This is an overview of SAS programs used in the analysis for “Measuring Alzheimer’s Disease and Other Dementias in Diverse Populations Using Medicare Claims Data,” by Johanna Thunell, Patricia Ferido, and Julie Zissimopoulos published in the *Journal of Alzheimer’s Disease* in 2019.

**Harmonize raw MBSF files**

bene\_demog2018.sas

* Source data: Medicare beneficiary summary files
* creates a file of beneficiary non-time-varying demographics across all years of available data

p2egwp2017.sas

* Source data: Medicare Part D plan characteristics files
* creates a format identifying different Part D plans made up of contract ID, plan ID and EGWP indicator

bene\_status\_year2001\_2018.sas, statyr.sas, bene\_status.fmt p2egwp.fmt

* Source data: Medicare beneficiary summary files and harmonized files from bene\_demog2018
* summarizes enrollment data.sas, HMO status.sas, dual eligibility.sas, Part D plan by year

**Pull Anti-dementia Drug Use Claims**

read\_in\_taxonomy\_xw\_2017.sas

* Source data: Medicare provider crosswalk <https://data.cms.gov/Medicare-Enrollment/CROSSWALK-MEDICARE-PROVIDER-SUPPLIER-to-HEALTHCARE/j75i-rw8y>
* Read in Medicare provider/supplier crosswalk

clean\_taxonomy\_xwlk.sas

* Source data: Medicare provider crosswalk data, Medicare NPPES data
* Clean taxonomy crosswalk, identifying dementia specialists among provider specialties

adrx\_descriptives.sas

* Source data: pulled AD drug Part D claims and NPI specialist dictionary
* Summarizes AD drug use and identifies incident use for each beneficiary

**Build Analytical Files**

sample\_selection.sas

* Source data: Harmonized beneficiary status files and beneficiary demography file, Medicare Chronic Conditions files
* Summarize sample information and identify sample as those 67+ and enrolled in FFS and Part D in years *t-2, t-1,* and *t*

pull\_ADdrugs\_dts.sas

* Source data: Medicare Part D Events files
* Pulls Part D claims for donepezil, galantamine, memantine, and rivastigmine

pull\_dementia\_dx.sas

* Source data: Medicare RIF files
* Pulls dementia and dementia symptoms claims

dementia\_dxdt.sas

* Source data: Dementia claims from above program
* Turn claim-level dementia files into date-level files

ADRDinc\_methods.sas

* Source data: Dementia date-level files and anti-dementia drug claims, sample information
* Build dementia incidence dates using different methods of verification

**Analysis**

ADRDinc\_analysis.sas

* Source data: Built analytical data set and sample information
* Analyze incidence rates using different verification methods for all beneficiaries, by race and by sex