

# Researchers observe major hand hygiene problems in operating rooms

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An observational study by Sahlgrenska Academy researchers at a large Swedish hospital found 2,393 opportunities for hand disinfection and/or aseptic techniques. Doctors and nurses missed 90% of the opportunities.

A new study at Sahlgrenska Academy, University of Gothenburg, is attracting a great deal of attention in the healthcare and research community. The study shows that the use of hand disinfection and aseptic techniques during risk-prone invasive procedures is very low.

## Direct observations

Performed at a large Swedish hospital, the study is the first of its kind in northern Europe. Direct observations were made of risk-prone invasive procedures in connection with intubation and local anesthesia, as well as insertion of catheters in the bloodstream and urinary tract.

Caregivers failed to avail themselves of more than 90% of the opportunities for using alcohol-based hand rub and aseptic techniques.

"An operating room is radically different from other clinical settings in that anesthesia-related tasks are so frequent," says Dr. Anette Erichsen Andersson, a researcher at Sahlgrenska Academy. "We counted an average of 30 opportunities, many of which were missed, for aseptic techniques every 24 minutes."

## Risk of infections

Problems with aseptic techniques and insufficient teamwork led to a substantial increase in situations where hand disinfection should have been used. The results also demonstrate that protective gloves are worn in an unsystematic manner that heightens the risk of hospital-acquired infections.

"Gloves often take the place of hand disinfection and are reused for a number of different tasks," Dr. Andersson says. "Bacteria may be transmitted from the airways to the bloodstream as a result, increasing the risk of infection."

## The underlying reason unknown

The study did not examine the underlying reasons for inadequate use of aseptic techniques. One explanation may be that neither hygiene nor prevention of infection is a mandatory subject at medical school or during specialist training for doctors and nurses.

"There is little doubt that all [doctors](#) and [nurses](#) are familiar with the benefits of hand rub," Dr. Andersson says. "But simply possessing that knowledge is not good enough in the demanding setting of an operating room whose interdisciplinary teams rarely if ever have the chance to practice new working methods together, either in training or clinical situations."

"Awareness that you need to employ aseptic techniques must be supplemented by specific skills that work under complex, risky circumstances. The potential for interdisciplinary learning is enormous, and additional research is needed to maximize the prospects for safe, aseptic care in the operating room."

The observations were not made during emergency surgery.

**More information:** "Hand hygiene and aseptic techniques during routine anesthetic care - observations in the operating room."

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