

Study finds low hand hygiene compliance rates during anesthesia administration

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Anesthesia providers are missing opportunities to clean their hands during surgical procedures, according to a study published in the July issue of the *American Journal of Infection Control*, the official publication of the Association for Professionals in Infection Control and Epidemiology (APIC).

In the study, researchers at Dartmouth-Hitchcock Medical Center used video observation to map patterns of anesthesia provider hand contact with anesthesia work environment surfaces to assess [hand hygiene](#) compliance. Researchers observed an average of 149 hand hygiene opportunities per hour of anesthesia time. Hand hygiene compliance was lowest during the first and last 20-minute time periods. The low hand hygiene compliance rates at case start and case end corresponded with sharp peaks in bacterial contamination of the 20 most frequently touched objects during these same time periods.

According to the study, conducted at Dartmouth-Hitchcock Medical Center, anesthesia providers were least likely to perform hand hygiene immediately before patient contact and after contact with the patient's environment. They were most likely to perform hand hygiene after potential exposure to body fluids.

The World Healthcare Organization specifies five moments for hand hygiene to reduce the risk of healthcare-associated infection: 1) before touching a patient; 2) before a clean procedure; 3) after exposure to [body fluids](#); 4) after touching a patient; and 5) after touching a patient's

surroundings.

"This work adds to the body of evidence pertaining to intraoperative bacterial transmission because it identifies targets for improved frequency and quality of environmental cleaning as well as important periods for hand hygiene compliance, namely induction and emergence from [general anesthesia](#)," state the authors.

The study points out that complete compliance with hand hygiene guidelines that are established for non-operating room environments would consume more than the 60 minutes available in each hour of anesthesia time, "a fact that identifies a need to create more practical – but still effective – methods of controlling bacterial transmission in anesthesia work environments," the authors write. "New methods to reduce [bacterial contamination](#) of the anesthesia work environment are needed to prevent healthcare-associated infections."

Infections that occur after surgery are one of the most common types of healthcare-associated infections. According to the Centers for Disease Control and Prevention, there are approximately 157,000 [surgical site infections](#) each year.

More information: "Video observation to map hand contact and bacterial transmission in operation rooms," by John Rowlands, Mark P. Yeager, Michael Beach, Hetal M. Patel, Bridget C. Huysman, and Randy W. Loftus, appears in the *American Journal of Infection Control*, Volume 42, Issue 7 (July 2014).

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