

## Podcast: Handwashing

Hello and welcome, this is XXX from the Difaem Health Team. After having completed our series about vaccinations, we will now start a new series on a very important topic: infection prevention and control, in short IPC. This topic has been quite relevant throughout the Corona pandemic. Even though Corona currently seems to be a tamed threat, there are many other diseases, which endanger our health. We can prevent the spread of Cholera, Ebola and many other infectious diseases by effective IPC measures. We can see the importance of IPC in the current outbreaks of Cholera in Malawi, of Marburg in Tanzania and Equatorial Guinea and a mysterious virus in Burundi, which might also be the Marburg virus.

Our new series will start with a podcast on hand washing. We celebrate World Hand Hygiene Day on the 5<sup>th</sup> of May this year. Therefore, a podcast on handwashing seems to be a good start into the theme of IPC. Today I am accompanied by xxx.

XXX, can you tell us something new about hand hygiene that we did not know before?

Hello to everyone. Thanks for this question. I will try my best to give you some new information on a topic that is very familiar to everyone. Hand hygiene is a simple process of washing your hands with soap and water or using hand sanitizers to remove dirt, germs, and other harmful particles from your skin. But how does it work, and why is it so effective in preventing the spread of diseases?

The science behind handwashing lies in the chemical and physical properties of soap and water. Soap consists of molecules that have two ends: one end is hydrophilic, which means it attracts water. The other end is hydrophobic, which means it repels water. When soap is applied to the skin, the hydrophilic end of the molecules attaches to the water molecules on the skin, while the hydrophobic end attaches to dirt, oil and germs on the skin.

As we rub our hands while washing them, the soap molecules dissolve dirt and germs in the water. When we rinse our hands, everything is washed away, leaving our hands clean and free from harmful particles.

Hand sanitizers work on a similar principle but use alcohol-based solutions instead of soap and water to kill germs on our skin. The alcohol in hand sanitizers disrupts the outer membranes of the viruses and bacteria, and renders them inactive and unable to cause infections.

You taught me things I did not know about handwashing. I did not know before now how soap works from a chemical point of view. Our listeners are certainly all experts on handwashing. They might even have prepared some related activities for the 5th of May in their health

facilities, in order to celebrate the World Hand Washing Day. However, studies show that simple handwashing remains a problem.

Yes, unfortunately. Lack of knowledge and awareness are usually not the problem of health workers. One of the reasons why health workers do not wash hands may be rooted in time constraints. People may feel that they do not have enough time to wash their hands properly, especially in busy healthcare settings or in workplaces with high productivity demands. In addition, lack of motivation and focusing on other more pressing issues might be other reasons for not spending time on handwashing.

Studies published on the American health care settings show that nurses and midwives comply better with hand hygiene than doctors. Several factors may contribute to this finding. Nurses are more in direct contact with patients and may be more aware of the importance of hand hygiene in preventing the spread of infections. In contrast, doctors may focus more on the medical aspects of care and may not always prioritize hand hygiene as a key component of patient AND staff safety. <sup>1, 2</sup>

To close the gap between nurses and prescribers, the WHO focusses the handwashing campaign of 2023 on clinicians' handwashing. <sup>3</sup>

We can all take Hand Washing Day as a reminder for observing our handwashing behaviour. There are protocols for correct handwashing. Can you summarize the five moments of correct hand hygiene in patient care?

I am happy to do this. The World Health Organization (WHO) recommends that healthcare workers perform hand hygiene at five key moments during patient care. These moments are known as the "Five Moments of Hand Hygiene". They ensure that hand hygiene is performed at critical times to prevent the spread of infectious diseases in healthcare settings.

1. Before touching a patient:  
Healthcare workers should perform hand hygiene before coming into contact with a patient, especially when the healthcare worker will perform a procedure that may expose the patient to infectious material.
2. Before clean and aseptic procedures:  
Healthcare workers should perform hand hygiene before performing clean and aseptic procedures, such as inserting a urinary catheter or performing a surgical procedure.
3. After body fluid exposure/risk:  
Healthcare workers should perform hand hygiene immediately after coming into contact with a patient's body fluids, such as blood, urine, or faeces.
4. After touching a patient:  
Healthcare workers should perform hand hygiene after coming into contact with a patient, even if gloves were worn during the interaction.
5. After touching a patient's surroundings:  
Healthcare workers should perform hand hygiene after touching any surfaces or equipment potentially contaminated by infectious material, such as bed rails, bedside tables, or medical equipment.

Thanks for outlining again the five crucial moments. In principle, there are two major protective scenarios: I wash my hands before I attend to a patient. Thereby, I protect the patient from

infectious agents, which might be on my hands. I wash my hands after I have attended to a patient, because I do not want to spread these infectious agents from this patient to the next or even myself. Otherwise, it is quite clear that we wash our hands before an aseptic procedure or after a contaminating task. However, when thinking about hospital work, there are also other situations, which require correct handwashing.

Yes, that is true. I'll give you a few examples:

1. When entering and leaving the hospital, healthcare workers should perform hand hygiene. Thereby, they reduce the risk of bringing pathogens from the outside into the health facility or taking pathogens from the facility into their homes. They should also wash hands after they have completed handshaking with colleagues at the beginning of their shift.
2. Healthcare workers should also have clean and disinfected hands when handling medications in order to prevent contamination.
3. In addition, they should perform hand hygiene before handling food so that they prevent the spread of pathogens and reduce the risk of foodborne illness.
4. Whenever they change gloves, they should disinfect or wash their hands. This reduces the risk of transferring pathogens from contaminated gloves to other surfaces or equipment.
5. Since healthcare workers frequently handle contaminated materials, such as soiled linen or medical waste, handwashing will protect them from pathogens.
6. Finally, healthcare workers should wash hands after using the toilet.

Many of these situations are everyday situations. They do not only apply to health care workers. What can we recommend to patients and visitors of health facilities?

Some people may not be aware of the importance of handwashing and how it is done properly. This is especially the case for visitors and patients of our facilities. They should be educated in order to realize the importance and the proper technique of handwashing. In addition, health staff, posters and other informative material should remind patients and visitors to wash hands before entering the facility or visiting a patient. Hand washing facilities should not only be accessible for staff but also for patients and visitors. These facilities have to be maintained well – meaning that water and soap have to be available. As we have heard before, soap is most important, because it removes germs and dirt.

Overall, promoting handwashing and providing access to clean water, soap and sanitation facilities can have a significant impact on public health. It is crucial to continue investment in hand hygiene promotion and infrastructure to improve the health and well-being of communities in the region. According to the World Health Organization (WHO), handwashing with soap can cut the incidence of diarrhoea roughly by half and respiratory infections by one quarter. Handwashing is especially important for child health, since children are particularly vulnerable to infectious diseases. Washing hands will protect them from these illnesses and help reducing child mortality.

Thanks, xxx, for this excellent overview on handwashing. I was not aware that I could still learn something about this very basic hygiene measure.

Dear clinicians, nurses, midwives, dear hospital support staff and dear administrators: We need you all if we really want to improve hand hygiene in facility settings. We have to assure that healthcare workers practice hand hygiene in the five essential settings around patient care as well as in any other situation in which they could promote the spread of infectious agents through their hands. The administrators of health facilities also have to assure that handwashing facilities are available to patients and visitors and that these groups are reminded of handwashing when entering the facility.

Handwashing is a cost-effective task, which can save lives. It can reduce health care costs, contributes to child health and in the end, promotes economic development because people will become ill less frequently and will therefore not miss school or work.

Today's podcast gave us information about a topic which is very familiar to us but which still needs promotion and support. It is the first podcast in a new series on IPC. Other aspects like waste management, WASH etc. will follow.

We wish you a successful World Handwashing Day on the 5th of May 2023. If you are planning activities on World Handwashing Day, we would be pleased if you could share some pictures in our WhatsApp group! Stay safe and stay blessed!

#### Literature:

<sup>1</sup> MDPI: Adherence to hand Hygiene among Nurses and Clinicians at Chiradzulu District Hospital, Southern Malawi: <https://doi.org/10.3390%2Fijerph191710981>

<sup>2</sup> PLOS Global public health: <https://doi.org/10.1371/journal.pgph.0001720>

<sup>3</sup> WHO: World Hand Hygiene Day 2023  
<https://www.who.int/campaigns/world-hand-hygiene-day/2023>