Gestational diabetes, defined as glucose intolerance with onset or first recognition during pregnancy, can adversely affect delivery, increase the risk of obesity and diabetes in offspring, and raise the prospect of type 2 diabetes in mothers.¹⁻³ Birth records from the Utah Office of Vital Records and Statistics show a steady increase in the prevalence of gestational diabetes among Utah mothers over the past decade, from 1.5% in 1997 to 3.3% in 2006 (Figure 1).⁴

Utah birth certificates contain information on three key risk factors: age at delivery, pre-pregnancy body mass index, and race/ethnicity.

The risk of gestational diabetes increases with age. Birth records from 2006 show that 2.3% of deliveries to mothers under age 30 were affected by gestational diabetes, compared to 5.6% of deliveries to mothers aged 30 and over (Figure 2). While the prevalence of gestational diabetes for younger mothers has been consistently lower over the past decade, prevalence has more than doubled for both age groups.

Body mass index (BMI) is calculated from mother’s self-reported height and pre-pregnancy weight. The World Health Organization uses BMI to classify weight status into five categories: normal weight (BMI <25 kg/m²), pre-obese (BMI of 25–29.9), obese-Class I (BMI of 30–34.9), obese-Class II (BMI of 35–39.9), and obese-Class III (BMI of 40 and higher).⁷ The risk of gestational diabetes increased with increasing BMI (Figure 3).

Non-Hispanic White and Black mothers had the lowest prevalence of gestational diabetes, both 2.3%. Over four percent of deliveries to Native Hawaiian/Pacific Islander and Hispanic/Latina mothers had gestational diabetes, 4.2% and 4.4%, respectively. Asian and American Indian mothers exhibited the highest prevalence of gestational diabetes, 5.6% and 6.3%, respectively. Just over two percent of mothers with unknown race/ethnicity had gestational diabetes (Figure 4).

Two limitations to this report are: 1) the criterion for diagnosing gestational diabetes may vary among physicians⁸, and 2) studies suggest that gestational diabetes may be underreported on birth certificates.⁹ This underreporting may constitute missed opportunity for identifying mothers who:

- Warrant treatment for high blood glucose levels during pregnancy
- May have had undiagnosed diabetes prior to pregnancy
- May have a high risk for developing permanent type 2 diabetes following delivery
Because gestational diabetes is an important risk factor for type 2 diabetes, women who have had gestational diabetes should be counseled by their physicians about ways to reduce their risk. Furthermore, it is important for them to have their blood glucose levels tested at their first postpartum checkup to ensure that they are within a normal range.\(^\text{10}\)

References:

---

**January 2008**

**Utah Health Status Update**

For additional information about this topic, contact Richard Bullough, Diabetes Prevention and Control Program, (801) 538-9291, rbullough@utah.gov; or the Office of Public Health Assessment, Utah Department of Health, Box 142101, Salt Lake City, UT 84114-2101, (801) 538-9462, FAX (801) 538-9346, email: chdata@utah.gov
Osteoporosis in Utah

Of people aged 50 and older, 2.4% of males and 16.3% of females reported having been told they have osteoporosis, according to a 2006 Utah Behavioral Risk Factor Surveillance Survey. Of those diagnosed over half of males (55.7%) and females (52.9%) reported taking prescription medicine for osteoporosis. Fewer men (12.5%) reported that they had ever had a bone density test than females (60.4%). (This difference in testing may be due to insurance, including Medicare, not covering the cost of screening for men.) Additionally, females (79%) were more likely than males (21%) to have been told by a doctor, nurse, or other health professional how to prevent osteoporosis.

By 2020, one in two Americans aged 50 and older will be at risk for fractures from osteoporosis or low bone mass. Most fractures among older adults are caused by falls, and in Utah falls are the leading cause of injury among older adults.

It is also of note that osteoporosis rates for women increased for ages 65–74 years (22.3%) and 75 years and older (27.7%). In addition to age, sex and an individual’s measure of body fat based on height and weight all play a role in determining the risk and prevention of osteoporosis.

1National Osteoporosis Foundation: http://www.nof.org/

Community Health Indicators Spotlight, December 2007

Pertussis Update

Pertussis is a contagious, vaccine-preventable bacterial disease; symptoms include an inspiratory whoop, post-tussive vomiting and paroxysmal cough. After several decades of stable pertussis activity in Utah, reported cases began increasing in 2001, mirroring national trends. From 2000 to 2006, rates of reported pertussis in Utah increased from 2.0 to 30.6 per 100,000 persons per year. Utah reported one of the highest state-specific rates in 2006. Data analyses have suggested that that adults aged 20+ years and adolescents aged 10–19 years had the greatest proportionate increases in pertussis rates. The rates of hospitalized pertussis in infants, which may more accurately reflect community disease occurrence, have remained stable overall. It is likely that increased testing, diagnosis, and disease recognition contributed to the increased rates.

In comparison to the dramatic increases in cases recently seen, it appears pertussis rates have decreased in Utah over the past year. As of December 14, 2007, 369 pertussis cases have been reported to the UDOH for 2007. This is compared to 715 cases reported in 2006 at this time last year. The number of hospitalizations slightly decreased from 19 in 2006 to 15 cases in 2007. The majority of reported cases continue to occur in adults aged 20+ years.
### Monthly Report of Notifiable Diseases, November 2007

<table>
<thead>
<tr>
<th>Disease</th>
<th>Current Month # Cases</th>
<th>Current Month Expected Cases</th>
<th>Current Month Expected Cases (5-yr average)</th>
<th># Cases YTD</th>
<th># Expected YTD (5-yr average)</th>
<th>YTD Standard Mortality Ratio (obs/exp)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campylobacteriosis (Campylobacter)</td>
<td>20</td>
<td>18</td>
<td>310</td>
<td>268</td>
<td>1.2</td>
<td></td>
</tr>
<tr>
<td>Enterotoxigenic Escherichia coli (E. coli)</td>
<td>7</td>
<td>6</td>
<td>135</td>
<td>95</td>
<td>1.4</td>
<td></td>
</tr>
<tr>
<td>Hepatitis A (infectious hepatitis)</td>
<td>0</td>
<td>2</td>
<td>7</td>
<td>32</td>
<td>0.2</td>
<td></td>
</tr>
<tr>
<td>Hepatitis B (serum hepatitis)</td>
<td>1</td>
<td>4</td>
<td>13</td>
<td>38</td>
<td>0.3</td>
<td></td>
</tr>
</tbody>
</table>


### Notifiable Diseases Reported Quarterly, 3rd Qtr 2007

<table>
<thead>
<tr>
<th>Disease</th>
<th>Current Quarter # Cases</th>
<th>Current Quarter Expected Cases</th>
<th>Current Quarter Expected Cases (5-yr average)</th>
<th># Cases YTD</th>
<th># Expected YTD (5-yr average)</th>
<th>YTD Standard Mortality Ratio (obs/exp)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV</td>
<td>21</td>
<td>21</td>
<td>65</td>
<td>62</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>AIDS</td>
<td>9</td>
<td>14</td>
<td>29</td>
<td>34</td>
<td>0.8</td>
<td></td>
</tr>
<tr>
<td>Chlamydia</td>
<td>1,353</td>
<td>1,101</td>
<td>4,030</td>
<td>2,951</td>
<td>1.4</td>
<td></td>
</tr>
<tr>
<td>Gonorrhea</td>
<td>187</td>
<td>153</td>
<td>599</td>
<td>414</td>
<td>1.4</td>
<td></td>
</tr>
<tr>
<td>Tuberculosis</td>
<td>6</td>
<td>10</td>
<td>28</td>
<td>26</td>
<td>1.1</td>
<td></td>
</tr>
</tbody>
</table>

### Program Enrollment for the Month of November 2007

<table>
<thead>
<tr>
<th>Program</th>
<th>Current Month</th>
<th>Previous Month</th>
<th>% Change(^\d) From Previous Month</th>
<th>% Change(^\d) From 1 Year Ago</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medicaid</td>
<td>158,140</td>
<td>158,696</td>
<td>-0.4%</td>
<td>-4.4%</td>
</tr>
<tr>
<td>PCN (Primary Care Network)</td>
<td>20,204</td>
<td>19,882</td>
<td>+1.6%</td>
<td>+18.7%</td>
</tr>
<tr>
<td>CHIP (Children’s Health Ins. Plan)</td>
<td>30,651</td>
<td>29,158</td>
<td>+5.1%</td>
<td>-10.0%</td>
</tr>
</tbody>
</table>

### Medicaid Expenditures (in Millions) for the Month of November 2007

- **Capitated Mental Health**: $1.6, $9.0, $34.8, $36.0 (6.2%)
- **Inpatient Hospital**: $20.9, $16.3, $75.8, $74.7 (1.1%)
- **Outpatient Hospital**: $6.0, $6.7, $29.5, $31.1 (1.6%)
- **Long Term Care**: $15.0, $16.5, $74.4, $79.5 (5.2%)
- **Pharmacy**: $6.8, $10.5, $49.4, $55.1 (5.7%)
- **Physician/Osteo Services\(^\d\)**: $5.4, $5.5, $22.8, $25.0 (2.2%)
- **TOTAL HC F M E D I C A I D**: $149.7, $156.7, $575.6, $600.4 (24.8%)

### Health Care System Measures

- **Overall Hospitalizations (2006)**: 272,404, 9.9%, -0.9%, $3,874.8, +10.7%
- **Non-maternity Hospitalizations (2006)**: 161,398, 5.7%, -2.5%, $2,323.5, +11.0%
- **Emergency Department Encounters (2005)**: 664,523, 25.0%, +3.5%, $553.2, +21.2%
- **Outpatient Surgery (2005)**: 308,300, 11.7%, -0.5%, $947.7, +12.1%

### Annual Community Health Measures

- **Overweight and Obesity (Adults 18+)**: 2006, 1,777,802, 976,000, 54.9%, +1.3%
- **Cigarette Smoking (Adults 18+)**: 2006, 1,777,802, 174,200, 9.8%, -15.0%
- **Influenza Immunization (Adults 65+)**: 2006, 217,313, 156,700, 72.1%, +3.4%
- **Health Insurance Coverage (Uninsured)**: 2006, 2,582,371, 306,500, 11.9%, +2.5%
- **Motor Vehicle Crash Injury Deaths**: 2006, 2,582,371, 296, 11.5 / 100,000, -0.7%
- **Suicide Deaths**: 2006, 2,582,371, 357, 13.8 / 100,000, +1.6%
- **Diabetes Prevalence**: 2006, 2,582,371, 105,600, 4.1%, -0.7%
- **Coronary Heart Disease Deaths**: 2006, 2,582,371, 1,563, 60.5 / 100,000, -2.3%
- **All Cancer Deaths**: 2006, 2,582,371, 2,600, 100.7 / 100,000, +1.4%
- **Births to Adolescents (Ages 15-17)**: 2006, 58,992, 981, 16.6 / 1,000, +5.9%
- **Early Prenatal Care**: 2006, 53,475, 42,237, 79.0%, +0.3%
- **Infant Mortality**: 2006, 53,475, 269, 5.0 / 1,000, +12.2%
- **Childhood Immunization (4:3:1:3:3)**: 2006, 51,016, 41,000, 80.4%, +8.5%

* Due to limited historical data, the average is based upon 3 years of data for norovirus, varicella, and 4 years of data for West Nile virus infections.

\(^\d\) Active influenza surveillance has started for the 2007-2008 season in Utah. Activity remains low. As of December 14.

\(^\dd\) Medicaid payments reported under Physician/Osteo Services do not include enhanced physician payments.

Note: Active surveillance for West Nile Virus has ended until the 2007 season.