Clinical practice guidelines (CPGs) attempt to maximize the quality, efficiency, and cost-effectiveness of care delivered to patients by incorporating evidence-based recommendations into daily management. These can be developed on a national or professional society level, or they can be local endeavors. Resource availability, institutional culture, and local practice patterns can significantly impact local guideline development, resulting in marked heterogeneity between institutions. The article by Neuman et al in this issue of Pediatrics describes the variety of CPGs developed by freestanding children’s hospitals for the diagnosis and treatment of community-acquired pneumonia (CAP). Participating hospitals used either no local CPG or had implemented various measures regarding diagnosis and management that, when compared between institutions, sometimes directly conflicted. The resulting analyses reflect the lack of impact one would expect with such variation. Only the most consistent recommendations—those that suggested specific antimicrobial regimens—demonstrated clinically significant differences between institutions that use or do not use CPGs. This is concerning, given that pediatricians, including trainees, use local CPGs more often than national guidelines for medical decision-making.

National guidelines ideally serve to reduce unnecessary differences in resource use between providers and health care organizations. Expert panels sift through the morass of available data and expert opinion to find the pearls of best practice that providers will find useful and that will give maximal benefit to patients. Freed from the limitations of local resource and practice pattern constraints, such large-scale guidelines can provide a menu of diagnostic and treatment options and their relative levels of evidentiary support. This allows practitioners in diverse situations to optimally treat their patients by using a variety of recommended strategies. Equally important, national guidelines deliver prescriptions against outdated, ineffective, or harmful management practices, and they ideally foster treatment standardizations that result in outcome and cost benefits. However, the challenges to developing national guidelines and achieving actual improvements in patient care are identical to those for local CPGs: (1) finding sufficient evidence to validate recommendations, (2) demonstrating that guideline suggestions actually improve patient care, and (3) determining the optimal strategy for guideline dissemination and implementation. Multiple previous CPGs, although touted as instruments for cost savings and higher-quality care, have faced significant obstacles to implementation or have not resulted in the desired improvement in outcomes.

In 2011, the Infectious Diseases Society of America and the Pediatric Infectious Diseases Society jointly published a national guideline on CAP management in infants and children >3 months of age. The purpose of this guideline was to improve consistency of care nationally and to drive...
care toward an evidence- and quality-based model. There is outstanding evidence for inconsistent management of pneumonia in children and that this inconsistency leads to variability in the quality of care delivered for patients. In a review of >21,000 patients from 29 US children’s hospitals, both testing and antimicrobial choice varied widely. Increased testing was associated with increased length of stay, but not 14-day readmission rate, and despite evidence for efficacy of penicillins for pediatric CAP, broad-spectrum antibiotic use predominated. The concept behind the national guidelines was that a unified, evidence-based information source could assist in decision-making, reduce practice variability, and lead to improved health outcomes.

Neuman et al’s article provides insight into implementing CPGs by describing various methods that hospitals used to execute their own local CPGs. Some developed educational campaigns, which previous studies have demonstrated provide limited benefit. Several institutions used electronic interventions, including clinical decision aids or changes to order-entry systems, which have been shown to improve management in other common conditions. Antibiotic stewardship programs at some institutions provided prospective audit and feedback services as well as educational outreach. These likely contributed to changes in institutional antibiotic prescription practices, and this technique is supported by a growing body of evidence. However, it is unlikely that any single method will prove sufficient to changing physician practice, and measuring the impact of these interventions can be problematic. We have proposed previously that developing quality metrics based on national CPGs for bronchiolitis can be used to evaluate physician practice patterns when the outcomes of interest are measurable and have high goal adherence rates. Similarly, developing quality metrics based on specific recommendations from the 2011 CAP guidelines may prove useful in implementing a comprehensive quality improvement initiative by providing relevant, individual, and actionable data to physicians as a means of changing practice patterns.

Regardless of the strategies employed, using CPGs is a local endeavor, subject to the constraints of resources and institutional culture. It also remains a fundamentally iterative process, requiring ongoing cycles of implementation, measurement, reassessment, revision, and reimplementation to achieve maximal desired effect. Neuman et al’s article provides a glimpse at the menu of interventions available to physicians and health care organizations for improving the care of children hospitalized for CAP. These insights will prove useful moving forward nationally to implement the 2011 CAP guidelines.

REFERENCES


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