



## PREVENTION OPPORTUNITIES UNDER THE BIG SKY

### Excess Pregnancy-Associated Mortality Among Young American Indian Women in Montana

The mortality rates for American Indian residents of Montana are substantially higher than mortality rates for white residents at most ages.<sup>1</sup> The differential is especially apparent among teens and young adults between 15 and 44 years of age, an age group that generally experiences good health and low morbidity and mortality rates (Figure 1). The American Indian to White mortality rate ratios for males (2.6), females whose deaths were not associated with pregnancy in the past year (3.8), and pregnancy-associated deaths (5.9) were greater than the overall rate ratio for the total populations of American Indian and White residents. This issue of Prevention Opportunities Under the Big Sky explores the specific causes of pregnancy-associated deaths by race.

Pregnancy-associated deaths are those that occur within one year of pregnancy, regardless of cause; they may be, but are not necessarily, directly caused by or aggravated by some aspect of pregnancy.<sup>2</sup> Pregnancy-associated deaths are numerically rare in Montana: there were 10 among American Indian women and 19 among White women in Montana between 2010 and 2012, inclusive. However, expressed as a rate ratio per 100,000 population, American Indian women experienced a rate nearly six times higher than White women.

The greatest single cause of pregnancy-associated mortality for all women was motor vehicle injury, which was more common among American Indian than White women, followed by suicide and then by other injuries (Figure 2). In contrast, among women of the same age who had not been pregnant within the year preceding their death, motor vehicle injuries were the second leading cause of death and accounted for only 13% of deaths among White women and 6% among American Indian women; suicide was infrequent among these women of both races (data not shown).

We found a similar excess of pregnancy-associated motor vehicle injury deaths among a larger sample ( $n=80$ ) of all Montana women who died between 2003 and 2009.<sup>3</sup> There is no obvious explanation for this excess, but the finding is consistent across a decade.

Figure 1. White and American Indian Mortality Rates, 2010-2012  
Montana Office of Vital Statistics

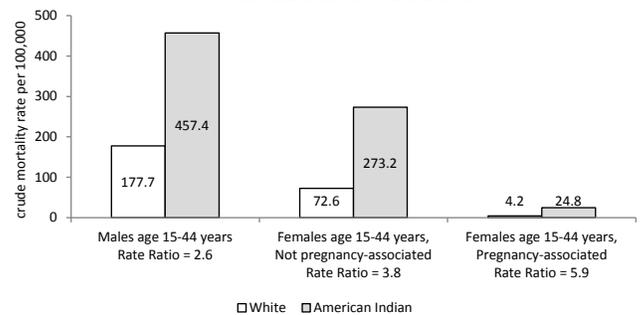
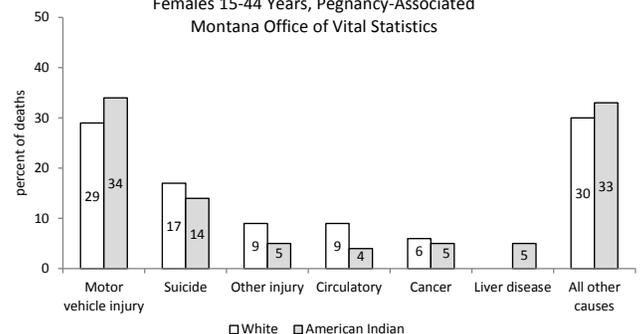


Figure 2. Selected Causes of Death, 2010-2012  
Females 15-44 Years, Pregnancy-Associated  
Montana Office of Vital Statistics



Women who have been pregnant in the past year are at increased risk of motor vehicle injury deaths, compared to women who have not recently been pregnant, and that differential is greater among American Indian than White women. However, this does not fully explain the substantially greater pregnancy-associated mortality rate ratio for American Indian women. Both White and American Indian women were at a moderately greater risk of

suicide than women who had not recently been pregnant.

There were no differences between American Indian and White women in mortality associated directly with pregnancy or its sequelae in the interval 2010 to 2012, but the numbers of deaths were very small so this should be interpreted with caution.

**Recommendations for Primary Care Providers Including Pediatricians and Obstetricians:**

1. A new mother may access the health care system in a number of ways, including her own post-partum visits, well-baby visits, or visits for other young children in her household. These visits provide relatively frequent venues for monitoring a mother's wellbeing.
2. New mothers should be evaluated for fatigue, depression, and other evidence of inadequate coping skills.
3. New mothers should be counselled on the importance of always using a seat belt when driving or riding in motor vehicles.

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**References:**

1. Montana Office of Vital Statistics, <http://www.dphhs.mt.gov/statisticalinformation/vitalstats/index.shtml>
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3. Schwartz B, Carpenedo D, Ballew C. Pregnancy-Associated Deaths in Montana, 2003-2009. Available at <http://www.dphhs.mt.gov/statisticalinformation/vitalstats/index.shtml>

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1,938 copies of this public document were published at an estimated cost of \$0.67 per copy, for a total cost of \$1,298.46, which includes \$426.36 for printing and \$872.10 for distribution.



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