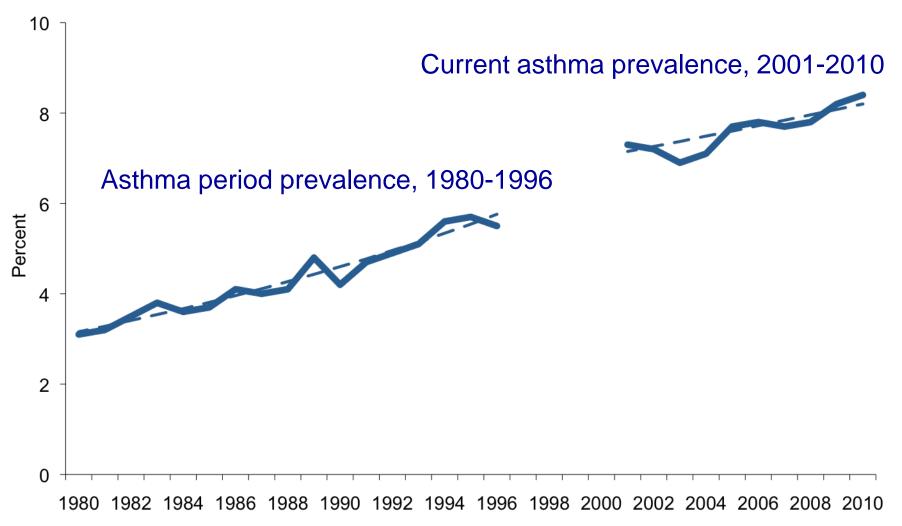
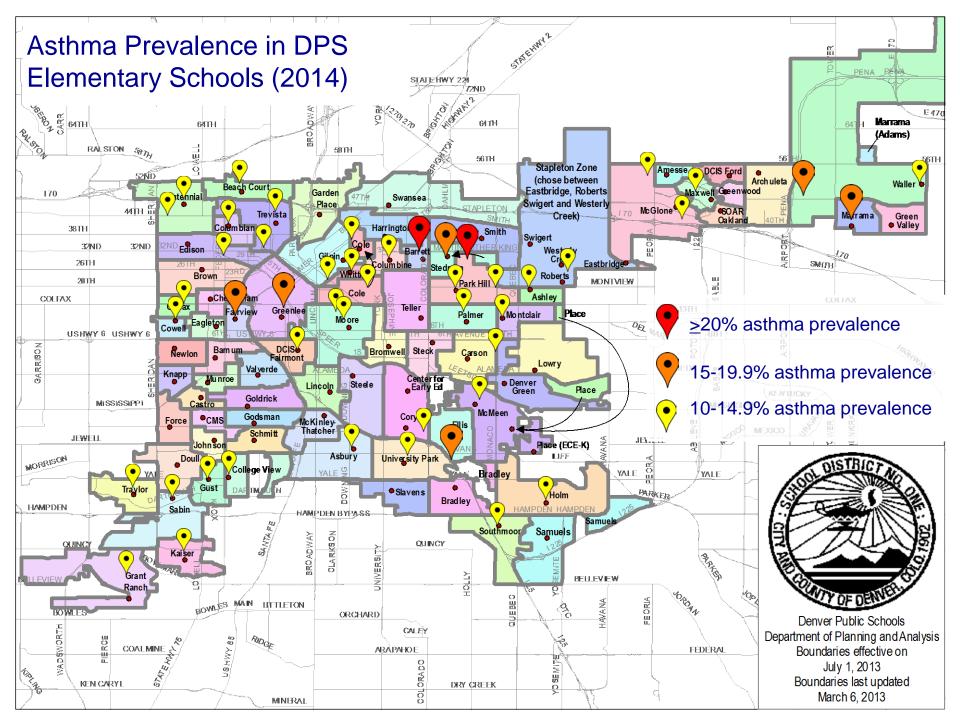
### Welcome Remarks

Stanley J. Szefler, M.D. Director, Pediatric Asthma Research Program **Breathing Institute** Children's Hospital Colorado; **Professor of Pediatrics University of Colorado Denver School of Medicine** 

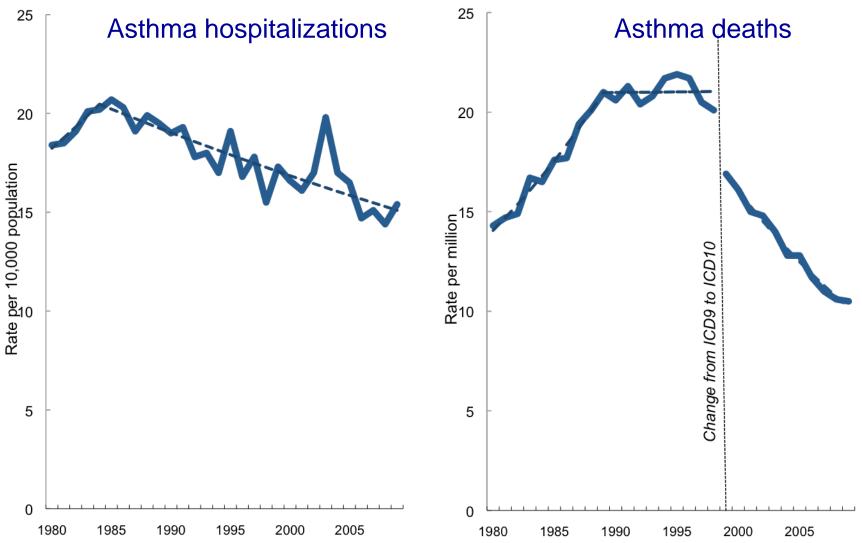
# Asthma period prevalence and current asthma prevalence: United States, 1980-2010



SOURCE: CDC/NCHS, National Health Interview Survey Notes: Percentages are age adjusted to the 2000 standard population.



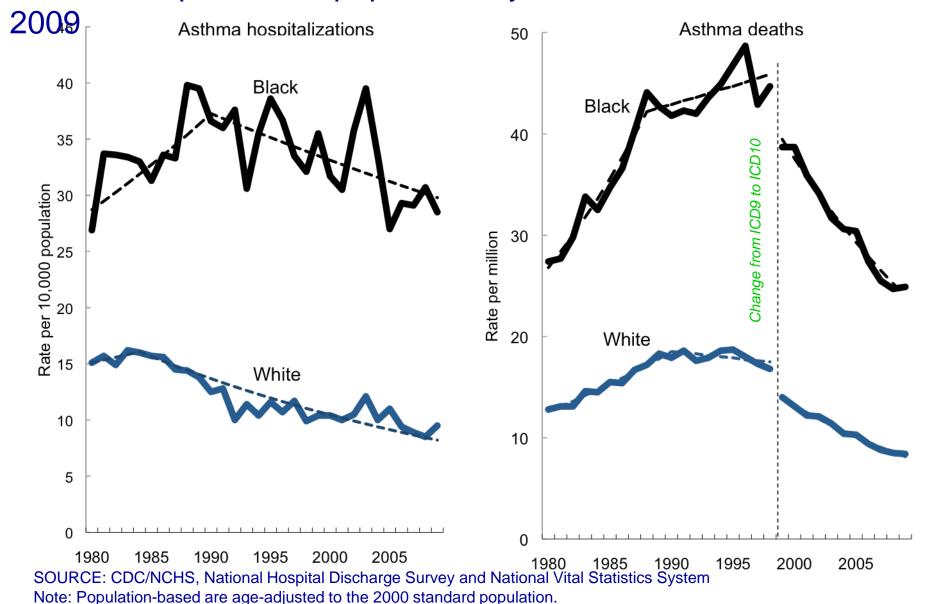
## Asthma hospitalization rates per 10,000 population and asthma death rates per million population: United States, 1980-2009



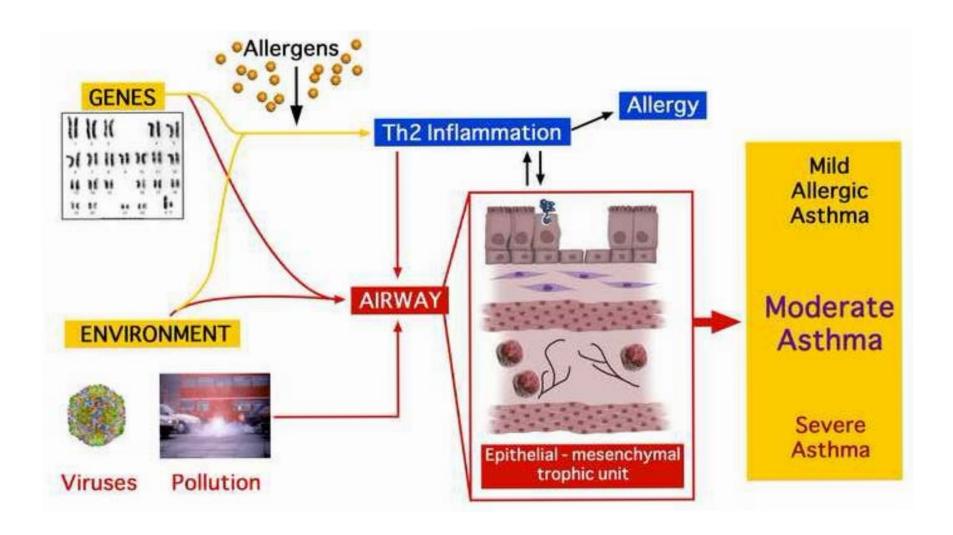
SOURCE: CDC/NCHS, National Hospital Discharge Survey and National Vital Statistics System Note: Population-based rates are age-adjusted to the 2000 standard population.

Dotted lines show the modeled trend estimated by Joinpoint. Inflection points represent a change in the annual percent change.

Asthma hospitalization rates per 10,000 population and asthma death rates per million population by race: United States, 1980-



Dotted lines show the modeled trend estimated by Joinpoint. Inflection points represent a change in the annual percent change.



Source: Holgate. "Epithelium dysfunction in asthma." J Allergy Clin Immunol 2007; 120(6): 1233-1244.

# Primary Goal of Therapy: Achieving and Maintaining Asthma Control

- Primary goal of asthma therapy is to enable a patient to achieve and maintain control over their asthma
  - Eliminate impairments including symptoms, functional limitations, poor quality of life, and other manifestations of asthma
  - Reduce risk of exacerbations, ED visits, and hospitalizations
- Treatment goals are identical for all levels of asthma severity

# Future Directions for Pediatric Asthma

- Prevention exacerbations, progression and onset of disease.
- Communication patients, families, providers and schools.
- Utilization of large data bases to guide treatment strategies.

### **Early Intervention for Asthma Prevention**

**Environment** 

- Allergens
- Microbes
- Pollutants
- Stress

Age I

Biological & Genetic Risk

- Immune
- Lung
- Repair

1º Prevention

#### Aberrant immune development & responses



Airways Injury



- Viral infections
- Aeroallergens
- Pollutants/toxicants

2° Prevention

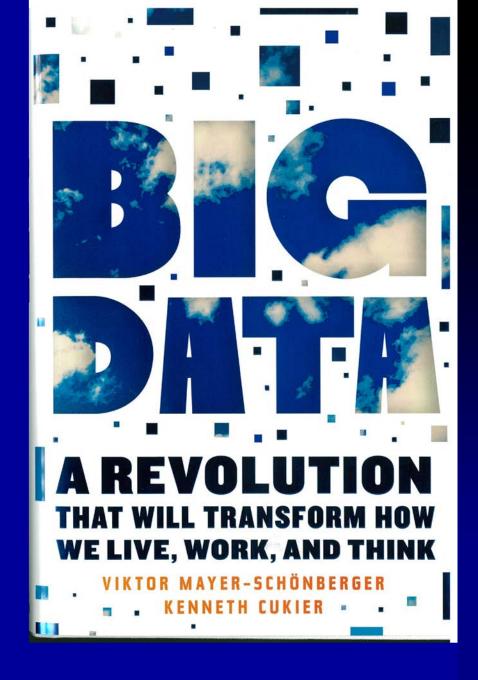
Aberrant Repair

- Persistent inflammation
- BHR
- Tissue remodeling
- Lung growth/differentiation

Early Intervention

**ASTHMA** 

- Liu AH. JACI, 113:S19024, 2004.



## **Environmental Control**

## Clinical approach

- Assessment
- Identification of sensitivity
- Education
- Monitoring

## **Environmental Control**

## Challenges

- Coordination of home evaluation
- Standardization of testing procedures
- Remediation
- Follow-up
- Cost of procedures

## THE FAMILY CIRCUS'



