Prevalence of Infant Mortality Amongst the African American Population Compared to the General Population in Massachusetts

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Infant Mortality

Infant Mortality Rate:
- # of infant deaths/1,000 live births.
- An important marker of the overall health of society

Different Stages of Infant Mortality
- Neonatal mortality (NN):
  - Death within the first month of life
- Postneonatal mortality (PNN):
  - Death after the first month of life
- Infant mortality:
  - Death of an infant between birth and the first birthday

“United States.” Peristats | March of Dimes, National Center for Health Statistics. 2020
Disparities in Infant Mortality Among African American Population

Health Disparity:

- National Institutes of Health "the difference in the incidence, prevalence, mortality, and burden of disease and other adverse health conditions that exist among specific population groups in the United States, when compared in contrast to a larger group (general population).

Prevalence:

- Refers to the total number of individuals in a population who have a disease or health condition at a specific period of time, usually expressed as a percentage of the population.

African Americans:

- Refers to any individual whose ancestral origins can be traced back to the continent of Africa

Our Focus:

- Disparity in prevalence of infant mortality among African American population compared to general population
**Social Determinants of Health (SDOH)**

Kaiser Family Foundation:
- “conditions where people are born, grow, live, work and age that shape health”

**Why SDOH?**
- To improve overall health outcomes and reduce disparities

**Examples:**
- SES
- Access to Care
- Higher Education

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Causes of Infant Mortality in Massachusetts

Most Significant Contributors:

- Low Birth Weight
- Maternal Pregnancy Complications
- Sudden Infant Death Syndrome

Low Birthweight

Definition: being born underweight (weighing less than 5 pounds 8 ounces)

Eg: In 2015, the percent of low birthweight babies for black females was 12% compared to 6% for white females. (In Boston)
Sudden Infant Death Syndrome (SIDS)

Unexplained death of an infant less than one years old
- Usually during sleep

Black non Hispanic 2x as likely as White non Hispanic to die from SIDS
SDOH of Low Birth Weight:

- Access to prenatal care
- Socioeconomic status
  - Access to transportation
  - Education
Barriers for Accessing Prenatal Care in MA

● not knowing about the pregnancy (24%)
  ○ 2014, Black non-Hispanic were 2.3 times as likely as White non-Hispanic women to have an unintended pregnancy

● Access to transportation, childcare or time off from work or school. (13%)
Lacking Access to Prenatal Care By Health Insurance Status

Impact of Education on Infant Mortality

White People:

- 44.6% have Bachelor Degrees or higher
- 7.5% have less than high school diploma

Black People:

- 25.6% have Bachelor Degrees or higher
- 14.8% have less than high school diploma.

Increased risk of low birth weight:

- 10% Females with less than high school diploma
- 8% Females with some college education


Social Determinant of Health Impacting Infant Mortality.

- Socioeconomic Status.
  - Low social support
  - Neighborhood with poor housing.
Breastfeeding

- Breastfeeding for 3 months reduces the risk of SIDs.
- The American Academy of Pediatrics: children be breastfed exclusively through their first six months of life.
- Valuable antibodies that will help establish your baby’s immune system.
- In MA, Black non-Hispanic mothers have a smaller percentage of breastfeeding.

Suggested Intervention Methods

● Community Based
1. Evidence-based home visit programs to support pregnant moms and new parents.
2. Access to high-quality prenatal care.
   a. Reduces SIDS
4. Newborn Screening and Follow Ups.

● Policy Change
1. Women, Infant, and Children Program (WIC)

Summary

- Combination of SDOH have influence on infant mortality
- Infants with lower SES and education have higher risk of SIDS

**Figure 11: Risk & Protective Factors associated with SUID at the time of birth by Race/Ethnicity, MA Infants, 2015 (n=71,484)**

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Race/Ethnicity</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>White NH</td>
<td>Hispanic NH</td>
<td>Black NH</td>
<td>Asian NH</td>
</tr>
<tr>
<td>Low birthweight</td>
<td>6.5%</td>
<td>8.3%</td>
<td>10.6%</td>
<td>8.6%</td>
</tr>
<tr>
<td>Preterm</td>
<td>7.8%</td>
<td>9.2%</td>
<td>10.4%</td>
<td>8.1%</td>
</tr>
<tr>
<td>Prenatal</td>
<td>7.5%</td>
<td>3.9%</td>
<td>3.9%</td>
<td>1.1%</td>
</tr>
<tr>
<td>Protective Factor</td>
<td>White NH</td>
<td>Hispanic NH</td>
<td>Black NH</td>
<td>Asian NH</td>
</tr>
<tr>
<td>Adequate prenatal care</td>
<td>85.1%</td>
<td>77.6%</td>
<td>69.3%</td>
<td>82.8%</td>
</tr>
<tr>
<td>Breastfeeding</td>
<td>86.2%</td>
<td>86.7%</td>
<td>87.9%</td>
<td>91.7%</td>
</tr>
</tbody>
</table>

*Source: MA Registry of Vital Records & Statistics, 2015*

CONCLUSION

● African Americans disproportionately have a higher risk of infant mortality when compared to the general population

● Infant Mortality is Caused by
  ○ Preterm birth
  ○ Sudden Infant Death Syndrome

● SDOH:
  ○ Lack of access to prenatal care.
    ■ Health insurance status
  ○ Breastfeeding
    ■ Education and Socioeconomic Status.
  ○ Access to support

● Many suggested community interventions to improve infant health
  ○ Baby Box Initiative
  ○ Women, Children and Infant (WIC) Program

Questions?


