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International Nosocomial Infection Control Consortium (INICC) report of health care associated infections, data summary of 45 countries for 2015 to 2020, adult and pediatric units, device-associated module (2024) *American Journal of Infection Control*, 52 (9), pp. 1002-1011. Cited 8 times.

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Abstract

Background: Reporting on the International Nosocomial Infection Control Consortium study results from 2015 to 2020, conducted in 630 intensive care units across 123 cities in 45 countries spanning Africa, Asia, Eastern Europe, Latin America, and the Middle East. **Methods:** Prospective intensive care unit patient data collected via International Nosocomial Infection Control Consortium Surveillance Online System. Centers for Disease Control and Prevention/National Health Care Safety Network definitions applied for device-associated health care-associated infections (DA-HAI). **Results:** We gathered data from 204,770 patients, 1,480,620 patient days, 936,976 central line (CL)-days, 637,850 mechanical ventilators (MV)-days, and 1,005,589 urinary catheter (UC)-days. Our results showed 4,270 CL-associated bloodstream infections, 7,635 ventilator-associated pneumonia, and 3,005 UC-associated urinary tract infections. The combined rates of DA-HAIs were 7.28%, and 10.07 DA-HAIs per 1,000 patient days. CL-associated bloodstream infections occurred at 4.55 per 1,000 CL-days, ventilator-associated pneumonias at 11.96 per 1,000 MV-days, and UC-associated urinary tract infections at 2.91 per 1,000 UC days. In terms of resistance, *Pseudomonas aeruginosa* showed 50.73% resistance to imipenem, 44.99% to ceftazidime, 37.95% to ciprofloxacin, and 34.05% to amikacin. Meanwhile, *Klebsiella* spp had resistance rates of 48.29% to imipenem, 72.03% to ceftazidime, 61.78% to ciprofloxacin, and 40.32% to amikacin. Coagulase-negative Staphylococci and *Staphylococcus aureus* displayed oxacillin resistance in 81.33% and 53.83% of cases, respectively. **Conclusions:** The high rates of DA-HAI and bacterial resistance emphasize the ongoing need for continued efforts to control them. © 2024 Association for Professionals in Infection Control and Epidemiology, Inc.

Author Keywords

Antibiotic resistance; Bloodstream infection; Catheter-associated urinary tract infection; Central line-associated bloodstream infections; Developing countries; Device-associated infection; Hospital infection; Limited resources countries; Low income countries; Network; Urinary tract infection; Ventilator-associated pneumonia

Index Keywords

amikacin, carbapenem, cefepime, ceftazidime, ceftriaxone, imipenem, norfloxacin, oxacillin, piperacillin plus tazobactam, vancomycin; adult, antibiotic resistance, Article, artificial ventilation, bacterium isolate, *Candida glabrata*, catheter associated urinary tract infection, catheter related bloodstream infection, coagulase negative Staphylococcus, device infection, Enterococcus faecalis, female, health care cost, healthcare associated infection, hospital infection, hospitalization, intensive care unit, *Klebsiella pneumoniae*, length of stay, major clinical study, male, methicillin resistant Staphylococcus aureus, microbial consortium, middle aged, mortality rate, pediatric hospital, pediatric intensive care unit, prospective study, *Pseudomonas aeruginosa*, public health service, resuscitation, Staphylococcus aureus, urinary tract infection, validation process, ventilator associated pneumonia, Asia, catheter infection, child, cross infection, epidemiology, human, infant, infection control, microbiology, preschool child, prevention and control, procedures; Adult, Asia, Catheter-Related Infections, Child, Child, Preschool, Cross Infection, Female, Humans, Infant, Infection Control, Intensive Care Units, Male, Middle Aged, Pneumonia, Ventilator-Associated, Prospective Studies, Urinary Tract Infections

Chemicals/CAS

amikacin, 37517-28-5, 39831-55-5, 110660-83-8, 1257517-67-1; carbapenem, 83200-96-8; cefepime, 88040-23-7; ceftazidime, 72558-82-8, 73547-61-2, 78439-06-2; ceftriaxone, 73384-59-5, 74578-69-1, 104376-79-6; imipenem, 64221-86-9; norfloxacin, 70458-96-7; oxacillin, 1173-88-2, 66-79-5, 7240-38-2; piperacillin plus tazobactam, 157044-21-8; vancomycin, 1404-90-6, 1404-93-9

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