Streamlining Asthma Care with Decision Support Tools
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Problem:
Asthma is a chronic condition that affects over 500,000 children in Texas, and ranks high amongst conditions that require hospital admissions.

Evidence:
In 2003, Texas Children’s Hospital (TCH) implemented an In-Patient Asthma Protocol with paper order sets to reduce variability in asthma care. To address the demands for greater efficiency and evidence based care, TCH garnered support from a multi-disciplinary team to develop an evidence-based practice (EBP) guideline with order sets for emergency and in-patient care.

Strategy:
The Joint Commission requests tracking of a quality metric of home management plans for patients discharged from an inpatient visit at children’s hospitals. An Asthma Action Plan (AAP) was embedded in the existing EBP guideline for TCH physicians. In 2011, TCH implemented an electronic medical record with computerized physician order entry that included clinical decision support tools to increase the utilization of AAPs.

Practice Change:
Data was extracted from EPIC to determine how well TCH physicians complied with the EBP asthma guideline.

Evaluation:
Overall length of stay and charges per case were tracked. Rates of utilization were assessed by comparing the number of in-patients discharged with a diagnosis of 493.xx to the sum of patients that were assigned an AAP before being discharged.
**Results:**
The implementation of standardized decision support tools for asthma diagnosis and treatment decreased length of stay from 3 to 2 days. The average charge per case decreased by 11% from FY07 to FY10. For FY11, 596 in-patients were discharged with a diagnosis of asthma. 90% of those patients received an AAP as part of the care provided by TCH. This rate of compliance is a 19% improvement from rates in FY10.

**Recommendations:**
Ongoing evaluations are needed to provide up-to-date feedback on non-compliant AAPs.

**Lessons Learned:**
Clinical decision support tools can minimize variations in asthma care and reduce expenditures in healthcare costs.

**Bibliography:**
