

Methods for the Statistical Comparisons in Tables 11 and 12 2005 Births, Infant Deaths and Fetal Deaths

Tests of statistical significance were conducted on data for birth outcomes and risk factors, infant deaths, and fetal deaths, by health district and town, and for racial/ethnic groups. Two types of statistical assessments were made: 1) comparisons between the current and prior year (2005 and 2004) for the same town, health district, or racial/ethnic group; and 2) comparisons between a reference group and the other groups within the current year. In the current-year comparisons, the reference group for towns and health districts was the state of Connecticut; the reference group for racial/ethnic groups was “white non-Hispanic.” Results for the state, health districts, and towns are given in Table 11, and results for racial and ethnic groups are shown in Table 12.

To balance the need to screen out random fluctuations with the need to detect meaningful differences, analyses were limited to geographic regions with at least 200 births or 5 or more infant or fetal deaths, and appropriate significance levels were selected. For determining annual significant changes for fetal and infant deaths, an additional criterion—a total of 10 or more deaths in both years combined—was applied. Comparisons were labeled “significant” in either of two situations: $p < 0.01$ for comparisons within the current data year; or $p < 0.05$ for differences between the current year and prior year. The latter, less stringent probability level was used because statistically significant changes over time are more difficult to detect than significant differences within the same year.

A limitation of an annual significance testing is that single-year figures for some towns are too small to allow valid conclusions to be drawn. Readers are thus cautioned to use the statistical assessments as a guide, not as an absolute dictum. Also, the choice of an appropriate “ p -value” for use as a reporting threshold varies with the point of view of the reader or analyst. The *Registration Report* is often used by persons primarily concerned with information about a single town. The appropriate “ p -value” for single-town analyses can differ considerably from that used in this report to survey all 169 Connecticut towns.

The reference group used for comparison with Connecticut statistics is the U.S. The reference group used for comparison with the local sub-state regions is the State of Connecticut. In 2005 a few states implemented the new 2003 Revision of the U.S. Certificate of Live Birth, increasing the number over those reported in 2004. As a result of this change in data collection methods, 2005 birth statistics are not directly comparable between all states. The U.S. figures used for comparison in this report rely on data from states using data collection methods comparable to those used in Connecticut. Specifically, the U.S. figures used here are derived from states using the 1989 Revision of the U.S. Certificate of live birth. Comparison of "Late or No Prenatal Care" used the U.S. figures based on 37 states. Comparisons for "Smoking During Pregnancy" used U.S. figures based on 36 states where comparable data was available. U.S. figures for Non-Adequate Prenatal Care were not published in 2005, so the U.S. reference values used in this report are based on the published 2004 U.S. percentage of Non-Adequate Care.