



Evidence Driven Approach to Increase Access to Hand Hygiene

With support from
Hygiene and Behaviour Change Coalition



Health and hygiene at BRAC

Since its inception, BRAC has worked tirelessly to help improve the lives of the people across Bangladesh. Be it in the form of microfinance support or through advocacy or by spreading education, BRAC has left no stones unturned to ensure awareness and access for local communities. During the COVID-19 pandemic, when access to hygiene products and services was the prime solution to fighting against it, BRAC stepped up to not only establish handwashing stations across the country but also to disseminate the hygiene behaviour change messages and generate evidence on what works best for sustainable change.

As part of the FCDO-Unilever Hygiene and Behaviour Change Coalition (HBCC), BRAC in partnership with the BRAC Institute of Governance and Development (BIGD) and Behavioural Insights Team (BIT), undertook the initiative to establish 1000 handwashing stations across 20 sub-districts in Bangladesh to systematically change the key hygiene behaviour of over 10 million people.



A picture of a BRAC Handwashing Station at Dhamrai

HBCC: Access to handwashing

We are currently delivering a large-scale initiative to reduce COVID-19 transmission.

Our aim is to improve handwashing practices, and face mask usage. We use a range of interventions informed by behavioural insights including:

- **Building 1,000 public handwashing stations (HWS):** BRAC is installing HWS at public hotspots across three districts of Bangladesh, in locations with high frequency of public footfall, such as outside schools, mosques, markets and bus terminals. The aim is to increase access to handwashing facilities given that many households lack running water within their homes.
- **Developing supporting communications materials:** We have developed and tested instructional posters to encourage thorough handwashing practices, now placed on the message boards behind the HWS sinks. We have also developed various posters and signage to direct people to HWS, and designed a novel “radio drama” miking announcement. These have been tested against in a large-scale randomised controlled trial (RCT) in early 2021.



Pictured above, BRAC HWS being used, left, and a poster directing people to the station, right.

What was the problem we needed to solve?

The basic premise of installing 1,000 HWSs across Bangladesh was that if we could provide access to free soap and water, and motivate them to wash hands, more people would wash their hands more frequently.



Existing studies in Bangladesh support this idea - access to soap and water is correlated with increased handwashing, and interventions that provide soap and water increase that access. However, we did not see specific evidence that a public handwashing station, in rural Bangladesh, that provided free water and soap, would lead to greater handwashing.

What if people were put off by the public setting? Or the stations broke down? How would these interventions be received in rural villages?

So, we set out to pilot in context.

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1. [Luby, S. P., Halder, A. K., Tronchet, C., Akhter, S., Bhuiya, A., & Johnston, R. B. \(2009\). Household characteristics associated with handwashing with soap in rural Bangladesh. *The American journal of tropical medicine and hygiene*. 81\(5\), 882-887.](#)
 2. [Ashraf, S., Nizame, F. A., Islam, M., Dutta, N. C., Yeasmin, D., Akhter, S., ... & Leontsini, E. \(2017\). Nonrandomized trial of feasibility and acceptability of strategies for promotion of soapy water as a handwashing agent in rural Bangladesh. *The American journal of tropical medicine and hygiene*. 96\(2\), 421-429.](#)

Learnings from the pilot

We ran an implementation and process evaluation (IPE) of 35 'pilot' public HWSs over four weeks, from 20 July 2020 to 27 August 2020, to inform the design of the remaining HWSs to be built.



A picture of a BRAC piloted HWS

These 35 pilot HWSs included 20 models developed by BRAC which included features such as foot-pedals for soap and water dispensing and a sturdy metal frame to increase durability of the model. The other 15 were an innovative model developed by local social enterprise, Bhumijo.

The pilot stations were installed across 20 villages in the Khulna division of Bangladesh. The BRAC models contained three basins (two for regular use, and one at a lowered height to improve access to people who may need assistance) in one station with a 500-litre water tank and a 20-litre soap-water tank.

Learnings from the pilot

The Bhumijo* models contained a single basin in each station with a water tank at the back of the station and a liquid soap jar/bottle stands on the sink. Both models were operated by foot pedals, and were fitted with posters behind their sinks that provided instructions on proper handwashing technique and on how to operate the station.

Initiatives were taken to encourage people to use the public HWSs. Signs were put up in surrounding areas to direct people to the stations. When BRAC staff were present they encouraged passersby to use the stations as well.



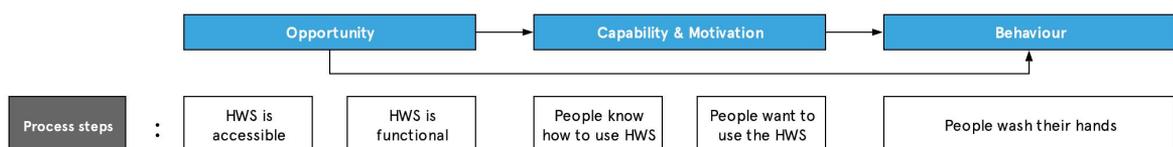
A picture of a Bhumijo piloted HWS

Why an IPE?

An IPE helps to check whether an intervention is doing what it is supposed to do. An IPE helps to identify:

- Any feasibility issues or delivery gaps,
- The influence of the local context on execution, and
- Any false assumptions underpinning the intervention.

An IPE does not measure impact on actual behaviours (and we would not be able to with 35 HWS). For this IPE our intervention was the HWSs and the associated promotion activities (signs and encouragement). Our basic theory of change is modelled below:



Picture: Our Theory of Change

*Bhumijo is a local social enterprise that specialises in making hygiene facilities with a people-centric approach. Incubated by BRAC previously, they are now part of the TRANSFORM cohort under Unilever.

The IPE checked every part of this process, with each of our research questions and outcome measures relating to a particular step.

To conduct our evaluation we collected and analysed data from multiple sources, including:

- Over 200 short phone surveys with people living around the stations;
- Over 600 hours of structured observations of how people use the stations; and,
- Peer research consisting of 25 in-depth interviews and eight focus group discussions carried out by people recruited from the villages where HWS were built.

Peer research is a participatory research method in which people with lived experience of the issues being studied take part in directing and conducting the research. Like other participatory methods, peer research ['recognises that individuals within any community being researched are themselves competent agents, capable of participating in research on a variety of levels, including as researchers'](#). We recruited peer-researchers from the community to help us conduct our research.

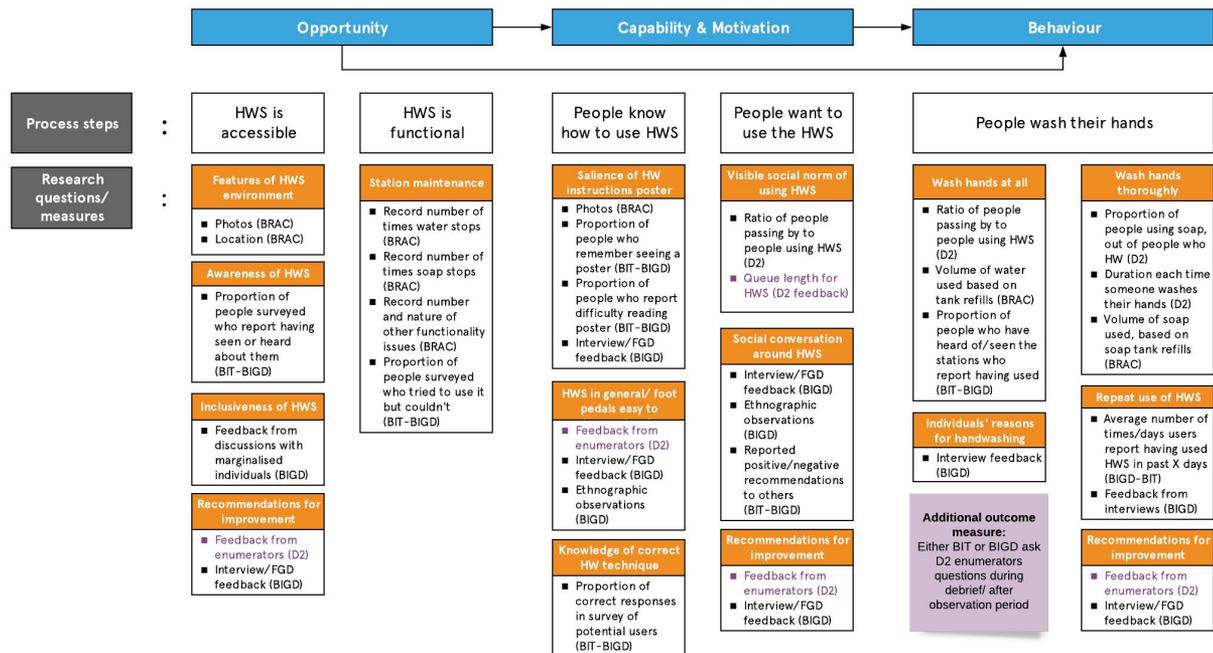
We also developed and introduced a novel way to measure handwashing: Attach mechanical “clicker counters” to the foot pedals that operated the HWS.

The most common way to measure handwashing behaviours is by asking people in surveys - the problem is, people may exaggerate how often they are washing their hands. Because we built the HWS, and they were in public spaces, we instead built our clickers into the mechanism, and counted how many times each pedal was used. This gives us a fairly objective measurement of handwashing.

3. Lushey, C. (2017). *Peer Research Methodology: Challenges and Solutions*. SAGE Publications Ltd

4. Higgins, J., Nairn, K. and Sligo, J. (2007). 'Peer research with youth.' In: Kindon, S., Pain, R. and Kesby, M. (eds.) *Participatory Action Research Approaches and Methods*. London: Routledge, Ltd., 104-111.

Combining these sources of data gave us a detailed understanding of how the HWS were working on the ground. The diagram below shows how the different data collected link to particular steps in the process of using a HWS:



Pictured above, the Process Analysis of HWSs

What did we learn?

We were encouraged by the positive response generated by the introduction of HWS. For instance:

- **The pedal operated design was highly appreciated.** In the context of COVID19, people are concerned about touching public implements with their bare hands. We received positive feedback about using foot-pedals for soap and water.

“This is a fantastic thing! We really appreciate it and it is necessary in this time”

- A community member from a pilot intervention area

- **Informal workers find this public hand washing facility useful.** People with lower income levels often will not have hand washing facilities at their workplace, so BRAC’s public HWS is a good opportunity for them to wash their hands.

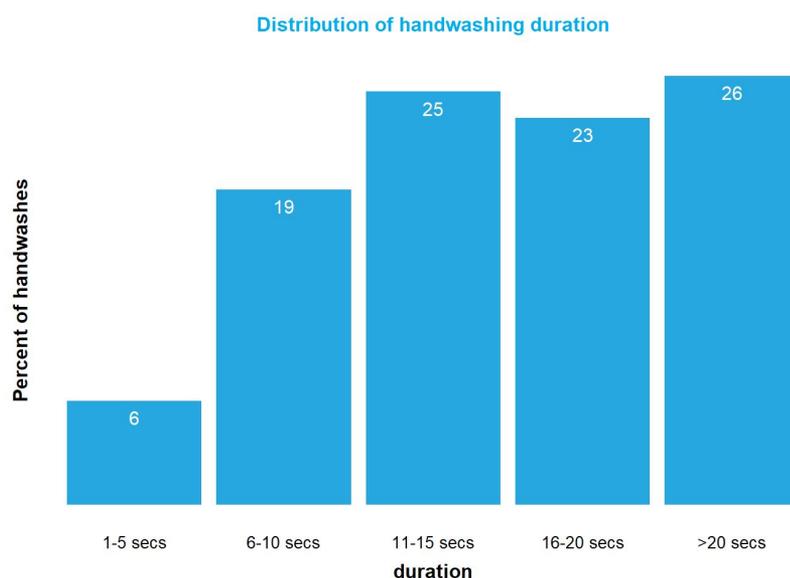
“There are poor people for whom affording soap is an extra often unnecessary cost. Now they are getting free soap and water facilities to wash hands frequently” - A community member from a pilot intervention area

- **HWS itself acts as a behavioural change communication (BCC) material.** HWS helped to diffuse good habits of hand washing with soap among some community people.

“I found the HWS interesting and useful. Inspired by it, I tried to set up a hand washing facility in front of my house by putting a plastic barrel (with tap) of water and a soap case nearby so that all of my family members as well as neighbours can wash their hands with soap conveniently” - A community member from a pilot intervention area

Overall, the quality of handwashing practises was high.

Almost all users of the stations washed their hands with soap, and 75% washed their hands for at least 11 seconds.

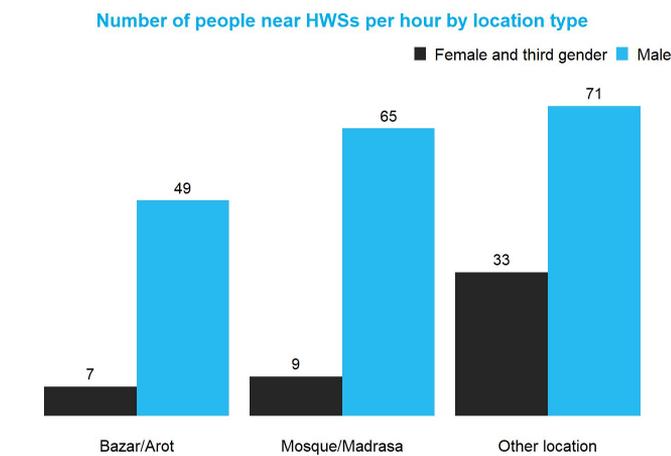


Pictured above, handwashing duration at HWSs

The HWSs worked most of the time: Out of 1963 observed handwashing attempts, water was unavailable for only eight attempts. Encouragingly, despite some reliability issues, the clicker counts we obtained were highly correlated with observed use, suggesting strong potential for use in **monitoring of the stations for the broader programme impact evaluation**.

Importantly, our evaluation allowed us to identify barriers to using the public HWSs, which we can now address before rolling out the remaining 980 stations. The key barriers we identified are outlined below.

- **The location of some of the HWSs may have been limiting usage.** Through our observations and phone surveys we identified that the specific positioning of some HWSs limited visibility and accessibility. In particular, fewer women passed by the stations, especially when they were located next to markets and mosques, as seen in the graph below.



Pictured above, number of people near HWSs per hour

For the remaining HWSs, we now know to prioritise highly visible locations that are frequented throughout the day, by women as well as men.



Pictured above, women at the HBCC handwashing station

- **Many passersby failed to notice the signs** pointing to the HWSs, particularly in busy locations such as bus stands. Furthermore, some signs were too small for people to be able to quickly understand their meaning. Moving forward, we have increased the number and size of the signs pointing to the HWSs to improve their prominence.
- **Some users were confused by the pedals**, and that they were too firm or too high for some users to press, particularly the elderly or women wearing traditional attire. Survey users also reported experiencing this problem. As a result of these findings, we have lowered the height of the pedals in the design of the remaining HWSs, and have made improvements to the posters behind the sinks explaining how to use the pedals.
- **There may be greater barriers for women.** Our peer research also identified additional barriers for women. Although women were interested in the HWSs, some felt shy and uncomfortable washing their hands in open places, especially in front of unknown men. Cultural norms play a role to induce barriers.

“I feel shy to wash hands in an open place in bazar where many people can watch me” - A woman community member from a pilot intervention area

Our latest posters specifically signal that stations are for all ages and genders, and additionally, BRAC’s partnership with HappyTap will aim to improve access to hand hygiene facilities at a household level, to provide handwashing access more inclusively.

- **Long term sustainability is not yet guaranteed.** The good news is that BRAC WASH Programme is setting up HWS committees with members from the communities to maintain the stations, and motivate others to use them. However, in our engagement with local communities throughout the IPE we found there was a lack of a sense of community ownership of the HWSs. Some village residents felt that they had no role in the decision-making process of selecting spots and in HWSs functions. There is scope for us to promote community ownership of the HWSs to ensure their long term sustainability. This is an area at which BRAC is already hard at work to improve.

Despite the positive findings, we found there was significant scope to increase station usage, with each station being used about 10 times per hour on average and minimal queues needing to be formed to use them.

As a result, we have developed a series of supporting interventions that aim to increase usage. We will be evaluating these, and the stations, as part of a full impact evaluation which started at the end of December 2020 and will continue throughout early 2021.



Pictured above, community members using the HBCC handwashing station with the nudge board

Importantly, this project shows how valuable it is to pilot interventions to test what works, even when under tight time pressure in emergency response projects.

Testing the fine details of an intervention at an early stage allows better designs to be scaled up.

Furthermore, testing is most effective when it is planned out and when measures are determined based on a sound theory of change process.



Pictured above, community members at the HBCC handwashing station

Sustaining hygiene practices

The world will eventually be rid of the pandemic but the significance of practicing proper hand hygiene goes beyond that. We are taking a holistic approach, by increasing access to handwashing facilities, by improving awareness of proper handwashing practices, and by distributing free soaps and hygiene products to communities - all in a bid to positively impact people's hand hygiene habits.

As said by Dr. Akramul Islam, Director, Water, Sanitation & Hygiene (WASH), and Tuberculosis and Malaria Control Programmes, BRAC Bangladesh, *“Hand hygiene habits is the tenet of fighting against transmissible diseases. As we look forward to seeing a world without the pandemic looming over us, BRAC is committed to ensuring that hand hygiene practices are spread across communities of the country.”*

'Evidence Driven Approach to Increase Access to Hand Hygiene'
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