Motor vehicle accident death rates are higher in rural regions compared to urban areas. Use the Leading Causes of Death Profile to answer the following questions related to Motor Vehicle Accident Deaths in Cass County and Bates County. These two counties are adjacent to each other in west-central Missouri. By some definitions Cass is considered urban while Bates is considered rural.

1. What is the age-adjusted motor vehicle accident death rate for Cass County?  
   **16.6 per 100,000 population**
2. Is the Cass County rate significantly different from the state rate?  
   **No**
3. What is the age-adjusted motor vehicle accident death rate for Bates County?  
   **28.9 per 100,000 population**
4. Is the Bates County rate significantly different from the state rate?  
   **Yes – The Bates County rate is significantly higher than the state rate.**
5. What time period was used to calculate these rates?  
   **2001-2011**
6. Why was this time period used?  
   **A long time period was needed in order to generate statistically stable rates. There are relatively few motor vehicle accident deaths in most counties. For example, there were only 54 deaths in Bates County during the eleven-year time period from 2001-2011. In Clay County, which has a larger population and is considered to be more urban, there were only 165 deaths during the eleven-year time period, or roughly 15 deaths per year.**
7. What constant was used in calculating these rates?  
   **These rates are per 100,000 population (residents).**
8. What DHSS tool could be used to determine if there is a statistically significant difference between Cass County and Bates County?  
   **The confidence intervals feature in the Death MICA can be used to determine statistical significance at either a 95% or a 99% confidence level. If the intervals overlap, the rates are considered to be statistically similar, or not significantly different. If the intervals do not overlap, the rates are considered to be statistically significantly different. (The Bates County rate is significantly higher at the 95% confidence level but not at the 99% confidence level.)**

**95% CI: Bates 21.5 to 38.0 versus Cass 14.2 to 19.4**  
**99% CI: Bates 19.6 to 41.1 versus Cass 13.4 to 20.3**