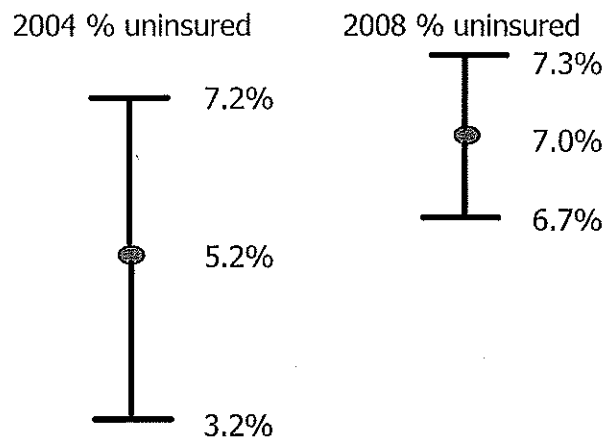


2004 and 2008 Health Insurance Surveys
Comparing County-Level Estimates of the Number of Uninsured Pennsylvanians
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The Pennsylvania Insurance Department recently released its second Health Insurance Status Survey, which can be found on its website at www.ins.state.pa.us. The department has received inquiries as comparisons are being made between the data provided in the 2004 and 2008 surveys, both of which are located on the department's Web site.

It is important to note that estimates of the number or percentage of uninsured individuals from the 2004 and 2008 Health Insurance Status Surveys are subject to margins of error, especially at the county level. These margins of error are useful in calculating ranges that are likely to include the true rates of those who are uninsured, since the actual number of uninsured citizens could only be obtained if we spoke with every Pennsylvania resident.

As an example, suppose the estimated percentage of uninsured citizens in a county was 5.2% in the 2004 study and 7% in the 2008 study. However, if the margins of error in each survey are considered, there is a 95% probability that the percentage of uninsured citizens is between 3.2% and 7.2% in 2004 and between 6.7% and 7.3% in 2008. The margin of error range is smaller for the 2008 study because more residents were interviewed compared to the 2004 study. These hypothetical results from 2004 and 2008 are illustrated in the diagram below:



Notice that the two ranges overlap. This means that we cannot say that the percentage of uninsured residents is "significantly" different between the 2004 and 2008 surveys. Therefore, it is only when the ranges do not overlap that we can draw the conclusion that the estimates are "significantly" different; that is, we can say with some certainty, such as a 95% probability, that the percentages are truly different. Similar results would hold true for the number of uninsured people as well as the percentages. At both the county level and statewide, if the measure or statistic of interest involves only a subset of the population surveyed, then the margins of error are larger than for measures of the entire population surveyed. Hence, while it may appear from looking at the percentage or number of uninsured individuals from 2004 to 2008 that there may be a difference, this difference may not be statistically significant.