Performance Improvement Appeals Using Confidence Intervals

What is a confidence interval and how is it used in AYP?

A confidence interval is an estimated range of performance that includes the observed performance rate plus an allowance for sampling error. For AYP, we can say that we are confident (meaning it is highly probable over repeated attempts) that the true performance rate will fall in the range (or interval) between the observed performance rate and the observed rate plus sampling error (the upper limit).

Criteria for appeal to Performance Improvement/Safe Harbor

A campus or district may appeal the results of a performance measure by requesting the application of confidence intervals on the performance improvement from 2004 to 2005. **To qualify for the application of confidence intervals, the district or campus must show improvement on the performance measure and improvement on the other measure (Graduation or Attendance Rate) for the student group in question.**

Calculation of the interval for Performance Improvement/Safe Harbor

Calculating the confidence interval for AYP involves a recalculation of performance improvement from student-level data using a matched profile process. The performance rates are recalculated based on students in the 2005 performance data that are matched to similar students in the 2004 performance data by student group membership and type of assessment taken. The recalculated performance improvement is defined as the difference in the passing rate of matched profile data in 2005 and the passing rate of matched profile data in 2004. The recalculated required improvement is defined as a ten percent decrease from the prior year (matched profile data in 2004) in percentage of students counted as not proficient.

A one-tailed 68% confidence interval is then built around the recalculated performance improvement between 2004 and 2005. The Wald formula for confidence intervals of the difference between dependent proportions was chosen for this calculation because it is well established and widely accepted, and is commonly used in the field of education.

Determining the results of the AYP appeal

The upper limit (the recalculated improvement plus sampling error) of the confidence interval is calculated. If the upper limit of the confidence interval is greater than or equal to the recalculated required improvement, then the appeal for performance improvement is granted. If the upper limit is less than the recalculated required improvement, the appeal for performance improvement is denied.