Effective treatments for Gram-negative infections have dwindled with the global dissemination of carbapenem- and multidrug-resistant Enterobacteriaceae. Enterobacteriaceae is a β-lactam/ non-β-lactam β-lactamase inhibitor combination used against Gram-negative infections. Enterobacteriaceae has activity against Enterobacteriaceae producing class A, C, and some class D β-lactamasises, but is not active against isolates that carry class B metallo-β-lactamases (MBLs). As part of the INFORM global surveillance program 2012-2016, this study evaluated the in vitro activity of ceftazidime-avibactam and comparator agents against a collection of Enterobacteriaceae isolates from Latin America.

Materials & Methods

10,329 non-duplicate Enterobacteriaceae isolates were collected from 26 sites in 6 countries in Latin America as a part of the INFORM surveillance study from 2012-2016. Susceptibility testing was by broth microdilution according to the CLSI and analyzed using CLSI 2018 breakpoints. Additionally, more isolates from 2014-2016 were susceptible to ceftazidime-avibactam than to meropenem (99.9% and 98.5% susceptible, respectively) (Table 1). When MBL-positive isolates were excluded from the analysis, there was no difference in susceptibility between time periods (99% for both). The majority of the A/B MBL-positive isolates identified were found in Colombia (n=23) and Mexico (Table 1).

Conclusions

Ceftazidime-avibactam demonstrated potent in vitro activity against isolates from Latin America from 2014-2016 with susceptibility ranging from 98.9% to 99.9% across the six countries surveyed. More isolates were susceptible to ceftazidime-avibactam than to the other agents tested, regardless of collection year or country of isolation. Ceftazidime-avibactam provides a valuable alternative to colistin and meropenem for infections caused by Enterobacteriaceae that do not carry MBLs.