New approaches for using data: Informing program outreach

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Infant mortality by race/ethnicity and education, MI 2002-2012

Source: Michigan Resident Birth and Death Files, Birth Cohort Linked to Death Files MDCH Division for Vital Records & Health Statistics
Prepared by: MDCH MCH Epidemiology Unit

Infant mortality by race/ethnicity and delivery payment, MI 2010-2012

Source: Michigan Resident Birth and Death Files, Birth Cohort Linked to Death Files MDCH Division for Vital Records & Health Statistics
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In 2011, these communities account for 87% of the African American infant mortality in Michigan.


- Use infant mortality as “marker” for many social determinates of health.
- Use evidence models – Nurse-Family Partnership (NFP) one of several acceptable models of care
  - Study has proven effective with White, African-American and Hispanic groups (Olds, 2010)
  - No claims to addressing infant mortality – addresses social determinates of health (SDOH) that contribute to infant mortality

http://www.nursefamilypartnership.org/proven-results
Ensure that the agencies focused on outreach to participants
- Highest need
- Address racial disparities

Consider geographic based enrollment
- Ignores women living rural areas
- Prior geographic based enrollment efforts did not result in increased enrollment of women of color.

A method was needed to identify populations within each county, stratified by race/ethnicity to inform outreach strategies.

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**Kitagawa Formula**

Developed by Evelyn Kitagawa and published in 1955*

Decomposition technique
- Addresses the contribution of the differences between rates and distribution.

**Basis of Perinatal Periods of Risk Analysis**

Useful for small populations

** CityMatCH. "Perinatal Periods of Risk Approach, Available at: http://citymatch.org

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**Kitagawa Analysis-Terms**

Excess mortality rate = SM + D

\[ SM = 2(\text{P-average}_{i}(P-R)) \]
\[ D = 2(\text{R-average}_{i}(P-R)) \]

Excess Mortality percent = \( SM + D \times 100 \div \sum SM + \sum D \)

- Compares the county population to the reference population
- Asks the question “What would the infant mortality rate be if the populations were the same?”
- Reference population
  - Same time period and state of Michigan
  - Women over the age of 20 and with more than a high school education
Guidance to Communities

No one identified needing and desiring services has to be without

- All communities have other home visiting and support services.

MDCH & Local agencies worked together to develop outreach plans.
Limitations/Criticism

Small numbers
Analysis not limited to first time Moms
Perceived as an exact enrollment goal
  • Importance of language and communication

Conclusion

• Analysis identified high risk populations within these communities
• Excess risk analysis can be used for small areas, allowing limited resources to be focused on areas of most need.
• Education and Collaboration!
  — Communities are using the results to guide outreach.
  — Underserved populations identified

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MDCH Successes
Policy/Program Changes

- Division of Family & Community Health Training with Local Providers
- Local MCH/Health Disparities
- Nurse Family Partnership Outreach Plans
- Native American PRAMS
- WIC Health Equity Plans & Local Provider Training

MDCH Website - Resources

- www.michigan.gov/dchprime
- www.michigan.gov/infantmortality
- www.michigan.gov/minorityhealth
- www.michigan.gov/mchepi

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