Fig. 2.

training structure. The goal was to create a module with multiple pathways that tailored regulatory content and delivery to the employee's job responsibilities (Figs. 1 and 2). Results: The 46 individual training modules were replaced with 1 module that averaged 24.46 minutes to complete. Branching was incorporated that customized education to the employee's role. The employee completion rate was 99% (n = 61,456). The scenario-based interactive approach engaged learners by challenging them to respond to real-life activities tailored to their level of risk. Most responders (87.4%) rated the learning activity as "good" or "excellent," and 92.4% of responders agreed or strongly agreed that the activities in the course aided their learning. Conclusions: We leveraged adult learning principles and industry-proven instructional design activities to deliver interactive and relevant infection control training that met regulatory requirements and engaged employees through action-driven tasks. In 2018, the work group created fast paths for employees who had previously completed this module whereby they could revisit the original content and/or focus only on updates and targeted areas of interest. A pathway for laboratory workers involved in specimen handling and processing is planned next.

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Presentation Type:
Poster Presentation

Screening for Multidrug-Resistant Organisms in a Tertiary-Care University Hospital in the North West Bank: A Descriptive Study

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Background: The prevalence of multidrug-resistant organisms (MDROs) in acute healthcare settings is increasing worldwide. Active screening for MDROs carriers on admission permits the prompt implementation of the appropriate precautions to decrease the probability of cross transmission to other inpatients. **Objective:** To report the spectrum of bacterial nasal, axilla, and perianal colonization among in patients at Najah National University Hospital (NNUH) during 2018. **Methods:** A retrospective observational study was performed at NNUH, a tertiary-care referral university hospital in Nablus, north of Palestine, that includes medical and surgical ICUs for both adults and children from January to August 2018. Nasal, axilla, and perianal swabs were collected within the first 24 hours of admission according to hospital policy. Patients who were referred from another hospital, who were admitted to a hospital for at least 2 nights during the previous 8 months, and who are known to have an MDROs in the past were included. Swab samples were processed for isolation and identification of these multidrug-resistant strains. Transmission-based precautions were implemented if positive results were reported (ie, contact isolation) and decolonization regimens were applied according to the CDC recommendations (muporocin ointment for nasal MRSA, daily bathing with chlorhexidine 2% soap for the rest). A daily isolation list was circulated among bed managers and senior nurses and head of departments for appropriate management of beds and reallocation of patients. The antibiotic susceptibility pattern was assessed using the disc-diffusion method on Mueller–Hinton agar and a Vitek-2 system. **Results:** During the period of the study, 1,425 nasal swabs, 1,245 axilla swabs, and 300 perianal swabs were collected according to the inclusion criteria. Positive results were reported in 7%, 4%, and 44% for nasal, axilla, and perianal specimens, respectively. Regarding the distribution of bacterial colonization in the nasal swab, 73% were MRSA; for the axial, 29% were *Pseudomonas*; and from the perianal swab, the most prevalent pathogen was ESBL (56%) (Figs. 1–3). A discrepancy between the number of nasal or axilla and perianal swabs was observed, which was mainly due to the refusal of many patients to have the sample collected by the nurse. **Conclusions:** Colonization of the skin and mucous membranes of inpatients with MDROs is

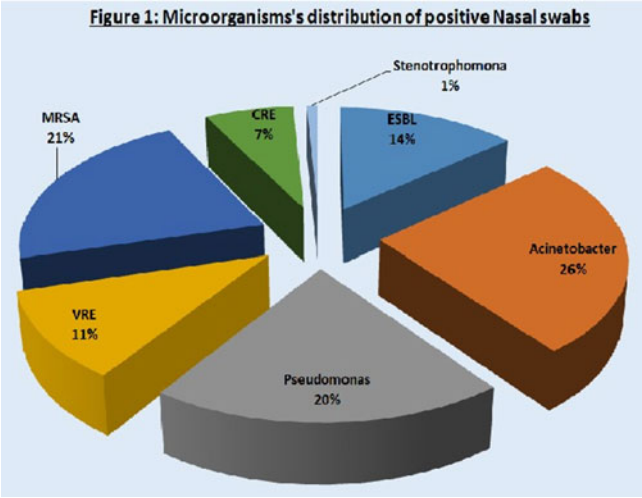

Fig. 1.

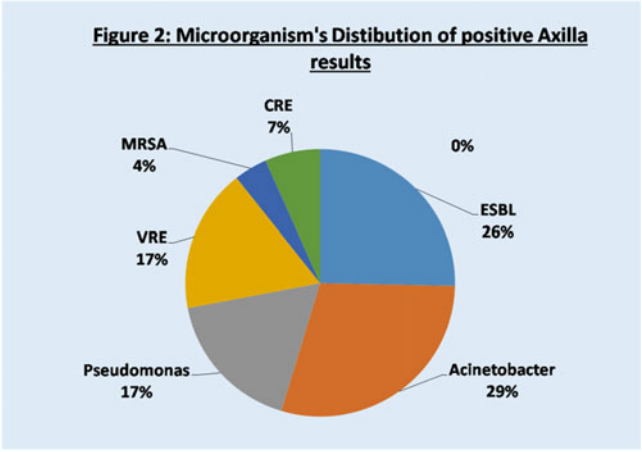

Fig. 2.

considered a risk factor for developing future infections. Therefore, active screening for those pathogens is critical for infection prevention and control programs and patient safety in acute-care settings.

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Secular Trends in Nosocomial Carbapenem-Resistant Enterobacteriaceae (CRE): Twenty-Five Years of Surveillance in Brazilian Hospitals

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Background: Enterobacteriaceae that develop resistance to carbapenems are a family of different types of bacteria that cause hospital-acquired infections. We evaluated the incidence of nosocomial infections caused by carbapenem-resistant Enterobacteriaceae (CRE) in 13 Brazilian hospitals over 25 years from 1995 to 2019. **Methods:** CRE was defined as Enterobacteriaceae that is nonsusceptible to any of the a carbapenem (doripenem, meropenem, or imipenem) AND is resistant to all of the following third-generation cephalosporins: ceftriaxone, cefotaxime, and ceftazidime. Hospital-acquired infections (HAIs) were diagnosed according to the CDC NHSN protocols in 13 hospitals from Belo Horizonte, Brazil, between January 1995 to June 2019. **Results:** In total, 33,922 HAIs caused by Enterobacteriaceae were diagnosed in 25 years across all 13 hospitals. The percentage of CRE varied among hospitals from a minimum of 3% in hospital to a maximum of 30% in hospital E (Fig. 2). The percentage of CRE varied along time as well: for 1995–1999, 0.1% (2 of 1,414) were CRE; for 2000–2004, 0.5% (28 of 5,160) were CRE; for 2005–2009, 2.0% (160 of 8,068) were CRE; for 2010–2014, 11.1% (971 of 8,771) were CRE; and for 2015–2019, 20.2% (2,127 of 10,509) were CRE (Fig. 1). ICU patients and elderly were the most affected by CRE, which has increased lethality, compared to non-

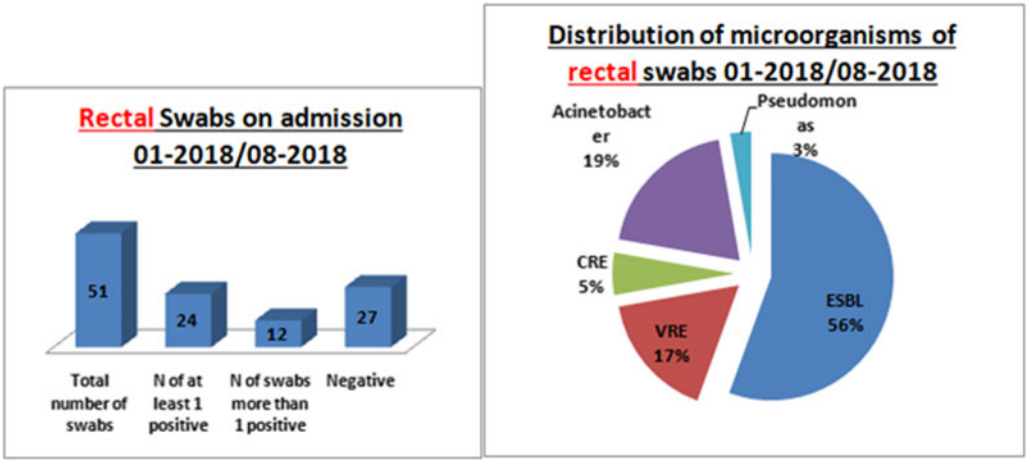

Fig. 3.