



## Overview

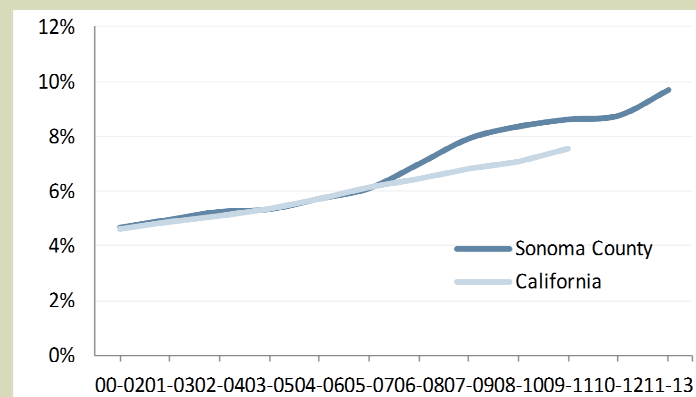
Gestational diabetes mellitus (GDM) is defined as impaired glucose tolerance with onset or first recognition during pregnancy.<sup>1</sup> Women with GDM are at high risk for pregnancy and delivery complications such as preeclampsia.<sup>2</sup> Gestational diabetes in pregnant women can result in babies that are larger than average, which increases the risk of birth trauma. Additionally, women with GDM have more than a 7-fold increased risk of developing type 2 diabetes 5 to 10 years after delivery.<sup>3</sup> Children born to mothers with GDM are at higher risk of developing obesity and type 2 diabetes.<sup>4</sup>

Risk factors for GDM include higher parity, advanced maternal age, family history of diabetes, nonwhite race, and overweight and obesity.<sup>5-6</sup>

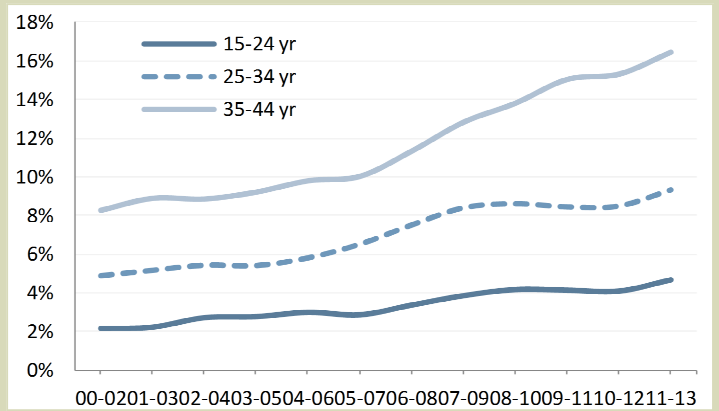
## Trend

- The rate of GDM among Sonoma County women 15 to 44 years increased significantly from 2000-2002 to 2011-2013.
- The Sonoma County GDM rate was similar to California from 2000-2002 to 2005-2007 but increased more steeply from 2006-2008 to 2009-2011 than the California rate. In 2009-2011 the Sonoma County GDM rate was significantly higher than the California rate for the same time period.

**Figure 1. Gestational diabetes per 100 females 15-44 years delivering a live or still-born infant, three year moving average— Sonoma County and California 2000-2013**



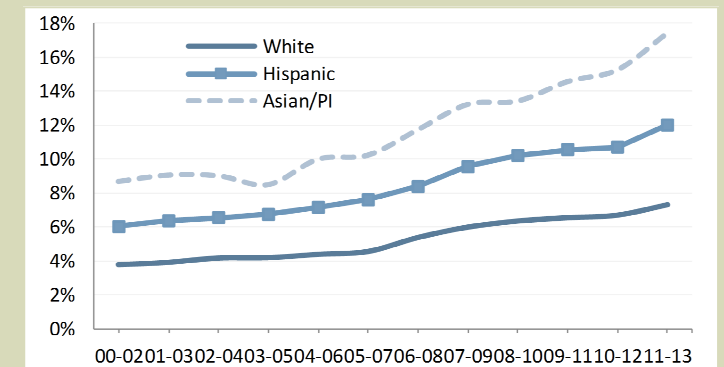
**Figure 2. Gestational diabetes per 100 females 15-44 years delivering a live or still-born infant by mother's age, three year moving average— Sonoma County 2000-2013**



## Age of Mother

- The rate of GDM increased significantly among Sonoma County mothers of all age groups during the time period.
- The rate of GDM increased significantly as mother's age increased. Older mothers aged 35 to 44 years had GDM rates almost four times that of mothers aged 15 to 24 years.

**Figure 3. . Gestational diabetes per 100 females 15-44 years delivering a live or still-born infant by mother's race/ethnicity, three year moving average— Sonoma County 2000-2013**

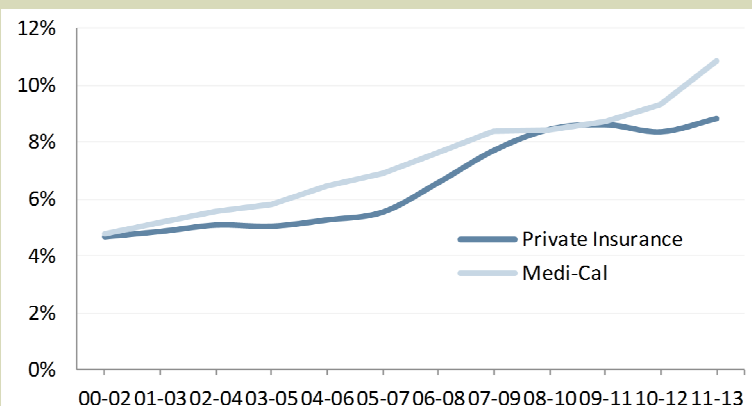


## Race/Ethnicity<sup>‡</sup>

- From 2000-2002 to 2011-2013 the GDM rate increased significantly for white, Hispanic and Asian/Pacific Islander Sonoma County women 15 to 44 years.
- The GDM rate for Asian/Pacific Islander women 15 to 44 years was significantly higher than the rates for Hispanic and white women.
- The GDM rate for Hispanic women 15 to 44 years was significantly higher than for white women in Sonoma County.

<sup>‡</sup> Only race/ethnicities with stable rates are presented (n>20)

**Figure 4. Gestational diabetes per 100 females 15-44 years delivering a live or still-born infant by pay source, three year moving average—**



### Pay Source

- The GDM rate increased significantly over the time period for both deliveries paid by private insurance and those paid by Medi-Cal.
- In 2011-2013 the GDM rate was significantly higher for deliveries paid by Medi-Cal than those paid by private insurance.

**Table 2. Gestational diabetes per 100 females 15-44 years delivering a live or still-born infant, three year moving average—Sonoma County 2000-2013**

	2000-2002	2001-2003	2002-2004	2003-2005	2004-2006	2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013	
Sonoma County	4.7%	5.0%	5.2%	5.3%	5.7%	6.1%	7.0%	7.9%	8.3%	8.6%	8.7%	9.7%	^
<i>Race/ethnicity</i>													
White non-Hispanic	3.8%	3.9%	4.2%	4.2%	4.4%	4.6%	5.4%	6.0%	6.3%	6.5%	6.7%	7.3%	^
Hispanic	6.0%	6.4%	6.6%	6.7%	7.2%	7.6%	8.4%	9.6%	10.2%	10.6%	10.7%	12.0%	^
Asian/Pacific Islander	8.7%	9.0%	9.0%	8.5%	10.0%	10.2%	11.7%	13.2%	13.4%	14.6%	15.3%	17.5%	^
<i>Mother's age</i>													
15-24yr	2.2%	2.2%	2.7%	2.8%	3.0%	2.9%	3.4%	3.8%	4.2%	4.1%	4.1%	4.7%	^
24-34 yr	4.9%	5.2%	5.5%	5.4%	5.8%	6.5%	7.5%	8.4%	8.6%	8.5%	8.5%	9.3%	^
35-44 yr	8.3%	8.9%	8.8%	9.2%	9.8%	10.0%	11.3%	12.8%	13.8%	15.0%	15.3%	16.5%	^
<i>Pay source for delivery</i>													
Private Insurance	4.7%	4.8%	5.1%	5.0%	5.3%	5.5%	6.6%	7.7%	8.4%	8.6%	8.3%	8.8%	^
Medi-Cal	4.8%	5.2%	5.6%	5.8%	6.4%	6.9%	7.6%	8.4%	8.4%	8.7%	9.3%	10.9%	^

^ Significant increase from 2000-2002 to 2011-2013 p<.05

**Table 3. Gestational diabetes per 100 females 15-44 years delivering a live or still-born infant, three year average—Sonoma County 2011-2013**

	Annual average	Rate per 100 females 15-44 yrs	95% Confidence Interval
Sonoma County	465	9.7%	9.2-10.2
<i>Race/ethnicity</i>			
White non-Hispanic	184	7.3%	6.7-7.9
Hispanic	224	12.0%	11.2-12.9
Asian/Pacific Islander	37	17.5%	14.6-20.6
<i>Mother's age</i>			
15-24yr	50	4.7%	4.0-5.4
24-34 yr	262	9.3%	8.7-10.0
35-44 yr	153	16.5%	15.1-17.9
<i>Pay source for delivery</i>			
Private Insurance	232	8.8%	8.2-9.5
Medi-Cal	223	10.9%	10.1-11.7

### References

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