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NATIONAL BUREAU OF ECONOMIC RESEARCH

## BULLETIN ON AGING AND HEALTH

### Incentives in the Medicare Prescription Drug Benefit

The introduction of Medicare's new Part D prescription drug benefit is perhaps the most significant expansion of the program since its inception in 1965. The cost of the drug benefit for 2004-2013 is projected to be \$410 Billion. As of mid-April 2006, 19.7 million Medicare beneficiaries were enrolled in a Part D plan, including 8.1 million beneficiaries who signed up for new stand-alone prescription drug plans (PDPs).

While private insurance markets have generally failed to provide stand-alone prescription drug insurance, there are several features that may allow Medicare to succeed. First, the Centers for Medicare and Medicaid Services (CMS) can impose mandatory minimum quality standards, as CMS must approve each PDP's formulary, or the specific drugs covered by the plan. Second, the program is heavily subsidized, with Medicare paying 74.5% of total plan premiums plus 80% of catastrophic costs (annual drug costs exceeding \$5,100). Third, payments to providers are risk-adjusted, meaning that they are adjusted up or down based on the expected cost of patients enrolled in the plan. This can help to avoid a "race to the bottom," whereby providers design their plans to make them unappealing to costly patients.

As the market for PDPs is brand new, it remains to be seen whether it will function as lawmakers envision. In "Perverse Incentives in the

**Medicare Prescription Drug Benefit,"** (NBER Working Paper 12008), David McAdams and Michael Schwarz examine issues in the design of the new drug benefit that may put upward pressure on drug prices and downward pressure on drug plan quality.

One issue the authors examine is risk adjustment. Although risk adjustment is commonly used for traditional health insurance plans, the authors suggest that it may be more problematic in the case of PDPs. If risk adjustment is very fine, for example based on a specific drug a patient is taking, then the manufacturer of that drug has an incentive to raise its price, knowing that the provider has little incentive to encourage the patient to switch to a lower-cost substitute given that Medicare will reimburse most of the cost.

This might suggest that coarse risk adjustment is preferable, but this too has drawbacks. If patients with different pre-existing conditions receive the same risk adjustment, PDP providers will have an incentive to discourage patients with the more costly condition from joining their plan. This is easy for providers to do, for example by moving a specific drug to a different tier or adding it to a pre-approval list. CMS has said that it will monitor plans to identify those that are outliers in terms of what drugs they exclude; however, if many plans engage in this behavior, it will not be easy to identify discriminatory PDPs in this manner.

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While risk adjustment is probably a necessary part of any reimbursement scheme, the authors argue that the drug benefit could be improved by having all PDPs charge the same premium, which would be determined based on the amount budgeted by Congress. This would have the obvious advantage of eliminating uncertainty about the total cost of the program. Moreover, the authors contend that there would be less upwards pressure on price and downwards pressure on quality in such a scheme.

With a fixed price, providers would try to assemble the most generous formulary possible within their budget. This would put pressure on drug manufacturers to keep prices low so that their drugs would be included. In terms of quality, the race to the bottom occurs when providers offer

cheaper and less generous plans to appeal to healthier patients. With premiums fixed, less generous plans would be less attractive to all seniors.

The authors envision that CMS will need to actively regulate PDPs. They note that this is particularly likely in the case of “fuzzy-line” rules, such as that PDPs must cover all drugs “presenting unique and important therapeutic advantages” or “most commonly used by the Medicare population.” Providers are likely to interpret such requirements narrowly and offer a limited formulary, in order to extract

greater price concessions for drugs that are included in the formulary. This may lead CMS to demand that more drugs be covered, which increases the upwards price pressure for drugs.

Another fuzzy-line rule is that PDPs may not discriminate against specific groups of patients. Since patients with a certain condition may all rely on a particular drug, enforcing this rule may lead CMS to mandate that specific drugs be covered by all PDPs, which can be expected to raise the drugs’ price. As a final example, since Medicare will pay up to 80% of the dif-

ference between a PDP’s projected and actual costs, CMS will need to be very involved in setting methods for projecting plan costs.

The authors conclude that “CMS will have to continue to closely regulate the benefit, especially formulary design, for the foreseeable future. Any minimum standard that CMS imposes on formularies, however, will put additional upward pressure on drug prices. Ultimately, this could jeopardize the benefit’s budgetary viability.”

## How Do Lifecycle Investment Strategies Affect the Distribution of Retirement Wealth?

The typical employer-provided pension has changed dramatically over the past twenty years. The fraction of private-sector employers offering defined benefit (DB) plans, in which employees receive a fixed benefit determined by a formula, has declined, while there has been a sharp increase in the fraction offering defined contribution (DC) plans such as 401(k)s, in which the employer’s contribution is specified but benefits depend on asset returns. Among employees with pensions, the share with DC plans rose from 40 percent in 1983 to 79 percent in 1998, while the share with DB plans fell from 87 percent in 1983 to 44 percent in 1998.

This change has shifted responsibility for managing retirement assets to employees, who must now decide how to allocate assets across broad asset classes and many different financial products. Many policy analysts and others have raised questions about whether DC plan participants are sufficiently well-informed to make these decisions, which have very important consequences for retirement wealth accumulation.

In response to these concerns, some plan sponsors have begun to offer investment options that simplify investment decision-making. One such option is the “lifecycle fund,” which automatically adjusts the portfolio allocation depend-

ing on the participant’s age or years until retirement, typically shifting assets from stocks to bonds and cash as participants age. These funds have grown rapidly in the past decade, with \$47 Billion held in such funds in 2005 and nearly 40 percent of all 401(k) plans offering them.

In “**Lifecycle Asset Allocation Strategies and the Distribution of 401(k) Retirement Wealth**” (NBER Working Paper 11974), **James Poterba, Joshua Rauh, Steven Venti, and David Wise** examine how different asset allocation strategies affect the distribution of retirement wealth. In their analysis, the authors contrast lifecycle strategies

earnings histories for 1,400 households. They assume that households contribute nine percent of their earnings to the plan each year, starting at age 28 until retirement at age 63. Next, they randomly assign return histories to these contribution paths, based on the empirical distribution of returns from 1926 to 2002. Each household is run through this simulation 200,000 times, to generate a distribution of possible retirement wealth outcomes.

Over this period, large-cap U.S. stocks had an average annual real return of 9.0 percent and a standard deviation of 20.7 percent, while long-term U.S. government bonds had an average real return on 3.2 percent and a standard deviation of 10.0 percent. Treasury Inflation-Protected Securities (TIPS), which were only introduced recently, are assumed to provide a 2 percent real riskless return.

The authors examine a number of asset allocation strategies, including investing solely in one assets (TIPS, government bonds, or stock), investing in stocks and bonds in fixed proportions, and the “No Lose” strategy proposed by Martin Feldstein, which calls for making sufficient investments in TIPS to guarantee assets of at least the amount originally contributed then investing the remainder in stock. They also consider several lifecycle options, either investing a fixed

Table 1: Simulated 401(k) Balances at Retirement

Investment Strategy	Mean Return (\$000s)	1st Percentile Return (\$000s)
100% TIPS	162.6	162.6
100% Government Bonds	192.7	36.3
100% Stocks	812.0	12.8
(110-Age)% Stocks, rest TIPS	303.6	54.3
(110-Age)% Stocks, rest Bonds	337.4	38.0
Empirical Lifecycle, Stocks and TIPS	405.3	64.3
Empirical Lifecycle, Stocks and Bonds	438.2	37.3
Fixed Proportions (53% Stocks, 47% Bonds)	404.9	35.9
“No Lose” Plan	420.3	113.8

with investment rules that allocate the portfolio across assets in fixed percentages and do not vary with age.

To conduct this analysis, the authors must model the path of plan contributions over an individual’s working life and combine this with information on asset returns. They start with real