

Letters to the Editor

Parents as a Vector for Nosocomial Infection in the Neonatal Intensive Care Unit

To the Editor:

The frequency of multiple births is increasing.¹ Multiple gestations are more likely to result in premature birth and problems associated with prematurity. This may result in newborn siblings being admitted to the neonatal intensive care unit (NICU) simultaneously. We report two situations where the parent appeared to transfer or be the source of an organism that infected multiple siblings.

Case 1. Siblings A1, A2, and A3 were born by cesarean section at 25 weeks gestation, after the mother developed premature rupture of membranes for baby A1. Placenta A1 showed evidence of chorioamnionitis, but cultures were negative. Each infant weighed less than 1,000 g. Different nurses cared for each infant in three different rooms of our five-room NICU. Resident and attending physicians were the same for all three infants; however, the physicians could not recall moving directly from one sibling to another.

Baby A2 developed sepsis and died on day 14 of life. *Pseudomonas aeruginosa*, an unusual isolate in our NICU,² was grown from premortem blood, postmortem blood, and sputum specimens. The mother held the infant after its death. Infant A1 developed necrotizing enterocolitis on day 19 of life and had positive endotracheal cultures for *P. aeruginosa* on the same day. Subsequently, stool cultures were intermittently positive for *P. aeruginosa*. In association with necrotizing enterocolitis, the infant developed enterocutaneous fistulae that intermittently drained stool.

Infant A3 had multiple problems due to prematurity but had stabilized before suddenly deteriorating on day 46. This infant died 24 hours later and had postmortem cultures of lung, liver, and spleen positive for *P. aeruginosa*. Genomic DNA was analyzed per protocol on a GenePath contour-clamped homogeneous-field apparatus (Bio-Rad, Hercules, CA). Finger-

printing analysis was performed using the GelDoc1000 and Molecular Analyst restriction fragment-length polymorphism software (BioRad, Hercules, CA). The pulsed-field gel electrophoresis fingerprint for all three *Pseudomonas* isolates was identical.

Case 2. Siblings B1, B2, and B3 were born by cesarean section at 29 weeks. On day 29 of life, baby B1 developed *Staphylococcus aureus* bacteremia and expired. On day 52 of life, baby B2 developed *S. aureus* conjunctivitis that was treated topically. *S. aureus* is an uncommon isolate in our NICU. The father of these infants had a chronic open wound with prior cultures positive for *S. aureus*. He visited the children several times a week. Pulsed-field gel electrophoresis typing of the isolates from babies B1 and B2 and the father's wound were identical.³

These cases underscore the possibility that parents can transfer organisms from patient to patient or serve as the source of a common-source outbreak in the hospital setting when the patients are siblings. Parents are encouraged to interact with their newborns in most NICUs. In our NICU, care providers and parents perform a 2-minute scrub with antimicrobial soap before entering. Care providers wash their hands after each activity associated with possible contamination of their hands. However, in the past, we did not require parents to wash their hands after contact with an infant. Parents must be instructed and monitored in hand washing between siblings. Alcohol hand rubs may facilitate compliance.⁴

Our findings have implications for other NICU practices. Sharing of items, such as toys, between siblings should be discouraged. Co-bedding should be reserved for near-term infants who are not critically ill and who are free of drains, tubes, and colonization or infection with pathogenic organisms.

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The Economic Impact of Influenza in a University Hospital Setting

To the Editor:

Nursing home residents and hospitalized persons are at increased risk of influenza-related complications. Institutional outbreaks likely occur frequently but may not be recognized or reported. Influenza infections among healthcare workers not only result in substantial work absenteeism but also serve as sources of infection for patients, whereas viral shedding is normally reduced in vaccinees.

We wanted to determine the impact of influenza and influenza-like illness (ILI) in hospital employees in the University Hospital of Zurich.

This was a cross-sectional and observational study. We drew a randomized sample of 200 employees from the hospital's telephone registry, covering a total of 5,525 employees. The sampled individuals were contacted by telephone after the 1999/2000 influenza season between February 18 and March 17, 2000, and asked to give information on ILI experienced during the period between November 1, 1999, and the date of the telephone interview (the observation