



Clinical Digest

ONLINE EDITION

INFECTION CONTROL

Toilet Seats and Dangerous Germs

Methicillin-resistant *Staphylococcus aureus* (MRSA) and vancomycin-resistant enterococci (VRE) infections have become increasingly prevalent in hospitals and pose a severe threat to immunocompromised and critically ill patients. When an increased occurrence of both MRSA and VRE infections was identified at St. Jude Children's Research Hospital, Memphis, TN in 2006 and 2007, staff from the hospital's infection control program and department of infectious diseases took action. Recognizing that immunocompromised outpatients often share toilet facilities with other patients, staff, and visitors, they enacted a policy that required alcohol wipes to be provided in bathrooms designated for patient use in the outpatient clinics. Patients and parents were instructed to use the wipes to clean the toilet seat before each use.

A study was performed to determine the effectiveness of the alcohol wipes at killing bacteria, including MRSA and VRE. Researchers obtained cultures from five toilets where wipes were not available (male and female employee-only toilets, male and female public toilets in the lobby, and a unisex toilet in the outpatient area) and from a patient-only toilet in the outpatient area that was equipped with wipes. All toilets were swabbed, then cleaned with the wipes, and swabbed a second time one minute later—once per day on weekdays for four weeks.

The researchers recovered MRSA from 3.3% of the toilets where wipes

were not available, but they found no MRSA on the toilet that was equipped with wipes. VRE was not found on any of the toilets in the study. The alcohol wipes were found to be effective in killing 99.75% of all bacteria and resulted in a 50-fold reduction in mean daily bacterial counts and elimination of MRSA.

The researchers say that, to their knowledge, theirs is the first report documenting MRSA on public toilets located in the outpatient areas of a hospital. The fact that the toilets contained dangerous bacteria was "particularly worrisome," they say, for hospitals where the majority of care for immunocompromised patients is delivered on an outpatient basis. They believe that such hospitals should enforce policies that emphasize hand hygiene and methods to decontaminate toilet seats.

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EMERGENCY MEDICINE

Delays Persist in Diagnosis of Appendicitis in Women

Research has shown that women don't always have the "accepted" signs and symptoms of appendicitis, which often leads to misdiagnosis and delays in treatment. For instance, between 1987 and 1998—before computed tomography (CT) became the standard tool for confirming an appendicitis diagnosis—women were misdiagnosed more than twice as often as men, say researchers from Northwestern University, Feinberg School of Medicine, Chicago, IL. And when they

conducted a retrospective cohort analysis involving emergency department patients to find out if anything has improved in this era of easily available and frequently used CT scans, they found the answer was, "Not really."

The researchers evaluated medical records of 180 patients discharged consecutively from an urban university hospital with a diagnosis of appendicitis during a period that began on January 1, 2005. A total of 137 charts met study inclusion criteria (patient age of at least 18 years and patient receipt of a CT scan). Of the 137 patients, 65 (47.4%) were female and 72 (52.6%) were male.

The data showed that delays persist in the process of diagnosing appendicitis in women. The time from triage to CT order was 138 minutes for women and 95 minutes for men. The time from initial physician evaluation to CT order was 45 minutes for women and 28 minutes for men. The researchers also found that there was no difference in time to CT order between women who received a pelvic examination and women who did not. This finding, they say, refutes the "commonly held but never previously evaluated belief" that the female patient's pelvic examination delays the diagnosis of appendicitis by delaying CT.

As in other studies, women reported atypical appendicitis symptoms (such as nausea, vomiting, and diarrhea) more often than men. The confounding effect of these symptoms might explain the delays, the researchers say. Even when women reported right lower quadrant (RLQ) pain, however, the time to CT order was still significantly longer than for men

with RLQ pain (40 minutes versus 27 minutes, respectively).

The researchers say they aren't encouraging "liberal CT use" for all

patients who present with abdominal pain. Instead, they call for a study of female-specific criteria for appendicitis or a better scoring system to

identify those who would benefit from early CT order. ●

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