

ED Computer Keyboards and Bacterial Contamination

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Keyboards located in triage and registration areas were found to be more contaminated with bacteria than those in other areas of the emergency department (ED) at Henry Ford Hospital in Detroit, according to a new study conducted by the hospital.

"Contamination was predominantly found in non-treatment areas," says Angela Pugliese, MD, lead author of the study and an emergency department physician at Henry Ford Hospital. "This suggests that only areas without true patient contact, and likely less frequent handwashing, might benefit from using washable silicone rubber or antibacterial keyboards instead of a standard keyboard."

Pugliese will present the findings June 5 at the annual meeting of the Society for Academic Emergency Medicine in Phoenix.

Multiple studies have found colonies of bacteria on computer keyboards. Due to the threat of its potential spread to patients, Henry Ford's information technology and infection control departments recommended exchanging traditional keyboards in the emergency department for washable, silicone rubber models.

The objective of this study was to determine the frequency and type of keyboard contamination before replacing the keyboards.

Seventy-two standard, non-silicone rubber keyboards were swabbed on two different days, six days apart. All keyboard keys, except the function keys, were cultured and analyzed for bacteria.

Less than 14 percent, or 10 keyboards, were colonized with nine different bacteria. Of the keyboards in non-treatment areas, nearly 32 percent were contaminated, versus less than 9 percent in treatment areas.

Further studies are needed to determine if measures such as more frequent cleaning, or replacing standard keyboards with silicone rubber or antibacterial keyboards, would improve safety in these non-clinical areas, said Pugliese.

In addition to Pugliese, the Henry Ford research team included A. Joseph Garcia, MD; Gerard Martin, MD; William Dobson; and Linoj Samuel, PhD.

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