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 Prevalence in DPS Elementary Schools (2014)

- >20% asthma prevalence
- 15-19.9% asthma prevalence
- 10-14.9% asthma prevalence
Asthma hospitalization rates per 10,000 population and asthma death rates per million population: United States, 1980-2009

Asthma hospitalizations

Asthma deaths

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, 1980-2009

SOURCE: CDC/NCHS, National Hospital Discharge Survey and National Vital Statistics System
Note: Population-based 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.
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**

**Aberrant immune development & responses**

**Airways Injury**
- Viral infections
- Aeroallergens
- Pollutants/toxicants

**Aberrant Repair**
- Persistent inflammation
- BHR
- Tissue remodeling
- Lung growth/differentiation

**1° Prevention**
- Biological & Genetic Risk
  - Immune
  - Lung
  - Repair

**2° Prevention**
- Environment
  - Allergens
  - Microbes
  - Pollutants
  - Stress

**Early Intervention**
- Atopy

**ASTHMA**

BIG DATA
A REVOLUTION THAT WILL TRANSFORM HOW WE LIVE, WORK, AND THINK

VIKTOR MAYER-SCHÖNBERGER
KENNETH CUKIER
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
SOMETIMES I WORRY ABOUT THE FUTURE OF THIS COUNTRY.