

# What's in a Graph? (Daily Warm-up)

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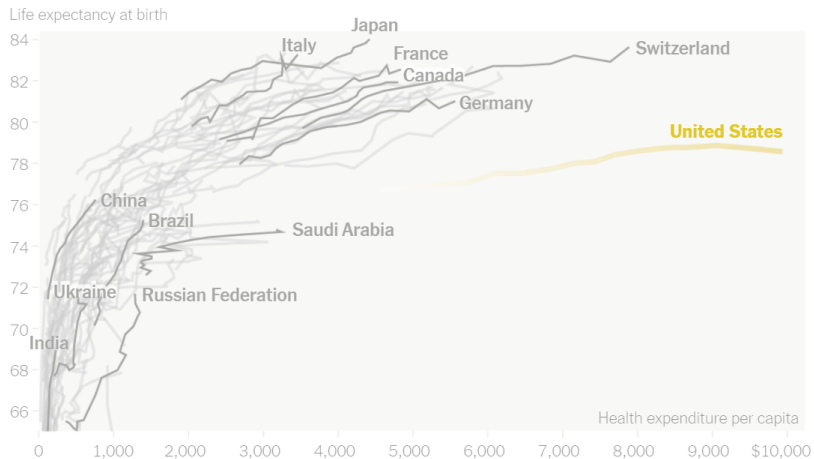


Two important goals of the Midterm Project in Math-156:

- 1) Develop an ability to identify and interpret patterns via data visualization
- 2) Develop an ability to communicate these findings using the proper statistical terms

For the first couple of weeks we will begin class (on most days) with brief warm-up that addresses these goals by analyzing and discussing a different data visualization.

# Graph #1 (Monday 1/10)



Note: Current health expenditure per capita, purchasing power parity, reflects current international dollars. Both measures span 2000-2017. Source: World Bank

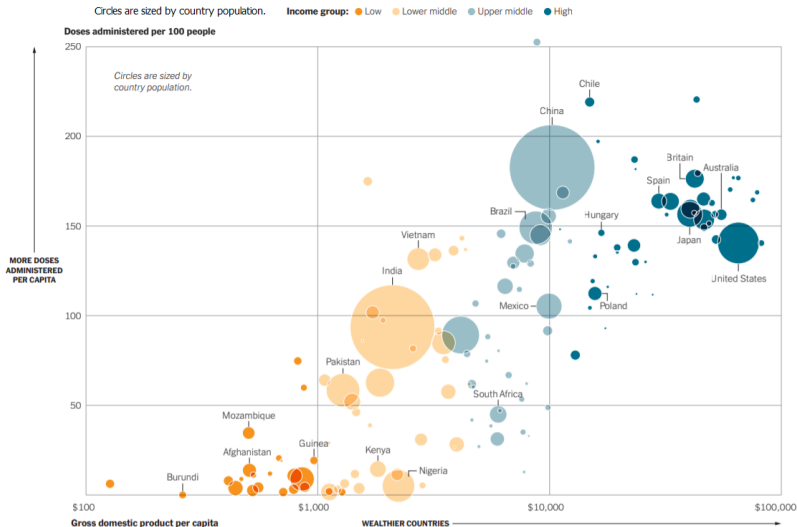
[Source/full-size link](#)



# Graph #1 (Questions)

1. What are the *variables* depicted on this graph? What are the *subjects/units* that are being considered?
2. What is the strongest predictor of *greater improvements* in a country's life expectancy (at birth)?
3. What do you think was the message that graph's creator wanted convey? Do you have any criticisms or concerns regarding the evidence this graph provides?

# Graph #2 (Friday 1/14)



Sources: Vaccination data from local governments via Our World in Data; income classifications and gross domestic product data from the World Bank. | Note: Data is as of Dec. 8.

Glossary: G.D.P. per capita is the Gross Domestic Product, or wealth of a country divided by its population size.



## Graph #2 (Questions)

1. Visualize or sketch what a spreadsheet of these data would look like. To do so, you need to determine the *cases* and the *variables* that are depicted in the graph.
2. Of the variables depicted in the graph, which are *categorical* and which are *quantitative*? Additionally, which variables seem most closely related?