Homework 2 - Research in Health Economics

Ammarah Ahmed

#Question 1

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## [1] "2114 hospitals filed more than one report per year. "
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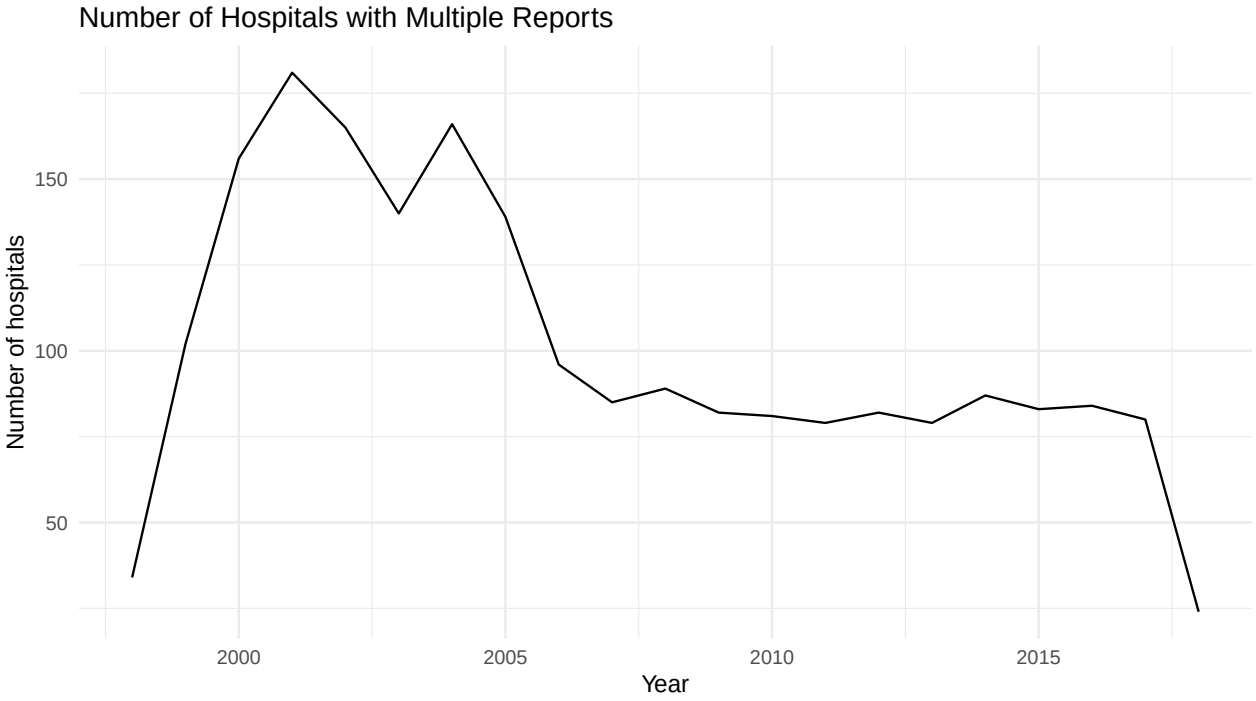

#Question 2

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## [1] "There are 9323 unique Medicare IDs"
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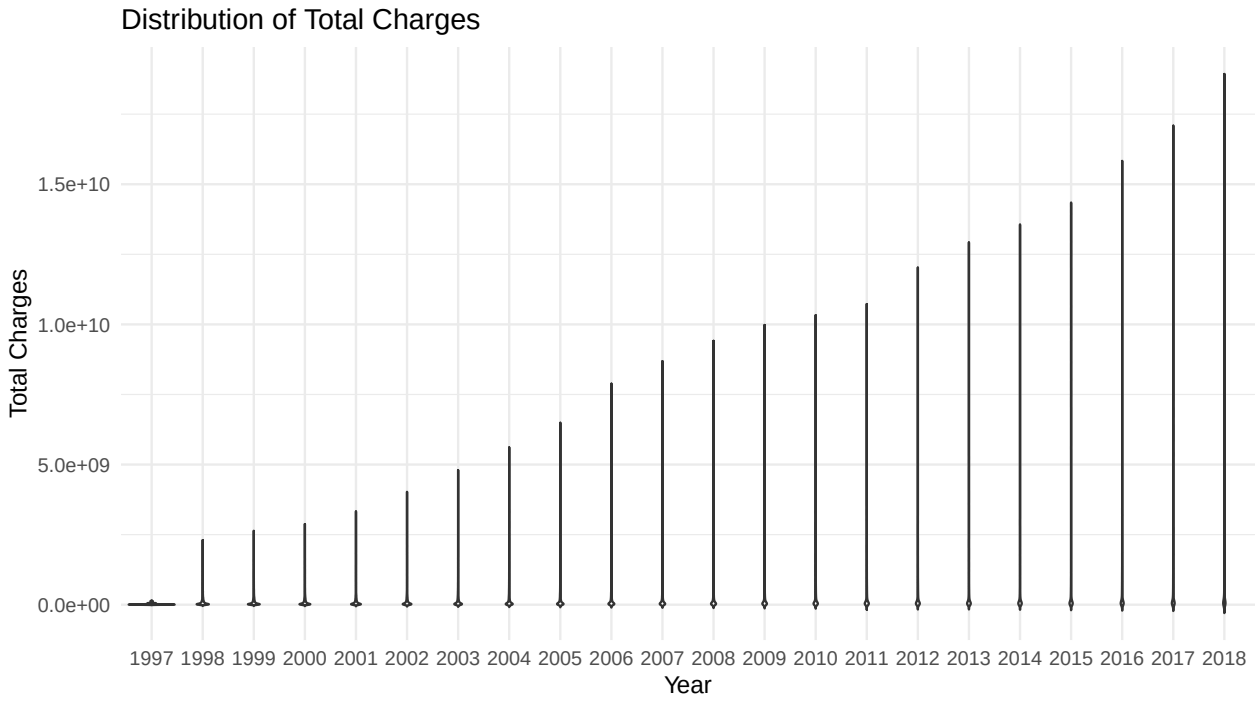
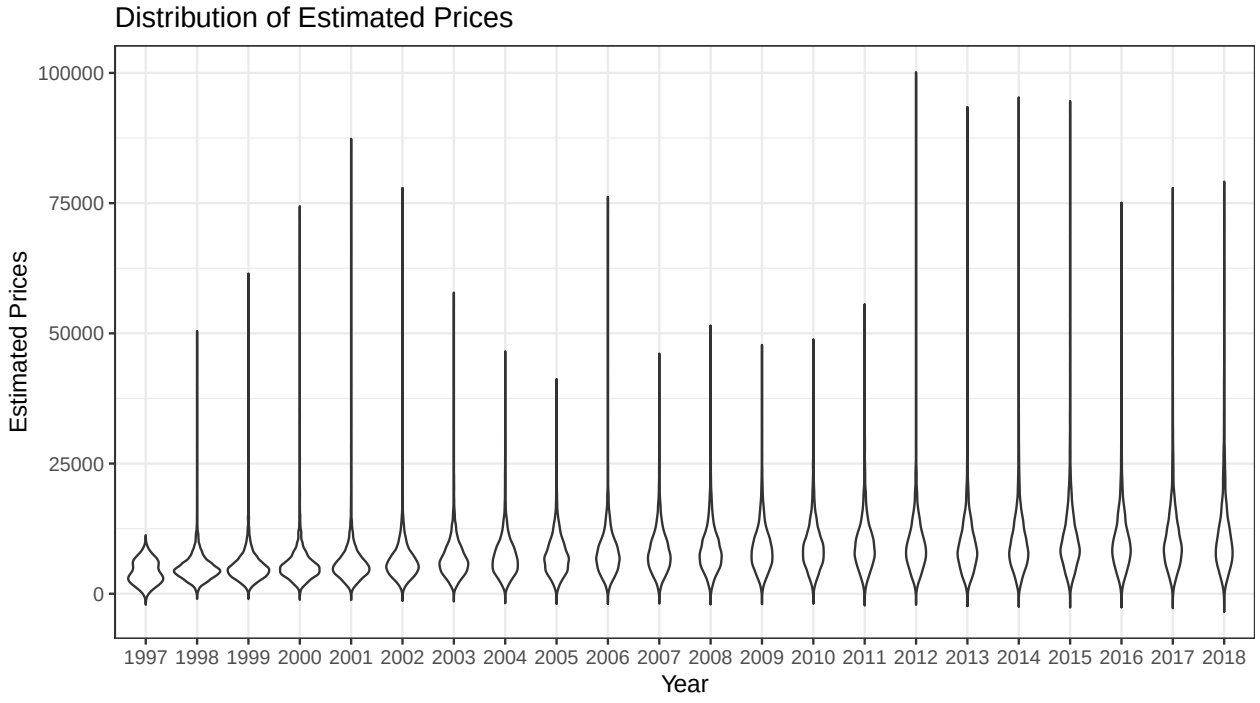
#Question 3



#Question 4



#Question 5

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## [1] "The average price amongst penalised hospitals is $9896.30849775112 and the average price amongs
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#Question 6

#Question 7

#Question 8

Table 1: Average Price for Treated and Control Groups

Quartile	Penalty	Average Price
1	0	7,684.240
1	1	8,318.709
2	0	8,510.959
2	1	8,690.891
3	0	9,856.928
3	1	10,127.130
4	0	12,355.606
4	1	12,068.479

Table 2: Average Treatment Effect

Estimate	ATE
NN Matching, inverse variance	199.5281
NN Matching, mahalanobis	199.5281
Inverse pscore weighting	161.7769
Regression	153.1743

The results from the different treatment effect estimators are similar. The results using the nearest neighbour matching methods are the same using both inverse variance distance and Mahalanobis distance at 199.5281. The results using inverse propensity weight and regression are more different at 161.7769 and 187.2840 respectively.

#Question 9

#Question 10 Working with this dataset was interesting. I learned more about applying the concepts we learned in class and was able to get more comfortable using R. However, it was confusing at times as I am still unclear about the codes to find ATE and struggled to write the codes to get to the required answers.