

- tions of nosocomial surgical site infections, 1992: a modification of CDC definitions of surgical wound infections. *Infect Control Hosp Epidemiol* 1992;13:606-608.
15. Gastmeier P, Hentschel J, de Veer I, Obladen M, Rüden H. Device-associated nosocomial infection surveillance in neonatal intensive care using specific criteria for neonates. *J Hosp Infect* 1998;38:51-60.
 16. Culver DH, Horan TC, Gaynes RP, Martone WJ, Jarvis WR, Emori TG, et al. Surgical wound infection rates by wound class, operative procedure, and patient risk index: National Nosocomial Infections Surveillance System. *Am J Med* 1991;91(suppl 3B):152S-157S.
 17. Wilson J, Ward V, Coello R, Charlett A, Sedgwick J, Pearson A. Surveillance of surgical site infection in England: the value of a national scheme. *Infect Control Hosp Epidemiol* 2000;21:148. Abstract.
 18. Gaynes RP. Surgical-site infections and the NNIS SSI risk index: room for improvement. *Infect Control Hosp Epidemiol* 2000;21:184-185.
 19. Jarvis WR, Edwards JR, Culver DH, Hughes JM, Horan T, Emori TG, et al. Nosocomial infection rates in adult and pediatric intensive care units in the United States: National Nosocomial Infections Surveillance System. *Am J Med* 1991;91(suppl 3B):185S-191S.
 20. National Nosocomial Infections Surveillance System, Centers for Disease Control. Nosocomial infection rates for interhospital comparison: limitations and possible solutions. A Report from the National Nosocomial Infections Surveillance (NNIS) System. *Infect Control Hosp Epidemiol* 1991;12:609-621.
 21. Coello R, Charlett A, Sedgwick J, Ward V, Wilson J, Pearson A. Hospital-acquired bacteraemia in England: where to focus preventative measures. *Infect Control Hosp Epidemiol* 2000;21:94. Abstract.
 22. Archibald LK, Gaynes RP. Hospital-acquired infections in the United States: the importance of interhospital comparisons. *Infect Dis Clin North Am* 1997;11:245-255.
 23. Vincent JL, Bihani DJ, Suter PM, Bruining HA, White J, Nicolas-Chanoin MH, et al. The prevalence of nosocomial infection in intensive care units in Europe: results of the European Prevalence of Infection in Intensive Care (EPIC) Study. *JAMA* 1995;274:639-644.

Nosocomial Urinary Tract Infection in Children

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Nosocomial urinary tract infection (NUTI) occurs with varying frequency in children and is thought to be associated with urethral instrumentation. Langley and coinvestigators from Dalhousie University reviewed NUTI to determine whether the frequency of NUTI, associated complications, or presence of a remediable risk factor (instrumentation) justified ongoing routine infection control surveillance.

Prospective surveillance was conducted on all wards 8 months per year, from January 1991 through December 1997, by an infection control nurse coordinator. NUTI was defined by laboratory evidence according to CDC definitions and

detected 48 hours after admission. Urinary catheterization in the previous 7 days was categorized as continuous/indwelling or intermittent.

NUTI was the fifth most common nosocomial infection (129/1375; ~9%) and decreased in frequency during the decade from 0.9 to ~0.6 cases/1,000 patient-days. Incidence was equal among men and women. Only 50% of cases had prior instrumentation of the urinary tract. NUTI occurred disproportionately in newborns and infants ($P < .001$). The most common pathogen was *Escherichia coli* (28%; 38/132), followed by *Candida* species (18%; 24/134), *Enterococcus* (13%; 18/134), gram-negative non-fermenters (13%; 17/132), *Enterobacter* (~10%; 13/134), *Pseudomonas* (9.7%; 13/134), and other pathogens (16%; 22/134). Three cases of secondary bacteremia occurred (2.3%; 95%

confidence interval, 0.5-6.6); there was no mortality.

The authors conclude that NUTI poses a less significant burden of illness (incidence, associated morbidity) than other nosocomial infection in children. If resources do not permit hospitalwide surveillance, high-risk children with urethral instrumentation and newborns and infants could be targeted. Although *E coli* remains the most common cause of pediatric NUTI, fungi have become the second most common pathogen in this tertiary-care population. Risk factors for NUTI in non-catheterized children remain to be delineated.

FROM: Langley JM, Hanakowski M, Leblanc JC. Unique epidemiology of nosocomial urinary tract infection in children. *Am J Infect Control* 2001;29:94-98.