

Excerpted from **Half the Sky** by Nicholas D. Kristof and Sheryl WuDunn
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Poverty is obviously a factor, but high rates of maternal mortality are not inevitable in poor countries. Exhibit A is Sri Lanka. Since 1935 it has managed to halve its maternal deaths every six to twelve years. Over the last half century, Sri Lanka has brought its maternal mortality ratio down from 550 maternal deaths for every 100,000 live births to just 58. A Sri Lankan woman now has just one chance in 850 of dying in pregnancy during her lifetime.

That is a stunning achievement, particularly since Sri Lanka has been torn apart by intermittent war in recent decades and ranks 117th in the world in per capita income. And it's not just a matter of throwing money at the problem, for Sri Lanka spends 3 percent of GNP on health care, compared to 5 percent in India next door—where a woman is eight times more likely to die in childbirth. Rather, it's about political will: Saving mothers has been a priority in Sri Lanka, and it hasn't been in India.

More broadly, Sri Lanka invests in health and education generally, and pays particular attention to gender equality. Some 89 percent of Sri Lankan women are literate, compared to just 43 percent across South Asia. Life expectancy in Sri Lanka is much higher than in surrounding countries. And an excellent civil registration system has recorded maternal deaths since 1900, so that Sri Lanka actually has data, in contrast to vague estimates in many other countries. Investments in educating girls resulted in women having more economic value and more influence in society, and that seems to be one reason that greater energy was devoted to reducing maternal mortality. Beginning in the 1930s, Sri Lanka set up a nationwide public health infrastructure, ranging from rudimentary health posts at the bottom to rural hospitals one tier up, and then district hospitals with more sophisticated services, and finally provincial hospitals and specialist maternity centers. To make sure that women could get to the hospitals, Sri Lanka provided ambulances.

Sri Lanka also established a major network of trained midwives, spread across the country and each serving a population of three thousand to five thousand. The midwives, who have undergone eighteen months of training, provide prenatal care and refer risky cases to doctors. Today, 97 percent of births are attended by a skilled practitioner, and it is routine even for village women to give birth in a hospital. Over time, the government added obstetricians to its hospitals, and it used its data to see where women were slipping through the cracks—such as those living on the tea estates—and then to open clinics targeting those women. A campaign against malaria also reduced maternal deaths, since pregnant women are especially vulnerable to that disease.

Sri Lanka shows what it takes to reduce maternal mortality. Family planning and delayed marriage help, and so do mosquito nets. A functioning health care system in rural areas is also essential. "Looking at maternal mortality is a great way to look at a health system as a whole, because it requires you to do a great many things," says Dr. Paul Farmer, the Harvard public health specialist. "You need

family planning, you need a district hospital for C-sections, and so on.” There are other possible innovations as well. One study found that giving Vitamin A supplements to pregnant women in Nepal reduced maternal mortality by 40 percent, apparently because that reduced infections in malnourished women. Anecdotal evidence in Bangladesh and other countries suggests that loosening controls over antibiotics and encouraging women to take them postpartum will reduce death from sepsis.

One of the most interesting experiments is under way in India, where a pilot program in some areas is paying \$15 to poor women to deliver in health centers. In addition, rural health workers get a \$5 bounty for each woman brought in for delivery. Vouchers are also provided so that pregnant women can get transportation to the clinic. The initial results have been very impressive. The proportion of women delivering in health centers rose from 15 percent to 60 percent, and mortality plunged. In addition, after the delivery the women were more likely to return to the health center for birth control and other services.

“We have what it takes,” said Allan Rosenfield. “Those countries that have paid attention to the problem have made a real difference in maternal mortality.” The World Bank summed up the experience in a 2003 report: “Maternal mortality can be halved in developing countries every 7–10 years . . . regardless of income level and growth rate.” Because progress on maternal health is possible, people have often assumed it is virtually guaranteed. In 1987, partly as a result of Allan’s landmark article in *The Lancet*, a UN conference convened in Nairobi to launch the Safe Motherhood Initiative; the goal was to “reduce maternal mortality by 50 percent by the year 2000.” Then, in 2000, the UN formally adopted the Millennium Development Goal of reducing maternal mortality by 75 percent by 2015. The first target wasn’t achieved, and the millennium goal will be missed by a wide margin.

In retrospect, advocates of maternal health made a few strategic errors. The dominant camp—which was backed by the World Health Organization and initially prevailed—insisted that the solution lay in improving primary care. The idea was to create programs like China’s old “barefoot doctors” or Sri Lanka’s network of midwives, because this would be much more cost-effective than training doctors (who in any case would probably serve only city-dwellers). After a WHO conference in 1978 emphasized funding for rural birth attendants, some countries even dismantled obstetric programs at hospitals. Those training programs for birth attendants probably helped save newborn babies—by teaching midwives to use sterile razor blades to cut the cord—but they didn’t much help maternal survival. In Sri Lanka, training midwives worked because they were part of a complete health care package and could refer patients to hospitals, but in most of the world training birth attendants was only a cheap substitute for a comprehensive program.

A minority camp, led in part by Allan Rosenfield, had argued that the crucial step for saving pregnant women was to provide emergency obstetric services. Training birth attendants is useful, Allan argued, but cannot save all pregnant women. Worldwide, about 10 percent of women giving birth need C-sections, and the percentage is higher in the poorest countries where pregnant women are more likely to be malnourished or very young. Probably too many women get C-sections in the West, but too few do in Africa. Without C-sections, there is simply no way to

save the lives of many women, and ordinary birth attendants cannot provide that service. It may not take an ob-gyn to perform a C-section, but it does take more than a birth attendant with a razor blade.

Further evidence of the centrality of emergency obstetrics came from a study of a fundamentalist Christian church in Indiana whose members were affluent, well-educated, and well-nourished Americans, yet who for spiritual reasons eschewed doctors and hospitals. The group's maternal mortality ratio was 872 per 100,000 live births. That's seventy times the rate in the United States as a whole, and it's almost twice as high as in India today. It's difficult to avoid the conclusion that the critical factor for saving mothers is access to doctors in an emergency. As the *International Journal of Gynecology & Obstetrics* put it in an editorial, emergency obstetric care is the "keystone in the arch of safe motherhood."

The practical challenge is how to provide emergency obstetric services. Such services are neither simple nor cheap. They require an operating theater, anesthesia, and a surgeon. And the reality is that rural parts of Africa often have none of these. In puzzling over that challenge, Allan Rosenfield kept thinking back to his experience as a young doctor in Thailand, when he trained midwives to offer services that normally were the preserve only of physicians. Especially considering how MDs often emigrate, why couldn't nonphysicians be trained to perform emergency C-sections?

The Addis Ababa Fistula Hospital often makes use of medical staff without formal degrees. As is common in poor countries, those administering anesthesia at the Fistula Hospital are nurses, not doctors. Indeed, one of them started out as a porter. Most striking, one of the top surgeons is Mamitu Gashe, who never went to elementary school, let alone medical school. Mamitu grew up illiterate in a remote village in Ethiopia and suffered a fistula as a young wife in her first pregnancy. She made her way to the Addis Ababa Fistula Hospital for surgery, and afterward began helping out by making beds and assisting Reg Hamlin during surgeries. She would stand beside him and hand him the scalpel, and she watched closely. After a couple of years, he let her do simple work, like suturing, and over time he entrusted her with more and more of the surgery.

Mamitu had nimble fingers and first-rate technical skills, and even if her biological knowledge was limited, she steadily accumulated experience repairing internal injuries. Eventually, Mamitu was doing fistula surgery by herself. The fistula hospital does more fistula repairs than any institution in the world, and Mamitu was at the center of the whirlwind. She also began to take charge of the training program, so when elite doctors went to Addis Ababa for a few months to learn fistula surgery, their teacher was often an illiterate woman who had never been to a day of school. Eventually Mamitu tired of being a master surgeon who couldn't read, so she went to night school. Last time we visited her, she had reached the third grade. "You can train midwives or senior nurses to do C-sections, and they will save lives," notes Ruth Kennedy. Indeed, there have been some experiments in Mozambique, Tanzania, and Malawi with training nonphysicians to perform C-sections; this approach would be a major lifesaver. But doctors are reluctant to give

up their exclusive control over these surgeries, and so there has been no broader rollout.

Another impediment is that maternal health just doesn't have an international constituency. In the 2008 U.S. presidential election, candidates tried to prove their foreign aid bona fides by calling for increased spending to fight AIDS and malaria. But maternal health wasn't on the political horizon, and the United States and most other countries contributed negligible sums to address it. Norway and Britain are rare exceptions, having announced a major foreign aid program in 2007 to target maternal mortality. The United States could do a world of good—and bolster its international image—if it joined the British and Norwegians in that effort.

In pushing for a global campaign to reduce maternal deaths, it's crucial to avoid exaggerated claims. In particular, advocates should be wary of repeating assertions that investing in maternal health is highly cost-effective. A senior World Bank official told a maternal health conference in London in 2007, with typical enthusiasm: "Investing in better health for women and their children is just smart economics." Now, that's certainly true of educating girls, but the sad reality is that investments in maternal health are unlikely to be as cost-effective as other kinds of health work. Saving women's lives is imperative, but it is not cheap.

One study suggested that the millennium development goal of curbing deaths by 75 percent could be achieved by spending escalating sums ranging from an additional \$1 billion in 2006 up to an additional \$6 billion in 2015. Another study suggested that it would cost an additional \$9 billion a year to provide all effective interventions for maternal and newborn health to 95 percent of the world's population. (In contrast, total international development assistance from all countries for maternal and neonatal health was a paltry \$530 million in 2004.)

Suppose that the estimate of \$9 billion per year is correct. It pales beside the \$40 billion that the world spends annually on pet food, but it's still a great deal of money. If that \$9 billion managed to save three quarters of the mothers who are now dying, that would mean that 402,000 women would be saved annually, in addition to many newborns (and many maternal injuries would be averted as well). The cost of each woman's life saved would be more than \$22,000. Even if we're wrong by a factor of five, it would still cost more than \$4,000 for each life saved. In contrast, a \$1 vaccine can save a child's life. As one leader in the development field said: "Vaccines are cost-effective. Maternal health isn't."

So let's not overstate the case. Maternal mortality is an injustice that is tolerated only because its victims are poor, rural women. The best argument to stop it, however, isn't economic but ethical. What was horrifying about Prudence's death was not that the hospital allocated its resources poorly, but that it neglected a human being in its care. As Allan Rosenfield has been arguing, this is first and foremost a human rights issue. And it's time for human rights organizations to seize upon it.