



# Implementation of Evidence-Based Practices to Improve Asthma in an Urban School System

Jamie Klingensmith, MPH, MPPA, RD<sup>1</sup>, Kathleen Szegda, MPH, MS<sup>1</sup>, & Matthew Sadof, MD<sup>2</sup>

<sup>1</sup>Partners for a Healthier Community, Inc, 280 Chestnut Street, Springfield, MA 01101;

<sup>2</sup>Pediatrics, Baystate Children's Hospital, 140 High Street, Springfield, MA 01199



## BACKGROUND

### Demographics

- Springfield, MA has a population of 153,552 people as of 2012
- 27.6% live below the **poverty** level
  - Child poverty rate of 44.6%
- Marginalized** populations make up about 75% of the population
  - Over 1/3 Latino, primarily Puerto Rican

### Comparison of Asthma Rates in School-Aged Children, 5-19 years, 2009

	Prevalence	Hospitalization Rate (per 100,000)	Emergency Room Visit Rate (per 100,000)
Springfield	<b>20%*</b>	1188	1910
Massachusetts	<b>11%**</b>	431	1707

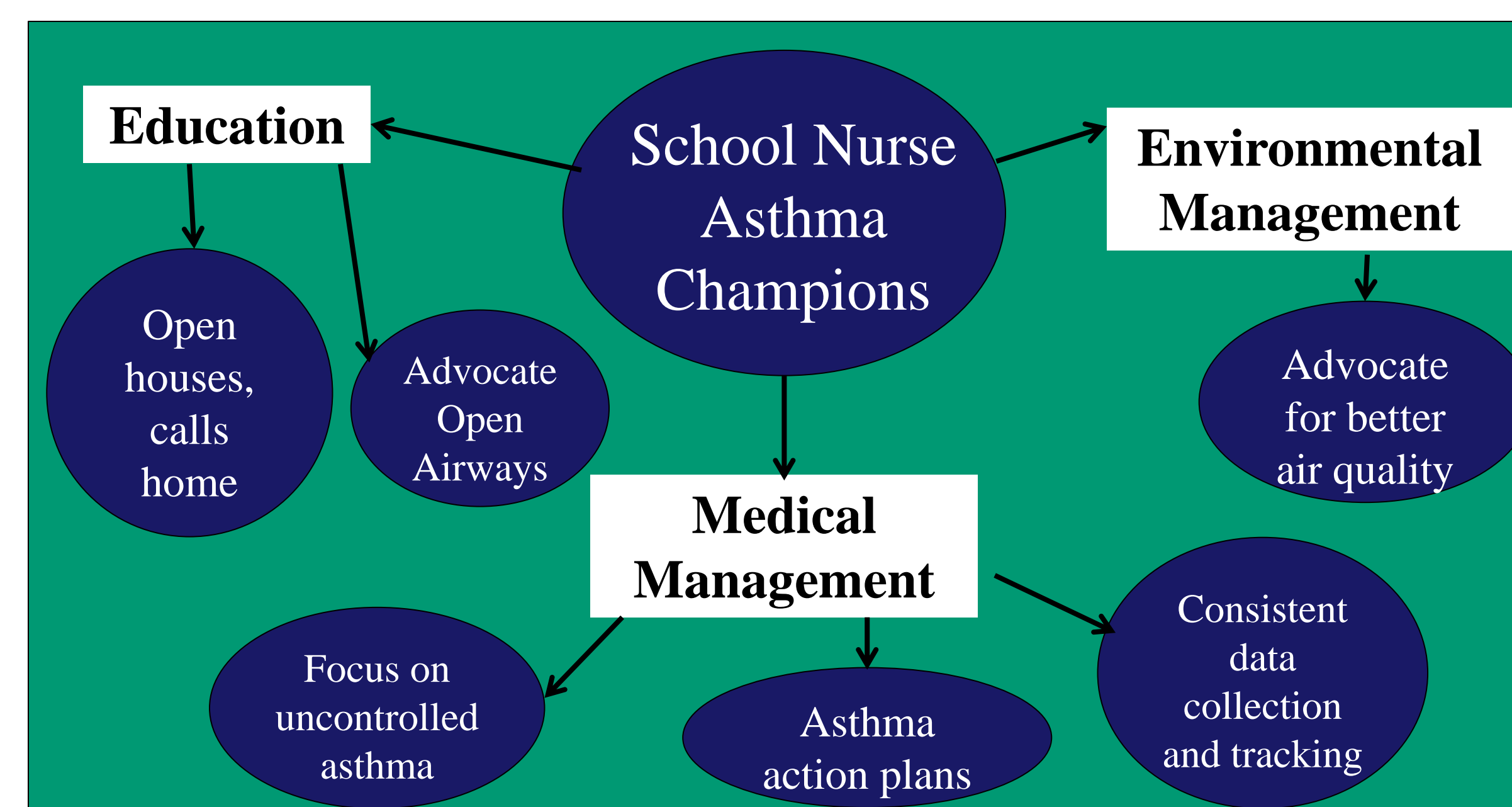
\* Reported by Springfield School Nursing Dept; \*\*MDPH Pediatric Surveillance Survey

### Disparities Exist

- Compared to white children, *emergency room rates among Hispanic children are ~3.5x higher, African American children are ~1.5x higher*
- Compared to white children, *hospitalization rates among Hispanic children are ~4.5x higher, African American children are ~2x higher*

## PROGRAM COMPONENTS

- Goal:** Improve asthma morbidity through asthma education, better medical management, and advanced environmental management with coordination by school nurses
- Approach:** Combination of the Environmental Protection Agency's (EPA) Tools for Schools, the American Lung Association's (ALA) Open Airways curriculum and Asthma Action Plans, and better data collection
  - Tools for Schools: program for management of environmental triggers (includes focus on air quality, green cleaners, etc)
  - Open Airways: self-management curriculum for ages 8-11; presented by nursing students from local college with ALA support
  - Asthma Action Plans: evidence-based tool for asthma management completed by doctors for the public
  - Data collection: tracking of asthma action plans and unscheduled asthma treatments

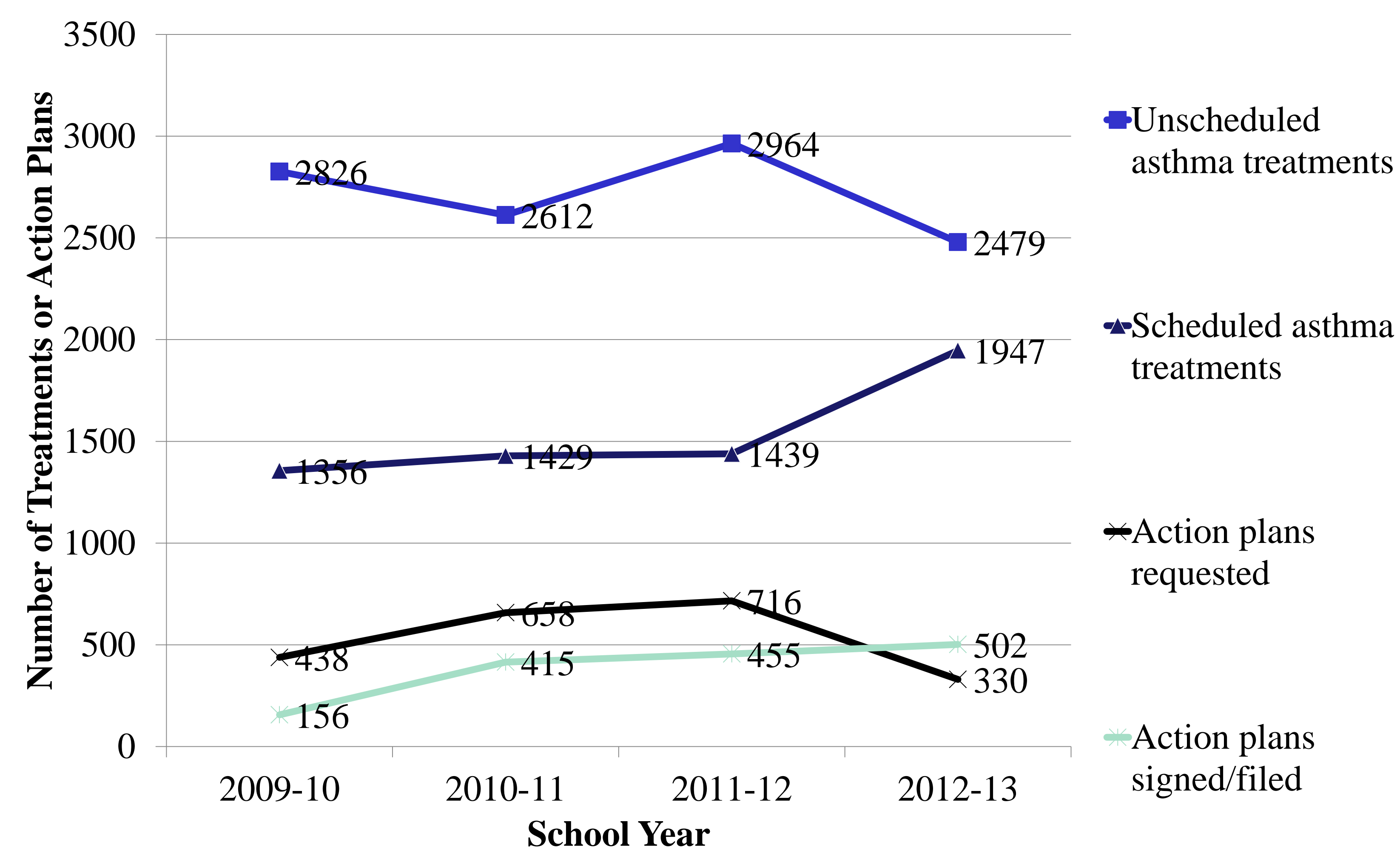


### Role of the School Nurse Asthma Champion

- Target uncontrolled* asthma through consistent and more complete charting techniques
- Improve management by obtaining *Asthma Action Plans* from physicians, and educating parents and school staff
- Advocate* for provision of Open Airways education for students with asthma
- Advocate* for elimination of *environmental triggers* and improved indoor air quality
- Link* between coalition and Nursing Dept. and assist with infrastructure building

## RESULTS

Springfield Public Schools Asthma Treatments, 2009-2013



## FACILITATORS

- Addresses multiple pathways in order to improve asthma management
- Asthma champions as a resource for other nurses in the district
- Network of asthma champions as a resource for each other
- Support and buy-in from leadership (nursing department heads, health departments)

## BARRIERS & SOLUTIONS

Barriers	Solutions
Limited time of school nurse	Improved systems for collecting information on asthma Use of nursing students for providing Open Airways Supplies and handouts provided by asthma coalition Support of other School Nurse Asthma Champions
Limited access to teachers and school staff for training	Creation of School Nurse Asthma Champions Online training for continuing education credit
Parent knowledge and cooperation	Notification to parent and doctor if problem and recommendations to parents by nurse as needed Information available to parents at school open houses
Physician completion of action plans	Medication order/Action Plan combination (below) Physician Electronic Health Record (EHR)-generated Action Plans

## ACKNOWLEDGEMENTS

Special thanks to our School Nurse Asthma Champions, Springfield School Nurse leadership, Children's Miracle Network, EPA, and ALA.