

# Bhasin-S-hw1-3

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## #Question 1

There are 19,126,783 observations in the data set, which means there are that many different combinations of contracts, plans, countries, and years in the data set.

## #Question 2

There are 27 different plan\_types in the data. One of them is “NA” so there are 26 different plan\_types in data set.

## Question 3

plan_type	2007	2008	2009	2010	2011	2012	2013	2014	2015
Medicare Prescription Drug Plan	920058	963478	945794	893609	771694	815223	826907	1122209	991457
PFFS	364285	630756	683361	385733	45781	36423	31919	24905	13658
HMO/HMOPOS	60012	70176	479978	506802	528473	507272	530909	523304	479275
Employer/Union Only Direct Contract PDP	32358	29113	25860	28700	28697	28669	25526	25528	25630
Regional PPO	26402	27990	25943	24442	22773	21602	19970	19773	17578
Local PPO	17427	38470	405197	417551	515700	636701	633884	664716	704993
1876 Cost	5855	5459	5825	6035	6851	7633	7731	7069	7157
MSA	4422	16515	12267	135	6421	6416	6431	6449	6518
MSA Demo	3274	NA	NA	NA	NA	NA	NA	NA	NA
Employer Direct PFFS	3247	NA	NA	NA	NA	NA	NA	NA	NA
SHMO	1125	NA	NA	NA	NA	NA	NA	NA	NA
MN Senior Health Options	968	NA	NA	NA	NA	NA	NA	NA	NA
PSO (State License)	421	535	87	123	176	171	NA	NA	NA
National PACE	405	548	616	717	781	858	953	1118	1216
PSO (Federal Waiver of State License)	162	NA	NA	NA	NA	NA	NA	NA	NA
Continuing Care Retirement Community	95	122	158	142	NA	NA	NA	NA	NA
ESRD I	75	122	123	117	NA	NA	NA	NA	NA
MA Health Senior Care Options	73	NA	NA	NA	NA	NA	NA	NA	NA
WI Partnership Program	42	NA	NA	NA	NA	NA	NA	NA	NA
MN Disability Health Options	21	NA	NA	NA	NA	NA	NA	NA	NA
Pilot	15	12	201	53	3	3	2	2	2

plan_type	2007	2008	2009	2010	2011	2012	2013	2014	2015
HCPP - 1833 Cost	13	13	3938	3604	11	11	10	9	9
ESRD II	12	12	7	8	NA	NA	NA	NA	NA
Employer/Union Only Direct Contract PFFS	NA	3332	3335	3332	3329	3323	NA	NA	NA
NA	NA	NA	27505	277533	NA	NA	NA	NA	NA
RFB PFFS	NA	NA	3006	NA	NA	NA	NA	NA	NA
Medicare-Medicaid Plan HMO/HMOPOS	NA	NA	NA	NA	NA	NA	265	1319	4130

## Question 4

plan_type	2007	2008	2009	2010	2011	2012	2013	2014	2015
Medicare Prescription Drug Plan	398167	428936	415027	391205	295458	289044	278091	301082	269153
PFFS	51987	105859	89586	54119	22038	17449	12945	6053	4232
HMO/HMOPOS	30670	34545	36166	34460	33931	37551	37179	38893	36588
Regional PPO	7254	7794	8470	10659	10995	11279	9660	10420	8531
Local PPO	6116	7612	9929	11652	13874	17030	17089	17169	16728
1876 Cost	5048	4577	4781	4923	5829	6647	6759	6207	6329
MSA	2177	3303	2459	68	131	132	145	163	232
SHMO	458	NA	NA	NA	NA	NA	NA	NA	NA
National PACE	395	548	615	717	781	858	953	1118	1216
PSO (State License)	376	394	75	97	141	143	NA	NA	NA
MSA Demo	129	NA	NA	NA	NA	NA	NA	NA	NA
PSO (Federal Waiver of State License)	110	NA	NA	NA	NA	NA	NA	NA	NA
ESRD I	75	122	123	117	NA	NA	NA	NA	NA
Continuing Care Retirement Community	68	66	60	64	NA	NA	NA	NA	NA
NA	NA	NA	13619	29733	NA	NA	NA	NA	NA
RFB PFFS	NA	NA	3006	NA	NA	NA	NA	NA	NA
Medicare-Medicaid Plan HMO/HMOPOS	NA	NA	NA	NA	NA	NA	265	1319	4130

#Question 5

#Question 6

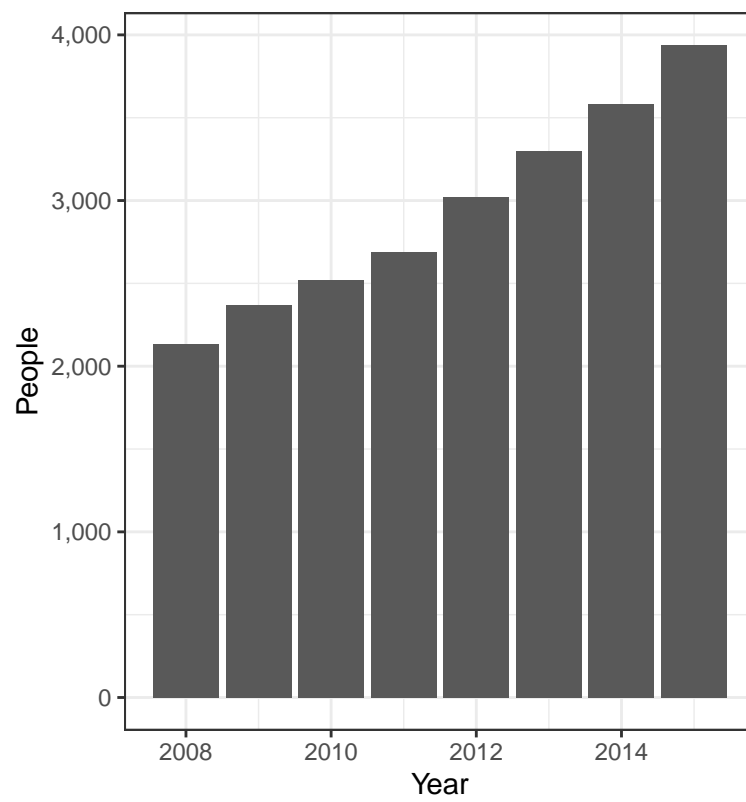
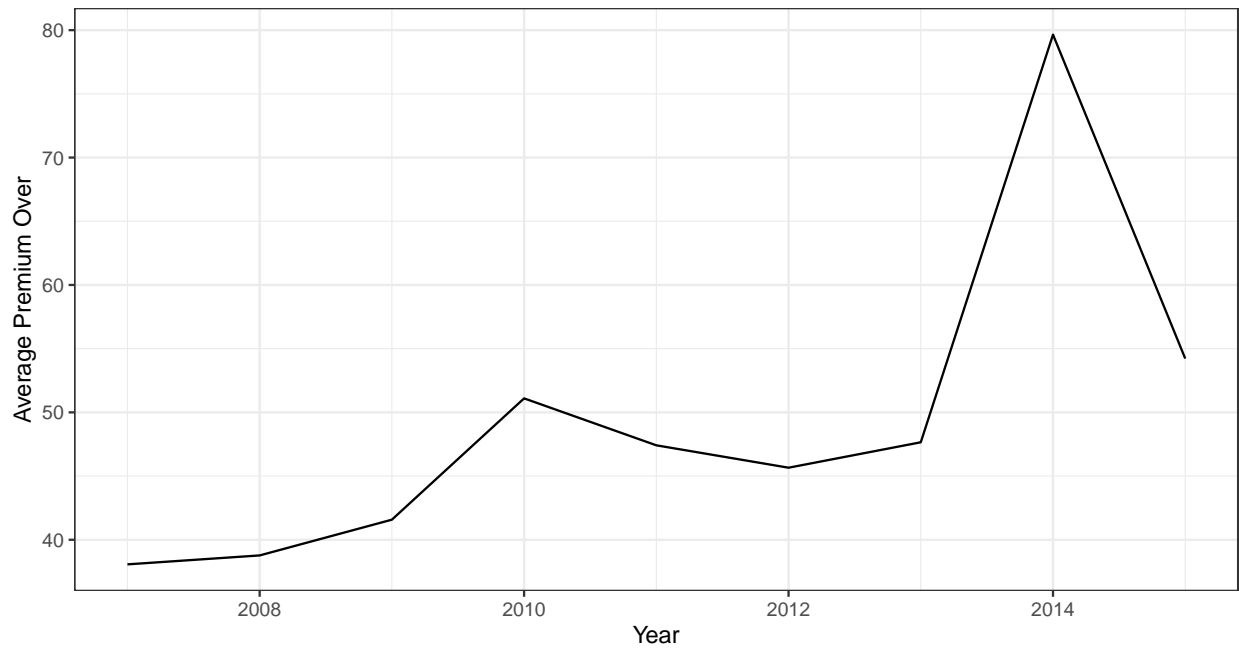
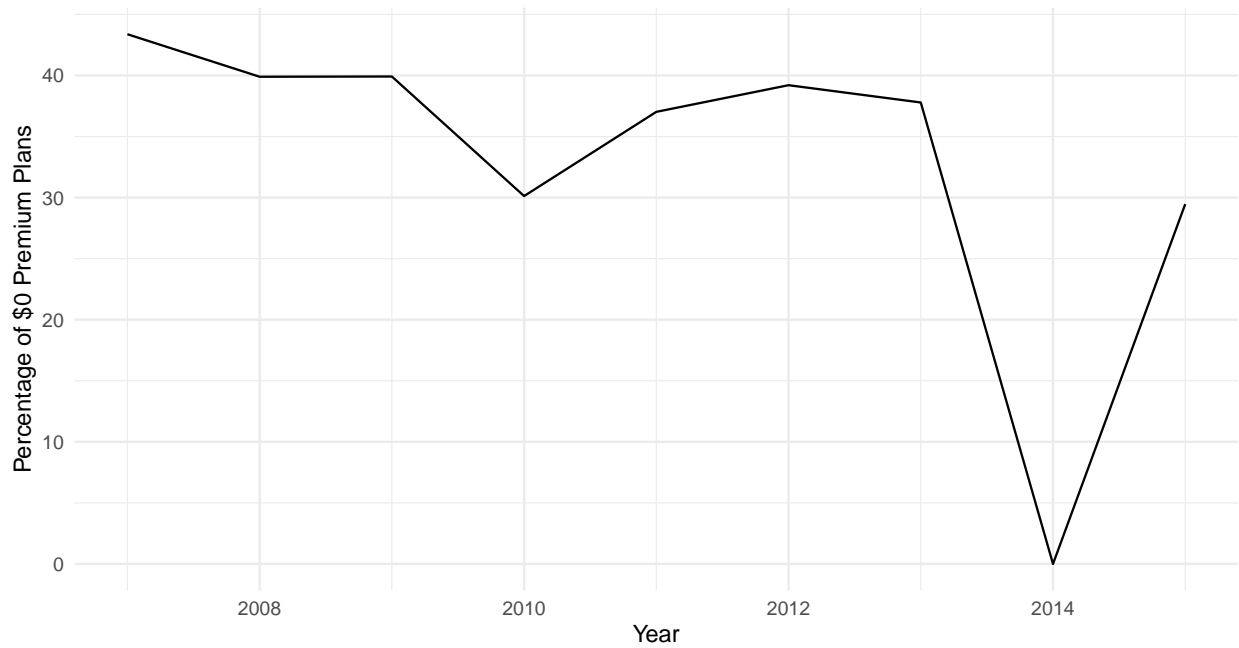


Figure 1: Average Enrollments per County



#Question 7



# Question 8

We dropped the “800-series” plans because they are offered by employers and union group sponsors. Therefore, they mostly represent Employer Group Wavier Plans, not Medicare.

#Question 9

So many plans charge a 0 dollar premium because government funding helps the insurance companies offer Medicare plans with no premiums. Most people qualify for premium-free Part A, so they have a 0 dollar

premium, whereas Part B has a premium. For the beneficiary, it means that they do not have to pay a monthly cost for medicare if they stick to Plan A, which does not include some doctors' services, outpatient care, medical supplies, and preventive services unlike Plan B.

#Question 10

My experience working with these data sets were very challenging. I learned how to create graphs in R as well as the importance of being patient. Several things aggravated me but trying to figure out how to get the R markdown was a struggle.

## R Markdown

This is an R Markdown document. Markdown is a simple formatting syntax for authoring HTML, PDF, and MS Word documents. For more details on using R Markdown see <http://rmarkdown.rstudio.com>.

When you click the **Knit** button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this:

## Including Plots

You can also embed plots, for example:

Note that the `echo = FALSE` parameter was added to the code chunk to prevent printing of the R code that generated the plot.