

Maternal mortality

Evidence brief

To improve maternal health, barriers that limit access to quality maternal health services must be identified and addressed at all levels of the health system.



Key facts

- ▶ Every day in 2017, approximately 810 women died from preventable causes related to pregnancy and childbirth.
- ▶ 94% of all maternal deaths occur in low and lower-middle income countries.
- ▶ Young adolescents (aged 10-14) face a higher risk of complications and death as a result of pregnancy than older women.
- ▶ Appropriate care provided by skilled health professionals competent in sexual and reproductive health care, before, during and after childbirth can save the lives of women and newborn babies.
- ▶ Between 2000 and 2017 maternal mortality* worldwide dropped by about 38%.

Maternal mortality is unacceptably high. Estimates for 2017 show that some 810 women die every day from pregnancy- or childbirth-related complications around the world. In 2017, 295 000 women died during and following pregnancy and childbirth. The vast majority occurred in low-resource settings, and most could have been prevented. (1)

Progress towards achieving the Sustainable Development Goals

Improving maternal health is one of the thirteen targets for the Sustainable Development Goal 3 (SDG-3) on health adopted by the international community in 2015. Whilst the SDGs include a direct emphasis on reducing maternal mortality they also highlight the importance of moving beyond survival. Under Target 3.1, countries committed to ending preventable maternal mortality and to reaching a

global maternal mortality ratio of less than 70 deaths per 100 000 live births.

Meeting this target will require average reductions of about three times the annual rate of reduction achieved during the Millennium Development Goal era – an enormous challenge. At the current pace of progress the world will fall short of meeting the SDG-3 at a cost of more than 1 million lives. (1)

Where do maternal deaths occur?

The high number of maternal deaths in some areas of the world reflects inequities in access to health services, and highlights the gap between rich and poor. Almost all maternal deaths (94%) occurred in low-income and lower-middle-income countries, and almost two thirds (65%) occurred in the World Health Organization (WHO) African Region. (1)

* Maternal mortality ration (MMR) = number of maternal deaths per 100,000 live births)

The maternal mortality ratio in the least developed countries is as high as 415 per 100 000 births versus 12 per 100 000 in Europe and Northern America and 7 in Australia and New Zealand. There are large disparities between countries, with 11 countries having extremely high maternal mortality ratios of 600 or more per 100 000 live births in 2017. (1)

Among adolescent girls aged 15-19 years, pregnancy and childbirth complications are the leading cause of death globally. Several countries, particularly those in Latin America and the Caribbean, and in South-East Asia, have already begun reporting data for women and girls outside the standard 15-49 year age interval, documenting the disturbing fact that maternal deaths are occurring among girls even younger than 15. (3)

Women in the least developed countries have on average many more pregnancies than women in developed countries, and their lifetime risk of death due to pregnancy is higher. (4) A woman's lifetime risk of maternal death – the probability that a 15-year-old woman will eventually die from a maternal cause – is 1 in 37 in sub-Saharan Africa versus 1 in 6500 in Europe and 1 in 7800 in Australia and New Zealand. (1)

Why do women die?

Women die as a result of complications during pregnancy, childbirth and postpartum. Most of these complications develop during pregnancy. Other complications may exist before pregnancy but are worsened during pregnancy. The major complications that account for 80% of all maternal deaths are (5):

- severe bleeding (mostly bleeding after childbirth)
- infections (usually after childbirth)
- high blood pressure during pregnancy (pre-eclampsia and eclampsia)
- unsafe abortion.

The remainder of maternal deaths are known as “indirect maternal deaths”. These occur when a pregnancy is aggravated by another condition or disease such as malaria, diabetes, or heart disease.

Maternal health and newborn health are closely linked. Nearly 2.5 million children die in the 1st month of life every year, and an additional 2.6 million babies are stillborn. (6,7).

How can women's lives be saved?

Most maternal deaths are avoidable, as the health-care solutions to prevent or manage complications are well known. All women need access to high quality care provided by competent skilled health professionals during pregnancy (antenatal care), during childbirth (intrapartum care), and care and support in the weeks after childbirth (postnatal and postpartum care). It is particularly important that all births are attended by skilled health professionals, as timely management and treatment can make the difference between life and death.

Severe bleeding after birth can kill a healthy woman within two hours if she is unattended. Injecting oxytocin immediately after childbirth effectively reduces the risk of bleeding.

Infection after childbirth can be eliminated if good hygiene is practiced and if early signs of infection are recognized and treated in a timely manner.

Pre-eclampsia should be detected and appropriately managed before the onset of convulsions (eclampsia) and other life-threatening complications. Administering drugs such as magnesium sulfate for pre-eclampsia can lower a woman's risk of developing eclampsia. To avoid maternal deaths, it is also vital to prevent unwanted and too-early pregnancies. All women, including adolescents, need access to family planning, safe abortion services to the full extent of the law, and quality post-abortion care.

Why do women not get the care they need?

Poor women in remote areas are the least likely to receive adequate health care. This is especially true for regions with low numbers of skilled health professionals, such as sub-Saharan Africa and South Asia. While levels of antenatal care have increased in many parts of the world during the past decade, Coverage of deliveries by a skilled birth attendant ranges from 59% in the WHO African Region to over 90% in the Region of the Americas, and in the European and Western Pacific regions. (8) This means that millions of births are not assisted by a midwife, a doctor or a nurse with specific competencies to manage labour and childbirth.

In high-income countries, virtually all women have at least four antenatal care visits, are attended by a skilled health worker during childbirth and receive postpartum care.

Other factors that prevent women from receiving or seeking care during pregnancy and childbirth are:

- poverty
- distance
- lack of information
- inadequate services
- cultural practices.

To improve maternal health, barriers that limit availability and access to quality maternal health services must be identified and addressed at all levels of the health system.

WHO response

Improving maternal health is one of WHO's key priorities. WHO is working to reduce maternal mortality by providing evidence-based clinical and programmatic guidance, setting global standards, and providing technical support to Member States. In addition, WHO advocates for more affordable and effective treatments, designs training materials and guidelines for health workers, and supports countries to implement policies and programmes and monitor progress.

A renewed commitment to maternal health was made with the UN *Global strategy for women's and children's and Adolescent's health (2016-2030)* (9) as well as the call to countries to end preventable maternal mortality as framed in the WHO *Strategies toward ending preventable maternal mortality* which set a supplementary target to SDG 3.1 whereby no country should have maternal mortality ratio greater than 140 per 100 000 live births by 2030. (10) WHO is working with partners to accelerate progress towards improved health and well-being of women, children, and adolescents.

References

1. WHO, UNICEF, UNFPA, World Bank Group and the United Nations Population Division. *Maternal mortality: Levels and trends 2000 to 2017*. Geneva: 2019. (<https://www.who.int/reproductivehealth/publications/maternal-mortality-2000-2017/en/>, accessed 17 October 2019)
2. Neal S, Matthews Z, Frost M, et al. Childbearing in adolescents aged 12–15 years in low resource countries: a neglected issue. New estimates from demographic and household surveys in 42 countries. *Acta Obstet Gynecol Scand* 2012;91: 1114–18
3. *Global health estimates 2015: deaths by cause, age, sex, by country and by region, 2000–2015*. Geneva: World Health Organization; 2016.
4. Zimicki S. The relationship between fertility and maternal mortality. In: Parnell A (ed), *Contraceptive use and controlled fertility: health issues for women and children* (background papers). Washington DC, National Research Council (US), National Academies Press (US); 1989 (<https://www.ncbi.nlm.nih.gov/books/NBK235085/>, accessed 17 March 2019).
5. Global Causes of Maternal Death: A WHO Systematic Analysis. Say L, Chou D, Gemmill A, Tunçalp Ö, Moller AB, Daniels JD, et al. *Lancet Global Health*. 2014;2(6): e323-e333.
6. United Nations Inter-agency Group for Child Mortality Estimation, *Levels & Trends in Child Mortality: Report 2018, Estimates developed by the United Nations Inter-agency Group for Child Mortality Estimation*. New York: UNICEF, 2018. (<https://childmortality.org/wp-content/uploads/2018/12/UN-IGME-Child-Mortality-Report-2018.pdf>, accessed 17 October 2019.)
7. Blencowe, Hannah et al. National, regional, and worldwide estimates of stillbirth rates in 2015, with trends from 2000: a systematic analysis. *Lancet Global Health*, Volume 4, Issue 2, e98 - e108 ([https://www.thelancet.com/journals/langlo/article/PIIS2214-109X\(15\)00275-2/fulltext](https://www.thelancet.com/journals/langlo/article/PIIS2214-109X(15)00275-2/fulltext), accessed 10 July 2019).
8. *World health statistics 2019: monitoring health for the SDGs*. Geneva: World Health Organization, 2019. (<https://apps.who.int/iris/bitstream/handle/10665/324835/9789241565707-eng.pdf>, accessed 25 October 2019)
9. *Every Woman Every Child. The Global Strategy for Women's, Children's and Adolescents' Health (2016-2030)*. Geneva: Every Woman Every Child, 2015.
10. *Strategies toward ending preventable maternal mortality*. Geneva: World Health Organization, 2015. (https://apps.who.int/iris/bitstream/handle/10665/153544/9789241508483_eng.pdf, accessed 25 October 2019).



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