

# ECON 470 Homework 1

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## 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 below.

```
## # 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 below.

```
## # 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

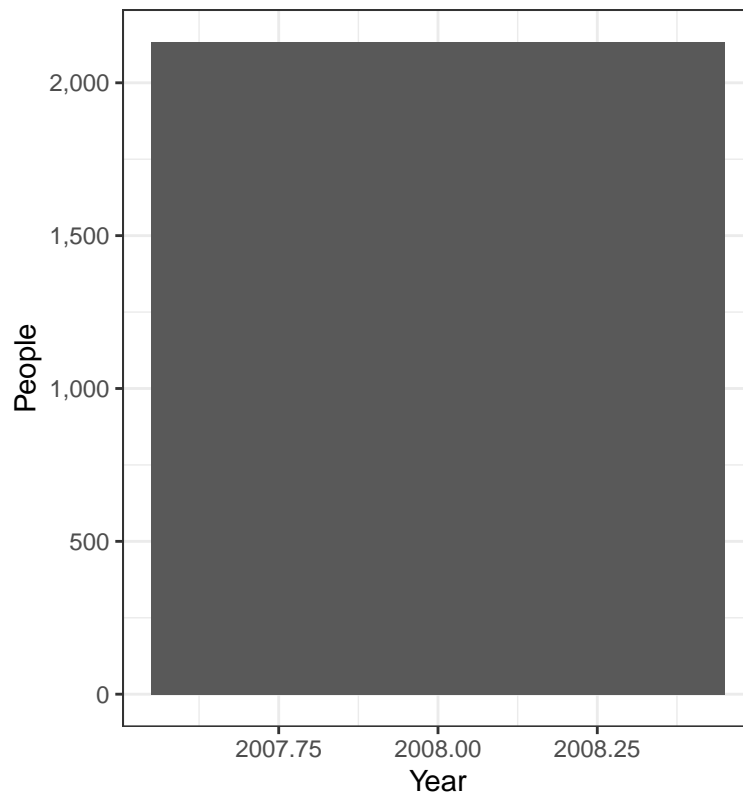


Figure 1: Average Enrollments per County

Question 6

Graph seen in Figure 2. Ignore warnings.

```
## Warning: Removed 3324 rows containing non-finite values ('stat_summary()').
```

Question 7

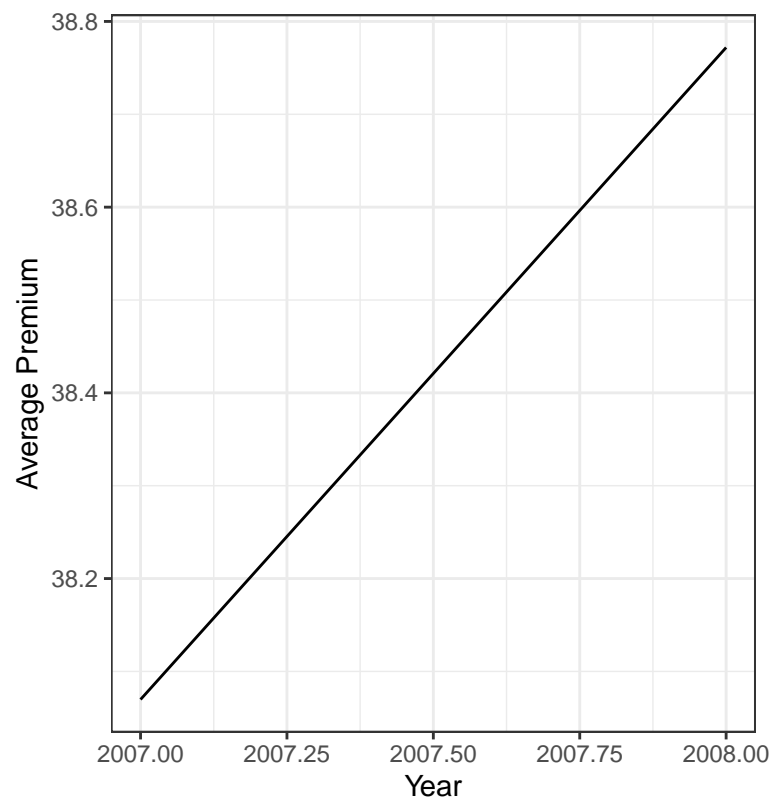


Figure 2: Average Premium Price over Time

Graph seen in Figure 3.

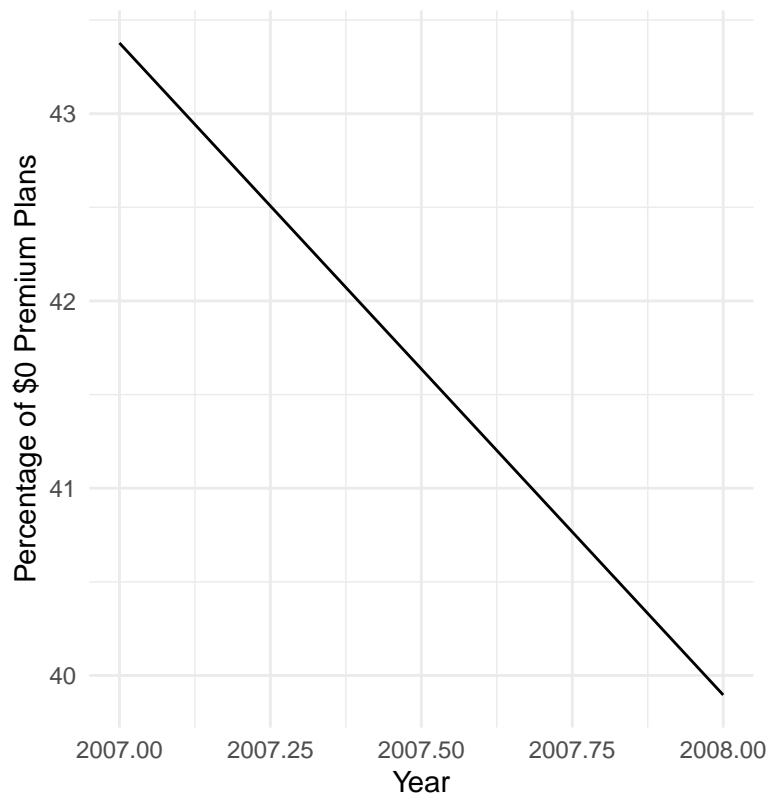


Figure 3: Free Premium Plans over Time

#### 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 aggravated 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.