

Discussion of Health Topics During Prenatal Care in Rhode Island

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PRENATAL CARE IS A SERIES OF ASSESSMENTS AND INTERVENTIONS FOR pregnant women, to help ensure healthy pregnancies and birth outcomes, and to prevent any potential adverse health outcomes to mothers and their babies. The three basic components of prenatal care have been defined as 1) early and continuing risk assessment, 2) health promotion, and 3) medical and psychosocial intervention and follow-up.¹ It is recommended that prenatal care start in the first trimester of pregnancy, and continue throughout the whole pregnancy period.² Early prenatal care provides opportunities for detection, treatment, and management of medical and obstetric conditions, as well as opportunities for encouraging healthy behaviors by educating women in their pregnancies.²

The report describes 1) the timing of prenatal care initiation among pregnant women in Rhode Island, 2) health topics discussed with healthcare providers during prenatal care visits, and 3) the relationships between maternal behaviors and prenatal care discussions.

METHODS

The aggregated data from the 2004-2008 Rhode Island **Pregnancy Risk Assessment Monitoring System (PRAMS)** were analyzed. PRAMS is a survey of recent mothers, which collects state-specific, population-based data on maternal behaviors and experiences before, during, and after pregnancy.³ The survey is conducted two to six months after the baby's delivery. During 2004-2008 in Rhode Island, a total of 9,845 recent mothers were sampled and 6,959 completed the survey, yielding a 73.2% weighted response rate. For the flu vaccination, the 2010 PRAMS data (completed survey n=1,282) were analyzed.

The timing of prenatal care initiation was assessed using a survey question, "How many weeks or months pregnant were you when you had your first visit for prenatal care?" The responses were categorized as initiating prenatal care in the first trimester, second trimester, third trimester, and no prenatal care. To assess prenatal care discussions, mothers were asked whether their health care provider talked with them about 12 selected health topics during their prenatal care visits.

To identify disparities among subpopulations, the proportion of women who initiated prenatal care in the first trimester was examined by socio-demographic characteristics (i.e., age, race, ethnicity, education, household income, marital status, and insurance type). The health topics discussed during prenatal care visits were also examined by maternal education level. To determine the relationships between maternal behaviors and prenatal care discussions, the following maternal behaviors were examined: flu vaccination, HIV testing, breastfeeding, and postpartum birth control. Data analyses were performed using the STATA 10.0 software.⁴ The chi-square tests and the logistic regression analyses were employed to determine the statistical significance. All statistical results presented here were weighted to represent the Rhode Island PRAMS population.

	Prenatal Care in the 1 st Trimester (%) ¹	95% CI ²	P-Value
Overall	84.8	(83.8 – 85.8)	
Maternal Age			<0.0001
< 20	68.0	(63.5 – 72.1)	
20-29	83.6	(82.0 – 85.1)	
≥ 30	89.6	(88.3 – 90.8)	
Maternal Ethnicity			<0.0001
Hispanic	75.9	(73.2 – 78.4)	
Non-Hispanic	86.6	(85.4 – 87.8)	
Maternal Race			<0.0001
White	86.7	(85.6 – 87.7)	
Black	78.1	(74.1 – 81.7)	
Other	73.3	(68.3 – 77.8)	
Maternal Education			<0.0001
< High School	70.7	(67.4 – 73.8)	
High School	81.1	(78.9 – 83.1)	
> High School	91.8	(90.7 – 92.8)	
Household Income			<0.0001
< \$10K	72.5	(69.3 – 75.6)	
\$10k - <\$25K	79.3	(76.5 – 81.9)	
\$25K - <\$50K	87.0	(84.6 – 89.1)	
≥ \$50K	94.2	(93.1 – 95.2)	
Marital Status			<0.0001
Married	90.5	(89.4 – 91.5)	
Not married	76.3	(74.3 – 78.1)	
Insurance type			<0.0001
Public	77.8	(75.9 – 79.6)	
Private	91.7	(90.6 – 92.7)	

Data Source: Rhode Island Pregnancy Risk Assessment Monitoring System, 2004-2008.
¹ Weighted percentage
² 95% Confidence Interval

Table 1. Percentage of mothers who initiated their prenatal care in the first trimester by Socio-demographic Characteristics, Rhode Island, 2004–2008.

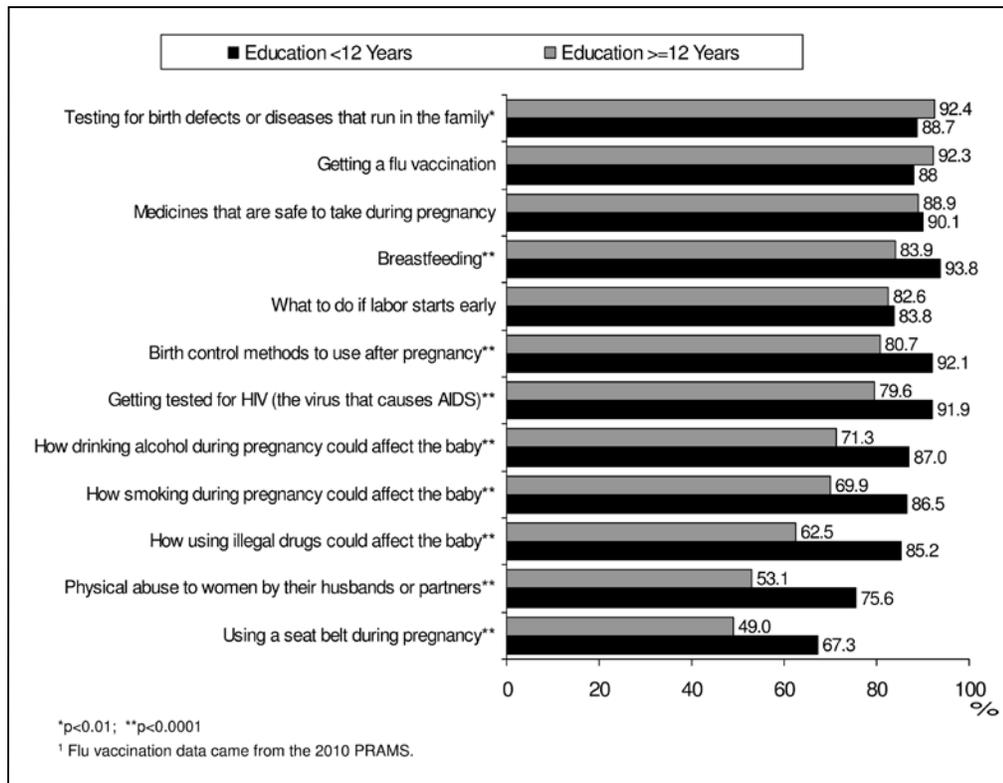


Figure 1. Health Topics Discussed with Healthcare Providers during Prenatal Care Visits by Mother's Education Level, Rhode Island, 2004-2008. (Flu vaccination data are from 2010 PRAMS)

RESULTS

Timing of Prenatal Care Initiation

Overall, 84.8% of Rhode Island mothers initiated their prenatal care in the first trimester, 13.3% in the second trimester, and 1.1% in the third trimester. A small proportion of mothers (0.7%) reported no prenatal care. The percentage of women who initiated prenatal care in the first trimester varied significantly by socio-demographic characteristics. Mothers who were 30 years or older (89.6%), white (86.7%), Non-Hispanic (86.6%), and married (90.5%) were more likely to initiate prenatal care in the first trimester, compared to their counterparts. Mothers who had more than a high school education (91.8%), annual household incomes greater than \$50,000 (94.2%), and private health insurance (91.7%) were also more likely to initiate prenatal care in the first trimester, compared to their counterparts. (Table 1)

Health Topics Discussed during Prenatal Care Visits

In general, some health topics, such as testing for birth defects (91.7%), flu vaccination (91.2%), or medicines that are safe to take during pregnancy (89.0%), were more frequently discussed during prenatal care visits than others, such as seat belt use (51.9%) or physical abuse by partners (57.0%). Health topics discussed during prenatal care visits varied by maternal education level. Mothers with less than high school education were more likely

than mothers with a high school education or higher to report the discussions of the following topics: breast-feeding (93.8% vs. 83.9%), birth control methods to use after pregnancy (92.1% vs. 80.7%), testing for HIV (91.9% vs. 79.6%), alcohol consumption (87.0% vs. 71.3%), tobacco use (86.5% vs. 69.9%), illegal drug use (85.2% vs. 62.5%), physical abuse by partners (75.6% vs. 53.1%), and seat belt use (67.3% vs. 49.0%). On the other hand, mothers with a high school education or higher were more likely to report the discussion of testing for birth defects or diseases that run in their family (92.4% vs. 88.7%). There were no significant differences between the two groups in the discussions of flu vaccination,

medicines that are safe to take during pregnancy, and what to do if their labor starts early. (Figure 1)

Relationship between Maternal Behaviors and Prenatal Care Discussions

Mothers reporting prenatal care discussions of flu vaccination and HIV testing were much more likely to have received a flu vaccination (78.5% vs. 21.1%; p<0.0001) and an HIV test (76.1% vs. 19.7%; p<0.0001) during their pregnancy, compared

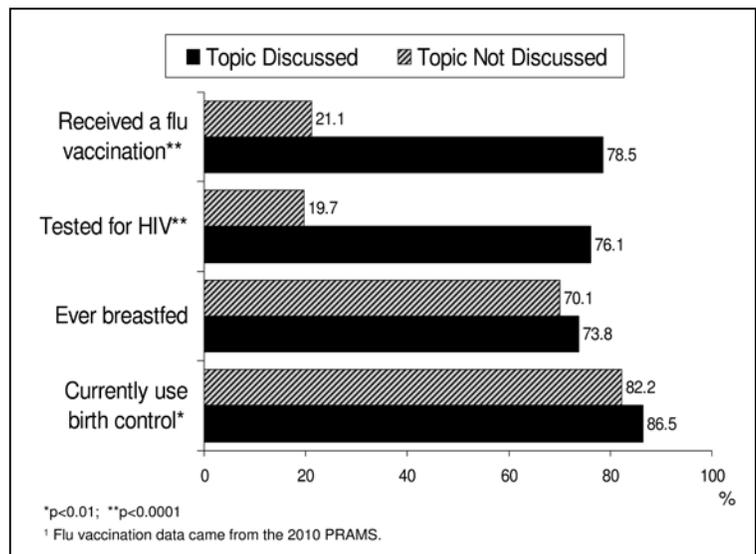


Figure 2. Maternal Behaviors by Prenatal Care Discussions, Rhode Island, 2004-2008. (Flu vaccination data are from 2010 PRAMS)

to those not reporting the discussion of these issues. Mothers who reported prenatal care discussion of birth control were also more likely to have used postpartum birth control (86.5% vs. 82.2%; $p < 0.01$), compared to those who did not report the discussion of this issue. However, there was no significant difference between these two groups in the rate of having ever breastfed. (Figure 2)

After adjusting for socio-demographic factors (age, race, ethnicity, education, marital status, and insurance type), all these maternal behaviors were significantly related to prenatal care discussions. Compared to mothers without discussions, mothers with discussions had significantly higher odds of receiving a flu vaccination (Adjusted Odds Ratio (aOR)=13.7; 95% CI=6.0-31.2; $p < 0.0001$), having an HIV test (aOR=11.6; 95% CI=9.1-14.7; $p < 0.0001$), using postpartum birth control (aOR=1.4; 95% CI=1.1-1.8; $p < 0.01$) and ever breastfeeding their new baby (aOR=1.4; 95% CI=1.1-1.7; $p < 0.01$).

DISCUSSION

The prevalence of initiating prenatal care in the first trimester among women with a live birth in Rhode Island was 84.8% during 2004-2008. However, there were disparities in initiation of prenatal care in the first trimester among subpopulations according to their demographic characteristics. Interventions that promote early prenatal care should especially target women who are teenagers, Hispanic, non-white, not married, and those who have low incomes, public health insurance, and less than a high school education.

Some health topics were not well discussed between health-care providers and pregnant women during their prenatal care visits, which may be due to several reasons. Healthcare providers might not discuss alcohol consumption, tobacco use, and illegal drug use with women who indicated not having these behaviors. Recall bias can also contribute to the results because mothers who do not have these behaviors during pregnancy may not accurately recall the discussion of these topics with their health-care providers. Healthcare providers were more likely to discuss health issues with less educated women, since low education is often associated with a high risk of adverse health behaviors or outcomes, such as tobacco use, alcohol consumption, partner violence, or an unintended pregnancy.

This report indicates that prenatal care providers play an important role to promote the healthy behaviors of pregnant women by discussing health issues during prenatal care visits. More women received a flu vaccination, had an HIV test, used postpartum birth control, and breastfed their baby when their health care providers discussed the benefits of these recommendations. This report also suggests that more healthcare providers should talk about intimate partner violence and use of a seat belt with all pregnant women during their prenatal care visits.

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Disclosure of Financial Interests

The authors and/or their significant others have no financial interests to disclose.

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