Healthy Start: WASH and newborn health

Healthy Start is WaterAid's four-year advocacy priority (2015-2019) focused on improving the health and nutrition of newborn babies and children. We will do this by advocating for access to water, sanitation, and hygiene promotion to be integrated into health policy and delivery locally, nationally and internationally.

WASH-related newborn deaths

In 2013, 2.8 million newborns (aged 0–28 days) died globally.[1] Almost all deaths occurred in low-resourced settings and could have been prevented; 99% of newborn deaths occur in low- and middle-income countries.[2]

Deaths caused by infection – which account for nearly half of all deaths in newborns aged 7–28 days and 14% of newborns aged 0–7 days (see Overall causes of death, p.2) – are intimately linked to the environmental conditions in which babies are born. A clean environment and access to clean water are essential to reducing newborns' risk of infection (see box).

While the number of newborn deaths globally is falling,[3] it could be significantly reduced if more attention were given to creating clean birthing environments, and to the water, sanitation and good hygiene practices needed for this.

The case for WASH in newborn health

Sepsis (inflammation caused mainly by bacteria) is the leading cause of infection in newborns and is long-associated with poor hygiene at birth.[i]

Research has found that 'clean birth practices' including handwashing with soap in homes and facilities were associated with reduced all-cause, sepsis and tetanus newborn deaths.[ii]

A study in Nepal found that birth attendant and maternal handwashing protected against neonatal mortality, with 41% lower mortality among newborns exposed to both practices.[iii]

i Gordon A (1795) *A treatise on the epidemic of puerperal fever of Aberdeen*. GG&J Robinson, London; and Semmelweis I (1861) Die aetiologie, debegriff, und die prophylaxi des kindbettfiebers. Pest, Editor: Wien u Liepzig.

ii Blencowe H et al Clean birth and postnatal care practices to reduce neonatal deaths from sepsis and tetanus: a systematic review and Delphi estimation of mortality effect. *BMC Public Health*, 2011. 11 Suppl 3: p. S11.

iii Rhee V et al. Maternal and birth attendant hand washing and neonatal mortality in southern Nepal. *Arch Pediatr Adolesc Med*, 2008. 162(7): p.603-8.

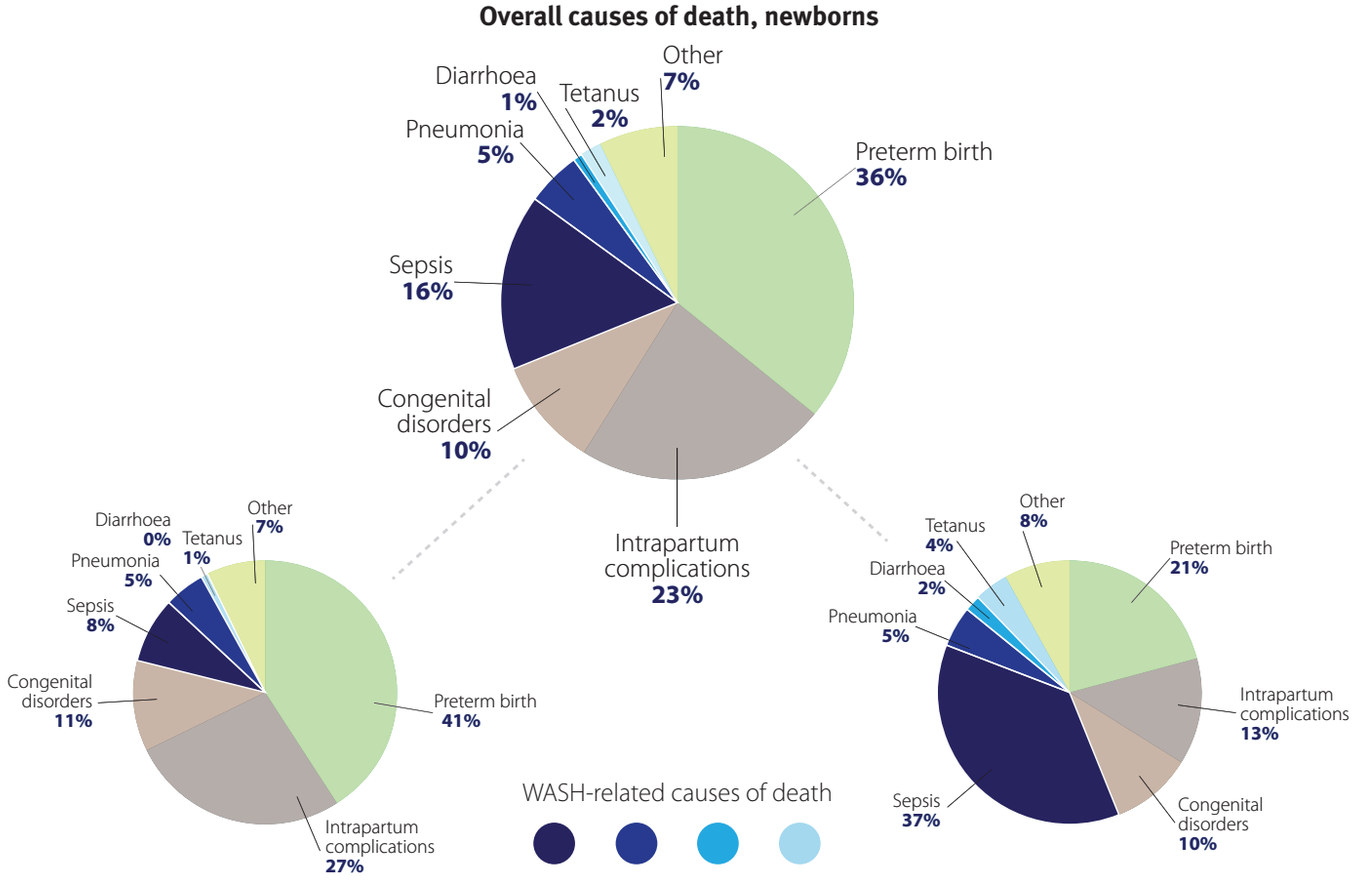
WASH to protect newborn health

In order to adequately protect newborns from risks of infection, the World Health Organization (WHO) advocates the practice of 'six cleans'[4] during delivery and post-natal care.

1. Clean hands (of birthing attendants and post-natal carers)
2. Clean perineum
3. Clean delivery surface
4. Clean umbilical cord cutting
5. Clean umbilical cord tying
6. Clean umbilical cord care

In addition to these it is important to maintain general cleanliness of newborns by washing before, and after, feeding and defecation. All of the above rely on:

- **water** – access to and use of water that is free from contamination by pathogens and chemicals. This requires convenient and consistent access to sufficient quantities of safe water.



Global causes of early (0–6 days) newborn deaths

Global causes of late (7–28 days) newborn deaths

Source: Oza S et al (2015) Neonatal cause-of-death estimates for the early and late neonatal periods for 194 countries: 2000–2013. Available at: http://www.who.int/bulletin/volumes/93/1/14-139790.pdf.

- **sanitation** – safe disposal of wastes from delivery (i.e. placental waste and medical wastes) and continued safe disposal of newborn excreta.
- **hygiene** – access to and use of adequate disinfecting materials (i.e. soap and detergents) for achieving hygienic conditions (i.e. for handwashing, body washing, cleaning surfaces and instruments, laundering sheets etc.).

WASH to protect maternal health

In addition to WASH conditions at birth, access to WASH throughout a mother's lifespan impacts newborn health. For example, stunting during a woman's childhood is a risk factor for obstructed labour in later life; maternal anaemia caused by poor nutrition and hookworm infections increases the risks associated with pregnancy and child birth; and poor maternal nutrition compromises the health of newborns. Such complications are intimately connected to WASH and contribute to newborn preterm deaths, which account for approximately 35%[5] of all newborn deaths.

WASH in birthing facilities and at home

In some low-income settings, many more women give birth at home than in healthcare facilities. A recent study[6] assessing conditions of home deliveries found that most took place without adequate water and sanitation. Findings from a World Health Organization survey (forthcoming) on WASH in healthcare facilities[7] indicate similar conditions for deliveries in healthcare settings.

In a sample of 54 low-income countries, 38% of healthcare facilities lacked a clean water supply, 19% did not have improved sanitation and 35% had no soap for handwashing. Access to clean water was lowest in Africa, with 42% of healthcare facilities without access, while access to adequate sanitation was lowest in the Americas, with 43% lacking access. It is important to note that these figures do not reflect whether water supply is constant, or even piped into the facility itself. Thus, WHO estimates that of those healthcare facilities that have some form of clean water supply, around half do not have a reliable supply.

Lack of adequate WASH in healthcare facilities extends beyond risks of infection to newborns to all patients and staff. A systematic review[8] of healthcare associated infections (HAI) found infection rates as high as 45.6% in some countries. Like newborn infections, HAI rates are closely linked to WASH.[9]

Both high risk of HAI and lack of access to adequate WASH may adversely affect patients' (including pregnant women's) willingness to seek care at healthcare facilities, and contribute to challenges in healthcare staff attendance, morale and retention.

Starting your advocacy plan

To see these demands met, it is important to plan at country level. When developing advocacy plans for newborn health, understanding the political landscape and your potential challenges is

Esther's story

Esther is a midwife at Mlali Health Centre in Tanzania.

When I arrive [at the health centre] in the morning, I sign into the register, and then I start cleaning. What I do in the morning is mop the floor and dust whilst talking with my colleagues. When we mop in the morning we use a lot of water.

This water is from the tank [and] when there is no water in the tank we buy it. The water that we fetch in the morning I use for other purposes like drinking, but also for washing the bed sheets.

Patients start to arrive at the health centre around 7.45am. We see around 10 to 15 pregnant women in a day. We see around five deliveries a week.

Water is very important during the delivery process because pre- and post-delivery the mother is advised to bathe but also after delivery the mother will be advised to wash her clothes. Also the site where the delivery has taken place is supposed to be cleaned after the delivery. When the baby is out, the baby is taken for weighing and they clean it.

When the health centre had no water we used to advise the relatives who accompany the mother for delivery to come with three jerry cans of water. The water that was brought by their relatives for delivery was not clean and safe.

The challenges that we faced during that time were the complaints from the pregnant women – they were complaining on how to get water here from their homes for delivery. That caused a drop in the number of deliveries at the health facility.

We felt bad because we didn't get safe and clean water, we only used the water because we didn't have any alternative. I didn't feel good because, as professionals, we are here to protect the community and prevent mortality. So I didn't feel good that I was here and I couldn't do anything.

The risks that the mother and the baby will encounter if there is not enough clean and safe water are that it can cause infections during the delivery, and also the baby may have septicaemia due to umbilical cord infection. But also there are diseases like eye and skin diseases which could easily be transferred to the baby and the mum.

And it was really difficult for us to work in this environment. Sometimes we felt demoralised because how can you work in such an environment in a health facility without enough water?

It is very important that we have safe and clean water at the maternal clinic.

helpful. Exploring the situation, past and present, in relation to the following points may be of interest:

- Efforts to improve maternal and newborn health outcomes in low-income countries have predominantly focused on measures for maternity care, health system strengthening and increasing demands for giving birth in healthcare settings.[11 12] Little attention has

WaterAid's recommendations

1. Every healthcare facility has clean running water, safe toilets for patients (separate for men and women, child-friendly, accessible to people with disabilities, and complete with locks and lights), functional sinks and soap for health workers and patients in all treatment and birthing rooms.
2. No new healthcare facilities are built without adequate, sustainable water and sanitation services.
3. Healthcare systems are committed to including good hygiene practice and promotion in their professional training, plans and actions. Staff and mothers are informed and empowered to practice adequate hygiene measures.
4. Every birthing centre[10] ensures basic hygiene and sterile conditions, particularly in delivery rooms and operating theatres – such as handwashing with soap, repeated cleaning and disinfection of facilities, and safe separation of human and medical waste from human contact.
5. Women giving birth away from maternity clinics must have access to clean water, a clean birthing area and a trained birth attendant who practises safe hygiene.
6. National governments ensure that water, sanitation and hygiene services (WASH) are embedded in all plans for reducing newborn deaths, Standards for Maternal and Neonatal care and in broader health systems plans that encompass any or all of these objectives. National governments ensure finances are made available and used accordingly.
7. Monitoring and assessment of progress towards universal health coverage include data on the availability of water, sanitation and hygiene services at healthcare facilities and household levels to inform strategies and planning.
8. The Sustainable Development Goals should include a dedicated goal for Water and Sanitation with ambitious targets for universal WASH access by 2030. The framework should ensure integration between WASH targets and health targets such as universal health coverage and prevention of under-five and maternal mortality.

been given to environmental conditions in healthcare facilities, including WASH.

- Healthcare facilities are often managed around the provision and improvement of diagnostic and treatment services. Preventative measures, such as adequate WASH, may be such an obvious requirement that it is insufficiently emphasised in national health standards and monitoring instruments.
- In many cases it is unclear who is responsible for WASH provision. Historically, WASH was embedded in public health measures. More recently WASH has become its own distinct sector (i.e. mandated by ministries of water, environment, public works), or mandated across various sectors. Being under the mandate of a distinct sector has resulted in a lack of holistic consideration of WASH policy and delivery, and where mandated across sectors has resulted in a lack of accountability,

under-prioritisation and under-resourcing.[13]

- International guidelines largely exclude the importance of WASH: WHO recommendations on post-natal care for mothers and newborns[14] include only one reference to WASH (on hygiene education); Standards for Maternal and Neonatal Care[15] include no recommendations on WASH, and while WHO's six essential 'cleans'[16] during childbirth imply the importance of WASH, WASH is not explicitly referenced. This has negative impacts on country planning. Only 40% of countries surveyed in WHO's assessment of WASH in healthcare facilities reported having coverage targets for water and sanitation, and less than 30% had fully implemented plans.

Targeting your advocacy

Through a clear understanding of the context in which you are working, you will most likely have success in advocacy through targeting:

- National policies and strategies for improving maternal and newborn health.
- Accountability and engagement processes, and national newborn roadmaps developed under Every Newborn Action Plan (see ***Healthy Start main target processes*** insert for more information).
- Accountability and engagement processes, and national child survival roadmaps developed under A Promise Renewed (see ***Healthy Start main target processes*** insert for more information).

1. Oza S et al (2015) *Neonatal cause-of-death estimates for the early and late neonatal periods for 194 countries: 2000–2013*. Available at: http://www.who.int/bulletin/volumes/93/1/14-139790.pdf.
2. World Health Organization and Partnership for Maternal, Newborn and Child Health (2011). See http://www.who.int/pmnch/media/press_materials/fs/fs_newborndealth_illness/en/.
3. Oza S et al (2015) op cit.
4. Pearson L, Larsson M, Fauveau V, Standley J (2007) *Childbirth care. World Health Organization: opportunities for Africa's newborns: practical data, policy and programmatic support for newborn care in Africa*. Geneva: World Health Organization.
5. Oza S et al (2015) op cit.
6. Benova L, Cumming O, Gordon B A, Magoma M, Campbell O M (2014) *Where there is no toilet: water and sanitation environments of domestic and facility births in Tanzania*. PLoS ONE, 9:e106738.
7. World Health Organization, forthcoming. *Landscape report on the status of water, sanitation, and hygiene and environmental conditions in healthcare facilities*.
8. Nejad S B et al (2011). Healthcare-associated infection in Africa: A systematic review. *Bulletin of the World Health Organization* 89.10: 757-765. http://www.who.int/bulletin/volumes/89/10/11-088179/en/.
9. Bartram J and Platt J (2010) How health professionals can leverage gains from improved water, sanitation and hygiene practices. *Perspectives in Public Health*, Vol 130 No.5.
10. Defined as any healthcare facility where women give birth.
11. Bustreo F, Say L, Koblinsky M, Pullum TW, Temmerman M et al (2013) Ending preventable maternal deaths: the time is now. *Lancet Glob Health* 1: e176–177.
12. Campbell OM, Graham W J (2006) Lancet Maternal Survival Series: Strategies for reducing maternal mortality: getting on with what works. *Lancet* 368: 1284–1299.
13. WaterAid and Action for Global Health (2014) *Making health a right for all: Universal health coverage and water, sanitation and hygiene*. Available at: http://www.wateraid.org/uk/what-we-do/our-approach/research-and-publications/view-publication?id=63af2f8f-1a91-4b7a-b88d-e31175215f57.
14. WHO (2013) *WHO recommendations for postnatal care of the mother and newborn*. Geneva: World Health Organization.
15. Pearson L, Larsson M, Fauveau V, Standley J (2007) *Childbirth care: opportunities for Africa's newborns: practical data, policy and programmatic support for newborn care in Africa*. Geneva: World Health Organization.
16. Ibid.

For more visit www wateraid.org/healthystart