Talking Points on 2011 BRFSS Methodology Change
Smoking Estimates

2011 BRFSS Background:
The Behavioral Risk Factor Surveillance System (BRFSS) has traditionally used random-digit-dial (RDD) telephone sampling of households with landline telephones. Since 2009, more and more telephone users are switching from regular landline telephones to cell phones, lowering the coverage of surveys that exclude households with cell phone only service. Therefore, BRFSS expanded its traditional landline-based survey to a survey of landline and cell phone numbers. Additionally, the BRFSS survey now uses a new weighting method (Raking) to adjust for more demographic factors to increase the representativeness of the estimates for the general population. The raking weighting methodology also adjusts for change in sampling method (addition of cell phone only service households to survey sample). 2011 BRFSS data will be the first BRFSS data release based on a survey of landline and cell phone numbers using the new weighting method to adjust for factors related to overall representativeness and change in sampling method of the survey.

Questions:

1) Why are the current smoking estimates different from what they used to be?
One reason could be, in previous years, the BRFSS used Random-Digit-Dialing (RDD) telephone sampling only of households with landline telephones. The survey disproportionally missed certain groups of people such as young adults (18 to 34 years) and minorities. However, cigarette smoking is more prevalent among younger adults (18 to 34 years) than among older adults and seniors. The estimate of current smoking provided by the landline telephone survey without inclusion of cell phone only service households was underestimated particularly due to underrepresentation of younger population in the survey sample. With addition of cell phones to the BRFSS survey, these differences have been significantly reduced.

2) Can we compare previous estimates with current estimates?
It would not be appropriate to compare previous year estimates with current estimates because of different data adjustment methods and different sampling frames (sampling of landline phone number only vs. a dual frame sampling of landline and cell phone numbers).

Beginning with the 2011 BRFSS data, BRFSS will provide estimates of risk behaviors and health conditions using the new sampling frames and data adjustment method.

3) Is Kansas the only state that the estimates increased from 2010 to 2011 based on the new methodology and sampling frames?
No, given the new methodology and new sampling frames, all states have experienced an increase in the estimated percent of adults who currently smoke in their state from 2010 to 2011. This observed increase is not likely a “Real” change in the percentage of adults who smoke currently; rather it is an “artificial” increase in the estimate due to change in survey methodology (adding cell phone only service households and using new weighting methodology).

4) Does an increase in estimates from 2010 BRFSS to 2011 BRFSS show that my state's investment in tobacco control is not working?

No, an increase in estimates from 2010 to 2011 does not reflect a shortcoming in the effect of state tobacco control programs. The inclusion of cell phones in the survey sampling frame and the new weighting methodology provide a more sensitive measure of tobacco use in the states. The new estimates are based on survey responses from those who use cell phones only in addition to those who use landline service. The number of people who use cell phones only has dramatically increased during the past few years, especially among young adults.

Past survey methods that excluded cell phone only users and did not use the new weighting methodology likely underreported tobacco use among young adults and among populations with tobacco use disparities. By including cell phone only users in the 2011 BRFSS survey, tobacco use prevalence is more accurately captured especially among the young adult population, which we know tends to have a higher prevalence of tobacco-use.

These better estimates on how large the smoking problem is especially among young adults emphasizes the importance of implementing the recommendations of the 2012 Surgeon General's Report and CDC's Best Practices for Comprehensive Tobacco Control.