ECON 470 Homework 1

Virginia Sanson

2023-01-28

Question 1

The total number of observations in the dataset is 3,227,420.

Question 2

There are 24 different plan types in the dataset.

Question 3

Table1 is seen in plan.type.year1

```
## # A tibble: 24 x 3
## # Groups:   plan_type [24]
##    plan_type                            Count_2007 Count_2008
##    <chr>                                     <int>      <int>
##  1 Medicare Prescription Drug Plan          920058     963478
##  2 PFFS                                     364285     630756
##  3 HMO/HMOPOS                                60012      70176
##  4 Employer/Union Only Direct Contract PDP   32358      29113
##  5 Regional PPO                              26402      27990
##  6 Local PPO                                 17427      38470
##  7 1876 Cost                                  5855       5459
##  8 MSA                                        4422      16515
##  9 MSA Demo                                   3274         NA
## 10 Employer Direct PFFS                       3247         NA
## # ... with 14 more rows
```

Question 4

Table2 is seen in plan.type.year2

```
## # A tibble: 14 x 3
## # Groups:   plan_type [14]
##    plan_type                        Count_2007 Count_2008
##    <chr>                                 <int>      <int>
##  1 Medicare Prescription Drug Plan      398167     428936
##  2 PFFS                                  51987     105859
##  3 HMO/HMOPOS                            30670      34545
```

```
##  4 Regional PPO                                 7254      7794
##  5 Local PPO                                    6116      7612
##  6 1876 Cost                                    5048      4577
##  7 MSA                                          2177      3303
##  8 SHMO                                          458        NA
##  9 National PACE                                 395       548
## 10 PSO (State License)                           376       394
## 11 MSA Demo                                      129        NA
## 12 PSO (Federal Waiver of State License)         110        NA
## 13 ESRD I                                         75       122
## 14 Continuing Care Retirement Community           68        66
```
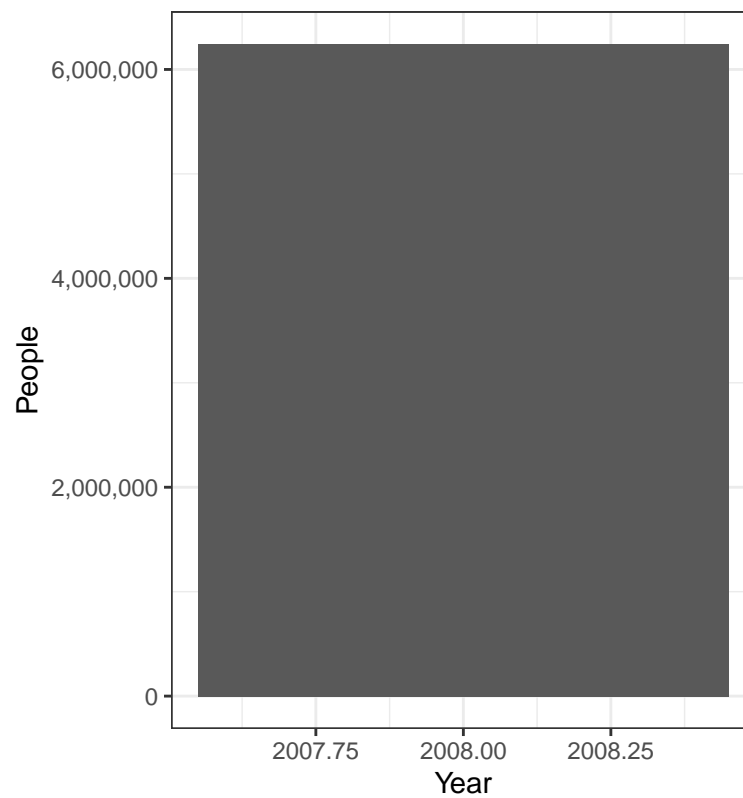
Question 5

```
print(fig.avg.enrollment)
```


Figure 1: Average Enrollments per County

Question 6

Question 7

Question 8

800-series plans are employer-sponsored insurance plans for their employees. We may have dropped the plans to avoid bias in the data versus governmental or private plans.

Question 9

Many Medicare Advantage plans charge a $0 premium. However, that means that a beneficiary can be charged in other ways, such as through a higher deductible, coinsurance, and co-pays.

Question 10

My experience working with this data was unfortunately very extensive and time consuming. My inexperience with R/R Studio made this process more difficult than expected. I became agravated when it came to question 5, as I could not figure out how to restrict datasets or effectively create a graph at the time. However, along the way, I learned how to create basic tables, graphs, and connect my GitHub account with RStudio.