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## Maternal Health

An Executive Summary for *The Lancet's* Series



“Every woman, every newborn, everywhere has the right to good quality care.”

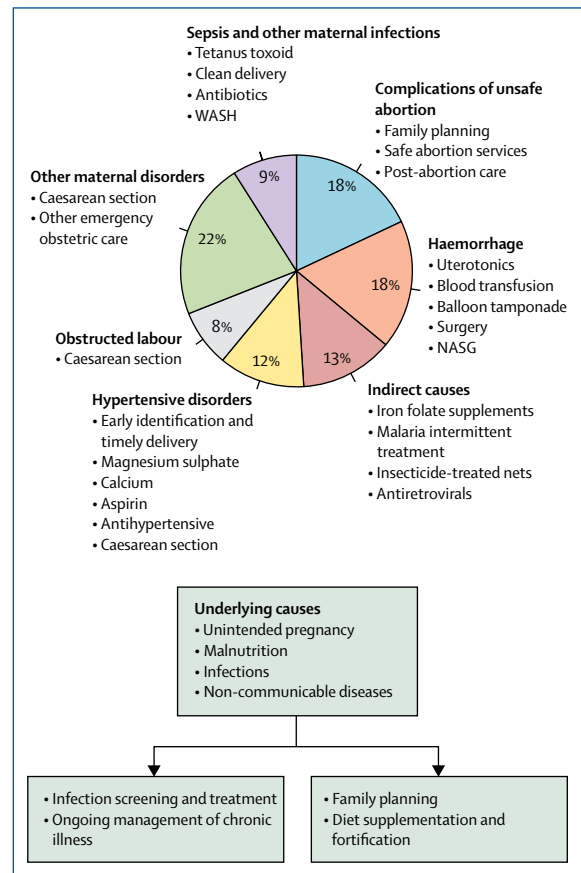
## Overview

The past quarter century has delivered progress for some women and their newborn babies. Maternal deaths globally have fallen by nearly half (44%) since 1990, and use of maternity services has increased markedly. At the same time, the Millennium Development Goal (MDG) for maternal health fell far short of achievement. Some countries and groups of women saw little or no progress, despite significant global political attention on maternal health. In sub-Saharan Africa, a woman's lifetime risk of dying in pregnancy or childbirth remains an appalling 1 in 36 compared with 1 in 4 900 in high-income countries.

Every woman, every newborn, everywhere has the right to good quality care. This is the guiding message of the 2016 *Lancet* Maternal Health Series—the first such series in a decade of change. The Series shines a light on the causes (see figure 1), trends, and prospects for maternal health in the current era of rapid demographic, epidemiological, and socioeconomic transition. It analyses experiences of the past 25 years, and exposes the growing threat to progress caused by poor quality care and inequity of access. Since 1990, the gap between the group of countries with the highest level of maternal mortality and the group with the lowest has doubled in size. With 210 million women becoming pregnant and the delivery of 140 million newborn babies each year, it is urgent to improve the quality of care and reduce disparities in access, so securing future economic and social development and supporting the vision of the 2030 Sustainable Development Goals (SDGs) and the *Global Strategy for Women's, Children's, and Adolescents' Health*.

The right to good quality, woman-centred maternal health care is universal. This Series presents a truly global perspective—reporting on experiences from across all regions. For women using services, some receive excellent care but too many experience one of two extremes: too little, too late or too much, too soon. Both extremes represent maternal health care that is not grounded in evidence. And other women receive no care at all.

In high- and middle-income countries, and in better-off groups in low-income countries, there is a growing risk of over-medicalisation of normal pregnancy and birth, with the routine use of interventions



**Figure 1: Main causes of maternal death and key interventions (2013)** Percentages refer to the proportion of all maternal deaths attributed to the specified cause. (WASH=water, sanitation, and hygiene. NASG=non-pneumatic anti-shock garment.) Source: *Series Papers Maternal Health 1 and 6*

unsupported by evidence. Facility-based births continue to rise, but maternity care that is too much, too soon may cause harm, raise health costs, and contribute to a culture of disrespect and abuse.

At the same time, poor quality care that is too little, too late jeopardises the health of women and their newborn babies, whether in sparsely-populated rural areas, dense urban centres, or in settings marked by environmental or political fragility. Furthermore, despite the increases in maternity care coverage in the past 25 years, an estimated quarter of pregnant women still do not access skilled care at birth.

Opportunities for future progress in improving quality of care and reducing inequities lie not only in wider adoption of effective maternal health interventions and models of care, but also in broader developments. These include the increasing fiscal

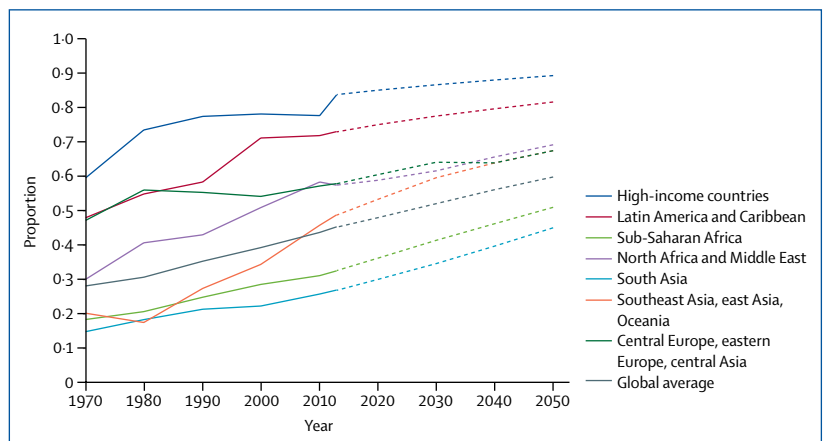
### At a glance

- In 2015, 216 women died of maternal causes per 100 000 live births—down 44% from 385 per 100 000 in 1990—but still far short of the MDG 5a target of a 75% reduction. The global target for 2030 is 70 per 100 000, requiring a 68% reduction
- In 1990, the pooled maternal mortality ratio for the 10 countries with the highest levels was 100 times greater than the pooled maternal mortality ratio for the 10 countries with the lowest levels; by 2013, the gap had doubled to 200 times greater
- The significant burden of maternal morbidity has become more apparent, with an estimated 27 million episodes from the five main direct obstetric causes alone in 2015
- Three-quarters of women now deliver with assistance from a skilled birth attendant and two-thirds receive at least four antenatal care visits. Nearly 53 million women, concentrated in the poorest countries or among the poorest women within countries, receive no skilled assistance at birth
- There are 51 high quality evidence-based guidelines available for maternity care services, developed by both government and non-governmental organisations from a variety of countries, but none developed by low-income countries. Within these guidelines there are 78 single interventions or groups of interventions recommended for use, and 37 recommended against use
- In seven sub-Saharan African countries studied, five had more than a quarter of their facility births in sites without capability to provide care for uncomplicated childbirth. In four countries, more than two-thirds of facility births were in sites that lacked three elements of basic infrastructure, such as water, and more than half of facility births were in sites unable to provide basic emergency obstetric care
- Modelled estimates point to the need for more than 18 million additional health workers by 2030 to meet the SDGs targets. Sub-Saharan African countries with the largest numbers of births (eg Democratic Republic of Congo, Tanzania, Kenya, and Ethiopia) have some of the lowest densities of midwives and obstetricians (<2 per 1 000 pregnancies)
- A review of 14 high-income countries showed average costs for vaginal births in the US were more than seven times higher than in Norway, and more than four times higher for caesarean sections. Costs for medical liability were high, but half of these 14 countries had no-fault systems to mitigate such costs, and three had partial systems

space for health investments in low- and middle-income countries, urbanisation (see figure 2), Universal Health Coverage, and promising new approaches for expanding the reach and effectiveness of care through behavioural economics, mHealth, and the data revolution. There are also challenges on the horizon that can impede or reverse progress, including a diluted focus on maternal health, weak global and national governance, and natural and human-made crises, such

as climate change, disease outbreaks, conflict, and mass migration.

The Series concludes with a five-point agenda for change: good quality care for every woman, every newborn, everywhere; equity through Universal Health Coverage; health system resilience, strength and responsiveness; sustainable financing for maternal and newborn health; and better evidence, advocacy, and accountability for progress.



**Figure 2: Urban and rural birth projections**

Proportion of births in urban areas by region, 1970–2050. We used urban and rural crude birth rate data from the UN Demographic Yearbooks from 1970–2013, population data from the UN World Urbanisation Prospects 2014, and total crude birth rate data from UN World Population Prospects 2012 to estimate the percentage of births occurring in urban areas from 1970–2050 by region. We used average values of available urban and rural crude birth rates per country within the region as a proxy for the entire region. Source: *Series Paper Maternal Health 5*

## Why the widening inequities in maternal health?

As more women survive childbirth, the global burden of poor maternal health is shifting markedly from avoidable deaths to an increasingly diverse array of maternal morbidities. Four major transitions have contributed to increasing diversity and divergence in the burden of poor maternal health across the world.

**Demographic:** Despite falling birth and death rates, the young age structure of the global population and the high unmet need for contraception continue to drive population growth, placing particular stress on fragile health systems.

**Epidemiological:** Low- and middle-income countries are following patterns in high-income countries, with increasing incidence of diabetes, heart disease, hypertension, and other chronic conditions. As direct causes of maternal mortality decline, indirect causes of maternal mortality and morbidity are becoming more prominent, including those related to mental health.

**Socioeconomic:** As individuals and communities become more prosperous, many lifestyle and behavioural changes occur. This includes older ages of women at first birth; increased obesity and non-communicable diseases; and greater aspiration to use



formal-sector health services and technologies, and receive woman-centred care.

**Environmental:** The impact of climate change, environmental degradation, and natural disasters on human health are population-wide, but it is often women who are most affected by these shifts and shocks. For example, women may need to spend more time collecting fuel and water and so have less time to seek care for themselves and their children. Women also face additional risks in pregnancy from vector-borne or hygiene-related infections, such as malaria, Zika, cholera or Ebola.

## Poor quality care is present in all countries

For women using services, some receive excellent care but too many experience one of two extremes: too little, too late, where women receive care that is not timely or sufficient, and too much, too soon, marked by over-medicalisation and excessive use of unnecessary interventions. Both extremes represent maternal health care that is not grounded in evidence. And other women receive no care at all.

A growing number of low- and middle-income countries now straddle the two extremes of maternal health care, with too little, too late care among the most vulnerable, and too much, too soon care among the wealthy and those in private care. Indeed, access to evidence-based care remains inadequate across all settings.

It is no longer acceptable to merely encourage women to give birth in health facilities, many of which continue to lack emergency obstetric care, reliable

water supply, and even the most basic capability to manage uncomplicated deliveries and provide respectful evidence-based routine care.

### Too little, too late

- Lack of evidence-based guidelines
- Lack of equipment, supplies, and medicines
- Inadequate numbers of skilled providers
- Women delivering alone
- Lack of emergency medical services and delayed inter-facility referrals

### Too much, too soon

- Unnecessary caesarean section
- Routine induced or augmented labour
- Routine continuous electronic fetal monitoring
- Routine episiotomy
- Routine antibiotics postpartum

Specific, context-appropriate strategies and guidelines are needed to counter both extremes. Configurations that have improved outcomes for women and their newborn babies in some contexts include midwifery-led care, ensuring health facilities are capable of providing evidence-based routine childbirth care and basic emergency obstetric care, innovations in emergency medical services, greater use of maternity waiting homes, and adoption of alongside midwifery-led units, co-located with hospitals (see figure 3).



The burden of poor maternal health—mortality and severe morbidity—is concentrated among vulnerable populations, especially those who face gender and other discrimination, have financial constraints, are affected by humanitarian crises, or live in fragile states or areas prone to natural disasters. These women often face

high fertility, higher-risk pregnancies, and difficulties in accessing quality services and in asserting their rights.

Vulnerable women exist in every country—including high-income countries. For example, African-American women in New York City are twice as likely to die in childbirth as women living in the developing region of Eastern Asia.

Health systems in high-income countries face challenges in supporting good quality, woman-centred care. Medical liability costs are often very high, fear of litigation is common, data and surveillance systems are weak, and human resource shortages are common. Team-based care in maternity hospitals and increased midwifery care may be effective in addressing staff shortages, excessive interventions, and high costs.

#### Women often left out of good quality care

- Adolescents and unmarried women
- Immigrants
- Refugees and internally displaced women
- Indigenous women and ethnic or religious minorities
- Women living in poverty
- Women living in informal urban settlements
- Women living in fragile states
- Women affected by humanitarian crises

## External shocks and health system innovations

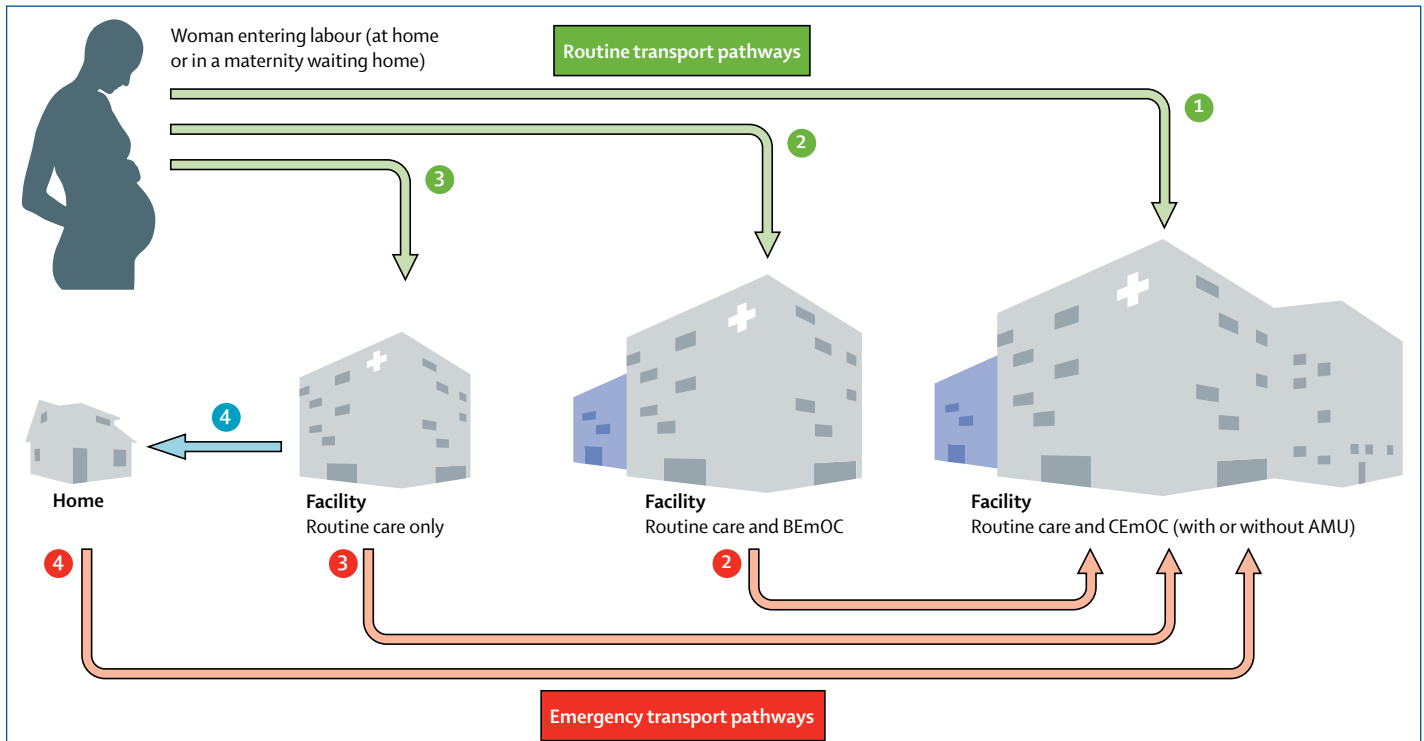
Reaching every woman with the good quality care she deserves depends on the resources and conditions of her community and country. Such conditions include economic growth in low- and middle-income countries, urbanisation, and health system shocks due to disease outbreaks, extreme weather, and conflict. At the same time, policy and technological innovations including Universal Health Coverage, mHealth, and behavioural economic interventions are generating new approaches to improve the health of women and newborn babies in all income settings.

Robust annual growth in GDP in the next two decades, coupled with the potential to tap new revenues through tobacco and alcohol taxes, tourist taxes, and reduction of fossil fuel subsidies, can substantially expand domestic fiscal space for health and other social investments. Given stagnating levels of development

assistance for health overall, increasing domestic investment in health makes sense not only for social development, but also for economic growth. Nearly a quarter of the growth in national income levels in low- and middle-income countries between 2000 and 2011 has come from the value of additional life-years gained, or in other words, increased life expectancy. This makes health an exceptionally good investment.

The new political and social landscape in the post-MDG era—along with the changing expectations of women and their access to technology and information—requires a fundamental shift in strategy to improve maternal health for all. For example, as access to services expands with urbanisation and better availability of health information, emphasis must shift from getting women to facilities to improving the quality and timeliness of care in facilities.





Requirements for each pathway and option for routine and emergency care

	Routine transport at start of labour	Provision of quality care for routine childbirth	Emergency transport for complications	Provision of quality care for complications (EmOC)
<b>Options to ensure SBA delivery</b>	Woman/family: <ul style="list-style-type: none"> <li>Makes decision on intended place of childbirth</li> <li>Has ability to reach intended location, (transport and communication) including by relocation to a MWH</li> </ul>	Facility has adequate: <ul style="list-style-type: none"> <li>Staff cadres and skills for routine childbirth</li> <li>Staff numbers</li> <li>Equipment, drugs, and supplies</li> <li>24/7 opening times and basic infrastructure</li> </ul>	Attendant: <ul style="list-style-type: none"> <li>Recognises need for emergency care</li> <li>Can identify and reach CEmOC facility (eg, using emergency medical service)</li> </ul>	Facility has adequate: <ul style="list-style-type: none"> <li>Staff cadres and skills to manage complications</li> <li>Staff numbers</li> <li>Equipment, drugs, and supplies</li> <li>Blood supply</li> <li>24/7 opening times and basic infrastructure</li> </ul>
<b>Facility with routine care &amp; CEmOC</b> <span style="color: green;">1</span>	Woman travels from home/ MWH to CEmOC facility	Uncomplicated childbirth at CEmOC facility, potentially in an AMU	Travel not required; if in AMU, move to emergency care located on the same site	Complicated childbirth managed at CEmOC facility
<b>Facility with routine care and BEmOC</b> <span style="color: green;">2</span>	Woman travels from home or MWH to BEmOC facility	Uncomplicated childbirth at BEmOC facility	<span style="color: red;">2</span> Woman who cannot be managed at BEmOC facility travels to CEmOC facility	
<b>Facility with routine care only</b> <span style="color: green;">3</span>	Woman travels from home or MWH to routine-only facility	Uncomplicated childbirth at routine-only facility	<span style="color: red;">3</span> Woman travels from routine-only facility to CEmOC facility	
<b>Home with SBA</b> <span style="color: blue;">4</span>	SBA travels to woman's home	Uncomplicated childbirth at home	<span style="color: red;">4</span> Woman travels from home to CEmOC facility	

Figure 3: Conceptual framework of pathways leading to adequate childbirth care options

Skilled birth attendance for uncomplicated childbirth and access to emergency obstetric care to manage complications, and the requirements for each pathway and option to be successful. (SBA=skilled birth attendant. EmOC=emergency obstetric care. BEmOC=basic emergency obstetric care. CEmOC=comprehensive emergency obstetric care. 24/7=24 h a day, 7 days a week. AMU=alongside midwifery-led unit. MWH=maternity waiting home.) Source: Series Paper Maternal Health 3

### Call to Action: Every woman, every newborn, everywhere has the right to good quality care

Good maternal health is a human right, as well as a pre-condition and a determinant of newborn, child, and adolescent health, and of sustainable development more generally. So what steps must local, national, and global communities take to achieve the SDG vision to reduce maternal deaths to less than 70 per 100 000 live births by 2030?

The *Lancet* Maternal Health Series proposes the following five-point action plan for all stakeholders, working in partnership to realise the vision of the *Global Strategy for Women's, Children's, and Adolescents' Health*:

- **Quality:** Partners must prioritise good quality, evidence-based maternal health services that respond to local needs and are capable of meeting emerging challenges. It is essential that maternal health services start with prevention (eg, family planning, and safe abortion where legal), are context-appropriate, interlinked along the continuum of care, and capable of addressing the increasing diversity in the burden of poor maternal health.
- **Equity:** Partners must promote equity, for example through investments in Universal Health Coverage—a mechanism for achieving the SDGs—that should include a strong maternal health service core that reaches every woman, everywhere with good quality care, and without causing financial hardship and pushing families into poverty.
- **Health systems:** Partners must invest in strengthening entire health systems, including data and surveillance systems, facility capability, linked emergency medical services, and a skilled health workforce—so that they can respond to the changing contexts of women's lives and are made resilient in the face of shocks and environmental threats to maternal and newborn health.
- **Financing:** Sustainable financing for maternal health is necessary to maintaining maternal health gains and accelerating progress. With recent economic growth in low- and middle-income countries, the case for investing in health as a catalyst to both social development and economic growth is crucial to securing political attention and support.
- **Better evidence:** Better local evidence from routine audits and strengthened health management information systems is essential to improving quality of care locally—at the very frontline where women receive care. Smarter metrics are needed to capture the true burden of poor maternal health, to inform evidence-based maternal care and policy, and improve the ability of health systems to provide good quality maternal care for all. Better evidence from research will also help build a platform upon which all partners—local and global, public and private—can advocate for the mobilisation of resources, learn from programmatic successes and failures, strengthen laws and policies, and promote mutual accountability.



For more on the Series see  
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maternal-health-2016](http://www.thelancet.com/series/maternal-health-2016)  
[www.maternalhealthseries.org](http://www.maternalhealthseries.org)

## Series papers

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3. Campbell OMR, Calvert C, Testa A, et al. The scale, scope, coverage, and capability of childbirth care. *Lancet* 2016; published online Sept 15. [http://dx.doi.org/10.1016/S0140-6736\(16\)31528-8](http://dx.doi.org/10.1016/S0140-6736(16)31528-8)
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