

## Motor Vehicle Injuries

### **Prenatal Counseling about Seat Belt Use during Pregnancy and Injuries from Car Crashes during Pregnancy**



#### **Background**

The CDC has identified prevention of motor vehicle injuries as a Winnable Battle.<sup>1</sup> In 2009 in the United States, motor vehicle-related injuries was the leading cause of death among women of reproductive age (15-44 years of age).<sup>2</sup> Motor vehicle injuries are a leading cause of death and injury for pregnant women.<sup>3</sup> Between 1% and 3% of live-born infants are exposed in utero to a motor vehicle crash.<sup>4-6</sup> Motor vehicle crashes are also the leading cause of traumatic fetal deaths.<sup>7</sup> Seat belt use reduces the risk of adverse maternal and fetal outcomes,<sup>8</sup> and their use throughout pregnancy is recommended by the American College of Obstetricians and Gynecologists (ACOG). The recommendation is very specific to wearing the shoulder belt between the breasts and wearing the lap belt low across the upper thighs, as this positioning distributes the force of the impact and reduces the risk of injury to both the mother and fetus.<sup>9-11</sup> Prenatal care providers are strongly recommended to counsel women during prenatal care visits on compliant use and proper positioning of seat belts.<sup>10</sup>

#### **PRAMS Questions**

Q1: *During any of your prenatal care visits, did a doctor, nurse, or other health care worker talk with you about any of the things listed below? Please count only discussions, not reading materials or videos. For each item, circle Y (Yes) if someone talked with you about it or circle N (No) if no one talked with you about it.*

- Using a seat belt during my pregnancy

Q2: *Did you have any of the following problems during your most recent pregnancy? For each item, circle Y (Yes) if you had the problem or circle N (No) if you did not.*

- I was hurt in a car accident.

Findings from women who delivered a live-born infant in 2009 in any of the 29 PRAMS states that met the response rate threshold of 65%\* are included in this report.

#### **Findings in Brief**

In 2009, slightly more than half (52.8%<sup>†</sup>) of women who delivered a live-born infant reported that their health care provider talked with them during prenatal care about seat belt use during pregnancy (Figure 1). The prevalence of prenatal discussion about seat belt use during pregnancy was highest among women who were younger than 20 years of age (62.3%); Black, non-Hispanic (64.8%); had less than a

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\*The 29 PRAMS states that met the response rate threshold of 65% in 2009 include: AK, AR, CO, DE, GA, HI, IL, ME, MD, MA, MI, MN, MS, MO, NE, NJ, OH, OK, OR, PA, RI, TN, TX, UT, VT, WA, WV, WI, and WY.

<sup>†</sup>95% confidence intervals (CI) for all percentages are included in the figures and tables.

high school education (61.7%); and reported Medicaid as their source of insurance coverage during pregnancy (59.1%). Lower prevalence of prenatal discussion about seat belt use during pregnancy was reported by women who were 35 years of age and older (46.4%); White, non-Hispanics (48.0%); had more than a high school education (46.2%); and who reported having private insurance coverage during pregnancy (46.9%).

Less than two percent (1.5%) of women reported being injured in a car accident during their most recent pregnancy (Figure 2). The prevalence of motor vehicle-related injury during pregnancy was highest among women who were younger than 20 years of age (2.1%); Black, non-Hispanic (2.6%); had less than a high school education (2.0%); and reported Medicaid as their source of insurance coverage during pregnancy (1.9%). Lower prevalence was found among women who were 35 years of age and older (0.8%); Hispanic (1.0%); had more than a high school education (1.3%); and who reported other insurance coverage during pregnancy (0.8%).

## Public Health Implications

Our findings mirror those of prior research and reinforce ACOG's guidance that women should be counseled during prenatal care regarding proper seat belt use during pregnancy. Pregnant women who are educated on correct seat belt use are more likely to wear them and in an appropriate manner.<sup>7</sup>

PRAMS is a good source for continued assessment of counseling on seat belt use and women's exposure to motor vehicle injuries during pregnancy. Findings can be used to inform providers about gaps in this counseling service so that corresponding actions may be taken.<sup>8</sup>

## References

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For more information:

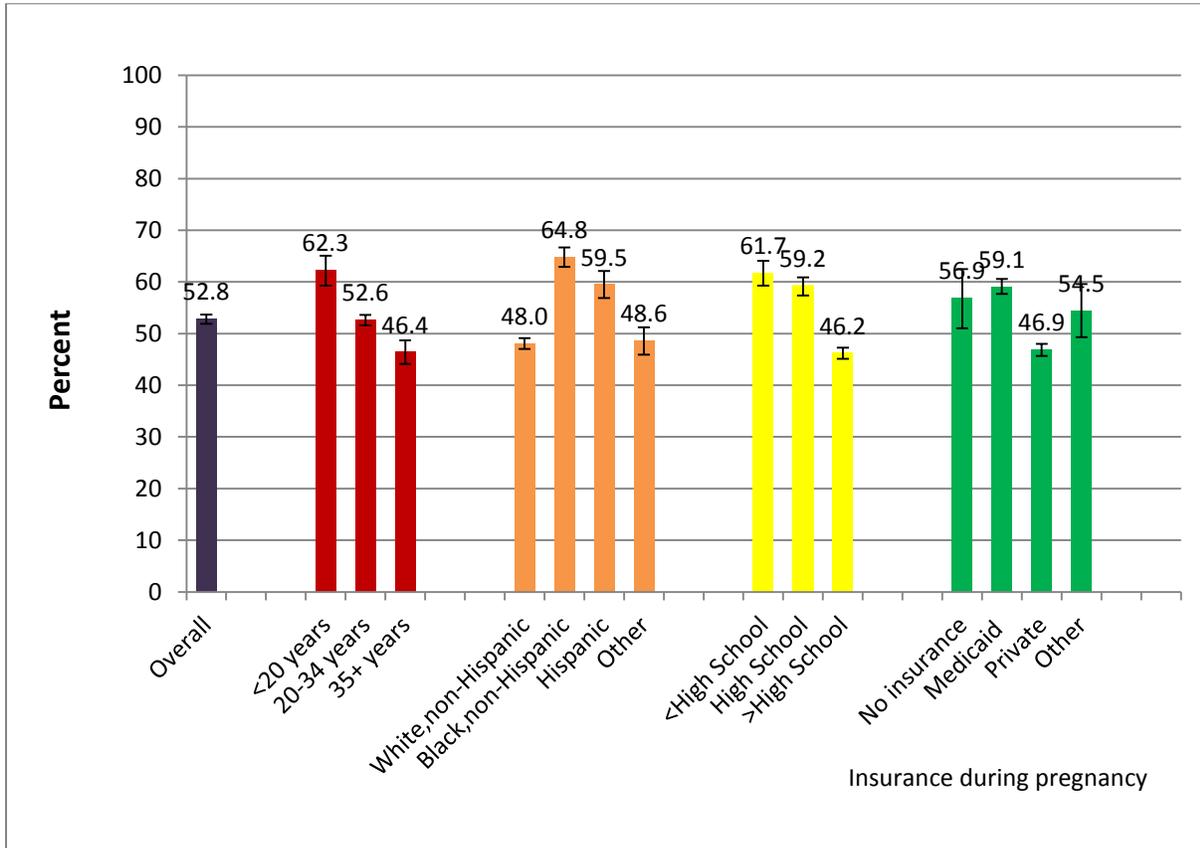
American College of Obstetricians & Gynecologists Frequently Asked Questions: Car safety for you and your baby

<http://www.acog.org/~media/For%20Patients/faq018.pdf?dmc=1&ts=20120726T0948556730>

National Highway Traffic Safety Administration. Should pregnant women wear seat belts?

[http://www.ochealthinfo.com/docs/public/mcah/forms/seat\\_belt.pdf](http://www.ochealthinfo.com/docs/public/mcah/forms/seat_belt.pdf)

**Figure 1.** Prevalence of prenatal counseling about seat belt use during pregnancy by selected maternal demographics, 29 States\*, PRAMS 2009



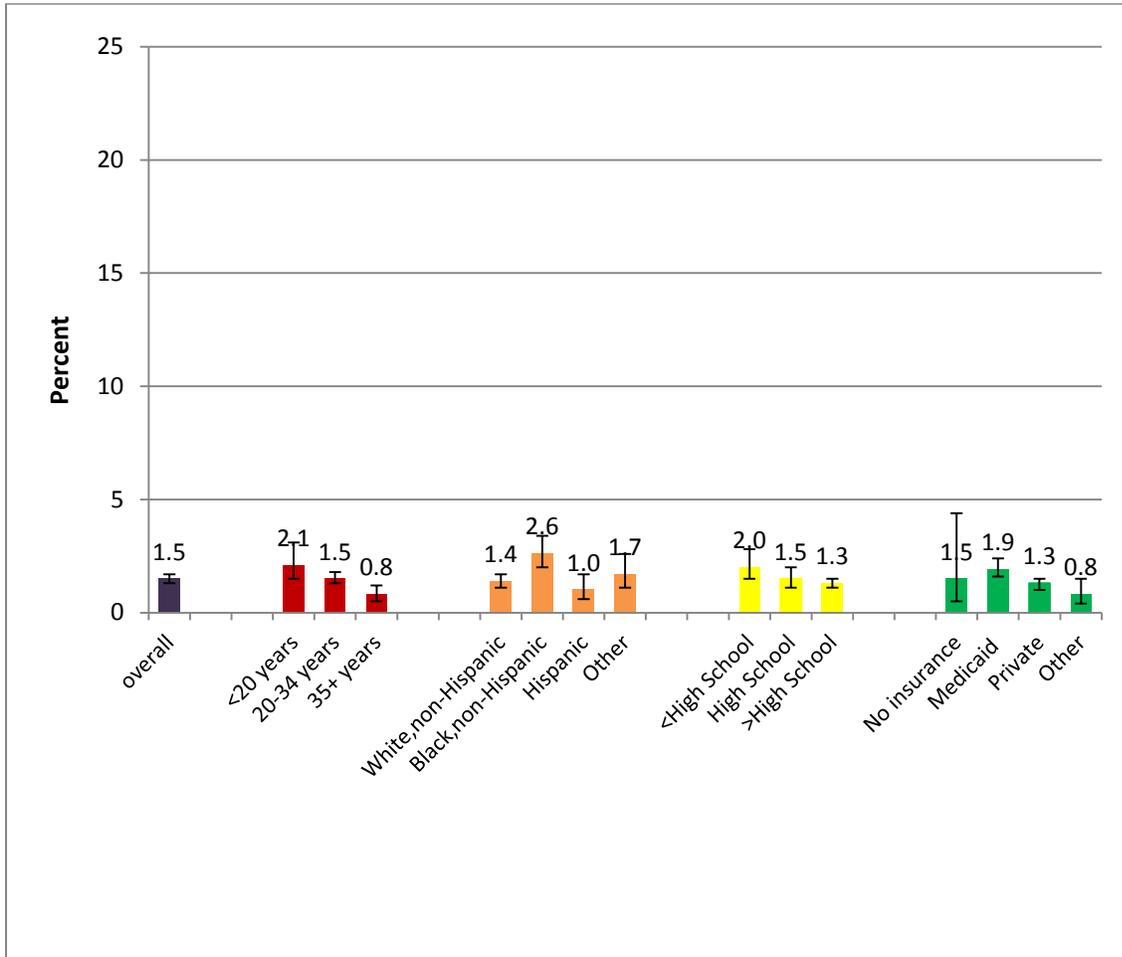
\*The 29 PRAMS states that met the response rate threshold of 65% in 2009 include: AK, AR, CO, DE, GA, HI, IL, ME, MD, MA, MI, MN, MS, MO, NE, NJ, OH, OK, OR, PA, RI, TN, TX, UT, VT, WA, WV, WI, and WY.

**Table 1. Prevalence of prenatal counseling about seat belt use during pregnancy by selected maternal demographics, 29 States\*, PRAMS 2009**

	Prevalence of Counseling on Seat Belt Use During Pregnancy		Prevalence of No Counseling on Seat Belt Use During Pregnancy	
	Percent (%)	95% Confidence Interval	Percent (%)	95% Confidence Interval
<b>Overall</b>	52.8	51.9-53.7	47.2	46.35-48.12
<b>Maternal age</b>				
<20 years	62.3	59.3-65.1	37.7	34.8-40.7
20-34 years	52.6	51.6-53.6	47.4	46.4-48.5
35+ years	46.4	44.1-48.7	53.6	51.3-55.9
<b>Maternal race/ethnicity</b>				
White, non-Hispanic	48.0	47.0-49.1	52.0	50.1-53.0
Black, non-Hispanic	64.8	62.9-66.7	35.2	33.3-37.1
Hispanic	59.5	56.9-62.1	40.5	37.9-43.2
Other	48.6	45.9-51.2	51.4	48.8-54.1
<b>Maternal education</b>				
<High School	61.7	59.3-64.1	38.3	35.9-40.7
High School	59.2	57.4-60.9	40.8	39.1-42.6
>High School	46.2	45.1-47.3	53.8	52.7-54.9
<b>Insurance during pregnancy</b>				
No insurance	56.9	51.0-62.5	43.2	37.5-49.0
Medicaid	59.1	57.7-60.6	40.9	39.4-42.4
Private	46.9	45.7-48.0	53.1	52.0-54.3
Other	54.5	49.3-59.6	45.5	40.4-50.7

\*The 29 PRAMS states that met the response rate threshold of 65% in 2009 include: AK, AR, CO, DE, GA, HI, IL, ME, MD, MA, MI, MN, MS, MO, NE, NJ, OH, OK, OR, PA, RI, TN, TX, UT, VT, WA, WV, WI, and WY.

**Figure 2.** Prevalence of women reporting being hurt in a motor vehicle crash during pregnancy, 29 States\*, PRAMS 2009



\*The 29 PRAMS states that met the response rate threshold of 65% in 2009 include: AK, AR, CO, DE, GA, HI, IL, ME, MD, MA, MI, MN, MS, MO, NE, NJ, OH, OK, OR, PA, RI, TN, TX, UT, VT, WA, WV, WI, and WY.

<b>Table 2. Prevalence of women reporting being hurt in a motor vehicle crash during pregnancy by selected maternal demographics, 29 States*, PRAMS 2009</b>				
	<b>Prevalence of Being Hurt in a “Car Accident”<sup>†</sup></b>		<b>Prevalence of Not Being Hurt in a “Car Accident”<sup>†</sup></b>	
	<b>Percent (%)</b>	<b>95% CI</b>	<b>Percent (%)</b>	<b>95% CI</b>
<b>Overall</b>	1.5	1.3-1.7	98.5	98.3-98.7
<b>Maternal age</b>				
<20 years	2.1	1.5-3.1	97.9	96.9-98.5
20-34 years	1.5	1.3-1.8	98.5	98.2-98.7
35+ years	0.8	0.5-1.2	99.3	98.8-99.5
<b>Maternal race/ethnicity</b>				
White, non-Hispanic	1.4	1.1-1.7	98.6	98.3-98.9
Black, non-Hispanic	2.6	2.0-3.4	97.4	96.6-98.0
Hispanic	1.0	0.6-1.7	99.0	98.4-99.4
Other	1.7	1.1-2.6	98.3	97.4-98.9
<b>Maternal education</b>				
<High School	2.0	1.5-2.8	98.0	97.2-98.6
High School	1.5	1.1-2.0	98.5	98.0-98.9
>High School	1.3	1.1-1.5	98.7	98.5-99.0
<b>Insurance during pregnancy</b>				
No insurance	1.5	0.5-4.4	98.5	95.6-99.5
Medicaid	1.9	1.6-2.4	98.1	97.6-98.5
Private	1.3	1.0-1.5	98.8	98.5-99.0
Other	0.8	0.4-1.5	99.2	98.6-99.6

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<sup>†</sup>The wording of the PRAMS question on this topic asks whether the respondent was hurt in a “car accident” during her most recent pregnancy.