Background

Bronchiolitis is the leading cause of hospitalization in children. Approximately 3% of infants under a year of age are admitted annually, with charges exceeding 1 billion dollars per year. In 2006, the American Academy of Pediatrics (AAP) published an evidence based clinical practice guideline (CPG) on the diagnosis and management of bronchiolitis which advocates for clinical diagnosis and primarily supportive care for this self-limited illness. Specifically the CPG recommends against the routine use of CXRs, bronchodilators, steroids, chest physiotherapy, antibiotics, and continuous pulse oximetry, while advocating for tobacco smoke exposure screening and intervention. Most of the published QI work has been concentrated in freestanding children’s hospitals whereas the majority of children’s care is still delivered in community settings. Little progress has been made in translating lessons learned in academic settings to the settings where most care is delivered in pediatrics. In response to this dichotomy, the Value in Inpatient Pediatrics (VIP) Network was formed to facilitate implementation of effective QI interventions across the range of locations where children are hospitalized. Bronchiolitis was chosen as a focus for this group due to its high volume and the availability of an evidence-based guideline.

This project, A Quality Collaborative for Improving Hospitalist Compliance with the AAP Bronchiolitis Guideline (BQIP), encouraged participation by an interdisciplinary team involving physicians (hospitalist), nurses, pediatric floor staff and respiratory therapists. As a virtual-only collaborative, the 21 participating hospital sites submitted two seasons (January, February and March 2013, January, February and March 2014) of bronchiolitis chart review data, engaged in monthly webinars and virtual educational learning sessions.

AIM

The specific aim of this project was to improve the care of children hospitalized with bronchiolitis by increasing compliance with the AAP clinical practice guideline by the end of the 9 month action period, with the following pre-specified goals:

1) decrease the overall usage of bronchodilators by 50%;
2) decrease the overall usage of systemic corticosteroids by 50%;
3) decrease the overall usage of chest physiotherapy by 50%;
4) decrease overall usage of chest radiography by 50%;
5) achieve 90% compliance with the usage of an “objective method of assessment” of response to bronchodilators;
6) achieve 90% compliance with the implementation of an institutional policy on conversion from continuous pulse oximetry to intermittent pulse oximetry when children no longer require supplemental oxygen;
7) achieve 90% compliance with screening and intervention for secondhand smoke exposure.

The BQIP Expert Group

Pediatric hospitalists working in multidisciplinary teams can successfully implement quality improvement even in community hospitals which lack robust QI support. Low-resource virtual collaborations have a role in translating QI successes from academic children’s hospitals to community hospitals.

For more information on BQIP visit: www.aap.org/quiin/vipbqip

Conclusions

From left to right: Jeanann Pardue, MD, FAAP, Alan Schroeder, MD, FAAP, Charles G. Macias, MD, MPH, FAAP, Matthew D. Garber, MD, FHM, FAAP, Shawn Ralston, MD, MS, FAAP, Grant M. Mussman, MD, FAAP, Liz Rice-Conboy, MS, Christopher Conteza, MD, FAAP