



A RESOURCE GUIDE FOR RAPIDLY
DEPLOYABLE INTERVENTIONS
FOR USE AS AN INTERIM MEASURE
DURING SCHOOL REOPENINGS

USING ENVIRONMENTAL NUDGES TO IMPROVE HANDWASHING WITH SOAP AMONG SCHOOL CHILDREN

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COVID-19

HygieneHub



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DEAR READER

Several research studies and interventions have successfully used environmental nudges – small changes to the environment that alter behaviour in a predictable way but do not explicitly constrain choices – to cue and trigger handwashing with soap in schools. As schools begin reopening after COVID-19 closures, environmental nudges may be an effective means to maintain proper hand hygiene practices in schools. However, careful consideration is needed before planning and implementing a nudge-based handwashing intervention.

This resource guide provides an overview of the science behind nudge-based handwashing interventions and the evidence supporting the use of environmental nudges for handwashing in schools in low-resource settings. Resources and tools for planning and implementing nudge-based interventions in schools are also provided.

Environmental nudges should be considered one component of a larger multi-modal strategy for encouraging and sustaining handwashing with soap at critical times among school-aged children. The focus of this resource guide is on a select number of nudge-based interventions that focus on using handwashing supplies and infrastructure placement and properties to cue and trigger handwashing among school-aged children. The interventions described here should be viewed as an interim intervention strategy for school reopenings in the context of COVID-19. More detailed and comprehensive behaviour change strategies will be needed in order to ensure that handwashing behaviour is incorporated into existing school routines and translates into improved habits among school aged children.



This resource guide is intended for programme staff involved in the design and implementation of a school-based hand hygiene intervention, particularly within the context of COVID-19. The guide should be used in combination with other key resources for school reopening, including:

“10 Immediate WASH in Schools (WinS) Actions”
Available at www.susana.org: > <https://bit.ly/367F7ur>

UNESCO, UNICEF, WHO, and WFP’s “Framework for Reopening Schools”
Available at www.unicef.org: > <https://uni.cf/2yX93gi>

The Global Education Cluster’s “Safe Back to School: a Practitioner’s Guide”
Available at www.savethechildren.net: > <https://bit.ly/2zS3Uhr>

HANDWASHING WITH SOAP TO PREVENT COVID-19 TRANSMISSION

The World Health Organization (WHO) confirmed the new coronavirus disease – COVID-19 – as a pandemic on March 11th, 2020 [2]. COVID-19 is caused by the SARS-CoV-2 virus and is a respiratory disease, spread predominantly by virus-laden droplets from coughs and sneezes. When these droplets land on surfaces the virus can transfer onto other people's hands if they touch these contaminated surfaces and may infect those people if they subsequently touch their eyes, mouth or nose. Regular handwashing with soap, or disinfection with an alcohol-based hand rub, is therefore a key measure to prevent the transmission of COVID-19 [3].

Handwashing with soap has been shown to reduce the risk of many communicable diseases, especially diarrhoea [4] and respiratory illness [5] – the two leading causes of death for children under 5 years old [6, 7], as well as for school-age children [8].

Despite the well-known benefits of handwashing with soap, the practice is still challenging to sustain. Estimated global rates of handwashing with soap after using the toilet are only 19% [9]. As such, there have been numerous approaches to promoting handwashing with soap in the past.



PHOTOGRAPH 1: HANDWASHING WITH SOAP,
PHILIPPINES, © FIT FOR SCHOOL, IVAN SARENAS

IMPROVING HANDWASHING IN SCHOOLS IN THE CONTEXT OF COVID-19

Evidence suggests that children are at a lower risk of contracting COVID-19 than adults [10], however, they are still susceptible to infection and are potential transmitters of the virus, even when symptomless [11]. Schools provide the ideal environment for diseases to spread because they bring together large numbers of children in close contact. Encouraging handwashing with soap within schools is therefore key to preventing the spread of COVID-19 among children to protect their health and to slow transmission of COVID-19 in schools and communities.

Within schools, traditional handwashing promotion approaches focus on education-based messages that teach children about the importance of handwashing with soap and proper handwashing technique. However, knowledge is just one of the many possible factors that determine handwashing behaviour [12]. In fact, evidence shows that perceived health benefits and knowledge are not strong determinants of handwashing behaviour change [13–15]. Within the context of the COVID-19 pandemic, messaging around handwashing has increased significantly and most people, including children, are likely to have been exposed to a range of messages about the importance of handwashing to prevent COVID-19 from different sources.



Sustainably improving handwashing behaviour among school-aged children will require interventions that go beyond knowledge and address other determinants of handwashing behaviour.

PHOTOGRAPH 2: HANDWASHING WITH SOAP
AT A TIPPY TAP / INDONESIA, © FIT FOR SCHOOL, IVAN SARENAS

There are a number of theories and frameworks that have been used to describe the range of possible handwashing behavioural determinants. One example is the COM-B behaviour change model [1].

ACCORDING TO COM-B, THERE ARE THREE MAIN FACTORS THAT INFLUENCE AN INDIVIDUAL'S BEHAVIOUR:

CAPABILITY

- > Capability refers to the psychological and physical skills and ability to complete the behaviour. For handwashing with soap this means the appropriate knowledge about handwashing times and its role in disease prevention.

OPPORTUNITY

- > Opportunity refers to the physical opportunity to complete the behaviour and a supportive social environment. For handwashing with soap, this means having access to the appropriate infrastructure and supplies (soap or hand sanitizers) at the appropriate moments to enable handwashing behaviours.

MOTIVATION

- > Motivation refers to the larger mental processes that direct individual behaviours. For handwashing with soap, motivation can encompass a wide range of cognitive processes, including planning, emotions, and impulses.

Sustaining good handwashing practice in schools will require interventions that holistically address the determinants of handwashing behaviour. To do this, rapid formative research is needed to understand the determinants of handwashing within your specific context and to subsequently develop interventions that target these determinants.

Within the context of the COVID-19 pandemic, however, it is necessary that safeguards are in place in schools before they reopen to enable and encourage handwashing with soap at key times among school children as soon as they return. An interim handwashing intervention is therefore needed to bridge the gap between schools reopening and the development and implementation of more comprehensive intervention strategies.

COM-B SYSTEM A FRAMEWORK FOR UNDERSTANDING BEHAVIOUR

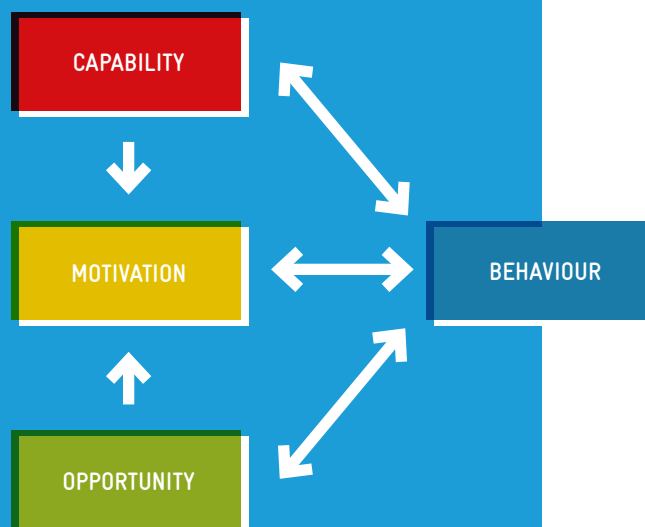


FIGURE 1: COM-B SYSTEM – A FRAMEWORK FOR UNDERSTANDING BEHAVIOUR. SOURCE: MICHIE 2011 [1]

USING ENVIRONMENTAL NUDGES TO INCREASE STUDENT HANDWASHING WITH SOAP AS AN INTERIM MEASURE IN THE CONTEXT OF COVID-19

Evidence suggests that nudges can be an effective at changing handwashing behaviour among school children. The term 'nudge' is often used for a wide range of approaches to changing behaviours. Hollands et al [16] define a nudge as:

"...interventions that involve altering the properties or placement of objects or stimuli within micro-environments with the intention of changing health-related behaviour. Such interventions are implemented within the same micro-environment as that in which the target behaviour is performed, typically require minimal conscious engagement, can in principle influence the behaviour of many people simultaneously, and are not targeted or tailored to specific individuals."

Nudges can take many forms and can be used to address multiple behavioural determinants. For the purposes of this document, we focus on environmental nudges – changes to the physical environment or objects in that environment that cue and trigger handwashing behaviours. We specifically focus on this subset of nudges for a number of reasons. Firstly, the evidence base for the use of nudges in schools to improve handwashing behaviour draws primarily on interventions that focus on changes to the physical environment. Secondly, the environmental nudges we describe in this guide require schools to provide and maintain access to handwashing infrastructure first and foremost, ensuring that opportunity for handwashing is met before or when implementing these nudges. Finally, these interventions can be readily expanded to incorporate other behaviour change approaches.

IT SHOULD BE NOTED THAT THERE ARE SOME LIMITATIONS TO THE USE OF ENVIRONMENTAL NUDGES.

ENVIRONMENTAL NUDGES...

...ARE PRIMARILY TARGETING STUDENT-LEVEL BEHAVIOURS.

- › Appropriate strategies are needed to ensure that schools comply with the larger intervention and make soap and water available, and that larger policy changes prioritize expanding water, sanitation, and hygiene programmes in schools.

...REQUIRE WATER AND SOAP.

- › Without these, a nudge-based intervention cannot improve student behaviours.

...MAY NOT ADDRESS ALL OF THE DETERMINANTS OF HANDWASHING BEHAVIOURS WITHIN A SPECIFIC CONTEXT.

- › Detailed formative research and intervention planning is needed for comprehensive strategies to improve handwashing.

THE SCIENCE BEHIND NUDGES

Knowledge and intention are poor predictors of many future behaviours [12]. This is because a very small proportion of our behaviour is the result of rational thinking. Most of our behaviour, particularly health-related behaviour, results from what behavioural economists and psychologists have referred to as 'System 1' thinking (Figure 2) – an automatic response to environmental and social cues which requires minimal conscious engagement. In contrast, 'System 2' thinking – which governs planning and rational decision making – is slow, deliberate and logical [17].

Nudges work by engaging System 1 thinking and have been widely used to influence behaviours in a number of different contexts. Classic examples of nudge-based interventions that focus on modifications to the physical environment include:

- > placing fruit and vegetables at the front of a food display [18],
- > using traffic light labels on food [19] to make healthier food choices more likely,
- > changing the width of stairs to make people more likely to use them [20] and
- > etching a fly into urinals to improve men's aim and reduce spillage when urinating [21].

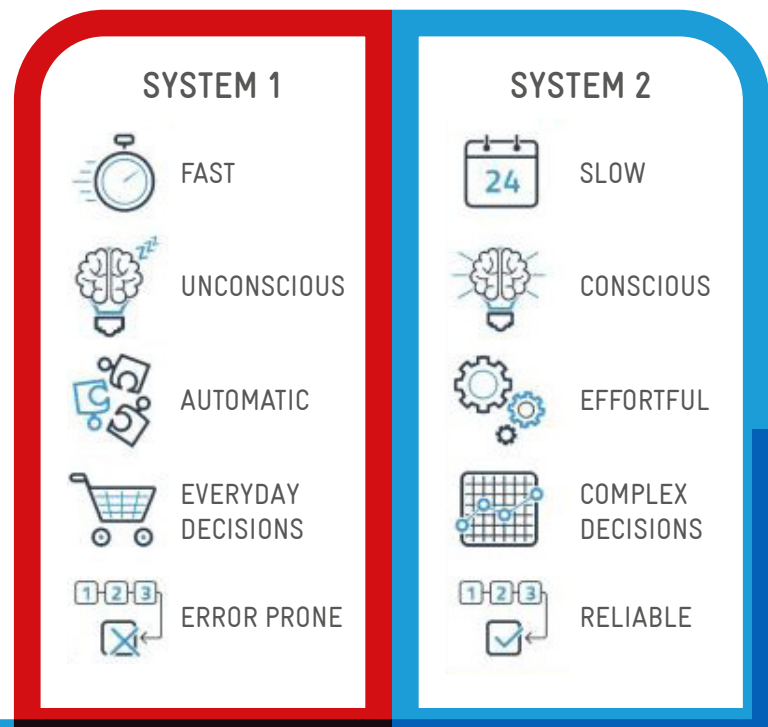


FIGURE 2: DUAL SYSTEM MODEL.
SOURCE: IB PSYCHOLOGY

NUDGES
WORK
BY ENGAGING
SYSTEM 1
THINKING

HOW CAN ENVIRONMENTAL NUDGES INFLUENCE STUDENT HANDWASHING?

There are two primary ways we can alter the physical or social environment to cue handwashing behaviour. First, nudges can alter the properties of objects or stimuli in the environment. Second, nudges can alter the placement of objects or stimuli in the environment [16].

ALTERING ENVIRONMENTAL PROPERTIES TO CUE HANDWASHING MAY INVOLVE:

IMPROVING THE FUNCTIONAL DESIGN OF OBJECTS.

> For example: Adapting handwashing facilities to be more child friendly (e.g. making taps larger and easier to turn), or installing an automatic soap dispenser.

IMPROVING THE AESTHETICS OR AMBIENCE OF THE SURROUNDING ENVIRONMENT.

> For example: Ensuring that bathrooms are always clean and do not have a bad smell.

ALTERING THE PRESENTATION OF OBJECTS.

> For example: Using brightly coloured handwashing facilities or soap dispensers to attract attention or placing mirrors above the facility to make them more appealing.

APPLYING LABELS OR ENDORSEMENT INFORMATION TO HANDWASHING FACILITIES OR POINT OF CHOICE.

> For example: Placing simple posters near a handwashing facility to prompt action.

ALTERING THE PLACEMENT OF OBJECTS OR STIMULI IN THE ENVIRONMENT TO CUE HANDWASHING MAY INVOLVE:

ALTERING THE AVAILABILITY OF OBJECTS.

> For example: Installing new handwashing facilities or soap dispensers.

ALTERING THE POSITIONING OF OBJECTS.

> For example: Relocating or installing handwashing facilities so that they are directly in a person's path when exiting the toilets, making them difficult to avoid, or positioning facilities in view of others to increase social pressure to perform handwashing (ease of access to, and visibility of, handwashing stations has been shown to be strongly associated with observed handwashing behaviour [22]).

In reality, most nudge-based handwashing interventions alter both the properties and placement of objects or stimuli in the environment to maximise behavioural outcomes. This is referred to as 'priming' or 'prompting', placing incidental cues or non-personalised information in the environment to trigger a non-conscious behavioural response.



Most nudging-based interventions in schools also use multiple individual nudges to cue and trigger handwashing with soap.

PHOTOGRAPH 3 (RIGHT): BRIGHT SOAP DISPENSER. SOURCE: DEB BLOG BY PAUL JAKWAY
PHOTOGRAPH 4 (LEFT): HANDWASHING POSTER, WWW.1ST-IN-HANDWASHING.COM
SOURCE: IB PSYCHOLOGY

THE KEY ELEMENTS OF A GOOD NUDGE

The UK Behavioural Insights Team have developed a helpful set of principles, termed the EAST principles, to guide the design of interventions using behavioural insights [23].

ACCORDING TO THE EAST PRINCIPLES NUDGE-BASED INTERVENTIONS SHOULD BE:

> EASY

MAKE THE OPTION OF HANDWASHING WITH SOAP THE DEFAULT BY REDUCING THE 'HASSLE FACTOR' SO THAT IT WILL BE MORE LIKELY TO BE ADOPTED.

- > For example: Place handwashing facilities in a user's direct path with soap in easy reach.

KEEP MESSAGES CLEAR AND SIMPLE

- > Avoid using too many words or pictures so that the main message is not lost. The desired behaviour to be nudged should be clearly understandable, triggered, and/or actionable. Even if the person does not consciously interpret the nudge, the nudge should easily translate to the desired behaviour [24].

- > For example: If using a poster to nudge, users should be able to understand from a glance that the poster is suggesting that they wash their hands and a handwashing facility should be in close proximity to enable them to do so.

> ATTRACTIVE

MAKE THE NUDGE APPEALING AND ATTRACTIVE.

- > Use bright colours so that the nudge stands out and make it attractive to look at.
- > If appropriate and feasible, design the nudge so that it is fun and performing the behaviour is rewarding.
- > For example: Placing a toy inside of a soap (see example below). Note that not all nudges have to be rewarding to be effective.

> SOCIAL

ENFORCE HANDWASHING WITH SOAP AS A SOCIAL NORM.

- > For example: Positioning handwashing facilities in visible locations and placing stickers with watchful eyes above the sink to give the feeling that others are watching.

> TIMELY

NUDGE PEOPLE WHEN THEY ARE LIKELY TO BE MOST RECEPTIVE.

- > For example: Installing a handwashing station outside of a toilet cubicle or placing a nudge at the entrance to a lunchroom.

NUDGE SHOULD ALSO BE INCLUSIVE.

- > When implementing a nudge, consider how all users will be able to interact with the nudge.
- > For example: If a mirror is installed at a handwashing station, make sure that it is not blocked from view of students who are younger (and shorter).

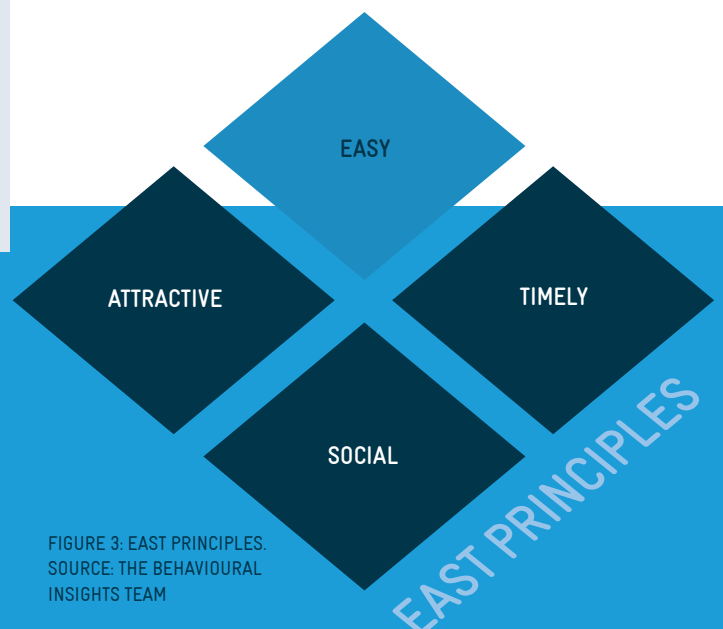


FIGURE 3: EAST PRINCIPLES. SOURCE: THE BEHAVIOURAL INSIGHTS TEAM

IMPLEMENTING HANDWASHING NUDGES IN SCHOOLS

Nudges and visual cues can trigger behaviour but only if the right tools (e.g., enabling products and hardware) are in place to enable that behaviour. For a nudge-based intervention to be viable in schools, there must be handwashing facilities and sufficient soap and water available – the Joint Monitoring Programme minimum requirement for hygiene in schools. Once there is capacity to install and maintain these facilities the focus can move to designing and implementing nudge-based interventions.

In the following section we outline the necessary structural conditions that must met before considering a nudge-based intervention and factors to consider when designing a nudge, once these structural conditions have been met.



FOR SCHOOLS TO DETERMINE IF IMPLEMENTING A NUDGE-BASED APPROACH IS APPROPRIATE AND HOW TO DESIGN AN APPROPRIATE NUDGE-BASED INTERVENTION CONSIDER THE FOLLOWING QUESTIONS IN SUCCESSION:

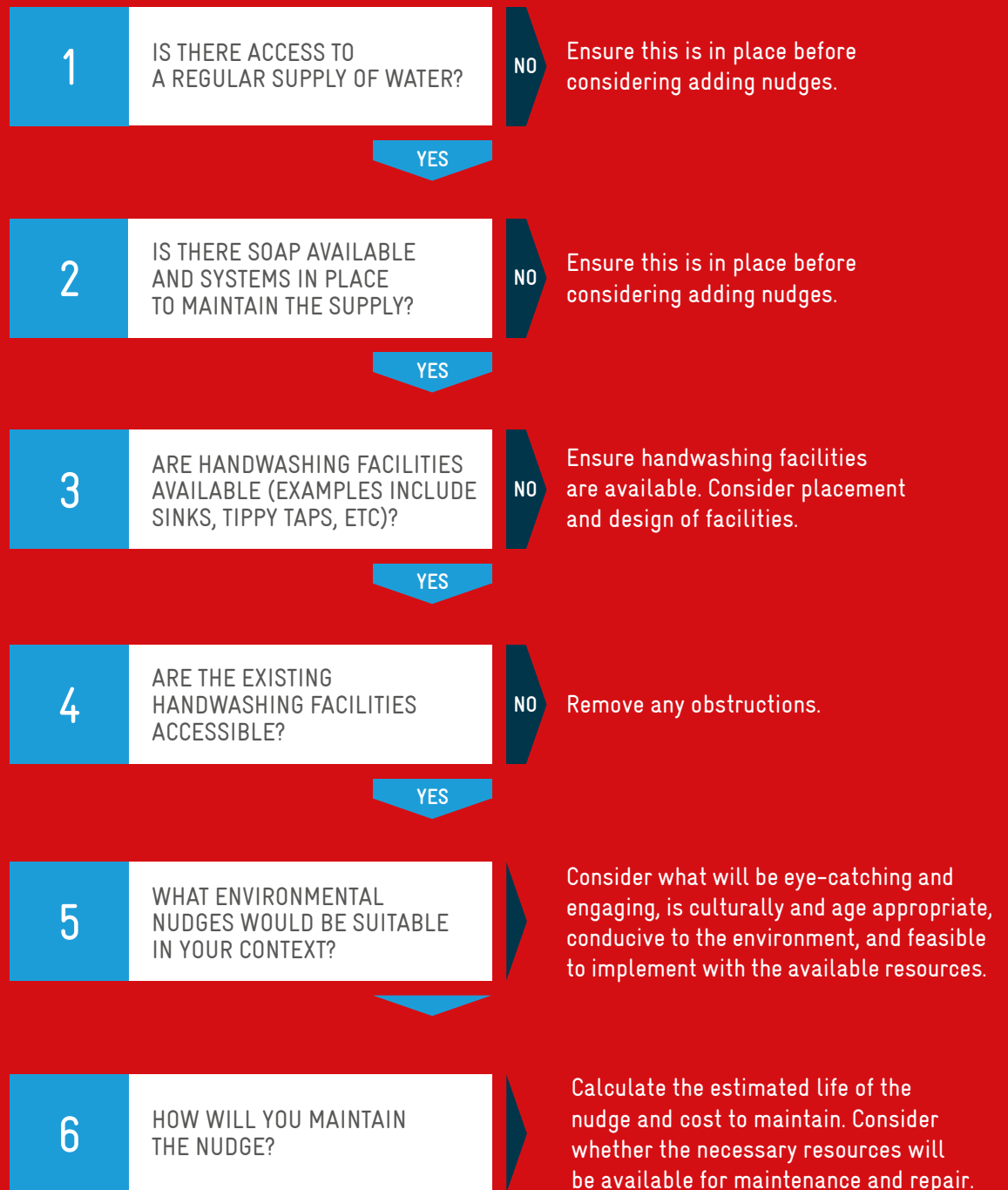


FIGURE 4: STEPS TO DEVELOPING A NUDGE-BASED HANDWASHING INTERVENTION

1

IS THERE ACCESS TO A REGULAR SUPPLY OF WATER?

If the answer is no then this must be addressed first.

ENSURE THERE IS SUFFICIENT WATER IN PLACE
FOR DRINKING AND PERSONAL HYGIENE, INCLUDING
HANDWASHING AND MENSTRUAL HYGIENE MANAGEMENT.

2

IS THERE SOAP AVAILABLE AND SYSTEMS IN PLACE TO MAINTAIN THE SUPPLY?

If the answer is no then this must be addressed first.

ENSURE THERE IS A CONSISTENT SUPPLY OF SOAP AVAILABLE FOR HANDWASHING.

ENSURE THAT THERE ARE SYSTEMS ESTABLISHED TO MONITOR AND
REPLENISH SUPPLIES AT THE SCHOOL.

3

ARE HANDWASHING FACILITIES AVAILABLE (EXAMPLES INCLUDE SINKS, TIPPY TAPS, ETC)?

Handwashing facilities must be available at the school. Placement and design of handwashing facilities can be an important way to cue and trigger handwashing and should be considered carefully, particularly when permanent structures are built.

HANDWASHING FACILITY PLACEMENT

PLACE FACILITIES NEAR OR CLOSE TO LOCATIONS WHERE HANDWASHING SHOULD OCCUR.

> This means:

- near toilet facilities for use after visiting the toilet,
- near the lunchroom for use before eating, and
- near school entrances and exits to encourage use when students arrive and leave the school grounds.



PURPOSELY POSITION THE HANDWASHING FACILITY IN CLOSE PROXIMITY TO THE ACTIVITY THAT YOU WANT TO LINK TO HANDWASHING SO THAT IT IS DIFFICULT TO AVOID.

- > For example: Place the handwashing facility directly in front of the toilet exit or next to the entrance of the lunchroom. If this is not possible, make a clear link between the two places, for example by using footpaths leading directly from the toilet to the handwashing facility.

PLACE FACILITIES IN AREAS THAT ARE VISIBLE TO OTHERS.

- > Social pressure can have a positive influence on handwashing behaviours.
- > Studies have shown that when handwashing facilities are visible to others, they are more likely to be used [22].

Handwashing facilities should never be positioned in a way that compromises a student's privacy or dignity. In many settings, handwashing facilities may be built inside of toilet stalls and making handwashing facilities visible may not be an option.

TO GUIDE THE PLACEMENT OF HANDWASHING FACILITIES ON SCHOOL GROUNDS, DRAW A MAP OF THE SCHOOL AND NOTE LOCATIONS WHERE HANDWASHING SHOULD BE PERFORMED.

In addition to locations, map how students move through school grounds with a particular focus on the paths that students take between locations, particularly locations where handwashing is targeted. For example, map how students move from toilet facilities back to their classrooms. Identify where students enter the lunchroom and place handwashing facilities accordingly.



HANDWASHING FACILITY DESIGN

MAKE HANDWASHING FACILITIES EYE-CATCHING.

- › **For example:** Consider using brightly coloured materials to build your handwashing facility or install brightly coloured soap dispensers.

MAKE HANDWASHING FACILITIES APPEALING.

- › **For example:** Add mirrors above the handwashing facility.

ENSURE THAT THE HANDWASHING FACILITY IS ACCESSIBLE TO ALL (AGE, GENDER, DISABILITY).

- › **For example:** Make handwashing stations child friendly and accessible to wheelchair users by adjusting the height and size.
- › Ensure taps are easy to open and close.

ENSURE SOAP IS EASILY ACCESSIBLE.

- › Attach a soap holder or soap dispenser to the handwashing facility that is clearly visible and easy to reach.

ENSURE THE FACILITY DESIGN CHOSEN IS AFFORDABLE AND EASY TO MAINTAIN.

- › Choose a design that is appropriate for the resources available and can be maintained once installed.

CONSIDER HOW THE FACILITY DESIGN CAN ITSELF CONTRIBUTE TO BREAKING THE TRANSMISSION CYCLE OF DISEASE.

- › Consider installing hands-free taps if possible, such as those that can be controlled with an elbow or foot, or if feasible, sensor activated taps and soap dispensers.

4

ARE THE EXISTING HANDWASHING FACILITIES ACCESSIBLE?

If the answer is no then this must be addressed.

ENSURE ANYTHING OBSTRUCTING THE HANDWASHING FACILITY IS REMOVED.

- › **For example:** Ensuring nothing is propped up against the facility and the pathway to it is clear. It may also mean placing a small foot stool so that young children can reach it.

5

WHAT ENVIRONMENTAL NUDGES WOULD BE SUITABLE IN YOUR CONTEXT?

Once both soap and water are available at the school and handwashing facilities are functioning and accessible, consider adding other environmental nudges to cue behaviours.

WHEN PLANNING AND DESIGNING YOUR ENVIRONMENTAL NUDGES CONSIDER THE FOLLOWING QUESTIONS:

WHAT TYPE OF COLOURS, MESSAGES OR OTHER ELEMENTS WOULD BE EYE-CATCHING AND ENGAGING TO YOUR USERS?

- › For example: Painted footpaths should be in a colour that clearly stands out from the colour of the surface they are painted on.

WHAT IS APPROPRIATE FOR YOUR TARGET USERS?

- › Consider what is appropriate for the age group you are targeting.
- › Consider what is, and is not, culturally acceptable in your context.

WHAT RESOURCES ARE AVAILABLE IN THE CONTEXT?

- › Consider the costs of installing and maintaining the nudge and whether these are affordable.
- › Consider if the materials required are available locally.
For example: If mirrors are not widely available and affordable in this context then this is not a good option.

IS THE ENVIRONMENT CONDUCIVE TO THE NUDGE OR CUE?

- › For example: If the ground surrounding the toilet and handwashing facility is grass then painting footprints on the floor will not be viable.
- › Also consider if there is enough space available to install the nudge.

Nudges will effectively alter placement, presentation, and properties of handwashing with soap. This means that careful consideration must be given to where handwashing facilities are located in the schools, the design of these facilities, how students interact with these facilities, and how they are complemented by simple and clear messages.

Strategies to answer these questions include observation, engaging with the target audience (children if it is in schools) and other key stakeholders (such as teachers) to develop the nudges, and later pilot testing them with the target audience to determine the nudges 'appeal and effect'. Once the complete nudge-based intervention is developed, it should be tested in a select number of schools to ensure that it is effective before rolling it out more widely. Because nudges and cues largely engage reactive and automatic thinking processes (System 1), focus groups discussions, interviews, or other introspective forms of participant engagement will only provide limited information about the effect nudges have on individual behaviour and field testing will require experimental and observational methods in order to estimate the true effect on behavioural outcomes.

ENSURE SCHOOL MANAGEMENT AND TEACHERS HAVE AT LEAST A BASIC UNDERSTANDING OF NUDGES AND THEIR ROLE IN IMPROVING HANDWASHING BEHAVIOUR TO GAIN THEIR SUPPORT DURING DESIGN, IMPLEMENTATION AND MAINTENANCE.

6

HOW WILL YOU MAINTAIN THE NUDGE?

Nudges will require maintenance, repair or reinstallation, the frequency of which will depend on the type of nudge used. For example, if footpaths are painted on the floor these may fade quickly depending on the surface on which they are painted, the type of paint used, the weather, and they may need to be repainted every few months. On the other hand, a laminated poster stuck above the sink may last a long time and require little maintenance.

BEFORE DECIDING WHETHER TO IMPLEMENT A PARTICULAR NUDGE, YOU SHOULD ALWAYS CONSIDER THE FOLLOWING:

THE ESTIMATED LIFE OF THE NUDGE

THE COST OF MAINTENANCE AND REPAIR

THE AVAILABILITY OF THE MATERIALS NECESSARY TO MAINTAIN AND REPAIR THE NUDGE

THE AVAILABILITY OF THE PEOPLE WITH THE NECESSARY SKILLS TO REPAIR THE NUDGE

To ensure nudges are well maintained, it may be necessary to adapt local monitoring tools to reflect any nudge-based interventions. For example, if footpaths are used, routine monitoring data should assess if footpaths remain visible or if paint has worn or faded over time. If nudge-based interventions focus on the placement and location of specific handwashing facilities, monitoring systems should assess if soap and facilities are available where intended.

HANDWASHING NUDGES: EXAMPLES

Nudge-based interventions are still a relatively new approach to encouraging handwashing and there are only a limited number of nudge-based interventions that have been formally evaluated. The limited evidence suggests that nudges can successfully increase handwashing. Below are examples of nudge-based handwashing interventions.

FOOTPATH NUDGE

INCLUDES:

Brightly coloured footpaths painted or stuck on to the floor/ground which lead people from the toilet to a handwashing facility. Footpaths typical consist of a coloured background with prints / stencils of child-sized feet in high contrast colours. Handprints can also be painted on the handwashing as a further cue.

EVIDENCE:

Footpath nudges were first tested in primary schools in Bangladesh [25]. Researchers found that observed handwashing with soap after using the toilet increased by 64% six weeks after installing this nudge.

In a subsequent cluster randomised trial, the impact of footpath nudges was compared against a high intensity education-based intervention. After five months, researchers found that the simple nudge-based intervention was just as effective as the high-intensity intervention but required significantly less resources [26].

The footpath nudge has been replicated in other countries, including in a refugee camp in the Democratic Republic of Congo [27]. In this setting, the same nudge led to a 20% increase in handwashing after latrine use. Similarly, a study in a public restroom in USA found that using red arrow-shaped stickers on the floor leading from the toilet to the handwashing facility can increase handwashing by up to 15% [28].

Most recently, IDinsight have tested the use of footprints, among other nudges, in a cluster randomised controlled trial across 132 schools in the Philippines, and found that handwashing increased by 17 percentage points in the intervention schools four months after implementation [29].



PHOTOGRAPH 5. FOOTPATH NUDGE, © KAMAL HOSSAIN, SAVE THE CHILDREN. SOURCE: DREIBELBIS ET AL 2016 [21].

WATCHFUL EYES

INCLUDES:

Images of eyes are placed above handwashing facilities to give the sense that others are watching and expect to see handwashing

EVIDENCE:

One study in a women's public restroom found people were 10% more likely to wash hands in the presence of eyes [30].

Another study in the hospital in Florida, USA, found that placing pictures of male eyes above hand gel dispensers led to a doubling in hand hygiene compliance by health professionals and service users [31]. Watchful eyes above the handwashing facility were also used as part of the successful IDinsight nudge-based intervention in Philippine schools [29], mentioned above.

NOTE:

Before choosing this nudge, check if using images of eyes is appropriate in your setting according to religious and cultural beliefs and traditions.



PHOTOGRAPH 6: WATCHFUL EYES, © BALAJI GOPALAN FROM CENTRE OF GRAVITY. SOURCE: BIRAN ET AL: 2014 [17].

SIMPLE POSTER PROMPTS



INCLUDES:

A simple poster positioned at the point of behaviour (i.e. near the handwashing station) to prompt action. Posters must be simple and must require only minimal cognitive processing – a person should be able to process the whole poster in one glance. Posters should be designed to serve only as a prompt rather than as an education tool. The BCD theory suggests that to change behaviour an intervention must be surprising [32].

Ways in which posters can be surprising and grab attention include using simple bold text on high contrast backgrounds; simple images that clearly convey the behaviour, for example, an image of unwashed dirty-looking hands and clean-looking washed hands; or an emotion, for example an image portraying disapproval because someone has not washed their hands.

EVIDENCE:

Poster prompts were also included as part of the successful IDinsight nudge-based intervention in Philippine schools [29], mentioned above.

PHOTOGRAPH 7: HANDWASHING POSTER. © IDINSIGHT [25]

SOAP ON A ROPE

INCLUDES:

A small piece of soap hanging on a piece of rope or cord that serves as a hall pass¹. When a student needs to use the toilet during class, the teacher (or an appointed monitor) provides the soap as a hall pass which cues children to wash their hands.

EVIDENCE:

This nudge was tested in a cluster randomised trial in 50 schools in Zambia. Researchers found that children in the intervention schools were 7 times more likely to use when washing their hands compared to children in the control schools [33].



PHOTOGRAPH 8: SOAP ON A ROPE, © PRIVATE

MIRRORS



INCLUDES:

Placing a mirror above the handwashing facility.

EVIDENCE:

Looking at oneself in the mirror is an intrinsically motivating human behaviour – people are drawn to the handwashing station to use the mirror and, as they are now at the handwashing station, they may be reminded to wash their hands.

This has been referred to as “piggybacking”, where a behaviour, in this case handwashing, “piggybacks” on another existing habitual behaviour (mirror checking) [34]. The existing habit, thus, becomes a cue to automatically perform the new behaviour.

PHOTOGRAPH 9: GROUP HANDWASHING STATION WITH MIRRORS.
© ERIC STOWE AT SPLASH INTERNATIONAL. SOURCE: WASHFUNDERS

GERM PICTURES

INCLUDES:

Placing pictures of germs or something else disgust-inducing on frequently touched surfaces, such as the toilet door handle. This can act as a cue to remind people to handwash that works by triggering an evolutionary drive to protect oneself from disease.

EVIDENCE:

This has not yet been formally evaluated.



PHOTOGRAPH 10: GERMS ON DOOR. © PROF. NIYATI MEHTA,
WWW.NUDGINGFORKIDS.COM / NIYATI@NEWMODALITY.COM LOCK.

¹⁾ A hall pass is a note or other object that gives a student permission to walk through the halls of a school unsupervised, usually for a specific purpose, like going to the bathroom or the nurse's office.

THE FOLLOWING THREE EXAMPLES ARE PRODUCT-BASED NUDGES WHICH MAY NOT BE AVAILABLE OR FEASIBLE IN ALL SETTINGS, PARTICULARLY WHERE RESOURCES ARE LIMITED.

TOY SOAPS



INCLUDES:

Colourful soaps with toys embedded inside of them to capture children's attention both cueing and incentivising them to wash their hands with the soap to reach the toy inside.

EVIDENCE:

Toy soaps were tested in a small controlled study in an internally displaced persons camp in Iraq and found that children who received the toy soaps were 4 times more likely than children who received plain soap to wash their hands with soap at key occasions [35].

Soaps with toys inside were also tested in a controlled study among children in a community in South Africa. Children who received the toys soaps were significantly more likely to use soap when washing their hands [36].

PHOTOGRAPH 11: SURPRISE SOAPS, © FIELD READY.
SOURCE: WATSON ET AL, 2018 [32].

SOAP PENS

INCLUDES:

Soap pens are markable soap for hands that are often commercially manufactured and sold. These were originally developed as bath toys for children. Children can draw on their dry hands with the soap pen and then wash off the drawing with water.

EVIDENCE:

This has not yet been formally evaluated.



PHOTOGRAPH 12: SOAPEN, © TEAM SOAPEN. SOURCE: KICKSTARTER.

AUTOMATIC TOWEL DISPENSER

INCLUDES:

Installing a paper dispenser that automatically presents a towel to users when they are at the handwashing station and this acts as a reminder for people to wash their hands with soap.

EVIDENCE:

This nudge was tested in a public restroom. Soap use was 13% higher when the dispenser presented the towel without user activation than when activation was required (37).



PHOTOGRAPH 13: enMOTION AUTOMATED TOUCHLESS PAPER TOWEL DISPENSER.
© NICK GRAY, FLICKR. TAKEN ON JANUARY 2, 2007

DEVELOPING A MORE COMPREHENSIVE HYGIENE BEHAVIOUR CHANGE STRATEGY

As mentioned above, implementing environmental nudges in schools can improve handwashing behaviour and are a positive action schools can take even before they have reopened, however, they should only be considered as one component of a larger multi-modal strategy for encouraging and sustaining handwashing with soap in schools.

A more comprehensive approach to improving handwashing behaviours in schools may be necessary to plan and design once schools have reopened and adequate formative research can be conducted safely and appropriately. In particular, comprehensive multi-modal strategies are needed that address the key determinants of handwashing with soap within the local context. For example:

A MORE COMPREHENSIVE APPROACH TO HYGIENE BEHAVIOUR CHANGE IN SCHOOLS SHOULD ENSURE THAT SYSTEMS ARE ALSO IN PLACE TO ENCOURAGE COMPLIANCE AT THE SCHOOL LEVEL (E.G. HEADTEACHERS, SCHOOL GOVERNORS).

For example:

- › Ensuring facilities and nudges are monitored and properly maintained.
- › School budgets include line-items for maintaining school hygiene infrastructure.
- › Monitoring systems are in place from the national to the local level.

ENVIRONMENTAL NUDGES MAY NOT ADDRESS ALL OF THE DETERMINANTS OF HANDWASHING BEHAVIOURS WITHIN A SPECIFIC CONTEXT.

Formative research is needed to understand which determinants are important in your setting followed by careful intervention planning to develop a more comprehensive strategy to improve handwashing. For example, if students do not know that washing their hands with soap is a desirable behaviour or how to wash their hands properly, then an intervention focused on environmental nudges alone will not be effective.

A more comprehensive approach might include:

- › An awareness campaign about new handwashing rules related to COVID-19, for example, distributing posters at school and to parents about key handwashing times.
- › Practical demonstrations in the classroom of how to effectively wash hands and aids to remember this such as singing the “Happy Birthday” song twice whilst washing.
- › Using role models to promote handwashing, for example, electing several hand hygiene ambassadors in each class to reinforce the social norm of practicing good hand hygiene.

Note that these are all just examples of components that may make up a more comprehensive approach. Schools contexts may vary within and between countries and at a minimum a rapid assessment should always be done to determine the approaches best suited for your context.

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