

## **PROPOSAL FOR USE OF AMERICAN COMMUNITY SERVICE DATA IN DESIGNATION APPLICATIONS**

It is clear that data from the American Community Survey (ACS) will be extensively utilized in assessment with respect to the HPSA and MUA/P/ designation criteria. This is the primary source for county, sub-county, census tract and CT roll-up service area information such as poverty, less than a high school education, single parent households, and other factors. These data elements may be used to populate an automated shortage assessment system. In addition, applicants will need or want to be able to access the information or supply the detail to their state Primary Care Office or to HRSA as part of an exploratory assessment or application. ACS information is gathered through a sample survey which, over a five year period, provides enough data for the Census Bureau to feel confident in making estimates down to the geographically defined block level.

The frequency of data availability is governed by the population size of the geographic area. For places over 65,000, information is published annually. Areas between 20,000 and 65,000 have three year estimates, and those with less than 20,000 have only five year estimates. With every statistic, the ACS provides a margin of error which offers a confidence interval within which the true estimate most likely (with 90% confidence) resides. Places with less population have smaller samples, even with the accumulation of data over a five year period, so that their 90% confidence intervals are relatively wider.

Considering a need to equalize information for every possible geographic area which might be considered for HPSA/MUA/P/ designations, selection of appropriate and comparable ACS information needs to be addressed. Some locations will have annual statistics while others will have only five year estimates. This discrepancy is not inconsequential as 41% of all counties have a population under 20,000 and will therefore have only five year estimates. Even the larger “rational service areas” are likely to consist of only some of the tracts within a county or place that might have annual data reported, so they also will rely on five-year data.

Additionally, Dr. Alfredo Navarro, Assistant Division Chief for ACS Statistical Design with the Census Bureau, in speaking with NRMC members Alice Larson and Alice Rarig, offered the following Census rules of thumb:

- (1) whenever ACS data are used to compare areas of different sizes, the same type of period estimates should be employed, and
- (2) the measure of uncertainty (margin of error) should be incorporated in some manner whenever ACS data are included.

## Recommendations

1. Any ACS data submitted as part of a designation application must use the latest five-year estimate.
2. If the margin of error percent for the estimate is larger than five percent (check this – possibly go to ten percent) (due to small population), the application should be permitted to use the appropriate outer limit of the 80% confidence interval for the estimate, which will be about half the distance between the point estimate and the 90% confidence interval. (Note: going to the top or bottom of the 90% confidence interval that exceeds 10% of the estimated value gives an unacceptably large increment to the measure.)
3. The Bureau of the Census should provide a publicly available explanation of the statistical formulae for combining estimates for geographic areas or strata, and for re-calculating both 90% and 80% confidence intervals.
4. The Bureau of the Census will work with agencies to provide special runs that could be done annually when a new 5-year data set is ready – for geographic or strata aggregations – with calculated confidence intervals. (Will be charged for initial programming and maintenance programming.)