The Lake County Challenge

Background

The government of Lake County, Illinois, is quite aware of the rapid population growth and changing demographics of the county. The county website, www.co.il.us, offers a summary of basic changes by comparing the 1990 and 2000 censuses, at www.co.lake.il.us/about/demographics/default.asp. A table shows a 25% change in total population from 1990 to 2000, from 516,418 to 644,599, and a 140% increase in the Hispanic Population (any race) from 38,570 to 92,716. The page also points to the Census Bureau website for additional census data.

At the Joint Statistical Meetings in Salt Lake City, 29 July – 2 August, Michael Beaghen and Lynn Weidman presented data from the ACS Multi-Year Estimates Study (MYES) for the percent speaking Spanish at home for Lake County. Lake was among the counties for which 1-, 3-, and 5-year period estimates are available. Over the period from 2000 to 2005, the 1-year estimates for Lake County show a clear increase in the proportion speaking Spanish at home, which is mirrored in a smoother upward trend in both the 3- and 5-year estimates. The statistical significance of the overall trend isn't even in question.

Hypothetical Situation

Suppose a senior county official in Lake County becomes interested in this trend of Hispanic speaking households and interprets this measure as an indicator of where bilingual services may be most needed, now and potentially in the future. Suppose also that Lake County is fortunate to have your part-time consultation as a statistician, demographer, or sociologist. You have all of your current (real) skills, but you are only able to access ACS data as an outsider. The official asks you to find geographic patterns in the ACS for the increasing number of persons speaking Spanish at home as best as you can. Accordingly, you will read the general advice provided on the ACS website but, because you are serving the county's goals, you will use all of your professional skills, too. You take up the question:

> *To what degree can you pinpoint areas where Hispanic-speaking households are growing, and are there possible emerging trends?*

The Challenge

How would you use the ACS data and what would be your findings?