Asthma Amongst African Americans vs. Asthma in the General Population of Massachusetts

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http://www.aafa.org
What is Asthma?

- Asthma is a chronic inflammatory disease of the airways.
- Leads to trouble breathing and functioning.
- A severe acute exacerbation of asthma is an episode of extremely blocked airways.
- If not treated properly, can lead to death by oxygen deprivation.
Disparity

“Health disparities are preventable differences in the burden of disease, injury, violence, or opportunities to achieve optimal health that are experienced by socially disadvantaged populations.” -Center for Disease Control and Prevention

- Compared to the general population of Massachusetts, Blacks have a high asthma morbidity and mortality rate.
  - This is due to unequal medical treatments.
Average Annual Massachusetts Asthma Morbidity Rate by Race/Ethnicity

NH=Non-Hispanic
Average Annual Asthma Mortality Rate by Race/Ethnicity

NH=Non-Hispanic

http://www.mass.gov/hdc/docs/2012/jan/asthma-disparities.ppt
Asthma Health Disparities Amongst African-Americans

- Blacks and Hispanics are over three times more likely to be hospitalized for asthma than whites.

- More than 10 percent of Massachusetts adults and nearly 10 percent of children are living with asthma.

- About 74 percent of adults and 66 percent of children with asthma reported that their disease was poorly controlled.
Factors contributing to Asthma disparity in African-Americans

- Many factors related to medical providers and their minority patients are correlated with racial disparities in asthma. (columbus.gov)

- The main factors include:
  - low quality health care
  - issues with communication
  - social structure
  - physical environmental factors
Massachusetts Distribution of Total Poor Population by Race

- White: 64%
- Blacks: 13%
- Asian: 7%
- Other: 16%
# Poverty Rates

## Poverty Rates by Race in Massachusetts’ 10 largest cities

<table>
<thead>
<tr>
<th></th>
<th>Boston</th>
<th>Brockton</th>
<th>Cambridge</th>
<th>Fall River</th>
<th>Lowell</th>
<th>Lynn</th>
<th>New Bedford</th>
<th>Quincy</th>
<th>Springfield</th>
<th>Worcester</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>13.0%</td>
<td>10.5%</td>
<td>10.6%</td>
<td>16.1%</td>
<td>14.8%</td>
<td>18.1%</td>
<td>19.4%</td>
<td>8.0%</td>
<td>18.2%</td>
<td>16.9%</td>
</tr>
<tr>
<td>Black</td>
<td>25.2%</td>
<td>15.2%</td>
<td>30.8%</td>
<td>41.7%</td>
<td>17.0%</td>
<td>20.7%</td>
<td>33.6%</td>
<td>20.6%</td>
<td>26.8%</td>
<td>18.9%</td>
</tr>
<tr>
<td>Asian</td>
<td>30.3%</td>
<td>4.5%</td>
<td>22.3%</td>
<td>27.2%</td>
<td>14.6%</td>
<td>20.6%</td>
<td>11.2%</td>
<td>10.4%</td>
<td>26.7%</td>
<td>20.5%</td>
</tr>
<tr>
<td>Other</td>
<td>27.4%</td>
<td>20.2%</td>
<td>21.4%</td>
<td>50.5%</td>
<td>39.0%</td>
<td>25.2%</td>
<td>33.5%</td>
<td>11.2%</td>
<td>46.3%</td>
<td>25.7%</td>
</tr>
</tbody>
</table>

[http://scholarworks.umb.edu/csp_pubs/56/](http://scholarworks.umb.edu/csp_pubs/56/)
Cost of Asthma Medications

- Prices of inhaled asthma medications have gone up drastically recently.
- In 2010, the Food and Drug Administration (FDA) required manufacturers of inhalers to stop using chlorofluorocarbon propellants.
- Most of the manufacturers had to develop new inhalers delaying the production of generics from entering the market.
- Without that competition, the brand name manufacturers have been able to increase prices.
- The generally poorer populations, including African Americans, cannot afford as much of this medication.
## Cost of Asthma Medications

<table>
<thead>
<tr>
<th>Generic Name and Strength</th>
<th>Brand Name</th>
<th>Puffs/Amount per Day</th>
<th>Average monthly cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beclomethasone 40mg</td>
<td>QVAR</td>
<td>4</td>
<td>$142</td>
</tr>
<tr>
<td>Beclomethasone 80mg</td>
<td>QVAR</td>
<td>4</td>
<td>$177</td>
</tr>
<tr>
<td>Budesonide suspension nebulizer 0.5 mg/2 ml</td>
<td>Pulmicort Respules</td>
<td>2 ml</td>
<td>$435</td>
</tr>
<tr>
<td>Budesonide suspension nebulizer 1 mg/2 ml</td>
<td>Pulmicort Respules</td>
<td>2 ml</td>
<td>$778</td>
</tr>
<tr>
<td>Ciclesonide 80 mcg</td>
<td>Alvesco</td>
<td>2</td>
<td>$187</td>
</tr>
<tr>
<td>Fluticasone 110 mcg</td>
<td>Flovent HFA</td>
<td>4</td>
<td>$191</td>
</tr>
<tr>
<td>Fluticasone 220 mcg</td>
<td>Flovent HFA</td>
<td>4</td>
<td>$307</td>
</tr>
<tr>
<td>Mometasone 220 mcg (60 puffs per inhaler)</td>
<td>Asmanex Twisthaler</td>
<td>2</td>
<td>$203</td>
</tr>
<tr>
<td>Mometasone 220 mcg (120 puffs per inhaler)</td>
<td>Asmanex Twisthaler</td>
<td>4</td>
<td>$282</td>
</tr>
</tbody>
</table>
African-Americans Asthma disparity in Treatment

Lower Quality of Health Care

- Minorities have a higher chance of seeing primary physicians rather than specialists because of the cost of the care that specialists usually (Bryant-Stephens, 2009).
Factors contributing to Asthma disparity in African-Americans

- In one health literacy study, 483 minority patients, mostly African-American, were given information relating to asthma to read. It was found that only 27% of the study subjects could read at a high school level. (columbus.gov)

- As a result, physicians have misinterpreted symptoms and their severity based on inadequately written guidelines and standards. (Bryant-Stephens, 2009)
Factors contributing to Asthma disparity

Social Factors
- Violence
- Stress

Physical Environmental Factors
- Second-hand smoking
- Pollution

BMI Chart

- BMI less than 18.50: Underweight
- BMI 18.50 - 24.99: Healthy weight
- BMI 25.00 - 29.99: Overweight
- BMI 30 or more: Obese
Ways to fix this disparity

- Education about disease and effects
- Basic health care coverage improvement
- Availability of specialists
- Improve environments
Overall

- Asthma is potentially fatal disease that is too often improperly treated
- Unequal medical treatment leads to higher mortality among African-Americans
- High morbidity + inferior treatment = high mortality
Bibliography


ANY questions?