

Infant Mortality in African American Infants and Infants in Rural Areas Study

November 9, 2018

Data Analytics Subgroup Meeting Summary

[Version 1/4/2019]

Location: Maryland Health Care Commission, Room 100, 4160 Patterson Ave., Baltimore, MD 21215, Remote Access Available

Purpose of meeting: Develop a data analytics plan that takes into account the Study Charge, work group interests, available staff and data, the study timeline, and existing analytic work products.

Attendance

Lawrence Reid (Phone)
Adrienne Collier (Phone)
Megan Renfrew
Lee Hurt
Geoff Dougherty
Lisa Burgess
Pam Kasemeyer

David Mann
Jeanne Murphy
Kellee White
Dr. Sheila Owens-Collins
Lauren Arrington
Also in attendance- a UMD student of David Mann's and another UMD affiliate

Welcome & Introductions: Megan Renfrew welcomed all attendees and facilitated a round of introductions.

Quick Review of Data Analytics Subgroup purpose; 2011 Infant Mortality Study Results; and Data Presented at Sept. 17th Meeting: State staff reviewed the meeting purpose and format, and provided a [discussion guide](#) for reference. The meeting content is largely contained in the discussion guide and a [slide deck](#).

State staff reviewed the study tasks as described in the legislation for the current study, the 2011 Infant mortality study results, and briefly summarized the data presentation from the September 2018 large group meeting. The key point is from the recent data is that, while geography is important to study and a clear study task, race is driving the rural rates. Rural and non-rural whites look similar to each other, but for blacks we've seen improvements in urban areas that have not been seen in rural areas. A next step would be to look at risk factors by geography and race.

Discussion to a list of potential data analytics questions and approach

The group spent a significant part of the meeting generating questions for possible analysis. Much of this conversation focused on questions related to race and ethnicity and the impact of bias and stress on health.

Discussion of potential study questions related to race/ethnicity

- Does race mean something different in urban and rural areas? How does this experience differ?
- Can we look at cumulative stressors, including discrimination? Consider the theory of Weathering and the impact of stress on health.
 - There is an optional module for BRFSS that some states use to show this stress. MD doesn't seem to use this module, but other states do. This module is for the respondents of the BSRFSS. Maryland has used this for a few years about 10 years ago. It applies to the general population.
 - It would be interesting if we could link to PRAM, but changes to PRAM data are limited as PRAM has to be consistent nationally.
 - These stresses are critical, but what we have the least surveillance data about. We may need to find ways to look at academic data and extrapolate or think about data that we have that could be proxies.
 - There is a growing body of literature looking at area level structural racism and a wide variety of ways to measure that across areas. Geoff is working on a paper on a county-level methodology that he would be willing to share. There are concerns that census or zip code might be more useful in MD, since MD counties are large. Geoff's method could be scaled, but some of the structural factors happen at the county level (ex. Schools).
- Why might African American women be less willing to access available care? Trust, prior bad experiences, cultural issues.
- Can we look at structural racism within the health system? Can we look at implicit bias and outcomes?
 - Mothers on Respect index: This is a tool for measuring patient experience.
 - The surveys currently used for value-based purchasing doesn't include discrimination. HSCRC is trying to look at data to understand the impact on race on outcome—what is the differential of “within hospital effect” of race. This is work in progress.
 - Regarding access to care and bias: can we look at bias in the types of services that African-American women are offered? For example, fewer African Americans were offered prescription opioids. Trust could be an issue—ex. Injection for avoiding preterm birth could be offered and refused.
 - Could we look at claims data to see if there are differences in evidence-based practices by race of the patient? Ex. Episiotomies (not an evidence based treatment). We can only look at claims for what is billed, not what was claimed.
 - There are also issues of how services are offered—how is the conversation worded and how does that impact how people respond?
 - There will be a long list of caveats on all the data we look at.
- How does race impact process which impacts outcomes? We could develop metrics for this. Will one process of care measure be enough, or do we need more?

There are some things, like how race impacts care and where people live, that we aren't sufficiently able to study with current data. Race/ethnicity information is not available in all data sets, and it sometimes differs across data sets (ex. Self-reported v. staff entered).

There will be some items that came up today that fall under the category of data that we'd like collect in the future that we can't collect today. These could be recommendations in the report.

Other Potential study questions for further analysis:

- Are the differences in geographic due to access to care, co-morbid conditions, etc.?
- Which factors determine the gap between urban and rural? We don't know yet, but that could be a goal for this work.
- What about demographic factors aside from race? Education, marital status, socio economic status...?
- What about geographic movement and trends over time?
- Unintended pregnancy rate: We need to look at women before they get pregnant-preconception care. The unintended pregnancy rate is high-how do we improve planning and health before conception.
- The opioid crisis: how does this fit?
 - Access and ease of accessing services (do patients need to go multiple places to get health care and SUD care).
- What is the impact of BMORE for Healthy Babies on our urban v. rural data and trends?
- How do we think about the family unit? Data shows us that marital status is correlated with outcomes. But marital status doesn't tell us the quality of the support system around the mother or the quality of the relationship (or non-marital relationship).
- What is the relationship between maternal mortality and infant mortality?

Outcomes of interest: infant mortality, low birth weight, NICU usage, and birth age. It is important to look at both birthweight and term—low birthweight babies born mature are better off than those who are early.

Cost: To the extent we can bring cost into the equation that can help bring some tools (ex. Hospital rates) to the table for solutions.

Questions that may be outside the scope of this sub group

- How do we get to sustainable programs in infrastructure to address disparities? Grant funding doesn't create these sorts of stable institutions.
- How has BMORE for Healthy Babies been evaluated? Can this program be scaled/expanded?

Discussion of Analytics Methods, Approaches, and data sets

David Mann discussed format and method of looking at 2011 data (see slides for reference document). He discussed ratios between prevalence over time for different risk factors and whether or not that explains black/white difference. Factorial design was discussed as a way to relate 2 factors to each other (see slides and page 11 of discussion guide), considering prevalence and relative risk/"impact". The goal is to identify reasonable targets for interventions. The 2*2 tables are a great way to present information without the complication of multivariate analysis.

- What are the magnitude of the effects of each risk factor on the outcomes? What has more or less impact?
- With this design, how do we decide which metrics are more important? This is not a multivariate process—it is not designed to compare metrics. We could do this and then use multivariate design to further analyze key risk factors. Or should we use multivariate analysis first, as it is a clean way to help set priorities?

The effect of a public health intervention is related to relative risk as well as size of a population effected. This leads to hard questions about who to target and why. These are hard budget, ethics, and policy questions. We will be looking at program evaluation in a different group. It is important to think about the impact on the touched cohort vs. impact on the whole population.

- How should we define rural and urban?
- What is the appropriate geographic level for analysis? County, sub-county, etc.

The designation of rural v. urban is important. Do we use federal definitions or state definitions? Do we use county level or smaller unit of analysis? This decision is related to available data. PRAMS has some data—but problem is best you can do is aggregate 10 years of data for county data. PRAMS data cannot be geocoded. It is possible to disaggregate this data by race/ethnicity. The same would be true with BRFSS. Further limitations include that not all stressors are included in all 10 years.

The legislature built this bill by looking at county level data (most likely). Perhaps we should start at this level and decide when to dig deeper strategically—lower level might be more distracting than useful.

- What quality measures do we have at what level of granularity, & how can we use them?

Evaluation/prioritization of list based on study charge, available staff, available data, and the study timeline.

We will need to prioritize data analysis work based on available data and staff and contractor availability/budget.

We can lay out the analysis in a grid: a list of important determinates; whether or not we have surveillance data or other data (the state also has claims data) and at what geographic level; and whether there is literature available if there is no available surveillance data. This could give us a sense of factors that we want to prioritize. One group member suggested that look for other available data (including from university researchers) as well.

Next steps

1. Fill out list and decide what is possible with the available data and what is not.--David will make list and send out.
2. What analytics work have we already done that we can surface for this project?
3. prioritize ideas on the list—whole group
4. Literature search—does that come first or after data analysis?