HEALTH DISPARITY: ASTHMA IN AFRICAN AMERICAN COMMUNITIES

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**Conflict of Interest**

- The author: Enna Trevathan
- Has no conflict of interest to report
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**Objectives**

At the end of this presentation the learners will be able to:

- Understand why the US and other industrialized nations are experiencing an increase in Asthma cases
- State the Asthma disparities between Black and White Americans
- Explain the financial and economic burden of health inequalities
- Describe approaches that can reduce the health disparities
WHAT IS ASTHMA?

• Asthma- Definition
• Childhood disease only?
• Public health perspective on Pediatric Asthma
DISPARITIES BETWEEN BLACK AND WHITE AMERICAN CHILDREN

**Prevalence and effects of Asthma in children in the US**

- In 2011- Over 7 million children in US
- In 2010- 3 out of 5 Children had one or more Asthma episodes the previous year
- In 2009- 1 out of 10 Children vs. 1 out 12 Adults had Asthma
- In 2008- Asthma attack- Children 57% vs. 51% Adults
- In 2008- More than 59% of Children with Asthma missed an average of 4 days of school
Figure 2. Asthma Prevalence by Race and Ethnicity, American Children

Children (Age < 18)*

*Includes persons who answered "yes" to the questions: "Have you ever been told by a doctor or other health professional that you had asthma?" and "Do you still have asthma?"
** NH = Non-Hispanic
***As a subset of Hispanic

DISPARITIES BETWEEN BLACK AND WHITE AMERICAN ADULTS

• Data from 2014
  • White American Adults: 7.6%
  • African Americans: 8.7%
• In most years between 2001 to 2010-Prevalence rates for Black Americans ranged from 4.6 to 5.8%
• Death rate due to Asthma for Black Americans from 2001 to 2009 was 1.6 to 2 times higher than White Americans
Figure 1. Asthma Prevalence by Race and Ethnicity, American Adults

Adults (Age 18+)*

- Black NH Adult (Age 18+)
- Hispanic Adult (Age 18+)
- Other NH Adult (Age 18+)
- Puerto Rican Adult (Age 18+)
- White NH Adult (Age 18+)

* Includes persons who answered "yes" to the questions: "Have you ever been told by a doctor or other health professional that you had asthma?" and "Do you still have asthma?"

** NH = Non-Hispanic

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POSSIBLE CAUSES FOR DISPARITIES

**Social Factors**

- Lack of access to healthcare
- Private vs. public insurance programs (Medicare and Medical)
- Communication difficulties
- Social structures of neighborhood
- Less than ideal living conditions
**ECONOMIC IMPLICATIONS**

*Medication adherence*

- Relationship between medication adherence to symptom control and the use of Inhaled Corticosteroids (ICS)
- Increase in Emergency Room visits, Clinic visits and Hospitalization
- Youth/Adolescents attributions to low adherence levels: Being African American, mild Asthma, less 12 years of formal education and ineffective communication with providers (Barnes & Ulrich, 2015)
- Decent adherence attributions: prescription of a fixed combination of ICS and long acting 2 agonists, Higher force expiratory volume in 1 second (FEV1), lower % of eosinophils in the sputum, reduction in hospitalizations, decrease use in corticosteroids and lower mortality rates
Major Differences in health and healthcare for Americans that lead to health disparities among people of color

- US Dept of Human Health Services (HHS, 2011) devised a plan to reduce inequalities in Health Outcomes that are tightly connected with: Social, Economic and Environmental disadvantages
- Factors tend to be driven by social conditions in which the persons live, work and play
- Lack of availability of preventive health services within the geographic communities
- Lack of health cultural awareness of African American Communities by the providers of services and policy makers
- Transportation to health care services
OTHER CONTRIBUTING FACTORS

- Cost of medications
- Co-pays/Deductibles
- Environmental Health
- Geography: Inner-City Asthma Epidemic?
- Genetic Ancestry
  - Genetics, Endotypes, and Asthma Therapy
APPROACHES TO REDUCE ASTHMA/HEALTH DISPARITIES

• Disease prevention model
• Patient and Family Education
• Improving care and considering costs
• Accessible clinic within the communities
• Following standards and considering social systems including contexts of policy generation
TECHNOLOGICAL APPROACHES

• Innovations
• Digital technologies: Negative or positive?
• Digital guided therapy
• Connect medications and machine learning intelligence (AI)
• Access to real time data, collect geospatial data and subsequently recognized environmental variables such as: air quality, pollen, ultraviolet sensitivity index levels, and housing codes
FINAL THOUGHTS...

• Complexity of Asthma and its numerous causes
• Upward trends of disparities between White and Black Americans
• Higher rates of poverty among African Americans/Lower rates of medication adherence
• Lower quality of care provided in African American Communities/ Lower rates of health insurance
• Environmental contaminants in African American communities
Thank You
REFERENCE LIST WILL BE MADE AVAILABLE THROUGH STTI
Q

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