

Homework 1

ECON 470 Spring 2025

Camila Castaneda

My answers to the homework questions are described below. Note that I do the analysis for these answers in a separate R script. You can read in the full data as part of your markdown file, but that takes some time to compile to pdf. So I run the analysis separately, save the workspace with only the summary stats, figures, and tables that I need, and then load the workspace in the final qmd. My analysis file is available in the analysis folder. The GitHub repository for this work is available [here](#). Enjoy!

Building the Data

1. Provide a table of the count of plans under each plan type in each year. See Table 1.

Table 1: All Plan Types (2015)

plan_type	n
HMO/HMOPOS	2400
Medicare Prescription Drug Plan	1244
Local PPO	810
National PACE	230
1876 Cost	111
Regional PPO	101
Medicare-Medicaid Plan HMO/HMOPOS	76
PFFS	72
MSA	10
HCPP - 1833 Cost	9
Employer/Union Only Direct Contract PDP	8
Pilot	2

2. Remove all special needs plans (SNP), employer group plans (eghp), and all “800-series” plans. Provide an updated table after implementing these exclusions.

I remove the relevant plans just by applying the relevant filter to the full ma data and then creating the table of plan types. Counts of different plan types with these exclusions are presented in Table 2.

Table 2: Revised plan types in 2015

plan_type	n
HMO/HMOPOS	1271
Medicare Prescription Drug Plan	1012
Local PPO	465
National PACE	230
1876 Cost	98
Medicare-Medicaid Plan HMO/HMOPOS	76
PFFS	69
Regional PPO	43
MSA	7

3. Provide a table of the average enrollments for each plan type in 2015.

To do this, I need to collapse the data to the plan-type level and form the average enrollments across all counties in which that plan type operates. The resulting table is presented in Table 3.

Table 3: Enrollments by plan type in 2015

plan_type	n	enrollment
HMO/HMOPOS	1271	NaN
Medicare Prescription Drug Plan	1012	NaN
Local PPO	465	NaN
National PACE	230	NaN
1876 Cost	98	NaN
Medicare-Medicaid Plan HMO/HMOPOS	76	NaN
PFFS	69	NaN
Regional PPO	43	NaN
MSA	7	NaN