Chester County Perinatal Periods of Risk (PPOR) Project

Maternal and Child Health Consortium

MCHC's Mission

To advocate for and empower prenatal and parenting families to achieve healthy beginnings and bright futures through a caring culture of service.

Our Vision

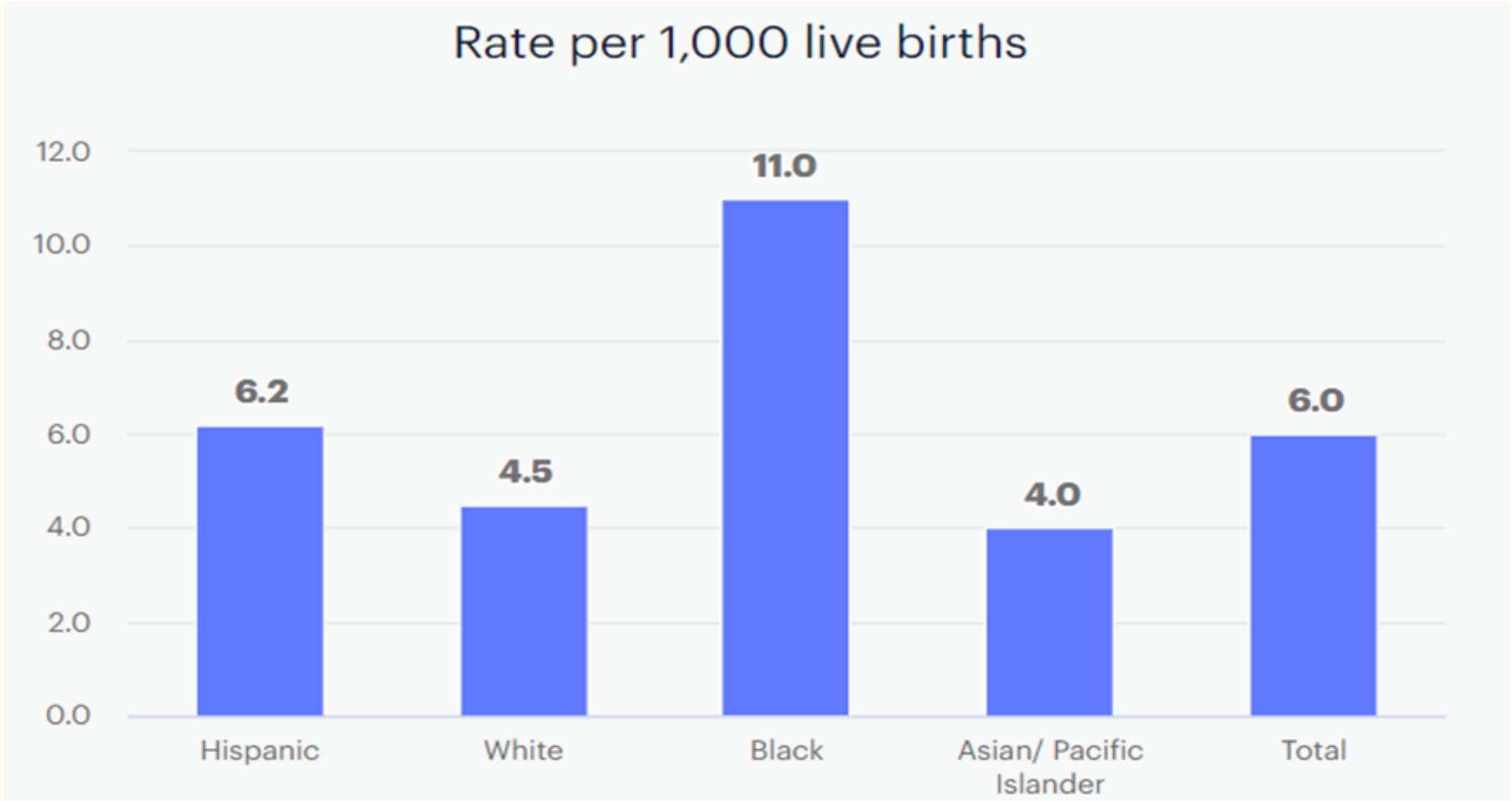
To create a world where every family has access to health care, education, and opportunity for success.

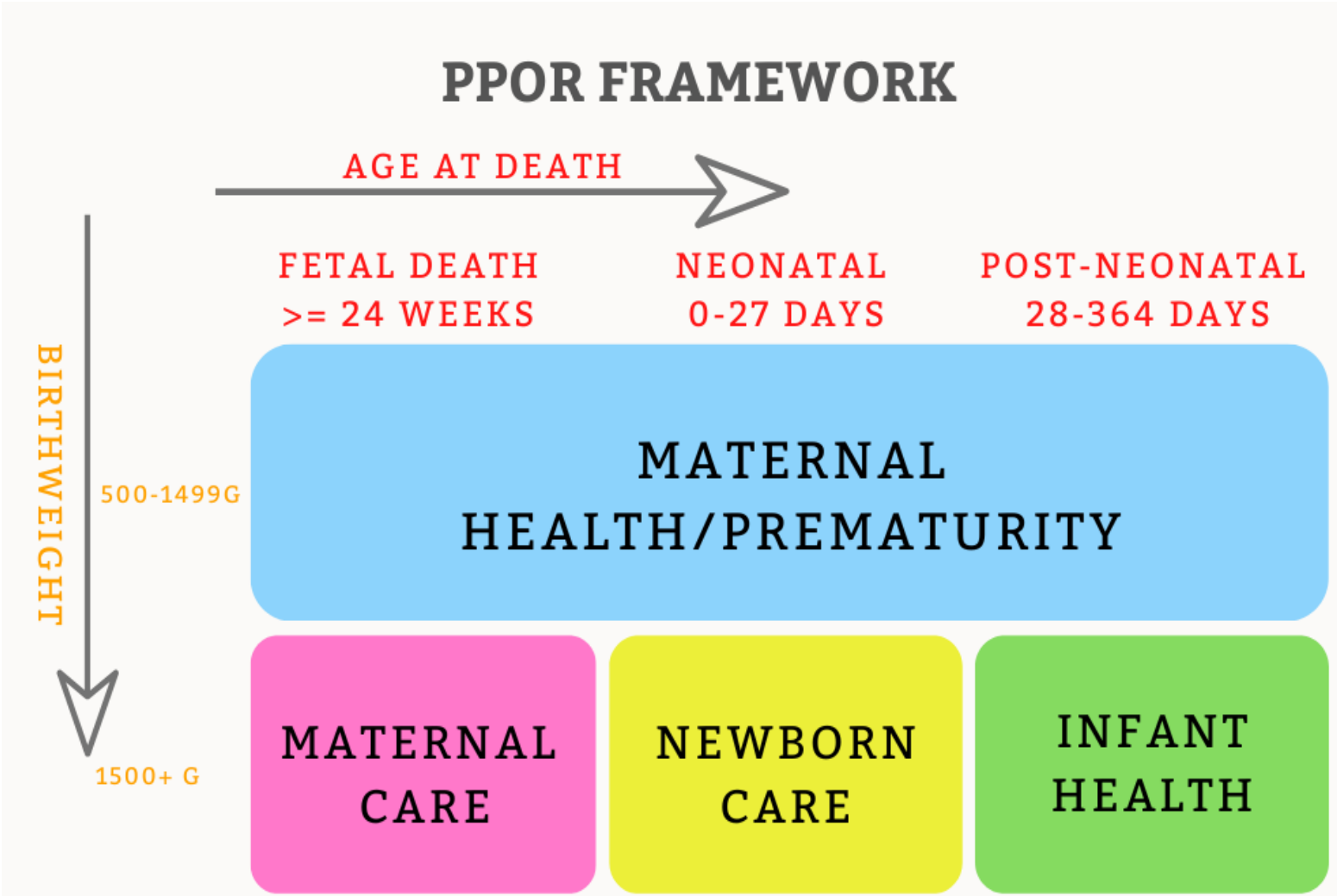
What is PPOR?

An analytical framework for studying fetal and infant mortality in a specific community

- Originated with the World Health Organization and has been modified by **CityMatCH**, along with the CDC, HRSA, and March of Dimes.
- It focuses on a community's racial disparities in fetal and infant mortality rates
- PPOR helps communities identify and prevent risk factors during the greatest periods of risk.

Infant mortality rates by race/ethnicity: Pennsylvania, 2017-2019 Average





Fetal death with 500-1499 grams weight would be included in Blue Box (Maternal Health / Prematurity)

Fetal death with 1500+ grams of weight would be included in Pink Box (Maternal care)

Death after 16 days of birth and 500-1499 grams weight would be in Blue Box (Maternal Health / Prematurity)

Death after 45 days but less than 365 days and over 1500 grams of weight would be in green box (Infant Health)

Very low birth weight < 1,500 grams or 3 lbs. 4 ounces
Low birth weight < 2,500 grams or 5 lbs. 8 ounces
High birth weight > 4,000 grams or 8 lbs. 13 ounces

American College of Obstetricians and Gynecologists (ACOG) and the Society for Maternal-Fetal Medicine (SMFM) definitions term pregnancies (weeks gestation):

- **Early term**: 37 weeks, 0 days and 38 weeks, 6 days
- **Full term**: 39 weeks, 0 days and 40 weeks, 6 days
- **Late term**: 41 weeks, 0 days and 41 weeks, 6 days
- **Post term**: Over 42 weeks, 0 days
- https://www.marchofdimes.org/find-support/topics/pregnancy/what-full-term

Perinatal Periods of Risk

Maternal Health

Preconception health
Perinatal care
Maternal behaviors

Maternal Care

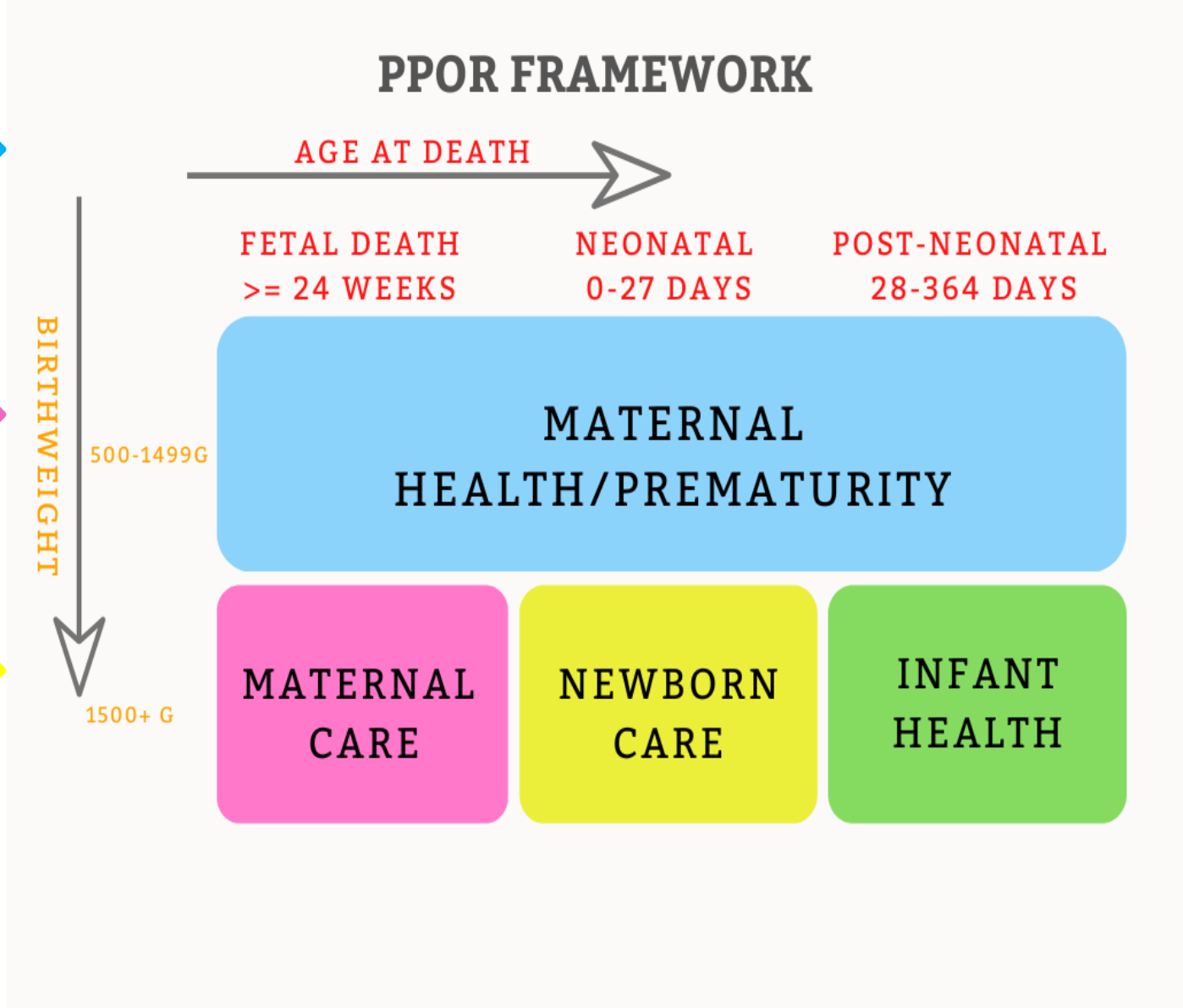
Prenatal care
Obstetric Care
Social determinants of health

Newborn Care

Neonatal care
Pediatric Surgery
Perinatal Management

Infant Health

Sleep position
Breastfeeding
Injury Prevention



Leadership

BWCCA, Phoenixville Health Foundation, Coatesville Center for Community Health, Chester County Community Foundation, Alliance for Health Equity

Community Clinics

Community Volunteers In Medicine (CVIM), LCH, ConnectCare

Health System

Chester County Hospital, Mainline OB/GYN (Paoli Hospital), Phoenixville Hospital, Children's Hospital of Philadelphia (CHOP), Nemours Children's Health , Thomas Jefferson University

Academia

West Chester University

Prenatal Support

Nurse Family Partnership & Title V Healthy Moms, Healthy Families (CCHD), Healthy Start (MCHC), Young Moms, Maternity Care Coalition, Bellies & Babies

Community Resources

Home of the Sparrow, Crime Victim's Center of CC, Domestic Violence Center of CC, Mitzvah Circle, Friends Association, Once Upon a Preemie,

Government

Chester County Health Department, Montgomery County Health Department

Lived Experience Experts

Women of Chester County with a perinatal and/or birthing experience

Data Collection

Maternal and Child Health Consortium

Infant Mortality Data

Retrieval of Infant Mortality Data from the Pennsylvania Department of Health.

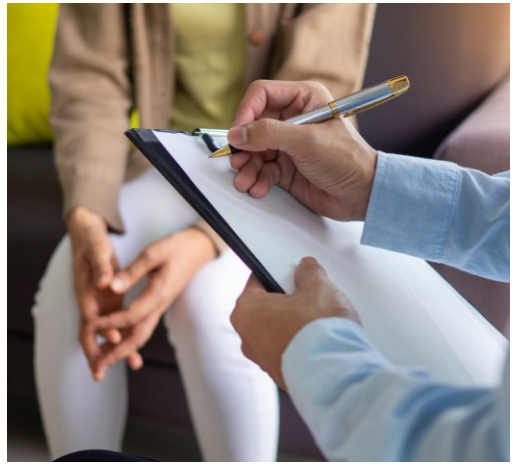
Data set from 2013-2019

Focus Groups

Focus Groups were held with mothers of Chester County to capture perceptions of racial gaps in infant mortality and possible interventions which could address the gap.

Perinatal Interviews

One on one interviews of Chester County women currently pregnant, recently pregnant in the last five years, and/or experienced pregnancy.



Phase I Analysis: Infant Mortality Rates

Chester County Perinatal Periods of Risk Analysis 2013-2019

Largest number of fetal/infant deaths and Infant Mortality rate per 1,000 by each Perinatal Period of Risk and by race

- White (WH) Black or African American (AA)

Chester County, PA Perinatal Period of Risk (PPOR) 2023		Age at Death		
		Fetal Death	Neonatal	Post-neonatal
Birthweight	500-1499 grams	Maternal Health/ Prematurity 20 infant deaths (IDs) & 9.03 Infant Mortality Rate (IMR) African American (AA) 70 infant deaths & 2.44 Infant Mortality Rate White (WH)		
	1500+ grams	Maternal Care 18 IDs & 8.13 IMR AA 50 IDs & 1.74 IMR WH	Newborn Care 2 IDs & 0.90 IMR AA 19 IDs & 0.66 IMR WH	Infant Health 8 IDs & 3.61 IMR AA 19 IDs & 0.66 IMR WH

Phase II Analysis: Associated Risk Factors

Chester County Risk Factors for Infant Mortality - PPOR Project	White	Black – African American
Number of cigarettes smoked last 3 months (Percent by race)	4 (1.22%)	5 (4.17%)
Previous Cesarean	13.6%	19.12%
Previous Pre-term birth	7.03%	11.46%
Eclampsia	2.75%	6.25%
Gestational Hypertension	3.36%	4.17%
Gestational Diabetes	2.45%	3.13%
Pre-pregnancy Diabetes	1.83%	2.08%
Average pre-pregnancy weight w/ average height	158 lbs. 5 feet	174 lbs. 5 feet
Mother's average BMI (≥ 30 = obese)	32	34
Number with high parity (5 or more births)	2 (2.11%)	5 (17.86%)
Average number of prenatal visits	7.41	3.82
Mean Birthweight	2195 grams	1758 grams
Chorioamnionitis (amniotic fluid infected)	4.33%	9%

“I was more comfortable after switching to a provider able to see me more often than my previous provider”

“I felt I had no choice but to travel for better services during my pregnancy”

“I constantly had to repeat my concerns to my provider”

“My symptoms were not being taken seriously”

“I was stressed trying to find mental health resources in my community”

Maternal and Child Health Consortium

Summary of Findings

Perinatal interviews

- Lack of awareness of resources in the community
- Limited prenatal and behavioral health services
- Limited to no transportation getting to and from medical appointments
- Pregnancy concerns not being taken seriously by providers

Community challenges involving racial disparities in infant mortality

- Mistrust in the health system from systemic racism
- Closure of Brandywine and Jennersville hospitals
- ChesPenn Health Services no longer providing prenatal care
- Identifying black birthing people – (meeting communities where they are)

Dr. Michael Lu's 12 pts

Suggestions to reduce black-white infant mortality gap

1. Provide interconception care to women with prior adverse pregnancy outcomes
2. Increase access to preconception care to African American women
3. **Improve the quality of prenatal care**
4. **Expand healthcare access over the life course**
5. Strengthen father involvement in African American families
6. Enhance coordination and integration of family support services
7. Create reproductive social capital in African American communities
8. Invest in community building and urban renewal
9. Close the education gap
10. **Reduce the poverty among African American families**
11. **Support working mothers and families**
12. **Undo racism**

[1] Lu, M. C., Kotelchuck, M., Hogan, V., Jones, L., Wright, K., & Halfon, N. (2010). Closing the Black-White gap in birth outcomes: a life-course approach. *Ethnicity & disease*, *20*(1 Suppl 2), S2–76.

Maternal and Child Health Consortium

Community Action Plan Goals

- Cultivate relationships and trust among African American families
- Support and advocate for the mental wellbeing of birthing people and their partners
- Educate birthing people how to advocate for themselves during the perinatal period
- Support diversity in the healthcare workforce
- Enhance coordination of health and social services

Maternal and Child Health Consortium

Where we are now...

Financial literacy/first-time home buying educational workshop

Community health education and awareness events -
Racism and Black Maternal Infant Health Conference

Cultural events: First Friday in Coatesville and Family Fun Day

The first support Group completed: Vision Board Experience

Research of different Doulas programs: AMAR, Health Connect One

Reduce implicit bias in the health system and community health services:
Once Upon a Preemie Training

Thank you!