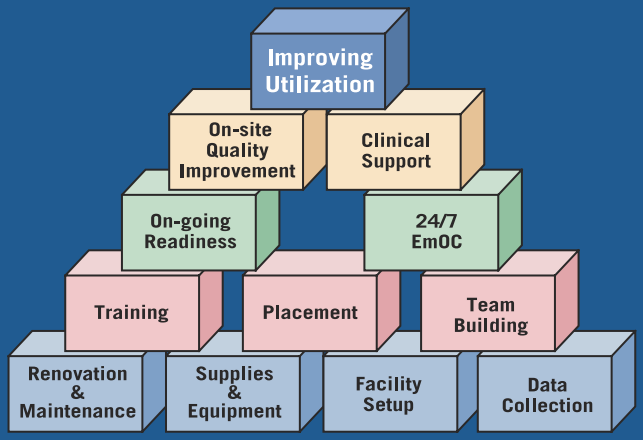
Improving Availability

Most governments already allocate considerable resources to the health sector. Too often, the full potential of these resources is not realized due to policy barriers and inadequate organization of services. The focus of AMDD-supported activities is on improving the functioning of existing health facilities and systems, thus allowing governments to realize the full value of their maternal health investments.

It is not easy, but it can be done, as the AMDD-supported teams are showing.

According to the UN Process Indicators, if women are to have sufficient access to care, every 500,000 people need at least four facilities offering basic emergency obstetric care and one facility offering comprehensive emergency obstetric care (see Guidelines, 1997).

Implementation of Emergency Obstetric Care



Functions used to identify Basic and Comprehensive EmOC Services

Basic EmOC services

1. Administer parenteral antibiotics
2. Administer parenteral oxytocic drugs
3. Administer parenteral anticonvulsants for pre-eclampsia and eclampsia
4. Perform manual removal of placenta
5. Performal removal of retained products
6. Perform assisted vaginal delivery

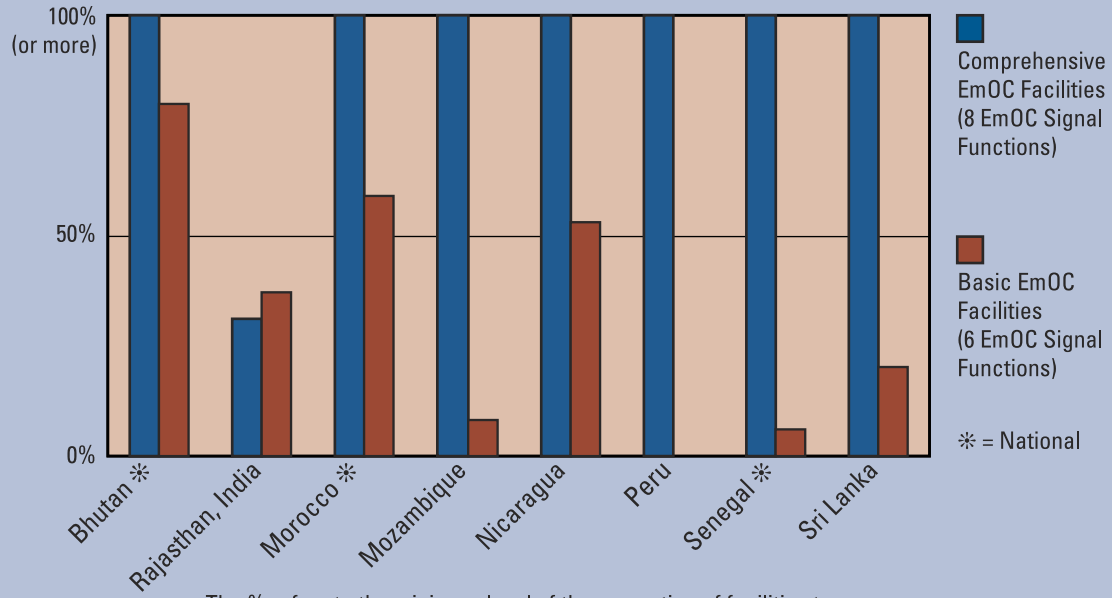
Comprehensive EmOC services

All of those included in Basic EmOC, plus

7. Perform surgery (Caesarean section)
8. Perform blood transfusion

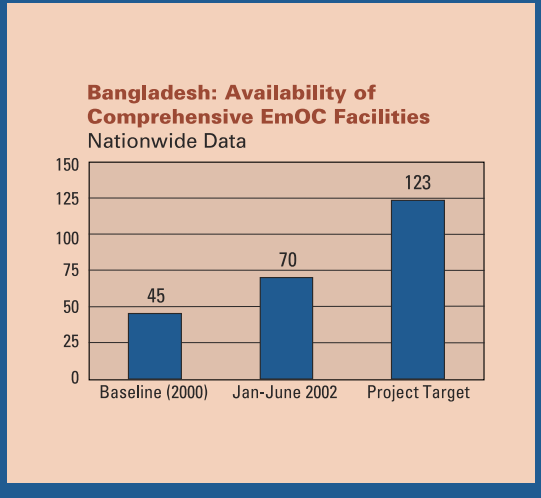
The chart below shows that the minimum numbers of basic EmOC facilities are not available in any of the selected countries. Comprehensive services are available, but these are often located in urban hospitals that may not be accessible to women, especially those living in rural areas. This can result in low Met Need (see chart on page 15).

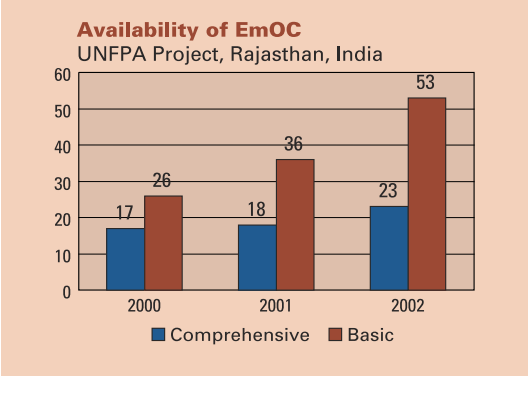
Availability of Emergency Obstetric Care (EmOC) at Baseline in Selected Countries



The % refers to the minimum level of the proportion of facilities to population that is acceptable, following the UN Guidelines

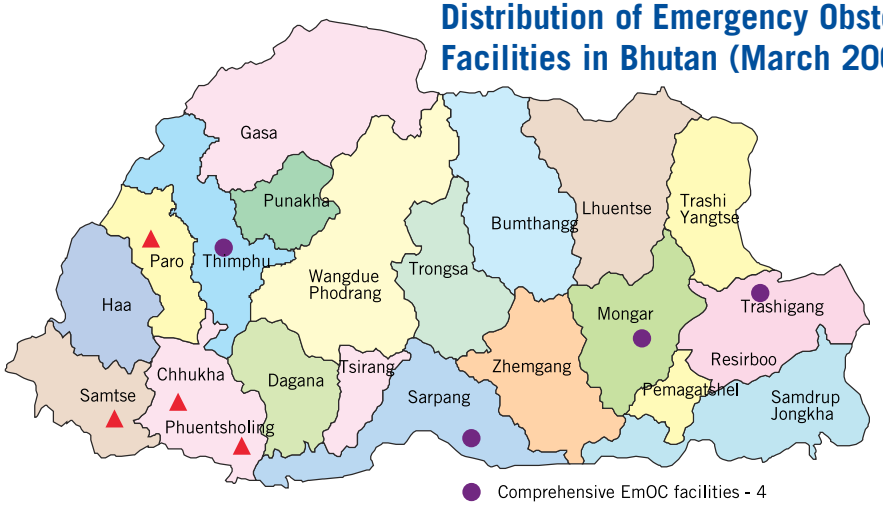
- In **Bangladesh**, with support from UNICEF and AMDD, the Government increased the number of functioning comprehensive EmOC facilities from 45 in 2000 to 70 in 2002.
- In seven districts in Rajasthan, **India**, with an average population of 2 million, the number of comprehensive emergency obstetric care facilities increased from 17 to 23, and the number of basic facilities increased from 26 to 53, with support from UNFPA and AMDD.



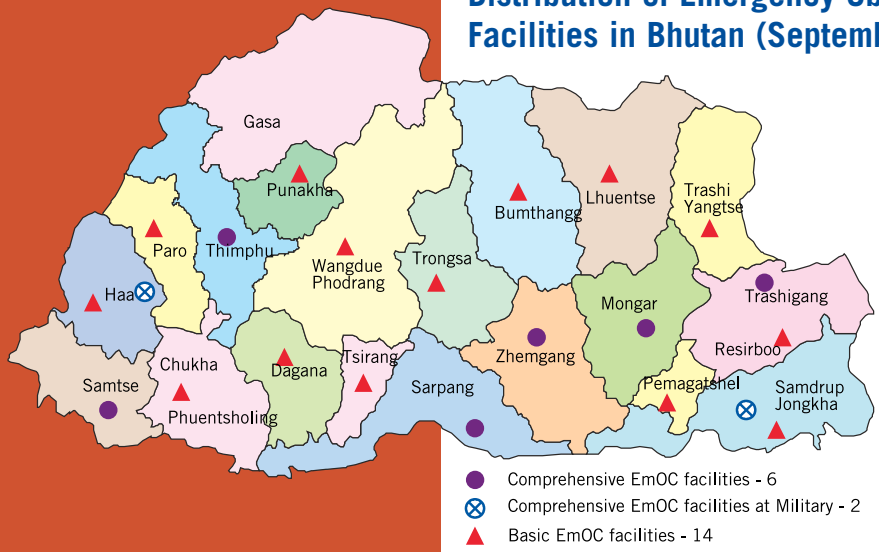


- In **Bhutan**, the Government used technical and material support from UNICEF and AMDD to increase the number of life-saving procedures their existing facilities could perform. In just two years, it more than doubled the number of facilities providing both basic and comprehensive EmOC services and improved their geographic distribution.

Distribution of Emergency Obstetric Care Facilities in Bhutan (March 2000)



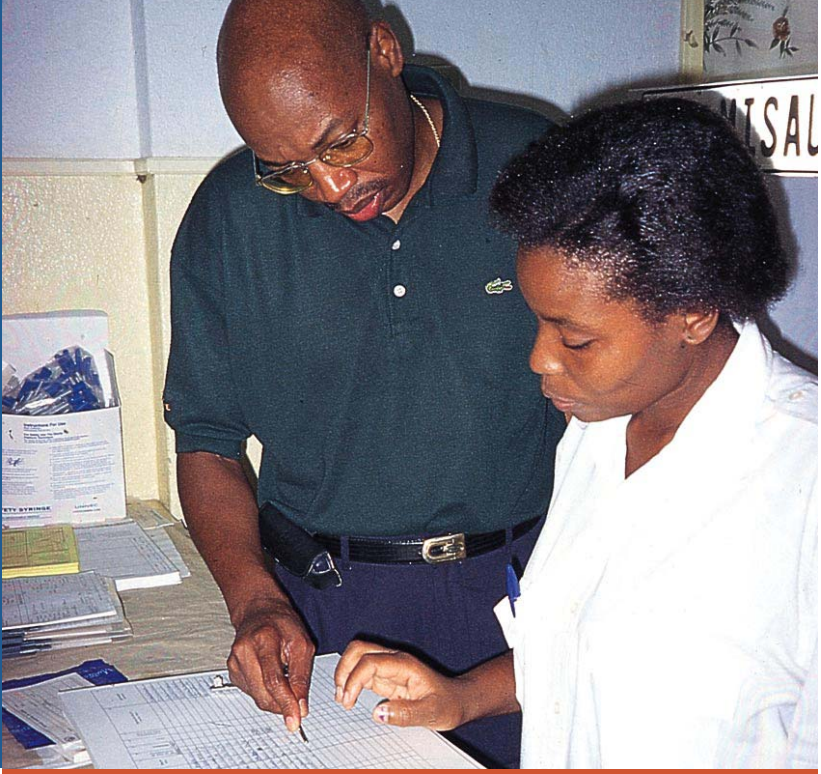
Distribution of Emergency Obstetric Care Facilities in Bhutan (September 2002)



It is not enough to train staff, upgrade equipment, and renovate facilities. Ensuring the sustainability of interventions also involves changing management systems and sometimes government policies.

- Cumbersome procurement delays the delivery of life-saving equipment and drugs. The Government of **Bangladesh** has now developed a standardized list of EmOC equipment and supplies, thus ensuring uniformity and enhancing availability.
- Staffing policies can be an obstacle to care. For example, in **Mozambique** and elsewhere, some functions previously restricted to surgeons are now successfully performed by surgical technicians. AMDD is supporting case studies of this experience in Mozambique, Malawi, Tanzania, Burkina Faso and Zambia.

In addition to its support through large partner organizations, AMDD provides Leadership Grants to institutions in developing countries that are already providing obstetric services but need some assistance to start or strengthen EmOC.



Dr. Eduardo Matediene of Beira Hospital in Sofala Province inspects the register: strengthening capacities for data gathering and analysis is a key feature of all AMDD-supported projects, and enables managers to better monitor trends in availability, quality, and utilization of EmOC services.
Photo: Czikus Carriere

Enhancing Quality

AMDD and its partners devote considerable attention to enhancing the quality of EMOC. One important activity is use of competency-based training, using a curriculum developed by JHPIEGO to improve the skills and knowledge service providers need to manage obstetric emergencies. AMDD has sponsored the introduction of such evidence-based training into six countries in South Asia in collaboration with UNICEF and the respective Ministries of Health.

EngenderHealth, a recognized leader in clinical quality of care for reproductive health, has adapted its tools and methodologies for use in EmOC settings. Other quality of care efforts include development of the methodology and materials needed to conduct criterion-based audits and experiments with various types of team-building approaches, such as Appreciative Inquiry and Hospital Action Plans.

Increasing Utilization

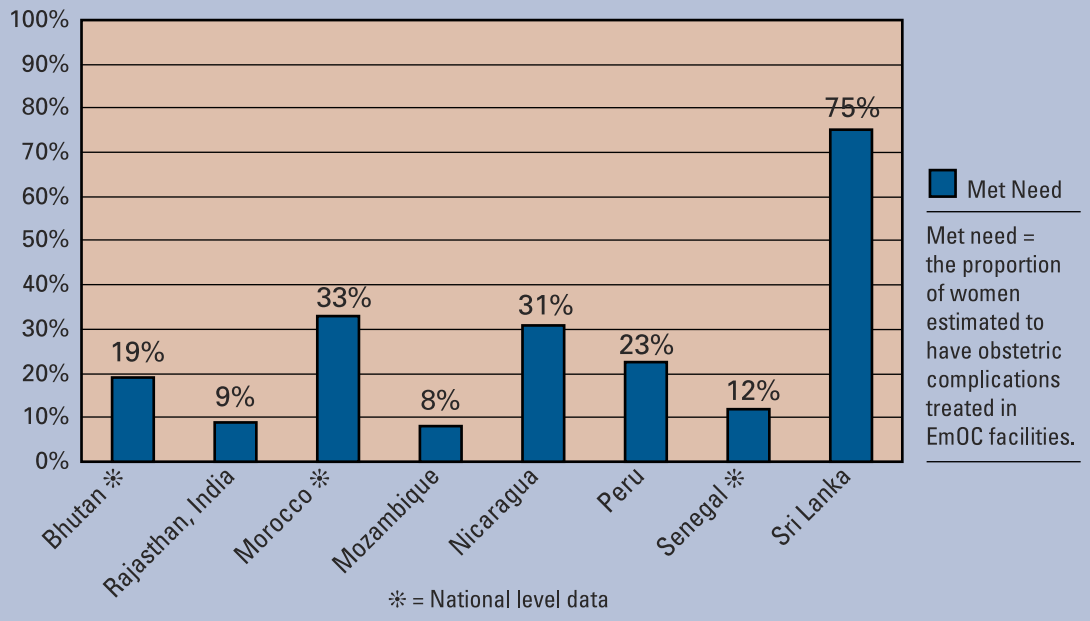
There has been encouraging experience in increasing the use of EmOC facilities. For example, the proportion of women estimated to have obstetric complications who are treated in EmOC facilities ("met need") has increased in project areas in **Peru** from 21 to 41 per cent. Experience to date suggests that if emergency obstetric services of good quality are available, many women will use them. In some contexts, however, women may face obstacles—problems of distance and transport, lack of information, cultural factors, or costs associated with obtaining care. While the primary focus of AMDD is on improving the availability and quality of services, many partners are engaged in various forms of community outreach and mobilization.

- In **Tajikistan,** staff training was provided after community surveys by CARE found that staff attitudes discouraged use of the newly renovated facility.

Pregnant woman outside Ngudu Hospital uses a common mode of transport in Tanzania: once the facilities are functioning well, it is time to address other obstacles to utilization such as transport and lack of information. Photo: Dileep Mavalankar

- In **Mali**, Save the Children facilitated meetings between women's groups and hospital staff to enhance mutual understanding and respect.
- Throughout **Africa**, the RPMM network includes journalists who can document and disseminate information about improved services for women.

Emergency Obstetric Care (EmOC) Met Need at Baseline in Selected Countries



Promoting Human Rights

Field experience is helping AMDD partners to incorporate human rights principles—such as dignity, constructive accountability and participation—at each stage of project implementation. Facility staff are recognizing that patients' rights include the right to receive good treatment on time as well as information, privacy, and respect. The rights of service providers must also be addressed. In some facilities, there is not even a place for nurses to sit during their breaks; in others, it is dangerous to travel to work.

At the policy level, staffing policies and user fees can bar access to care. AMDD is working with women's human rights groups – in Ecuador, in Nigeria, in Pakistan and in the Philippines – to identify and overcome local barriers to access, including those which stem from national and global policies.

Constructive Accountability

- Uses a human rights framework
- Does not use a "violations-blame" approach
- Requires standards (legal standards, good practice standards)
- Provides remedy
- Is constructive
- Is accountable to the people
- Is characterized by transparency, participation, equity, non-discrimination
- Supports enabling conditions

Averting death due to pregnancy and childbirth fulfills women's human rights to life and health and the wellbeing of the whole family. Photo: Czikus Carriere

Engaging Professional Associations

The commitment and efforts of health care providers – such as obstetricians, midwives and anesthetists – are central to the effort to make emergency obstetric care more widely available. Therefore, AMDD is actively engaged with international professional health care associations:

- **The International Federation of Gynecology and Obstetrics (FIGO)** has joined with AMDD to establish Distinguished Community Service Awards to recognize special efforts in preventing needless deaths due to pregnancy and childbirth.
- **The International Confederation of Midwives** has, together with AMDD, instituted the Averting Maternal Death and Disability awards for midwives.

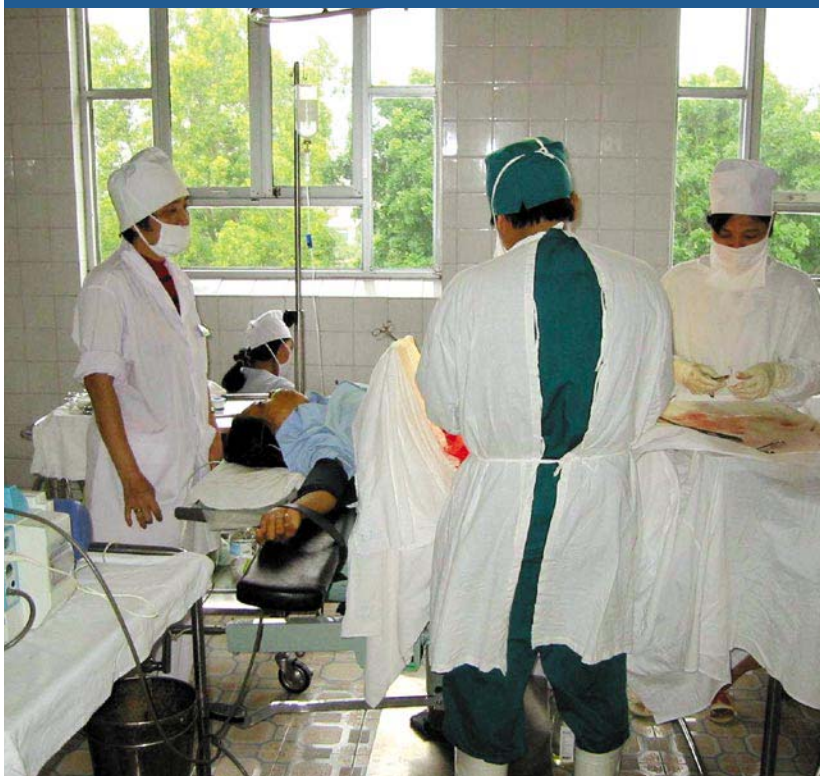
- **The International Journal of Gynecology and Obstetrics (IJGO)** includes a special section – "The Keystone for Averting Maternal Death and Disability" – sponsored by AMDD.

- AMDD and all its partners also collaborate with national professional societies such as the Federation of Obstetric and Gynecological Societies of India (FOGSI).

Treating Disabilities

Improving women's access to timely, good-quality EmOC will prevent many of the disabilities resulting from obstetric complications, including obstetric fistula (an abnormal passage between the vagina and urinary tract or rectum which leads to leakage). Meanwhile, skills in fistula repair are needed to treat the thousands of women

Life-saving operation in Vietnam, where Save the Children and AMDD are upgrading 5 hospitals in two provinces.
Photo: Dileep Mavalankar



Staffed by nearly 100 people (many of them former patients), the Addis Ababa Fistula Hospital provides fistula repair surgery to poor rural women, free of charge.
Photo copyright 2001: Shaleece Haas

already suffering from this terrible disability

- The reputation of the **Addis Ababa Fistula Hospital** draws trainees from as far away as Nicaragua. AMDD is assisting the hospital to expand its services through satellite centers in five regions of Ethiopia

- In 2002, AMDD joined UNFPA and FIGO in a two year program to support the prevention and treatment of obstetric fistula in twelve countries in Africa.

- The **African Medical & Research Foundation (AMREF)** and AMDD are enhancing fistula repair skills in Kenya, Uganda and Sudan.

A Growing Global Movement

The activities carried out by AMDD and its partners have already had a catalytic effect, encouraging changes in policies and programs and generating additional resources for EmOC:

- In **Morocco**, attention to the treatment of obstetric emergencies is included in the national strategy for maternal mortality and the national information system.
- In **Mozambique**, the Ministry of Health is applying the experience gained in providing EmOC from Sofala to nine other provinces.
- In **Pakistan**, the Government's substantial new reproductive health program incorporates EmOC, as do new projects in **Afghanistan** and **China**.

Waiting to register newborn babies at the Instituto do Maternite Perinatale in Lima, Peru. Photo: Czikus Carriere

Deborah Maine, AMDD Principal Investigator and Program Director, listening to Dr. Neelam Bhardwaj, UNICEF Assistant Program Officer, describe the project in Maharashtra, India, during poster session at the 2002 AMDD Global Workshop in Bangkok. Photo: Czikus Carriere

- EmOC plays an important role in the proposed strategy for reducing maternal mortality in a large USAID project in the **Dominican Republic**.

The focus on EmOC is finding its way into the mainstream work of partner agencies.

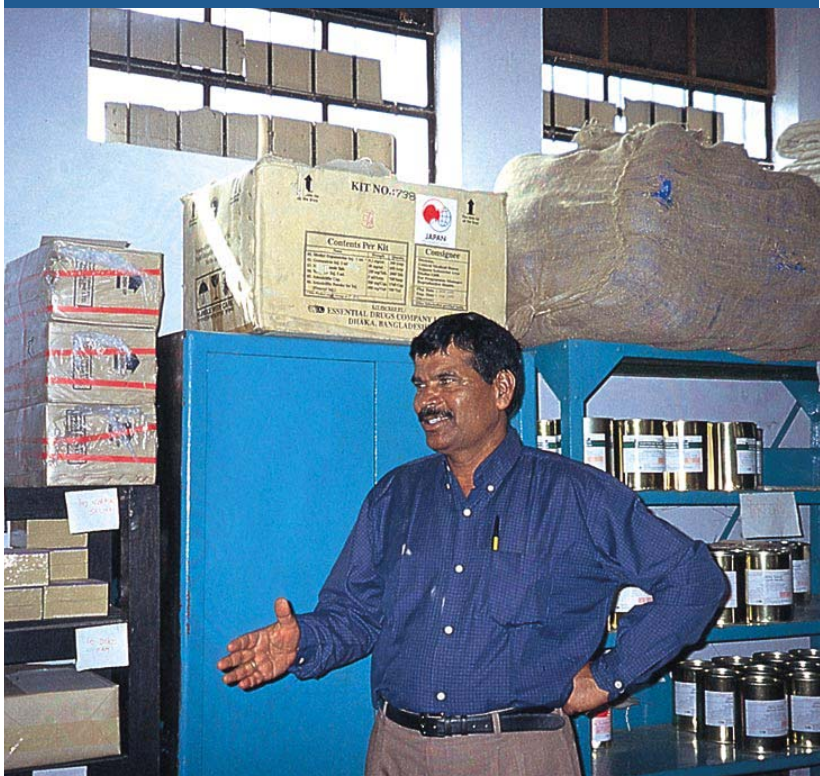
- **UNFPA** has made EmOC one of the three pillars of its Safe Motherhood program, and EmOC is increasingly featured in many UNFPA country programs. UNFPA is supporting needs assessments in Central America and Africa.

- **UNICEF** has drawn on the experience of its projects in South Asia to inform its programs in other countries, initiating needs assessments in Africa and other parts of Asia.

- **CARE** has been encouraged by its three-year AMDD-supported project to make a focused effort to build its capacity in EmOC services and is including EmOC in new projects in Nicaragua and Guatemala, among others.

- **Save the Children** is integrating EmOC into its program. For example, it is also actively involved with the Ministry of Health in Pakistan and the Asian Development Bank in a women's health project in 20 districts to improve emergency obstetric care. It is replicating in Pakistan and Guinea its experience of enhancing services in Vietnam and Mali.

Storekeeper at the Upazilla Health Complex in Kaliakor, Bangladesh: team training supported by UNICEF and AMDD inspired him to rearrange his store to place the supplies necessary for obstetric emergencies closest to the door.
Photo: Czikus Carriere



Cross-regional exchanges on experiences in providing good quality, timely obstetric care at the second global workshop convened by AMDD in Thailand in February 2002.
Photo: Czikus Carriere

Nor is this limited to partner agencies. A growing number of development assistance institutions, including those of the European Community, Japan, the Netherlands, the United Kingdom, as well as the World Bank, are devoting increased attention to EmOC in their programs and policies.

The international community first pledged to reduce maternal deaths at the Nairobi Safe Motherhood Conference in 1987, but mortality ratios remain unacceptably high. Today, there is a network of international organizations and governments that share a common language and approach, grounded in evidence and practical field experience. Working together with sustained commitment, we may at last progress toward our goal of saving women's lives.

Resources

- Safe Motherhood Programs: Options and Issues, Columbia University, 1993 (Available in English, French and Spanish)
- Indicators to Monitor Maternal Health Goals: Report of a Technical Working Group, Geneva, 8 - 12 November 1993, WHO, 1994
- Maternal Mortality in 1995:Estimates developed by WHO, UNICEF, UNFPA. WHO, 2001 (WHO/RHR/01.9)
- Guidelines for Monitoring and Evaluation of Obstetric Services, UNICEF/ WHO/ UNFPA, 1997 (Available in English, French and Spanish)
- Design and Evaluation of Maternal Mortality Programs, AMDD, Columbia University, 1997 (Available in English, French and Spanish).
- Using the UN Process Indicators of Emergency Obstetric Services: Questions and Answers, AMDD, Columbia University, 2003
- Distance learning courses on population issues, Course 6: Reducing Maternal Deaths: Selecting Priorities, Tracking Progress. UNFPA, AMDD, Columbia University. 2002.
- Managing Complications in Pregnancy and Childbirth: A guide for midwives and doctors, WHO/UNFPA/UNICEF/World Bank,2000 (WHO/ RHR/00.7) (Available in English and Spanish)
- Improving Emergency Obstetric Care Through Criterion-Based Audit. AMDD, Columbia University, 2002.
- Emergency Obstetric Care: Leadership Manual and Toolbook for Improving the Quality of Services. EngenderHealth, AMDD, Columbia University. Working Draft, January 2002.

  http://www.engenderhealth.org/res/offc/mac/emoc/index.html
- International Journal of Gynecology and Obstetrics, special Keystone section

  (www.figo.org)
- Infection Prevention Multimedia Package: Training CD-ROM and Reference Booklet, Addendum for EmOC EngenderHealth.

  http://www.engenderhealth.org/res/onc/bibliog.html

To learn more about AMDD and to access the tools, consult our website:

http://www.amdd.hs.columbia.edu

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A happy outcome at the Tambo Health Centre (Department of Ayacucho, Peru): word of improved services at the AMDD-CARE supported facility is attracting more patients. Photo: Czikus Carriere

Woman drying the newly harvested rice crop in Bangladesh. Photo: Czikus Carriere

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