

BABY'S 1ST PROJECT: PERINATAL PERIODS OF RISK STUDY

September 2017

*Closing the
Feto-Infant
Mortality
Racial Gap and
Helping Babies
Reach their 1st
Birthday*

 **RESEARCH
& EVALUATION** GROUP

at PHMC



25 : Women's and
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What is Perinatal Periods of Risk (PPOR)?

PPOR is an analytic framework for studying racial disparities in fetal and infant mortality rates. PPOR helps communities identify and prevent risk factors during the greatest periods of risk through 3 phases: (1) Determine the “period of risk” with the most deaths; (2): Identify factors contributing to deaths in that period; (3): Take action based on priorities established in earlier phases. Baby’s 1st Project, a cross-sector group of community partners, undertook a PPOR study via a subcommittee of the Delaware Child Death Review Team.

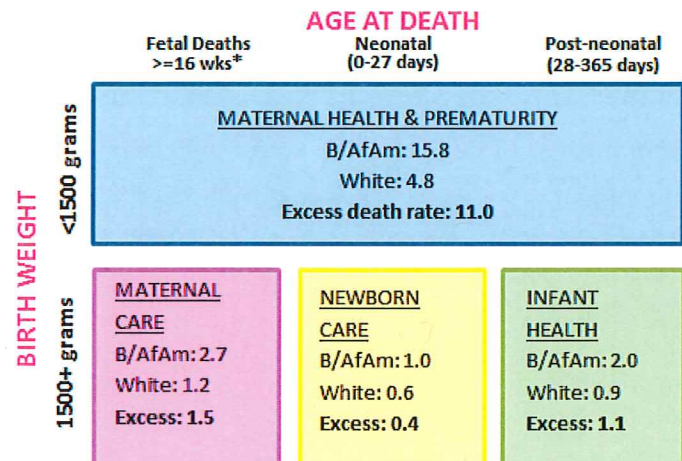
How does PPOR work?

Using vital records, fetal and infant deaths in Delaware County between 2008 and 2012 were categorized into four periods of risk based on birthweight and age at death. The periods correspond to specific factors associated with birth outcomes. PPOR determines the period of risk with the most disparity in deaths to focus community efforts. Disparity is calculated by comparing mortality rates of a target group to a reference group.

- The PPOR committee identified **black or African American, non-Hispanic women** (herein after referred to as “black”) as the target population and **white, non-Hispanic women** (“white”) as the reference group. This was also supported by the vital records data.
- The mortality rates in the two groups are compared in order to determine where the most “**excess deaths**” exist. The rationale behind the comparison is that there is no reason why one group in a community cannot have the same fetio-infant mortality rate as another group in the same community.

During which Period of Risk does the most disparity occur in Delaware County?

- There were a total of 146 fetal and infant deaths among white women (0.7% of all white births) and 194 deaths among black women (2.1% of all black births).
- The overall fetio-infant mortality rate among black women was 3 times higher than that of white women: 21.5 deaths per 1,000 births compared to 7.4 deaths per 1,000 births.
- 78% of the total disparity is within the **Maternal Health & Prematurity (MH&P) period of risk: among babies weighing less than 1500 grams**. This period corresponds with the mother’s preconception health and health behavior risk factors.



To help us understand why there is a Maternal Health & Prematurity disparity, we need to know whether the problem of excess MH&P deaths is because black babies are more likely than white babies to die at low birthweights or because there are more very low birthweight black babies.

- Our analysis found that the MH&P disparity is due to **too many small black babies being born**.
- To prevent excess very low birthweight (VLBW) deaths among black babies, we must **prevent VLBW births**.

What risk and protective factors are associated with having a VLBW baby among black women?

We analyzed our vital records data to study associations between risk and protective factors and birthweight, comparing black women with VLBW babies to black women with normal weight babies. We also interviewed 10 local individuals who represent various social service and health care. Key statistics include:

- Adjusted Odds Ratio (AOR): a measure of association (not causality) that compares the odds of having a very low birthweight baby if a woman does or does not have a risk factor. Controls for age, education, marital status, WIC participation, and prior pregnancy outcomes. * Indicates statistical significance.
- Population Attributable Risk (PAR): how much of an outcome can be theoretically prevented if the risk factor were eliminated. Also controls for the variables listed above.

	Risk Factors	Prevalence (n=234)	AOR	PAR	
Women's Health <i>Nutrition and underlying medical conditions like diabetes, hypertension, and obesity are important risk factors affecting black women in Delaware County.</i>	Pre-pregnancy hypertension	10.7% (25)	3.4*	7.0%	
	Gestational hypertension	19.7 (46)	3.3*	14.8%	
	Pre-pregnancy diabetes	3.4% (8)	3.1*	2.2%	
	Gained more than recommended weight	64.9% (124)	1.7*	26.7%	
	Gained less than recommended weight	19.4% (37)	1.6	10.6%	
	WIC participation	45.3% (96)	0.4*	n/a	
	<p>"I have seen an increased risk associated with obesity, hypertension, and diabetes. I am seeing increasing numbers of young women entering pregnancy with one or several of these risk factors. Early access to care and preconception prevention and treatment of maternal disease are desperately needed."</p> <p>"It's a lack of education and a lack of desire to eat healthy. The services catch women too late."</p>				
Stress and Mental Health <i>Stress and mental health problems have significant effects on health and birth outcomes. Sources of stress include living in unsafe areas, racism, trauma, unmet basic needs, anxiety and depression, low income, and lacking support during pregnancy.</i>	Loss of a child (beyond neonatal period)	7.7% (18)	2.9*	3.5%	
	<p>"There is an overwhelming amount of stress for these women. Things they are experiencing-problems with housing, food, lack of support. Health is hard to focus on; their basic needs are not being met. It's toxic."</p> <p>"Racism causes stress...Being on Medicaid is not easy, it's stressful to maintain coverage. It causes you to always feel on guard with a flight or fight mentality. We need people to say, 'I'm always going to be here with you.'"</p>				
Pregnancy Spacing and Family Planning <i>Ambivalence and shame around pregnancy and not preparing physically and mentally to be pregnant can impact birth outcomes.</i>	< 18 mos. between last live birth and current birth	30.2% (26)	3.2*	22.0%	
	<p>"Preparing to be pregnant is a missing piece in this culture."</p>				
Women with Prior Poor Birth Outcomes <i>Women may not have resolved the issues that resulted in their prior birth outcome. Pre-term births may be normalized in the community.</i>	Prior poor outcome (preterm, fetal/neonatal death, SGA/IUGR)	34.6% (81)	4.6*	28.2%	
	<p>"It's a different mentality to talk about the longer the baby stays in the mom, the better. What happened to that mantra? It used to be talked about more."</p>				
Prenatal Care and the Health System <i>Late entry and inconsistent prenatal care, the quality of prenatal care, lack of social services in health care, provider-patient relationships, and concerns with the speed of insurance approvals are all prominent issues affecting black women in the county.</i>	<p>About 23% of vital records data was missing on the timing and adequacy of prenatal care and therefore cannot be assessed.</p>				
	<p>"We spend so much time worrying about the clinical and not enough on the social and environmental side of things. You have to think about where a woman's head is... handing a resource to a mom is not enough, you need follow-up."</p> <p>"They don't feel respected. The providers don't engage with them...They went there for the doctor and they only get 5 minutes with the doctor. They feel too rushed to feel comfortable asking questions."</p>				
Housing <i>In Delaware County, homelessness, lack of permanent housing, unsafe conditions, and lead contamination all impact pregnancy and birth outcomes.</i>	<p>"A lot of clients don't have permanent housing. They aren't considered homeless, but they aren't guaranteed housing forever. They are bopping from one place to another and sleeping on a sofa. This is reflective of an unstable home life."</p>				
	<p>"These living arrangements contribute to a lack of sleep and poor nutrition. If you're not getting proper rest and you have bad nutrition, of course your baby's birthweight will be low."</p>				

Context

Our Perinatal Periods of Risk (PPOR) study found that in Delaware County, the feto-infant mortality rate among black or African American women was 3 times higher than that of white women. The majority of this disparity was found among very low birthweight babies; thus our work focuses on preventing very low birthweight babies among black women. Analysis of risk and protective factors associated with very low birthweight births, interviews with community key informants, and meetings with Baby's 1st Project partners directly led to the development of this Action Plan.

Mission

To create strong partnerships, working systemically and grounded in data and community input, to strengthen health and social services, advance health equity, and improve pregnancy and birth outcomes for Black and African-American women, babies, and families in Delaware County.

Vision

A Delaware County where racial disparities in birth outcomes are eliminated through community support for women and families across their lifespans and through widespread, equitable access to robust health care and social services.

Principles

- Racism and trauma are prominent stressors and determinants of health, including preterm birth.
- Chronic stress affects all aspects of the lives of women and families.
- Reproductive life planning is an essential aspect of women's health.

Strategies

Strengthen Baby's 1st Project

- Ensure the voices of mothers are central to the design and implementation of new initiatives
- Create memorandums of agreement with key community partner organizations to work towards common goals
- Strengthen engagement with upper level leadership at large anchor institutions
- Identify and establish relationships with under-represented sectors such as transportation, business and faith communities
- Engage other collaborative groups to strategically align and assist with dissemination of public health messaging

Improve Health Care and Social Service Delivery and Access

Short term

- Expand access to services by embedding them in frequently visited locales and co-locating services.

Long term

- Develop a universal intake, shared referral system, and/or virtual catalog of services that connects clients and providers to community services
- Implement new models of service delivery with a focus on behavioral health and nutrition, such as Centering Pregnancy and mobile mental and physical health care

Build Provider Capacity

Short term

- Expand information and education for all providers so they can help families achieve reproductive life planning goals
- Examine practices and criteria used in screening women for risk of pre-term delivery, including stress and race as prominent risk factors

Long term

- Train all health and social service providers in trauma-informed care and in cultural competence and humility
- Support primary health care providers through patient navigators, doulas, and other allied health workers

**Bolster
Community-
Based Support**

Short term

- Develop social marketing campaigns with messages related to improving birth outcomes, such as the importance of prenatal care and full term births, pregnancy planning and preparation, female empowerment, racial disparities in birth outcomes, and risks associated with pre-term births
- Engage the faith-based sector as hubs and gateways to social services and health care

Long term

- Increase neighborhood access to healthy foods
-

**Develop
Programs for
Targeted
Populations**

Short term

- Establish outreach to women with prior poor birth outcomes
- Expand multigenerational education on nutrition, health, and sexuality

Long term

- Increase availability of programming for fathers
-

**Improve Access
to Quality
Housing**

Short term

- Prioritize need for various types of housing, including emergency shelters, public housing, or housing for women and mothers

Long term

- Increase housing supply that is in greatest demand
 - Expand housing inspection and lead remediation programs
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Recommendations

Although beyond the current scope of Baby's 1st Project, we recommend:

- Making transportation more accessible
- Including a social justice lens in trauma informed care trainings that examines the impact of racism & discrimination on health
- Ensuring access to high quality health insurance with swift enrollment and approval for pre-term interventions
- Incorporating social justice and health equity in health promotion

Key Measures of Success

- Varied sectors are engaged in Baby's 1st Project
- Organizations align goals, programming, and measurement with Baby's 1st Project Community Action Plan
- Diverse sources of continued organizational and programmatic funding are secured
- Access to health and social services improves through increased connectivity
- Providers receive training in trauma informed care and cultural competency
- Social marketing campaigns and partnerships engage the community, especially at-risk populations, in birthing healthy babies
- **Fetal-infant mortality rates and disparities improve**

Stay Tuned! A full Perinatal Periods Of Risk (PPOR) Report will be available soon.

Updated: September 7, 2017

Katie Kenyon, Crozer-Keystone Community Foundation, 610.497.7346, Katie.Kenyon@ckcommunityfoundation.org