



Changes in Health Care Financing & Organization (HCFO)

# findings brief

## Should Healthy Medicare Beneficiaries Postpone Enrollment in Part D?

### key findings

- Total lifetime expected out-of-pocket costs are minimized if healthy 65-year-old Medicare beneficiaries enroll in Part D immediately upon eligibility rather than waiting until they contract a drug-intensive condition.
- The savings from early enrollment are greater for females than for males.
- The late enrollment penalty for Medicare Part D provides an important incentive for early enrollment, and eliminating the late enrollment penalty would create a significant cost advantage for postponed enrollment, especially for men.

### Background

In 2006, the United States federal government added a voluntary outpatient prescription drug benefit to the Medicare program through the Medicare Prescription Drug, Improvement, and Modernization Act (MMA): Medicare Part D. Medicare beneficiaries enrolled in Part D choose a prescription drug plan from either a private stand-alone drug plan (PDP) in fee-for-service (FFS) Medicare or a Medicare Advantage (MA) plan. The plans are required to provide a “standard” package that is defined in law, or one that is actuarially equivalent, to beneficiaries. Part D enrollees pay a monthly premium and part of the cost for each prescription through a copayment or coinsurance. Some plans provide more coverage and additional drugs for a higher monthly premium or with the inclusion of a yearly deductible.<sup>1,2</sup>

Given out-of-pocket monthly premiums and cost sharing, “healthy” Medicare beneficiaries who do not regularly take prescription drugs wonder whether or not it is cost effective for them to enroll in Part D. However,

Part D premiums depend on when a Medicare beneficiary enrolls in a prescription drug plan. If a healthy Medicare beneficiary waits until he or she has a drug-intensive condition and then decides to enroll in Part D, the monthly premiums will be higher than if the beneficiary had enrolled in Part D upon eligibility. Specifically, beneficiaries who do not have coverage through another source (that is at least as generous as the Part D requirements) face a financial penalty for late enrollment equal to one percent of average out-of-pocket premiums per month. This financial penalty for late enrollment is permanent and follows the beneficiary if he or she changes plans. Also, Part D coverage has a limited open enrollment period, which creates a possible delay between the start of a drug-intensive condition and prescription drug coverage. If a healthy Medicare beneficiary who is not enrolled in Part D contracts a drug-intensive condition, he or she may have to wait for an open enrollment period to sign up for coverage, and the beneficiary will have to pay for all prescription drugs out-of-pocket during this lag time.<sup>3</sup> Thus, determining

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whether or not it is cost effective to enroll in Medicare Part D is a complex decision for healthy beneficiaries.

## Project/Research

To help answer the question of whether healthy 65-year-old Medicare beneficiaries should enroll in Part D as soon as they are eligible or postpone enrollment until they contract a drug-intensive condition, HCFO funded Bryan Dowd, Ph.D., Mayo Professor and Director of Graduate Studies in the Division of Health Services Research and Policy at the University of Minnesota School of Public Health, to examine the differences in lifetime out-of-pocket prescription drug expenditures depending on when beneficiaries enroll in Part D.<sup>4</sup>

Dowd and colleagues compared total expected lifetime out-of-pocket prescription drug expenditures on outpatient prescription drugs, Part D premiums, and late enrollment penalties for healthy beneficiaries who enroll immediately with those who postpone enrollment. The project focuses on healthy Medicare beneficiaries because it is almost certainly cost effective for those with drug-intensive conditions to enroll in Part D.

Dowd and colleagues hypothesized that it would be cost-minimizing for healthy beneficiaries to postpone enrollment until they contract a drug-intensive condition. Dowd explains this initial prediction, “At first, we expected that the money individuals spend on increased premiums upon late enrollment would be offset by the years of premiums they did not pay by delaying enrollment. We were very curious about what the data would show, so we set out to find answers.”

## Methodology

Dowd and colleagues developed a microsimulation model to help healthy Medicare beneficiaries make informed decisions about Part D coverage. Without knowledge of the incidence of drug intensive conditions and the out-of-pocket prescription drug costs associated with those condi-

tions, it is difficult for healthy Medicare beneficiaries to predict their future prescription drug costs. Thus, Medicare beneficiaries are likely to make their Part D enrollment decisions based on measures such as their own drug expenditures in the previous year or their best guess at their expenditures in the next year. For healthy individuals, these estimates could be very inaccurate. The microsimulation model can help Medicare beneficiaries with the Part D enrollment decision.

Dowd used data from the Medicare Current Beneficiary Survey (MCBS) over the period 1992-2002 for the analysis. Data from 1998 was incomplete and thus omitted. From an initial sample size of 126,436, the researchers eliminated beneficiaries enrolled in Medicare Advantage plans, disabled-entitled beneficiaries under the age of 65, and those who were dually eligible for Medicaid. The final sample size on which expenditure estimates were based was 74,433 beneficiaries. Death and drug intensive illness probabilities were based on all community-based Medicare beneficiaries, with a total sample size of 105,072.

Dowd and colleagues studied three factors that affect expected lifetime drug expenditures for currently healthy Medicare beneficiaries: 1) the probability that the beneficiary will contract a drug-intensive condition; 2) the expected length of survival for individuals with a drug-intensive condition; and 3) the expected annual drug expenditures for people with a drug intensive condition.

The research team defined the set of drug-intensive conditions from an MCBS survey question that asked respondents if they have “ever been told” that they have a chronic condition. From the chronic condition choices listed, the researchers defined 14 drug-intensive chronic conditions: all heart conditions (hardening of the arteries, hypertension, myocardial infarction, CHD, and heart disease), stroke, skin cancer, other cancer, diabetes, rheumatoid arthritis, arthritis, Alzheimer’s disease, mental disorder, osteoporosis, broken hip,

partial paralysis, Parkinson’s disease, and asthma. “Healthy” (none of the chronic conditions) and “death” were added, resulting in 16 total health states for the analysis.

The researchers then estimated the probability that a healthy beneficiary would contract a drug-intensive condition in any year and the time between that event and death. Dowd studied the sample in different subgroups based on sex (male or female) and age (five year increments ranging from “65 to 69” up to “greater than age 85”). He predicted the probability of each chronic illness for each age and sex combination, controlling for other chronic illnesses. The probabilities of remaining healthy and dying were also calculated.

The team estimated the mean annual expenditures for each of the health states by looking at the self-reported annual total spending on outpatient prescription drugs in the MCBS data. The researchers used a microsimulation to calculate the mean expenditures for each health state across all years of data.

## Findings

### Costs

The researchers found that the health conditions of Mental Disorder and Parkinson’s disease are associated with the highest average annual out-of-pocket prescription drug spending (Mental Disorder, \$3,066; Parkinson’s, \$2,927). These results align with those of previous studies on prescription drug spending in the elderly.<sup>5,6</sup> Besides remaining healthy or dying, the least expensive health conditions, in terms of prescription drug costs, are skin cancer (\$1,892) and other cancers (\$1,942).

The team also found that average annual out-of-pocket prescription drug spending increases initially with age when moving from the 65 to 69 age group to the 70 to 74 age group. However, after this initial increase, average annual prescription drug costs decrease with age. Dowd tested for an effect of sex on total drug expenditure, and there was an increase of about \$100 per year for females. Rather than per-

forming separate analyses for males and females, the researchers decided to ignore the difference and keep the sexes together to maintain larger sample sizes for each of the health conditions. The larger sample sizes help yield more accurate and statistically significant results. The difference in expenditures between males and females means that the true benefits of coverage for women in their analysis are understated while benefits for men are overstated.

As predicted, the life expectancy results show differences in terms of sex and health condition. According to the Centers for Disease Control and Prevention's (CDC) National Center for Health Statistics (NCHS), life expectancy for females in 2005 is 5.2 years greater than males.<sup>7</sup> In this study, the researchers found that females who are healthy at 65 are expected to live three years longer than similar males. Also, the average life expectancy after the onset of a drug-intensive condition is approximately 9.5 years for females and 8 years for males. For both sexes, the most common health state at death was "healthy," meaning that the beneficiary did not contract a drug-intensive condition (26 percent of females and 31 percent of males). The second and third most common health states at death were heart-related (26 percent of females and 28 percent of males) and arthritis (18 percent of females and 17 percent of males).

Contrary to the researchers' expectations, the microsimulation analysis of total prescription drug expenditures indicates that it is more cost effective for both males and females to enroll in Part D as soon as they are eligible. Total out-of-pocket prescription drug expenditures for female Medicare beneficiaries who are healthy at age 65 are about 10 percent higher if they wait until they contract a drug-intensive condition before they enroll in Part D. Expenditures for male beneficiaries are about 6.5 percent higher if they wait to enroll. Dowd explains that the expenditure differences are greater for females because females have a longer life expectancy and a greater lifetime probability of contracting a drug-intensive condition.

### Utilization or Moral Hazard?

Dowd also studied the effect of moral hazard, which occurs when individuals who have prescription drug insurance use more and spend more money on prescription drugs than they would if they did not have such insurance. The research team estimated the size of this effect by comparing expenditures of beneficiaries with employer-sponsored Medicare supplements that did and did not cover outpatient prescription drugs. They hypothesized that, in accordance with moral hazard, those who had prescription drug coverage would spend more money on prescription drugs than those who did not. As expected, the researchers found a difference of about \$400 per year, which they attributed to moral hazard. Dowd repeated the microsimulation analysis to take into account the \$400 annual moral hazard effect. The results showed that moral hazard makes early enrollment less attractive to healthy beneficiaries. With moral hazard, the estimates indicate a slight cost advantage toward waiting to enroll in Part D for men, but it is still better for women to enroll immediately. Dowd notes that moral hazard should not automatically be considered a negative aspect of being insured. He elaborates, "Moral hazard does not necessarily result in a negative effect for those who choose to enroll in prescription drug insurance. Moral hazard could mean that covered individuals are more able and likely to use the prescription drugs that are doctor-recommended for them. Without prescription drug coverage, some individuals might not purchase all the medications they are prescribed because of the costs associated with the medications."

### Part D Late Enrollment Penalty

In addition, the researchers simulated the effect of two changes in the late enrollment penalty: 1) freezing it at the value it takes on when the beneficiary first enrolls in Part D coverage rather than having it inflate each year with the benchmark premium; and 2) eliminating the penalty completely. Dowd found that it is still cost effective to enroll early in Part D if the enrollment penalty is frozen at its initial value. However, the degree of cost advantage for early enrollment is

greatly reduced, and it is almost completely eliminated for men. The simulation analysis shows that eliminating the late enrollment penalty makes postponed enrollment more cost effective than immediate enrollment. Without the late enrollment penalty, there is no financial penalty for postponing enrollment. Expected out-of-pocket prescription drug spending reduced by about 8 percent for females and 10 percent for males from postponed enrollment when there is no late enrollment penalty. Thus, the late enrollment penalty plays an important role in encouraging early enrollment into Medicare Part D.

### Conclusion

These findings can be helpful to Medicare beneficiaries who are trying to decide whether or not to enroll in Part D as well as to insurance companies and consultants who are trying to help Medicare beneficiaries with the Part D enrollment decision. Those who give advice on Medicare Part D can now have an empirical foundation for their suggestions.

The research methodology for this project provides a way to not only think about the cost-effectiveness for Medicare Part D coverage, but it offers a model for thinking about the value of other insurance plans as well. With the rising interest in and questions about long-term care insurance, perhaps this research methodology could serve as a tool for estimating the cost effectiveness of this new insurance option.

The study does not yield a final or absolute answer to the question, "Should healthy Medicare beneficiaries postpone enrollment in Part D until they contract a drug-intensive condition?" A Medicare beneficiary's decision of whether or not to enroll in Part D partially depends on an individual's aversion to risk and the personal value placed on additional expenditures on drugs induced by having Part D coverage. However, Medicare beneficiaries who immediately enroll in Part D face lower estimated lifetime out-of-pocket spending on prescription drugs, reduce their risk of incurring the future values of the late-enrollment penalty, and enjoy higher levels of utility. Based on his findings, Dowd offers his

opinion, “The combination of these factors suggests that, in general, the best advice to offer Medicare beneficiaries is to enroll in Part D as soon as they are eligible.”

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### Endnotes

- 1 “Prescription Drug Coverage: Basic Information,” U.S. Department of Health & Human Services. March 27, 2008. Also see [www.medicare.gov/pdp-basic-information.asp](http://www.medicare.gov/pdp-basic-information.asp).
- 2 *Medicare: A Primer*. Kaiser Family Foundation. March, 2007.
- 3 Ibid.
- 4 Study findings can be found at: Atherly, A. and B. Dowd. “Should Healthy Medicare Beneficiaries Postpone Enrollment in Medicare Part D?” *Health Economics*, 2009, ePub Ahead of Print. DOI:10.1002/hec.1413. Also see [www3.interscience.wiley.com/journal/121482494/abstract](http://www3.interscience.wiley.com/journal/121482494/abstract)
- 5 Schoenberg, N. et al. “Burden of Common Multiple-Morbidity Constellations on Out-of-Pocket Medical Expenditures Among Older Adults.” *Gerontologist*. Vol. 47, No. 4, August 2007, p. 423-37.
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