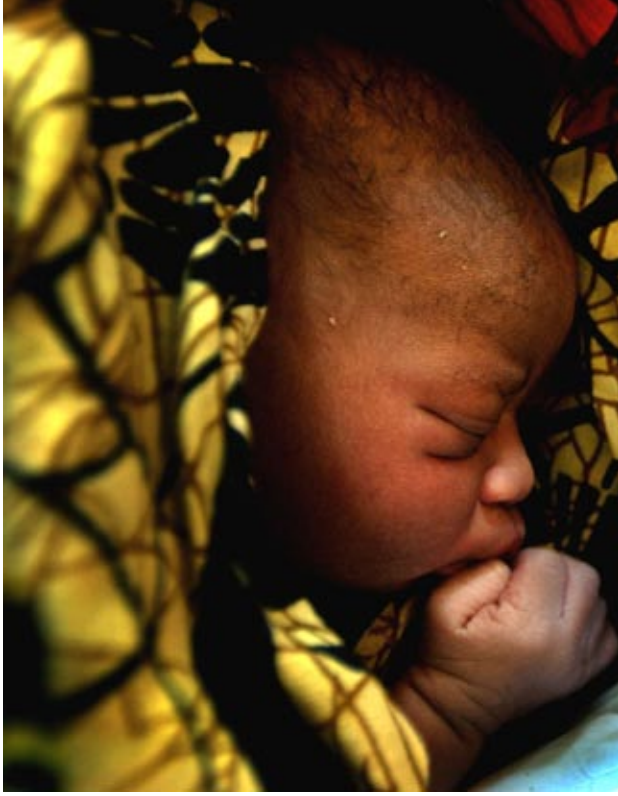


How can child and maternal mortality be cut?

With only five years to go, the millennium development goals to reduce maternal and child mortality remain a long way off target. **Tatum Anderson** looks at the problems

A decade ago world leaders identified deaths of women in childbirth and of children under the age of 5 years as two of eight key problems that must be tackled in order to lift millions out of extreme poverty by 2015.

Ten years on and international agencies are less than optimistic that the goal of cutting deaths among under 5s by two thirds by 2015 will be met without a great deal more effort. Most of the 8.8 million children who died before their 5th birthdays in 2008 were in developing countries. Over 43% were newborn babies, who died in the first few days of life, and undernutrition contributed to a third of deaths. But although progress has been made in tackling many of the causes, including pneumonia, diarrhoea and malaria, it is not enough. Of 67 countries with high mortality rates (≥40/1000), a staggering 47 are off track to meet the target.[1]

Yet more pessimism is reserved for the millennium development goal for maternal mortality. The aim is to reduce the maternal mortality ratio by three quarters and offer universal access to reproductive health. It is considered to be the goal that is furthest off track.

Up to date statistics on maternal death are more difficult to come by. But maternal mortality ratios are "high or very high" in all but 12 of the 68 countries working towards this millennium development goal, according to the Countdown to 2015 Initiative, a collective of research institutions and aid agencies that includes the London School of Hygiene and Tropical Medicine and the Norwegian Agency for Development Cooperation (Norad).[2] In Sierra Leone 2100 women die per 100 000 live births. (Earlier figures from the World Health Organization had shown maternal mortality was rising in some countries.)

Obstacles to progress

Although there may be broad agreement among health experts, donors, and politicians on this failure to make progress, there is far less consensus on the main reasons why. A lack of political will and poor governance in the affected countries, too great a focus on other higher profile health issues, and squabbling among health experts about how best to proceed are all blamed.

And any attempt to uncover definitive reasons for success or failure in progressing towards these two goals is further muddied by clear pockets of excellence in countries where they may be least expected.

Take Nepal, where despite political instability the number of births per family was halved in a decade and the neonatal deaths dropped from 40 to 33 per 1000 between 2000 and 2006. Or Malawi, which has the lowest number of health workers per capita and a high HIV prevalence but remains on track to reach the goal for children under 5 (box). As was Haiti, until last week's devastating earthquake.[2]

Helga Fogstad of Norad, which spearheads Norway's global efforts on these two millennium development goals, argues that failure to make progress is chiefly a result of political choice. Child and maternal health has not been sufficiently high on the agenda of too many governments. Many agree with her.

"You cannot say that maternal mortality is going up and that countries have prioritised this," she says. "It's impossible."

She points to Tanzania. There the government funnelled its efforts into targeting child mortality rather that maternal mortality. Then, Tanzanian health officials were shocked to learn that although their policies were greatly reducing the number of deaths in children, 950 women in every 100 000 died in childbirth in 2005. And newborn infants, whose survival is closely intertwined with that of their mothers, were also not doing well.

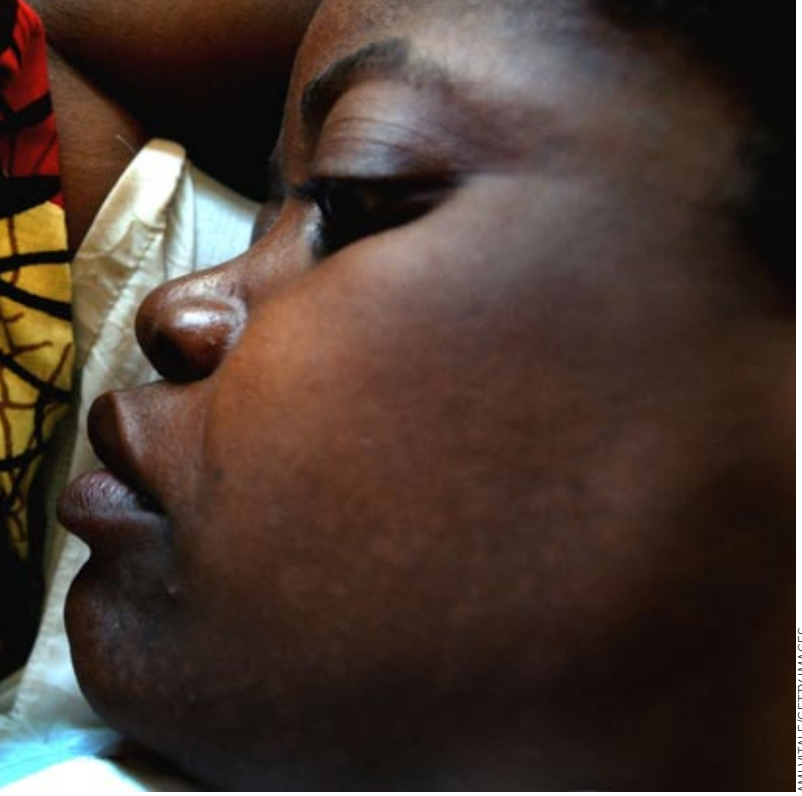
Tanzania is now aggressively tackling maternal and newborn mortality. But fresh data on whether its efforts are paying off will not be published until later this year at the earliest.

It is not just governments of developing countries that have failed to prioritise child and maternal health. Donors have not either. Many have funnelled their cash into more high profile goals, such as the one that tackles HIV/AIDS, malaria, and other infectious diseases.

Tackling these diseases will help reduce child and maternal deaths. HIV/AIDs is responsible for reported rises in child deaths in Zambia and its Southern African neighbours, and malaria kills mainly children under 5 and pregnant women. But the UK's Department for International Development (DFID) has warned that in Zambia, donors have been diverting trained staff and other scarce resources away from the rest of the health sector and undermining efforts to tackle maternal health. Here 90% of all aid goes on fighting specific diseases, leaving only 10% for building the health system.[5]

Success or failure in reducing child and maternal mortality cannot be linked directly to economic conditions. India, the world's fourth largest economy, is home to a fifth of all maternal deaths, a quarter of neonatal deaths, two thirds of all deaths from measles, and some of the worst malnutrition rates.[6 7]

Lack of progress there is firmly attributable to poor political decisions (box). India is the only country not to have implemented a comprehensive measles strategy. In sub-Saharan Africa deaths from measles declined by 92% over nine years.[7]



AMI VITALE/GETTY IMAGES

Elsewhere, Ethiopia has only just decided to allow its community health workers to dispense antibiotics, despite evidence that the strategy could tackle pneumonia, the country's number one cause of death for children under 5, says Save the Children USA.

Complex problem

Poor political choices aside, the lack of focus on maternal and neonatal mortality can also be partly explained by the complexity of tackling the problem effectively. Success requires countries to build a health system, making it much more difficult to demonstrate progress to funders than it is with other simpler interventions to improve child health.

Dr Neema Rusibamayila, assistant director with responsibility for reproductive and child health at the Ministry of Health and Social Welfare in Tanzania, says: "You can do many things, such as distribution of insecticide treated bed nets and vitamin A, that don't necessarily need a strong health system but can make a big difference.

"But to address maternal mortality, you need a referral system that is strong, with emergency obstetric care, blood, the ability to do a caesarean section close to the people. It is more difficult to address."

Building a health system on a minuscule budget and limited aid is a huge challenge for developing countries. "The primary obstacle is health systems that don't have enough workers, often crumbling to the ground," says Ann Starrs of Family Care International. "Three per cent of the global workforce is trying to deal with half the world's maternal deaths."

Another problem is that health professionals in the fields of child, maternal, and newborn have been unable to agree on how best to proceed. Jeremy Shiffman, associate professor of public administration at Syracuse University, blames this discord for delaying progress because funders and countries were confused about what strategies to implement. For example, experts used to recommend the use of traditional birth attendants; now it is strongly discouraged.

However today there is mounting consensus among child, maternal, and newborn advocates and a corresponding rise in lobbying power. The Partnership for Maternal, Newborn And Child Health advocates a series of well tested interventions: a continuum of care, from comprehensive family planning to emergency care for childbirth complications and treatment of childhood illnesses.

Governments are being urged to drop charges for hospital services (most sub-Saharan countries still charge, according to Anna Marriott, a health policy adviser at Oxfam) and provide more skilled birth attendants.

The partnership has pushed for more money—$30bn between 2009 and 2015—to tackle maternal and child mortality. It will be targeting the global leaders at the UN Summit on the millennium development goals in September and plans to hold those who pledge money or strategies to account. Indeed, the two goals now have high profile advocates, including the UK prime minister's wife, Sarah Brown, and a host of celebrities.

Joined up approach

However, progress is hampered because many great ideas can have unintended consequences when scaled up to large populations. Experts say this is often because they have addressed only part of a more complex problem.

Unicef and other agencies are finding that large scale projects may not deliver the

MALAWI: BEACON OF HOPE

Malawi has managed to buck the trend of many southern African countries that reported rises in child mortality as a result of HIV infection despite many disadvanges.

Data from WHO, Unicef, and the UN Population Fund suggested Malawi had one of the worst maternal mortality ratios in the world in 2000. The least developed country, it has experienced an unprecedented loss of health workers from HIV infection and migration. With the lowest human resource capacity of any country in the world, it reported severely understaffed and underequipped health centres.[3]

The government put together an essential health package in 2002 that would be rolled out throughout the country. The package included childhood vaccines; treatment of childhood infections such as tuberculosis, schistosomiasis, acute respiratory infections, and diarrhoeal diseases; prevention and treatment of HIV/AIDS and sexually transmitted infections; prevention and management of malnutrition; and management of eye, ear, and skin infections. It has since been expanded to include neonatal services.

According to Joy Lawn of Save the Children USA, donors were invited to work together in funding the package. "They would not let donors go to one of their favourite districts and do what they wanted. Everybody had to implement the government package."

Malawi has also upgraded health facilities and trained armies of community health workers; clinical assistants are being trained to carry out emergency caesarean sections if there are no obstetricians, for instance. The number of nurses is beginning to improve, rising from one nurse per 4000 people in 2005 to one per 3000 in 2008.

Malawi is now considered to be on track to reach the millennium development goal for child deaths. Mortality among under 5s has dropped nearly 50% in 15 years to 122/1000 .[4] Maternal mortality is falling but remains high, at around 800/100 000 births.

JENNY MATTHEWS/ALAMY

Keeping on track: Nasanje Mbenje health centre mother and baby clinic in Malawi

INDIA: GOOD INTENTIONS, VARIABLE IMPLEMENTATION

The Indian government has a gargantuan task on its hands. Although 30 000 medics graduate every year, the entire rural health system, which serves 750 million people, has never had more than 26 000 doctors.

In 2005, the Indian government launched a National Rural Health Mission to improve public health systems in rural areas. The scheme included emergency obstetric care units, immunisation plans, and one of the most ambitious cash incentive initiatives—the mother protection scheme, which pays mothers 1400 rupees (£17; €20; $28) for every hospital or clinic based delivery (traditional birth attendants are paid to bring women into facilities too). Incentives to encourage more staff to work in rural areas are expected.

The number of women having their babies in medical facilities is up 60% in some states according to the government. Innovative rural strategies are being seen in states such as Rajasthan. However, a report from Human Rights Watch on progress in maternal health in Uttar Pradesh shows that many problems remain.[8] Women experiencing complications in childbirth have been turned away from health facilities, sometimes forced to travel 100 km for blood transfusions or caesarean sections. Many cannot afford transport between facilities. The report author Aruna Kashyap, says, "By the time a woman reaches a facility [with equipment], it is sometimes too late."

But the issue is not that the government does not plan to roll out good quality services, she says, it is about effective implementation. Many facilities that are equipped, according to government records, are not in reality. Although services are supposed to be delivered for free, some of the poorest patients are being charged or miss out on vital care if they cannot afford to pay.

AMI VITALE/PANOS

Orissa, India: only 22% of women give birth in hospital

Monitoring is also inadequate. No one knows how many women die of postpartum haemorrhage (because there are no data on women who go home from clinics and die) or whether many women are attended by skilled birth attendants when they reach clinics, says Kashyap. Without this sort of knowledge, nobody can be held to account and nothing will change. "There is no quality control, no route to follow up on why she died," she says. "Lack of accountability is a serious problem and boils down to an issue of governance."

outcomes and successes they expected. When Ghana removed its fees, it was disappointed to find fewer women used health facilities than expected because they could not afford transport. Other countries have found it difficult to exempt the poor from fees because determining who is eligible is problematic. And the jury is still out, for instance, on the effect of cash incentives to encourage women into health systems.

Wendy Graham has studied several countries as part of Initiative for Maternal Mortality Programme Assessment at the University of Aberdeen. She says that there is little focus on the quality of care women receive when they do enter the health system.

"We have taken our eye off the ball. It doesn't matter if you get to the hospital. If you don't get what you need, you won't survive," she says.

Even if governments prioritise maternal and child mortality, and there is cash available and clear evidence about what strategy will be most effective, governance problems still stand in the way.

A poorly functioning government bureaucracy, lack of accountability, bad or unenforced rules, lack of transparency, and corruption will all contribute to failing progress in child, maternal, and newborn health.

Shiffman says: "Lack of progress is down to multiple factors, which may include governance. My hunch is that governance is a major contributory factor."

For example, dismal reporting by health workers about individual maternal deaths makes tracking the causes of why so many women die in childbirth extremely difficult. Without clear causes, effective policies to improve mortality become equally unclear. Likewise, poor supply chain logistics means clinics run out of crucial medicines such as oxytocin, which reduces the risk of haemorrhage, and contraceptives, which can result in unplanned pregnancies and raises women's risk of dying in childbirth.

Poor governance also takes the form of corruption. Kick-backs and bribes deny the poor access to health care. Larger scale embezzlement, such as the scam uncovered in the Zambian ministry of health last year in which £2m of aid was stolen, affects entire projects.

However, most experts are quick to caution against any assumption that corruption is endemic. Or that problems in tackling the millennium development goals effectively are down to political intrigue and self interest.

Paul Banoba of Transparency International, which is tracking governance and corruption in the health sector of sub-Saharan Africa for a report expected in April, says: "Where we find faulty and dysfunctional systems, it is important to look into the underlying issues.

"It may not be an abuse of office. It might be mismanagement, where the health workforce is working in a resource poor setting and trying to make do with a little bit that is available.

"Where corruption does exist, it is a small component."

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Competing interests: TA has written for numerous publications, some of which are funded by donors. They include TropIKA.net, SciDev.net, and Developments magazine. She has completed the unified competing interest form at www.icmje.org/coi_disclosure.pdf (available on request from the corresponding author) and declares no financial support from and no financial relationships with commercial entities that might have an interest in the submitted work; no spouses, partners, or children with relationships with commercial entities that might have an interest in the submitted work; and no non-financial interests that may be relevant to the submitted work.

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Cite this as: *BMJ* 2010;340:c431