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## HealthcareIT News

### Ensuring computers, notebooks and mobile devices are included in the disinfection mix

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Coagulase-negative staphylococcus. Acinetobacter species. Escherichia coli. Klebsiella pneumoniae. Pseudomonas species. Enterococcus species. Staphylococcus aureus. These are just some of the pathogens that researchers found on 80% of mobile phones used at a tertiary care teaching hospital and on 81% of the clinicians' hands that handled those phones, according to a study published in *Advanced Biomedical Research*.<sup>1</sup>

“Clinicians, like everyone else, are constantly touching their mobile devices, notebooks, and computers — and the heat of human hands increases the breeding of bacteria. Unfortunately, these devices could be carrying pathogens that aren't necessarily being

addressed by current infection control practices,” said Joyce Sensmeier, RN, vice president, informatics, HIMSS.

For example, clinicians typically are required to gel their hands when walking into a patient room and then gel their hands again as they exit the room. The problem is that clinicians often touch contaminated notebooks and mobile devices after they have disinfected their hands and then immediately start working with patients. As such, they could be inserting central lines and ventilators with hands that are carrying dangerous pathogens. “We are not going to stop using mobile phones and laptops. We are not going to stop putting in ventilators. We are not going to stop putting in central lines,” Sensmeier said. “But if we make sure infection control practices are in place, we can put safeguards in place that help control the spread of healthcare-associated infections.”

The proliferation of computers and mobile devices and the lack of infection control protocols to address them could potentially exacerbate what’s already a troubling situation. Consider the following: According to the World Health Organization, the prevalence of healthcare-associated infections (HAIs) in European countries is 7.1%. As such, HAIs affect about 4.5 million European patients annually and account for 37,000 deaths, 16 million extra days of hospital stay, and approximately €7 billion in costs.

In the United States, the prevalence rate of HAIs is 4.5% and affect 1.7 million patients, resulting in 99,000 deaths and about \$6.5 billion in costs.<sup>2</sup> Such statistics are especially troublesome for the growing number of organizations that are operating under value-based care models, which base reimbursement on quality outcomes, not merely on the volume of services delivered.

As a result, infection control leaders need to ensure that infection control plans include clear-cut computer and mobile device disinfection policies and that clinicians follow these stated best practices. “Infection control practices need to focus on more than just addressing the disinfection of the clinicians’ hands,” Sensmeier pointed out. “Now, the computers, notebooks and devices need to be routinely sanitized as well. So, it adds to the complexity of the situation.”

Printers also need to be routinely disinfected. “The fact that a printer doesn’t typically travel into a patient’s room like notebooks or medical devices can create the illusion that it doesn’t pose a risk of spreading healthcare-associated infections,” noted Frank Cutitta, healthcare market analyst, HIMSS.

Many clinicians don’t routinely disinfect their computer hardware at all or they use methods that fall short. For instance, they might quickly wipe the device down, which could clean the device without ridding it of dangerous pathogens. Disinfecting computers and other devices, however, “requires a much more rigorous approach,” according to Sensmeier.

A study published in *American Nurse Today*, for example, showed that clinicians need to wipe devices with alcohol wipes while applying friction for a full 15 seconds to successfully remove pathogens.<sup>3</sup> This research notwithstanding, there is debate among healthcare professionals about the potency of the solutions used on computer hardware. There is growing concern that using alcohol alone is not nearly enough, and

more powerful disinfecting solutions must be used on mobile devices, notebooks, and printers to truly prevent a broader variety of HAIs in clinical settings.

As such, healthcare organizations need computer hardware technologies that are able to withstand more effective (but potentially corrosive) germicides on all key touch points to assure clinical workflow and asset value.

While disinfection best practices will continue to evolve, healthcare organizations need to act now “to ensure that infection control policies explicitly address computers, notebooks, and mobile devices,” Sensmeier concluded. “By doing so, healthcare organizations can reduce infections, which can potentially compromise care and lead to death in some cases.”

1 Pal S, Juyal D, Adekhandi S, et al. Mobile phones: Reservoirs for the transmission of nosocomial pathogens. *Adv Biomed Res*.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4549928/>

2 World Health Organization. Health care associated infections fact sheet.

[https://www.who.int/gpsc/country\\_work/gpsc\\_ccisc\\_fact\\_sheet\\_en.pdf](https://www.who.int/gpsc/country_work/gpsc_ccisc_fact_sheet_en.pdf)

3 Wentz B and Bowles J. Mobile devices and healthcare-associated infections.

American Nurse Today. <https://www.americannursetoday.com/mobile-devices-healthcare-associated-...>