A matter of birth and death: Unsafe conditions still killing new mothers and newborns

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WaterAid and the London School of Hygiene & Tropical Medicine today join the World Health Organization, UNICEF, UNFPA, SHARE Research Consortium and other organisations in a call to protect the lives of new mothers and their babies, by improving access to safe water, basic sanitation and hygiene in healthcare facilities and homes.

A paper published in *PLOS Medicine* argues that despite improvements in health care, new mothers and newborns are still dying because a reliable supply of safe water, good hygiene practice and adequate toilets are often not present.

A companion paper in *PLOS ONE* illustrates the situation in Tanzania, where less than a third (30.5%) of births occur in places with safe water and basic sanitation. In 2013, one in 44 women in the country faced dying in childbirth in their lifetime.

Women face a similar level of risk in many developing countries. Globally, an estimated 289,000 women died from complications related to pregnancy or childbirth in 2013 [1], a number which researchers say can be more rapidly reduced through better provision and monitoring of safe water, basic sanitation and hygiene to prevent infection and improve care.

Some 38% of healthcare facilities in 54 low-income countries are
without an improved water source, according to a forthcoming survey [2], leaving doctors, nurses and midwives struggling to care for their patients.

Sixteen researchers representing WaterAid, World Health Organization, UNICEF, the United Nations Population Fund, the London School of Hygiene & Tropical Medicine, the University of Aberdeen and The SoapBox Collaboration, BRAC and BRAC University, and Evidence for Action authored the flagship paper, 'From joint thinking to joint action: A call to action on improving water, sanitation and hygiene for maternal and newborn health.'

The research was funded by the Sanitation and Hygiene Applied Research for Equity (SHARE) Consortium, a five-year initiative funded by the UK Department for International Development and based at the London School of Hygiene & Tropical Medicine.[3]

Yael Velleman, senior policy analyst, sanitation and health, at WaterAid, said: "We have known since Victorian times about the importance of clean water and good hygiene in birth. Yet today tens of thousands of mothers will be giving birth in places where doctors and midwives, if present, do not have access to clean water. The process of giving life should not mean unduly risking death.

"Health agencies and governments have encouraged women to give birth in hospitals and clinics to give them a better chance of surviving complications. But if those environments are dirty, without safe water, basic toilets and a way to keep patients, beds and instruments clean, women are reluctant to seek them out for fear of exposing themselves and their babies to deadly infection.

"As governments work to help women and their babies survive childbirth, they must not neglect these basic building blocks of health
care. In coming months, there is a chance to address these desperate needs in new Sustainable Development Goals now under discussion at the UN."

Lenka Benova of the London School of Hygiene & Tropical Medicine, lead author of the companion paper, said: "Nearly 8,000 women in Tanzania die each year in or immediately after childbirth. Sepsis from infection causes at least 10% of these deaths. Nearly half of women, and disproportionately the country's poorest, are giving birth at home, and almost none of these homes have clean water and basic sanitation. But women cannot be expected to go to a health facility to deliver if it is dirty.

"This situation is not limited to Tanzania. What is frustrating is we know infection-related deaths are preventable, with the addition of clean water, basic toilets and good hygiene practice. Our hope is these findings will guide future work on UN development goals and make the provision of these services a priority, when trying to improve the health of new mothers and their babies."

**About the UN Millennium Development Goals:**

- In 2000, the United Nations set out eight Millennium Development Goals to achieve by 2015, forming a blueprint for development.
- There is progress on a goal to reduce the maternal mortality rate by three-quarters; last year, 210 mothers died out of every 100,000 live births - a decline of 45% from 1990. But the maternal mortality ratio in developing regions remains 14 times higher than in developed regions. [4]
- Newborn mortality is particularly difficult to address. Fewer children under five are dying, from 12.7 million in 1990 to 6.3 million in 2013. [5] But the proportion of newborn deaths is
increasing. In 2013 45% of deaths of under fives occurred in the first month of life, according to the WHO.

- The goal on sanitation is among the most off-track. WaterAid analysis shows Sub-Saharan Africa will not reach its goal, to halve the proportion of people without access to basic sanitation, for 150 years, at present rates of progress.
- The UN is now negotiating a new set of Sustainable Development Goals to pick up from 2015. WaterAid joins partner organisations in calling for a standalone goal on universal access to water and sanitation in homes, healthcare settings and schools; and the inclusion of water, sanitation and hygiene targets into goals for improving maternal and newborn health.

In Tanzania, WaterAid works in health clinics, schools and homes to improve access to safe water, basic sanitation and hygiene. Interviews and footage from a clinic in Morogoro region in August 2014 show how a regular water supply encouraged women to use the clinic and led to safer, cleaner births.

**More information: PLOS ONE, dx.plos.org/10.1371/journal.pone.0106738**


[2] 'A recent World Health Organization rapid assessment of WASH coverage in health facilities in 54 low-income countries found that 38% of these facilities lacked a readily available improved water source,' PLOS Medicine, 'From Joint Thinking to Joint Action' p 2, cited from WHO Landscape report on the status of water, sanitation and hygiene and environmental conditions in healthcare facilities, to be published early 2015.

[3] This article was made possible with UK Aid from the Department of
International Development as part of the SHARE Research Consortium. However the views expressed do not necessarily reflect the Department's official policies. The funder had no role in study design, data collection and analysis, decision to publish or preparation of the manuscript.

[4] 'In 2013 the average maternal mortality ratio in developed countries was just 16 per 100,000 live births compared to 230 in developing countries', PLOS Medicine, 'From Joint Thinking to Joint Action', p 4, cited from WHO et al, Trends in Maternal Mortality, 1990-2013. Also in www.un.org/millenniumgoals/maternal.shtml.


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