# Pediatric Asthma and the Urban Emergency Department: Challenge and Opportunity

Stephen J. Teach, MD, MPH June 6, 2011





#### 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)

#### IMPACT DC

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

#### **Medical Director/Principal Investigator**

Stephen Teach, MD, MPH

#### **Project Director**

Deborah Quint, MPH

#### **Associate Clinicians/Investigators**

Hemant Sharma, MD, MHS Molly Savitz, MSN, FNP Mark Weissman, MD Rhonique Shields-Harris, MD, MHA Jamilla Marcus, MD Robert Freishtat, MD, MPH Melanie Rosenberg, MD Craig DeWolfe, MD, MEd Ivor Horn, MD Jeremy Kerns, MD

**Clinical Coordinator** Molly Savitz, MSN, FNP

Care

Advocacy

Research

**IMPACT DC** Asthma Clinic at \*CNMC ED \*THEARC

School-Based Education

Community Outreach

IMPACT DC

Collaborations

Inner City Asthma Consortium



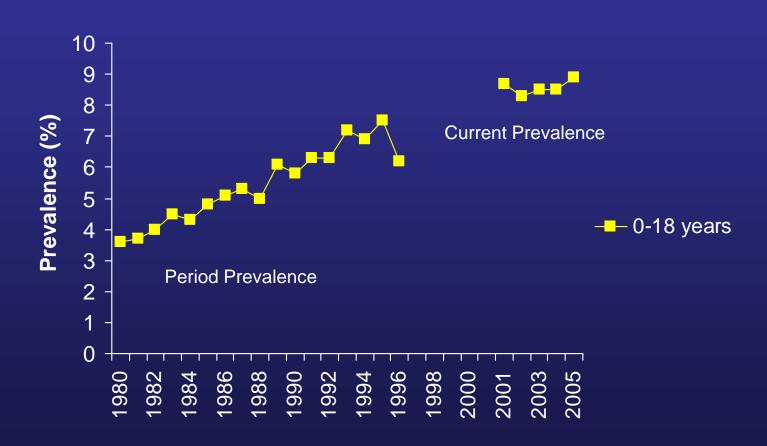
## National Experience with Pediatric Asthma

- 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\*

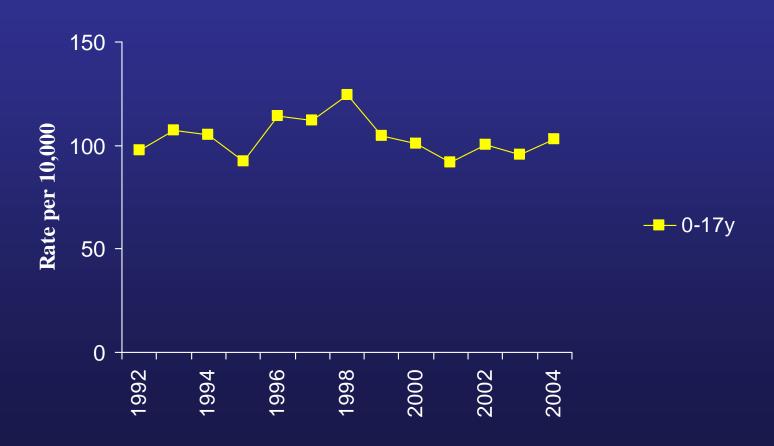
<sup>\*</sup>National Health Interview Survey

<sup>\*\*</sup>National Hospital Medical Care Survey

#### Prevalence of Asthma



#### Pediatric ED Visits for Asthma



MMWR. December 12, 2006

#### Pediatric ED Visit Rates for Asthma

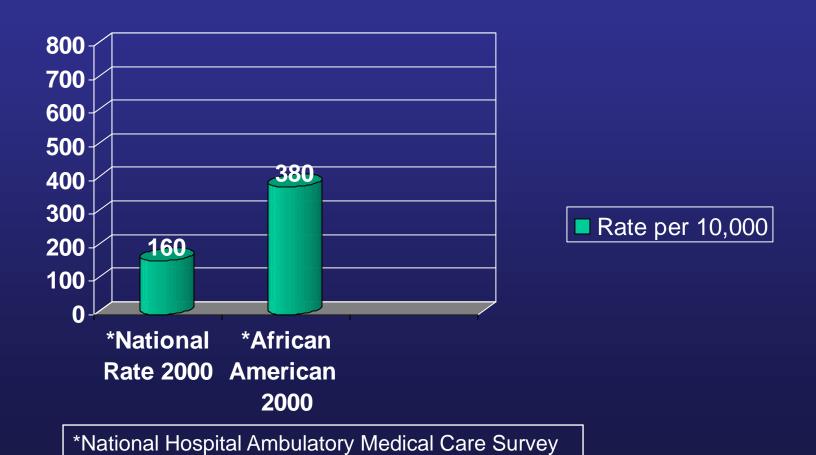
0-4y, inclusive



\*National Hospital Ambulatory Medical Care Survey

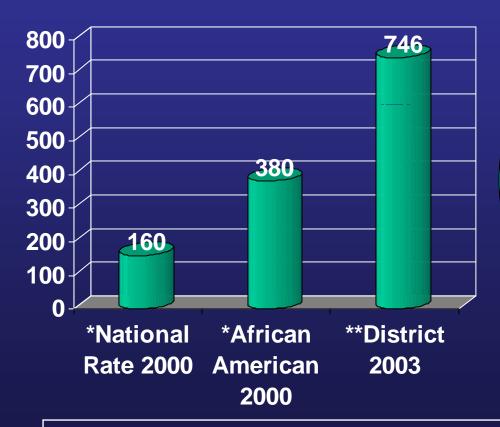
#### Pediatric ED Visit Rates for Asthma

0-4y, inclusive



#### Pediatric ED Visit Rates for Asthma

0-4y, inclusive



Healthy People 2010 Target:

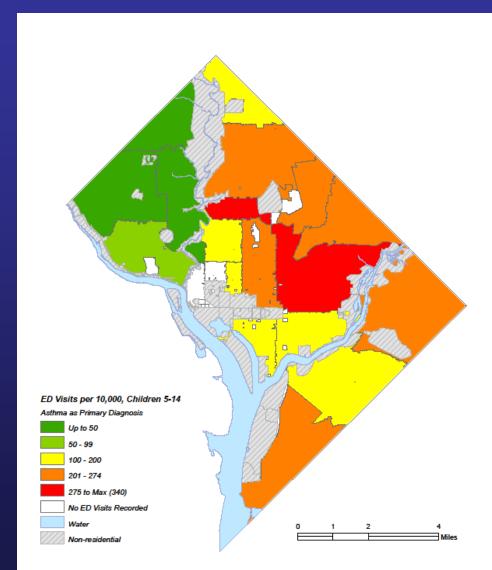
80 per 10,000

\*National Hospital Ambulatory Medical Care Survey

\*\*IMPACT DC



#### Visit Rate by Zip Code, 2006

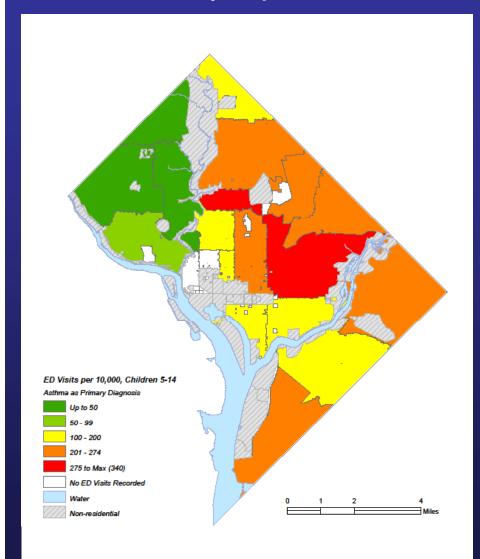


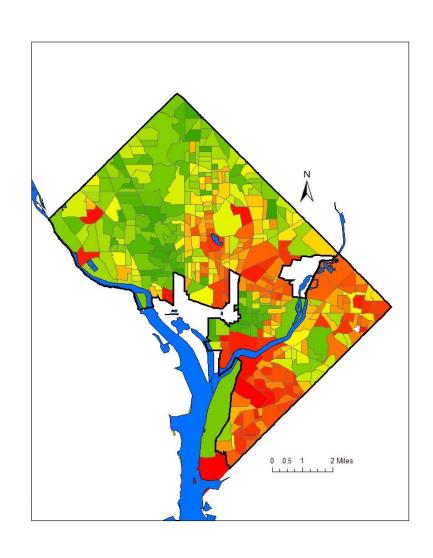
>10 fold Difference in Rate



#### Visit Rate by Zip Code, 2006

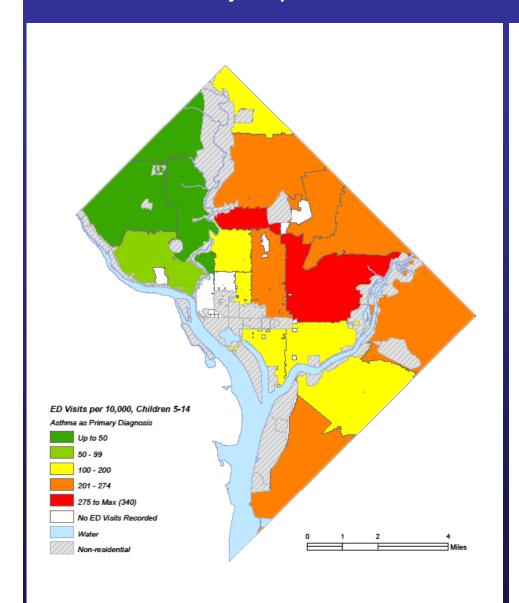
#### Poverty in DC, 2000

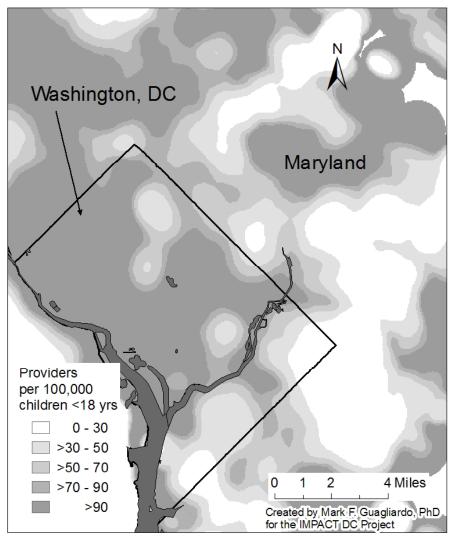




#### Visit Rate by Zip Code, 2006 Primar

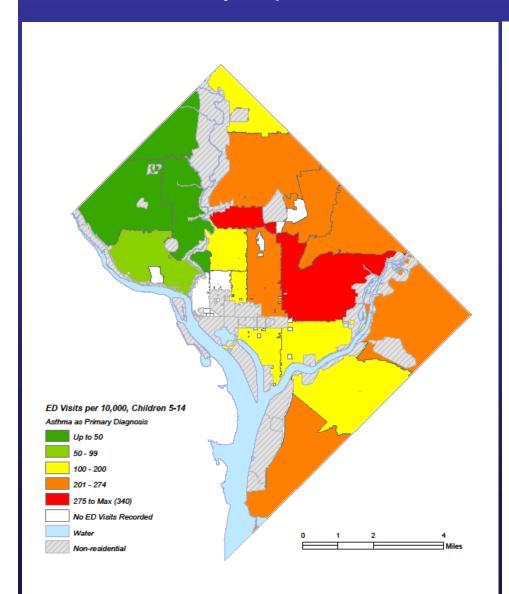
#### Primary Care Access, 2005

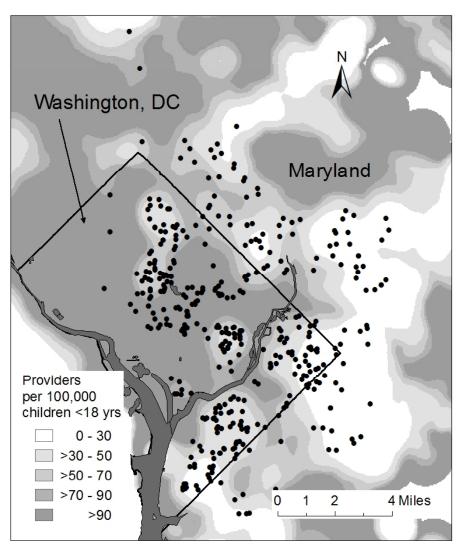




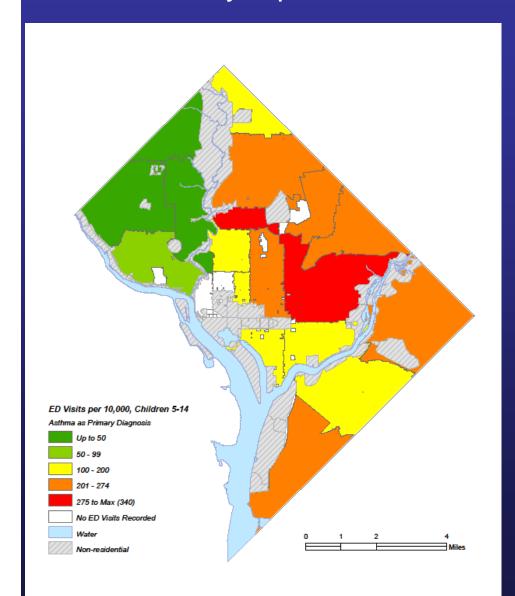
#### Visit Rate by Zip Code, 2006

#### Primary Care Access, 2005





#### 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

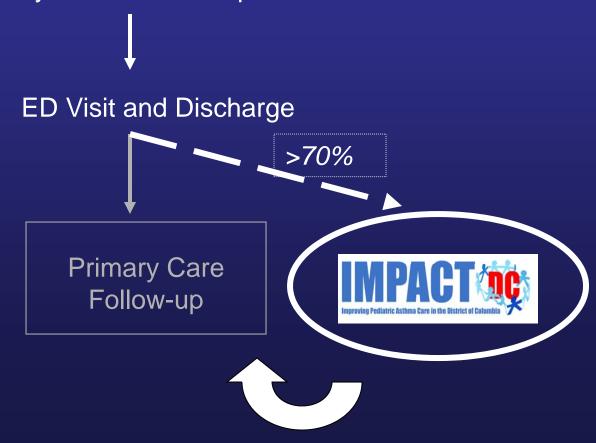
Liberman D. [In submission]

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







#### IMPACT DC ASTHMA CLINIC

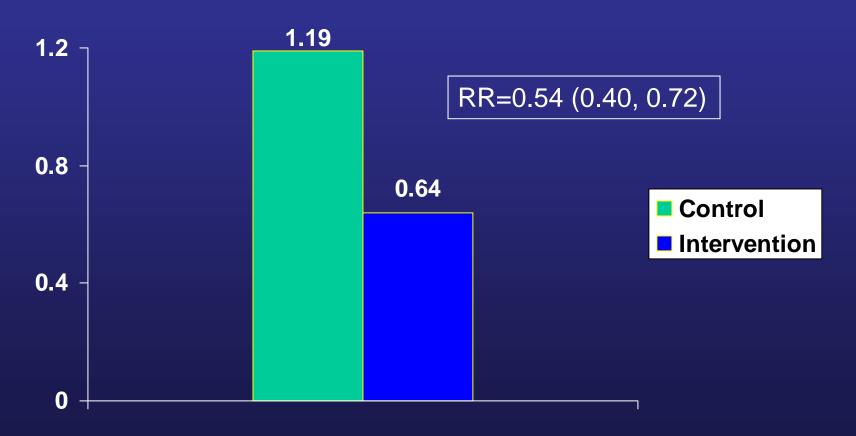




#### Priorities of the NIH Guidelines

- Proper diagnosis
- Patient and family education
- Identification and control of triggers
- Clear medical plan
  - Inhaled Corticosteroids (ICS)
- Effective longitudinal care

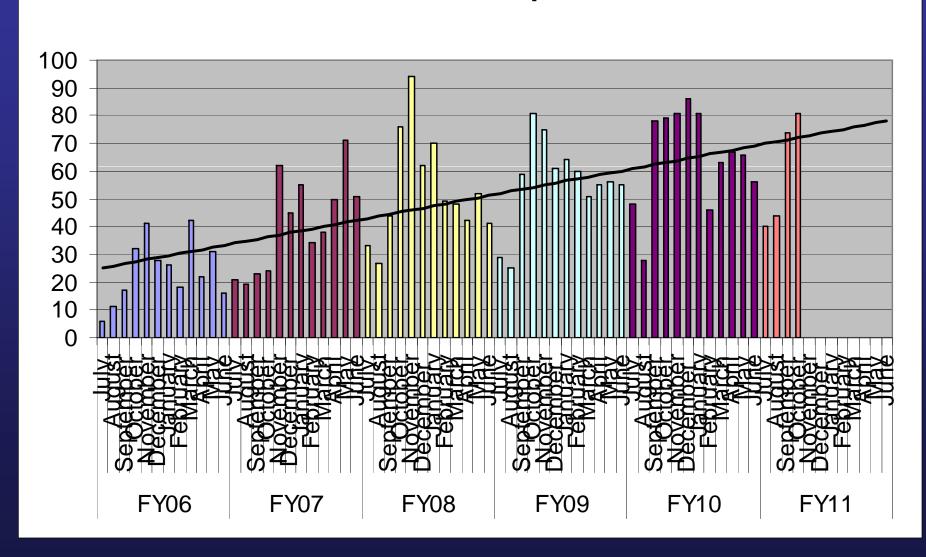
#### ED Visits Over Following Six Months



Teach SJ. Arch Ped Adol Med. May 2006.

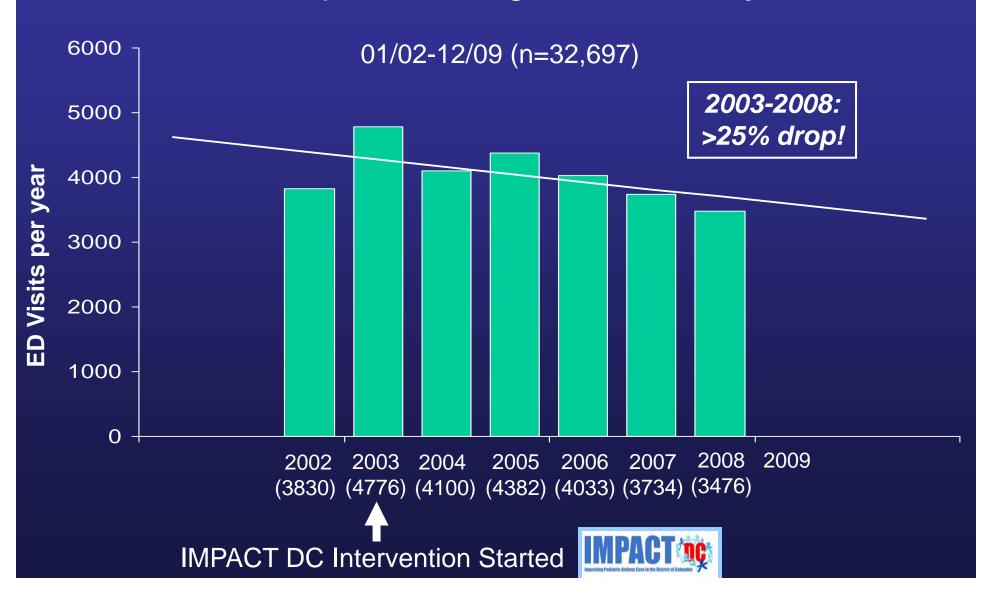


#### IMPACT DC Asthma Clinic New Patient Visits per Month



## Effect on ED Visits in the District as a Whole

## Pediatric ED Visits for Asthma DC Zip Codes, Ages 12 mo-17 y



## Pediatric ED Visits for Asthma DC Zip Codes, Ages 12 mo-17 y

