The Community Readiness Model:

Addressing Black Infant Mortality Disparity in Columbus, Ohio

- **Wengora Thompson, MPH,** *Jackson State University, School of Pubic Health*
- **Melissa Thomas, PhD,** *OhioHealth Research & Innovation Institute, Office of Health Equity*
- **Haley Riegel, MPH,** *OhioHealth Research & Innovation Institute, Office of Health Equity*
- **LaKeesha Leonard, MS,** *Ohio State University*
- **Allyson Baker, BS Candidate,** *Ohio State University, School of Health & Rehabilitation Services*

1

Abstract //

In comparison to other developed countries, the United States ranks near the bottom for infant mortality. Ohio's black infant mortality rates are the second worst in the country. In 2012, Franklin county black infants died at more than twice the rate of white infants, 12.9 and 6.0 per 1,000 births, respectively. Assessing a community's readiness to address the issue of infant mortality is a critical factor in implementing effective interventions to address health disparities; however, readiness has not been assessed within Ohio's urban area. The purpose of this study was to use the Community Readiness Model (CRM) as a theoretical basis for understanding and increasing community readiness, and to measure community attitudes, perceptions, and knowledge regarding black infant mortality within the Hilltop community of Columbus.

Semi-structured key informant interviews were conducted with community leaders from five "hot spot" areas with the highest black infant mortality rates in Franklin County (n=15). The interviews consisted of open-ended questions within the following five dimensions: community knowledge of the issue, community knowledge of efforts, community climate, leadership, and resources. The interviews were transcribed, and a mixed-method approach was employed using a quantitative scoring process of the CRM and a thematic analysis of key words.

Findings of the Community Readiness assessment validated our study hypothesis about the lack of robust awareness concerning the issues of black infant mortality amongst community members and leadership. Results from the study will help guide stage-appropriate strategies provided in the CRM. Recommendations to engage the community include unconventional partnerships, targeted media campaigns, faith community involvement, planned interventions addressing the social determinants of health and engagement of community leaders.

2

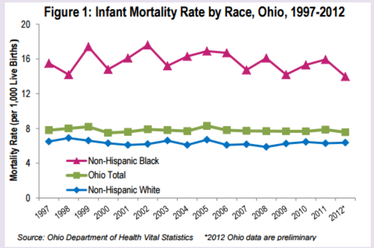
Background //

The Black Infant Mortality Disparity in Ohio and Franklin County:

"Every year in Franklin County, approximately 150 babies – enough children to fill five kindergarten classes – die before reaching the age of one. Franklin County's infant mortality rate is among the worst of Ohio's 88 counties." Columbus has had one of the highest infant mortality rates of America's 50 largest cities. Its rate is twice that of New York City.

In Columbus, Black babies die at twice the rate of White babies and some neighborhoods experience even greater disparities. The table below represents the communities with that highest Black infant mortality rate.

Figure 1: Infant Mortality Rate by Race, Ohio, 1997-2012



Source: Ohio Department of Health Vital Statistics *2012 Ohio data are preliminary

Hotspot Infant Mortality Rate //

Below are the infant mortality rates for the five hotspot areas.

Neighborhood	Black IM Rate
South Linden	23.5
Near East	18.4
Hilltop	17.1
Franklinton	15.8
Near South	15.5
County	8.6

3

Materials and Methods //

The Community Readiness Model (CRM):

- Created at Colorado State University
- A model for community mobilization and change
- Nine stages of readiness
  — Each readiness stage has specific interventions that work most effectively for that stage
- Measures six dimensions (or aspects) of a community
  — Each dimension has a stage of readiness associated with it
- Integrates culture into the prevention process

Participants & Procedures:

- 15 key informant interviews were conducted from January 2015 to October 2015
- Interviewees included police officers, librarians, daycare providers, social services providers, health care providers and business owners.

Interviews surveyed participants' knowledge of:

- Community Knowledge of Efforts—
  How much does the community know about the current programs and activities?
- Leadership—
  What is leadership's attitude toward addressing the issue?
- Community Climate—
  What is the community's attitude toward addressing the issue?
- Community Knowledge of the Issue—
  How much does the community know about the issue?
- Resources—
  What are the resources that are being used or could be used to address the issue?

Overall Score / 6 Dimensions =Stage of Readiness

21.13 / 6 = 3.52/Vague awareness

4

Results //

Demographics Table

Characteristic	N	Percent (%)
Race/Ethnicity		
Anglo	6	40%
Asian/Pacific islander	1	6.7%
African American	8	53.3%
Hispanic/Latino/Chicano	0	0%
American Indian/Alaska Native	0	0%
Other	0	0%
Gender		
Male	6	40%
Female	9	60%
Age		
19-24		0%
25-34	1	6.7%
35-44	5	33.3%
45-54	5	33.3%
55-64	1	6.7%
65 and above	1	6.7%
Missing	2	13.3%
Employed		
Full-time		13%
Part-time		0%
Seasonal	0	0%
Not currently employed	2	13.3%
Live in Communities on Interest		
Yes	5	33.3%
No	10	66.7%
Work in Communities of Interest		
Yes	15	100%
No	0	0%

5

Conclusions //

We found that the overall community readiness score landed Columbus in the vague awareness stage, meaning most feel that there is a local problem, but there is no immediate motivation to do anything about it.

- Interviewees seemed most aware of "who" was in the place of leadership in addressing infant mortality but the least aware of what current programs and activities were available to combat it.
- Although leaders mentioned that communities had many issues to address (e.g. crime, poverty, hypertension, drugs) they offered their spaces and status to be a part of the change.
- Of most interest, we found that those who were closely involved with committees and organizations offering social services were most aware of efforts surrounding infant mortality; however, most could not address what was present to specifically address black infant mortality.

Some limitations of this study were:

- Convenience sample does not allow for generalizability of results.
- All demographic data was self-reported, increasing likelihood of response bias.
- Interpretive validity: scorers used their judgment in assigning scores to answers.

CRM Dimension Readiness //

This table shows aggregate scores for the dimensions of readiness. The community's readiness stages are also displayed as well.

Dimensions	Stage Score	Readiness Stage
Community Efforts	3.47	Vague Awareness
Knowledge of Efforts	2.87	Denial/Resistance
Leadership	4.07	Preplanning
Community Climate	3.00	Vague Awareness
Knowledge About the Issue	3.47	Vague Awareness
Resources for Prevention Efforts	4.27	Preplanning
Overall Community Readiness Score	**21.13**	

Ohio's black babies die at more than twice the rate of white babies. //

In Ohio, the infant mortality rates for 2013 were

7.4,
per 1,000 live births
for all races

6.0,
per 1,000 live births
for white mothers and

13.8,
per 1,000 live births
for black mothers respectively.

Using a scale from 1-10, how much of a concern is black infant mortality to community members, with 1 being "not a concern at all" and 10 being "a very great concern"?

Two.

There's a lot of things that contribute to that. I mean lack of awareness, but also lack of education. Another thing is that I mean especially for this population, when you're concerned about what you're going to eat every day, or how you're gonna... if you're gonna pay for medicine or pay for food or how you're going to get to a job that pays $8 an hour when you have 5 kids, infant mortality is the last thing on your mind."

References //

- Ohio Department of Health (2013). Infant Mortality Fact Sheet. Infant Mortality 101. (2014). Retrieved June 28, 2015, from https://www.odh.ohio.gov/en/odhprograms/cfhs/octpim/Infant Mortality 101.aspx
- Macdorman, M. F., Ph, D., Mathews, T. J., Mohangoo, A. D., & Ph, D. (2014). National Vital Statistics Reports International Comparisons of Infant Mortality and Related Factors : United States and Europe , 2010, 63(5), 1–7.
- Oetting E. R., Plested, B. A., Edwards, R. W., Thurman, P. J., Kelly, K.J., Beauvais, F., & Stanley, L. (2014). Community Readiness for Community Change, 2nd Edition. Retrieved from http://triethniccenter.colostate.edu/docs/CR_Handbook_2014.pdf
- Sprague Martinez, L., Freeman, E., & Perea, F. (2012). From Engagement to Action: Assessing Community Readiness for Disparities Mobilization. Journal of Health Disparities Research and Practice, 5(2). Retrieved from http://digitalscholarship.unlv.edu/jhdrp/vol5/iss2/9
- Xu, J., Kochanek, K. D., & Murphy, S. L. (2010). National Vital Statistics Reports Deaths : Final Data for 2007. Statistics, 58(4), 135. Retrieved from http://www.cdc.gov/nchs/data/nvsr/nvsr58/nvsr58_19.pdf

Acknowledgements //

- OhioHealth Office of Health Equity, OhioHealth Research and Innovation Institute
  —John Niles, MBA, Director
  —Rebecca Chacko
  —Colleen Chenevey
- Jackson State University, School of Public Health
  —Dr. Russell Bennett
- Kirwan Institute
  —Jason Reece
- Colorado State University, Tri-Ethnic Center for Prevention Research

JSU 1877 JACKSON STATE UNIVERSITY®