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Predictors of Enrollment in Medicare Part D: Are Beneficiaries Rational?

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Background

- The initiation of the Medicare Part D benefit offers an ideal opportunity to study real-world decision-making and the role of adverse selection and other factors in insurance enrollment
- Medical Expenditure Panel Survey (MEPS) data from 2006 are among the few publicly available sources of nationally representative Part D data
- Our objective in this study was to identify predictors of Part D enrollment among individuals with a range of health conditions and insurance designs

Methods Overview

- Retrospective longitudinal analysis of the MEPS database
- Sample included all individuals in both the 2005 and 2006 MEPS datasets enrolled in Medicare (but not Medicaid) with information available on Part D enrollment
  - Excluded dual-eligibles (Medicare + Medicaid enrollees) since they were automatically enrolled in Part D
  - Focused on beneficiaries' insurance coverage as of December 2005, just before enrollment in Part D began
- Descriptive analyses: demographic and socioeconomic characteristics, supplemental insurance, health status, and 2005 medical expenditures
- Multivariate logistic regression used to predict factors associated with the likelihood of enrolling in Part D in 2006

Data Source

- MEPS
  - Conducted by AHRQ since 1996
  - Annual sample size of ~15,000 households — nationally representative sample of the US civilian noninstitutionalized population
  - Each survey panel includes 5 rounds of interviews covering 2 full calendar years
- Expenditures include payments for hospital inpatient stays, ER visits, outpatient visits, office visits, dental visits, prescription medications, home health care, and other medical
- Expenditure data derived from the household component (for amounts paid by respondents) and medical provider component (for amounts paid by third-party payors)

Data Analyses

- Descriptive analyses performed
  - Age, sex, race/ethnicity
  - Regional and rural/urban designation
  - Marital status, educational attainment, employment status, income category
  - Perceived health status, SF-12 scores, number of unique medications
  - Supplemental insurance coverage
  - Out-of-pocket (OOP) drug expenditures and total OOP expenditures (copayments, co-insurance, deductibles) in 2005
  - Total expenditures (sum of payments by all sources) in 2005
- Person-level expenditures and weights used
- Premiums excluded from expenditures

Regression Model

- Multivariate logistic regression analysis performed using the SURVEYLOGISTIC procedure in SAS v9.1 to account for the complex sampling design in MEPS
- Predictors of enrolling in Part D identified using a variety of factors hypothesized to potentially influence Part D enrollment decisions

Table 1. Demographic and Socioeconomic Characteristics

Measure	Enrolled in Part D	Did Not Enroll in Part D
Unweighted N	657	779
Age		
Mean	72.4	71.4
SD	9.4	12.0
Median	72.0	72.0
<65 years	8.9%	10.7%
65+ years	91.1%	89.3%
Female	58.5%	54.6%
Race/ethnicity		
White, non-Hispanic	81.3%	85.1%
African American, non-Hispanic	8.3%	8.0%
Hispanic, any race	6.2%	3.8%
Asian or Pacific Islander	2.5%	2.8%
Multiple races/other	1.7%	0.4%
Marital status		
Married	57.1%	58.6%
Not married	42.9%	41.4%

Source: MEPS, 2005-2006

Table 1. Demographic and Socioeconomic Characteristics, cont.

Measure	Enrolled in Part D	Did Not Enroll in Part D
Unweighted N	657	779
Region		
Northeast	16.4%	20.3%
Midwest	23.7%	24.8%
South	38.0%	37.4%
West	21.9%	17.5%
Metropolitan statistical area (MSA)		
MSA	76.5%	81.3%
No MSA	23.5%	18.7%
Education		
Less than 12 years	28.3%	20.3%
12 years or GED	33.1%	38.2%
More than 12 years	37.9%	39.5%
Missing	0.8%	2.0%
Income		
Low income	41.6%	28.1%
Middle income	24.6%	32.5%
High income	33.8%	39.4%

Source: MEPS, 2005-2006

Table 2. Health Status

Measure	Enrolled in Part D	Did Not Enroll in Part D
Unweighted N	657	779
Perceived health status		
Excellent/Very good/Good	73.4%	77.7%
Fair/Poor	26.6%	22.1%
Perceived mental health status		
Excellent/Very good/Good	85.8%	89.8%
Fair/Poor	14.1%	10.2%
SF12v12 physical component		
Mean	40.58	42.74
SD	12.79	12.38
SF12v12 mental component		
Mean	51.00	51.73
SD	11.00	10.46
Number of unique medications		
Mean	6.48	5.60
SD	4.83	4.59

Source: MEPS, 2005-2006. SF-12 scores range from 0-100, with higher scores indicating better health

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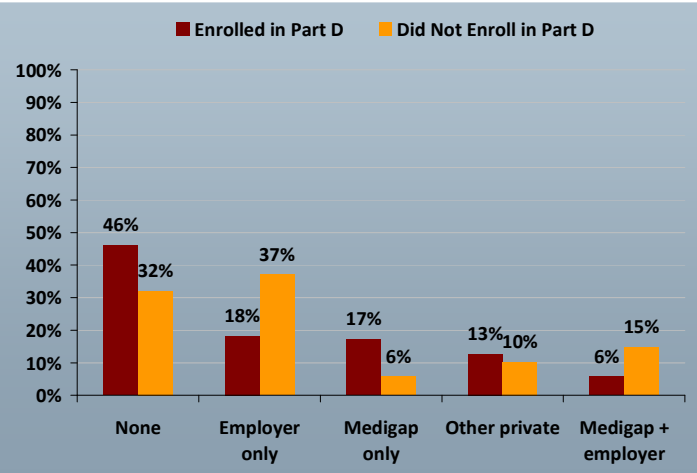
Figure 1. Supplemental Insurance



Source: MEPS, 2005-2006

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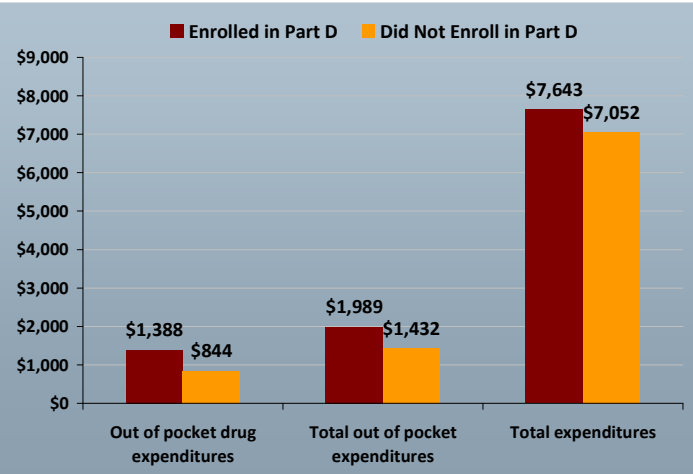
Figure 2. Mean individual OOP and total expenditures in 2005 by enrollment in Part D in 2006



Source: MEPS, 2005-2006

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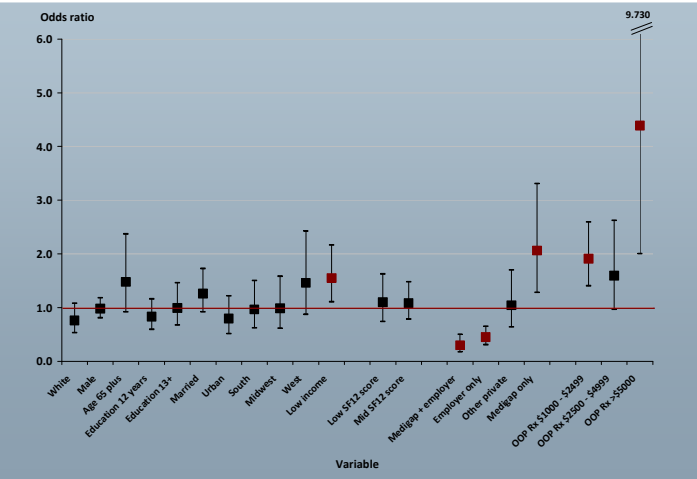
Figure 2. Multivariate Adjusted Odds of Enrollment in Part D



Source: MEPS, 2005-2006

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Discussion

- Concept of adverse selection in insurance markets suggests that, given a choice, healthier people would not enroll in Part D
  - Our study: healthy had lower Part D enrollment rates, but perceived health status/SF-12 scores were not significant predictors of Part D enrollment after adjustment
- Concern that less educated and poorer seniors would not be able to make rational enrollment and plan decisions
  - Our study: education was a not significant predictor, but low income was positively associated with enrollment
- Extent of existing drug coverage and OOP spending both predicted enrollment decisions
- Less enthusiasm for enrollment among those with 2005 spending in the range of the plan's coverage gap

Limitations

- Subject to the usual limitations of retrospective studies and survey research in general
- Unable to analyze whether beneficiaries who did not enroll in Part D had "creditable coverage"
  - Type of supplementary insurance served as proxy for this factor
    - 3% of Medigap plans included drug benefits in 2005*
    - 98% of retiree health plans offered drug benefits in 2005**
- Other, unmeasured factors may have influenced decision to enroll in Part D
- Findings represent first year experiences only

*America's Health Insurance Plans. A Survey of Medigap Enrollment Trends, July 2006. http://www.ahipresearch.org/PDFs/MedigapProductSurvey10-27-06.pdf.
**Kaiser Family Foundation. Kaiser/Hewitt 2005 Survey on Retiree Health Benefits, December 2005. http://www.kaiserfamilyfoundation.org/medicare/upload/7439.pdf

Conclusions

- Based on first-year data, fears of only the sickest beneficiaries enrolling in Part D and employers withdrawing drug benefits to retirees seem to have been unwarranted
- Existing coverage and high prior drug spending drove the decision to enroll in Part D in what appears to have been a rational way