

Editorial

Reducing maternal mortality: a global imperative

A woman dies every 90 seconds from complications during pregnancy or childbirth — 86% of them in sub-Saharan Africa or South Asia [1]. According to experts, an estimated one in 26 women in sub-Saharan Africa is at risk of dying during childbirth over her lifetime, compared with one in 7300 in developed regions [1]. Girls are dying as well, since many are forced into marriages and pregnancies when they are as young as 11 years old. Maternal deaths are all the more tragic because they are nearly all preventable.

In 1987, three United Nations (UN) agencies — UNFPA, the World Bank and the World Health Organization — launched the Safe Motherhood Initiative to raise awareness about the numbers of women dying each year from complications of pregnancy and childbirth and to challenge the world to do something [2]. The importance of maternal health was again addressed by the international community when it met in 2000 and agreed on eight Millennium Development Goals (MDGs) aimed at ending extreme poverty worldwide by the year 2015. MDG 5 focused specifically on improving maternal health — setting a target of reducing maternal mortality levels by three-fourths. In 2007, in recognition to the close links between maternal health and other reproductive condition, a second target — ensuring universal access to reproductive-health services — was added to MDG 5.

Recently, some progress on the reduction of maternal mortality worldwide has been reported: a study published in April 2010 in the *Lancet* shows that the number of annual maternal deaths worldwide declined from roughly 525,000 in 1980 to about 343,000 in 2008 [3]. A UN report recently released confirms the maternal mortality decline, providing an estimate of 358,000 maternal deaths in 2008. This represents a 34% decline from the 1980 levels [4]. We take this as a sign that the hard work and investment over the last many years are finally paying off. It also signals that more effort and resources being directed toward this catastrophic problem will help; it is a cause for hope but, more than that, an impetus to invest in women's lives. The troubling news in these two studies is that progress has been unequal: while many countries are showing a downwards trend, in some, maternal deaths actually increased. The United States is one of these countries showing a striking 96% increase in the maternal mortality ratio between 1990 and 2008 [4].

We need to focus on two fronts — the international and domestic. Indeed, maternal mortality ratios in the United States have nearly doubled between 1999 and 2006 (7.1 deaths per 100,000 births to 13.3 deaths per 100,000 births) [5]. The United States now ranks only 50 in maternal mortality out of 171 countries, far below other developed nations and even some developing countries like Vietnam and Albania, according to UNFPA figures [6]. This piece takes a global perspective on maternal mortality, and the next installment in this editorial series will focus on the US context.

The fact is that pregnancy always carries risk of unexpected complications, and 15% of pregnancies *everywhere* are life threatening [7]. Thus, wherever pregnant women live — whether in a Tanzanian village, Silicon Valley or an underserved area of the Bronx — access to skilled, high-quality prenatal care and assistance in childbirth can mean the difference between life and death.

We have known for decades what needs to be done to prevent maternal deaths — relatively simple, safe and affordable approaches exist to successfully prevent or treat most obstetric complications and thus save women's lives. When there is political will, these tools become available to all women. Indeed, there are some mid- and low-income countries that have made the reduction of maternal mortality their priority and have therefore successfully reduced maternal deaths. In Sri Lanka, Cuba and Tunisia, all relatively poor countries, women have a very low risk of dying from pregnancy-related causes. These countries have provided quality maternal health care, ensured access to safe abortion services and made contraception readily available. In sum, they have invested in women and empowered them to take care of their reproductive lives.

Eradicating preventable maternal deaths worldwide will ultimately require structural changes such as getting women out of poverty, eliminating gender inequalities and building stronger health systems. High maternal mortality is inextricably linked to development and culture-related factors that are not simple to change. While the bigger picture elements improve, there are some concrete measures that need to be immediately put in place in order to address this critical problem.

1. Improve maternal care

In many developing countries, more than a third of pregnant women have no access to or contact with health professionals before they deliver, and 57% of births occur without a skilled attendant present [8]. The assistance of skilled attendants who are trained to identify and manage complications and refer patients to emergency obstetric care if needed can literally mean the difference between life and death for both woman and child. Clearly, if we are to meet MDG 5 by 2015, we are going to have to significantly increase the number of skilled birth attendants, particularly in underserved regions of the world.

But skilled attendants can only be effective when they work in the context of functional health systems. Many health facilities desperately need vital medical supplies such as antibiotics, uterotonics (i.e., oxytocin or misoprostol) and magnesium sulfate for eclampsia; safe blood supplies; upgraded facilities; and better transportation services to emergency obstetric care. And for women who give birth outside of health facilities, increasing access to life-saving technologies such as misoprostol and the non-pneumatic AntiShock Garment for postpartum hemorrhage can save lives.

Improving existing health services does not have to be an expensive proposition. In Tanzania, the Kigoma Regional Hospital was able to reduce the number of women dying in childbirth by 80% over a 4-year period by implementing simple low-cost interventions that drastically improved the quality of care [9]. And in California, a statewide initiative was launched in 2007 to improve the readiness, recognition, response and reporting of obstetric hemorrhage. Prior to the development of these tools, only 60% of hospitals in California reported having written obstetric hemorrhage protocols and 30% held routine drills on this topic [10]. The California experience points out that even in high-resource countries, clinicians can benefit from efforts to improve how prepared they are to respond to obstetric emergencies. (Note: The tools are open-access documents that can be utilized anywhere in the world: http://www.cmqcc.org/ob_hemorrhage.)

2. Make abortion legal and accessible

Improving maternal care is not the only way to save lives. Giving women and girls the power to manage their reproductive lives is also crucial, and that includes access to safe abortion. According to the World Health Organization, an estimated 20 million *unsafe* abortions take place every year. Worldwide, at least 68,000 women annually die from complications from such procedures, and another estimated 5 million women per year suffer long-term injuries [11].

The benefits of legalizing abortions can be huge. Tunisia, for example, has legalized abortion and integrated it into the national family-planning program, but its neighbor Algeria

has not. So now, although the two countries share a similar population (predominately Arab and Muslim), common history (former French colonies) and similar development indicators (GNP, literacy, life expectancy), women in Algeria are more than twice as likely to die from pregnancy-related complications as Tunisian women. Since the two countries also have similar birth practices (95% delivered by skilled birth attendants) and rates of contraception usage, the best explanation for the differential is that Tunisian women have abortions under safe conditions whereas Algerian women must risk their lives to end a pregnancy [12,13].

India is another country that has focused on reducing maternal deaths by improving access to safe abortion. Although the government legalized abortion in 1971, the majority of women in the country have lacked access to safe abortions services. So in 2002, the Indian government passed an amendment expanding safe services and regulating the quality of abortion services [14]. While much work still needs to be done, improved access to safe abortion has likely contributed to the steady progress India has made in reducing maternal deaths [3].

Given that deaths from unsafely performed abortions make up about a fifth of maternal deaths worldwide, increasing access to quality contraception so mistimed and unwanted pregnancies are prevented and ensuring access to safe abortion services continue to be among the most effective strategies for saving women's lives.

3. Make contraception accessible and affordable

As Cates [15] pointed out in his commentary in *Contraception*, family planning is key to achieving all eight MDGs and in particular MDG no. 5. Unfortunately, in far too many countries, women face obstacles in accessing modern methods of contraception.

According to the UNFPA, about 200 million women and girls globally who *want* to use contraceptives do not have access to them [8]. For example, a 2006 survey of women in Uganda found that 41% of women wished to space their pregnancies further apart — a key health factor for both mothers and children — but lacked access to contraception and family planning services [16]. Although Uganda has one of the highest maternal mortality rates in the world, its government has failed to allocate more resources to solve its shortage of contraceptive supplies. Similarly, in Zambia, where oral contraceptives are the most commonly used method of birth control, empty dispensaries are all too common. Health care workers in rural outposts sometimes cut the remaining few packages of pills into strips in a misguided attempt to serve as many women as possible. And in Ethiopia, where contraceptive supplies are also severely limited, some women walk long distances to the nearest health facility in search of birth control — only to leave empty-handed. Health care workers lament that there is little

they can do about the supply shortage and worry that some women may seek unsafe abortions when faced with an unwanted pregnancy.

The fact that so many women around the world do not have access to modern contraception is a gross violation of women's human rights. As we celebrate the 50th anniversary of the birth control pill, we need to recommit to ensuring universal access to this empowering and life-saving technology.

4. Eliminate harmful practices

In many countries, all too many women do not have adequate access to life-saving procedures. However, in other countries such as the United States and Brazil, there are women being exposed to numerous types of procedures that they do not need [17,18]. The use of C-sections is one such paradox — while many women who desperately need C-sections cannot get them (and they and their babies face severe morbidity and mortality as a result of that), healthy women in other countries are getting them unnecessarily [19,20]. In the United States alone, the number of C-sections increased 53% from 1996 to 2007 [21]. C-Sections are a major surgical procedure and, as such, involve risks like infection, hemorrhage and other complications [20,22–24]. Indeed, the rise in the US maternal mortality rates during the same period of time may be correlated with the unprecedented rise in C-sections. The global focus on expanding access to life-saving obstetric care for women who need it will need to be matched with awareness campaigns discouraging elective procedures such as non-medically indicated C-sections and labor inductions among women who do not need them [19,25,26].

5. Time to save women's lives

Today, less than 5 years away from reaching the Millennium Development Goals of 2015, most countries, the United States included, are lagging behind and are not in the right trajectory to achieve MDG 5 by the designated date. But over the last few years, work on maternal health has significantly increased both here in the United States and globally. At long last, the global and national communities seem to be coming together to ensure that all women access the life-saving knowledge and technologies that can prevent and treat most pregnancy and delivery complications.

Happily, the solutions may be cheaper than imagined: experts estimate that, to deliver services needed, it would cost only \$1.50 annually per person living in the 75 countries where 95% of the maternal deaths occur [7]. But we will all need to contribute to the global effort if we are to put an end to needless deaths from pregnancy and childbirth. To meet its obligations, the United States will need to spend an estimated \$3 billion annually for reproductive health and family planning globally. While this is less than one-half of

1% of the annual US defense budget, given the state of the economy and the many competing priorities, garnering these funds will require political and financial actions from advocates and concerned citizens.

It is time for the global community to fulfill its promises; the goal of ensuring universal access to reproductive and maternal health care is within our grasp. Improving maternal mortality is not only a goal we can achieve, it is a goal worth reaching.

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