SOC 4650/5650: Lab-10

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Directions

Please complete all steps below. All three maps should be uploaded to your GitHub assignment repository by 4:20pm on Tuesday, March 28th, 2017. This lab uses data from `USHealth` and the `USBoundary.gdb`.

Data Preparation

1. In Microsoft Excel, save the file `US_HEALTH_noIns.csv` as an `xlsx` file. Add this file to your table of contents in `ArcMap`.
2. Add the county boundary data to your map.
3. Open the Attribute Table and create a new attribute that has the same data as the existing variable `FIPS`, but stored in a numeric format.
4. Join the insurance rate data to your county boundary data.
5. There are some values of `-1` in the insurance data. Those are "missing" counties that the CDC does not provide insurance rate estimates for. To remove them, execute a query on your joined data that looks like this:[1] `"US_HEALTH_noIns$.noIns" >= 0`
6. Export the joined data as a shapefile and save it into your `USHealth` directory.

[1] If you named your `xlsx` file something different, you will have to put that file name in the query in place of the example text shown here.

Mapping Health Insurance Data for the Contiguous United States

7. In a new map document, add the data you created in step 5. Also add the state boundary data from `USBoundary.gdb` to your map.
8. Select a projected coordinate system for this map that is appropriate for mapping the contiguous United States (i.e. the "lower 48") - either the Albers or Lambert projected coordinate systems.
9. Create a thematic choropleth map for that shows variation in the number of individuals without health insurance. Use Jenks Natural Breaks with 5 data classes for your symbology.

10. Overlay the state boundaries (symbolized with a hollow fill) to make it easier to identify states that have not seen large decreases in the uninsured population since the introduction of the Affordable Care Act.

11. Export the map image as a `pdf` at `300dpi`,

Mapping Health Insurance Data for Alaska

12. In a new data frame, copy the data from the previous section and change the extent of the map so that it shows only Alaska. Notice the counties that are white - these are the counties that had missing data that we managed in our query in the first section.

13. Change the projected coordinate system of this second data frame so that it is appropriate for mapping Alaska - the Albers state system for Alaska.

14. Re-position your map image to accommodate any changes to the shape of your data.

15. Export the map image as a `pdf` at `300dpi`.

Mapping Health Insurance Data for Hawaii

16. In a new data frame, copy the data from the previous section and change the extent of the map so that it shows only Hawaii.

17. Change the projected coordinate system of this second data frame so that it is appropriate for mapping Hawaii - the Albers state system for Hawaii.

18. Re-position your map image to accommodate any changes to the shape of your data.

19. Export the map image as a `pdf` at `300dpi`.