An infection control bundle to reduce contamination from phone use in the operating room

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Introduction

Healthcare providers utilize both work and personal cellular devices to communicate in the perioperative environment, but there is a lack of standardized approaches to phone hygiene (1-3). The large number of surface contacts made by anesthesia providers, along with inconsistent device cleaning and hand hygiene practices, represents an infection control risk to providers and patients alike. This poster assesses current phone use practices in a community-based anesthesiology group and tests a practical approach to improve phone hygiene in the perioperative environment.

Methods

Thirty providers in the anesthesiology department in the Memorial Hospital System completed an IRB approved survey assessing phone hygiene practices. Providers were then asked to answer an intraoperative phone call in a simulated operating room setting during maintenance of anesthesia. In this simulation, ultraviolet dye was utilized to detect contamination of nearby surfaces (anesthesia machine, cart, patient). Percentage surface contamination was calculated using the methodology described in reference 1. Following training in an infection control bundle (figure 1), providers repeated the simulated phone call and survey after one month and six months to assess the impact of the intervention on infection control practices. Data were analyzed using a mixed effects model.

Results

Initial survey results showed limited adherence to phone hygiene protocol elements (Figure 2). Following training in the infection control bundle, adherence to survey elements increased significantly at one month (p<0.05) and six months (p<0.08). Following training in the infection control bundle, contamination of anesthesia work surfaces decreased significantly at 1 month (p<0.04) and 6 months (p<0.07; Figure 3).

Discussion

While perioperative phone use in the operating room is common, there is tremendous variability in phone hygiene among anesthesia providers. Task saturation, production pressure, and a complex work environment all create barriers to implementation of perioperative infection control practices. Challenges with phone contamination are not unique to anesthesia, as several studies have examined protocols for phone decontamination in orthopedic surgery (4).

This poster describes a simple, robust approach to improve infection control practices surrounding phone use. While we used a simulated setting to illustrate its efficacy, we have utilized this approach to improve phone hygiene in OR, non-OR and labor and delivery settings. We found that consistent support from leadership, reminders from colleagues, and opportunities to practice workflows were critical for adherence to the protocol.

One drawback of this protocol is the need for plastic bags to cover the phone, which may be considered wasteful but has been shown to work well in challenging infection control settings, such as COVID-19 exposure (5). Other sanitation methods for phones, such as UV disinfection and use of disinfecting wipes, are also possible but come with unique disadvantages.

We believe that this methodology will improve general infection control in the operating room and will have value as part of a bundle to reduce SSI.

References