

Study Finds Poor Hand Hygiene and Aseptic Techniques in the Operating Room



Direct observational research at a large hospital in Sweden reveals that compliance with recommended hand disinfection and aseptic techniques is alarmingly low, with clinician caregivers missing 90 percent of 2,393 opportunities in the operating room. The observations were not made during emergency surgeries.

The study was conducted at the University of Gothenburg's Sahlgrenska Academy. The research team observed risk-prone invasive procedures related to intubation and local anaesthesia, and also catheter insertion in both the bloodstream and urinary tract. When presented with an opportunity to use alcohol-based hand rub and aseptic techniques to keep medical instruments sterile, doctors and nurses missed those opportunities 90 percent of the time.

"An operating room is radically different from other clinical settings in that anaesthesia-related tasks are so frequent," said 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."

While the study did not explore the reasons underlying the inadequate use of hand hygiene and aseptic techniques, the results of the demonstrate the importance of teams working together to prevent heightened risk of infection.

The findings also draw attention to the unsystematic manner in which protective gloves are worn, which raises the risk of hospital acquired infections. "Gloves often take the place of hand disinfection and are reused for a number of different tasks," said Dr. Andersson. "Bacteria may be transmitted from the airways to the bloodstream as a result, increasing the risk of infection."

One area for improvement noted by the authors relates to training: it is possible that hand hygiene and infection control is not a required subject at medical schools or specialist trainings. When it is brought up, there should also be discussion about how aseptic techniques can be employed during complex circumstances. There is a high risk of bacterial infection when peripheral venous or arterial catheters must be inserted during invasive procedures.

"There is little doubt that all doctors and nurses are familiar with the benefits of hand rub," Dr. Andersson noted. "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," Dr. Andersson continued. "The potential for interdisciplinary learning is enormous, and additional research is needed to maximise the prospects for safe, aseptic care in the operating room."

The study has been published in *Antimicrobial Resistance and Infection Control*.

Source: The Sahlgrenska Academy/University of Gothenburg

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