Social Determinants of Health among Black People During Pregnancies Following a Short Interpregnancy Interval

Katlynn V. McFarland, BS1, Leah M. Hefelfinger, BS1, Christina V. Mendez, BS1, Emily A. DeFranco, DO, MS1, Elizabeth Kelly, MD, MS1,2

1 University of Cincinnati College of Medicine Department of Obstetrics and Gynecology, 2 Cincinnati Children’s Hospital Medical Center Perinatal Institute

Introduction
- The Black infant mortality rate (IMR) is higher than all other races and more than twice as high as the White IMR.
- Short interpregnancy interval (IPI) contributes to preterm birth disparities among different races.

Objective
Examine the differences in social determinants of health among non Hispanic Black participants with and without short interpregnancy interval (IPI).

Methods:
- Nested case-control study from a prospective cohort analyzing SDH in 576 postpartum patients from 2011-2021.
- Participants were consented, enrolled, and administered questionnaires
- Sociodemographic, pregnancy, and maternal characteristic data were collected from participants' medical records.
- Structured interviews measured participants' social determinants of health

Results
- Over one third non-Hispanic Black study participants had short IPI (<18 months), 38.9%
- Non-Hispanic Black short IPI group was more likely to have a preterm birth, 24.1% versus 12.9% of the referent group (p<0.04)
- Non-Hispanic Black short IPI group was more likely to be younger, mean age 25.9 compared to 27.8 mean age of referent group (p<0.008)
- Non-Hispanic Black short IPI group was more likely to receive WIC during their pregnancy, 81% of the pregnancies versus 63.7% of the referent IPI group (p<0.008)
- Non-Hispanic Black participants with short IPI were also significantly more likely to have negative feelings towards the pregnancy, not have received prenatal care as early as desired, reported reason for late prenatal care as early as desired due to consideration of pregnancy termination, and choose not to breastfeed because they "don't like it".
- However, non-Hispanic Black participants with short IPI reported higher perceived social support, (OR 0.3)

Conclusions
Social determinants that differed between participants with short IPI and those with IPI ≥ 18 months were indicators of social support, joy and resilience, breastfeeding intent, and government assistance.

Prior studies examining infant mortality risk factors compared Non-Hispanic Black people to Non-Hispanic White people. Our study focuses specifically on understanding the lives of Black pregnant people so that future public health initiatives focused on social determinants may attenuate the racial disparity of infant mortality in the US.

Acknowledgements
This research project was funded by an educational grant from the University of Cincinnati Department of Obstetrics and Gynecology Women’s Health Scholars Program

Figure 1. Drivers of Infant Mortality

Figure 2: Percent preterm birth by race averaged from 2016-2018

Graph from 2020 March of Dimes Report Card (marchofdimes.org)

Table: Determinants of health regarding social environment by pregnancy time as Non Hispanic Black

SOCIAL ENVIRONMENT FACTORS
Income < $23,000 14 (7.4) 35 (1.7) 1.46 (0.7-3.3)
Received WIC during this pregnancy 64 (32.9) 79 (3.9) 2.43 (1.2-4.6)
Paid maternity leave 14 (7.4) 22 (1.1) 0.66 (0.3-1.3)
Uninsured 20 (10.9) 90 (4.5) 0.62 (0.3-1.5)
Perceived lack of access to contraception 20 (10.9) 4 (0.2) 5.02 (2.0-12.6)
More than 2 times of birth control used 9 (4.9) 9 (0.5) 8.49 (0.5-14.6)
Did not plan pregnancy as early as desired 38 (20.3) 10 (0.5) 3.56 (1.2-11.1) due to consideration of abortion 9 (4.9) 3 (0.2) 5.21 (1.3-20.3)
Negative feelings toward this pregnancy 38 (20.3) 23 (1.2) 1.84 (0.7-4.9)
Not planning to breastfeed 38 (20.3) 4 (0.2) 16.8 (5.2-56.6) because they don’t like it 7 (3.8) 1 (0.1) 6.89 (0.2-211.5)
Perceived social support 9 (4.9) 21 (1.1) 1.84 (0.7-4.9)

Figure 3. Flow diagram of study population

Graph from 2020 March of Dimes Report Card (marchofdimes.org)