

Regional One Health

Protecting the Most Vulnerable: NICU Infection Surveillance

Problem Identified

The appearance of gram negative central-line associated bloodstream infections (CLABSIs) in the neonatal intensive care unit (NICU) occurred from late fall 2012 to early winter 2013. Preventing CLABSIs in critically ill newborn infants is essential for their survival.

Interventions

Leading an interdisciplinary team, the infection prevention and control department conducted an in-depth outbreak investigation. Among other elements, it examined the physical environment, cleaning protocols and practices, and patient care protocols and practices.

Leadership and Patient Engagement

Key participants included the infection preventionist, hospital epidemiologist, chief of pediatrics, chief nursing officer, NICU nurse manager, NICU nurse educator, materials management manager, and environmental services manager.

Outcomes

The outbreak investigation identified opportunities for improvement. The most important was the product used for cleaning intravenous ports. The rise in gram negative CLABSIs was traced to alcohol as the cleaning agent. Changing to Prevantix (3.15% CHG) resulted in a precipitous drop in gram negative CLABSIs. Since July 2013, there have been no gram negative CLABSIs in the NICU—a direct result of switching to Prevantix for cleaning intravenous ports.

Lessons Learned

Three main lessons were learned. First, the infection preventionist is a critical member of the care-giving team. Second, changes in care protocols should be vetted by an interdisciplinary team for impact on patient outcomes prior to making a change. Third, the use of interdisciplinary teams as a problem-response technique facilitates a rapid and comprehensive response.

Strategies for Successful Replication

This approach can be replicated or modified to address problems in other areas of the organization. The main elements are constant surveillance of key patient outcome metrics; rapid establishment of an appropriate interdisciplinary team; and engaged leadership to ensure momentum.

