

## Intimate Partner Violence Before or During Pregnancy In Rhode Island

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**Intimate partner violence (IPV)** can be any form of physical, psychological, economic, verbal, or sexual abuse by current and former spouses and dating partners.<sup>1</sup> Each year in the United States, IPV affects approximately 1.5 million women, including as many as 324,000 pregnant women.<sup>1</sup> IPV during pregnancy can lead to unintended pregnancy, smoking, depression, premature delivery, vaginal bleeding, miscarriage, and serious physical injury or even death of the mother and fetus.<sup>1,2</sup> The American College of Obstetricians and Gynecologists (ACOG), the American Medical Association (AMA), and the American Academy of Family Physicians (AAFP) recommend routine screening of all women for IPV.

This report describes 1) the prevalence of IPV before or during pregnancy in Rhode Island and 2) the associations of IPV with maternal health and well-being.

### METHODS

Data from the 2004-2007 Rhode Island Pregnancy Risk Assessment Monitoring System (PRAMS) were analyzed to assess IPV before or during pregnancy. PRAMS, a surveillance project of the Centers for Disease Control and Prevention (CDC) and state health departments, collects state-specific, population-based data on maternal behaviors and experiences before, during, and after delivery of a live infant.<sup>3</sup> During 2004-2007, a total of 5,662 women completed the survey, with an average 73.8% weighted response rate. (Response rates were weighted to account for the sample design and unequal probabilities of selection of the survey.)

Four survey questions focused on physical abuse by partner/ex-partner or husband/ex-husband: two concerned the year prior to pregnancy and two the months of pregnancy. Physical abuse includes pushing, hitting, slapping, kicking, choking, or other forms of physical hurting. Maternal health and well-being were assessed by the presence or absence of health risk behaviors (delayed or no prenatal care, smoking during and after pregnancy, unintended pregnancy, no current breastfeeding, alcohol use during pregnancy) and pregnancy complications (vaginal bleeding, urinary tract infection, severe nausea, vomiting or dehydration,

preterm or early labor, premature rupture of membranes (PROM), diagnosed depression during pregnancy). PRAMS data were weighted and analyzed to estimate the prevalence of IPV, 95% confidence intervals (CI), p-values, and adjusted odds ratios (aOR). Data analyses were performed using SUDAAN software, which accounts for the complex sample design of the survey. All unknown and missing responses were excluded from the analysis.

### RESULTS

#### Prevalence of IPV

Overall, 5.5% of RI women reported physical IPV before and/or during the most recent pregnancy: 4.2% for before pregnancy and 3.2% for during pregnancy. (Figure 1) IPV was significantly higher among teenagers (14.3%), Hispanics

Table 1. Prevalence of Intimate Partner Violence before/during Pregnancy by selected characteristics, Rhode Island, 2004-2007

	n <sup>1</sup>	% IPV	95% CI	P-Value
<b>Overall</b>	5554	5.5	(4.9 - 6.3)	
<b>Maternal Age</b>				
< 20	530	14.3	(11.0 - 18.5)	<0.0001
20-29	2466	7.3	(6.2 - 8.7)	
30-34	1471	2.2	(1.5 - 3.3)	
≥ 35	1087	1.4	(0.8 - 2.5)	
<b>Maternal Ethnicity</b>				
Hispanic	1172	8.0	(6.3 - 10.0)	0.0051
Non-Hispanic	3587	5.0	(4.2 - 6.0)	
<b>Maternal Race</b>				
White	4597	5.3	(4.6 - 6.2)	0.0088
Black	553	7.5	(5.2 - 10.7)	
American Indian	76	13.0	(6.1 - 25.5)	
Asian/Pacific Isl.	253	2.2	(0.7 - 6.3)	
<b>Maternal Education</b>				
< High School	885	10.3	(8.1 - 13.0)	<0.0001
High School	1531	8.9	(7.3 - 10.9)	
> High School	2937	2.1	(1.6 - 2.8)	
<b>Household Income</b>				
< \$15K	1382	13.2	(11.1 - 15.6)	<0.0001
\$15K - <\$25K	607	6.0	(4.1 - 8.6)	
\$25K - <\$50K	1013	3.9	(2.7 - 5.7)	
≥ \$50K	2084	1.3	(0.9 - 2.1)	
<b>Marital Status</b>				
Married	3391	1.9	(1.4 - 2.5)	<0.0001
Not married	2163	11.2	(9.7 - 13.0)	
<b>Insurance for Prenatal Care</b>				
Public	2208	9.8	(8.4 - 11.4)	<0.0001
Private	3031	1.9	(1.4 - 2.6)	
<b>WIC Participation</b>				
Yes	2406	9.4	(8.1 - 11.0)	<0.0001
No	3134	2.7	(2.1 - 3.4)	

Data Source: Rhode Island Pregnancy Risk Assessment Monitoring System, 2004-2007.

<sup>1</sup> Sample size in each category; unknown and missing categories were excluded.

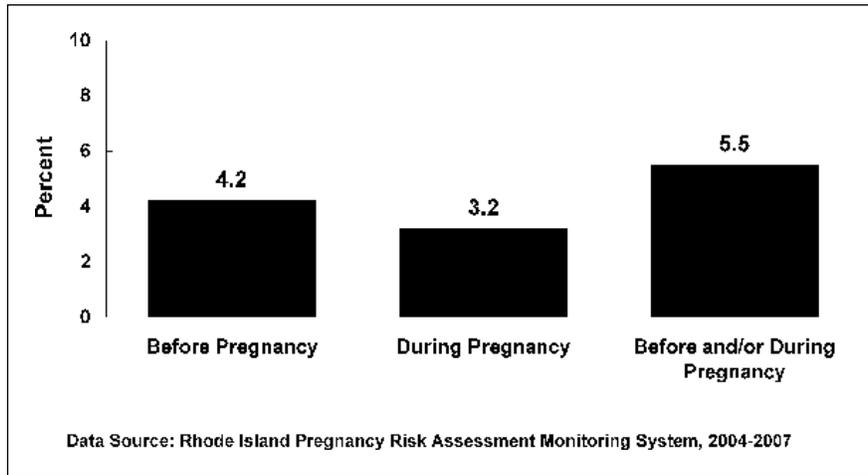


Figure 1. Prevalence of intimate partner violence among women with a recent live-birth, Rhode Island, 2004-2007

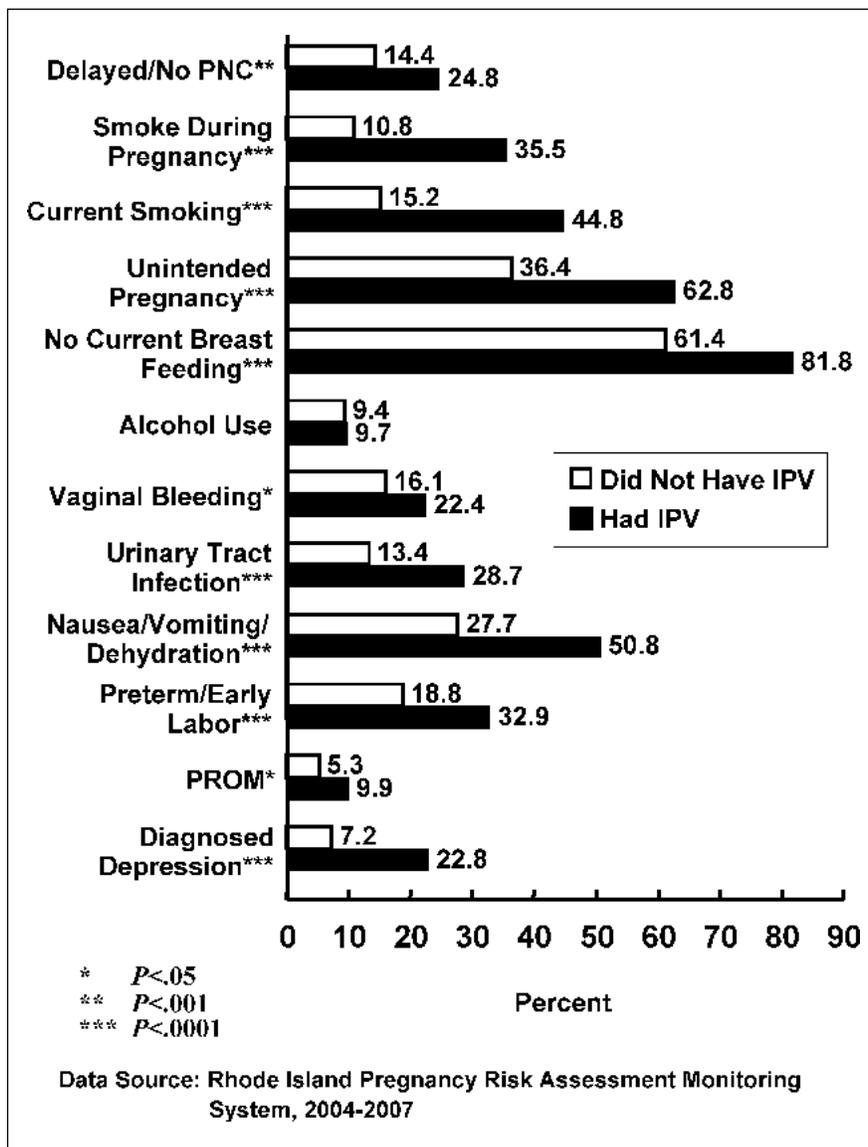


Figure 2. Behavioral risks and pregnancy complications by intimate partner violence status, Rhode Island, 2004-2007

(8.0%), American Indians (13.0%), Blacks (7.5%), and those who were unmarried (11.2%), had household incomes  $< \$15,000$  (13.2%), had  $< \text{high school education}$  (10.3%), had public insurance (9.8%), and were enrolled in the **Women, Infants and Children (WIC) Food Supplement Program** during pregnancy (9.4%) than among their counterparts. (Table 1)

### Maternal Health Risk Behaviors

Compared with women who did not experience IPV before or during pregnancy, women who experienced IPV were more likely to have delayed or no prenatal care (24.8% vs 14.4%), smoke during pregnancy (35.5% vs 10.8%), smoke at the time of the survey (44.8% vs 15.2%), report their pregnancy was unintended (62.8% vs 36.4%), and report not breastfeeding at the time of the survey (81.8% vs 61.4%). The likelihood of drinking alcohol during pregnancy was not significantly different for women experiencing IPV (9.7%) compared to women who did not experience IPV (9.4%). (Figure 2)

### Pregnancy Complications

Women who experienced IPV before or during pregnancy, compared to their counterparts, were more likely to report vaginal bleeding (22.4% vs 16.1%), urinary tract infections (28.7% vs 13.4%), severe nausea, vomiting, or dehydration (50.8% vs 27.7%), preterm or early labor (32.9% vs 18.8%), premature rupture of membranes (9.9% vs 5.3%), and diagnosed depression (22.8% vs 7.2%). (Figure 3)

Even after adjusting for socio-demographic factors (maternal age, race, ethnicity, marital status, household income, and educational level) in the logistic regression models, women who experienced IPV were still at increased risk for vaginal bleeding (aOR=1.7; 95% CI=1.2-2.4), urinary tract infections (aOR=1.8; 95% CI=1.3-2.5), severe nausea, vomiting, or dehydration (aOR=2.0; 95% CI=1.5-2.8), preterm or early labor (aOR=1.7; 95% CI=1.3-2.4), premature rupture of membranes (aOR=1.8; 95% CI=1.2-2.8), and diagnosed depression (aOR=2.6; 95% CI=1.8-3.7) during their pregnancy.

## DISCUSSION

Each year, about 12,500 women in Rhode Island deliver live-born infants. Based on our estimates, about 690 RI women would experience IPV before or during pregnancy each year. This number may be low: it excludes women whose pregnancies did not result in live births. The data consider only physical abuse as a measure of IPV, not sexual, psychological or verbal abuse. Finally, women tend to underreport IPV.

Women who experienced IPV before or during pregnancy were more likely to have pregnancy complications and to engage in unhealthy behaviors.

Although the ACOG and CDC recommend that all health care providers screen all patients for violence at regular intervals, many health care providers do not.<sup>1</sup> A survey conducted in Alaska indicates that only 17% of prenatal care providers routinely screened for IPV at the first prenatal visit, and only 5% at follow-up visits.<sup>4</sup> In Rhode Island, according to the PRAMS data, 55% of new mothers reported their health care providers talked about IPV during their prenatal care visits.

If a patient screens positively for IPV, physicians are recommended to validate the patient's experience and concerns, conduct safety assessment/develop a safety plan, offer information about/provide referrals to local agencies, document findings in the medical record, and schedule a follow-up appointment.<sup>1,5</sup>

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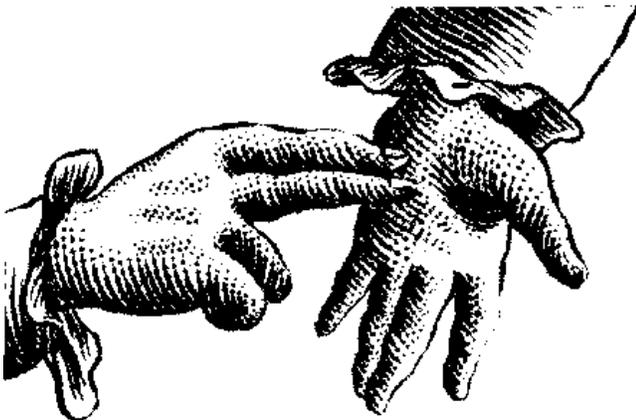
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## Disclosure of Financial Interests

The authors have no financial interests to disclose.



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