Pediatric-specific research needed to reduce health care-associated infections among children

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There are differences between adult and pediatric patients regarding the appropriate treatment and prevention efforts for health-care associated infections, highlighting a need for pediatric-specific quality measures to guide infection prevention and treatment practices, according to a commentary in the April 13 issue of *JAMA*, a theme issue on infectious disease and immunology.

Camille Sabella, M.D., of the Cleveland Clinic Children's Hospital, presented the commentary at a *JAMA* media briefing at the National Press Club in Washington, D.C.

Dr. Sabella and commentary co-author Charles B. Foster, M.D., of the Cleveland Clinic Children's Hospital, write that the rates of central line-associated bloodstream infections (CLABSI), surgical site infections (SSI), and respiratory viral infections differ between children and adults, reflecting the unique susceptibilities of each population. The U.S. Centers for Disease Control and Prevention/National Healthcare Safety Network surveillance definitions for health-care associated infections (HAI) in children and adults are in general the same, differing slightly for patients 1 year or younger. "The commonality of definitions, however, belies the fact that children and adults differ in both susceptibility to infection and in the steps necessary to prevent these infections. Furthermore, identification of pediatric-specific risk factors for infection and the solutions needed to reduce pediatric HAI have not been well investigated."

The authors cite central line-associated bloodstream infections as a primary example of an HAI that requires different strategies between adults and children to reduce the rate of this infection, and that there are unique considerations involved in the prevention of CLABSI in pediatric patients.

The Surgical Care Improvement Project (SCIP) is a national quality improvement project to reduce surgical complications. Six of the 9 publicly reported SCIP measures focus on reducing SSI. Although several of the SCIP measures to reduce infection are appropriate for children, some measures are intended for adults. "It is perhaps not surprising that SCIP measures, and the requirement for hospitals to track and report SCIP adherence, do not apply to patients younger than 18 years. What is surprising is that similar measures are not in place for prevention of SSI in children," the authors write. "To separately address the issue of HAI in children is essential, and equal resources and energy must be devoted to the pediatric effort."

According to Drs. Sabella and Foster, to fully reduce HAI in infants and children, quality and patient safety efforts need to directly address the problem of HAI in a pediatric-specific manner. Appropriate resources need to be devoted to pediatric

infection prevention efforts, to define problems, and to support collaborative efforts to create meaningful solutions. They cite collaborative organizations such as the National Association of Children's Hospitals and Related Institutions collaborative, the Vermont Oxford Network (a neonatal collaborative), and the Ohio Solutions for Patient Safety, that provide children's hospitals with a forum to work together to reduce HAI and, more generally, to improve patient safety. "Regardless of whether a child receives care in a free-standing children's hospital, a pediatric hospital within a hospital, or a community hospital, hospitals and clinicians should be expected to participate in these collaborative efforts, develop and implement population-specific best practices, and develop cultures of openness that encourage internal reporting and the identification and tracking of all hospital-associated events of harm, not just HAI"

The authors write that much remains to be done to develop and disseminate effective methods for preventing HAI in children. "Precise definitions need to be established, rigorous research needs to be performed, and best practices need to be identified, agreed upon, and implemented. The expectation that adult criteria and practices can be used to define, track, and eliminate HAI in children is problematic. Legislative policies should reward and encourage the development and implementation of population-specific best practices to promote patient safety without stifling internal surveillance and quality improvement efforts. Health care-associated infections in children need to be studied in a systematic manner, collaborating efforts need to take place to develop and introduce best practices, and the resources devoted to the task by funding agencies and hospitals need to be equitable."

SOURCE [1]

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