

## **Document Title: Prevent spreading infection in aavvcc12**

### **Proper hand hygiene helps prevent the spread of infections**

**With clean hands, we ensure the safe care of patients and the safety of employees in the workplace. Proper hand hygiene is the single most important factor in preventing the spread of nosocomial infections.** A targeted and structured approach to hygiene and infection prevention methods can contribute to reducing the risk of healthcare-related infections.

In European hospitals, between five and ten percent of patients fall ill with a healthcare-related infection each year. At the same time, the resistance of microorganisms to the antibiotics with which they treat these infections is spreading more and more, so the treatment options are quickly exhausted.

The cause of infection is often contaminated hands of medical workers. Adequate hand hygiene of medical personnel is therefore the fundamental, simplest, cheapest and most effective way to prevent the transmission of microorganisms, since it can reduce the number of infections and associated mortality by 50 percent.

#### **Why is hand hygiene in the hospital so important?**

Hand hygiene in the hospital is important to prevent the spread of infections among patients, as medical personnel, in their work with improper hand hygiene procedures, can transmit infection from one patient to another. Healthcare workers are in contact with various secretions, dirty surfaces and microorganisms every day. With proper hand hygiene procedures, especially hand disinfection, we also protect our health by preventing them from becoming infected.

The basis of hand hygiene, according to the methodology of **5 moments for hand hygiene**, defines the work with the patient and his surroundings, as well as the work environment in general.

To increase awareness and understanding of the importance of hand hygiene in the prevention of microbial resistance, the World Health Organization (WHO) has designed the concept of five moments for hand hygiene, which include individual occasions where the possibility of transmission of bacteria from host to host is greatest. As the figure shows, the opportunities for hand hygiene according to the WHO methodology are divided into five groups:

1. before contact with the patient,
2. before aseptic and invasive procedures,
3. after contact with body fluids,
4. after contact with the patient (including after removing gloves),
5. after contact with the patient's immediate surroundings.

We remove bracelets, a watch, a ring (including wedding ones) from our hands. Nails should be short, not varnished, not gelatinized.

- Before washing, we stand by the sink so that we do not touch the sink with our hands and clothes.
- We open the water of the appropriate heat, the jet of water should not be too strong.
- We wet our hands.
- We press on the soap dispenser and activate the pump and take 2 to 3 ml of soap (2 pushes).
- We wash our hands by capturing the entire surface of the hands. We rub with circular movements of the palm against the palm, the tips of the fingers in the palm of the other hand, then change the hand, wash the thumbs, fingers and between the fingers, the back of the hands with extended fingers - between the fingers and wrists. Repeat each step 7 to 10 times. We wash our hands for 40 to 60 seconds.
- We wash our hands from the fingers down towards the wrist (so that the water does not flow back to the fingertips).
- We dry our hands by taking 2 paper towels in each hand and placing them between the palms and drying the palms, then separating them and drying the back of the hand from the fingers down, finally finishing circularly around the wrist.
- Discard the wet paper towel and close the tap with another, clean paper towel.

### **Hand disinfection**

One of the key elements in improving hygiene practices among occupational health care groups is the use of hand sanitizers instead of traditional hand washing with soap and water. The use of hand sanitizers is much more economical, since much less time is spent on the process of hand disinfection, less burden is placed on medical personnel and the environment.

Hand disinfection is carried out before each direct contact with the patient and after it:

- before transporting the patient,
- before and after carrying out a nursing procedure or diagnostic therapeutic intervention,
- after contact with body fluids or with damaged skin,
- before and after handling invasive devices and medical equipment in and around the patient
- before and after aseptic and clean procedures,
- before and after using gloves,
- always before arranging the bed,
- always when entering and leaving the hospital room and isolation room, where other protective measures are taken.

The process of hand disinfection is as follows:

- the palm of one hand is set under the disinfectant dispenser. With the other palm we press 2 times on the disinfectant dispenser,
- we rub the palm against the palm,

- we disinfect the finger pads,
- with fingers spread and crossed, disinfection of the interdigital areas is carried out,
- follows the circular rotation of the thumb of the right and left hands,
- rub the backs of the palms of both hands,
- We rub our wrists,
- we wait until the disinfectant on both hands evaporates,
- Above all, make sure that the disinfectant is not wiped

The disinfectant is rubbed into the hands for 20 to 30 seconds, or until dry. Repeat each step 5 times.

### **Why is washing your hands with soap not enough?**

In the past, hand washing was the main way to maintain hand hygiene in the hospital. However, frequent washing puts a strain on the skin of the hands, as soap leaches the natural flora of the skin. It is also not effective enough, since microbes are removed only from the upper layer of the skin, while when disinfecting, the disinfectant is also rubbed into the deeper layers of the skin and several microorganisms are destroyed. Disinfectants contain special skin care additives and thus protect the skin on the hands. Disinfectant is also more accessible than water and sinks, because it can be easily placed in all “critical” places: next to the hospital bed, in the hallway, on the work cart...

### **Use of gloves**

In healthcare, the use of appropriate gloves is important both for the protection of the patient and for the health and safety of medical personnel and the protection of the work process itself (e.g. maintaining sterility).

We know:

1. sterile surgical gloves — used during aseptic procedures to protect the patient from the introduction of microorganisms into the sterile field,
2. non-sterile examination gloves — used wherever contamination of the hands by the patient's secretions or blood is expected.

### Basic principles when using gloves:

- Gloves are put on dry disinfected hands.
- They are put on before the procedure.
- They are used only for one patient for a specific intervention and for a certain period of time.
- After use, remove the gloves and discard the inward-facing ones.
- After using gloves, we disinfect our hands.
- Gloves are changed for each patient and after each procedure.
- If gloves are torn or damaged during work, remove them immediately, disinfect hands and put on new ones.