Figure. Frequency of transfer of MRSA from MRSA-colonized patients by different greeting methods

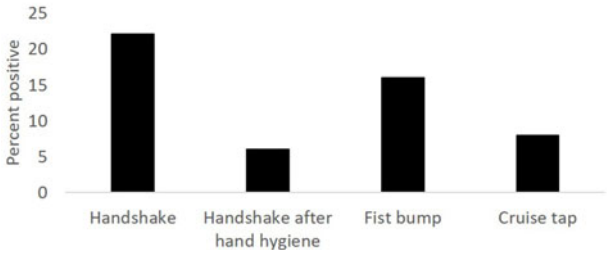

Fig. 1.

frequency of transfer of MRSA by handshake versus fist bump versus cruise tap (ie, a modified fist bump involving knuckle-to-knuckle contact with a single finger). MRSA-colonized patients performed each greeting with research personnel wearing sterile gloves, and cultures were obtained to determine the number of colonies transferred. Transfer by handshake was also assessed after MRSA-colonized patients used alcohol-based hand sanitizer. Quantitative cultures were obtained to compare the burden of MRSA on the palm versus dorsum of the hands of the MRSA carriers. **Results:** As shown in Fig. 1, there was a significant reduction in the frequency of MRSA transfer for the cruise tap compared to the handshake, but not for the fist bump. Use of alcohol-based hand sanitizer by MRSA carriers also significantly reduced the risk for transfer of MRSA. There was no significant difference in the burden of MRSA on the dorsum versus the palm of the hands (mean +SE colonies recovered, 32.7+12.3 vs 27.3+12.7; $P > .05$). **Conclusions:** The fist-bump greeting did not transfer less MRSA than a handshake. However, transfer was significantly reduced by a cruise-tap greeting or by handshake after the use of hand sanitizer. Modified greetings and patient hand hygiene are potential strategies to reduce transmission of healthcare-associated pathogens.

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Presentation Type:
Poster Presentation

Duodenoscope Medical Device Reports Associated with Patient Infection, Patient Exposure, or Device Contamination

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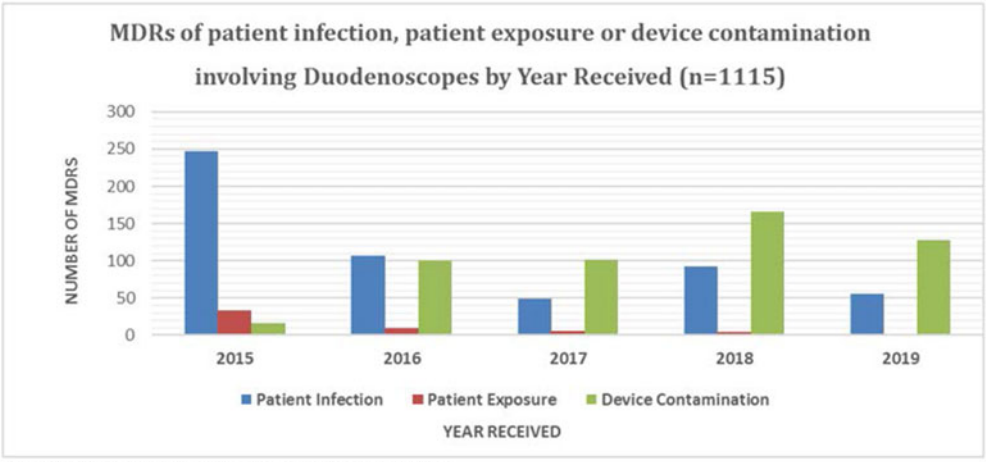
Background: Each year, the FDA receives more than a million reports of suspected device-associated deaths, serious injuries, and malfunctions. Medical device reports (MDRs) are submitted to the FDA by mandatory reporters (manufacturers, importers, and device user facilities) and voluntary reporters such as healthcare professionals, patients, and consumers. The FDA uses MDRs to monitor device performance, including monitoring reports of infection or device contamination to detect potential device-related safety issues and to share this information in public communications. In this analysis, the FDA presents MDRs for duodenoscopes, which are a type of flexible endoscope that have been associated with infections in patients. **Methods:** For this analysis, we searched the MDR database for duodenoscope reports submitted between January 2015 and July 1, 2019. MDRs were classified into clinical risk categories based on the MDR's text narratives as patient infection (indicated the presence of infection in patients potentially transmitted by the device), patient exposure (indicated a contaminated device has been used in a patient, but the MDR lacks clear mention of patient infection), or device contamination (indicated that the device was contaminated, but no mention of device use in patients or patient infection). **Results:** Overall, 1,115 duodenoscope reports related to a patient infection, patient exposure, or device contamination for devices marketed inside and outside the United States were received from January 2015 to mid-2019. Among them, 79 MDRs were received for deaths in patient infection, patient exposure, or device contamination reports. The

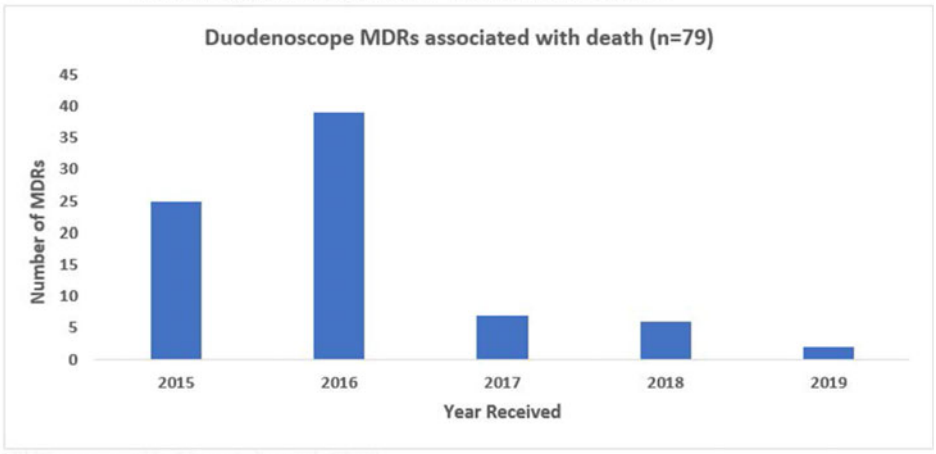
Figure 1. Number of MDR reports[1,2,3] received for duodenoscopes associated with patient infection, patient exposure or device contamination



1: Each MDR may report events associated with one or more patients
2: 2019 year only includes data received as of July 1, 2019
3. MDR event may occur prior to MDR received year

Fig. 1.

Figure 2. Number of duodenoscope MDR reports[1,2] of death associated with patient infection, patient exposure or device contamination



1. 2019 year only includes data received as of July 1, 2019
2. Cause of death is undetermined or related to patient's preexisting condition in some cases

Fig. 2.

number of reported infections decreased from 247 MDRs in 2015 to 55 MDRs in the first half of 2019. Furthermore, the number of reported deaths decreased from 25 MDRs in 2015 to 2 MDRs reported in the first half of 2019. **Conclusions:** The MDR data indicate a decrease in the number of reported infections. The decrease in infections suggests that efforts to reduce the risk of infection from duodenoscopes have yielded improvements; however, additional improvements are necessary to further decrease the risk of infection.

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Presentation Type:
Poster Presentation

Duodenoscope-Associated Outbreak of a Carbapenem Resistant Enterobacteriaceae

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Background: We describe and evaluate our outbreak of carbapenem-resistant *K. pneumoniae* transmitted by contaminated duodenoscopes during endoscopic retrograde cholangiopancreatography (ERCP) procedures. **Methods:** An outbreak investigation was performed when *Klebsiella pneumoniae* carbapenemase-producing *K. pneumoniae* (KPC-KP) were identified from bile specimens of 4 patients. The investigation included medical record review, practice audits, and surveillance cultures of duodenoscopes and environmental sites. If available, clinical specimens were obtained from patients who had undergone ERCP in the previous 3 months. Carbapenem-resistant Enterobacteriaceae (CRE) screening cultures were performed to identify additional patients until no CRE cases were detected during 2 consecutive weeks. Pulsed-field gel electrophoresis (PFGE) of KPC-KP isolates was implemented. **Results:** In total, 12 cases were identified with exposure to duodenoscope from February 2019 through April 2019, including 6 cases with infections and 6 asymptomatic carriers. Case-control analysis showed that 2 specific duodenoscopes would be associated with the KPC-KP outbreak. Duodenoscope reprocessing procedures did not deviate from manufacturer recommendations for reprocessing. After ethylene oxide (EO) gas sterilization, the outbreak was terminated. **Conclusions:** Meticulous cleaning protocol and enhanced surveillance are necessary to prevent outbreaks of CRE. Notably, enhanced cleaning measures, such as sterilization for duodenoscopes, would be required after procedures with KPC-KP carriers.

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Duration of Outpatient Antibiotic Therapy in Common Outpatient Infections, 2017

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Background: Community-acquired pneumonia (CAP), urinary tract infection (UTI), pharyngitis, acute otitis media (AOM), and skin and soft-tissue infection (SSTI) are among the most common outpatient conditions for which antibiotics are prescribed. The objective of this study was to describe the observed duration of outpatient antibiotic therapy compared with guideline recommendations for these common conditions in 2017 in the United States to identify antibiotic stewardship targets. **Methods:** We estimated therapy duration for oral and parenteral antibiotic prescriptions associated with CAP, AOM, pharyngitis, acute cystitis, pyelonephritis, SSTI, and sinusitis diagnoses from the IQVIA National Disease and Therapeutic Index 2017 dataset, a two-stage stratified cluster sample of office-based physician visits. We excluded azithromycin due to its unique pharmacokinetics, and we limited our study to prescriptions from emergency medicine, family practice, general practice, geriatrics, internal medicine, osteopathic medicine, and