Healthy Start: WASH and child health

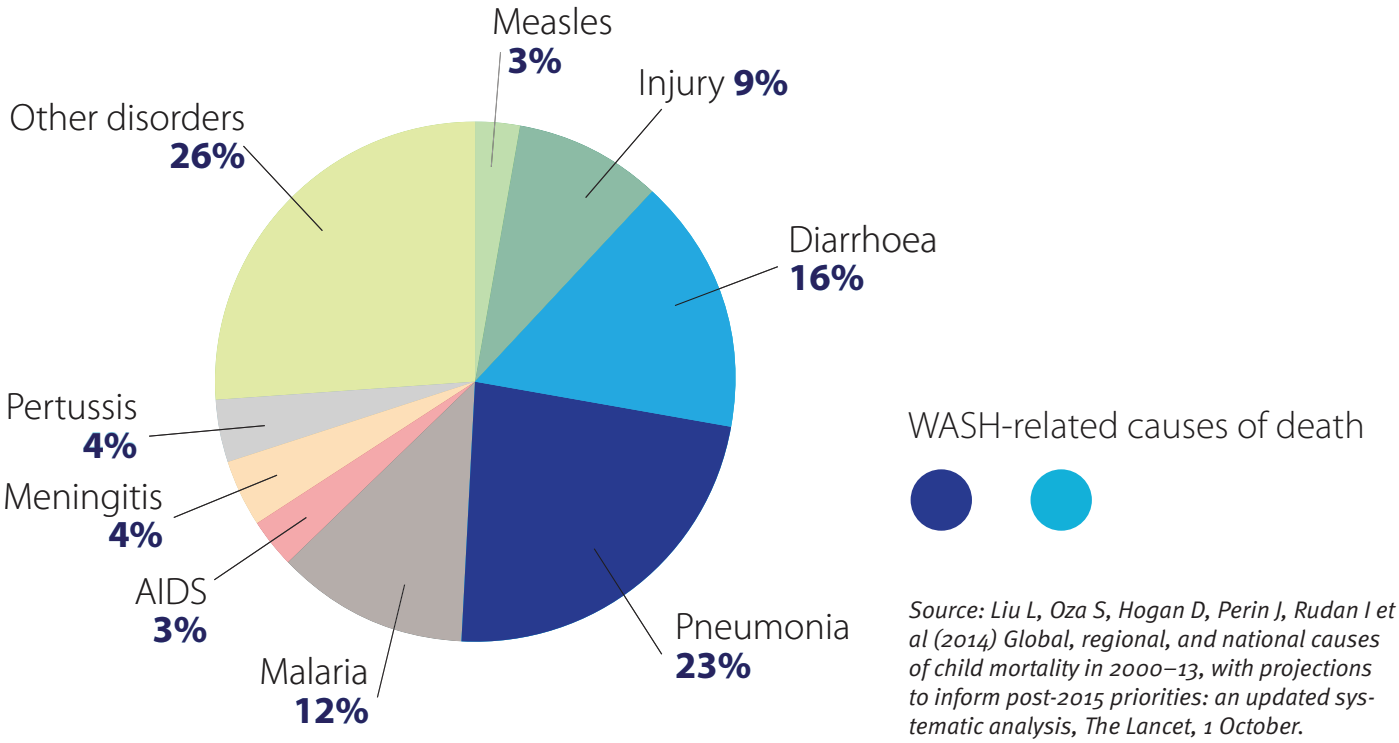
Healthy Start is WaterAid's four-year advocacy priority (2015-2019) focused on improving the health and nutrition of newborn babies and children. We will do this by advocating for access to water, sanitation, and hygiene promotion to be integrated into health policy and delivery locally, nationally and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

In 2013, 6.3 million children died before the age of five[1] – most of these deaths occurred in low-income settings and could have been prevented with simple, affordable interventions. Children in low- and middle-income regions are more than 15 times more likely to die before the age of five than children in high-income regions.[2]

WASH-related child deaths

Newborns (0–28 days) are those at greatest risk of death – almost all child deaths (44%) occur in the first 28 days of life (see ***WASH and newborn health*** insert). After the first month of life, pneumonia and diarrhoea are the leading causes of child death.

Global causes of child death (one month to five years), 2013



Source: Liu L, Oza S, Hogan D, Perin J, Rudan I et al (2014) Global, regional, and national causes of child mortality in 2000–13, with projections to inform post-2015 priorities: an updated systematic analysis, The Lancet, 1 October.

In 2013, 800,000 children aged between one month and five years died from pneumonia, an acute respiratory infection. Risk of infection is linked to poor hygiene[3, 4] – a risk that rises for malnourished children with repeat episodes of diarrhoea.[5, 6]

Diarrhoea, the second largest killer of children aged between one month and five years, claimed 558,000 lives in 2013.[7] Inadequate WASH directly accounts for 88% of cases of diarrhoea.[8]

In addition to life lost, children who are frequently ill suffer adverse effects to their physical, mental, social and emotional development. The impact can be lifelong in terms of poor health and loss of social and economic potential. While child deaths from pneumonia and diarrhoea have decreased substantially since 2000, more needs to be done to prevent this unnecessary and devastating loss of life, wellbeing and potential.

The case for WASH and child health

About 1,400 children die every day from preventable diarrhoea;[i] 9 out of 10 cases of diarrhoea are linked to inadequate water, sanitation and hygiene.[ii]

Sanitation has been estimated to lower the odds of children suffering diarrhoea by 7–17%, and under-five mortality by 5–20%.[iii]

A systematic review of the effect of handwashing with soap on acute respiratory infections such as pneumonia found an estimated 23% risk reduction.[iV] An analysis of improved hand hygiene[v] found a 21% risk reduction.

The promotion of hygiene practices has been identified as the most cost-effective intervention for preventing infection in low- and middle-income countries.[vi]

i Liu L, Oza S, Hogan D, Perin J, Rudan I et al (2014) Global, regional, and national causes of child mortality in 2000–13, with projections to inform post-2015 priorities: an updated systematic analysis, *The Lancet*, 1 October.
ii World Health Organization (2008) *Safe Water, Better Health: Costs, benefits and sustainability of interventions to protect and promote health*. Available at: http://whqlibdoc.who.int/publications/2008/9789241596435_eng.pdf.
iii Gunther I and Fink G (2010) *Water, sanitation, and children's health: Evidence from 172 DHS surveys,* World Bank Policy Research Working Paper No. 5275. Washington, DC: World Bank. http://sanitationupdates. files.wordpress.com/2010/05/ worldbank-dhs2010.pdf
iv Rabie T, Curtis V (2006) Handwashing and risk of respiratory infections: a quantitative systematic review. *Trop Med Int Health* 11(3): 258-67.
v Aiello AE, Coulborn RM, Perez V, Larson E L (2008). Effect of hand hygiene on infectious disease risk in the community setting: a meta-analysis. *American Journal of Public Health*, 98, 1372-81.
vi World Bank (2006) *Disease control priorities in developing countries* (second edition). Chapter 2, p.41. Available at http://elibrary.worldbank.org/doi/book/10.1596/978-0-8213-6179-5.

WASH for protecting child health

Diarrhoea

Most children become infected with diarrhoeal diseases by ingesting faecal particles carrying pathogens such as bacteria and viruses. The below 'F Diagram'[9] illustrates the transmission of pathogens, and how WASH interventions can stop this. Importantly, sanitation – safe separation of faeces from human contact and the environment – is a primary barrier to transmission.

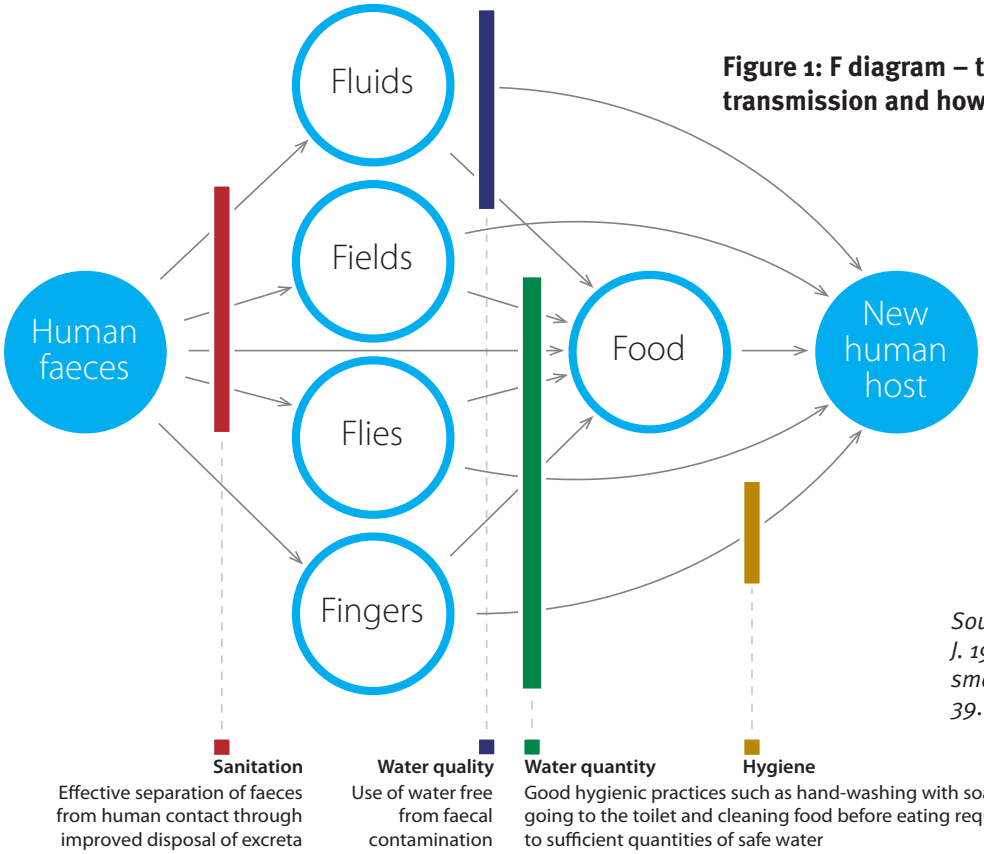


Figure 1: F diagram – the faecal-oral route of disease transmission and how WASH can prevent it

Source: Adapted from Wagner, E and Lanoix, J. 1958. Excreta disposal for rural areas and small countries. WHO Monograph Series no. 39. Geneva, World Health Organization.

Pneumonia

Pneumonia is spread through contaminated air droplets expelled by a cough or sneeze, or by infected blood.[10] Hands play a prominent role in transmitting the disease – when hands come into contact with contaminated surfaces or substances, they become disease carriers. The spread of pneumonia is highest in densely populated, unsanitary areas, such as urban slums.[11]

Hygiene is the most direct link between pneumonia and WASH, as lack of access to WASH can lead to diarrhoea which then disposes undernourished children to pneumonia. This makes handwashing and cleaning potentially contaminated surfaces important defences against pneumonia infection. Consistent access to safe water and sanitation is essential to be able to do this.

WASH for protecting child health

Worldwide, 748 million people lack access to adequate water, while 2.5 billion have no access to adequate sanitation.[12] This means that 1 in 10 children lack safe water, and 1 in 3 lack adequate sanitation. Without access to adequate WASH, these children are at a significantly increased risk of poor health.

Alida's story

Alida is a mother in Tsarahonenana village, Mahanoro, Madagascar.

Before safe water arrived in our village, we didn't even have a traditional well. When we wanted to drink water we had to dig a hole in the ground near the small dirty river behind our house. We used to live like this even though there were many people going to the toilet in the open nearby. Because this was often near where we used to dig for water, poo got into the water. It's not good for us because all we got was bad smells, dirt and dirty water diseases – like diarrhoea. Children used to get sick.

Before, when children wanted to drink, we tried to boil water. But most of the time we didn't have boiled water or rice juice ready so the children used to get water from the dirty hole and drink it behind your back when they got thirsty.

I had to face an irreversible impact from drinking dirty water. Before, I had a daughter, one-and-a-half years old. Her name was Bertacia and she had a problem with her belly. She got diarrhoea and she had to be hospitalised for a week. In the beginning, it was just a simple diarrhoea disease. But a few days later, two days to be exact, her illness progressed and led to bloody diarrhoea instead of just normal diarrhoea. The treatment was difficult and not feasible as there were too many germs in her belly. So she passed away.

I am definitely sure that the dirty water we drank caused her health problem – the diarrhoea – that finally led to her death. It was like this because we drank dirty water. It was the saddest time of my entire life. I loved her too much and it took me a while to feel any better. Even now I feel like I am responsible for her death.

Healthy Start key recommendations

1. National governments ensure that water, sanitation and hygiene services (WASH) are embedded in all plans for reducing undernutrition, acute malnutrition, preventable childhood disease and newborn deaths, and/or in broader health systems plans that encompass any or all of these objectives. National governments ensure finances are made available and used accordingly.
2. International and national health and nutrition initiatives include WASH in their policies and ensure they are financed, monitored and delivered.
3. Every healthcare facility has clean running water, safe toilets for patients (separate for men and women, with locks and lights and child-friendly and accessible to people with disabilities), functional sinks and soap for health workers and patients in all treatment and birthing rooms.
4. No new healthcare facilities are built without adequate, sustainable water and sanitation services.
5. Healthcare systems are committed to including good hygiene practice and promotion in professional training, plans and actions. Staff and patients are informed and empowered to practice adequate hygiene measures.
6. Every birthing centre[3] 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.
7. Monitoring and assessment of progress towards universal health coverage[4] includes data on the availability of water, sanitation and hygiene services at healthcare facility 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.

Starting your advocacy plan

To see our demands met it is important to plan at country level. When developing your advocacy plans for child health, understanding the political landscape and your potential challenges is helpful. Exploring the situation, past and present, in relation to the following points may be of interest:

- Healthcare service delivery approaches often fail to consider comprehensive health needs, and tend to focus on specific diseases or interventions. For example, national programmes may target diarrhoea and pneumonia in isolation, or focus on medical interventions that treat the illness, while excluding the importance of preventing disease in the first place.
- The Global Strategy for Women's and

Children's Health[13] identifies WASH as integral to protecting health. Similarly, the Integrated Global Action Plan for the Prevention and Control of Pneumonia and Diarrhoea (GAPPD)[14] in children under five highlights WASH as a key measure for preventing disease. These international guidelines and strategies may have influenced country-level policy and planning in some way, and to varying degrees of success.

- In numerous cases, it is unclear who is responsible for the provision of WASH. Historically, WASH was embedded in public health measures. More recently WASH has become subsumed into a distinct sector (i.e. mandated by a ministry of water, environment or public works) or mandated across various sectors. Being under the mandate of a distinct sector has resulted in a lack of consideration of WASH policy and delivery, while cross-sector mandates across sectors have resulted in a lack of accountability, under-prioritisation and under-resourcing for WASH.[15]

Targeting your advocacy

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

- National policies and strategies for improving child health
- Accountability and engagement processes, and national child survival roadmaps developed under A Promised Renewed (see ***Healthy Start International target processes*** insert for more information)

1. Liu L, Oza S, Hogan D, Perin J, Rudan I et al (2014) Global, regional, and national causes of child mortality in 2000–13, with projections to inform post-2015 priorities: an updated systematic analysis, *The Lancet*, 1 October.
2. WHO Reducing Mortality factsheet [online] Available at: http://www.who.int/mediacentre/factsheets/fs178/en/.
3. Aiello A E, Coulborn R M, Perez, V, Larson E L (2008) Effect of hand hygiene on infectious disease risk in the community setting: a meta-analysis. *American Journal of Public Health*, 98, 1372-81.
4. Rabie T, Curtis V (2006) Handwashing and risk of respiratory infections: a quantitative systematic review. *Trop Med Int Health* 11(3): 258-67.
5. Fischer Walker C, Rudan I, Liu L, Nair H, Theodoratou E et al (2013) Global burden of childhood pneumonia and diarrhoea. *The Lancet*. Apr 20;381(9875):1405-16. doi: 10.1016/S0140-6736(13)60222-6. Epub 2013 Apr.
6. Schlaudecker EP, Steinhoff MC, Moore SR (2011) Interactions of diarrhoea, pneumonia, and malnutrition in childhood: Recent evidence from developing countries. *Current Opinions in Infectious Disease*, vol 24, no 5, pp 496–502.
7. Liu L, Oza S, Hogan D, Perin J, Rudan I et al (2014) op cit.
8. World Health Organization (2008) *Safe Water, Better Health: Costs, benefits and sustainability of interventions to protect and promote health*. Available at: http://whqlibdoc.who.int/publications/2008/9789241596435_eng.pdf.
9. Wagner EG, Lanoix JN (1959) *Water supply for rural areas and small communities*. Geneva: World Health Organization.
10. World Health Organization (2014). Pneumonia Fact Sheet. Available at: http://www.who.int/mediacentre/factsheets/fs331/en/
11. UNICEF (2012). *Pneumonia and diarrhoea: Tackling the deadliest diseases for the world's poorest children*. Available at http://www.unicef.org.uk/Documents/Publications/UNICEF_pneumonia_diarrhoea_report.pdf?epslanguage=en
12. WHO/UNICEF Joint Monitoring Programme (JMP) Report 2014 update.
13. UNICEF (2010) *Global Strategy for Women's and Children's Health*. Available at: http://www.who.int/pmnch/topics/maternal/20100914_gswch_en.pdf
14. WHO/UNICEF (2013) *Ending preventable child deaths from pneumonia and diarrhoea by 2025: The Integrated Global Action Plan for the Prevention and Control of Pneumonia and Diarrhoea*. Available at: http://apps.who.int/iris/bitstream/10665/79200/1/9789241505239_eng.pdf?ua=1
15. 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

For more visit www wateraid.org/healthystart