

Improving Adherence to Otitis Media Guidelines with Clinical Decision Support and Physician Feedback

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OBJECTIVE: To assess the effects of electronic health record-based clinical decision support (CDS) and physician performance feedback on adherence to guidelines for acute otitis media (AOM) and otitis media with effusion (OME).

METHODS: We conducted a factorial-design cluster randomized trial with primary care practices (n = 24) as the unit of randomization and visits as the unit of analysis. Between December 2007 and September 2010, data were collected from 139,305 otitis media visits made by 55,779 children aged 2 months to 12 years. When activated, the CDS system provided guideline-based recommendations individualized to the patient's history and presentation. Monthly physician feedback reported adherence to guideline-based care, changes over time, and comparisons to others in the practice and network.

RESULTS: Comprehensive care (all recommended guidelines were adhered to) was accomplished for 15% of AOM and 5% of OME visits during the baseline period. The increase from baseline to intervention periods in adherence to guidelines was larger for CDS compared with non-CDS visits for comprehensive care, pain treatment, adequate diagnostic evaluation for OME, and amoxicillin as first-line therapy for AOM. Although performance feedback was associated with improved antibiotic prescribing for AOM and pain treatment, the joint effects of CDS and feedback on guideline adherence were not additive. There was marked variation in use of the CDS system, ranging from 5% to 45% visits across practices.

CONCLUSIONS: Clinical decision support and performance feedback are both effective strategies for improving adherence to otitis media guidelines. However, combining the 2 interventions is no better than either delivered alone.

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