

# Homework 1

ECON 470, Spring 2025

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My answers to the homework questions are described below. 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
Medicare Prescription Drug Plan	991457
Local PPO	704993
HMO/HMOPOS	479275
Employer/Union Only Direct Contract PDP	25630
Regional PPO	17578
PFFS	13658
1876 Cost	7157
MSA	6518
Medicare-Medicaid Plan HMO/HMOPOS	4130
National PACE	1216
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 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
Medicare Prescription Drug Plan	269153
HMO/HMOPOS	36588
Local PPO	16728
Regional PPO	8531
1876 Cost	6329
PFFS	4232
Medicare-Medicaid Plan HMO/HMOPOS	4130
National PACE	1216
MSA	232

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
Medicare Prescription Drug Plan	269153	312
HMO/HMOPOS	36588	849
Local PPO	16728	311
Regional PPO	8531	202
1876 Cost	6329	228
PFFS	4232	125
Medicare-Medicaid Plan HMO/HMOPOS	4130	624
National PACE	1216	140
MSA	232	108