

Medical News

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Back to Quarantine: Man With TB Jailed for Infecting Family

A man with active TB was arrested and jailed in a special cell after violating a county-ordered quarantine and infecting his grandchildren. The 54-year-old man was quarantined to his apartment in Stockton, California, 2 years ago and ordered to stay away from everyone except his wife, who chose to risk infection and live with him. The San Joaquin Health Department even paid the rent for the apartment, but one of his nurses alerted authorities after seeing one of his grandchildren go into the apartment. Tests showed that his 1-year-old grandson and 2-year-old granddaughter were infected with the same strain of multidrug-resistant *Mycobacterium tuberculosis*.

Police arrested the man on charges of violating an official health order, a misdemeanor that carries up to 1 year in jail. In addition, his son and daughter-in-law face the same charges and child-endangerment charges. The man was being held in one of San Joaquin County's half-dozen negative-airflow rooms. He is allowed no visitors except for nurses.

FROM: Man With TB Jailed. *The Orange County (California) Register* April 10, 1999: B2.

Nosocomial Infections in Pediatric ICUs

According to Richards and coinvestigators from CDC's Hospital Infections Program, patient and ICU characteristics suggest that the pattern of nosocomial infections in pediatric ICUs may differ from that seen in adult ICUs. Data were collected between January 1992 and December 1997 from 61 US pediatric ICUs on 110,709 patients with 6,290 nosocomial infections.

Primary bloodstream infections ([BSIs] 28%), pneumonia (21%), and urinary tract infections ([UTIs] 15%) were most frequent and were almost always associated with use of an invasive device. Primary BSI and surgical-site infections were reported more frequently in infants aged 2 months or less as compared with older children. UTIs were reported more frequently in children >5 years old compared with younger children. Coagulase-negative staphylococci (38%) were the most common bloodstream isolates, and aerobic gram-negative bacilli were reported in 25% of primary BSIs. *Pseudomonas aeruginosa* (22%) was the most common species reported from pneumonia and *Escherichia coli* (19%) from UTIs. *Enterobacter* species were

isolated with increasing frequency from pneumonia and were the most common gram-negative isolates from BSIs. Device-associated infection rates for BSIs, pneumonia, and UTIs did not correlate with length of stay, number of beds in the hospital, or season, and thus appeared to be the best rates currently available for comparisons between units.

FROM: Richards MJ, Edwards JR, Culver DH, Gaynes RP. Nosocomial infections in pediatric intensive care units in the United States. *Pediatrics* 1999;103:39-41.

Colonization With Resistant Organisms in Pediatric ICU

Toltzis and coinvestigators from Case Western Reserve University School of Medicine conducted a study to predict which patients hospitalized in a pediatric ICU are colonized with antibiotic-resistant gram-negative rods on admission. A questionnaire was completed by the parent or guardian. Nasopharyngeal and rectal cultures were obtained on each of the first 3 days of ICU admission, and organisms resistant to ceftazidime or tobramycin were identified. Only clonally distinct organisms, as confirmed by pulsed-field gel electrophoresis, were analyzed.

In 64 (8.8%) of 727 admissions, an antibiotic-resistant gram-negative bacillus was isolated within the first 3 ICU days. More than one half were identified on the day of admission. Colonization was associated with two factors related to the patient's medical history: number of past ICU admissions (1.98 vs 0.87) and administration of intravenous antibiotics within the past 12 months (67.9% vs 28.2%). No association was found between colonization and exposure to oral antibiotics. Residence in a chronic-care facility was strongly associated with colonization (28.3% vs 2.6%); exposure to a household contact who had been hospitalized in the past 12 months also predicted colonization (41.7% vs 18.5%).

The authors suggested that a profile could be established characterizing children colonized with resistant gram-negative bacilli before admission to a pediatric ICU. Infection control measures may help to contain these potentially dangerous bacteria once they have been introduced into the unit.

FROM: Toltzis P, Hoyer C, Spinner-Block S, Salvator AE, Rice LB. Factors that predict preexisting colonization with antibiotic-resistant gram-negative bacilli in patients admitted to a pediatric intensive care unit. *Pediatrics* 1999;103(4 Pt 1):719-723.