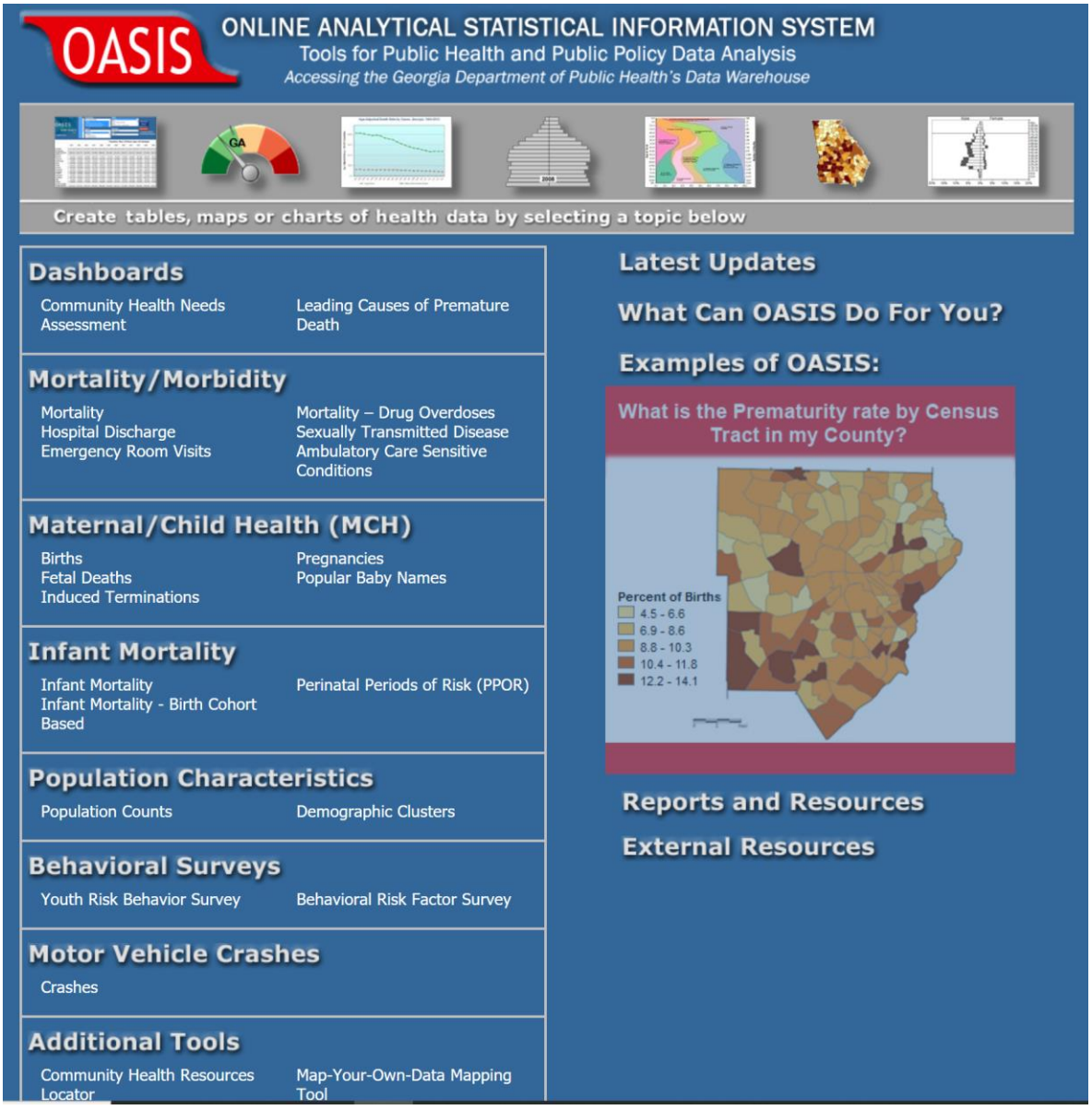
BST 6200

Spatial Statistics and Disease Mapping

Homework #1

Due Tuesday 3:45 pm February 3, 2020

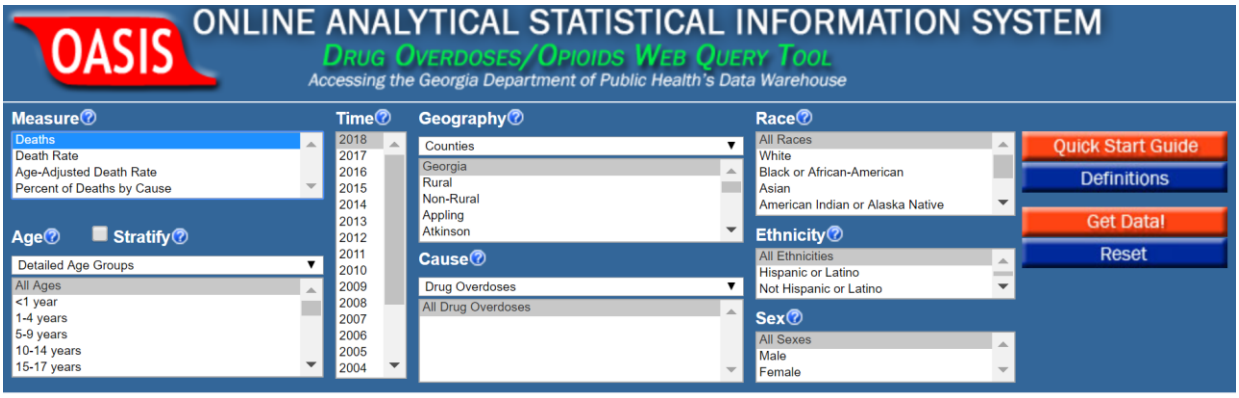
Go to the following web site: https://oasis.state.ga.us/



Choose one data source that involves county-level data. For example, if you choose

Mortality/Morbidity > Mortality – DrugOverdoses

you'll see the screen



Choose a Measure, Age, Cause, Race, Ethnicity, and Sex. For Geography, select all counties; this can be done by clicking on Appling and scrolling down to the last county, Worth. While holding down the shift key, click on Worth and all the counties should be highlighted. Then click on the red button "Get Data!" on the right side. Scroll down and you should see a blue button saying "Save Data". This will save it as an Excel file, which you can easily convert to csv in Microsoft Excel. Be sure to go into Microsoft Excel and edit out the rows that do not contain data.

Do this again for at least one other demographic variable (age, sex, etc.)

Merge your data in R with the Georgia.shp files we created in class. Create choropleth maps for the two or more measures that you selected. Make sure the graphics are well-labeled and have readable text. Save these graphics files and import them into a R Markdown file. Using R Markdown, describe your data, your maps, and your conclusions. You need not use sections in your R Markdown file, but you explanations should be thorough enough that a reader can follow your reasoning. Your R Markdown file should include all the R code you used to load, manage, and plot your data. There are a few options available to output your R Markdown file. Select html as the output file. When you are ready to submit, upload the homework through Blackboard.

Here are some tutorial videos on R Markdown:

https://www.youtube.com/watch?v=DNS7i2m4sB0

https://www.youtube.com/watch?v=hpAJMSS8pvs