MITx: 14.310x Data Analysis for Social Scientists

Module 11: Intro to Machine Learning and Data Visualization > Visualizing Data > Data Visualization: Common Mistakes, Part III - Quiz

Data Visualization: Common Mistakes, Part III - Quiz

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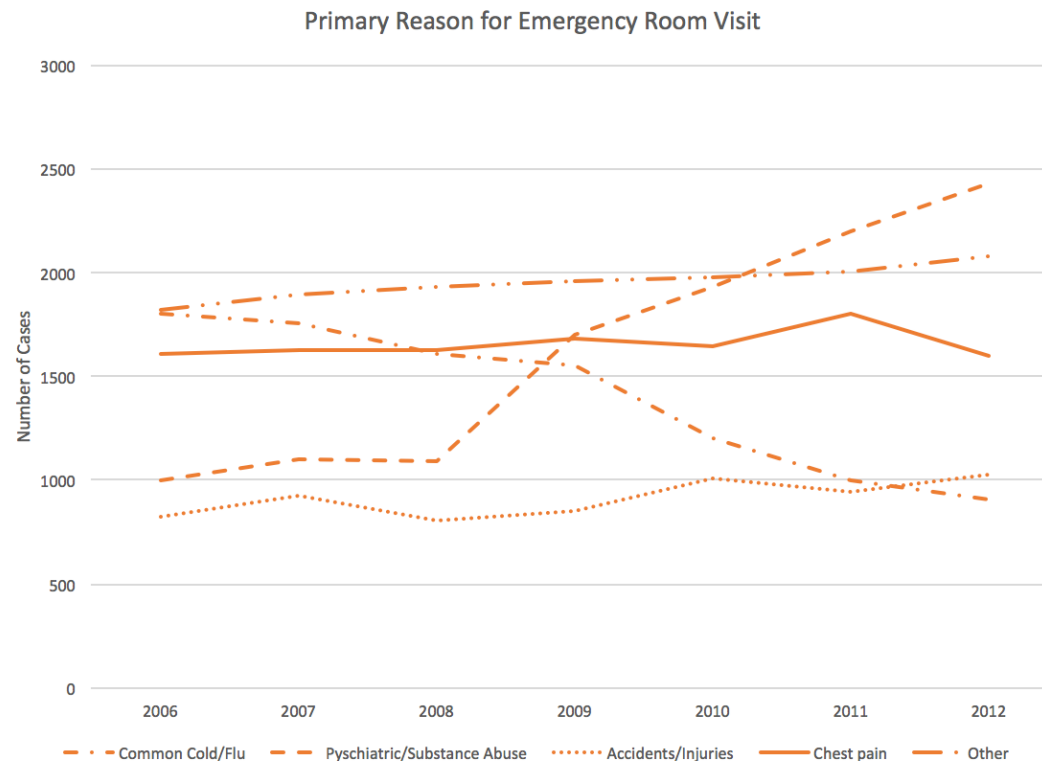
Primary Reason for Emergency Room Visit

Question 1

1/1 point (graded)
The above graph presents fake data regarding the number of cases at an imaginary Emergency Room
(ER) between 2006 and 2012. Based on the discussion in class, which of the following are ways that
the graph can be improved to make it more easily interpretable? (Select all that apply)

☑ a. Use more distinct patterns for each of the trends or change each of the lines to different
colors

☐ b. Add percentage signs to the tick marks on the y-axis.

☑ c. Match the order of lines in the legend with how they appear on the left most side of the
graph.

☐ d. Simplify the legend by using abbreviations

✔

Explanation
Looking at the graph presented above, it is difficult to determine any distinct trends. As mentioned in
class, a better way to present this data may be to use a stacked bar chart where each bar represents
100%. In the above graph, it also is difficult to distinguish between the reasons Common Cold/Flu and
Other, making choice A correct. Choice C is also mentioned as a way to improve similar charts during
lecture. Choice B would be adding repetitive information to the graph, while Choice D would present
the chart from standing on its own. Therefore, neither B or D is correct.

Submit	You have used 1 of 2 attempts

✔ Correct (1/1 point)

## Question 2
1/1 point (graded)
True or False: When presenting data, three dimensional graphics should be avoided at all costs.

○ a. True

◉ b. False ✔

Explanation
False. While Prof. Duflo comments that 3-D graphs should be avoided, she notes that in some cases they are indeed necessary since the data you wish to display really has three dimensions. For instance, sometimes it is better to use 3-D histrograms instead of 2-D ones since often times the probability distribution functions they are representing are multivariate. An example of this from class is the distribution of shots in a basketball court by Steph Curry.
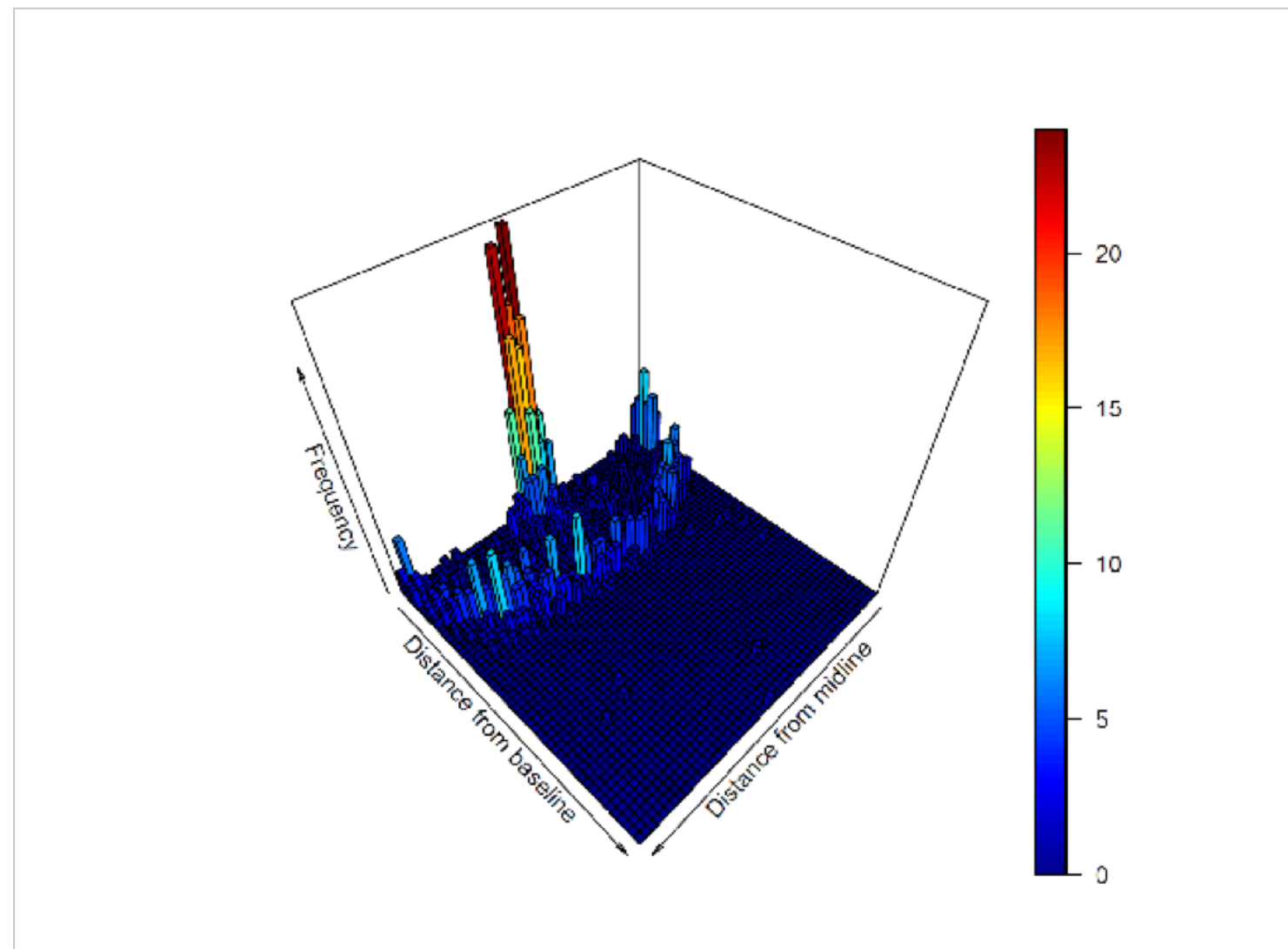
Submit   You have used 1 of 1 attempt

✔ **Correct (1/1 point)**

Discussion

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