

NLN 2016 Abstract Submission from Oregon

Title: Association of Interpregnancy Interval (IPI) and Maternal Health Outcomes among Oregon WIC participants

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Background: Although the potential impact of the WIC program on maternal and child health is a frequently researched topic, few studies have looked at issues outside of WIC's primary sphere of influence; namely dietary intake, breastfeeding support, and anthropometric measures. One indicator that has not been examined extensively and has the potential to be influenced by WIC is interpregnancy interval (IPI). IPI is calculated as the time between the last birth and the next pregnancy. The impact of a short IPI on maternal health outcomes is still debated. Negative impacts on infant birth outcomes have been documented. This study is the first to look at the association of IPI and maternal and infant health outcomes among WIC participants.

Objectives: To assess the association between inter-pregnancy intervals (IPI) and selected maternal and infant health outcomes.

Methods: We linked Oregon birth certificate data from 2008-2013 (n=285,116 births). From these data, we created an analytic file that included only women who had a first and second order birth in that time period (n=31,277 mothers and 62,554 births). The longitudinal file of births was then linked to data from the WIC administrative database. We associated IPI to pre-pregnancy smoking status, pre and post body mass index (BMI) and infant birth outcomes.

Results: Ten percent of births to women on WIC in Oregon have an IPI of less than six months and 31% have an IPI less than 12 months. The comparative figures for non-WIC women are 4 and 20 percent. Women on WIC are more likely to be obese than their non-WIC counterparts at the onset of each pregnancy. In addition, there is a substantial increase in obesity between pregnancies. Although the odds that a women with an IPI less than 6 months smoked in the three months before the second pregnancy is 26% greater than women with an IPI of at least 18 months, adjusting for smoking prior to the first pregnancy eliminates the association between smoking and a short IPI. Similarly after adjusting for BMI in the first pregnancy, the association between BMI and short IPI was eliminated. While the odds of preterm birth are modestly higher for those with an IPI of less than six months there are no associations between IPI and other infant outcomes such as LBW or SGA.

Conclusion: Maternal health risks that were present in the first pregnancy were strongly persistent in the following pregnancy *regardless* of IPI. Future research should explore how the WIC Program, providers of women's health services, and the additional health, and social service programs that touch the lives of women during the inter-conception period can optimally collaborate to assist women with overcoming personal and societal barriers to improving maternal health outcomes.