

Running Head: Use of the CenteringPregnancy® Initiative to Decrease Preterm Births
and Racial Disparities in a High Risk Population

Jeree Frost, D.O., PGY 2

Kristina Dakis, M.D., Fellow

University of Illinois College of Medicine

Abstract

Back ground: The proposed research is design to address two significant neonatal issues, preterm birth (PTB) and low birth weight (LBW). PTB and LBW is defined as birth less than 37 gestational weeks and a birth weight less than 2500g, respectively. PTB and LBW babies can lead to many complications and require more interventions compared to full-term babies. These interventions are estimated to cost greater than 26 billion dollars, annually. In Illinois, the

preterm birth rate is 10.3% compared to the

U.S. national average of 9.8%. The

percentage of babies born with LBW has

increased in Peoria County from 2010 to

2014 (8.6%-8.8%), which is above the

average for the state of Illinois. Not only are

the rates increasing but there is a large racial

disparity. African American women PTB rate

is 46% higher than Caucasian women. In Peoria, Il the

PTB rate for Caucasian women is 9.7% and 13% for

African American women, based on 2017 data from the

Peoria County Maternal Child Health Report. Zip codes

within Peroia with higher African American population

have the highest PTB rates.

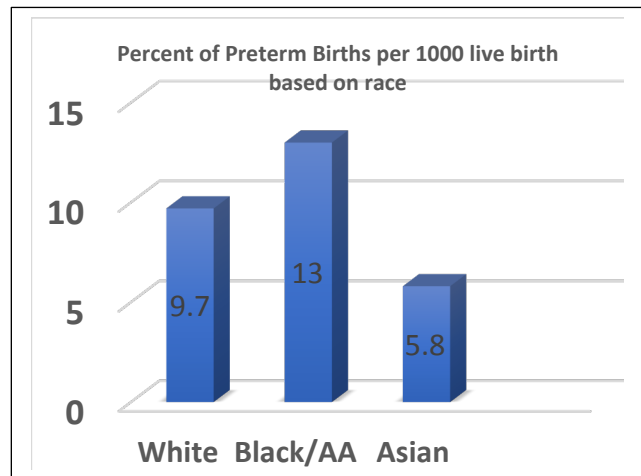
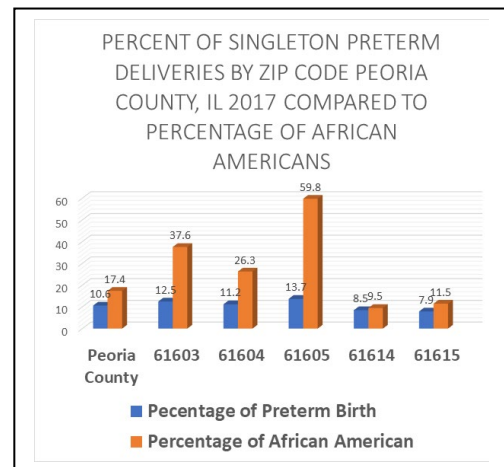


Figure 1. Percent of Preterm Births per 1000 live birth based on race



The rate of PTB is still high even with the current prenatal care and preterm labor interventions, such as tocolytic agents and cerclage. These methods are not decreasing the PTB rate, and do not address racial disparity. There needs to be another intervention that can prevent PTB and LBW that addresses racial disparity. One possible intervention is CenteringPregnancy Group Prenatal Care (GPNC), which have been shown to decrease LBW and PTB , especially in low income population. CenteringPregnancy GPNC also have shown to decrease tobacco use during pregnancy and depression, as well as increase breastfeeding rates.

Methods/design: This is a non-randomize prospective cohort study. Eligible participants are women ages 14-40 years old, who initiate prenatal care before 24 weeks gestational age. Women who choose to be in GPNC will attend 1.5-hour group session with a curriculum provided by Centering Healthcare Institute, with other women whom will deliver the same month. The participants will be followed until 6 weeks postpartum.

Discussion: The purpose of this study is to determine the effect of the CenteringPregnancy model GPNC on the rates of PTB as primarily outcome and secondary outcomes of LBW, tobacco use, smoking cessation, and breast feeding, compared to women who receive IPNC. The results will be used to guide the standard of care to decrease PTB and racial disparities in Peoria, IL.

Result: PTB rate for the GPNC was 9% (n=1). The tobacco use was 27% (n=3), however the tobacco cessation was 67% (n=2), out of the 3 women that uses tobacco. The LBW was 27% (n=3). Breast feeding initiation was 100%, however breast feeding at 6 week postpartum visit was 18%(n=2). 100% of participant were started on birth control before 6 weeks postpartum visit.

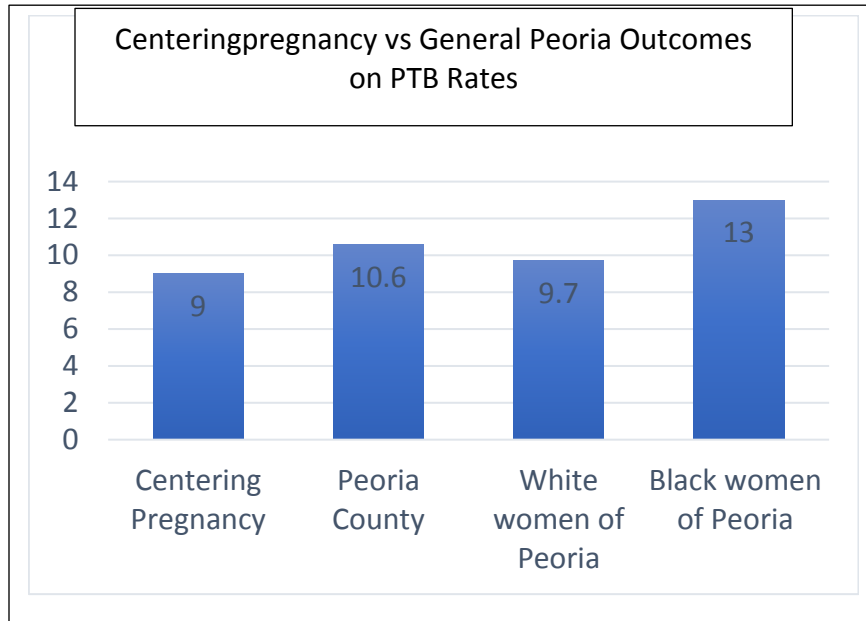
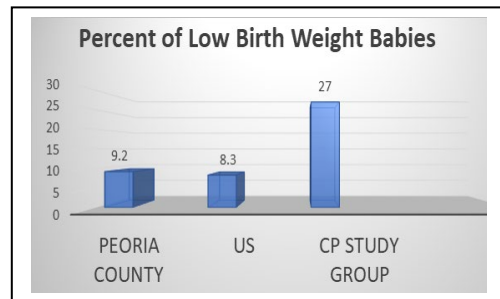


Figure 3. CenteringPregnancy vs General Peoria Outcomes on PTB Rates

Conclusion: GPNC PTB rate was 9%, which is lower than the PTB rate for African American women of 13%, thus decreasing racial disparities.

This is shown in figure 3. The LBW rate was higher than the LBW for Peoria, however this is due to the high tobacco use among participant which was 27% compared to the 23% for adults in Peoria. The tobacco cessation was 67%. The hope that these women can



continue to smoking cessation future babies will be normal birth weight. CenteringPregnancy can be used to decrease racial disparities and PTB rate, however due to the small population size, the results are not statically significant. The result should be continued to gather a larger population size, focusing on areas with higher PTB rates.