This article considers two hypothetical scenarios—one in which the Medicare eligi,, bility age is raised to 67 along with the scheduled increase in the normal retirement age, and one in which eligibility for both programs is raised to age 70. It then projects the effects that each of those changes would have on So,, cial Security Disability Insur,, ance participation, Medicare participation, and Medicare expenditures.

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# How Raising the Age of Eligibility for Social Security and Medicare Might Affect the Disability Insurance and Medicare Programs

by David C. Wittenburg, David C. Stapleton, and Scott B. Scrivner\*

# Summary

The normal age of retirement is sched,, uled to increase to 67 by 2022, and several proposals to increase it to age 70 are being considered. The Medicare eligibility age is not scheduled to increase under current law, but propos,, als to raise it in step with the retirement age were recently considered by the National Bipartisan Commission on the Future of Medicare (1999).

This article examines how raising both the normal retirement age and the Medicare eligibility age would affect Social Security Disability Insurance (DI) eligibility, Medicare eligibility, and Medicare expenditures under two hypothetical policy scenarios. The first (the 2022 age-67 scenario) assumes that the eligibility age is raised to 67 by 2022, in step with the scheduled in,, crease in the normal retirement age. The second (the 2040 age-70 scenario) assumes that the eligibility ages are increased to 70 by 2040.

The findings are based on a summary of two reports. The earlier one (Wittenburg and others 1999) describes a series of microsimulation models developed from data in the Survey of Income and Program Participation (SIPP) and the Medicare Current

Beneficiary Survey (MCBS). The base simulations in that report assume that the normal retirement and Medicare eligibil, ity ages had already been increased in 1993, when the SIPP and MCBS respon,, dents were observed. In the later report (Wittenburg, Stapleton, and Scrivner 2000), adjustment factors were devel,, oped to reflect future increases in Medicare expenditures, population growth, and increased participation in DI. The base simulations were then adjusted by those factors, yielding a final set of annual projections under the two policy scenarios.

The hypothetical policy scenarios illustrate that the major cost reductions from jointly raising the Medicare eligibility age and the normal age of retirement would not be realized until after 2020, when the increases are fully phased in and a large portion of baby boomers have reached age 65. Although the projections provide important cost estimates, the equity and efficiency of those policies must be studied before the desirability of any specific proposal can be evaluated fully.

# Introduction

The normal retirement age will be raised to 67 by 2022, and several proposals

have suggested raising it to age 70. The Medicare eligibility age is not scheduled to increase, but proposals to raise it in step with the retirement age were recently considered by the National Bipartisan Commission on the Future of Medicare (1999).

Raising the normal retirement and Medicare eligibility ages would have significant effects on Social Security beneficiaries, people eligible for Medicare, and employ, ment. The number of people who receive full Social Security benefits and who are covered by Medicare would drop; however, some beneficiaries would retain both Social Security benefits and Medicare eligibility because they qualify for Social Security Disability Insurance (DI) or, in a small number of cases, because they have end-stage renal disease (ESRD).1 Other people could turn to early-retirement Social Security benefits (or private pension benefits) and remain ineligible for Medicare until later. Still others might turn to other government programs such as Supplemental Security Income and Medicaid. Finally, some might stay in the labor market longer than they would have under the current policy.

This article describes how raising both the normal retirement age and the Medicare eligibility age would affect DI eligibility, Medicare eligibility, and Medicare expenditures under two hypothetical policy scenarios. The scenarios are consistent with both current law and various new proposals to raise the retirement age to 70, and both assume that the eligibility age for Medicare increases in step with each increase in the normal retirement age.

- The 2022 age-67 scenario reflects current law—raising the normal retirement age to 67—and assumes that the Medicare eligibility age is raised in step with it from 2000 through 2022.<sup>2</sup>
- The 2040 age-70 scenario extends the normal retirement age from 67 in 2022 to 70 in 2040 and assumes that the Medicare eligibility age is raised in step with the retirement age. The final phase-in for both is implemented annually in bimonthly increments from 2023 through 2040.

Medicare and DI outcomes under each policy scenario are simulated for the population directly affected by the change. For the 2022 age-67 scenario, DI and Medicare eligibility outcomes are simulated for the population aged 65 and 66; for the 2040 age-70 scenario, outcome simulations are for the population aged 65 to 69. Medi,, care program savings (calculated as the reduction in Medicare expenditures for people who lose eligibility) are also simulated under each policy scenario. Although the two scenarios do not reflect the exact parameters of any specific proposal, they are representative of various

proposals to raise the retirement and Medicare eligibility ages.

#### This article:

- Gives background information on current legislative initiatives to increase the normal age of retirement, the Medicare eligibility age, or both and explores the relationship between those initiatives and the policy scenarios described above:
- Summarizes the methodological approach for generating the microsimulation models;
- Presents projections for raising the retirement and Medicare eligibility ages under each of the hypo,, thetical scenarios and discusses the net effects on the population directly affected and the net Medi,, care program savings; and
- Compares our projections with other estimates, discusses the limitations of our projections, and summarizes the policy and research implications of our findings.

# Current Legislative Initiatives

Under current law (enacted in 1983), the increase in the normal retirement age started in 2000 and will proceed in 2-month increments to age 66 in 2005.<sup>3</sup> The retirement age will remain 66 until 2017, when it will increase in 2-month increments to 67 in 2022.

Several proposals have suggested raising both the normal retirement age and the Medicare eligibility age. For example, the National Commission on Retirement Policy (1999) favors raising the retirement age to 70 by 2029 and increasing it in the future by 2 months every 3 years. Other proposals, such as the one put forward by former Senator Daniel Patrick Moynihan and Senator Robert Kerrey, suggest raising the normal retirement age to 68 by 2017 and indexing future increases to life expectancy (Center on Budget and Policy Priorities 1998). Similarly, two of the Social Security Administration's Advisory Council proposals (numbers 2 and 3) suggest that the age be raised to 67 by 2011 and indexed to life expectancy thereafter (Advisory Council on Social Security 1997). No increases in the Medicare eligibility age were included in these proposals, but if any of them is successful, some increases may be proposed in the future. For example, the National Biparti,, san Commission on the Future of Medicare (1999) recently considered proposals to increase the eligibility age in step with the retirement age.

The 2022 age-67 scenario reflects current law (raising the retirement age to 67) and assumes that the Medicare eligibility age is raised in step, which is consistent with the bipartisan commission's proposals. The 2040 age-70

scenario does not reflect any specific proposal, but it is consistent with proposals to increase the normal retire,, ment age to 70, as well as with proposals to index the retirement age to life expectancy. That scenario also assumes that the Medicare eligibility age is raised in step with the retirement age.

These assumptions are important because people's economic decisions under a joint increase are fundamen,, tally different from their decisions under, say, an increase in just the normal retirement age. Under a joint increase, people must consider the potential loss of both Medicare coverage and full Social Security benefits, whereas under an increase in just the retirement age, they must consider only the potential loss of Social Security benefits.

# Methodology

The basic assumption for each of the microsimulation models is that people below the higher retirement and eligibility ages will qualify for DI and Medicare under the same program rules that exist today for people under age 65. That is, to be eligible for DI, an individual must satisfy the Social Security Administration's definition of disability and meet past earnings requirements.<sup>4</sup> After DI beneficiaries turn 65, their benefits automatically be,, come Old-Age and Survivors Insurance benefits. Medi,, care coverage is available for DI beneficiaries after a 2-year waiting period, and it is available for people with ESRD.<sup>5</sup> The models simulate outcomes for those who meet any of the eligibility requirements for DI, Medicare, or both.

The procedure for generating the base simulations has two parts (Wittenburg and others 1999). The first con, sists of our initial DI and Medicare eligibility simulations for the noninstitutionalized population, which we devel,, oped using data from the Survey of Income and Program Participation (SIPP). That survey is a rich data source for the simulations because it includes detailed demo,, graphic, health, income, and program participation information for a nationally representative sample in all age groups. The second part supplements the analysis of SIPP data with information from the Medicare Current Beneficiary Survey (MCBS). The MCBS provides detailed demographic, health, and Medicare program information on a nationally representative sample of people eligible for Medicare, including individuals who reside in institutions. We used the MCBS to generate information on Medicare expenditures, ESRD status, and institutionalized persons. Both the SIPP and MCBS simulations are based on information from calendar year 1993.

The SIPP microsimulation models drew on a series of descriptive and econometric estimates for respondents aged 55 to 64.<sup>6</sup> The models assumed that DI and Medi,,

care participation patterns of people in the two hypotheti,, cal scenarios would be like those of people aged 55 to 64 after adjusting for individual characteristics observed in SIPP, such as age and health characteristics. To generate the parameters for the models, we estimated a series of econometric and descriptive models for men and women to predict DI and Medicare eligibility, using data for people aged 55 to 64.7 The estimates were then applied to the characteristics of SIPP respondents aged 65 and 66 to generate probabilities of DI and Medicare eligibility. Those probabilities were then used to assign DI and Medicare outcomes.8

The MCBS analysis had three stages. First, it simu,, lated a sample of noninstitutionalized people eligible for Medicare to match the SIPP simulations. Then, it completed the pool of people eligible for Medicare by identifying institutionalized individuals and persons with end-stage renal disease, using special MCBS identifiers. Finally, it simulated Medicare expenditures using information from the simulated sample of people eligible for Medicare.

We generated separate base simulation results for raising the normal retirement and Medicare eligibility ages to 67 and 70, respectively. The results estimate what the DI and Medicare outcomes would have been in 1993 had the higher ages already been in place.

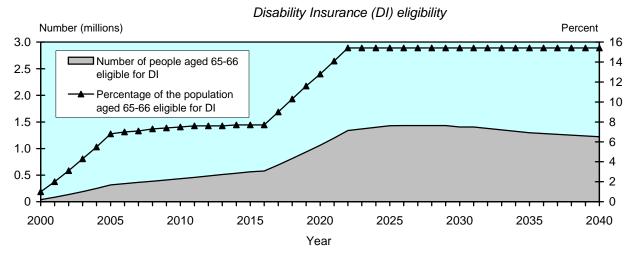
#### **Simulations**

Changes after 1993 in Medicare expenditures, popula,, tion, and program participation will make the future effects of higher retirement and Medicare eligibility ages substantially different from those in the base simulations. In recent years, Medicare expenditures per beneficiary have risen because of rising health care costs. Projec,, tions indicate that those costs will continue to increase more rapidly than inflation (Congressional Budget Office 1998; Social Security Administration 1999). The DI- and Medicare-eligible population is growing and will con,, tinue to grow as the baby-boom generation enters that age group. Finally, DI participation rates for the popula,, tion over age 60 are increasing, particularly among women (Zayatz 1999).

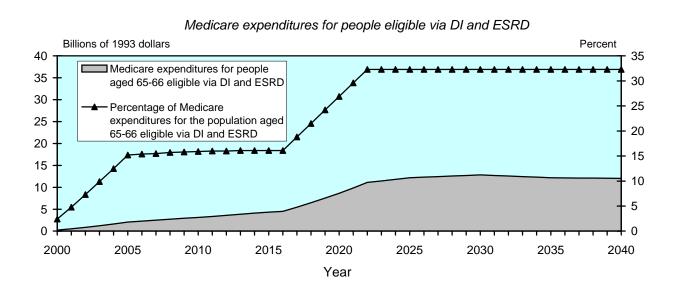
To respond to these changes, we developed factors for adjusting the base simulations and making projections under the two hypothetical policy scenarios (Wittenburg, Stapleton, and Scrivner 2000). The adjustment factors significantly influence the predicted outcomes. For example, from 1993 through 2025, the population aged 65 and 66 will more than double in size. Hence, all else being equal, raising the retirement and Medicare eligibil, ity ages to 67 will result in twice as many people losing their Medicare eligibility in 2025 as in 1993. Similarly, Medicare expenditures are expected to approximately

Chart 1.

Projected Disability Insurance eligibility, Medicare eligibility, and Medicare expenditures for the population aged 65-66 under the 2022 age-67 scenario



#### Medicare eligibility via DI and end-stage renal disease (ESRD) Number (millions) Percent 3.0 16 Number of people aged 65-66 14 eligible for Medicare via DI and 2.5 **ESRD** 12 Percentage of the population aged 2.0 65-66 eligible for Medicare via DI 10 and ESRD 1.5 8 6 1.0 4 0.5 2 0.0 0 2000 2005 2010 2015 2020 2025 2030 2035 2040 Year



double during that period, raising both the total costs of maintaining Medicare and the projected cost "savings" of raising the retirement and Medicare eligibility ages. Finally, the proportion of the population who qualify for DI is expected to increase significantly, particularly among women, which will increase the number of people who participate in DI (and potentially Medicare).

# **Findings**

We projected each hypothetical scenario's net effects on DI eligibility, Medicare eligibility, and Medicare expen,, ditures and calculated the net savings in Medicare enrollment and costs. Net effects were derived by calculating annual DI eligibility, Medicare eligibility, and Medicare expenditures from 2000 through 2040 for the population aged 65 and 66 (for the 2022 age-67 scenario) and the population aged 65 to 69 (for the 2040 age-70 scenario). Net savings were estimated by sub,, tracting our projections under each scenario from the Trustees' baseline projections for the entire Medicare program (Social Security Administration 1999).

# Net Effects of the 2022 Age-67 Scenario

If the normal retirement age and Medicare eligibility age were fully phased in to age 67, we project that in 2022 (see Chart 1):

- 15.4 percent of the population aged 65 and 66 (1.33 million people) would retain their Social Security benefits under DI;
- 14.9 percent of the population aged 65 and 66 (1.30 million people) would retain their Medicare eligibility under DI or ESRD; and
- Medicare expenditures for those who retain eligibility via DI or ESRD would be \$12.1 billion, or 32.3 percent of what those expenditures would have been if normal retirement and Medicare eligibility had been set at age 65. 12

The annual estimates indicate that the proportion of the population retaining DI and Medicare eligibility generally increases with the normal retirement and Medicare eligibility ages but remains flat after full implementation of the policy in 2022. In contrast, the number of people who are eligible fluctuates with the phase-in of the policy, as well as with changes in DI eligibility and population size. For example, despite the fact that the percentage of people in the affected age groups who receive DI and Medicare is constant from 2022 to 2040, the number of people who retain DI benefits is lower in 2040 than in 2022. Similar trends exist for Medicare expenditures, even though expendi, ture projections, unlike eligibility projections, are also influenced by increasing health care costs.

# Net Effects of the 2040 Age-70 Scenario

Patterns are similar for the 2040 age-70 scenario during the period of policy phase-in after 2022. Projections under that scenario are also sensitive to the policy's phase-in parameters, as well as to changes in population, DI eligibility, and Medicare expenditures. If the normal retirement age and Medicare eligibility age were fully phased in to age 70, we project that in 2040 (see Chart 2):

- 15.9 percent of the population aged 65 to 69 (2.94 million people) would retain their Social Security benefits under DI;
- 15.1 percent of the population aged 65 to 69 (2.79 million people) would retain their Medi,, care eligibility under DI or ESRD; and
- Medicare expenditures for those who retain eligibility via DI or ESRD would be \$36.8 billion, or 35.4 percent of what those expenditures would have been if normal retirement and Medicare eligibility had been set at age 65.

#### Net Savings

Not surprisingly, net savings from raising the normal retirement and Medicare eligibility ages are larger under the 2040 age-70 scenario—\$67.3 billion compared with \$23.2 billion in the 2022 age-67 scenario. The age-67 scenario projects an 11.1 percent (7.12 million) drop in Medicare enrollment and a 4.3 percent (\$23.2 billion) reduction in Medicare expenditures by 2022 (see Chart 3). The age-70 scenario projects a 16.8 percent (14.48 million) decrease in Medicare enrollment and an 8 percent (\$67.3 billion) drop in Medicare expenditures by 2040.

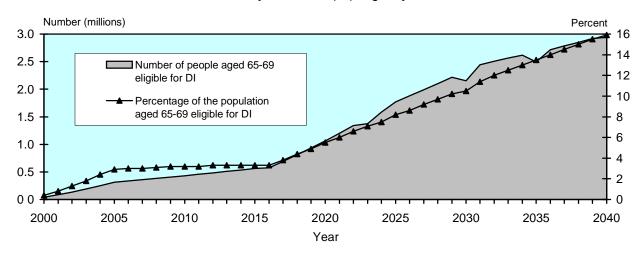
The reduction in Medicare enrollment under both scenarios is much larger than the reduction in expenditures—250 percent larger in the 2022 age-67 scenario and almost 200 percent larger in the 2040 age-70 sce,, nario. That finding is not surprising, because people who are not eligible for Medicare have much lower medical expenditures than those who remain eligible because of DI, ESRD, or age. In essence, both scenarios cut the healthiest portion of Medicare-eligible people from the rolls, so in percentage terms the savings are much lower than the reduction in enrollment.

The annual net savings accruing to the Medicare program are strongly influenced by the size of the population affected by the change and the size of the overall Medicare-eligible population. That result is most evident in the projections for the 2022 age-67 scenario. Because the population aged 65 and 66 is projected to be larger in 2022 than in later years, the estimated effects on total Medicare enrollment and expenditures are also larger in 2022 than in later years. For example, enroll-

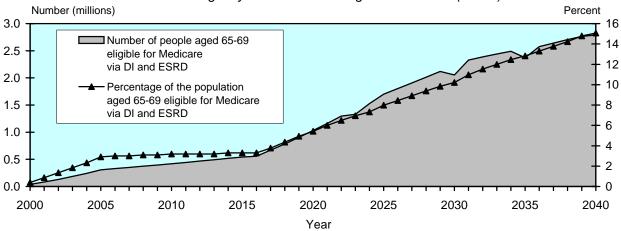
Chart 2.

Projected Disability Insurance eligibility, Medicare eligibility, and Medicare expenditures for the population aged 65-69 under the 2040 age-70 scenario

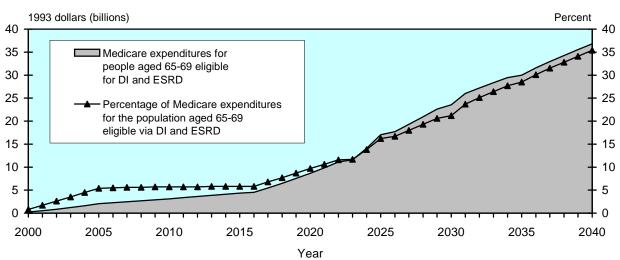
#### Disibility Insurance (DI) eligibility



#### Medicare eligibility via DI and end-stage renal disease (ESRD)



# Medicare expenditures for people eligible via DI and ESRD



ment is expected to fall by 11.1 percent in 2022 but by only 7.5 percent in 2039; expenditures would be reduced by 4.3 percent in 2022 but by only 3.0 percent in 2039 (see Chart 3). The decline in the size of the population aged 65 to 69 after 2022 also explains why savings increase more slowly after 2022 under the 2040 age-70 scenario.

Net savings would be greater to the extent that pro,, longed employment increased taxable earnings. As an upper bound, Medicare trust fund revenues are estimated to increase savings by approximately 10 percent under the 2022 age-67 scenario and 7 percent under the 2040 age-70 scenario. The estimated savings would rise from approximately \$23 billion to \$25 billion in the 2022 age-67 scenario and from approximately \$67 billion to \$72 billion

in the 2040 age-70 scenario. Although those changes increase projected savings, their impact on the Medicare program remains relatively small because the Medicare tax revenues collected from older workers who stay in the workforce are relatively small. Those workers, however, would generate additional Social Security, federal, and state income taxes (all of which are signifi,, cantly higher than Medicare taxes); those tax revenues would greatly increase resources for other government programs.

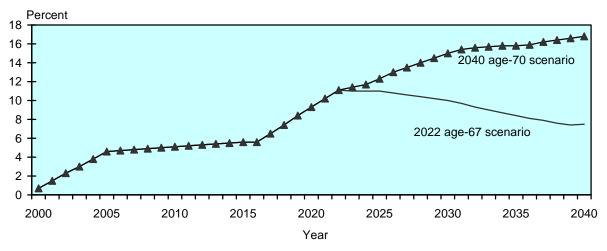
### Comparison with Other Estimates

It is difficult to compare these projections with other estimates because there are few available studies on the

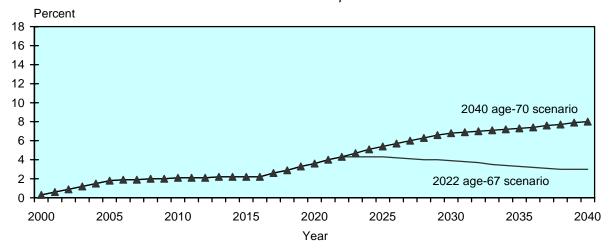
Chart 3.

Projected reductions in Medicare eligibility and expenditures under the 2022 age-67 and 2040 age-70 scenarios

# Reduction in the Medicare-eligible population



#### Reduction in Medicare expenditures <sup>a</sup>



a. Medicare expenditures are measured in 1993 dollars.

potential cost implications of jointly raising the normal retirement and Medicare eligibility ages. A 1998 study by the Congressional Budget Office (CBO) provides the most comparable set of cost estimates.<sup>14</sup> In its hypotheti, cal policy scenarios, it estimated the impact of an in, crease to age 67 in 2025 and to age 70 in 2032.15 The increase to age 67 would reduce Medicare enrollment by 7 percent and expenditures by 3 percent, relative to current projections, by 2030. The increase to age 70 was estimated to reduce enrollment by 20 percent and expen, ditures by 11 percent, relative to current projections, by 2030. Thus, CBO's estimates for raising the normal retirement and Medicare eligibility ages to 67 are roughly similar to those presented above, but the estimates to age 70 are much larger. Two factors account for that differ, ence: full phase-in to age 70 occurs much earlier under the budget office's scenario, and the population of 65- to 69-year-olds is smaller at the time of full phase-in.

#### Limitations

Our approach does not take into account the impact that increasing the normal retirement and Medicare eligibility ages would have on the economic decisions of persons under age 65. Such an increase might enhance the attractiveness of applying for DI benefits, particularly by those in relatively poor health. To the degree that our estimates do not account for that response, we understate the percentage of the total population who will retain DI benefits and, hence, overstate Medicare savings.

In addition, environmental and policy factors that influence program participation and employment deci,, sions, such as macroeconomic conditions and the Social Security Administration's definition of disability, will affect estimates. Depending on the direction of any change in those factors, certain estimates might be under- or overstated.

Finally, we do not consider the extended effects of these policy changes on other programs. As mentioned above, these changes could significantly influence tax revenues. In addition, there are possible interactions of Medicare and DI with other programs, such as Supple,, mental Security Income (SSI) and Medicaid. Those interactions could significantly affect federal expendi,, tures outside of Medicare and DI. For example, if the SSI eligibility age remained at 65 while the normal retire,, ment age and the Medicare eligibility age were raised, some of the DI and Medicare savings would be offset by increases in SSI and Medicaid expenditures.

#### **Conclusions**

Despite certain limitations, the projections under our two scenarios for raising both the normal retirement age and the Medicare eligibility age provide important estimates of the annual costs to the DI and Medicare programs. The projections show that major savings for the Medicare and Social Security programs (even from other proposals) probably will not be realized until after 2020, when the increases are fully phased in and a large share of the baby-boom generation has reached age 65. Under both scenarios, the reduction in Medicare savings is less than proportional to the reduction in enrollment. That occurs because the people who lose their eligibility have much lower Medicare expenditures, on average, than those who continue to qualify for Medicare because of disabil,, ity, end-stage renal disease, or age.

Because the savings from raising the retirement and Medicare eligibility ages are small relative to overall expenditures for the Medicare program, the 2022 age-67 scenario will not significantly improve the solvency of Medicare (or Old-Age and Survivors Insurance) on its own. Nonetheless, savings under that scenario are quite large when compared with spending on other programs. The \$23.2 billion saved in 2022 is equivalent to the just over \$20 billion (in constant 1993 dollars) spent by the federal and state governments for the Temporary Assis,, tance for Needy Families program in 1996. Further, the savings become larger if one factors in the potential increases in tax revenues from the earnings of people who may work longer.

Researchers and policymakers can use the projections presented here to gauge the potential impact of alterna,, tive proposals to raise the normal retirement and Medi,, care eligibility ages. For example, policymakers interested in increasing the savings to Medicare may design policies that ensure full phase-in of the higher retirement and eligibility ages before 2022, when the heart of the baby boom first reaches age 65. Alternatively, policymakers interested in limiting the number of people who lose their Medicare eligibility may propose increasing the retirement and eligibility ages after 2030.

To further evaluate any specific proposal, however, additional research is necessary on the efficiency and equity of raising the normal retirement and Medicare eligibility ages. Specifically, researchers and policymakers need a better understanding of the effects on employment, program participation, and retirement decisions, as well as on distributional consequences, such as who loses benefits, who pays for the costs of the Social Security and Medicare programs, and differences in costs and benefits across generations.

#### Notes

<sup>1</sup>DI-eligible people are defined as those who receive adult Social Security DI payments in a particular month.

<sup>2</sup> There is a 3-year lag between each increase and its effect on benefits for 65-year-olds; that is, each increase shifts the

entire schedule for retirement benefits, beginning at age 62. Consequently, the effect on people age 62 begins immediately. We selected the starting date of 2000 for ease of exposition in presenting the two policy scenarios. Starting the analysis in 2003 would not significantly change the findings.

<sup>3</sup>The phase-in will start with people who turn 62 in 2000 (that is, those born in 1938). After 2005, the normal retirement age will remain at age 66 for 11 more years (birth years 1943 through 1954). For workers who reach age 62 in 2022 or later, the normal retirement age will be 67.

<sup>4</sup> The Social Security Administration (SSA) defines disabil, ity in section 223(d) of the Social Security Act as an "... inability to engage in any *substantial gainful activity* (SGA) by reason of any medically determinable physical or mental impairment which can be expected to result in death or which has lasted or can be expected to last for a continuous period of not less than 12 months." An individual is insured for disability if he or she has worked in a job covered by Social Security for a specified number of quarters. For those who are eligible, there is a 5-month waiting period after the onset of a disability before benefits begin. For a more complete discussion of SSA disability determination rules, see Mashaw and Reno (1996).

<sup>5</sup> People who receive an annuity from the Railroad Retire,, ment system are also eligible for Medicare, though expendi,, tures for that group are small in comparison with those for ESRD- and DI-eligible people. Dependents of DI beneficiaries and persons with ESRD are not automatically eligible for Medicare.

<sup>6</sup>Alternative econometric and descriptive estimates are presented for those aged 55 to 61 and 62 to 64. We chose the age 55-64 model because the sample for the econometric estimates was larger and because, unlike the model for those aged 55 to 61, it included the option of early retirement.

<sup>7</sup>We estimated a series of probit models to predict how DI participation varies with race, education, marital status, age, and several health status variables. We relied on descriptive statistics to develop parameters for Medicare eligibility among male and female DI beneficiaries. We did not use econometric estimates for that group because the only factor that distin,, guishes DI beneficiaries who are eligible for Medicare from those who are not is the 2-year waiting period for Medicare eligibility.

<sup>8</sup> The simulation outcomes are weighted to be nationally representative using a combination of SIPP weights and adjustments based on data from the Social Security Adminis,, tration. The factor used to adjust the SIPP weights was constructed by comparing DI participation statistics from the SIPP weighted samples and Social Security Administration data. Specifically, we adjusted the SIPP weights of men and women aged 55 to 64 to ensure that the weighted DI participa,, tion estimates in SIPP matched the administrative results.

<sup>9</sup> We used special MCBS variables to identify people aged 65 and 66 who became eligible for Medicare via DI or who had end-stage renal disease before age 65. That sample includes most people who might retain their Medicare eligibility under a higher age for normal retirement or for Medicare eligibility. Next, we applied an estimated econometric model from SIPP to

simulate the remaining MCBS cases who might be eligible under higher retirement and Medicare eligibility ages (for example, DI recipients who started receiving their benefits at age 64). The estimated SIPP model includes demographic and health variables with distributions comparable with those for the same variables in the MCBS. We adjusted the total simulated Medicare-eligible cases for the noninstitutionalized population to be equal to the total in our SIPP simulations.

<sup>10</sup> We used this information to adjust our DI simulations from the SIPP data to account for institutionalized individuals.

<sup>11</sup>We first calculated Medicare costs for those who would retain their eligibility under a higher normal retirement age and Medicare eligibility age. We then calculated Medicare costs for all individuals aged 65 and 66. Medicare expenses "retained" after raising the retirement and eligibility ages are based on expenditures for those who remained eligible.

<sup>12</sup> We used the consumer price index to adjust the Medicare expenditure projections for inflation to reflect real 1993 dollars.

<sup>13</sup> These upper bounds are based on an analysis of earnings information from the 1999 Current Population Survey. First, we calculated average earnings of men aged 62 to 64 to provide an upper bound on per capita earnings for both men and women. We then multiplied earnings by the projected population size and the Medicare tax rate (2.9 percent, including both employer and employee shares). We subtracted from that amount Medicare revenues generated by those aged 65 and 66 and 65 to 69 who are currently working, thus obtaining the "marginal" increase in Medicare taxes associated with each scenario. Finally, we adjusted the amount for inflation.

<sup>14</sup>The Social Security Administration (1999) and Waidmann (1998) also provide estimates of raising the age for normal retirement, Medicare eligibility, or both. The SSA estimates are not directly comparable with ours because SSA examined only the impact of raising the normal retirement age. Waidmann estimated the effects of a joint increase to age 67. Assuming that there was no rise in the rates of Medicaid and DI participa, tion among 65- and 66-year-olds and that the normal retirement and Medicare eligibility ages were raised in 1992, Waidmann estimated that his policy scenario would reduce the total number of people eligible for Medicare by 11.3 percent and expenditures by 6.2 percent. Our estimates for retained Medicare eligibility and expenditures for the population aged 65 and 66 were larger (Wittenburg and others 1999). There are several possible explanations for that difference, the primary one being that Waidmann identified Medicare-eligible people only as those who started receiving Medicare before age 65, whereas we include those whom we would expect to enroll in DI and Medicare as a result of the higher retirement and eligibility ages. See Wittenburg and others (1999) for more details.

<sup>15</sup>The CBO scenario under which both the normal retirement age and the Medicare eligibility age increase to 67 is essen,, tially the same; however, we assume that the phase-ins begin in 2000 and CBO assumes that they start in 2003 for the population aged 65 and 66. CBO makes that assumption because the phase-in starting in 2000 is effective for 62-year-olds, not 65-year-olds.

- Advisory Council on Social Security. 1997. *Final Report of the* 1994-1996 Advisory Council. Available at <a href="https://www.ssa.gov/policy/adcouncil/report/toc.htm">www.ssa.gov/policy/adcouncil/report/toc.htm</a>.
- Center on Budget and Policy Priorities. 1998. How Would Various Social Security Reform Plans Affect Social Security Benefits? Available at <a href="https://www.cbpp.org/9-8-98socsec.htm">www.cbpp.org/9-8-98socsec.htm</a>.
- Congressional Budget Office. 1998. *Long-Term Budgetary Pressures and Policy Options*. Report to the Senate and House Committees on the Budget. Washington, D.C. May.
- Mashaw, J., and V. Reno, eds. 1996. *The Environment of Disability Income Policy: Programs, People, History, and Context*. Final Report of the Disability Policy Panel, Washing, ton, D.C.: National Academy of Social Insurance.
- National Bipartisan Commission on the Future of Medicare. 1999. *Building a Better Medicare for Today and Tomorrow*. Available at medicare.commission.gov/medicare/bbmtt31599.html.
- National Commission on Retirement Policy. 1999. *The 21st Century Retirement Security Plan*. Available at <a href="https://www.csis.org/retire/NCRPFinal.pdf">www.csis.org/retire/NCRPFinal.pdf</a>.
- Social Security Administration, Office of the Actuary. 1999. *The 1999 OASDI Trustees Report*. Available at www.ssa.gov/OACT/TR/TR98/index.html.
- Waidmann, T. 1998. "Potential Effects of Raising Medicare's Eligibility Age." *Health Affairs* 17(2):156-164.
- Wittenburg, D.; D. Stapleton; and S. Scrivner. 2000. Projected Impacts of an Increase in the Social Security Retirement Age and the Medicare Eligibility Age on Social Security Disability Insurance and Medicare from 2000 Through 2040. AARP Public Policy Institute Report No. 2015. Wash,, ington, D.C.: American Association of Retired Persons. September.
- Wittenburg, D.; D. Stapleton, S. Scrivner; and R. Hobbie. 1999. The Impact of Changes in the Social Security Retirement Age and the Medicare Eligibility Age on Social Security Disability Insurance, Medicare and Employment. AARP Public Policy Institute Report No. 9911. Washington, D.C.: American Association of Retired Persons. August.
- Zayatz, T. 1999. Personal communication from the Social Security Administration, Office of the Actuary, on SSA projections of DI participation and SSA area population.