A safer start in life: handwashing and child health in Kisumu, Kenya

Diarrhoea can take a terrible toll. It is the second leading cause of death in children under five years old after pneumonia killing around 525,000 children under five every year. But beyond that, repeated bouts of diarrhoea and other faecally-transmitted infections are responsible for approximately half of all cases of malnutrition in young children, leading to significant adverse effects on long-term health. Their chances in life are stunted. But at the same time, investments in handwashing are one of the most cost-effective public health interventions.

Changing engrained habits is hard. Handwashing at critical times can easily be over-looked especially when the materials are not conveniently to hand. A lack of good handwashing practices is one of the leading causes of diarrhoeal disease, and improving these practices alone can cut the incidence of those diseases by nearly half. There can be particular challenges in ensuring hand hygiene for children in their first few years.

Key messages

In this briefing paper we outline the situation of handwashing and child health in informal settlements in Kisumu, Kenya; how Practical Action and our partners are planning to address it; and what others need to do.

We are calling for:

- A clearer understanding of the barriers to better hand hygiene among children under five and their carers
- Triggering of community action to address wider environmental sanitation challenges to create a healthy future for all
- Greater recognition by all those working on early years health, of the link between diarrhoea, malnutrition and diminished life prospects; and the significance of hygiene and handwashing in breaking this cycle.
- Greater funding for hygiene programmes by both national governments and donors, meeting commitments made under SDG 6.
Life-long impacts of poor hand hygiene

It has been clear for many years that diarrhoeal disease is a leading cause of death globally, accounting for 1.3 million deaths in 2015 of which around 525,000 (nearly 40%) were among children under five (UNICEF 2016, WHO 2017a). The good news is that over the past ten years, improvements in treatment and access to water and sanitation have helped to reduce the numbers of deaths by 34% for under-fives and 20% overall (GBD Diarrhoeal Diseases collaborators, 2017).

However, the number of incidences of disease only reduced by 10% for under-fives and 6% overall. This is important because a clear link has been established between repeated bouts of diarrhoea (and other faecally-transmitted infections), and half of all cases of malnutrition as indicated by stunting (low height for age) (Prüss-Üstün, and Corvalán, 2006). This has been described as a "professional blind-spot for most of those concerned with child undernutrition" (Chambers and von Medeazza, 2013). The combined effect of faecally-transmitted infections (both those that cause diarrhoea and those that do not) is complicated, but they lead to a hindering of the ability to absorb nutrients through the gut wall. They also reduce a child's resistance to subsequent infections. All this can tragically lead to impaired physical and cognitive development: future potential cut short (Guerrant et al, 2006).

Why rates of handwashing remain low?

We are all familiar with handwashing messaging and campaigns. Notices confront us in public or work-place toilets and development agencies have been running handwashing campaigns for many years with evidence seen on school walls and other prominent places. We also know that investments in handwashing and hygiene campaigns are the most cost-effective ways of spending public health money with every $1 invested yielding an average return of $25.50 (Hutton, Haller and Bartram, 2007).

On the other hand, the (Global Analysis and Assessment of Sanitation and Drinking-water) report (WHO 2017b) shows that investments are still tiny and below what is estimated to be needed. 80% of countries say they have insufficient funding to meet national WASH (Water, Sanitation and Hygiene) targets, let alone the higher levels of service that are the focus of the Sustainable Development Goals (SDGs). Only 6 of 52 countries reporting expenditure could separate budget allocations for hygiene promotion, with amounts totalling less than 1% of the total WASH budgets.

However, the solution is not as straightforward as just teaching people the importance of handwashing and distributing posters. Improving handwashing knowledge or having facilities available is apparently not sufficient to change behaviours. In a study of 100,000 office workers across Europe in 2015, 62% of men and 40% of women admitted not washing their hands after using the toilet despite being well aware that they should.

In Kenya, a study (World Bank 2009) found key barriers to handwashing with soap at the household level including a lack of soap, or soap being reserved for other uses, and thus not kept in a convenient place to facilitate handwashing; lack of a designated place for handwashing; the distance between the toilet and a source of water; and soap being perfumed (which was felt to be good for other purposes, but not for washing hands especially before eating).

Evelyn, Kisumu

“When my daughter was six months old, she was admitted to hospital for six days. The main problem was acute diarrhoea and the doctors advised that I keep up cleanliness because they said it was the main cause. I felt bad and felt that it is good to make your surroundings clean and to wash your hands before eating anything. From that time, it has been very different, I have changed completely. I now take care of my surroundings, my level of cleanliness and hygiene has gone up and I have had no problems with my other children.”
Changing entrenched habits is difficult. A range of actions is needed to overcome barriers such as: getting the technology and infrastructure right and making it available in convenient places; using emotional stimuli to motivate people (the World Bank study in Kenya (2009) found concepts of disgust, nurture and comfort were particularly powerful); using non-verbal cues to prompt handwashing as well as written / verbal messaging. It also requires sustained and repeated messaging over time rather than one-off actions.

For example, for school children in Bangladesh, it was found that putting handwashing facilities nearer the toilet, making a clear pathway from the toilets to the handwashing station and printing foot-prints on the pathway all made a significant difference to rates of handwashing compared to just putting up reminder-posters (Dreibelbis et al, 2016).

Particular challenges faced by parents and carers may include the sheer number of times one should ideally wash hands each day while caring for one or more children under 5; the overall levels of pollution in the environment; approaches to toilet training which may see children far younger than is common in the UK using toilets, potties or sometimes open ground, while still needing supervision to ensure handwashing.

The challenge in urban informal settlements

Practical Action is focusing its WASH programme on urban communities living in informal settlements. Child health indicators for urban slum communities are generally worse than for the nation as a whole (Key stats for Kenya box).

The housing, water and sanitation situation in informal settlements does not lend itself easily to the promotion of good health or consistent handwashing practices for a number of reasons:

- The majority of residents are tenants and therefore it is the responsibility of the landlord to make provision for sanitation facilities and bathrooms. These facilities do not usually include handwashing stations.
- Water is collected and paid for from water points, and is therefore not freely available for handwashing at shared sanitation facilities within each plot.
- The quantity of water used is generally less than WHO recommended amounts per person because it has to be paid for and carried back to the house. There is therefore a pressure to not ‘waste’ water.
- Levels of poverty are high. Soap may be saved for other priority uses (such as washing clothes or cleaning dishes), and given the general pollution of the environment and risks to health, handwashing may not been seen as worthwhile.
- Cramped housing conditions mean that handwashing materials are often tucked away to keep them safe from being ‘wasted’ or misused. This means they are less conveniently available. Children are discouraged from using these materials un-supervised.

Results in Nakuru

Between 2012 and 2015 Practical Action in partnership with Umande Trust implemented a sanitation project in two informal settlements in the town of Nakuru, aiming to create the first ‘open defecation free’ zones of any urban slum in the country. The project used CLTS (Community Led Total Sanitation) methodologies adapted from rural contexts to trigger powerful emotions and mobilise communities towards collective behaviour change, transforming their sanitation situation. Handwashing messaging was an integral part of the approach. ‘Triggering’ activities and intensive follow-up were carried out by a large team of community-health volunteers supported by public health officers, each covering a designated block of houses. Results included:

- 1,603 new toilets constructed (of an estimated requirement of 2,100) and 601 facilities renovated
- 58,260 residents benefitting
- 60% of households installed simple handwashing stations in their homes
- 4 ‘villages’ (areas within the informal settlements) close to declaring themselves ‘open defecation free’ but hampered by national guidelines requiring handwashing stations with soap and water at each toilet, which is impractical in these urban contexts.

Key stats for Kenya

5,325 children under five die per year from diarrhoeal disease. (13% of post neo-natal deaths) (UNICEF 2017)

21% of children in Kisumu County are stunted due to malnutrition (County Government of Kisumu, 2015)

47% of children from a slum community in Nairobi are stunted compared to a national rate of 35% (Olack et al, 2011)

Despite high levels of awareness about the importance of handwashing with soap, only 14% of primary caregivers washed hands consistently at key moments, and only 5% consistently used soap in Kenya (World Bank, 2009).
Building on experience in Kisumu

We have transferred our experiences and lessons learned in Nakuru to new work in informal settlements in Kisumu starting in 2016 and running for five years. This work again applies CLTS methodologies, adapted to the urban context and containing strong hygiene and handwashing messages. At the same time, we have secured an additional UK Aid Match funding from the Department of International Development which puts concentrated efforts into improving handwashing practices among children 0-5 years and their carers.

It is estimated that around 48% of all incidences of diarrhoeal disease can be avoided simply through improved handwashing at critical times (Olack et al., 2011).

‘Safe Pair of Hands’ project activities will include:

- Facilitating 2,750 households with children under 5 years to choose and construct hand-washing stations at their homes. Participatory design sessions between community members, the private sector and local authority will help to refine available technologies.
- Facilitating local community-based artisans and small enterprises to manufacture and/or market local handwashing stations and soap.
- Gaining a better understanding about carers of children including early years teachers about the barriers and motivating factors to proper handwashing practices, and provide the training and encouragement needed to support change.
- Developing and sharing communications materials and support community health volunteers and public health officials in running regular, on-going public health campaigns.

In addition, the ‘Safe Pair of Hands’ project will work to improve the supply of clean water by working with the water company and the local managers of individual supply lines to rehabilitate 3 km of water pipelines and install a further 2,500 water points. The water operators will be trained to help them run their businesses better and ensure effective maintenance of their section of the network. Households will be trained on safer water storage, handling and treatment at home.

Creating a better future together

For over fifty years, Practical Action has worked on technologies challenging poverty. Technologies to improve the ease and regularity of handwashing are often simple but life-saving. The challenge of helping people to form and sustain new habits involves a wider systemic view and understanding. It takes the ability to work from the bottom-up and to observe and listen to people’s experiences and challenges. The challenges in urban slum communities are not the same as in rural villages, but our history of engagement makes us well-placed to address these.

However, the key to creating and sustaining impact, to ensure children born today have the chance to fulfil their full potential in life, is in building the capacity and working together with local partners, with support and financing from national and global stakeholders:

We are calling for:

- A clearer understanding of the barriers to better hand hygiene among children under five and their carers
- Triggering of community action to address wider environmental sanitation challenges to create a healthy future for all.
- Greater recognition by all those working on early years health, of the link between diarrhoea, malnutrition and diminished life prospects; and the significance of hygiene and handwashing in breaking this cycle.
- Greater funding for hygiene programmes by both national governments and donors, meeting commitments made under SDG 6.

By improving access to clean water, hand washing facilities and through promotion of proper handwashing, Practical Action will reduce diarrhoea, improve health and reduce life-long malnutrition for 3,000 young children aged under-5 years and work with 8,250 child carers in informal settlements of Kisumu City, Kenya.

For more information about the Safe Pair of Hands appeal visit: practicalaction.org/safepairofhands
For more information about our water and sanitation work visit: practicalaction.org/water

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