RURAL AND URBAN DATA

The following section compares rural to urban residence for several infant health indicators. Urban includes all metropolitan counties regardless of size, large rural includes non-metropolitan counties with a city of 10,000 or more residents while small rural includes non-metropolitan counties without a city of 10,000 or more residents. In 2009, 15.2 percent of births were to mothers who resided in rural or non-metropolitan counties. Rural counties tend to be disadvantaged in a variety of areas, including poorer health care access, greater poverty, and higher rates of injury and smoking, which may affect maternal and infant health. These comparisons of low birth weight, preterm birth, and infant mortality indicate that the health status of infants living in rural counties, and especially small rural counties, is generally poorer than that of infants in urban or metropolitan counties. For example, in 2008, the rate of postneonatal mortality (deaths from 1 month to under 1 year) was 27 percent higher in small rural counties than urban counties (2.84 versus 2.23 deaths per 1,000 live births, respectively).
LOW BIRTH WEIGHT AND PRETERM BIRTH

Disorders related to low birth weight (LBW) and preterm birth (PTB) are a leading cause of infant mortality in the United States, and particularly neonatal mortality (deaths within the first month of life). The causes of LBW and PTB are not fully known, but have been linked to maternal smoking and substance use, chronic conditions, and infections (see pages on Low Birth Weight and Preterm Birth).

In 2009, 8.31 percent of infants residing in small rural counties were LBW (weighing less than 2,500 grams, or 5.5 pounds). This was slightly higher than the LBW rate among residents of urban or large rural counties (8.15 and 8.16 percent, respectively). The greater rate of LBW for residents of small rural counties was due entirely to a greater proportion of infants born at moderately LBW (from 1,500 grams or 3.25 pounds to less than 2,500 grams or 5.5 pounds) as opposed to very LBW (less than 1,500 grams or 3.25 pounds). The proportion of infants born at moderately LBW was highest among infants both in small rural counties (6.91 percent), followed by those in large rural counties (6.77 percent), and was lowest among those in urban counties (6.69 percent). However, the difference between small rural and urban counties was less than 5 percent.

Similar to LBW, there were small differences in PTB (delivering at less than 37 weeks’ completed gestation) by rural and urban residence. These differences were largely confined to infants born at the late preterm range of 34 to 36 weeks’ gestation. Late PTB, for example, ranged from 8.63 percent among infants born to residents of urban counties to 8.98 percent among those in small rural counties; however, this difference was less than 5 percent. Though not at highest risk, late preterm and moderately LBW infants are still at elevated risk for mortality and morbidity particularly for developmental delays, compared to their term and normal birth weight counterparts.90,91

Low Birth Weight (LBW),* by Rural/Urban Residence,** 2009
Source (V.1): Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System

Preterm Birth (PTB),* by Rural/Urban Residence,** 2009
Source (V.1): Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System

*Low birth weight, <2,500 grams or 5.5 pounds; moderately low birth weight, 1,500 to 2,499 grams or 3.25 to 5.5 pounds; very low birth weight, <1,500 grams or 3.25 pounds. **Urban includes all metropolitan counties regardless of size, large rural includes non-metropolitan counties with a city of 10,000 or more residents, small rural includes non-metropolitan counties without a city of 10,000 or more residents; follows the National Center for Health Statistics’ Urban-Rural Classification Scheme for Counties.

*Preterm birth, <37 weeks’ gestation; late preterm birth, 34-36 weeks’ gestation; moderately preterm birth, 32-33 weeks’ gestation; very preterm birth, <32 weeks’ gestation. **Urban includes all metropolitan counties regardless of size, large rural includes non-metropolitan counties with a city of 10,000 or more residents, small rural includes non-metropolitan counties without a city of 10,000 or more residents; follows the National Center for Health Statistics’ Urban-Rural Classification Scheme for Counties.
INFANT MORTALITY

In 2008, 4,662 infants born to residents of rural or non-metropolitan counties died in the first year of life. The infant mortality rate was higher in small and large rural counties (7.31 and 7.10 deaths per 1,000 live births, respectively) than in urban counties (6.51 per 1,000). Although the infant mortality rate in rural counties was higher than urban counties in both the neonatal (<28 days) and postneonatal periods (28 to 364 days), disparities were only significant in the postneonatal period. For example, postneonatal mortality was 27 percent higher in small rural counties than urban counties, while neonatal mortality was only 5 percent higher. The major causes of postneonatal mortality include sudden infant death syndrome (SIDS), congenital anomalies, injury, and infection. These causes may be addressed through improved education for safe sleep practices and injury prevention as well as improved access to health care. SIDS and infection have also been associated with environmental tobacco smoke exposure, and smoking has been shown to be higher in rural areas.

Infant, Neonatal, and Postneonatal Mortality Rates,* by Rural/Urban Residence,** 2008

<table>
<thead>
<tr>
<th></th>
<th>Infant</th>
<th>Neonatal</th>
<th>Postneonatal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Urban</strong></td>
<td>6.51</td>
<td>4.27</td>
<td>2.23</td>
</tr>
<tr>
<td><strong>Large Rural</strong></td>
<td>7.10</td>
<td>4.37</td>
<td>2.73</td>
</tr>
<tr>
<td><strong>Small Rural</strong></td>
<td>7.31</td>
<td>4.47</td>
<td>2.84</td>
</tr>
</tbody>
</table>

*Infant deaths are under 1 year; neonatal deaths are under 28 days; postneonatal deaths are between 28 days and under 1 year. **Urban includes all metropolitan counties regardless of size, large rural includes non-metropolitan counties with a city of 10,000 or more residents, small rural includes non-metropolitan counties without a city of 10,000 or more residents; follows the National Center for Health Statistics’ Urban-Rural Classification Scheme for Counties.