residual, structured, random-effects model indicated that hot spots were

**Conclusions:** The rate of CRE in clinical cultures decreased during COVID-19 but not the rate in surveillance cultures. Further studies are warranted to study the impact of COVID-19 on CREs.

**Subject Category:** Multidrug-Resistant (MDR) Organisms

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**The impact of COVID-19 on the incidence of carbapenem-resistant Enterobacteriales (CRE) in Singapore: An interrupted time-series analysis**

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**Objectives:** Over the past 2 years, many infection prevention and control (IPC) resources have been diverted to manage the COVID-19 pandemic. Its impact on the incidence of antimicrobial-resistant organisms has not been adequately studied. We investigated the impact of the pandemic on the incidence of carbapenem-resistant Enterobacteriales (CRE) in Singapore. **Methods:** We extracted data on unique CRE isolates (clinical and/or surveillance cultures) and patient days for 6 public hospitals in Singapore from the carbapenemase-producing Enterobacteriaceae (CaPES) study group database, and we calculated the monthly incidence of CRE (per 10,000 patient days). Interrupted time-series (ITS) analysis was conducted with the pre-COVID-19 period defined as before February 2020, and the COVID-19 period defined as after February 2020. Statistical analyses were performed using Stata version 15 software.

**Results:** From January 2017 to March 2021, 6,770 CRE isolates and 9,126,704 patient days were documented. The trend in CRE monthly incidence increased significantly during the pre-COVID-19 period (0.060; 95% CI, 0.033–0.094; P < .001) but decreased during the COVID-19 period (−0.183; 95% CI, −0.390 to 0.023; P = .080) without stepwise change in the incidence (−1.496; 95% CI, −3.477 to 0.485; P = .135). The trend in monthly incidence rate of CRE clinical cultures increased significantly during the pre-COVID-19 period (0.046; 95% CI, 0.028–0.064; P < .001) and decreased significantly during COVID-19 period (−0.148; 95% CI, −0.249 to −0.048; P = .048) with no stepwise change in the incidence (−0.063; 95% CI, −0.803 to 0.677; P = .864). The trend in monthly incidence rate of CRE surveillance cultures decreased during the pre-COVID-19 period (−0.020; 95% CI, −0.062 to 0.022; P = .341) and the COVID-19 period (−0.067; 95% CI, −0.2910 to 0.158; P = .552) without stepwise change in the incidence (−1.327; 95% CI, −3.535 to 0.881; P = .233).

**Conclusions:** The attributable mortality and excess length of stay associated with third-generation cephalosporin-resistant Enterobacteriales bloodstream infections—A prospective cohort study in Suva, Fiji

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**Objectives:** Although antimicrobial resistance (AMR) disproportionately affects low- and middle-income countries (LMICs), primary clinical data on AMR burden from LMICs are lacking, particularly from the Pacific Islands. We adapted recent World Health Organization methodology to measure the impact of third-generation cephalosporin (3GC) resistance on mortality and excess length of hospital stay among inpatients with Enterobacteriales bloodstream infection (BSI) in Fiji. **Methods:** We conducted a prospective cohort study of inpatients with Enterobacteriales BSIs at Colonial War Memorial Hospital in Suva. We collected demographic, clinical, and microbiological data, and we stored bacterial isolates for confirmatory testing and molecular genomics in Melbourne, Australia. We employed cause-specific Cox proportional hazards models to estimate the effect of 3GC-resistance on hazard of in-hospital mortality and discharge alive (competing outcomes), and we used multistate modelling to estimate the excess length of hospital stay associated with 3GC. **Results:** From July 2020 to February 2021, we identified 162 consecutive Enterobacteriales BSIs, and 66 (40.7%) were 3GC resistant. The crude mortality rates for patients with 3GC-susceptible and 3GC-resistant BSIs were 16.7% (16 of 96) and 30.3% (20 of 66), respectively. Also, 3GC resistance was not associated with either in-hospital mortality (aHR, 1.67; 95% CI, 0.80–3.49) or discharge alive (aHR, 0.75; 95% CI, 0.50–1.12). However, patient comorbidities and acuity of illness were associated with in-hospital mortality. Furthermore, 3GC-resistance was associated with an increased length of stay of 2.6 days (95% CI, 2.5–2.8). Overall, 3GC-resistance was more common among patients with hospital-associated than community-acquired infection, but genomics did not identify clonal transmission. **Conclusions:** Among patients with Enterobacteriales BSIs, mortality was relatively high, and 3GC resistance was common. Also, 3GC resistance was associated with increased hospital length of stay but not with in-hospital mortality after adjusting for potential confounders. Accurate estimates of the burden of AMR are important, especially from LMICs. Such knowledge can inform policy decisions, guide allocation of limited resources, and assist the evaluation of future interventions to address AMR.