

Fig. 1.

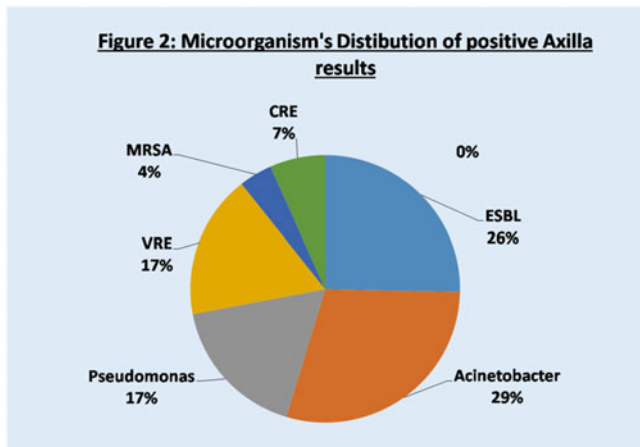


Fig. 2.

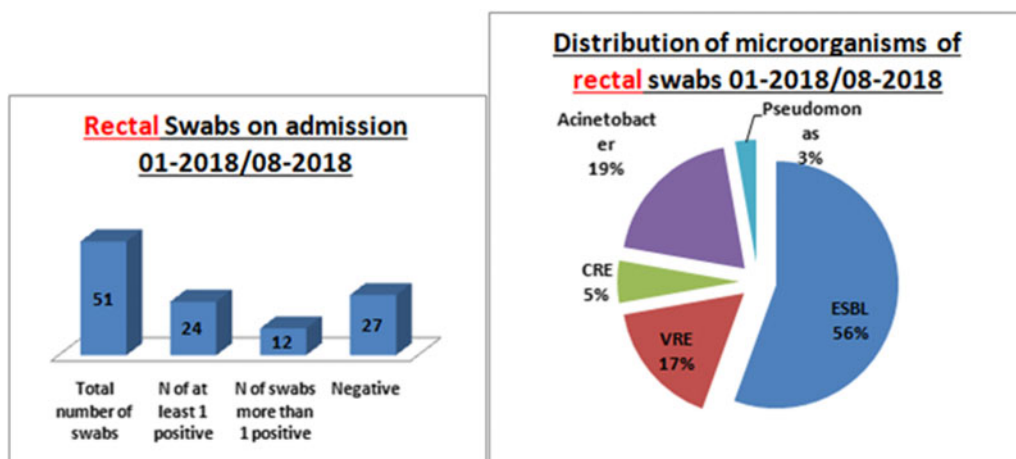


Fig. 3.

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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Disclosures: None

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Presentation Type:

Poster Presentation

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 A 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-

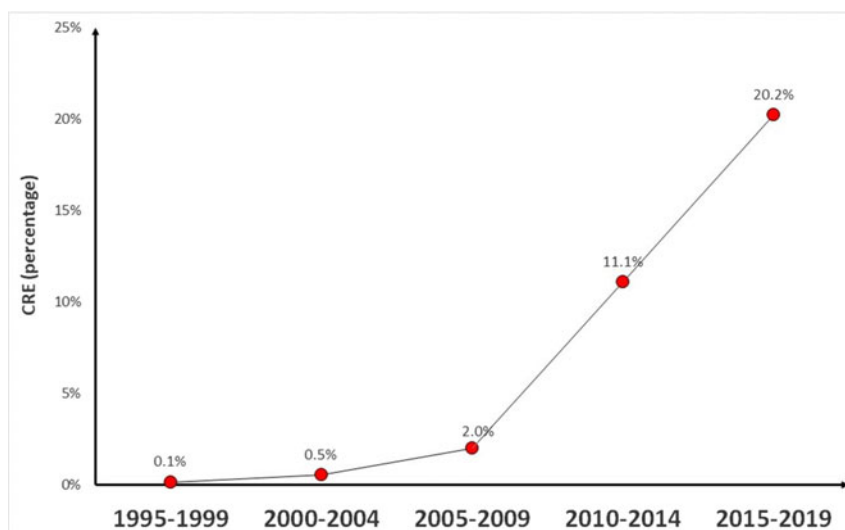


Fig. 1.

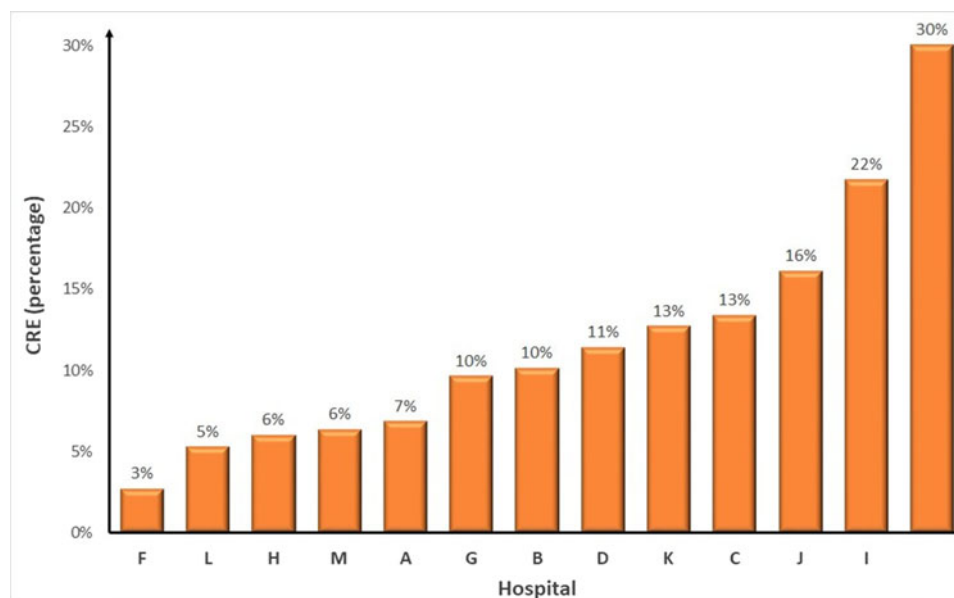


Fig. 2.

CRE Enterobacteriaceae. **Conclusions:** Over 25 years, CRE percentage increase from almost zero in 1995–1999, to >20% in 2015–2019.

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Disclosures: None

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Self-Contamination and Failure Modes During PPE Doffing: A Comparison of Two Powered Air-Purifying Respirator Hoods

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Background: High-level personal protective equipment (PPE) protects healthcare workers (HCWs) during the care of patients

with serious communicable diseases. Doffing body fluid-contaminated PPE presents a risk of self-contamination. A study assessing HCW failure modes and self-contamination with viruses during PPE doffing found that, of all PPE items, the highest number of doffing failure modes and highest self-contamination risk occurred during removal of the 1-layer powered air-purifying respirator (PAPR) hood. Hood type may affect contamination risk; however, no experimental evidence exists comparing hood types. **Objective:** We quantified and compared the risk of self-contamination with viruses during doffing of a 1e-layer versus a 2-layer PAPR hood. **Methods:** In this study, 8 HCWs with experience using high-level PPE donned PPE contaminated on 4 prespecified areas with 2 surrogate human viruses, bacteriophage MS2 (a nonenvelope virus) and $\Phi 6$ (an enveloped virus). They completed a clinical task then doffed PPE according to a standard protocol. Following doffing,