benefits of vaccination can be realized by employees and employers alike.

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Antimicrobial Resistance Patterns Among Bloodstream Infection Isolates

The empiric treatment of patients with bloodstream infections (BSIs) has become more complicated in an era of increasing antimicrobial resistance. Biedenbach and co-investigators using their SENTRY Antimicrobial Surveillance Program have monitored BSIs from patients in medical centers worldwide since 1997. During 1997–2002, a total of 81,213 BSI pathogens from North America, Latin America, and Europe were tested for antimicrobial susceptibility. *Staphylococcus aureus, Escherichia coli*, and coagulase-negative staphylococci were the three most common BSI pathogens in all three regions each year. Prevalence variability was noted in regions for some species, including higher rates of isolation of *Escherichia coli* in Europe, *Enterococcus* species in North America, and gram-negative enteric and nonenteric species in Latin America. Patient age analysis showed that the most common BSI pathogen among neonates was coagulase-negative staphylococci and among elderly patients, *Escherichia coli.* Resistance among BSI pathogens was much more prevalent in nosocomial infections and in patients in intensive care units; age differences were also noted. Geographically, oxacillin-resistant *S. aureus* (39.1%, 2002) and vancomycin-resistant enterococci (17.7%, 2002) were highest in North America, and extended-spectrum beta-lactamase–producing *Klebsiella* species (35.8%–46.7%) and multidrug-resistant *Pseudomonas aeruginosa* (18.7%, 2002) were highest in Latin America. Activity of commonly used antimicrobial agents remained relatively stable in North America, except in the case of vancomycin-resistant enterococci (20% decline between 1997 and 2002). An epidemiologic investigation of oxacillin-resistant *S. aureus* in North America identified 10 significant clones (ribotypes) and the common resistance patterns associated with them. Surveillance of BSI pathogens is needed to determine trends of resistance and provide useful information regarding patient risk factors and geographic differences.

FROM: Biedenbach DJ, Moet GJ, Jones RN. Occurrence and antimicrobial resistance pattern comparisons among bloodstream infection isolates from the SENTRY Antimicrobial Surveillance Program (1997-2002). *Diagn Microbiol Infect Dis* 2004;50:59-69.