



## Getting it Right

### Improving maternal health through water, sanitation and hygiene

*The lives of millions of women can be saved and improved through hygienic use of safe water and sanitation before, during and immediately after childbirth*

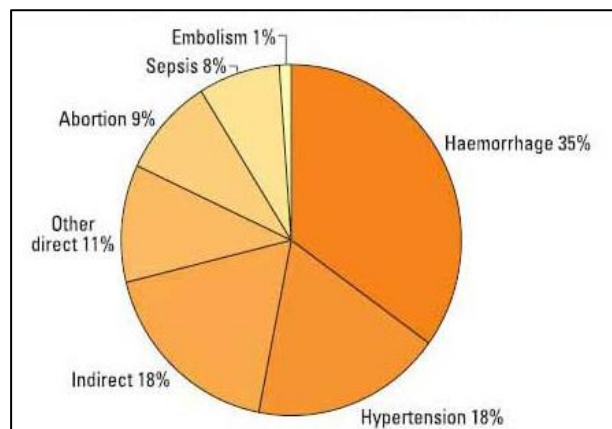


Every day 800 women die from complications during pregnancy and childbirth, and an estimated 10 to 20 million suffer from complications related to pregnancy and poor birth management.

Pregnancy and childbirth are among the leading causes of death and disability for girls and women in developing countries. Many of these deaths are preventable by practices and interventions that have been proven to be effective.

By 2015, maternal mortality has to be reduced by 75% to reach Millennium Development Goal 5. Despite a reduction in maternal mortality between 1990 and 2010 by nearly 50%, particularly the poorest countries and regions are off track. 99% of all maternal deaths occur in developing countries, especially in sub-Saharan Africa and South Asia. Countries with the worst maternal health also have the worst access to sanitation and safe drinking water.

Causes of maternal deaths, adapted from Countdown to 2015



### Link between WASH and (maternal) health

**'Getting it Right' is a literature review addressing the impact of water, sanitation and hygiene on maternal mortality. This summary includes the specific linkages that were found and recommendations from the authors.**

Improved water, sanitation and hygiene (WASH) provides significant health benefits in general, reducing risks of bacterial and viral infections, parasitic infections and other diseases such as upper respiratory infection trachoma and scabies. For example, it is estimated that the risk of diarrhoea is reduced by up to 48% from hand washing with soap.

**The impact of water, sanitation and hygiene on the health outcomes and survival of mothers, from pregnancy to birth and the weeks of recovery afterwards, is found with regard to:**

**Location of the water source** impacts maternal health as the burden of carrying water over long distances affects the necessary weight gain of pregnant women.

#### **Water quality:**

- Pregnancy causes a naturally induced immune suppression. Pregnant women are therefore at greater risk for water-related illnesses, which can cause pre-eclampsia, anaemia, and spontaneous abortion. Unsafe and contaminated water is an important threat.
- Hepatitis E, oral transmitted through faecal contamination and poor sanitation is more severe in pregnant women.
- Arsenic contamination of drinking water, which affects more than 130 million people worldwide, is linked to anaemia, putting pregnant women at greater risk of haemorrhage (profuse bleeding).

**Lack of sanitation** causes hookworm infestation, which may infect nearly 44 million pregnant women worldwide. This is related to anaemia which increases the risk of haemorrhage.

**Hygiene** during the birthing process is essential. This includes hand hygiene, as well as clean equipment and cord cutting, inserting nothing unclean into the vagina. 60% of the maternal deaths occur within 24 hours of birth, mainly caused by excess bleeding and infections. These bacterial infections are often caused by unhygienic practices during childbirth.

**Hand washing with soap** reduces tetanus, mortality and cord infection for the newborn infant and reduces the risk of infections for the mother.

- **Personal hygiene** is important to manage obstetric fistula, which may affect 2 million young women.
- **Menstrual hygiene**, including having sufficient water and clean, private toilets, reduces urinary tract and reproductive infections.

## Knowledge and practice: communities and (professional) health care

The **community involvement** (including men, older women, community leaders) regarding maternal health, health seeking behaviour and water, sanitation and hygiene are crucial. Decision-making and resource-allocation powers related to maternal health have their parallel in household WASH.

The community health approach, including **outreach programmes** and training/supervision of **community-based health staff** bring health promotion for maternal and child health, as well as for WASH together.

The lack of **trained health personnel**, including 330,000 midwives, is a challenge to the availability and quality of maternal health care, as well as the lack of **WASH in medical facilities**.

### **“Six cleans” at delivery**

*Clean hands of the attendant and mother; clean perineum; clean delivery surface under the mother; clean blade for cord cutting; clean cord tying; and clean towels to dry then wrap the baby and wrap baby and mother, promoted by the World Health Organization are strongly associated with a lower incidence of sepsis, saving lives of both mothers and babies.*



## Recommendations

### WASH sector

- Effective water service delivery, including testing water sources for basic chemical and bacterial quality.
- Reduce physical burden for pregnant women by having water sources located conveniently and promote men carrying water.
- Address anaemia in pregnant women by consistent use of hygienic latrines.
- Promotion of hand hygiene for safe delivery and the neonatal period.

### (Maternal and Newborn) Health sector

- Improve health educational/promotional aspects relating to WASH and (maternal and newborn) health. Make it participatory and action oriented.
- Ensure availability of hygienic and functional WASH facilities in formal and informal health care settings. Governments should develop standards for quality including water and sanitation facilities.
- Continuous training of clinic and hospital personnel on the importance of WASH for maternal and newborn health.
- Training of and embedding community based health providers in formal health care system, to ensure quality of services and hygienic practices.

### Education sector

- Reproductive health and menstrual hygiene education in schools.
- Maintenance of water supply, toilets and handwashing facilities in schools.

### Cross-sectoral

- Reduce compartmentalization of programmes and combine promotion of hygiene, safe water and sanitation with maternal and newborn health promotion.
- Joint policy and programming across Ministries relevant to maternal and newborn health, and WASH.
- Aligning (donor) policies, strategies and road maps for maternal and newborn health with those for WASH.

### Additional research

Studies should be done on the **impact** of WASH on maternal mortality and morbidity at household and/or community level.

**Water and sanitary surveys of health facilities**, and research on the impact of improved water and sanitation at health facilities on maternal health outcomes should be done. This should include the disposal of medical waste at facilities.

The influence of socio-cultural perspectives, identifying the **barriers for behaviour change and potential change agents within communities**, in relation to maternal health and WASH should be researched.

Assessments and pilots of the most appropriate, cost-effective and sustainable **clean delivery strategies** at community level and in rural settings are necessary.



## Conclusion

Although the importance of water, sanitation and hygiene for health in general has long been established, little research and attention goes to the specific relevance of WASH for reducing maternal mortality and morbidity. In *Getting it Right* it is indicated that from pregnancy, to birth and the immediate weeks after, the availability and hygienic use of water and sanitation has particular importance to the health of the mother as well as the newborn baby. Recommendations therefore center around greater integration and alignment of maternal health and WASH interventions by (donor) governments, Ministries, (international) institutions and NGO's.