

BUILDING MOMENTUM

GLOBAL PROGRESS TOWARD REDUCING
MATERNAL AND CHILD MORTALITY



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About IHME

The Institute for Health Metrics and Evaluation (IHME) at the University of Washington monitors global health conditions and health systems and evaluates interventions, initiatives, and reforms. Our vision is that better health information will lead to more knowledgeable decision-making and higher achievements in health. To that end, we strive to build the needed base of objective evidence about what does and does not improve health conditions and health systems performance. IHME provides high-quality and timely information on health, enabling policymakers, researchers, donors, practitioners, local decision-makers, and others to better allocate limited resources to achieve optimal results.

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Acronyms

HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
MDGs	Millennium Development Goals
MDG4	Millennium Development Goal 4: Reduce child mortality rate by 66% between 1990 and 2015
MDG5	Millennium Development Goal 5: Reduce maternal mortality ratio by 75% between 1990 and 2015
MMR	Maternal mortality ratio: the number of women dying of pregnancy-related causes for every 100,000 live births
U5MR	Under-5 mortality rate: the probability of death between birth and age 5 (per 1,000 live births)

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Executive summary

Improving the odds of survival for the world's mothers and children has become an increasingly urgent priority for policymakers and health advocates worldwide. In the past decade, that concern has been propelled to the forefront of global health issues, sparking an intense debate over how best to respond.

Reducing maternal and child mortality are two of eight goals for development adopted by 189 nations in the Millennium Declaration in 2000. Millennium Development Goal 5 (MDG5) set the ambitious target to reduce the maternal mortality ratio by three-quarters between 1990 and 2015. Similarly, Millennium Development Goal 4 (MDG4) aims to reduce the under-5 mortality rate by two-thirds in that same period. While there have been regular reports in recent years that child mortality has been dropping, there is a common perception that the number of maternal deaths has remained stagnant.

Researchers at the Institute for Health Metrics and Evaluation (IHME), working with collaborators around the world, have developed new methods and worked to overcome analytical challenges in an effort to generate the most accurate estimates to date of maternal and child deaths. After more than two years studying maternal and child mortality from an array of vantage points, IHME has reached an encouraging conclusion: Progress on both fronts has been better than previously believed.

Key findings of our research:

Maternal mortality

- Global maternal deaths have dropped from an estimated 526,300 in 1980 to 342,900 in 2008. Since 1990, the annualized rate of decline in the maternal mortality ratio has been 1.3%, dropping from 320 to 251 deaths per 100,000 live births in 2008.
- Nearly 80% of all maternal deaths in 2008 occurred in just 21 countries, and half of all maternal deaths are concentrated in six countries: India, Nigeria, Pakistan, Afghanistan, Ethiopia, and the Democratic Republic of the Congo.
- Rates of change in the maternal mortality ratio vary widely across countries, from an annualized decline of more than 8% in the Maldives to an increase of 5.5% in Zimbabwe between 1990 and 2008.
- HIV accounts for nearly 20% of all maternal deaths globally and an even higher percentage in countries with high infection rates. The disease is having a strong negative effect on maternal mortality, preventing some countries from reducing their death rates.

- As of 2008, 19 developing countries were on pace to reach the MDG5 goal, listed in order here based on their rates of decline: the Maldives, Egypt, Bhutan, Tunisia, El Salvador, United Arab Emirates, Laos, Oman, Qatar, Saudi Arabia, Lebanon, Libya, Syria, Morocco, Turkmenistan, Cape Verde, Myanmar, Jordan, and Algeria.

Child mortality

- Global child mortality dropped from 11.9 million deaths in 1990 to 7.9 million deaths in 2008, including 3.2 million neonatal deaths, 2.3 million postneonatal deaths, and 2.4 million deaths between ages 1 and 5.
- Across all regions of the world, child mortality rates are declining. The global under-5 mortality rate declined 2.1% annually between 1990 and 2008, and the death rate for the postneonatal phase between 1 month and 1 year of age declined 2.3%.
- IHME also found a surprisingly strong rate of decline in neonatal deaths, which dropped 2.1% annually between 1990 and 2008, a much larger decline than previous estimates have shown.
- In 13 regions of the world, including all of sub-Saharan Africa, there is evidence of accelerating declines. Some countries, such as Kenya, Rwanda, and Senegal, experienced slower declines in under-5 mortality between 1990 and 2000, but the pace has picked up since 2000 with declines between 2% and 5.5%.
- As of 2008, 31 developing countries were on pace to meet the MDG4 goal, listed in order here based on their rates of decline: the Maldives, United Arab Emirates, Oman, Vietnam, Sri Lanka, Egypt, Turkmenistan, Malaysia, Lebanon, Tunisia, El Salvador, Peru, Nepal, Libya, Syria, Mongolia, Chile, Bhutan, Armenia, Algeria, Cuba, Brazil, Thailand, China, Bangladesh, Mexico, Liberia, Bahrain, Honduras, Turkey, and Nicaragua.

The state of mothers and children worldwide is brighter than it was during the period that gave rise to the Millennium Development Goals. This report documents both ground that has been gained and challenges still to be met. Our research has shown there are lessons to be learned and knowledge to be shared between countries that are succeeding and those still struggling to meet the MDGs. These findings underscore the need for a continued unity of purpose among global health leaders to find the best way to build on this momentum and accelerate progress.



Introduction: The challenge to save mothers and children

The world has five years left to achieve the Millennium Development Goals (MDGs) of reducing maternal and child mortality. These twin issues have galvanized the global health community and prompted increasing levels of development aid, policy attention, and research work.

Groups such as the White Ribbon Alliance for Safe Motherhood have formed to rally donors and policy-makers. In 2005 and 2008, the Countdown to 2015 consortium held international conferences to discuss the state of progress toward MDG4 and MDG5. More research papers have been published since 2000 concerning maternal and child mortality than in any period in recent history. The common thread in all of these efforts is the search for a solution to a troubling global phenomenon: Too many mothers and children die every year from entirely preventable causes.

To help in this search, the Institute for Health Metrics and Evaluation (IHME) set out in 2007 with a fresh approach to the issue. We began by building relationships with governments and organizations worldwide that could provide the data necessary to measure maternal and child mortality trends. We then built the largest dataset currently available of information from vital registration systems, surveys, and censuses around the world. Finally, we created new methods and tools to analyze those datasets, generating the best picture of mortality trends to date.

What we learned gives us reason for optimism: Although most countries will fail to reach the targets set in MDG4 and MDG5, our research suggests that global

progress toward these goals has been steadier and more significant than previous studies have indicated.

Furthermore, evidence from countries in a wide range of economic situations indicates that rapid scale-up of programs to improve maternal and child health is possible and that accelerated reductions in mortality already are happening in many countries. There are many reasons to hope that these accelerations will continue, given the steady rise in skilled birth attendance and antenatal care, the scale-up of development assistance for health, the expansion of insecticide-treated bed net coverage and vaccination campaigns, and the broader use of antiretroviral treatment to combat HIV.

At the end of this report, we provide regional overviews showing maternal and child mortality trends from 1990 to 2008, including regional and country performance rankings. In addition, we include a country table with all of IHME's maternal and child mortality data, recording each country's progress toward MDG5 and MDG4.

The fact that most countries will fall short of the MDG targets for reducing maternal and child mortality will undoubtedly prompt much discussion and concern over the next few years. This discussion should be grounded in the most accurate assessments available of mortality trends and of the interventions being used to influence those trends.

