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Impact of a National Guideline on Antibiotic Selection for Hospitalized Pneumonia.

Derek J Williams

Matthew Hall

Jeffrey S Gerber
George Washington University

Mark I Neuman

Adam L Hersh

See next page for additional authors

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Authors

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20 (71%) implemented a new order set. By the end of the study and compared with pre-guideline trends, we noted an absolute increase in penicillin use of 27.6% (95% CI: 23.7%–31.5%) [Figure 1]. Cephalosporin use declined by a similar magnitude (not shown). Prescribing changes varied across hospitals [Figure 2]. Among hospitals implementing a CPG or order set, the median difference was 29.5 [IQR 19.6, 39.1] for penicillins, while among hospitals without local activities, the median difference was 20.1 [9.5, 44.5]; these differences were not statistically significant.

1916. Antibiotic Use for Children with Pneumonia: Sustained Adoption of National Guidelines at United States Children's Hospitals

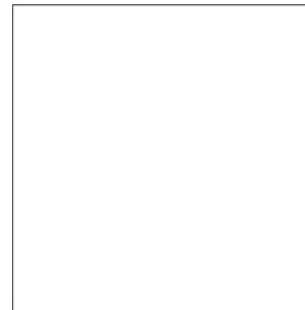
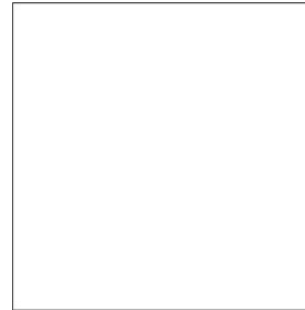
Derek J. Williams, MD, MPH¹; Matthew Hall, PhD²; Jeffrey S. Gerber, MD, PhD³; Mark Neuman, MD⁴; Adam L. Hersh, MD, PhD⁵; Thomas Brogan, MD⁶; Kavita Parikh, MD⁷; Sanjay Mahant, MD⁸; Anne J. Blaschke, MD, PhD, FIDSA, FPIDS⁹; Samir Shah, MD, MSCE¹⁰; Carlos G. Grijalva, MD, MPH¹¹; ¹Pediatrics, Vanderbilt University School of Medicine, Nashville, TN; ²Children's Hospital Association, Kansas City, Missouri; ³Department of Pediatrics, Division of Infectious Diseases, The Children's Hospital of Philadelphia, Philadelphia, Pennsylvania; ⁴Boston Children's Hospital, Boston, Massachusetts; ⁵University of Utah School of Medicine, Salt Lake City, Utah; ⁶Seattle Children's Hospital, Seattle, Washington; ⁷Children's National Health System, Washington, District of Columbia; ⁸Pediatrics, The Hospital for Sick Children, Toronto, Ontario, Canada; ⁹Department of Pediatrics, Division of Pediatric Infectious Diseases, University of Utah School of Medicine, Salt Lake City, Utah; ¹⁰Division of Hospital Medicine, Cincinnati Children's Hospital Medical Center, Cincinnati, Ohio; ¹¹Department of Health Policy, Vanderbilt University Medical Center, Nashville, Tennessee and Pediatric Research in Inpatient Settings (PRIS) Network

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Background. Consensus national guidelines (2011) recommend narrow-spectrum penicillins (penicillin, ampicillin, amoxicillin) for children hospitalized with uncomplicated pneumonia. Prior to guideline release, most hospitalized children received second/third generation cephalosporins. We assessed the impact of the national guideline and subsequent hospital-level interventions on antibiotic choice across a national sample.

Methods. We identified children 6 months to 18 years from 28 children's hospitals admitted between August 2009 and March 2015 with a diagnosis of pneumonia and who received antibiotics within the first 2 hospital days. Each hospital was surveyed regarding local activities implemented after guideline release (e.g. clinical practice guideline [CPG]). Outcomes included the monthly percentage of children receiving penicillins or cephalosporins. Interrupted time series analysis was used to assess the national guideline impact by comparing the absolute change in prescribing at the end of the study ([observed % from post-guideline trend] – [expected % from pre-guideline trend]) aggregated across all hospitals. Hospital-level analyses assessed the impact of local activities.

Results. A total of 58,559 pneumonia hospitalizations were included. Prior to the national guideline, penicillin use was rare (<10%); cephalosporins accounted for ~60% of prescribing. After guideline release, 19 hospitals (68%) implemented a new CPG and



Conclusion. Antibiotic prescribing for pneumonia changed substantially after release of a national guideline, although institutional adoption varied. Local implementation efforts may enhance appropriate antibiotic selection, but room for improvement remains.

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