



hand washing

Enhanced hand hygiene is at the core of public health measures underpinning the reopening of early child care services across the UK. Settings are now expected to ensure that there are increased hand washing facilities available, allowing children and practitioners to access them more frequently throughout the day.

Article written by Liz Edwards



What is effective hand washing?

We have heard a lot about this in the media over the last year and we are all now aware that washing our hands with soap and water for at least 20 seconds at appropriate and regular times throughout the day will help prevent transmission of a variety of infectious diseases.

Soap vs hand sanitiser

Using soap and water has now been highlighted as the most effective and practical way of cleansing your hands. Soap contains a fat-like material that dissolves parts of the SARS-CoV-2 virus making it inactive. In tests it has been shown that you need a lot of antibacterial gel to be as effective as soap and water.

The effectiveness of gel is also decreased when hands are dirty, eg covered in mud.

***Non-statutory guidance for early learning and childcare (ELC) providers states only use antibacterial hand gel for children when soap and water is unavailable. Antibacterial hand gel should not be used by children under 12 months.*



Dry hands thoroughly

A system that does not allow cross contamination is required - no shared towels.

Disposable paper towels or kitchen roll are the obvious choice to be used as each piece is thrown away after use - but this does bring with it environmental considerations. Many settings have designed systems using small towels (hand flannels) that are used once and put in a bin to be washed and reused. Others have devised named hand towels and peg systems that are re-used throughout the day by the same individual and washed at the end of the day. This is harder to achieve with larger numbers.

Practitioner comment:

"As practitioners we all know that getting 30 children to wash their hands thoroughly requires expert management and takes time! This can be more challenging if you only have one sink, an empty soap dispenser and somebody has just flooded the toilets again!"

Water use

Use clean, running, tepid water. Running water is important as it washes any contamination off the hands. Do not use a communal bowl. Ideally the water should be tepid (lukewarm). Although water temperature doesn't affect the effectiveness of hand washing, it will make the experience more comfortable, which means that the individual is more likely to wash their hands for the required length of time than if the water is too cold or too hot.

Provide height-appropriate hand washing stations and consider the type of tap being used for age and ability. Explore ways to make hand hygiene more fun - use visual cues, hang photographs up, and sing songs, ideally ones that the children have created themselves for increased ownership.

Gradually incorporate hand washing into daily routines and always supervise children washing their hands and provide assistance if required.

When to hand wash

For hand washing to be effective practitioners need to create and apply protocols for their own settings. Hand washing should be encouraged on arrival, after toileting, before and after eating, and when moving between different areas.

Intuitive hand hygiene

Ideally children need to hand wash independently, the systems and equipment used need to support this.



Q: How are settings supposed to create increased hand washing facilities?

A: The most straightforward way to do this is to increase the number of hand washing stations available. This will reduce the demand at each station and speed up the process significantly.

Q: How do we install more handwashing stations when plumbing for hand washing facilities indoors can be expensive, and where do you put them when space is a premium?

A: Your outdoor space could offer the options you need to increase the number of hand washing stations available.



Hand washing outdoors

There are many advantages of adding hand washing stations to your outdoor space but also a couple of significant barriers and issues. It's important to consider what sort of hand washing system will work best for your setting.

Why outdoors?

Settings are being encouraged to maximise the use of their outdoor space with hand wash stations outside because:

- Children & practitioners can clean their hands without having to head indoors to a confined space
- Portable stations can be placed & moved wherever you like and do not need to be plumbed in, making them a versatile & cheaper option
- There are not the same concerns about spillages & splashes outdoors that you may have indoors
- Sunlight or, more specifically, solar UV radiation (UV) acts as a natural virucide which means there is a natural sanitation of surfaces occurring when in direct sunlight, helping to reduce chances of virus spreading

What are the potential issues?

- A non-plumbed system needs filling

& emptying - with lower capacity units this could become tiresome and a chore that pulls practitioners away from supporting rich play to frequent visits to empty waste water

- The weather - a successful system will be required to protect hand towels from the rain. If it is cold then it's even more important to dry hands well to prevent chills & chapping. In temperatures below freezing, units with water in them will need to be protected

- Cleaning & maintenance - an outdoor wash station may well require a different cleaning regimen to an indoor sink & a cover may be required to prevent bird droppings etc

Choosing a hand washing system - factors to consider:

Effectiveness

Ask: Does it work? Will it support your setting in the correct way? Watch out for cheap systems that have not been built or engineered robustly/ drips or leaks that mean there won't be enough water available when needed.

Ease of use

Ask: Is the station the correct height for the user? Is the water outlet in a comfortable place? If it is too high water will run past the elbows soaking

clothing, and if it is too low then it will be awkward to use. Ensure the child doesn't have to reach excessively to rinse their hands.

Water flow and taps

Using systems that are not connected to the mains requires a balance between water conservation & having enough flow to wash hands effectively. Be aware that a tap without an auto close could be left on, allowing all the water to run out. A foot pump is ideal as there is no need for hands to touch taps. Some foot pumps require a certain amount of strength. **Ask:** Can younger children use a foot pump system independently?

▼ *Flappy or spring tab taps are good as you press them and they release a set amount of water.*



▼ *A SaveAqua tap releases water when you press up with the back of your hand - water flows over the tap onto your hands.*



Capacity

One of the main considerations if you are increasing your hand washing provision and using a non mains connected system is capacity. A larger capacity system needs to be filled up & emptied much less often than a smaller capacity tank.

Hand wash capacity comparison

Different systems release different amounts of water. This chart compares different capacity systems based on a 200ml 10-second wash. If the system releases more water on each wash the number of washes will decrease, and vice versa.

Capacity	Number of 200ml 10 second washes
1 ltr	5
3 ltr	15
10 ltr	50
35 ltr	175
50 ltr	250

Waste water disposal

Ask: How is the waste water removed if it flows to a tank? The larger the tank capacity the less often it will need to be emptied. But if the tank is too large it can be heavy to transport & empty.

Health & hygiene

Ask: What is the system made out of? Some materials are better for supporting virus reduction, such as non absorbent surfaces like stainless steel or plastic.

Ask: Is it easy to clean and are parts removable & wipeable? Does it have a cover to help it stay clean when not in use?

Cost

Your budget will dictate what systems you can purchase, but you could surprise yourself with a little ingenuity. If you are feeling creative you could create a cheap system that works really well for your setting using recycled items.

Do it Yourself

A well-known system that is used all over the world is the Tippy tap - there are plenty of 'how to' videos on the internet to make your own.

A new one-foot-operated system we've seen on YouTube is called a **Tubey tap by Chris Ensor** and

Richard Irvine has kindly shared instructions on how to make a foot operated soap dispenser (*you'll find them on p20*).

Juliet Robertson from creativestartlearning.co.uk has a useful [blog exploring hand hygiene outdoors](#) particularly if you are heading offsite. In it she highlights an inexpensive washing line system using a spa tap. The children move along the line from left to right. (*see photo below*)

Creating a system like this with the help of the children involved will increase the likelihood of the system being used effectively and independently by them.

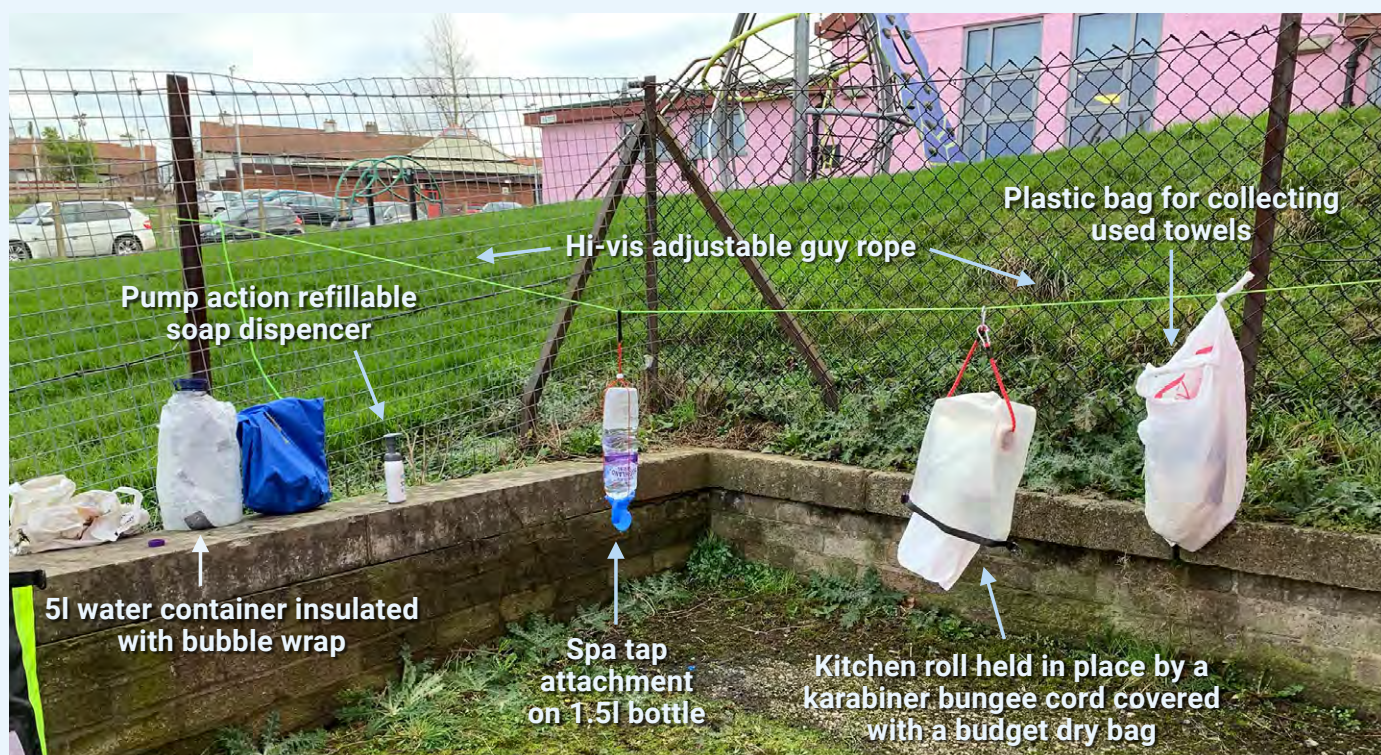
Space

The space you have may dictate what systems you can use. **Ask:** How far away is your water source for filling tanks and emptying waste?

What is the ground like - will it get muddy if water is spilt frequently on it?

Longevity

The system needs to be robust enough to handle frequent hand washing. If it is cheap or not designed for purpose you may find you are replacing the system frequently.





What hand washing systems are available to buy?

The number of ideas, products & systems for hand washing are increasing all the time, with many options for different budgets. Most of these options are available from Muddy Faces.

Portable mains free systems - low capacity

There are some clever devices, specifically designed to enable effective hand washing where there is limited water supply. These work really well if you are travelling or have a small group.



▲ The Spa Tap Portable Tap (capacity - varies)

A fab ultra-light (just 82gms) invention made from highest quality UV-stable, food & water-safe flexible silicone. It can be squashed down very small and attached to different sizes of bottles, transforming them into a flow-controllable water-saving tap. Hang it on a tree or fence with the hook and loop strap for quick, easy hand washing. It can even be attached to a big watercooler bottle to give a large capacity option.

Disadvantages: It fits some bottles better than others. This juice bottle (above) fitted perfectly but a 2ltr pop bottle with a wide top didn't fit as well, letting air in and making it drip. You need to touch the plug to switch the tap on and off.



▲ The SaveAqua Self Closing Tap (capacity - varies)

A really nifty gadget made from high quality durable materials, which can be used in various ways:

- A.** Use the internal cutting device to cut a perfect hole in the lid of a bottle then attach the tap to the lid. Fill the bottle, attach the lid and tap, turn upside down and you have an instant hand washer.
- B.** Attach it to a solar shower for a warm wash.
- C.** Simply use the cutter to cut a hole in a container and hang it up. ▼



The SaveAqua Tap works by pushing up with the back of your hand, releasing the water over the tap, rinsing any contaminants away. When you remove your hand the tap

drops down to block the flow and the water stops. It's easy to use and very effective. We've seen devices like this before but they were poorly made and dripped, but the SaveAqua Tap is well-engineered and we had no drips at all in our testing. It was designed to save water and releases the ideal amount to wash your hands without wasting water.

Disadvantages: It has a cutting device in it under a screw top. But if you do not want or require the cutting device it can be removed with pliers and/or the cap glued shut.



▲ KiddiWash Xtra (capacity 8ltrs)

Portable, robust and easy to clean, this is specifically-designed to provide an effective and fun hand wash. It's entirely self-contained: just fill with warm water and the KiddiWash Xtra will keep the water warm for hours. The lightweight flippi-tap is perfect for little fingers, enabling children to activate a steady spray of warm water that's the perfect temperature for hand washing every time – both indoors and out!

Disadvantages: It's capacity is on the lower range, requiring it to be refilled and emptied more often than larger units.



Non mains connected systems - mid capacity

There are a number of different items in this mid capacity (15-30ltr) range, most of which are not designed specifically for hand washing but do a good job. Separate waste collection will need to be organised as well as a way to minimise cross contamination from taps.



▲ Jerry Cans

A jerry can with a tap is a very cheap option. You can usually increase and decrease the flow. A good quality jerry can is robust and designed to be transported around.

Disadvantages: The taps can be a bit stiff and tricky to use for independent hand washing, plus you have to touch the tap to turn it on and off.



▲ Solar Showers

Solar showers are flexible and roll up small. They can be 20-40ltr in capacity and are designed to add some warmth to the water if the sun is shining.

They can be hung up at a convenient height. On some makes the shower pipe can be cut down to turn it into a hand wash. The tap allows flow to be increased or decreased.

Different brands have different tap mechanisms, some better than others. We have found that Mil-Tec camp showers have an easy-to-use tap and a SaveAqua Tap can be added to

create a touch-free system if you wish.

Disadvantages: They are designed to warm water but they can struggle in the UK weather. On the other end of the scale, if it is very sunny the water can get very hot, so always check temperature before use.

◀ Thermal Water Dispensers

Different brands range significantly in price. Of the better quality brands, Igloo dispensers are one of the cheaper ones on the market. This yellow range is available in 11, 19 & 38ltrs capacities. They are designed for keeping drinking water cool but some settings use them as hand washing systems, using the thermal capacity to keep water warm. The corded lid prevents heat loss and maintains hygiene. The handles are reinforced to provide extra strength.

Disadvantages: The push button tap is quite tricky to use for hand washing but you can unscrew it and swap the tap it comes with for a different flip-style tap that would work better. Larger tanks are heavy and need to be placed on a very stable surface.



Non mains connected systems - large capacity

These systems have been designed and created by Muddy Faces, specifically for educational and outdoor settings.

The Gravity 35Ltr system

Holds a lot of water, allowing for many hand washes - approx 170 per refill - and the waste drains away into handy-sized jerry cans making overall daily maintenance less frequent and much easier than units with smaller capacities.

The Gravity 35ltr system utilises the easy to use SaveAqua Tap - a simple yet clever system that allows water to be released with a touch from the back of a hand, reducing cross contamination.

Disadvantages: The tank is heavy when filled and needs to be positioned on a very stable surface

The Pump 50l system

Has a massive tank that requires no connection to the mains and the easy-use foot pump system allows you to wash your hands with no hand contact and therefore little opportunity for cross contamination. The unique pump system has been designed to make the flow of the water just right for hand washing and reduces unnecessary water consumption. The unique pump design requires only light foot pressure making it ideal for children and people with limited physical strength.

Our systems can be placed on a sturdy table or a wall. A fence/tree pump system is great if space is tight but may only be suitable for older children who can use the foot pump.



Gravity 35l system



Pump 50l system



Mains connected systems

The simplest of these options is a hose over a drain, very easy to install and even better if you can run warm water through the hose and attach a SaveAqua Tap.

A permanent outdoor sink plumbed to the mains is at the upper end of the

budget scale but is a very effective solution, especially if warm water can also be plumbed in and suitable drainage built in as well. Having a sink installed means you can have it built at the correct height for children and you can choose a tap system that they can use independently.

A mains connected mobile unit would be another option at the higher

end of the budget scale. The main problem with these is that they are adult height and not effective to use with small children. They also require mains and drainage, and some also require mains electricity, which opens up more complications. If looking at these options, make sure the units are suitable for the outdoors.



Newly plumbed in sinks at Quackers in York

Environmental considerations

Increased use of water and its safe disposal, and increased use of disposables such as PPE and hand towels.

Drains

If you plan to run your outdoor handwashing directly into the drain you need to check what type of drain it is first. Drains are underground pipes that take water away from your buildings, they can be combined or separate.

• Combined

A single pipe collecting your wastewater and rainwater runoff. Properties built before 1970 are likely to have a combined drains system.

• Separate drains for waste and rainwater

Rainwater is untreated. It's also described as 'storm water'. The surface water drain takes it directly to rivers and beaches. The drain for **rainwater** collects rainwater from roofs, driveways and roads.

The **wastewater** drain takes foul water to the local wastewater treatment works. Wastewater comes from toilets, sinks, baths and showers, washing machines, dishwashers, etc. Most properties built since 1970 have separate drains for rainwater and wastewater.

IMPORTANT! If you run detergents or soap into the rainwater drain, you could be causing water pollution.



For more on hand washing, including videos, links, guides & more, go to the **Outdoor Hub**