Dying: Millions of women in childbirth, newborns and young children

April 13 2010

This map depicts world progress in addressing maternal and child health. Credit: WHO, UNICEF, UNFPA, World Bank

Widespread global use of known and proven maternal and childcare techniques, practices, and therapies could save the lives of millions of women, newborns and children each year, according to a new analysis prepared for a mid-April meeting of world leaders and technical experts on maternal and child health. The meeting is being held to focus attention on this toll and develop a plan of action to reduce it.

Despite significant advances over the past decades, the detailed analysis shows that an estimated 350,000-500,000 women still die in childbirth each year, 3.6 million newborns fail to survive the first month, and an additional 5.2 million children die before the age of five.

It shows progress has lagged mainly in Sub-Saharan Africa and South Asia where an estimated 82 percent of maternal, newborn, and child deaths take place.

The new analysis comes from members of Countdown to 2015, a global scientific and advocacy movement formed in 2005 to track global progress in reducing the toll of maternal and child deaths, two of the Millennium Development Goals set by 189 member nations of the United Nations General Assembly in 2000. Countdowns focus on 68 countries, most of them in Africa, which together account for 92 percent of maternal, newborn and child deaths and include some of the poorest countries in the world.

Progress on Maternal and Child Health Lags

While considerable progress has been made towards meeting other Millennium Development Goals, the two goals on maternal and child survival have lagged behind, prompting a renewed effort to meet them.

"Because we know what causes these deaths and what would prevent them, major progress is possible," says Jennifer Bryce, a child health researcher at Johns Hopkins University and a member of the Countdown group. "The Countdown analysis provides a road map, helping countries focus on their own data and take action to meet their specific needs."

Already 135 countries have child mortality rates of less than 40 per 1,000 live births or have a rate of reduction sufficient to meet the goal of two-thirds reduction by 2015, according to UNICEF. Currently 39 show insufficient progress and 18 show no progress or a worsening of child mortality, says UNICEF.

"This is a multi-layered problem that can be addressed with a combination of many, very simple interventions, says Flavia Bustreo,

M.D., Director of The Partnership for Maternal, Newborn & Child Health (PMNCH), a group of more than 300 organizations, foundations, institutions, and countries that is one of the leaders in this effort.

No Single Intervention

"No single intervention is sufficient," explains Zulfiqar Bhutta, M.D., Ph.D., of Pakistan's Aga Khan University and co-chair of Countdown to 2015. "What is required is a seamless continuum of care including family planning, breastfeeding, hand washing, skilled attendance at delivery and childhood immunizations. There are multiple therapies and practices that have been proven to save lives and the use of national data can prioritize which ones will make the biggest difference in the shortest time.

"Even more, besides additional funding, we need political leadership to guarantee that actions will be taken and will be successful, and we need community engagement to keep leaders accountable," Dr. Bhutta says.

The immense global toll of women and newborns has only just come to public attention, probably because maternal death and newborn death traditionally have been considered separate problems. Also, reducing maternal and newborn deaths were considered too difficult, according to some health professionals.

The new analysis details why these deaths still happen and shows how the toll can be reduced with additional political and financial support from donors and increases in health care budgets in the poorest countries.

It points out that malaria, HIV/AIDS and immunization have received major funding, including attention to drugs and commodities, and major progress was made. Maternal, newborn and child deaths remain a larger

problem, yet receive less attention and funding.

Among the reasons are societal and cultural practices. Many stillbirths, newborn and maternal deaths occur at home, unseen and uncounted. The deaths of mothers, newborns and young children are accepted as part of life in some parts of the world, and birth and death certificates are not common. That is why precise data is lacking.

Babies Don't Need to Die

"Millions of babies die without people realizing it can be different," says Joy Lawn, M.D., Ph.D., of Saving Newborn Lives/Save the Children and a Countdown to 2015 member. "This is not high tech. Up to 3 million newborns each year can be saved with simple approaches, like cutting the cord with a clean blade, and kangaroo mother care where the mother acts as an incubator for her preterm baby, or antibiotics to treat infections."

A Countdown to 2015 report, due in June, will show what progress has been made toward meeting the two goals in 68 countries with the highest toll. This information will highlight service gaps and deficiencies so countries and their development partners can focus efforts on areas of greatest need.

Attacking maternal, newborn and child deaths means attention and resources. "When attention is focused on a problem and resources are mobilized, we get results," says Mickey Chopra, M.D., Ph.D., UNICEF's chief of health, and a member of the Countdown group. "For example, immunization, use of vitamin A and treated bed nets, breast-feeding, and treatment for HIV/AIDS are way up in many countries because of resources directed to these areas.

"It's important to create a supportive environment for maternal and

newborn health based on respect for women's rights, and the need to establish continuum of care for mothers, newborns and children that integrate programs for reproductive health, safe motherhood, newborn care and child survival, growth and development."
For example, if women go to clinics with trained staff or midwives and proper equipment, an estimated 50 percent of mothers and newborns could be saved. If quality antenatal care is routinely provided for women, up to 2/3 of lives could be saved.

Donor countries have increased their giving for maternal, newborn and child health by almost 100 percent to $4 billion a year from 2003 to 2007.

However, the funding gap will be about $20 billion per year between 2011 and 2015, which includes both maternal and child health programs and the cost of improving health systems.

An innovative health financing task force set up by world leaders in 2008 already is working to increase funding to help close the gap.

"The gap is about $16 billion a year more than we are spending now, but it is not out of range," says Dr. Bustreo.

"The emphasis is always on external aid, but internal funds are the main source of health funding. National authorities need to recognize and honor their financial commitments on maternal and child health," says Peter Berman of the World Bank, another Countdown to 2015 member.

According to the new analysis, if the funding gap were filled by 2015, the increased funding would buy:

- Modern methods of family planning for 50 million more couples;

- About 234 million more births in facilities that provide quality care for both normal and complicated deliveries;
- Quality antenatal care for an additional 276 million women;
- Quality postnatal care for an additional 234 million women and newborn babies;
- Appropriate treatment for 164 million cases of child pneumonia;
- An additional 2.5 million health care professionals and 1 million more community health workers.

The results by 2015 would be enormous in the number of lives saved: up to 1 million women, 4.5 million newborn babies, and 6.5 million children aged 1 month to 5 years.

Why High Death Rates

Beyond poverty, the analysis pinpoints the many reasons for continuing high rates of death during childbirth, both of women and newborns.

Most newborn deaths are due to conditions rarely seen in high-income countries: infections, birth complications, preterm birth - even babies who are just a few weeks preterm often do not survive for lack of simple care.

Women in childbirth die from hemorrhage, infections, hypertensive disorders, obstructed labor, and unsafe abortions. In some countries, HIV/AIDS and malaria are also important causes.

Many of these deaths could be prevented with a maternal and newborn

health program that includes continuing prenatal care, hygienic care during childbirth and the postnatal period.

In some parts of the world, traditions add to the risk faced by families. In parts of south Asia, for example, childbirth is considered dirty, so women are forced to deliver their babies in cowsheds, where they must stay for one month. Cords may be cut with dirty tools, leading to possible infection. "Strong cultural practices hide the problem. Families know many mothers and babies will die so they just accept it," says Dr. Lawn. "But this does not mean they do not care. Mourning is hidden".

"Countries are unlikely to meet the goals unless they prioritize the delivery of life-saving interventions to those who need them most," says Dr. Bhutta.

Another major barrier is a shortage of skilled health care and community workers in many parts of the world. One way to ease this shortage is to upgrade skills of existing workers, so that nurses and outreach workers can provide medications and surgeon assistants can perform caesarean sections where no obstetrician is available, as has been done successfully in Mozambique. Another is to recruit and train additional health workers and provide incentives for work in remote and underserved areas.

And, while the need for more research always exists, the failure to use proven techniques more widely poses yet another barrier to rapid progress. Examples are kangaroo mother care, improved techniques to manage child birth, and providing routine postnatal visits to newborns soon after delivery to advise the family on breast feeding and keeping the baby warm, and to check for cord infection or other problems.

Programs and Interventions Known to Work

The new analysis reports on the usage of specific packages of

interventions, which, if scaled up, have been proven to reduce the continuing high toll of preventable deaths.

These packages form the core of effective health systems that can deliver a full range of services to assure that every pregnancy is wanted, that every birth is safe, and that every newborn and child is healthy.

A number of these packages of interventions are underutilized and underfunded including:

- Comprehensive family planning
- Skilled birth attendance
- Emergency obstetric care
- Antenatal and postnatal care
- Breastfeeding and child feeding practices
- Prevention and treatment of diarrhea, pneumonia, and malaria

Ensuring these services are available to all women and children who need them would go a long way in reducing mortality and improving the health of women, newborns and children under 5, and get countries closer to reaching MDGs 4 and 5.

Missed Opportunities

Though progress has been made toward meeting those goals, significant challenges remain.

For example, while the use of contraceptives has increased steadily, an estimated 26 percent of women in least developed countries that want to delay or stop childbearing are not using contraceptives. Unintended pregnancies contribute to high mortality and poor health for both mothers and babies, according to the analysis.

While the percentage of women who give birth with the aid of a skilled attendant, defined as an educated midwife, or similarly trained person, with access to the necessary equipment, resources and services, has increased to more than 60 percent, that leaves some 40 percent of women, mostly in Africa and Asia, giving birth without access to skilled obstetric care - 60 million births each year.

And although an estimated 70 percent of women receive at least one antenatal care visit, even in the poorest countries, the quality of care may not be sufficient. For instance, many of these visits do not include essential blood pressure readings or HIV testing and drugs to prevent HIV transmission to the baby.

"These are lost opportunities," says Cesar Victora of Brazil's Universidad Federal de Pelotas, a member of the Countdown to 2015 group. "We know the service was provided, but not necessarily what was provided at that visit.

"Even when the coverage is high, poor and disadvantaged women living in remote areas and ethnic groups don't necessarily get maternal, newborn and child services. Progress should be measured not only through national averages, but also by how much the poorest mothers and children are benefiting from overall progress. It is an equity issue."

"No woman should die giving life. All pregnancies should be wanted and every childbirth safe for both the woman and the baby," says Laura Laski, M.D., UNFPA's chief of Sexual and Reproductive Health, and H4

representative (WHO, UNFPA, UNICEF and the World Bank) in the planning of the mid-April meeting.

Progress is Possible Even in Poorest Countries

However, all the news is not bad.

Nineteen of the 68 countries with high incidences of maternal, newborn and infant deaths are now moving forward, and experience in several countries that were lagging shows a quick turn-around is possible, even in the poorest countries.

India's Janani Suraksha Yojana (Women's Protection Scheme) was launched in April 2005 under the Government of India's National Rural Health Mission. The program seeks to reduce maternal and neo-natal mortality by promoting institutional delivery and skilled attendance at birth by offering cash payments to women who fulfill the conditions of attending antenatal appointments and seeking skilled care at delivery. These payments are primarily to women below the poverty line.

These benefits reached only 700,000 women in 2005, increasing to 8,380,000 in 2008, more than a 10-fold increase in just a few years. The government realizes that quality of services now needs to be urgently addressed.

Nepal used national cause of death data to design programs that curb child and maternal deaths, developing innovative approaches to bring care closer to home that included community child pneumonia treatment programs and household visits to promote family planning and newborn care. The effort required recruiting and training additional community workers. Offering skilled birth care is a particular challenge with very low coverage (only 19 percent) and is now being addressed by new investments in training midwives.

Malawi, a low-income country with only four pediatricians, has been declared on track for child survival. The Ministry of Health identified the main causes of child death as pneumonia, diarrhea, malaria, HIV, and newborn problems and planned to address those problems with national scale-up of an essential health package, including programs for immunization, malaria control, prevention of mother-to-child HIV transmission, and improved water and sanitation services. In spite of these efforts, diarrhea, pneumonia, and maternal and newborn care remained problematic, so Malawi trained health surveillance assistants to deliver selected services closer to the community. Over 800 health assistants now offer malaria, diarrhea, and pneumonia treatment (using the latest malaria drugs, zinc for diarrhea, and appropriate antibiotics), and some are being trained to support home based newborn care. To overcome high maternal mortality, facilities are being improved and additional staff is being hired and trained, including non-physicians to undertake emergency cesarean sections. Death rates for children and women are now declining.

Brazil's success in reducing the under 5 death rate by 4.8 percent each year since 1990 is attributed to a sharp decline in inequalities in access to health care. This decline was done through a nationwide, tax-based Unified Health System with no user fees and specific geographical targeting of family health teams to attend the poorest areas of the country. Reducing regional and socioeconomic disparities in health and development have been a central element in Brazil's political agenda for the last 20 years. As a result, primary healthcare coverage is universal, primary care is free for everyone, and even the poorest Brazilians now have access to skilled attendance at birth.

Rwanda has introduced health reforms, which expand coverage across all areas of health care. One approach gives "performance bonuses" for health facilities and hospitals, based on provision of high quality, priority services. From 2005 to 2008, births in health facilities have increased

from 39 to 52 percent, the use of insecticide treated bed nets for children under 5 has risen from 4 to 67 percent, and modern contraceptive use has increased from 10 to 28 percent, contributing to a decline in under-5 mortality from 152 to 103 deaths per 100,000 live births.

"We know this global problem can be solved even in the poorest countries," says Dr. Bustreo. "It will take commitment of donors and recipient countries, and considerable ingenuity. We are seeing that Malawi, Nepal, Brazil, and Rwanda are making progress in saving the lives of women and children."

Provided by Partnership for Maternal, Newborn & Child Health