## Homework 1

ECON 470, Spring 2025

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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**

Answer the following based on our initial, simplified dataset of enrollments, plan types, and service areas:

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

Table 1: All plan types in 2015

Plan Type	Count
Medicare Prescription Drug Plan	991,457
Local PPO	704,993
HMO/HMOPOS	479,275
Employer/Union Only Direct Contract PDP	25,630
Regional PPO	17,578
PFFS	13,658
1876 Cost	7,157
MSA	6,518
Medicare-Medicaid Plan HMO/HMOPOS	4,130
National PACE	1,216
HCPP - 1833 Cost	9
Pilot	2

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

Table 2: Revised plan types in 2015

Plan Type	Count
Medicare Prescription Drug Plan	269,153
HMO/HMOPOS	$36,\!588$
Local PPO	16,728
Regional PPO	8,531
1876 Cost	6,329
PFFS	4,232
Medicare-Medicaid Plan HMO/HMOPOS	4,130
National PACE	1,216
MSA	232

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

Table 3: Enrollments by plan type in 2015

Plan Type	Count	Avg Enrollments
Medicare Prescription Drug Plan	269,153	312
HMO/HMOPOS	36,588	849
Local PPO	16,728	311
Regional PPO	8,531	202
1876 Cost	6,329	228
PFFS	4,232	125
Medicare-Medicaid Plan HMO/HMOPOS	4,130	624
National PACE	1,216	140
MSA	232	108