Pathogens standard was violated during instrument transport and during disposal of regulated medical waste into the general waste stream.

Conclusions: This extensive outbreak of NTM highlights critical gaps in education and resources within ASCs emphasizing the need for enhanced regulatory oversight and more accessible and effective education. In turn, acceptable healthcare quality and patient safety standards will be achieved and maintained.

DS 39
Multidisciplinary Response to Endoscopy-Associated Infections due to Extensively Drug Resistant Klebsiella pneumoniae (XDR KP)

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Background: A cluster of post endoscopy infections due to New Delhi metallo beta lactamase producing Klebsiella pneumonia (NDM KP), an extensively drug resistant (XDR) strain, were identified at a large academic medical center.

Methods: An outbreak investigation was performed by Infection Prevention in collaboration with the local Health Department to determine the source of hospital acquired XDR KP infections. The investigation & response focused on high level disinfection (HLD) of gastrointestinal endoscopes and included audits of each step of device reprocessing. Weekly meetings were held between Infection Prevention, Endoscopy staff, Patient Safety, and Gastroenterology.

Results: Five cases of XDR KP were identified from clinical cultures in a 7 month time period. All cases were highly genetically related by whole genome sequencing (WGS). Four of five cases underwent ≥ 1 recent gastrointestinal endoscopic procedures. Four shared endoscopes were identified between the 4 endoscopy related cases. Cultures from shared endoscopes were negative for XDR KP. 75 patients exposed to the shared endoscopes underwent screening for XDR KP by rectal swab; 3/75 (4%) screened were positive. These isolates were all highly related to the initial 5 isolates by WGS. The investigation identified multiple XDR KP endoscopes requiring recent repairs for mechanical damage. Audit of endoscopy reprocessing was notable for episodes of delayed reprocessing.

Conclusions: A multidisciplinary group was able to identify a complex network of device related XDR KP infections and implement a bundle of interventions to interrupt transmission and improve the quality of endoscope reprocessing. These Interventions included: reeducation of Endoscopy reprocessing staff on core Infection Prevention measures; Electronic scope tracking from procedure end to manual cleaning of instrument; Standardization of Endoscope drying process; Weekly endoscope culturing for microbiologic surveillance; Transition to disposable duodenoscopes; Transition from 3rd party to device manufacturer to perform device repairs; Improved identification of device damage (e.g. boroscopic evaluation of endoscopes).

DS 40
Pros and Cons for Adopting a Novel High-Level Disinfection Technology

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Background: Recent regulations issued by the United States Environmental Protection Agency have reopened discussions about the sterilants and disinfectants appropriate for use on reusable medical devices. To explore all alternatives available for their facilities, infection preventionists should be familiar with chlorine dioxide, a disinfectant new to the United States market, having received Food and Drug Administration clearance in 2023.This poster outlines the strengths and weaknesses of chlorine dioxide as a useful compound for high-level disinfection of medical devices. Attendees will learn about features of chlorine dioxide as a novel high-level disinfectant; understand how chlorine dioxide compares to alternative systems; and be able to identify two pros and cons related to high-level disinfection systems.

Methods: Working from published literature, key performance metrics were gathered for five commonly used systems with Food and Drug Administration clearance for high-level disinfection of medical devices. A comparison of the systems was made for the following performance metrics: active ingredient and concentrations, technology, and related costs (including maintenance), facility requirements and costs, training and traceability features, application methods, automated steps, disinfection cycle times, and cost per cycle.

Results: Comparison of the five systems showed distinctive differences that infection preventionists should consider when selecting methods for the disinfection of medical devices. Cycle times, ease of use, and costs all varied significantly in ways that may make one or more disinfectants especially suited—or unsuited—for use in varied healthcare settings. Chlorine dioxide performed well according to several metrics, justifying its consideration alongside preexisting systems.

Conclusions: Healthcare providers have a range of options available for high-level disinfection of medical devices. Performance metrics for chlorine dioxide constitute a strong business case for considering its adoption as an alternative to systems historically available in both inpatient and outpatient settings.

DS 41
Team Audits for Visual Inspection of Surgical Instrumentation

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Background: Every day, thousands of reusable instruments are used in operating rooms (ORs). Patients are at risk of infection when surgical instruments are used that are not adequately cleaned, damaged, or malfunctioning. Considering instruments do not have an infinite shelf life, they require regular inspection to determine that manufacturer's instructions for cleaning and sterilization can be