Cooperative Inner-City Asthma Study (NCICAS) and the Inner-City Asthma Study (ICAS).

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Practice Variation in Management of Childhood Asthma Is Associated With Outcome Differences

Garbutt JM, Yan Y, Strunk RC. *J Allergy Clin Immunol Pract*. 2016;4(3):474–480

PURPOSE OF THE STUDY. To determine how variation in preventive and acute care approaches to asthma in pediatric primary care practices affects patient outcomes.

STUDY POPULATION. The study included 948 children from 22 community-based primary care practices with a physician diagnosis of asthma and evidence of bothersome asthma within the past year.

METHODS. The data for this study were obtained over the year prior to participant entry into a trial. Inclusion criteria included 1 of the following indicators of bothersome asthma: (1) prescription for daily controller medicine; (2) ≥1 acute asthma exacerbation requiring an unscheduled office visit and a course of oral steroids, emergency department (ED) visit, or hospitalization; or (3) persistent asthma symptoms. Data on practice-level measures (≥1 asthma maintenance visit/year) and acute care (≥1 acute asthma visit/year) were collected over a 12-month period by chart review and telephone interviews with parents. Relationships between practice-level measures and individual asthma outcomes (symptom-free days, parental quality of life, emergency department visits, and hospitalizations) were evaluated using generalized estimating questions, adjusting for seasonality, specialist care, Medicaid insurance, single-family status, and race.

RESULTS. For every 10% increase in the proportion of children in the practice receiving preventive care, symptom-free days increased by 7.6 days ($P = .02$), and ED visits per child decreased by 16.5% ($P = .002$). There was no difference in hospitalizations or parental quality of life. In the adjusted analysis, only the association between preventive care and fewer ED visits persisted (12.2% reduction; $P = .03$). For every 10% increase in acute care provision, ED visits and hospitalizations decreased by 18.1% ($P = .02$) and 16.5% ($P < .001$), respectively, and this persisted in adjusted analyses (ED visits, 8.6% reduction; $P = .02$; hospitalizations, 13.9% reduction; $P = .03$).

CONCLUSIONS. This study found that practices providing more preventive and acute asthma care had improved outcomes in both impairment and risk. The outcomes suggest that practice-level interventions to increase both preventive and acute asthma care could reduce asthma disparities.

REVIEWER COMMENTS. National asthma guidelines recommend a collaborative partnership between families and their physicians, with regular asthma maintenance care visits (at least 2 visits/year) to monitor and adjust the treatment plan as needed and to provide education and support for asthma management. This large, multicenter study of both urban and suburban primary care practices revealed a large variation in asthma care, and this variation is associated with differences in outcomes. The study highlights the fact that routine preventive care leads to improved asthma outcomes, including decreased impairment (more symptom-free days) and risk (fewer ED visits). The results suggest that focused efforts to improve practice-level preventive and acute care for childhood asthma may be effective in improving outcomes and reducing disparities.

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Practice Patterns in Medicaid and Non-Medicaid Asthma Admissions

Silber JH, Rosenbaum PR, Wang W, et al. *Pediatrics*. 2016;138(2):e20160371

PURPOSE OF THE STUDY. To evaluate any differences in practice patterns between Medicaid and non-Medicaid patients admitted for asthma at 40 Children's Hospital Association hospitals that contribute to the Pediatric Hospital Information System database.

STUDY POPULATION. This cohort consisted of 17 739 matched pairs of children (Medicaid and non-Medicaid) admitted for asthma at the same institution between April 1, 2011, and March 31, 2014.

METHODS. A matched-cohort design was used, matching pairs of Medicaid and non-Medicaid children admitted to the same hospital for age, sex, asthma severity, and other patient factors.

RESULTS. The median cost for Medicaid patients was higher than for non-Medicaid patients ($4263 vs $4160; $P < .001$), but the median cost difference between matched pairs was $84 (95% CI $44–$124). The costs for admissions at the 90th percentile were comparable ($10 710 vs $10 948; $P < .07$). Length of stay (LOS) was similar, and rates of ICU admission were comparable (10.1% vs 10.6%; $P = .12$).

CONCLUSIONS. In a closely matched cohort of children within the same hospital, Medicaid status did not significantly impact expenses, LOS, or ICU utilization.

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