

Supplemental Table 1. Logistic regression model of risk factors for ICU-onset VAP.

Risk Factors	VAP/Total Exposed (%)	Odds Ratio (95% CI)
PPIs		
No	305 / 2,224 (13.7%)	Ref
Yes	592 / 4,606 (12.9%)	1.16 (0.97-1.39)
H2RAs only		
No	764 / 6,195 (12.3%)	Ref
Yes	133 / 635 (20.9%)	2.13 (1.66-2.73)
Age category		
Under 45	128 / 1,067 (12.0%)	Ref
45-65	324 / 2,341 (13.8%)	1.26 (1.01-1.57)
65+	445 / 3,422 (13.0%)	1.21 (0.98-1.51)
CCI		
0-2	490 / 3,573 (13.7%)	Ref
3+	407 / 3,257 (12.5%)	0.87 (0.75-1.00)
Antibiotics		
None	258 / 2,364 (10.9%)	Ref
Narrow spectrum	181 / 1,645 (11.0%)	0.93 (0.76-1.14)
Broad spectrum	458 / 2,821 (16.2%)	1.44 (1.22-1.71)
Central venous catheter		
No	137 / 1,389 (9.9%)	Ref
Yes	760 / 5,441 (14.0%)	1.37 (1.18-1.67)

ICU, intensive care unit; VAP, ventilator-associated pneumonia; CI, confidence interval; PPIs, proton pump inhibitors; H2RAs, histamine-2 receptor antagonists; CCI, Charlson Comorbidity Index.

Supplemental Table 2. Antibiotic classes included in the study. Study classification as narrow- versus broad-spectrum was based on Brown *et al.*²²

Antibiotic class	Example	Study Classification
Aminoglycosides	Gentamicin	Narrow-spectrum
Penicillins/ β -lactamase inhibitors	Piperacillin-tazobactam	Broad-spectrum
Carbapenems	Meropenem	Broad-spectrum
Cephalosporins	Cephalexin	Broad-spectrum
Fluoroquinolones	Levofloxacin	Broad-spectrum
Glycylcyclines	Tigecycline	Broad-spectrum
Glycopeptides	Vancomycin	Narrow-spectrum
Lincosamides	Clindamycin	Broad-spectrum
Lipopeptides	Daptomycin	Narrow-spectrum
Macrolides	Clarithromycin	Narrow-spectrum
Monobactams	Aztreonam	Narrow-spectrum
Nitroimidazoles	Metronidazole	Broad-spectrum
Oxazolidinone	Linezolid	Narrow-spectrum
Penicillins	Amoxicillin	Narrow-spectrum
Sulfa-based	Trimethoprim-sulfamethoxazole	Broad-spectrum
Tetracyclines	Doxycycline	Narrow-spectrum