Background: Avibactam (AVI) is ineffective against class C β-lactamases, preventing ceftazidime (CAZ) from hydrolyzing β-lactamase-resistant Enterobacteriaceae (ENT). Our objectives were to determine activity against CAZ-resistant ENT and to confirm previous observations of synergy between CAZ and AVI. In vitro activity was assessed against a large number of clinical isolates using the broth microdilution method as described by the Clinical and Laboratory Standards Institute (CLSI). All isolates were tested for susceptibility according to defined breakpoints of the US Food and Drug Administration and the CLSI. All β-lactamase-positive isolates were tested by the β-lactamase disc method as described by the CLSI. Only clinically isolated strains were included. All isolates were carried out from December 2012 to December 2014. Statistical analysis was performed using Fisher's exact test.

Methods: Isolates were collected from 2517 strains, and 5832 strains were collected from United States community hospitals from January 2011 to October 2014 as part of the INFORM project. Antimicrobial susceptibility testing was performed using the CLSI broth microdilution method. All isolates were carried out from December 2012 to December 2014 and were collected from United States community hospitals from January 2011 to October 2014 as part of the INFORM project.

Results: All isolates were carried out from December 2012 to December 2014 and were collected from United States community hospitals from January 2011 to October 2014 as part of the INFORM project.

Conclusions: AVI demonstrated potent activity against a large proportion of β-lactamase-positive isolates from community hospitals compared to other β-lactamase inhibitors. AVI may be a valuable addition to the limited group of β-lactamase inhibitors that are approved for clinical use.

Acknowledgment: This study was supported by Pfizer Inc. and Flamm Inc.