

Table 2. Types of infection and nosocomial pathogens responsible for healthcare-associated infections in ICUs

Microorganisms	VAE	UTI	BSI	SSI	SST	PNE	Other sites	Total
Gram-positive bacteria, n (%)								
Staphylococcus spp.								
<i>S. aureus</i>	110 (44.7)	15 (6.1)	37 (15.0)	41(16.7)	13 (5.3)	8 (3.2)	22 (8.9)	246 (25.0)
<i>Staphylococcus epidermidis</i>	13 (13.0)	5 (5.0)	58 (58.0)	14(14.0)	1 (1.0)	0 (0)	9 (9.0)	100 (10.1)
Co-NS ^a	69 (30.4)	16 (7.0)	88 (38.8)	31(13.6)	2 (0.9)	6 (2.6)	15 (6.6)	227 (23.1)
Streptococcus spp.								
<i>Streptococcus pyogenes</i>	7 (46.6)	1 (6.7)	2 (13.3)	0 (0.0)	1 (6.7)	3 (20.0)	1 (6.7)	15 (1.5)
<i>Streptococcus agalactiae</i>	2 (9.5)	1 (4.7)	8 (38.1)	0 (0)	0 (0)	10(47.6)	0 (0)	21 (2.1)
Group D <i>Streptococcus</i>	1 (1.0)	1(1.0)	2 (2.0)	2 (2.0)	0 (0)	4 (4.0)	0 (0)	10 (1.0)
<i>Streptococcus pneumoniae</i>	9 (75.0)	0 (0)	2 (16.7)	0 (0)	0 (0)	1 (8.3)	0 (0)	12 (1.2)
<i>Streptococcus viridans</i>	3 (42.8)	0 (0)	1 (14.3)	0 (0)	0 (0)	2 (28.6)	1 (14.3)	7 (0.7)
<i>Enterococcus</i> spp.	39 (12.1)	133(41.3)	76 (23.6)	24 (7.4)	14 (4.3)	13 (4.0)	23 (7.1)	322 (32.8)
<i>Corynebacterium diphtheriae</i>	11 (84.6)	0 (0)	1 (7.7)	0 (0)	0 (0)	0 (0)	1 (7.7)	13 (1.3)
Other species ^b	7 (87.5)	0 (0)	0 (0)	1 (12.5)	0 (0)	0 (0)	0 (0)	8 (0.8)
Gram-negative bacteria, n (%)								
<i>Acinetobacter</i> spp.	596 (58.4)	35 (3.4)	114(11.1)	59 (5.8)	102(10.0)	66 (6.5)	48 (4.7)	1020(39.3)
<i>Klebsiella</i> spp.	308 (49.7)	85 (13.7)	83 (13.4)	37 (6.0)	48 (7.7)	27 (4.4)	31 (5.0)	619 (23.9)
<i>Escherichia coli</i>	99 (27.0)	135(36.8)	40 (10.9)	48(13.0)	15 (4.1)	16 (4.3)	14 (3.8)	367 (14.1)
<i>Pseudomonas</i> spp.	189 (47.0)	88 (21.9)	33 (8.2)	27 (6.7)	35 (8.7)	14 (3.5)	16 (4.0)	402 (15.5)
<i>Enterobacter</i> spp.	27 (42.2)	9 (14.1)	13 (20.3)	7 (10.9)	4 (6.2)	2 (3.1)	2 (3.1)	64 (2.47)
<i>Proteus</i> spp.	13 (41.9)	3 (9.7)	1 (3.2)	5 (16.1)	9 (29.0)	0 (0)	0 (0)	31 (1.1)
<i>Stenotrophomonas maltophilia</i>	20 (48.8)	1 (2.4)	17 (41.5)	0 (0)	0 (0)	1 (2.4)	2 (4.9)	41 (1.5)
<i>Chlamydia pneumoniae</i>	10 (47.6)	3 (14.3)	1 (4.8)	2 (9.5)	0 (0)	2 (9.5)	3 (14.3)	21 (0.8)
Other species ^c	9 (34.6)	5 (19.2)	6 (23.1)	3 (11.5)	0 (0)	3 (11.5)	0 (0)	26 (0.9)
Fungi, n (%)								
<i>Candida</i> spp.	68 (13.5)	389 (77.2)	21 (4.2)	9 (1.8)	1 (0.1)	11 (2.2)	5 (1.0)	504 (98.8)
<i>Aspergillus</i> spp.	1 (100.0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (0.2)
Total	1611 (39.5)	925 (22.7)	604 (14.8)	310 (7.6)	245 (6.0)	189 (4.6)	193 (4.8)	4077 (100)

^aIncludes *Staphylococcus saprophyticus*, *Staphylococcus haemolyticus*, *Staphylococcus lugdunensis*, and *Staphylococcus simulans*. Includes *Micrococcus* spp. and *Bacillus cereus*. Includes *Burkholderia* spp., *Citrobacter* spp., *Serratia* spp., *Morganella* spp., and *Salmonella typhi*. BSI = bloodstream infection; Co-NS = coagulase-negative staphylococci; PNE = pneumonia; SSI = surgical site infection; SST = skin and soft tissue infection; UTI = urinary tract infection; VAE = ventilator-associated event.