

Using Surveillance to Inform Public Health Planning: The Utility of the Michigan Pregnancy Risk Assessment Monitoring System in Preconception Health Counseling Initiatives



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Background on Preconception Health and Health Care

In 2006 The Center for Disease Control and Prevention (CDC) and the Agency for Toxic Substances and Disease Registry (ATSDR) published *Recommendations to Improve Preconception Health and Health Care*.¹ Recommendation #3 called for “risk assessment and educational and health promotion counseling to all women of childbearing age to reduce reproductive risks and improve pregnancy outcomes,” to be integrated into primary care visits.

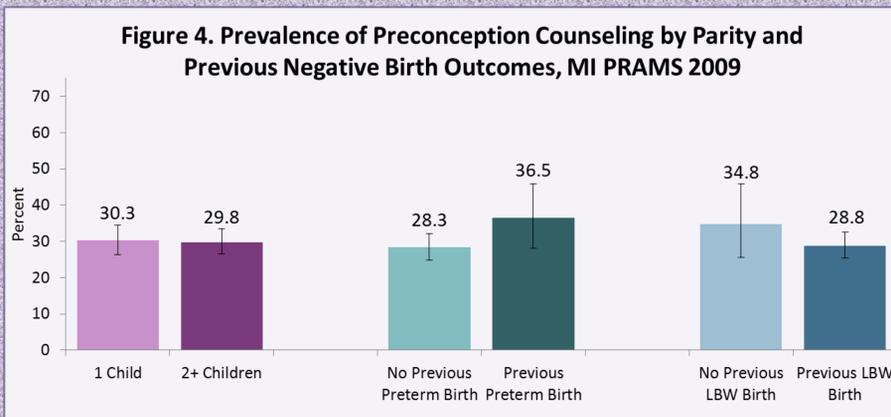
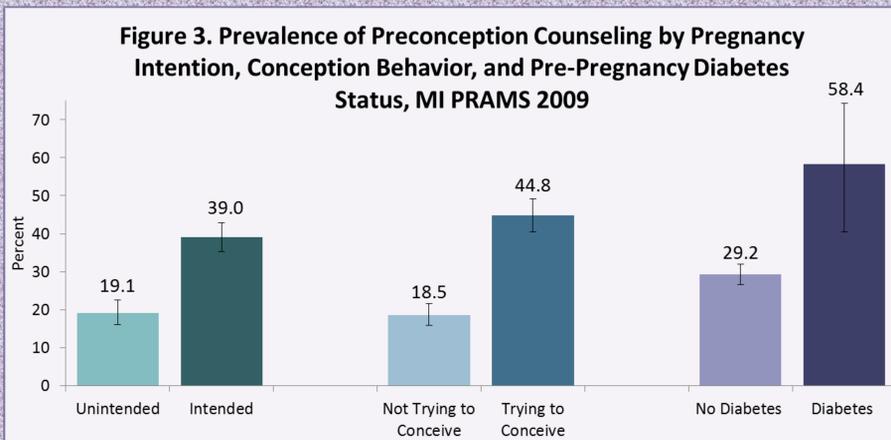
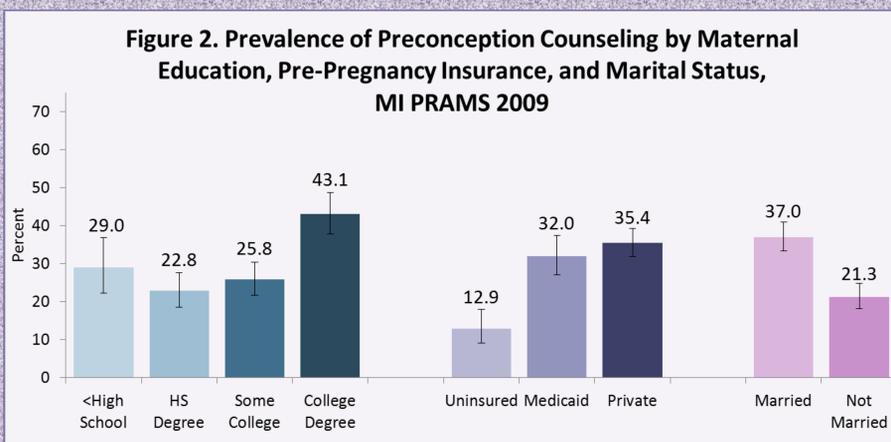
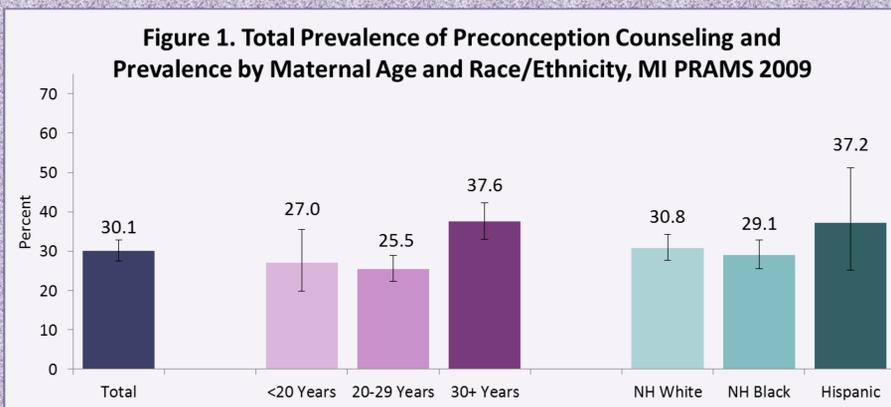
The rationale for preconception counseling comes from Life Course Theory, which provides a theoretical framework for health across the entire lifespan, beginning during the preconception period. Life Course Theory posits that risk and protective factors that occur during certain critical periods of development can affect health later in the lifespan. The preconception and prenatal periods are examples of critical time points that may influence fetal, infant, and early childhood health, in addition to subsequent maternal health.

One of the major setbacks for the planning and implementation of preconception health and health care initiatives is the lack of data for measurable indicators necessary to inform programs and policies about specific issues and populations with the greatest need. The Pregnancy Risk Assessment Monitoring System (PRAMS) has been identified by the CDC as one source of data that can help build this important evidence base.²

The Pregnancy Risk Assessment Monitoring System

PRAMS is a public health surveillance system, which is designed to measure behaviors and experiences around the time of pregnancy. Women are chosen by a stratified, random sample of birth certificates. Sampled mothers are mailed up to three surveys, beginning when their infants are approximately two to four months old, and a telephone phase is implemented for nonresponders. The survey results are weighted to represent the whole population of births occurring to Michigan residents each year. In 2009, a total of 1,667 respondents represented 113,714 total births.

In 2009, information about preconception health and provider counseling were included in the PRAMS survey for the first time. Specifically, the preconception counseling question asked, “*Before you got pregnant with your new baby, did a doctor, nurse, or other health care worker talk with you about how to prepare for a healthy pregnancy and baby?*” Women who answered yes were considered to have received preconception counseling from their providers.



How PRAMS Can Inform Preconception Initiatives

The results from the PRAMS preconception counseling question provide a baseline estimate of the prevalence of preconception counseling among Michigan women delivering a live birth. Overall, 30% of mothers reported that their providers counseled them during the preconception period (Figure 1).

Demographic groups with the lowest prevalences of preconception counseling include: women ages 20-29 (Figure 1), as well as those with less than a college degree, women who were uninsured before pregnancy, and those not married at delivery (Figure 2). This information can be used to identify priority populations for intervention.

Nearly 60% of women with diabetes before pregnancy reported preconception counseling (Figure 3). Since diabetes is a risk factor for negative perinatal outcomes, it is particularly important for diabetic women to receive counseling before pregnancy. Conversely, the prevalence of counseling among women who had a previous preterm birth or low birthweight infant was not significantly higher than for women without these histories (Figure 4). These results suggest that at least some high risk women are either not being identified by their providers for counseling more often than low risk women, or they were not seen by a provider during the preconception period.

Recommendations for Public Health Practitioners

The 2009 PRAMS results suggest that the prevalence of preconception counseling is not uniform across all mothers in Michigan. Based on these findings, the following recommendations are offered:

1. Consider the demographic disparities in self reported preconception counseling when planning which populations to target for preconception interventions.
2. Incorporate the information regarding the prevalence of preconception counseling among high risk women into the development of preconception initiatives.

References

1. Centers for Disease Control and Prevention. Recommendations to improve preconception health and health care — United States: a report of the CDC/ATSDR Preconception Care Work Group and the Select Panel on Preconception Care. *MMWR* 2006;55(No. RR- 6):10-11.
2. Posner SF, Broussard DL, Sappenfield WM, et al. Where are the data to drive policy changes for preconception health and health care? *Women's Health Issues* 2008;(18S):S81-86.