The Effect of Disability Insurance on Beneficiaries’ Mortality

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Key Findings and Policy Implications

This paper examines how Social Security Disability Insurance payments affect the mortality of program beneficiaries. It uses SSA administrative data on all new DI beneficiaries from 1997 to 2009, and applies a methodology that takes advantage of the “bend points” in the DI benefit formula linking past earnings to DI replacement rates. The paper shows that:

- The marginal replacement rate of DI has several bend points. The marginal rate drops from 90 to 32 percent at a “lower bend point,” from 32 to 15 percent at an “upper bend point,” and, for combined worker and dependent benefits, from 85 to 48 percent at a “family maximum bend point.” The paper analyzes changes in the slope of the relationship between earnings and mortality around these bend points.

- There is a substantial effect of DI payment amounts on mortality, particularly for the lowest-income beneficiaries. The investigators’ preferred estimates suggest that at the lower bend point, an increase of $1,000 in annual DI payments decreases beneficiaries’ probability of mortality over the subsequent four years by 0.47 percentage points per year, corresponding to an elasticity of -1.11.

Information on how DI benefits relate to health and longevity is one of many factors that might be used to evaluate disability insurance policy. In particular, the large mortality gains from DI benefits estimated in this study suggest a substantial value to the program, and an important factor in conducting cost-benefit analyses of benefit amounts. As illustration, even using a very modest value of an additional year of life of $100,000 and considering only a single year’s mortality experience, an incremental $1000 in the DI benefit amount is associated with a $470 value in mortality reduction. Using statistical life values of as much as $9 million, and considering a mortality return beyond one year, the estimated impact of DI benefit payments is that much greater.

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