Pediatric Asthma and the Urban Emergency Department: Challenge and Opportunity

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IMPACT DC

• “Improving Pediatric Asthma Care in the District of Columbia”
  – Founded in 2001 with funding from the Robert Wood Johnson Foundation
  – Focused on urban kids with high ED recidivism for asthma
  – Evolved into a highly collaborative program:
    • Clinical Care
    • Advocacy & Outreach
    • Surveillance
    • Clinical & Translational Research (T1 – T4)
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• *Mission Statement:*

  – To improve the care and outcomes of disadvantaged, urban, and largely minority children and adolescents with asthma in the DC metro region while serving as a model program for the nation
National Experience with Pediatric Asthma

- 6.1 million children <18y living with asthma in the US in 2002*
  - 730,000 ED visits**
  - 196,000 hospital admissions**
  - 14.7 million annual lost school days*

*National Health Interview Survey

**National Hospital Medical Care Survey
Prevalence of Asthma

![Graph showing the prevalence of asthma over years with two lines representing current and period prevalence.](image-url)
Pediatric ED Visits for Asthma

Rate per 10,000


MMWR. December 12, 2006
Pediatric ED Visit Rates for Asthma

0-4y, inclusive

*National Rate 2000

*National Hospital Ambulatory Medical Care Survey
Pediatric ED Visit Rates for Asthma

*National Rate 2000

*African American Rate 2000

*National Hospital Ambulatory Medical Care Survey
Pediatric ED Visit Rates for Asthma
0-4y, inclusive

Healthy People 2010 Target:
80 per 10,000

*National Hospital Ambulatory Medical Care Survey
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Visit Rate by Zip Code, 2006

>10 fold Difference in Rate
Visit Rate by Zip Code, 2006

Where to place intervention?
The IMPACT DC Intervention
ED-based Follow-up after Acute ED Visits for Asthma

Child in Community with Asthma Experiences Acute Attack

ED Visit and Discharge

21% within 30 days

Liberman D. [In submission]

Primary Care Follow-up

Opportunities for Improved Care
The IMPACT DC Asthma Clinic
A Novel ED-based Follow-up Mechanism

Child in Community with Asthma Experiences Acute Attack

ED Visit and Discharge

Primary Care Follow-up

>70%
IMPACT DC ASTHMA CLINIC
Priorities of the NIH Guidelines

• Proper diagnosis
• Patient and family education
• Identification and control of triggers
• Clear medical plan
  – Inhaled Corticosteroids (ICS)
• Effective longitudinal care
ED Visits Over Following Six Months

RR = 0.54 (0.40, 0.72)

IMPACT DC Asthma Clinic
New Patient Visits per Month
Effect on ED Visits in the District as a Whole
Pediatric ED Visits for Asthma
DC Zip Codes, Ages 12 mo-17 y

01/02-12/09 (n=32,697)

2003-2008: >25% drop!

IMPACT DC Intervention Started
Pediatric ED Visits for Asthma
DC Zip Codes, Ages 12 mo-17 y

01/02-12/09 (n=32,697)

H1N1

IMPACT DC Intervention Started