The new Medicare drug law that was enacted in late 2003 makes two changes that supporters of
the law say should make it easier for today’s workers to prepare to pay the medical bills they will
confront in retirement: prescription drug benefits (the new Medicare Part D) and health savings
accounts (HSAs).

This Issue Brief examines the impact of Medicare Part D on savings needed for insurance
premiums to supplement Medicare, Medicare Part B and D premiums, and out-of-pocket
expenses in retirement, and examines the viability of using HSAs to save for these expenses. It
presents a wide range of estimates based on various ages at the time of death, because longevity
risk is a major threat to retirement income security. This range of estimates also varies with
various assumptions regarding health insurance premium inflation rates and out-of-pocket
expenses.

The new drug benefit program (Part D) that will be available to those beneficiaries who elect Part
B coverage could lower prescription drug spending, particularly for the growing majority that will
not have employment-based drug coverage.

Health savings accounts will allow those who elect to purchase high-deductible health insurance
to save up to several thousand dollars annually on a tax-free basis, particularly if none of the
saved money is used to pay current expenses for health care services. But because of contribution
restrictions, the amount of money that an individual can accumulate in an HSA is limited. An
individual who contributes $1,000 each year starting in 2007 and makes catch-up contributions
can accumulate $23,000 after 10 years, $47,000 after 20 years, $81,000 after 30 years, and
$127,000 after 40 years.

HSAs will have a negligible potential benefit for those already 55 years old or older and would be
structurally incapable of producing enough savings to substantially offset retiree health expenses.
An individual age 55 in 2004 could save a maximum of $44,000 in an HSA by the time he or she
reaches age 65. This is nowhere near enough money to completely pay for insurance premiums
and out-of-pocket expenses in retirement. Specifically, an individual will need $137,000 if he or
she only lives to age 80 and insurance premiums and maximum out-of-pocket expenses increase 7
percent annually.

Projecting the amount needed for medical expenses in retirement is tentative and complex
because it requires conclusions about the range by which medical inflation will exceed consumer
prices generally, as well as assumptions about whether medical practices will change in a way
that makes Medicare coverage for a given ailment more or less likely.
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Introduction

In a prior report, EBRI examined needed savings to purchase health insurance and to cover certain out-of-pocket health expenses in retirement, how taxes relate to savings, and how needed savings vary by estimated age at time of death (Fronstin and Salisbury, 2003). Since the publication of this report, there have been new developments:

- Congress passed and the president signed the Medicare Prescription Drug, Improvement, and Modernization Act of 2003, or MMA (P.L. 108–73). This act creates Medicare Part D, an outpatient prescription drug benefit for Medicare beneficiaries. It provides a subsidy to employers for 28 percent of the cost of some drug benefits for retirees. It also allows certain individuals to contribute to a health savings account (HSA). Among other things, an HSA is the only vehicle an individual can use to save money for insurance premiums and out-of-pocket health expenses in retirement on a tax-favored basis.

- The erosion of retiree health benefits continued. In 2003, 71 percent of employers that offered retiree health benefits increased retiree premiums, 53 percent increased cost sharing, and 10 percent terminated all subsidized benefits for future retirees (McArdle et al., 2004).

- Studies predict an enormous shortfall between the amount of money required for the elderly to afford basic expenses during retirement and the income and benefits they are expected to have (VanDerhei and Copeland, 2001, 2002a, 2002b, 2003). VanDerhei and Copeland (2003) show that the elderly face an income shortfall of at least $400 billion between 2020 and 2030 just in their ability to cover basic living expenses and any expense associated with an episode of care in a nursing home or with a home health care provider.

The purpose of this Issue Brief is to examine the impact of Medicare Part D on savings needed for insurance premiums to supplement Medicare, Medicare Part B and D premiums, and out-of-pocket expenses in retirement and to examine the viability of using HSAs to save for these expenses.1

Recent Trends in Retiree Health Benefits

Most workers will never be eligible for subsidized health insurance in retirement through an employer because the percentage of employers offering this benefit to future retirees is declining rapidly. The Agency for Healthcare Research and Quality (AHRQ) reports that only 11 percent of all private establishments (both small and large) offered health benefits to Medicare-eligible retirees in 2001, down from 20 percent in 1997.2

An annual national survey of employers with 500 or more workers shows that the percentage that currently expect to continue offering health benefits to future Medicare-eligible retirees declined from 40 percent in 1993 to 21 percent in 2003 (Figure 1). And most employers that are continuing to offer retiree health benefits have made changes in the benefit package that raise costs to beneficiaries, tighten eligibility, limit or reduce benefits, or some combination of these. Modifications to cost-sharing provisions are a common change, with employers asking retirees to pay a greater share of the cost. In 2000, 39 percent of employers with 500 or more workers offering early retiree health benefits required retirees to pay 100 percent of the premium for coverage, up from 31 percent of employers in 1997 (Figure 2).3

Employers are also tightening eligibility requirements to control spending (McCormack et al., 2002). This might involve requiring workers to attain a certain age and/or tenure with the company before they qualify for retiree health benefits. Overall, the percentage of employers requiring an age of 55 and a service requirement of 10 years for benefit eligibility increased from 30 percent in 1996
to 38 percent in 2003 (Figure 3). Concurrently, some employers recently instituted a requirement of age 55 and 20 years service or age 60 and 10 years service for the first time.

Employers also have instituted caps or ceilings on the total amount of money they are willing to spend on retiree health benefits. Under a commonly used approach, once an employer reaches the spending cap, the subsidy toward retiree health benefits will no longer be increased. These employers do continue to provide subsidies for retiree health, but retirees are responsible for the entire premium in excess of the cap amount each year. Caps erode the level of coverage even for employers continuing to provide retiree health benefits. In 2003, 46 percent of large employers had a cap for Medicare-eligible retirees (Figure 4), and among employers that have instituted a cap, 52 percent have already hit the cap while 12 percent anticipate reaching it in the next year and another 15 percent within three years.

Some employers have reduced the subsidy or eliminated benefits altogether for workers hired (or retiring) after a specific date. McArdle et al. (2002) found that 13 percent of employers with 1,000 or more employees reported that they had terminated all subsidized health benefits for future retirees during 2002. In a subsequent report, McArdle et al. (2004) found that another 10 percent had terminated all subsidized health benefits for future retirees during 2003.

Some employers have established retiree medical accounts (RMAs) for retirees to use to purchase health benefits during retirement. Employers are interested in RMAs for a number of reasons:

- RMAs could reduce future employer cash costs for retiree health benefits.
- Contributions to the account may earn interest and the value of the contribution could grow over time, or could vary with age or years of service.
- The value of the RMA may not grow as fast as the anticipated cost of providing retiree health benefits, which essentially shifts the risk of unpredictable health benefit cost inflation to employees and retirees.

RMAs are typically set up as a notional account, which means they are not actually prefunded, but are rather a book-keeping device that allows employers and employees to keep track of the dollars that will be made available to the worker for health benefits during retirement. Employers make fixed contributions or book-keeping entries to the account over a specific number of years, usually based on age and service requirements. Employees can also make contributions to the account, but those contributions must be made on an after-tax basis. When a worker retires, he or she can then use the money in the account to purchase health insurance, although the money in the account may or may not be enough to pay for health insurance in retirement. A recent study found that 2 percent of large employers have adopted RMAs for current retirees, while 7 percent have adopted them for future retirees and 13 percent have adopted them for new hires (McDevitt et al., 2002).

Driven by rising health insurance costs, employers continue to consider additional changes to retiree health benefits, including dropping coverage for some and shifting costs on to others. Sixty-two percent of firms are reported to be very likely to increase retiree contributions to premiums, and 52 percent are very likely to increase cost sharing (Figure 5). Only 9 percent are very likely to move toward an access-only plan for current retirees (meaning retirees are given access to the company’s retiree health group insurance plan but must pay the entire premium themselves), while 6 percent are very likely to move toward an access-only plan for future retirees.

It will be a few more years before enough time has passed to assess how workers and retirees are ultimately affected by cutbacks in retiree health benefits. Predictions are also complicated by the fact that the MMA provides employers with a subsidy for certain drug expenses of retirees. Many workers may never qualify for retiree health benefits because their employers offer them only to workers hired before a specific date or because they may never reach the age and/or service requirements needed to qualify for benefits. Some workers may delay retirement, while others may be able to retire when they want to because they can get health insurance through a working spouse.
Ultimately, however, it is likely that future retirees will pay more for health benefits and health care services in retirement than current retirees—in many cases, a lot more. Policymakers have recently introduced various proposals that purport to directly or indirectly end the erosions of retiree health benefits in the private sector. But in fact, some of these proposals may have the opposite effect and exacerbate the erosion of private-sector retiree health benefits.\(^5\)

### The Medicare Program

Medicare is the primary payer of health care services for persons who are retired and age 65 and older.\(^6\) The Medicare program contains Parts A and B. Eligible Medicare beneficiaries in the traditional program automatically receive Medicare Part A (Hospital Insurance) at no premium cost and are able to supplement it at their own cost with Medicare Part B (Supplementary Insurance). Persons choosing Part B services currently pay a $66.60 per month premium. On average, elderly persons spent 26 percent of their income on health care in 2000, although this figure does not include spending for long-term care expenses (Maxwell, Moon and Segal, 2001).

Part A covers inpatient hospital services, skilled nursing facility (SNF) benefits following a three-day hospital visit, home health visits following a hospital or SNF stay, hospice care, and blood (after the member has paid for the first three pints). Hospital stays are subject to an $876 deductible for days one–60. A $219 per day co-payment is required of Medicare beneficiaries for days 61–90; this increases to $438 per day for days 91–150, although there are a total of 60 lifetime reserve days that can be used for stays more than 90 days. Medicare beneficiaries are responsible for all costs for each day beyond 150. SNF care costs beneficiaries nothing during the first 20 days, after which a $109.50 per day co-payment is required until day 100, after which the beneficiary pays all costs.

Medicare Part B is partially financed by beneficiary premiums that originally covered 50 percent of the program’s cost. Today, Part B is financed by beneficiary premiums that cover 25 percent of the program’s cost and general tax revenues finance the balance of Medicare Part B. Under provisions contained in MMA, higher-income Medicare beneficiaries will begin to pay a greater percentage of the Part B premium starting in 2007.\(^7\) Part B covers doctors’ services, outpatient care, diagnostic tests, ambulatory services, durable medical equipment, outpatient physical and occupational therapy, mental health services, clinical laboratory services, limited home health care, outpatient hospital services, and blood provided on an outpatient basis. Most of these services are subject to 20 percent coinsurance from the Medicare beneficiary, and some services are also subject to an annual $100 deductible.\(^8\) Part B also now covers a number of preventive services.

### Options to Supplement Medicare Benefits

Like employment-based health benefits and retiree health benefits of the 1960s, Medicare was never designed to cover all medical expenses of Medicare beneficiaries. In addition to the deductibles, coinsurance, and copayments for inpatient and outpatient care, Medicare has not covered outpatient prescription drugs, there are no out-of-pocket maximums, and there is very limited coverage for long-term care expenses. Overall, the Medicare program covers on average 53 percent of an elderly Medicare beneficiary’s medical expenses.\(^9\) Medicare beneficiaries pay for an average of 19 percent of the cost out-of-pocket, private insurance covers an average of 14 percent, and 14 percent comes from other sources.

Nearly all Medicare beneficiaries have some type of health insurance to supplement Medicare. In 1999, 33 percent were covered by employment-based health benefits to supplement Medicare, 24 percent were covered by Medigap (private coverage paid for entirely out-of-pocket by the...
beneficiary), and 17 percent by Medicare+Choice (managed-care health insurance plans that cover more services than regular Medicare) (Laschober et al., 2002). Only 13 percent of Medicare beneficiaries did not have supplemental health insurance in 1999.

Whether a Medicare beneficiary has supplemental insurance clearly will affect the savings needed to cover the cost of health care services in retirement. For those Medicare beneficiaries with supplemental insurance, the source of that insurance will affect the amount of money needed for health insurance and health care services.

Employment-Based Retiree Health Benefits—Individuals with employment-based retiree health benefits to supplement Medicare coverage typically have rich benefit packages. Most plans have a deductible, after which the plan covers out-of-pocket costs for inpatient and outpatient services with an out-of-pocket maximum, and nearly all provide prescription drug benefits. The total annual premiums for these plans often ranged from $2,000 to $3,000 per person in 2003. One study found the average cost of a retiree health plan for retiree-only coverage to be $2,544 for Medicare-eligible retirees in 2003 (McArdle et al., 2004). Another study estimated a premium for Medicare-eligible retirees of $2,631 in 2002 for a rich plan. This plan provided the following benefits:

- Major medical benefit: $150 annual preventive care benefit, and 20 percent coinsurance after a $250 deductible is met.
- Outpatient prescription drug benefit: 30 percent coinsurance after a $50 deductible is met.
- Maximum annual out-of-pocket: $1,500 (medical and prescription drug combined).

On average, retirees pay only $83 per month for supplemental retiree health benefits, or $996 per year for single coverage (McArdle et al., 2004). However, 21 percent of employers offering benefits to Medicare beneficiaries require them to pay the full cost of insurance. As more employers turn to so-called “access-only” plans, the percentage of retirees required to pay the full premium will increase. Because retirees must pay the full cost of access-only plans, and premiums are often based on the group of retirees (as opposed to mixing retirees with active workers), retirees with costly health conditions will be more likely to take these plans than healthy retirees. This will inevitably drive up the cost of these plans, making it more difficult for individuals to afford them, which would result in an adverse selection “death spiral.”

Medigap—Medicare beneficiaries are currently able to choose from 10 Medigap plans to supplement Medicare benefits. After Jan. 1, 2006, Medigap policies providing coverage for prescription drug benefits (Plans H–J) cannot be sold, or issued, though they can be renewed if an individual does not enroll in Medicare Part D. Furthermore, the MMA authorized two new Medigap plans. All Medigap plans provide coverage for Part A coinsurance, 365 additional hospital days during a person’s lifetime, Part B coinsurance, and blood (Figure 6). Medigap plans B–J include other combinations of benefits, such as coverage for skilled nursing coinsurance, the Part A deductible, the Part B deductible, and outpatient drug benefits.

Medigap Plan F is the most popular choice among Medicare beneficiaries in plans A–J (U.S. General Accounting Office, 2002). Plan F accounts for 35.2 percent of all Medigap A–J policies. Among the plans that do not provide outpatient prescription drug benefits, Plan F is also the most comprehensive Medigap plan. In 2003, the average (unweighted) annual premium for Medigap Plan F was $1,627, but premiums varied significantly by age, insurer and by geographic region, ranging from a low of $617 to a high of $4,419. In 2004, the premium for Medigap Plan F for a 65-year-old first enrolling in Medicare averaged $1,380.

Assumptions to Project Needed Savings

The combination of the erosion of retiree health benefits, coupled with limited benefits from Medicare and Medigap, inevitably means that retirees can expect to pay a significant amount of...
money out-of-pocket for health insurance and health care services in retirement. If a person were to try to save for these expenses, the amount of money needed would vary with a number of factors.

**Cost Projection Assumptions**

Total spending on health care services has been growing faster than the overall economy for many years. Since 1960, spending on health care services has grown on average 2.5 percent faster than the entire economy has (U.S. Congressional Budget Office, 2003). While the difference in growth between health care spending and the overall economy slowed to 1.5 percent between 1990 and 2001, the U.S. Congressional Budget Office (CBO) concludes the following:

“There is no evidence to suggest that excess cost growth will disappear rapidly. It is likely to continue, to some degree, for some time to come.”

The CBO projects that gross domestic product (GDP) will increase at an annual average rate of 4.8 percent between now and 2013. In turn, this means that overall spending on health care services will increase at an annual average rate of between 6.3 percent and 7.3 percent between now and 2013. The Centers for Medicare & Medicaid Services (CMS) is also projecting a 7.3 percent annual average rate of increase in health care spending between now and 2013 (Heffler et al., 2004). However, CBO, CMS, and others are using a number of different assumptions to project future health spending.

**Insurance Premiums**—CMS and a number of other organizations have projected increases in health insurance premiums. CMS predicts that premiums for private health insurance will grow 10.4 percent in 2003, with an average annual growth rate of 7.6 percent between 2002 and 2013 (Heffler et al., 2004). This is in contrast to a number of surveys reporting actual premium increases closer to 15 percent in 2003. The annual Henry J. Kaiser Family Foundation/Health Research and Educational Trust survey of employers found that premiums increased 13.9 percent in 2003, despite the adoption of new forms of cost sharing (Gabel et al., 2003). Other surveys also have found insurance premiums increased by about 15 percent in 2003.16

There is no ideal way to predict the level of premium growth in the future. Most surveys look out only a handful of years and then use a flat rate of increase. In its previous analysis, instead of choosing one rate of growth for premiums, EBRI examined the sensitivity of needed savings based on three rates of cost increases: 7 percent, 14 percent, and 14 percent grading down to 5 percent (Fronstin and Salisbury, 2003). Because some researchers may disagree with this choice of premium growth rates, EBRI also posted its model on the Internet so that users could download it and enter their own assumptions.17

It is hard to imagine that health insurance premiums will continue to increase at the rate they are increasing today. On the one hand, employers have started to shift costs to employees by increasing deductibles, co-payments, and coinsurance. They are also emphasizing the use of financial incentives to get employees to use the least costly health care service available, which should reduce premium growth over time. On the other hand, structural forces such as cost pressures related to technological innovation, consolidation among insurers and health care providers, governmental mandates and regulations, medical malpractice, and the aging population are expected to continue. If premiums for retiree health benefits increased 7 percent indefinitely, a $2,631 premium in 2002 would grow to more than $11,000 in 2024 when a 65-year-old today turns 85. A 10 percent annual increase in premiums would grow to $21,400 in 2024. Instead of choosing one assumption or the other, or an entirely different assumption, this analysis provides estimates based on two assumptions for annual premium growth: 7 percent and 10 percent.18
To estimate the cost of an access-only retiree health plan, this analysis uses the premium of $2,631 in 2002, as described above. This premium is for a rich Medicare supplemental plan provided through an employer. It covers inpatient services, outpatient services, and prescription drug benefits, and has a combined maximum out-of-pocket cost of $1,500.

To estimate the cost of a Medigap plan, Plan F was chosen. It is the most comprehensive plan that does not include prescription drug benefits, and is the most popular choice among Medicare beneficiaries. For illustrative purposes, the analysis starts with an average premium for Plan F of $1,380 and increases it by 7 percent and 10 percent annually.

**Medicare Part B Premium**—Medicare Part B premiums cover 25 percent of the cost of the Part B program. As the cost of the Part B program increases, so does the premium. The CBO estimates that the Part B premium will increase at an average annual rate of 4.9 percent during 2006–2013. By contrast, CMS projects an annual average increase of 3.9 percent during 2006–2013. However, premium increases could prove to be far greater than what has been reported in the Medicare Trustees’ annual report if Congress does not allow future reductions in provider payments to take effect, as it has done in the past. Because of the uncertainty related to projecting Medicare Part B premiums, this analysis uses a flat annual increase of 5.5 percent.

**Medicare Part D Premiums and Cost Sharing**—Under the MMA, outpatient prescription drug benefits will become available to Medicare beneficiaries in 2006 under the new Medicare Part D. Monthly premiums for standard coverage have been estimated to start at $35. Beneficiaries also would be subject to a $250 deductible in 2006. After the deductible, beneficiaries would pay 25 percent of the cost of prescription drugs on the next $2,000 in benefits (or $500). At that point they would be completely responsible for the next $2,850, after which they would be responsible for 5 percent coinsurance.

Deductibles and coinsurance thresholds will be indexed to annual growth in per capita Part D drug spending by Medicare beneficiaries. CBO has estimated that premiums for Part D coverage will increase at an average annual rate of 7.5 percent between 2006 and 2014, and the cost-sharing thresholds will increase at an average annual rate of 8.6 percent. This analysis uses these same estimates to project the savings needed for health insurance and health care services.

**Life Expectancy Assumptions**

According to estimates based on the Group Annuity Mortality Table of 1994 (GAM94), average life expectancy for a 65-year-old male is 17 years (82 years of age) and for a female it is 21 years (86 years of age) (Figure 7). Life expectancy is expected to increase in the future with technological innovation in the delivery of health care. Employers use average life expectancy when calculating future health benefit liabilities because they can expect roughly one-half of their retirees to live past the average, while roughly one-half will not live as long as the average.

Life expectancy may be a good starting point for financial planning for individuals, but simply using average life expectancy of 82 and 86 without considering other factors could lead to significant shortfalls in savings for many individuals. Not only is longevity a major threat to retirement income security, but individuals also tend to underestimate longevity. If all individuals saved based on having enough money to meet average life expectancy, approximately one-half will outlive savings because they will live too long (beyond average life expectancy), while roughly one-half would not outlive savings because they will die before reaching average life expectancy. Publications that recognize the longevity risk will still report savings estimates based only on average life expectancy (Fidelity Investments, 2003).

Figure 7 shows the likelihood of living to different ages based upon the Group Annuity Mortality Table of 1994, the table used by most actuaries today, as well as a table used by Northwestern Mutual Life Insurance for “best risks,” or those individuals in good health (NML Best Individual).
not only shows that average life expectancy for a 65-year-old male is 82, while for a 65-year-old female it is 86, but also shows that 25 percent of 65-year-old males (the 75th percentile) are expected to live to age 89, and 10 percent (the 90th percentile) are expected to live to age 94. Similarly, 25 percent of 65-year-old females (the 75th percentile) are expected to live to age 94, and 10 percent (the 90th percentile) are expected to live to age 95. Healthy individuals at age 65 are expected to live even longer. Since life expectancy on an individual basis is highly uncertain, this analysis presents a range of estimates in this paper. Savings estimates are presented for individuals if they live to age 80, 85, 90, 95, and 100.

**Rate of Return Assumptions**

This analysis generally assumes that assets will have an after-tax annual rate of return of 4 percent. This is a reasonable estimate, although it may be too high. Prominent projections of “long-term” stock returns are about 7 percent, but persons age 65 and older are much more likely to put their assets in safe or less-volatile investments. As a result, they are much less likely to see a 7 percent pretax rate of return. If a 4 percent after-tax rate of return assumption is too high, individuals will need to save an even greater sum of money than the estimates shown in this report.

**Savings Needed for Retirement at Age 65 With Employment-Based Retiree Health Benefits**

Figure 8 provides estimates of savings needed under various assumptions to pay for health insurance premiums, Medicare Part B premiums, and maximum out-of-pocket health care costs during retirement for a person with access to employment-based health benefits. This assumes the individual is responsible for paying the entire premium, as this practice is becoming more common. One study found that 2 percent of employers offering retiree health benefits have adopted access-only plans for current retirees, 6 percent have adopted it for future retirees, and 17 percent for new hires (McDevitt, Mulvey, and Schieber, 2002). Another study found that in 2003 alone, 11 percent of employers offering retiree health benefits moved to access-only plans, and 10 percent terminated all subsidized benefits for future retirees (McArdle et al., 2004).

The first section of Figure 8 shows that a 65-year-old retiring in 2004 who lives to age 80 will need $72,000 in savings to pay for premiums only. The individual will need assets of $105,000 if he or she also wants to fully cover the $1,500 out-of-pocket maximum. In contrast, an individual who lives to age 90 will need $134,000 in savings to pay for premiums and $197,000 to pay for premiums and cover the out-of-pocket maximum. These estimates use a 7 percent assumption for the average annual increase in premiums. Were the assumption raised to a 10 percent average annual increase in premiums and the out-of-pocket maximum, an individual who lives to age 80 will need $91,000 in savings to pay for premiums and $135,000 to pay for both premiums and the out-of-pocket maximum, as shown in the second section of Figure 8. In contrast, an individual who lives to age 90 will need $199,000 in savings to pay for premiums and $299,000 to pay for premiums and cover the out-of-pocket maximum.

These estimates may highlight the extremes. As already discussed, health insurance premiums are currently increasing at about 14 percent annually. However, future annual increases may fall to and possibly below 10 percent. This analysis also recognizes that most individuals will not reach their out-of-pocket maximum each year; in fact, in most cases the savings needed will fall in between the premium-only estimates and the premium-plus-maximum-out-of-pocket estimates. However, longevity risk and uncertainty related to annual insurance premium increases will have a bigger impact on needed savings than whether an individual reaches the out-of-pocket maximum.
Savings Needed for Retirement at Age 65 With Medigap and Medicare Part D

As noted above, 33 percent of current retirees are covered by employment-based retiree health benefits. However, most future retirees will not have access to retiree health benefits through a former employer. Instead, their options for supplementing traditional Medicare will be limited to purchasing a Medigap plan with or without Medicare Part D, or a Medicare Advantage plan. This section focuses on savings that would be needed for an individual to pay premiums for Medigap, premiums for Medicare Part D, as well as out-of-pocket expenses for prescription drugs not covered by Medicare Part D.

For the estimates associated with Medigap and Medicare Part D coverage, a number of different stylized individuals are examined. First, the savings needed for an individual to purchase Medigap Plan F only are estimated. Then the savings needed for a person to also purchase prescription drug benefits under a stand-alone Medicare Part D plan are estimated. Next are shown how the needed savings vary, depending upon the level of prescription drug use. These levels are determined by the cost-sharing tiers as defined in the MMA.

Figure 9 shows the projected distribution of prescription drug spending among Medicare beneficiaries in 2006 as they align to the cost-sharing tiers under the Medicare prescription drug benefit. It is expected that 13 percent of Medicare beneficiaries will have no prescription drug spending in 2006. Fifteen percent of Medicare beneficiaries are expected to spend $250 or less on prescription drugs in 2006 (this is the statutory deductible in 2006). Forty-three percent of Medicare beneficiaries will use between $250 and $2,250 in prescription drugs, the range in which beneficiaries are responsible for 25 percent of the cost of drugs. Eighteen percent will use between $2,250 and $5,100 in prescription drugs, the so-called “donut-hole,” where Medicare beneficiaries are responsible for 100 percent of the cost of drugs. Eleven percent of Medicare beneficiaries are expected to spend more than $5,100 annually, after which they will be responsible for 5 percent coinsurance.

The first column in Figure 10 contains estimates for savings needed to pay Medigap Plan F premiums. These estimates range from $40,000 to $118,000 if Medigap premiums were to increase at an annual average rate of 7 percent. Were premiums for Medigap Plan F to increase at an annual average rate of 10 percent, an individual would need to have saved between $47,000 and $186,000 (Figure 11).

The savings estimates for Medigap Plan F (Figures 10 and 11) are much lower than they are for employment-based retiree health benefits (Figure 8). These differences are mainly due to the fact that the premium for employment-based retiree health benefits is higher than the premium for Medigap because the former includes a comprehensive prescription drug benefit and a $1,500 out-of-pocket maximum, while the latter does not include drug coverage. As reported above, only 13 percent of Medicare beneficiaries are not expected to incur prescription drug expenses in 2006 (Figure 9).

In order to make a better comparison between savings needed for employment-based retiree health benefits versus Medigap Plan F, Medicare Part D premiums and cost sharing are added to the Medigap estimates. First shown is how the estimates increase for an individual with Medigap Plan F and Medicare Part D who does not ever incur any drug expenses. These savings estimates range from $47,000 to $141,000, depending upon length of life, when assuming an average annual rate of 7 percent for Medigap premium increases (Figure 10). If an individual with Medigap Plan F and Medicare Part D were to reach his or her deductible for prescription drug coverage, each and every year in retirement, and incur no additional drug expenses, the savings needed range from $51,000 to $158,000. Fifteen percent of Medicare beneficiaries are expected to be in this range of prescription drug spending.
More than 40 percent of Medicare beneficiaries are expected to incur prescription drug expenses between $251 and $2,250 (Figure 9). If enrolled in Medicare Part D, maximum out-of-pocket spending for these individuals will reflect an additional $500, or 25 percent of the cost of prescription drugs for expenses between $251 and $2,250. This is in addition to the Medicare Part D premium and deductible. Medicare beneficiaries who reach this level of spending each and every year in retirement are expected to need savings ranging from $59,000 to $192,000 if average annual Medigap premiums increase 7 percent (Figure 10), and $66,000 to $260,000 if Medigap premiums increase 10 percent (Figure 11).

Nearly 30 percent of Medicare beneficiaries will reach the so-called “donut hole.” Medicare beneficiaries are responsible for 100 percent of the cost of prescription drugs between $2,250 and $5,100 in spending. After $5,100 in spending, beneficiaries are responsible for 5 percent coinsurance. Beneficiaries who reach and exceed $5,100 in prescription drug spending each and every year in retirement are expected to need savings ranging from $108,000 to $389,000 if Medigap premiums increase 7 percent (Figure 10), and $114,000 to $458,000 if Medigap premiums increase 10 percent (Figure 11).

There are a number of reasons why these projections may be either overestimating or underestimating needed savings to cover Medigap premiums and out-of-pocket spending for health care services during retirement. Using data projections on prescription drug spending that were developed prior to implementation of Medicare Part D means that the distribution of Medicare beneficiaries by spending level as presented in Figure 9 may not accurately reflect the actual distribution of spending. If, for example, insurers and pharmacy benefit managers were able to negotiate lower retail drug prices, fewer Medicare beneficiaries will be in the top spending categories, while more will be in the lower spending categories. As a result, the total amount that Medicare beneficiaries spend out of pocket will be lower. However, the estimates shown in Figures 10 and 11 are still valid for individuals who reach those cost-sharing spending levels.

Another complication that limits this analysis is related to behavioral effects. Insurers providing Medicare Part D coverage will be allowed to provide incentives for Medicare beneficiaries to use certain less costly drugs. To the extent that beneficiaries change consumption behavior, the distribution of drug spending shown in Figure 9 will turn out to be inaccurate.

In this analysis, two different assumptions are provided for average annual premium increases for Medigap insurance, but only one set of average annual increases is used in costs related to Medicare Part D. As mentioned above, CBO estimates are used assuming that premiums for Part D coverage will increase at an average annual rate of 7.5 percent between 2006 and 2014, and the cost-sharing thresholds will increase at an average annual rate of 8.6 percent. If these rates were to increase faster or more slowly, the estimates for needed savings would change.

This analysis also does not take into account low-income assistance benefits, or the income-related Medicare Part B premium. Medicare beneficiaries with income below 150 percent of poverty will receive assistance with premiums and cost sharing. In contrast, Medicare beneficiaries with income between $80,000 and $100,000 will be required to pay 35 percent of the premium, and beneficiaries with income of at least $200,000 will be responsible for 80 percent of the premium to enroll in Part B starting in 2007. These income levels will also be indexed to general inflation.

Finally, this analysis is complicated by the fact that utilization of prescription drugs by an individual Medicare beneficiary is not constant over time. The estimates in Figures 10 and 11 presume that an individual will have the same level of prescription drug expenditures each and every year between his or her retirement age and age at time of death. In fact, some beneficiaries may use very few prescription drugs when they first enter the Medicare program, but over time may increase their use. Figure 12 shows the level of savings needed to cover insurance premiums and out-of-pocket prescription drug expenses for a Medicare beneficiary who increases the use of prescription drugs during retirement. Specifically, this analysis assumes that a Medicare beneficiary will not use...
prescription drugs during the first 25 percent of his or her retirement, but will pay the Medicare Part D premium during these years. It also assumes that during the second 25 percent of retirement years, the Medicare beneficiary uses enough prescription drugs to only reach the deductible. In the third 25 percent of retirement years, the Medicare beneficiary uses $2,250 in prescription drugs each year, which means $500 out-of-pocket per year in addition to the deductible. In the last 25 percent of retirement years, it assumes the individual uses $5,100 in prescription drugs, the top of the so-called “donut-hole.”

Compared with the estimates in Figures 10 and 11, an individual who starts off using no prescription drug benefits in retirement and gradually increases the level of usage will need between $73,000 and $264,000 if Medigap premiums increase 7 percent, and between $80,000 and $332,000 if premiums increase 10 percent (Figure 12). These estimates would be similar to the estimates obtained for a Medicare beneficiary who reaches part of the donut-hole each year during retirement.

### Health Savings Accounts

Under the MMA, individuals with certain high-deductible health benefits during their working years are eligible to contribute to a health savings account (HSA). The theory behind these accounts is that by giving individuals more control over funds allocated for health care services, they will spend the money more responsibly, especially once they become more educated about the actual cost of health services. Furthermore, these accounts can be used as a tax-advantaged vehicle to save for health care expenses in retirement.

Contributions to an HSA are deductible in computing adjusted gross income, even for individuals who do not itemize their taxes. Furthermore, distributions are also tax-free for qualified health care services, COBRA and long-term care insurance premiums, health insurance premiums while unemployed, and health premiums while eligible for Medicare other than for Medigap premiums. This means that distributions used to pay Medicare Part A or B, MedicareAdvantage plan premiums, and the employee share of the premium for employment-based retiree health benefits are allowed on a tax-free basis. HSAs are owned by the individual with the high-deductible health plan and are completely portable. Unlike flexible spending accounts (FSAs), there is no “use-it-or-lose-it” rule associated with HSAs, as any money left in the account at the end of the year automatically rolls over and is available in the following year.

In order for an individual to qualify for tax-free contributions to an HSA, the individual must be covered by a health plan that has an annual deductible of not less than $1,000 for self-only coverage and $2,000 for family coverage. The out-of-pocket maximum may not exceed $5,000 for self-only coverage and $10,000 for family coverage, with the deductible counting toward this limit.

Both individuals and employers are allowed to contribute to an HSA. The maximum annual contribution for self-only coverage is $2,600 ($5,150 for family coverage) but is also limited to be no higher than the deductible for plans with a deductible of less than $2,600. As a result, an individual with a $1,000 deductible is not allowed to contribute more than $1,000 a year to an HSA. There is one exception to this rule: Individuals who have reached age 55 and are not yet eligible for Medicare may make catch-up contributions. A $500 catch-up contribution is allowed in 2004, and a $1,000 catch-up contribution will be phased in by 2009.

Because of these restrictions, the amount of money that an individual can accumulate in an HSA is limited. An individual who contributes $1,000 each year can accumulate $23,000 after 10 years, $47,000 after 20 years, $81,000 after 30 years, and $127,000 after 40 years (Figure 13). These estimates are rounded and are based on three assumptions: 1) that the individual earns an average annual rate of return of 5 percent on the funds held in the HSA; 2) that the maximum allowable contribution is indexed for inflation; and 3) catch-up contributions are made once an individual
reaches age 55. An individual contributing $2,600 each year (the maximum contribution) can accumulate $44,000 after 10 years, $101,000 after 20 years, $190,000 after 30 years, and $334,000 after 40 years.

An individual age 55 in 2004 can save a maximum of $44,000 in an HSA by the time he or she reaches age 65. This is nowhere near enough money to completely pay for insurance premiums and out-of-pocket expenses in retirement: Figure 14 provides estimates on how much money an individual age 55 in 2004 will need by 2014 (when the individual is 65) to completely pay for insurance premiums and maximum out-of-pocket expenses if he or she had access to employment-based retiree health benefits. Specifically, an individual will need $137,000 if he or she only lives to age 80 and insurance premiums and maximum out-of-pocket expenses increased 7 percent annually. If he or she lives beyond age 80 or insurance premiums and maximum out-of-pocket expenses increased faster than 7 percent, he or she will need a lot more than $137,000. Figure 15 provides similar estimates for an individual with both Medigap Plan F and Medicare Part D who also gradually increases his or her consumption of prescription drugs during retirement.

One of the difficulties in using an HSA to save money for premiums and out-of-pocket expenses during retirement is that individuals also can (and may need to) use the money in the account to pay for health care services during their working years. They can also draw money from the HSA to pay COBRA premiums and insurance premiums while they are unemployed. Distributions from the account prior to becoming eligible for Medicare will erode the value of the account. In fact, an individual who is able to roll over an average of 90 percent of his or her HSA each year, and contributes $1,000 each year, will have $17,000 after 40 years and $43,000 after 40 years if he or she contributes $2,600 each year. In contrast, an individual who is only able to roll over 50 percent of the funds in the account each year, and contributes $1,000 each year, would have an account balance of only $2,000 after 40 years, while a person contributing $2,600 per year would have an account balance of $6,000 after 40 years. These estimates, and estimates based on other rollover assumptions, are presented in Figure 16. Some individuals may choose to forego withdrawals from the HSA to pay for out-of-pocket expenses if they are able to pay those expenses on an after-tax basis.

It is important to understand why an individual contributing $1,000 yearly for 40 years and rolling over 50 percent of the end-of-year funds will have only $2,000 in his or her account, while an individual contributing $2,600 yearly will have only $6,000 in his or her account. These estimates at first glance do not seem plausible. An individual who contributes $1,000 each year and rolls over 50 percent of the account will reach a maximum of $2,000 balance in the HSA because the maximum that can possibly be rolled over in any future year will be $1,000, or 50 percent of the account. This is because once the account balance reaches $2,000, 50 percent (or $1,000) is rolled over. The total account balance will never exceed $2,000 because the $1,000 maximum annual rollover (assuming a 50 percent annual rollover) will always be added to the annual $1,000 that is contributed by the account holder. Similarly, once an individual contributing $2,600 each year reaches a $5,200 balance in the HSA, the maximum rollover in each additional year will be $2,600. Combined with a $2,600 annual contribution, the individual has reached an equilibrium account balance of $5,200. The estimates in Figure 16 are slightly higher than those in this paragraph because the estimates in Figure 16 earn interest on the account balance, and the deductible and maximum contribution levels are indexed to inflation.

Even if an individual is able to roll over 90 percent of the end-of-year account balance each year, after 40 years an individual contributing $1,000 per year will have accumulated only $17,000, while an individual contributing $2,600 per year will have accumulated only $43,000. These estimates are much lower than the potential savings that can be accumulated by an individual who rolls over the entire end-of-year account balance each year. In fact, an individual contributing $1,000 per year over 40 years would have $124,000 in his or her account, while an individual contributing $2,600
would have $321,000. Hence, even a 10 percent withdrawal rate for out-of-pocket expenses will have a relatively large impact on the potential accumulation of assets in an HSA over a long period of time.

Because individuals must have a high-deductible health plan to qualify to make contributions to an HSA, they may well choose (or need) to use the funds in the HSA to pay for health care services while they are actively working. IRS Revenue Ruling 2004-25 generally precludes an individual from contributing to an HSA if the individual is also covered by an FSA or health reimbursement arrangement (HRA), except in certain circumstances. As a result, the potential value of the account may be diluted. Compared with an individual who rolls over the entire end-of-year account balance, an individual who rolls over 90 percent of the end-of-year account balance will have only 13 percent of the potential funds after 40 years.

Another issue is whether an individual with an HSA will contribute to it each year, and, if a contribution is made, whether it is at the maximum level. Prior research shows that of the 17 percent of individuals who own an individual retirement account (IRA), an average of 25 percent make an annual contribution of any amount to the account in any year (Copeland, 2002). About 70 percent of individuals who contribute to the IRA make the maximum contribution. It is quite possible that a similar pattern will be seen among HSA owners. However, employers may provide incentives for employees to contribute to an HSA through matching contributions and by other means.

Conclusion

Since publication of the previous EBRI report that examined needed savings to purchase health insurance and cover out-of-pocket expenses for health care services in retirement (Fronstin and Salisbury, 2003), Congress and the president have taken two steps to address these expenses. As part of the MMA, Medicare beneficiaries will have access to Medicare Part D (providing outpatient prescription drug benefits), and certain individuals not eligible for the Medicare program will be allowed to make contributions to an HSA (which can be used to save money for insurance and out-of-pocket expenses on a tax-favored basis). This report has examined the impact of Medicare Part D on savings needed to purchase health insurance and to cover out-of-pocket expenses in retirement, and also examined the viability of using HSAs to save for health care expenses in retirement.

Overall, this analysis finds that a person retiring at age 65 in 2004 will need between $72,000 and $580,000 to cover insurance premiums and out-of-pocket expenses through an employment-based retiree health benefit. In contrast, a person supplementing traditional Medicare with Medigap Plan F and Medicare Part D will need between $73,000 and $332,000. The difference between the two ranges is due mainly to the fact that the premium used for the employment-based retiree health benefit plan is higher than the combined Medigap and Medicare Part D premium, because the former is associated with a low out-of-pocket maximum. This analysis presents a wide range of estimates based on various ages at the time of death, because longevity risk is a major threat to retirement income security. This range of estimates also varies with various assumptions regarding health insurance premium inflation rates and out-of-pocket expenses.

This report also found that a 55-year-old retiring in 2014 at age 65 will need between $137,000 and $1.5 million to cover employment-based health benefit premiums and out-of-pocket expenses. The same person supplementing traditional Medicare with Medigap Plan F and Medicare Part D will need between $151,000 and $778,000. The results show that an HSA is not a viable option to save for health care expenses in retirement for a 55-year-old today. At most, a 55-year-old will be able to accumulate $44,000 in an HSA over the next 10 years. While an individual has the potential to save more than $300,000 in an HSA over 40 years, as long as growth in health care costs exceeds overall growth of the economy, the HSA likely will never be sufficient to save for health care expenses in retirement.
References


Income-Relating the Medicare Part B Premium

Legislation enacted in 2003—the Medicare Prescription Drug, Improvement, and Modernization Act, or MMA (P.L. 108–73)—added a prescription drug benefit to the Medicare program, and also moved away from the principal of commonality, since it eliminated the flat Part B premium for all beneficiaries. Premiums required to enroll in Medicare Part B also will be related to income starting in 2007. By 2011, the changes to Part B premiums as they relate to income will be fully phased in. As a result, the highest-income beneficiaries will pay a higher Part B premium.

Medicare beneficiaries with annual income under $80,000 ($160,000 for married couples) will continue to be required to pay 25 percent of the cost of Part B. However, beneficiaries with income between $80,000 and $100,000 will be required to pay 35 percent of the premium, and beneficiaries with income of at least $200,000 will be responsible for 80 percent of the premium to enroll in Part B (Figure A-1). These income levels will also be indexed to general inflation.

Currently, the Medicare Part B premium is $66.60 per month. The Congressional Budget Office (CBO) projects that it will reach $99.70 per month in 2011 (Figure A-2). However, individuals with annual income of between $80,000 and $100,000 will be required to pay $139.60 per month in 2011, while individuals with income of at least $200,000 in 2011 will be required to pay $319 per month for Part B benefits. It has been estimated that 3 percent of Part B enrollees will be affected by these higher premiums in 2007, increasing to 6 percent in 2013.

This latest change has received very little attention since it only affects high-income individuals, but it may be indicative of changes that will become necessary in the future to keep Medicare solvent.
Endnotes

1 Health savings accounts can be used for long-term care insurance premiums. However, premiums for long-term care insurance and out-of-pocket expenses are not included in this analysis.


3 The apparent decline between 1999 and 2000 in the percentage of employers requiring retirees to pay the full cost of retiree health benefits is not statistically significant. In addition, the survey used in this chart includes public-sector employers and nonprofit-sector employers, which are more likely than private-sector for-profit employers to require retirees to pay the full cost of retiree health benefits.

4 Employers will be required to amortize the 28 percent subsidy over the life expectancy of participants. See www.fasb.org/fasb_staff_positions/fsp_fas106-2.pdf (last reviewed May 2004) for more information.

5 Proposals include adding prescription drugs to Medicare, prohibiting employers from dropping or cutting back on retiree health benefits, expanding COBRA coverage, and allowing a buy-in to Medicare. See Fronstin (2001) for more details on these proposals.

6 Medicare covers some disabled people under age 65 and also covers persons with end-stage renal disease.

7 See Appendix, Figure A-1 and Fronstin, Jaffe, and Salisbury (2004) for more information.

8 The Medicare Part B deductible is going to increase to $110 in 2005 and will be indexed thereafter.

9 EBRI estimates from the 1999 Medical Expenditure Panel Survey.

10 PricewaterhouseCoopers, LLP developed this plan on behalf of the Mellon College Retirement Project.

11 In fact, the same phenomenon (known as “adverse selection”) already occurs with COBRA benefits (continuation of access to a former employers’ health plan under certain circumstances).

12 The adverse selection death spiral occurs when the healthiest (and lowest-cost) enrollees in a plan continue over time to drop out, leaving only the sickest (and highest of high-cost users) in the plan. At some point, the plan will have to raise premiums to a level beyond which they become unaffordable.

13 This does not take into account the fact that there are Medigap policies still in effect that do not fall into the 10 standardized choices because these policies were purchased prior to July 31, 1992. Known as pre-standard policies, they still account for 35 percent of all Medigap plans sold.

14 See www.weissratings.com/News/Ins_Medigap/20030714medigap.htm (last reviewed March 2004).

15 This premium was averaged across the 50 U.S. state capitals, and was found on www.aarphealthcare.com (last reviewed April 2004).

16 Towers Perrin (2002) found that health plans will experience an average increase in costs of 15 percent for active workers. The Segal Company found premiums increased between 12.1 percent and 15.4 percent in 2003, depending upon plan type. Hewitt Associates reported that HMO premiums increased 17 percent in 2003.
17 See www.choosetosave.org

18 Needed savings were also estimated based on a 4 percent and 14 percent increase in insurance premiums. Those estimates are available at www.ebri.org.


24 See www.choosetosave.org/tools/lifeexp.htm for a list of life expectancy calculators that can be used by individuals to get specific life expectancy estimates.

25 Warren Buffet predicts that long-term stock returns will average 7 percent, as cited in the March 18, 2002 issue of Pensions&Investments.

26 In these estimates, both insurance premiums and the out-of-pocket maximum are assumed to increase at the same rate.

27 Certain preventive services can be covered in full and not subject to the high deductible.

28 Contribution limits will be indexed.

29 The catch-up contribution is not indexed to inflation after 2009.

30 There are a few ways in which an individual covered by an FSA or HRA can also contribute to an HSA. The FSA or HRA could restrict coverage to permitted benefits such as preventive benefits, dental care, and vision care. In addition, plans that require the use of the HSA before the use of FSA and HRA dollars would permit an individual to make an HSA contribution.
Figure 1

Source: Mercer Human Resources Consulting.
Figure 2
Percentage of Large Employers Requiring Retiree to Pay Full Cost of Retiree Health Premium, Employers With 500+ Employees, 1997–2000

Early Retirees
- 1997: 31%
- 1998: 36%
- 1999: 42%
- 2000: 39%

Medicare-Eligible Retirees
- 1997: 27%
- 1998: 35%
- 1999: 40%
- 2000: 34%

Figure 3
Eligibility Requirements for Retiree Health Benefits, Employers With 1,000 or More Employees, 1996 and 2003

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<tr>
<th></th>
<th>1996</th>
<th>2003</th>
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<tr>
<td>Age 50 + 10 Years Service</td>
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<td>Age 50 + 15 Years Service</td>
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<td>Age 55 + 5 Years Service</td>
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<td>Based on Age/Service Points</td>
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<td>Based on Age and/or Service Plus Age/Service Points</td>
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<td>Two or More Alternatives</td>
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<tr>
<td>Other (e.g., Age Only or Service Only)</td>
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Source: Hewitt Associates.

Figure 4
Percentage of Employers With 1,000 or More Employees That Have a Cap on Their Firm's Contributions to Retiree Health, 2003

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<th>Pre-65 Retirees</th>
<th>Medicare-eligible Retirees</th>
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<td>Percent With a Cap</td>
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<td>46%</td>
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<td>Have Already Hit Cap</td>
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<td>Anticipate Hitting Cap Within the Next 3 Years</td>
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<td>Do Not Anticipate Hitting the Cap</td>
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Figure 5
Likelihood of Making Selected Changes to Retire Health Benefits Within the Next Three Years, 2003

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<tr>
<td>Increase Retiree Contribution to Premiums</td>
<td>62%</td>
<td>24%</td>
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<td>Increase Cost-Sharing</td>
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<td>Shift to a Defined Contribution Approach</td>
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<td>Eliminate Prescription Drug Coverage</td>
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Figure 6
Benefits Covered by Standardized Medigap Policies

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<th>C</th>
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<tr>
<td>At-Home Recovery</td>
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<td>√</td>
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<td>√</td>
<td>√</td>
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<td>√</td>
</tr>
<tr>
<td>Basic Drug Benefit</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
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<td>√</td>
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<tr>
<td>Preventive Care</td>
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<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
</tbody>
</table>

Note: The data in this figure do not apply to Massachusetts, Minnesota, and Wisconsin, where alternative standards for supplemental insurance exist.

a Basic benefits include 1) the Part A coinsurance amount for days 61–90, and days 91–150 of a hospital stay, 2) coverage of up to 365 more days of a hospital stay during a lifetime, 3) coinsurance or copayment amount for Part B services, and 4) the first three pints of blood.
b Plans F and J also have a high-deductible option.

Figure 7
Life Expectancy at Age 65

<table>
<thead>
<tr>
<th>(years)</th>
<th>GAM94a</th>
<th>NML Bestb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>Females</td>
<td>Males</td>
</tr>
<tr>
<td>50th percentile</td>
<td>82</td>
<td>86</td>
</tr>
<tr>
<td>75th percentile</td>
<td>89</td>
<td>92</td>
</tr>
<tr>
<td>90th percentile</td>
<td>94</td>
<td>97</td>
</tr>
<tr>
<td>99th percentile</td>
<td>101</td>
<td>104</td>
</tr>
</tbody>
</table>

Source: EBRI estimates based on data from the Society of Actuaries and Northwestern Mutual Insurance Company.
a Group Annuity Mortality Table of 1994.
b Northwestern Mutual Life Insurance "best risk" for individuals in good health.

Figure 8
Savings Needed For Employment-Based Health Insurance Premiums, a Medicare Part B Premiums, and Maximum Out-of-Pocket Costs for Retirement at Age 65 in 2004, Assuming 4% After-Tax Rate of Return on Investments

<table>
<thead>
<tr>
<th>Age at Death</th>
<th>Retiree Health Premium</th>
<th>Retiree Health Premium + $1,500 Maximum Out-of-Pocket</th>
<th>Retiree Health Premium + $1,500 Maximum Out-of-Pocket + Part B Premium</th>
</tr>
</thead>
<tbody>
<tr>
<td>80</td>
<td>$72,000</td>
<td>$105,000</td>
<td>$315,000</td>
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<tr>
<td>85</td>
<td>101,000</td>
<td>147,000</td>
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<tr>
<td>95</td>
<td>172,000</td>
<td>253,000</td>
<td>421,000</td>
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<tr>
<td>100</td>
<td>215,000</td>
<td>317,000</td>
<td>580,000</td>
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</tbody>
</table>

Source: EBRI estimates based on various assumptions.
a Benefits package for the $2,631 premium was developed by PricewaterhouseCoopers LLP on behalf of the Mellon College Retirement Project. It contains the following benefits:
- Major Medical Benefit: $150 annual preventive care benefit, $250 deductible, 80% coinsurance.
- Outpatient Prescription Drug Benefit: $50 deductible, 70% coinsurance.
- Maximum out-of-pocket: $1,500 (medical and prescription drug combined).
Figure 9
Projected Distribution of Annual Prescription Drug Spending by Medicare Beneficiaries in 2006


Figure 10
Savings Needed For Medigap Premiums, Medicare Part B Premiums, and Medicare Part D Expenses for Retirement at Age 65 in 2004, Assuming 4% After-Tax Rate of Return on Investments

7% Increase in Medigap Premium, and Increases in Other Costs as Defined in Assumptions Section

<table>
<thead>
<tr>
<th>Age at Death</th>
<th>Base Medigap premium + Part B premium</th>
<th>Base Medigap premium + Part B premium + Part D premium</th>
<th>Base Medigap premium + Part B premium + Part D premium + Part D deductible + $500 in out-of-pocket drug spending</th>
<th>Base Medigap premium + Part B premium + Part D premium + Part D deductible + $2,850 in out-of-pocket drug spending</th>
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</thead>
<tbody>
<tr>
<td>80</td>
<td>$40,000</td>
<td>$47,000</td>
<td>$51,000</td>
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</tr>
<tr>
<td>85</td>
<td>$56,000</td>
<td>$65,967</td>
<td>$72,000</td>
<td>$85,000</td>
</tr>
<tr>
<td>90</td>
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<tr>
<td>100</td>
<td>$118,000</td>
<td>$141,000</td>
<td>$158,000</td>
<td>$192,000</td>
</tr>
</tbody>
</table>

Source: EBRI estimates based on various assumptions.

* Benefits package for a $1,380 premium for Medigap Plan F averaged across all plans in 2004. The plan contains the following benefits:
  - Inpatient Hospital Care: Covers the cost of Part A coinsurance and the cost of 365 extra days of hospital care during your lifetime after Medicare coverage ends.
  - Medical Costs: Covers the Part B coinsurance (generally 20% of Medicare-approved payment amount) or copayment amount, which may vary according to the service.
  - Blood: Covers the first three pints of blood each year.
  - Also covers the Part A Inpatient Hospital Deductible, the Part B Deductible, 100% of the Part B Excess Charges, the Skilled Nursing Facility Coinsurance, and Emergency Foreign Travel.
Figure 11
Savings Needed For Medigap Premiums,* Medicare Part B Premiums, and Medicare Part D Expenses for Retirement at Age 65 in 2004, Assuming 4% After-Tax Rate of Return on Investments

10% Increase in Medigap Premium, and Increases in Other Costs as Defined in Assumptions Section

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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
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<td>80</td>
<td>$47,000</td>
<td>$54,000</td>
<td>$58,000</td>
<td>$66,000</td>
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</tr>
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<td>85</td>
<td>70,000</td>
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<tr>
<td>90</td>
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<td>113,000</td>
<td>123,000</td>
<td>141,000</td>
<td>247,000</td>
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<tr>
<td>95</td>
<td>138,000</td>
<td>155,000</td>
<td>168,000</td>
<td>193,000</td>
<td>340,000</td>
</tr>
<tr>
<td>100</td>
<td>186,000</td>
<td>209,000</td>
<td>226,000</td>
<td>260,000</td>
<td>458,000</td>
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</table>

Source: EBRI estimates based on various assumptions.

* Benefits package for a $1,380 premium for Medigap Plan F averaged across all plans in 2004. The plan contains the following benefits:
  - Inpatient Hospital Care: Covers the cost of Part A coinsurance and the cost of 365 extra days of hospital care during your lifetime after Medicare coverage ends.
  - Medical Costs: Covers the Part B coinsurance (generally 20% of Medicare-approved payment amount) or copayment amount which may vary according to the service.
  - Blood: Covers the first 3 pints of blood each year.
  - Also covers the Part A Inpatient Hospital Deductible, the Part B Deductible, 100% of the Part B Excess Charges, the Skilled Nursing Facility Coinsurance, and Emergency Foreign Travel.
Figure 12

Savings Needed For Medigap Premiums,\textsuperscript{a} Medicare Part B Premiums, and Medicare Part D Expenses for Retirement at Age 65 in 2004, Assuming 4% After-Tax Rate of Return on Investments, and Graduated Spending on Prescription Drugs\textsuperscript{b}

<table>
<thead>
<tr>
<th>Age at Death</th>
<th>7% Increase in Medigap Premium, and Increases in Other Costs as Defined in Assumptions Section</th>
<th>10% Increase in Medigap Premium, and Increases in Other Costs as Defined in Assumptions Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>80</td>
<td>$73,000</td>
<td>$80,000</td>
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<tr>
<td>85</td>
<td>111,000</td>
<td>125,000</td>
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<td>158,000</td>
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<td>195,000</td>
<td>238,000</td>
</tr>
<tr>
<td>100</td>
<td>264,000</td>
<td>332,000</td>
</tr>
</tbody>
</table>

Source: EBRI estimates based on various assumptions.

\textsuperscript{a} Benefits package for a $1,380 premium for Medigap Plan F averaged across all plans in 2004. The plan contains the following benefits:

- Inpatient Hospital Care: Covers the cost of Part A coinsurance and the cost of 365 extra days of hospital care during your lifetime after Medicare coverage ends.
- Medical Costs: Covers the Part B coinsurance (generally 20% of Medicare-approved payment amount) or copayment amount, which may vary according to the service.
- Blood: Covers the first three pints of blood each year.
- Also covers the Part A Inpatient Hospital Deductible, the Part B Deductible, 100% of the Part B Excess Charges, the Skilled Nursing Facility Coinsurance, and Emergency Foreign Travel.

\textsuperscript{b} Assumes that Medicare beneficiaries spend 25% of their retirement years in each of the following cost-sharing tiers:

- Medicare Part D premium only.
- Medicare Part D premium + Part D deductible.
- Medicare Part D premium + Part D deductible + $500 out-of-pocket drug spending (25% of $2,250–$250)
- Medicare Part D premium + Part D deductible + $3,300 out-of-pocket drug spending (25% of $2,250–$250 + 100% of $5,100–$2,250)
Figure 13

Potential Savings in an HSA, Assuming 5% Rate of Return and Individual Makes Maximum Catch-Up Contribution in At Age 55

<table>
<thead>
<tr>
<th>Years Contributing to HSA</th>
<th>Annual Contribution/Percentage Rolled Over</th>
<th>$1,000/100%</th>
<th>$2,600/100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td></td>
<td>$23,000</td>
<td>$44,000</td>
</tr>
<tr>
<td>20</td>
<td></td>
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<td>190,000</td>
</tr>
<tr>
<td>40</td>
<td></td>
<td>137,000</td>
<td>334,000</td>
</tr>
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</table>

Source: EBRI.

a Health savings account.

b Maximum allowable HSA contributions will be indexed for inflation. The estimates in this figure include such an inflation.

Figure 14

Savings Needed For Employment-Based Health Insurance Premiums, Medicare Part B Premiums, and Maximum Out-of-Pocket Costs for Retirement at Age 65 in 2014, Assuming 4% After-Tax Rate of Return on Investments

<table>
<thead>
<tr>
<th>Age at Death</th>
<th>Retiree health premium + $1,500 maximum out-of-pocket + Part B premium</th>
<th>Retiree health premium + Part B premium</th>
</tr>
</thead>
<tbody>
<tr>
<td>80</td>
<td>$137,000</td>
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<tr>
<td>85</td>
<td>193,000</td>
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<tr>
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<td>257,000</td>
<td>381,000</td>
</tr>
<tr>
<td>95</td>
<td>330,000</td>
<td>490,000</td>
</tr>
<tr>
<td>100</td>
<td>409,000</td>
<td>610,000</td>
</tr>
</tbody>
</table>

Source: EBRI estimates based on various assumptions.

a Benefits package for the $2,631 premium was developed by PricewaterhouseCoopers LLP on behalf of the Mellon College Retirement Project. It contains the following benefits:

Major Medical Benefit: $150 annual preventive care benefit, $250 deductible, 80% coinsurance.

Outpatient Prescription Drug Benefit: $50 deductible, 70% coinsurance.

Maximum out-of-pocket: $1,500 (medical and prescription drug combined).
Figure 15
Savings Needed For Medigap Premiums, a Medicare Part B Premiums, and Medicare Part D Expenses for Retirement at Age 65 in 2014, Assuming 4% After-Tax Rate of Return on Investments, and Graduated Spending on Prescription Drugs b

<table>
<thead>
<tr>
<th>Age at Death</th>
<th>7% Increase in Medigap Premium, and Increases in Other Costs as Defined in Assumptions Section</th>
<th>10% Increase in Medigap Premium, and Increases in Other Costs as Defined in Assumptions Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>80</td>
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<tr>
<td>85</td>
<td>231,000</td>
<td>291,000</td>
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<td>90</td>
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<td>95</td>
<td>407,000</td>
<td>559,000</td>
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<tr>
<td>100</td>
<td>550,000</td>
<td>778,000</td>
</tr>
</tbody>
</table>

Source: EBRI estimates based on various assumptions.

a Benefits package for a $1,380 premium for Medigap Plan F averaged across all plans in 2004. The plan contains the following benefits:

- Inpatient Hospital Care: Covers the cost of Part A coinsurance and the cost of 365 extra days of hospital care during your lifetime after Medicare coverage ends.
- Medical Costs: Covers the Part B coinsurance (generally 20% of Medicare-approved payment amount) or copayment amount, which may vary according to the service.
- Blood: Covers the first three pints of blood each year.
- Also covers the Part A Inpatient Hospital Deductible, the Part B Deductible, 100% of the Part B Excess Charges, the Skilled Nursing Facility Coinsurance, and Emergency Foreign Travel.

b Assumes that Medicare beneficiaries spend 25% of their retirement years in each of the following cost-sharing tiers:

- Medicare Part D premium only.
- Medicare Part D premium + Part D deductible.
- Medicare Part D premium + Part D deductible + $3,300 out-of-pocket drug spending (25% of $2,250–$250 + 100% of $5,100–$2,250).

Figure 16
Potential Savings in an HSA, a Assuming 5% Rate of Return b and Individual Rolls Over Various Amounts of End-of-Year Account Balance c

<table>
<thead>
<tr>
<th>Years Contributing to HSA a</th>
<th>Percentage of End-of-Year Account Balance Rolled Over</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10%</td>
</tr>
<tr>
<td>$1,000 Annual Contribution</td>
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</tr>
<tr>
<td>10</td>
<td>$1,000</td>
</tr>
<tr>
<td>20</td>
<td>$1,000</td>
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<td>30</td>
<td>$1,000</td>
</tr>
<tr>
<td>40</td>
<td>$1,000</td>
</tr>
<tr>
<td>$2,600 Annual Contribution</td>
<td>$3,000</td>
</tr>
<tr>
<td>10</td>
<td>$3,000</td>
</tr>
<tr>
<td>20</td>
<td>$3,000</td>
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<tr>
<td>30</td>
<td>$3,000</td>
</tr>
<tr>
<td>40</td>
<td>$3,000</td>
</tr>
</tbody>
</table>

Source: EBRI.

a Health savings account.

b Maximum allowable HSA contributions will be indexed for inflation. The estimates in this figure include such an inflation adjustment.

c All estimates are rounded to the nearest thousand and do not include catch-up contributions at age 55.
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Appendix

July 2004 EBRI Issue Brief:

“Health Care Expenses in Retirement and the Use of Health Savings Accounts”

The July 2004 EBRI Issue Brief examines the impact of Medicare Part D on savings needed for insurance premiums to supplement Medicare, Medicare Part B and Part D premiums, and out-of-pocket expenses in retirement, and examines the viability of using HSAs to save for these expenses. It presents a wide range of estimates based on various ages at the time of death, because longevity risk is a major threat to retirement income security. This range of estimates also varies with various assumptions regarding health insurance premium inflation rates and out-of-pocket expenses.

Instead of choosing one assumption or the other, or an entirely different assumption, the July 2004 Issue Brief analysis provides estimates based on two assumptions for annual premium growth: 7 percent and 10 percent premium inflation.

To provide additional analysis showing both lower and higher results, the six tables included in this appendix are different versions of selected tables from the July Issue Brief, using 4 percent and 14 percent premium inflation instead of 7 percent and 10 percent.
### Appendix: Figure 1

#### Alternative Cost Estimates

Savings Needed For Employment-Based Health Insurance Premiums, Medicare Part B Premiums, and Maximum Out-of-Pocket Costs for Retirement at Age 65 in 2004, Assuming 4 Percent After-Tax Rate of Return on Investments

<table>
<thead>
<tr>
<th>Age at Death</th>
<th>4 Percent Increase in Employment-Based Retiree Health Premiums and Out-of-Pocket Costs</th>
<th>14 Percent Increase in Employment-Based Retiree Health Premiums and Out-of-Pocket Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Retiree health premium + $1,500 maximum out-of-pocket + Part B premium</td>
<td>Retiree health premium + $1,500 maximum out-of-pocket + Part B premium</td>
</tr>
<tr>
<td>80</td>
<td>$57,000</td>
<td>$128,000</td>
</tr>
<tr>
<td>85</td>
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<td>362,000</td>
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<tr>
<td>95</td>
<td>115,000</td>
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</tr>
<tr>
<td>100</td>
<td>134,000</td>
<td>934,000</td>
</tr>
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</table>

Source: Employee Benefit Research Institute estimates based on various assumptions.

* Benefits package for the $2,631 premium was developed by PricewaterhouseCoopers, LLP, on behalf of the Mellon College Retirement Project. It contains the following benefits:
  - Major Medical Benefit: $150 annual preventive care benefit, $250 deductible, 80% coinsurance.
  - Outpatient Prescription Drug Benefit: $50 deductible, 70% coinsurance.
  - Maximum out-of-pocket: $1,500 (medical and prescription drug combined).
### Appendix: Figure 2

**Savings Needed For Medigap Premiums, Medicare Part B Premiums, and Medicare Part D Expenses for Retirement at Age 65 in 2004, Assuming 4 Percent After-Tax Rate of Return on Investments**

<table>
<thead>
<tr>
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<tr>
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<td>124,000</td>
<td>157,000</td>
<td>355,000</td>
</tr>
</tbody>
</table>

Source: Employee Benefit Research Institute estimates based on various assumptions.

* Benefits package for a $1,380 premium for Medigap Plan F averaged across all plans in 2004. The plan contains the following benefits:
  - **Inpatient Hospital Care:** Covers the cost of Part A coinsurance and the cost of 365 extra days of hospital care during your lifetime after Medicare coverage ends.
  - **Medical Costs:** Covers the Part B coinsurance (generally 20% of Medicare-approved payment amount) or copayment amount, which may vary according to the service.
  - **Blood:** Covers the first 3 pints of blood each year.
  - Also covers the Part A Inpatient Hospital Deductible, the Part B Deductible, 100% of the Part B Excess Charges, the Skilled Nursing Facility Coinsurance, and Emergency Foreign Travel.
Appendix: Figure 3

Savings Needed For Medigap Premiums, Medicare Part B Premiums, and Medicare Part D Expenses for Retirement at Age 65 in 2004, Assuming 4 Percent After-Tax Rate of Return on Investments

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>80</td>
<td>$60,000</td>
<td>$66,000</td>
<td>$71,000</td>
<td>$79,000</td>
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<tr>
<td>85</td>
<td>100,000</td>
<td>109,466</td>
<td>116,000</td>
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<td>90</td>
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<td>174,000</td>
<td>183,000</td>
<td>201,000</td>
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<td>398,000</td>
<td>421,000</td>
<td>438,000</td>
<td>472,000</td>
<td>670,000</td>
</tr>
</tbody>
</table>

Source: Employee Benefit Research Institute estimates based on various assumptions.

Benefits package for a $1,380 premium for Medigap Plan F averaged across all plans in 2004. The plan contains the following benefits:

Inpatient Hospital Care: Covers the cost of Part A coinsurance and the cost of 365 extra days of hospital care during your lifetime after Medicare coverage ends.

Medical Costs: Covers the Part B coinsurance (generally 20% of Medicare-approved payment amount) or copayment amount, which may vary according to the service.

Blood: Covers the first 3 pints of blood each year.

Also covers the Part A Inpatient Hospital Deductible, the Part B Deductible, 100% of the Part B Excess Charges, the Skilled Nursing Facility Coinsurance, and Emergency Foreign Travel.
### Appendix: Figure 4

**Savings Needed For Medigap Premiums, a Medicare Part B Premiums, and Medicare Part D Expenses for Retirement at Age 65 in 2004, Assuming 4 Percent After-Tax Rate of Return on Investments, and Graduated Spending on Prescription Drugs**

<table>
<thead>
<tr>
<th>Age at Death</th>
<th>4 percent increase in Medigap premium, and increases in other costs as defined in assumptions section</th>
<th>14 percent increase in Medigap premium, and increases in other costs as defined in assumptions section</th>
</tr>
</thead>
<tbody>
<tr>
<td>80</td>
<td>$68,000</td>
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<td>354,000</td>
</tr>
<tr>
<td>100</td>
<td>229,000</td>
<td>544,000</td>
</tr>
</tbody>
</table>

Source: Employee Benefit Research Institute estimates based on various assumptions.

a Benefits package for a $1,380 premium for Medigap Plan F averaged across all plans in 2004. The plan contains the following benefits:

- **Inpatient Hospital Care**: Covers the cost of Part A coinsurance and the cost of 365 extra days of hospital care during your lifetime after Medicare coverage ends.
- **Medical Costs**: Covers the Part B coinsurance (generally 20% of Medicare-approved payment amount) or copayment amount, which may vary according to the service.
- **Blood**: Covers the first 3 pints of blood each year.
- Also covers the Part A Inpatient Hospital Deductible, the Part B Deductible, 100% of the Part B Excess Charges, the Skilled Nursing Facility Coinsurance, and Emergency Foreign Travel.

b Assumes that Medicare beneficiaries spend 25% of their retirement years in each of the following cost-sharing tiers:

- Medicare Part D premium only.
- Medicare Part D premium + Part D deductible.
- drug spending (25% of $2,250–$250).
- Medicare Part D premium + Part D deductible + $3,300 out-of-pocket drug spending (25% of $2,250–$250 + 100% of $5,100–$2,250).
Appendix: Figure 5

Alternative Cost Assumptions
Savings Needed For Employment-Based Health Insurance Premiums, Medicare Part B Premiums, and Maximum Out-of-Pocket Costs for Retirement at Age 65 in 2014, Assuming 4 Percent After-Tax Rate of Return on Investments

<table>
<thead>
<tr>
<th>Age at Death</th>
<th>4 Percent Increase in Employment-Based Retiree Health Premiums and Out-of-Pocket Costs</th>
<th>14 Percent Increase in Employment-Based Retiree Health Premiums and Out-of-Pocket Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Retiree health premium + Part B premium</td>
<td>Retiree health premium + $1,500 maximum out-of-pocket + Part B premium</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Retiree health premium + Part B premium</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Retiree health premium + $1,500 maximum out-of-pocket + Part B premium</td>
</tr>
<tr>
<td>80</td>
<td>$88,000</td>
<td>$125,000</td>
</tr>
<tr>
<td>85</td>
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<td>206,000</td>
</tr>
<tr>
<td>95</td>
<td>176,000</td>
<td>248,000</td>
</tr>
<tr>
<td>100</td>
<td>203,000</td>
<td>286,000</td>
</tr>
</tbody>
</table>

Source: Employee Benefit Research Institute estimates based on various assumptions.

a Benefits package for the $2,631 premium was developed by PricewaterhouseCoopers LLP on behalf of the Mellon College Retirement Project. It contains the following benefits:

- Major Medical Benefit: $150 annual preventive care benefit, $250 deductible, 80% coinsurance.
- Outpatient Prescription Drug Benefit: $50 deductible, 70% coinsurance.
- Maximum out-of-pocket: $1,500 (medical and prescription drug combined).
### Appendix: Figure 6

**Savings Needed For Medigap Premiums, Medicare Part B Premiums, and Medicare Part D Expenses for Retirement at Age 65 in 2014, Assuming 4 Percent After-Tax Rate of Return on Investments, and Graduated Spending on Prescription Drugs**

<table>
<thead>
<tr>
<th>Age at Death</th>
<th>4 Percent Increase in Medigap Premium, and Increases in Other Costs as Defined in Assumptions Section</th>
<th>14 Percent Increase in Medigap Premiums, and Increases in Other Costs as Defined in Assumptions Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>80</td>
<td>$130,000</td>
<td>$270,000</td>
</tr>
<tr>
<td>85</td>
<td>196,000</td>
<td>457,000</td>
</tr>
<tr>
<td>90</td>
<td>282,000</td>
<td>737,000</td>
</tr>
<tr>
<td>95</td>
<td>340,000</td>
<td>1,108,000</td>
</tr>
<tr>
<td>100</td>
<td>459,000</td>
<td>1,731,000</td>
</tr>
</tbody>
</table>

*Source: Employee Benefit Research Institute estimates based on various assumptions.*

a Benefits package for a $1,380 premium for Medigap Plan F averaged across all plans in 2004. The plan contains the following benefits:

- **Inpatient Hospital Care:** Covers the cost of Part A coinsurance and the cost of 365 extra days of hospital care during your lifetime after Medicare coverage ends.
- **Medical Costs:** Covers the Part B coinsurance (generally 20% of Medicare-approved payment amount) or copayment amount, which may vary according to the service.
- **Blood:** Covers the first 3 pints of blood each year.
- Also covers the Part A Inpatient Hospital Deductible, the Part B Deductible, 100% of the Part B Excess Charges, the Skilled Nursing Facility Coinsurance, and Emergency Foreign Travel.

b Assumes that Medicare beneficiaries spend 25 percent of their retirement years in each of the following cost-sharing tiers:

- Medicare Part D premium only.
- Medicare Part D premium + Part D deductible.
- Medicare Part D premium + Part D deductible + $3,300 out-of-pocket drug spending (25% of $2,250–$250 + 100% of $5,100–$2,250).