



Few Children in HUSKY A Received Care After An Emergency Visit or Hospitalization for Asthma

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Pediatric asthma is a chronic disease that affects a growing number of children in the United States. In 1999, 3.1 million children under 14 reportedly had an episode of asthma or an asthma attack in the preceding 12 months.¹ Treatment for asthma resulted in almost 3.5 million office or hospital outpatient department visits (about 60 per 1,000 children 0-14). Many children required acute care: children with asthma made over 650,000 emergency department visits; almost 200,000 hospitalizations occurred in 1999. Pediatric asthma disproportionately affects low-income and minority children.

Pediatric asthma is an ambulatory care sensitive condition, that is, for many children, symptoms can be managed and acute problems avoided through high quality primary and specialty care, use of appropriate therapies and family education. National Heart, Lung, and Blood Institute (NHLBI) "Guidelines for the Diagnosis and Management of Asthma" advise providers on all aspects of care, including timely follow-up of patients who have been seen for emergency care or hospitalized. In order to assess continuing symptoms and effectiveness of prescribed therapy, NHLBI recommends scheduling an appointment with a primary care clinician or asthma specialist within 7 days of discharge from the emergency department or hospital admission.

In order to investigate this one aspect of the quality of care provided by hospitals, health care providers, and health plans, the Children's Health Council studied ambulatory care follow-up of children in HUSKY A who were seen for emergency care or hospitalized for treatment of asthma.²

Methods

Using HUSKY A enrollment data, children under 21 who were continuously enrolled in HUSKY A between October 1, 2000, and September 30, 2001, were identified. HUSKY A encounter data for dates of service that fell within the study year were searched for outpatient, inpatient, and emergency care records

accompanied by a primary or other diagnosis of asthma (ICD-9-CM code 493.0-493.9). Encounter data were searched for records corresponding to any office or clinic visit and for office or clinic visits with a primary diagnosis of asthma or an asthma-related condition that occurred within 2 weeks and within 4 weeks after the first emergency care visit or hospital discharge for each child.^{3, 4} The percentages of children who had ambulatory care follow-up after an emergency visit or discharge were determined. In order to identify children at greatest risk for no follow-up and to determine the relative effectiveness of health plans and their provider networks, the odds of having had follow-up by 2 weeks were calculated while controlling for age, gender, race/ethnicity, primary language, residence, and health plan.

Results

In FFY 2001, 130,998 children under 21 were continuously enrolled in HUSKY A, including 12,365 children who received care for which an asthma diagnosis was reported (estimated asthma prevalence: 9.4%).

Emergency Care

There were 3,465 children (28.0%) who had at least one emergency visit for treatment of asthma. This rate represents a significant increase from the emergency visit rates observed in previous years. The adjusted odds of having had emergency care were over 60% higher for children in Community Health Network, Health Net and children who changed plans, compared to children in BlueCare Family Plan (reference level).⁵ The likelihood of having had an emergency visit was nearly 5 times higher for children in Preferred One.

Overall, just 20% of the emergency visits were followed within two weeks by office or clinic visits for asthma or related conditions (Table 1). Follow-up rates varied by health plan, ranging from 27% for children in BlueCare to 6% for children in Preferred One. The percent with follow-up increased slightly by 4 weeks. The odds of

having had follow-up after emergency visits were 50% lower for children in Community Health Network, 35% lower for children in Health Net, and 90% lower for children in Preferred One, compared to children in BlueCare Family Plan (reference level).⁶

Hospitalization

There were 575 children (4.7%) who were hospitalized at least once for treatment of asthma, a rate that was essentially unchanged from previous years. The odds of having been hospitalized were 35% higher for children in Health Net and 75% higher for children in Preferred One, compared to children in BlueCare Family Plan (reference level).⁷

Overall, 41% of hospital discharges were followed within two weeks by office or clinic visits for asthma or related conditions (Table 1). Follow-up rates varied by health plan, ranging from 50% for children in BlueCare to 8% for children in Preferred One. The percent with follow-up increased at four weeks. The odds of having had follow-up after discharge were 90% lower for children in Preferred One, compared to children in BlueCare Family Plan (reference level).⁸

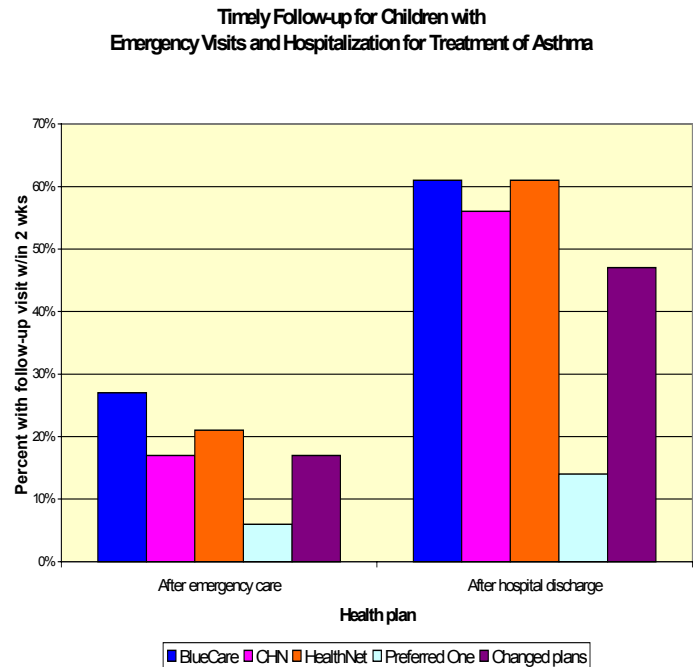
	Visit for asthma or related condition	Any primary care visit
Children seen for emergency care:		
Visit within 2 weeks	20%	34%
Visit within 4 weeks	24%	44%
Children who were hospitalized:		
Visit within 2 weeks	41%	54%
Visit within 4 weeks	44%	62%

Effect of race/ethnicity

There were also remarkable differences in asthma-related care utilization associated with race/ethnicity. Compared to White children with asthma, Hispanic children with asthma were more likely to have had emergency care (OR=1.43; 95% CI: 1.28, 1.60). African American children with asthma were more likely to have had emergency care (OR=1.31; 95% CI: 1.16, 1.47) or hospital admission (OR=1.31; 95% CI: 1.02, 1.67) and less likely to have received care after emergency visits (OR=1.31; 95% CI: 1.02, 1.67).

Conclusions

- ◆ **Most children did not receive timely ambulatory care follow-up after emergency visits or hospitalization for asthma.**
- ◆ **Asthma care varied by health plan.**
- ◆ **Asthma-related health care disparities associated with race/ethnicity were evident.**



¹ Mannino DM et al. Surveillance for asthma—United States, 1980-99. MMWR, 2002; 51(SS-1): 1-13.

² The Children's Health Council was created by the Connecticut General Assembly in 1995 and charged with evaluating the impact of Medicaid managed care on children's health services under the Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) program. The Children's Health Council monitors children's health services under a contract with the Connecticut Department of Social Services and with support from the Hartford Foundation for Public Giving. The Connecticut Children's Health Project is the operational arm of the Children's Health Council.

³ Asthma-related diagnoses: bronchitis, bronchiolitis, allergies, viral and bacterial pneumonia, and chronic obstructive pulmonary disease.

⁴ Estimates of prevalence and asthma-related health care utilization may have been affected by a problem with completeness of encounter data submitted by Preferred One.

⁵ Odds of having had emergency care: Community Health Network (OR=1.66; 95% CI: 1.46, 1.89), Health Net (OR=1.64; 95% CI: 1.47, 1.83), Preferred One (OR=4.72; 95% CI: 3.91, 5.69), and children who changed plans (OR=1.62; 95% CI: 1.38, 1.91), compared to BlueCare (arbitrarily selected reference level).

⁶ Odds of having had follow-up after emergency care: Community Health Network (OR=0.50; 95% CI: 0.38, 0.66), Health Net (OR=0.64; 95% CI: 0.51, 0.80), Preferred One (OR=0.15; 95% CI: 0.09, 0.24), and children who changed plans (OR=0.53; 95% CI: 0.37, 0.75), compared to BlueCare (arbitrarily selected reference level).

⁷ Odds of having been hospitalized: Community Health Network (OR=1.28; 95% CI: 0.97, 1.68), Health Net (OR=1.35; 95% CI: 1.08, 1.70), Preferred One (OR=1.75; 95% CI: 1.21, 2.53), and children who changed plans (OR=1.44; 95% CI: 1.04, 1.98), compared to BlueCare (arbitrarily selected reference level).

⁸ Odds of having had follow-up after discharge: Community Health Network (OR=0.62; 95% CI: 0.36, 1.07), Health Net (OR=0.96; 95% CI: 0.60, 1.54), Preferred One (OR=0.08; 95% CI: 0.03, 0.26), and children who changed plans (OR=0.68; 95% CI: 0.35, 1.31), compared to BlueCare (arbitrarily selected reference level).