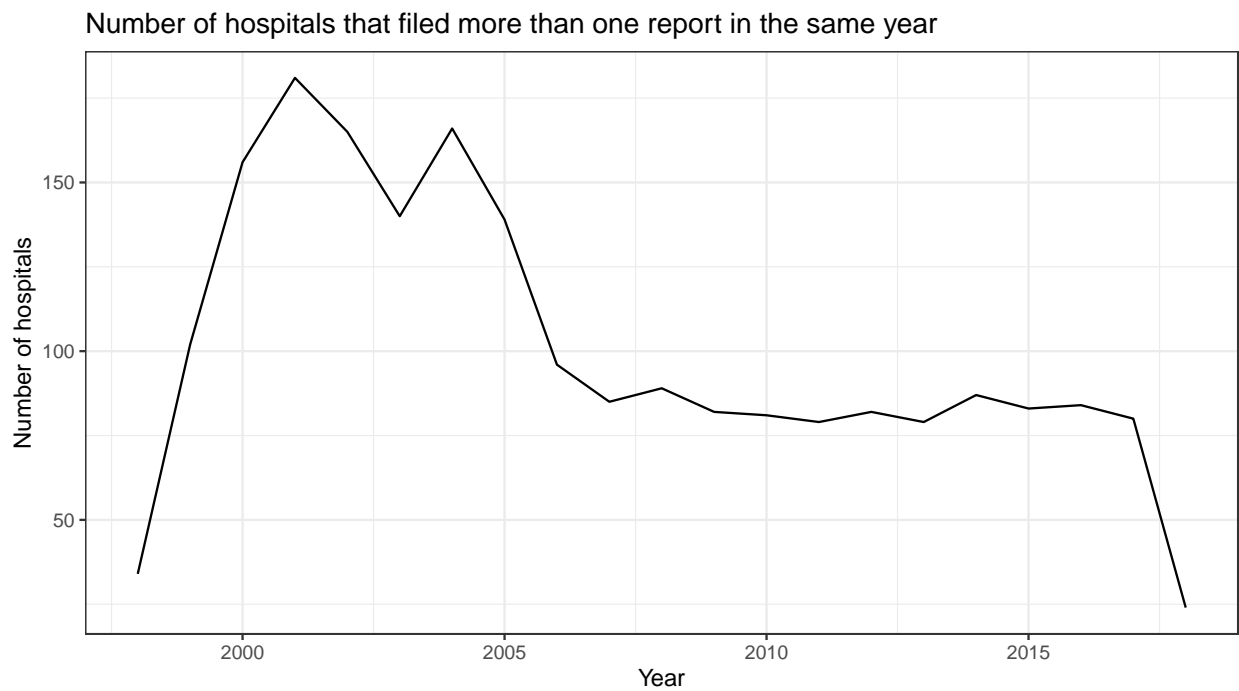


Research in Health Economics- Homework 2

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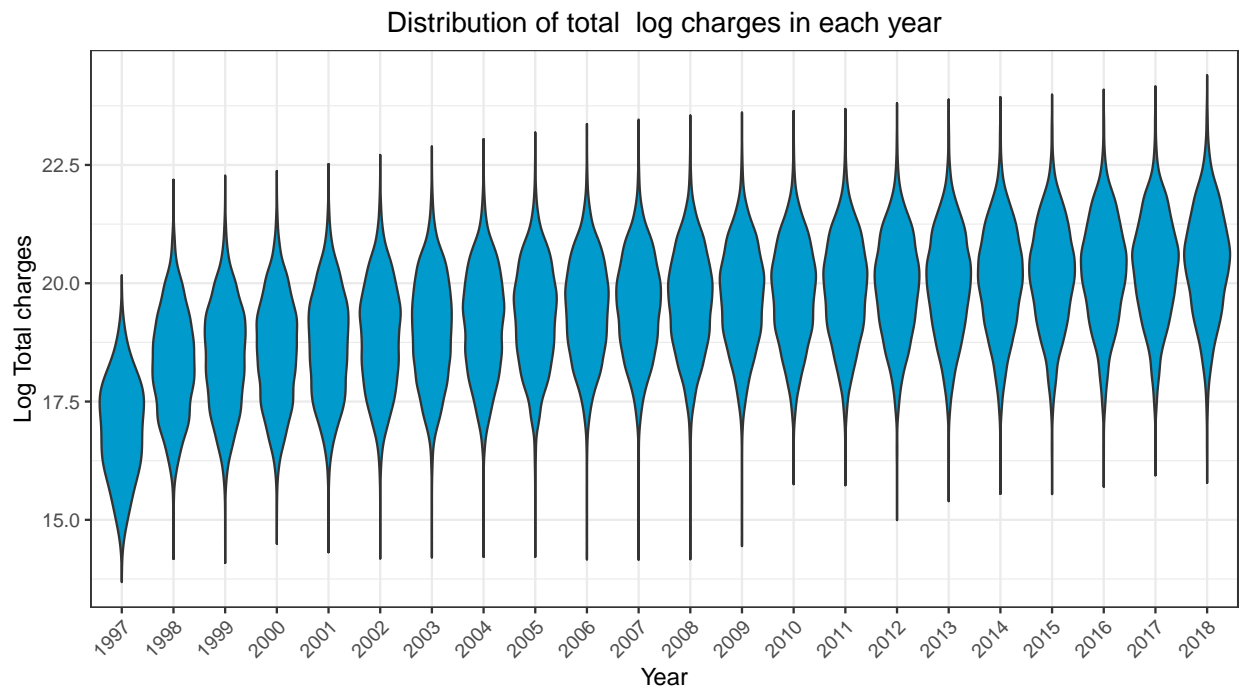
Question 1



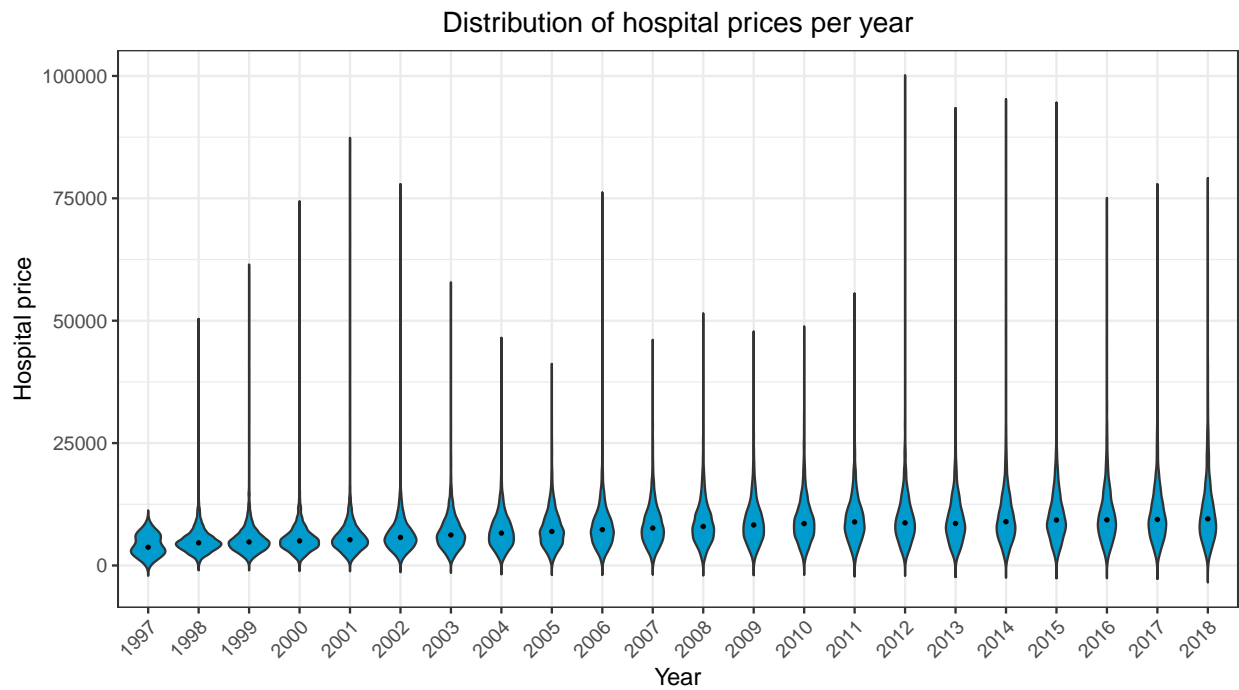
Question 2

There are 9323 unique hospitals in the data set.

Question 3



Question 4



Question 5

The average price for a hospital without penalty is 9560.41, while the average price of a hospital with penalty is 9896.31.

Question 6

Quartile of bed size	1	2	3	4
Average price for no penalty	7684.240	8510.959	9856.928	12355.61
Average price for penalty	8318.709	8690.891	10127.130	12068.48

Question 7

- The estimate of the ATE for KNN regression with inverse variance is **199.53**
- The estimate of the ATE for KNN regression with Mahalanobis distance is **199.53**
- The estimate of the ATE for inverse propensity weighting is **9.19**
- The estimate of the ATE using regression is **2733**

Question 8

I am pretty sure I made a mistake above, but I would expect the results to be similar, given that we are controlling for the same variables in all the estimators.

Question 9

I don't think I have a casual effect above, since I have only controlled for a few variables (quartiles, penalty). There are likely other variables such as the competition mentioned in class, not included in the estimators that bias the result.

Question 10

The hardest part for me was getting the data this time, as I had to do it manually. Apart from this, I have had a hard time figuring out how to code what we learned in class in regards to IPW. I understood the theory, but had a hard time putting it into practice.