

Illinois EMS for Children

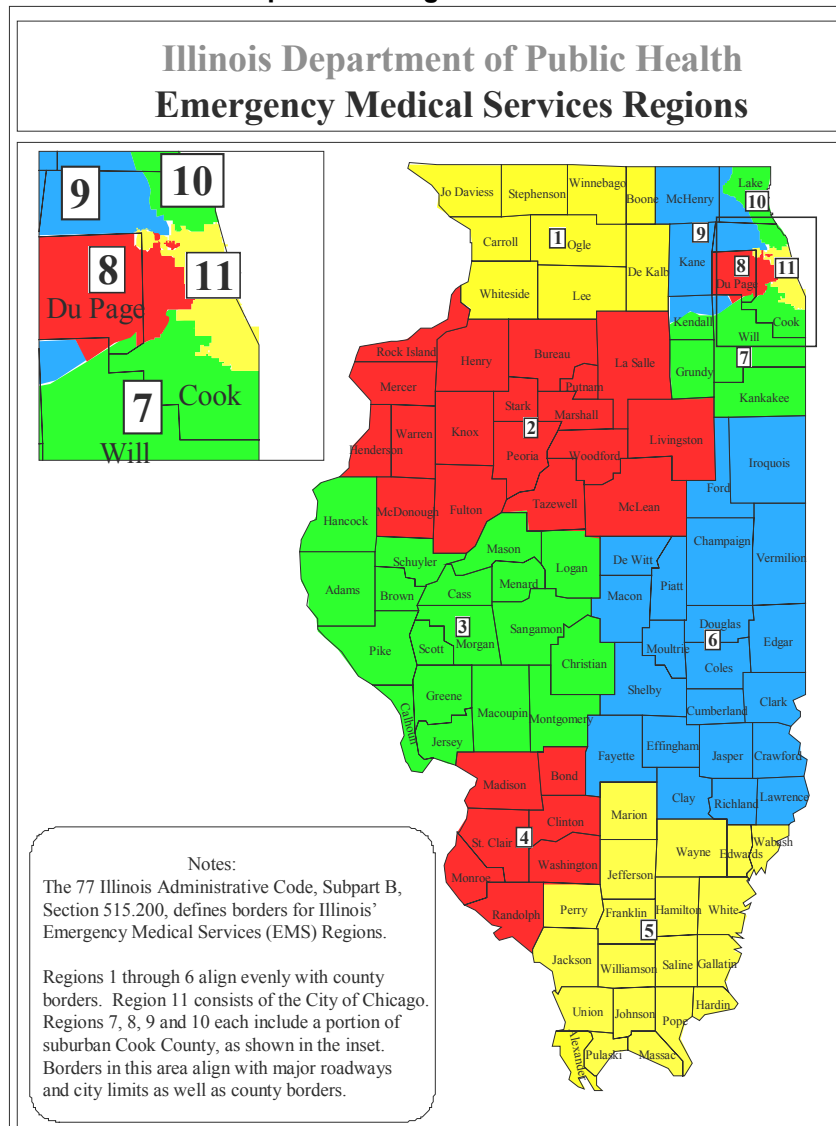
Pediatric Asthma Assessment and Discharge Planning in the Emergency Department, 2006

Results of Online Survey

I. Executive Summary

In 2006, 118 emergency departments (EDs) actively participated in the EMSC regional CQI program (of these, 99 are recognized as PCCC, EDAP or SEDP facilities). These EDs were surveyed regarding asthma assessment and discharge planning using a Web-based application. Of the 118 facilities, 85 (72%) completed the survey. After data submission, participants were provided with Web-based reports that allowed comparison of their results to their region, to similar sized facilities, and to the rest of the state. For this executive summary, responses were aggregated for facilities in the Chicago and suburban areas (regions 7 through 11 – please see map below) and compared with those for the rest of the state (regions 1 through 6). Separately, responses were aggregated for facilities with greater than 7,000 pediatric ED visits in 2005 and compared with facilities with 7,000 or less pediatric ED visits in 2005. Statistically significant differences found with these comparisons are noted throughout the summary.

Map of EMS Regions in Illinois



Asthma Protocols

- 63% of EDs have reviewed the NIH/NHLBI Guidelines for the Diagnosis and Management of Asthma. Differences were found by location (78% for regions 7-11 vs 50% for regions 1-6, $p<0.01$) and size of facility (77% for facilities with >7000 pediatric ED visits per year vs 48% for facilities with $\leq 7,000$ visits, $p<0.01$).
- 38% of EDs have formal asthma protocols/standing orders. Differences were again found by location (49% for regions 7-11 vs 27% for regions 1-6, $p<0.01$) and size of facility (48% for facilities with >7000 pediatric ED visits per year vs 27% for facilities with $\leq 7,000$ visits, $p<0.01$).

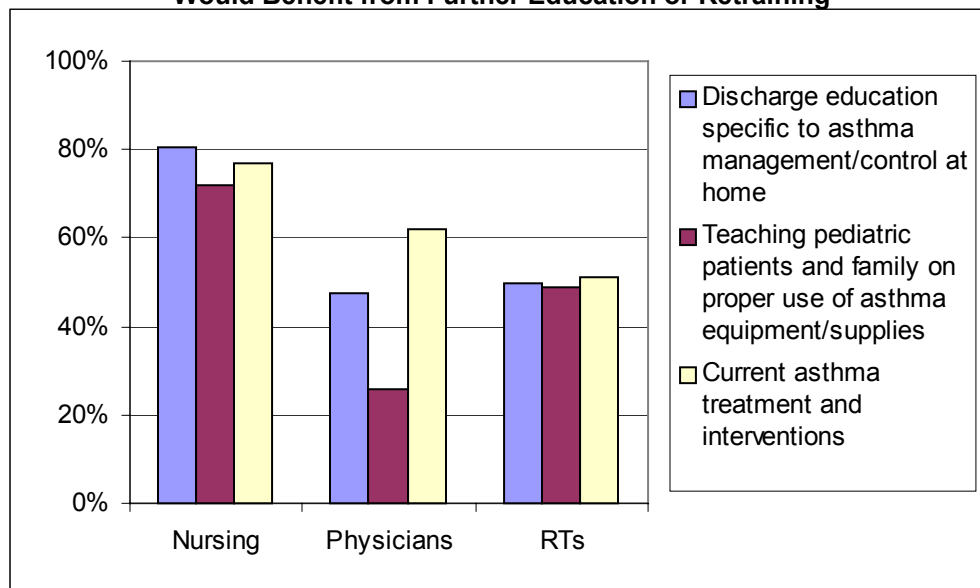
Patient Education

- A relatively high percentage of EDs provided education related to the emergency event, such as when to return to the ED (94%) and the use of emergency medications (62%), although a lower percentage (50%) was found for teaching parents regarding bulb syringe suctioning of infants.
- Although EDs have taken on the role of primary care provider in many settings, a relatively low percentage offered patient education for maintenance activities such as peak flow technique (38%) and asthma control fact sheets (32%).
- 99% of EDs were noted to have resources for non-English speaking or hearing impaired patients.

Staff Training

- Staff nurses provide asthma patient education for almost all EDs (96%), with a majority also using physicians (76%) and respiratory therapists (71%) in this role.
- Overall, EDs reported that nursing staff would benefit from further education and/or retraining in asthma management more than physicians and respiratory therapists. Particular areas of emphasis include discharge education for asthma management/control at home, teaching the proper use of asthma equipment/supplies, and current asthma treatment/interventions (Figure 1).

Figure 1. Aspects of Asthma Management where ED Staff Would Benefit from Further Education or Retraining

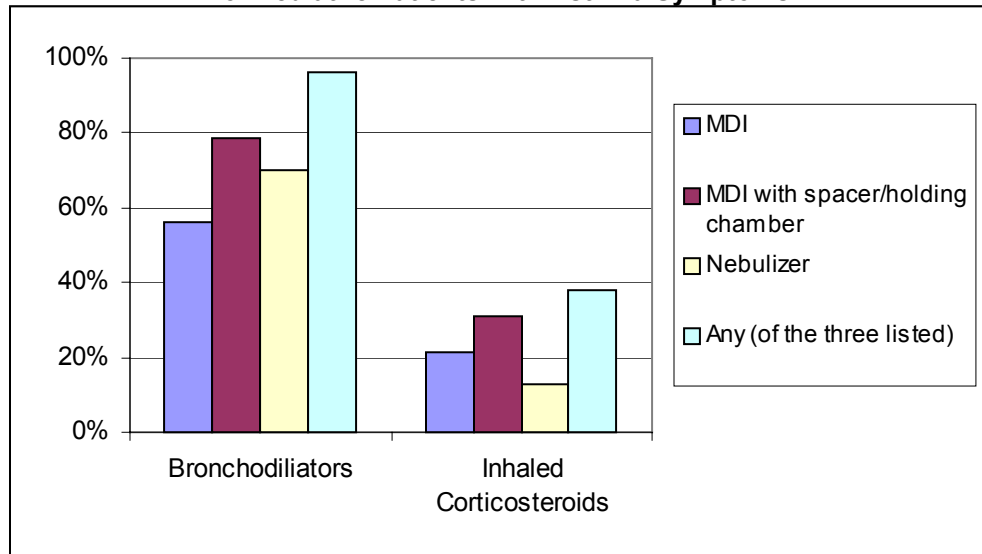


- Separately, smaller facilities with 7,000 or less visits recommended education/retraining for their RTs more than larger facilities for current treatment/interventions (75% vs 43%, $p < 0.01$) and for teaching the proper use of equipment/supplies (72% vs 40%, $p < 0.01$).

Discharge Planning

- Although current literature emphasizes inhaled corticosteroids, only 38% of EDs routinely prescribe or discharge their patients home with these medications compared with 96% for bronchodilators (Figure 2).

Figure 2. Routinely Prescribed Treatments and Delivery Mechanism for Pediatric Patients with Asthma Symptoms



- In cases with recurrent asthma symptoms or repeat visits, only 25% of EDs send patients home with inhaled corticosteroids
- Larger facilities with more than 7,000 visits used MDI with spacer/holding chamber as the delivery mechanism for bronchodilators more frequently than smaller facilities (91% vs 66%, $p < 0.01$).
- Larger facilities with more than 7,000 visits also routinely prescribe oral corticosteroids more frequently than smaller facilities (98% vs 83%, $p < 0.05$).
- Overall, 54% of EDs reported that they have sent home pediatric patients with asthma symptoms on Albuterol syrup. This was reported more frequently in regions 1-6 than in regions 7-11 (66% vs 41%, $p < 0.05$).

Return Visits

- 71% of EDs track return visits of asthma patients with similar symptoms, and of these 78% conduct peer reviews regarding the adequacy of care.

Underinsured Patients

- 74% of EDs provide a specific PCP/Physician referral service for underinsured patients.
- A referral list of local PCPs was provided more frequently upon discharge in regions 1-6 relative to regions 7-11 (57% vs 30%, $p < 0.05$) and also more frequently in smaller facilities with 7,000 or less visits relative to larger facilities (71% vs 19%, $p < 0.01$).

Summary of Survey Responses

For reference, 100%: |||

7. Who is responsible for providing asthma patient education in your ED?

Physician	76%	
Staff RN	96%	
Respiratory Therapist	71%	
Discharge Teaching RN	20%	
Staff member from asthma clinic	0%	
Certified asthma educator	4%	
Other	5%	

8. For non-English speaking or hearing impaired patients, what resources do you have to assist in patient education?

Certified interpreter	58%	
Multilingual printed versions of your discharge planning/instructions	71%	
AT&T type phone based interpreter service	81%	
Other professional staff	51%	
Family members	64%	
None	1%	
Other	6%	

9.a. What aspects of asthma management would your Nursing Staff benefit from further education and/or re-training?

Asthma disease process	43%	
Assessing asthma severity	67%	
Current asthma treatment/interventions	77%	
Patient reassessment	70%	
Discharge education for the patient/parent specific to asthma management/control at home	80%	
Teaching pediatric patients and family on proper use of asthma equipment/supplies	72%	
Smoking cessation/counseling to patient and/or parent	43%	
Providing referral sources	46%	
Other	5%	

Summary of Survey Responses

For reference, 100%: |||

11. Which of the following treatment options are pediatric patients with asthma symptoms routinely prescribed/discharged home with?

Antibiotics	44%	
Albuterol syrup	38%	
Bronchodilators via MDI	56%	
Bronchodilators via MDI with spacer/holding chamber	79%	
Bronchodilators via Nebulizer	70%	
Inhaled corticosteroids via MDI	21%	
Inhaled corticosteroids via MDI with spacer/holding chamber	31%	
Inhaled corticosteroids via Nebulizer	13%	
Oral corticosteroids	90%	
None	0%	
Other	4%	

12. Are the majority of pediatric patients with either recurrent asthma symptoms or repeat visits typically sent home on long term inhaled corticosteroids?

25% |||

13. Are pediatric patients with asthma symptoms ever sent home on Albuterol syrup?

54% |||

14. Are objective measures (e.g., peak flow measurements) or other clinical scoring tools (e.g., Clinical Asthma Score, Asthma Severity Score) used in the decision to discharge or admit a patient?

80% |||

