

# The protective effects of a healthy spouse: Medicare as the family member of last resort

## Introduction

As populations age, long-term care becomes a central challenge. Projections for the United States and other high-income countries point to rapid growth in the share of adults who need help with the basic activities of daily living. Meeting that need has become a first-order issue for public budgets worldwide.

Long-term care is different from most other forms of health care because there exists a comparable alternative at home. Unlike, for example, surgery or diagnostic tests, help with the activities of daily living can be supplied informally by one's family. Long-term care thus comes in two forms: formal and informal. Formal care consists of nursing home stays, skilled nursing services, and paid home health aides. Informal care consists of the unpaid help of a spouse or child at home.

Little is known about informal care as it's difficult to measure and even more difficult to value. When providing care, family members don't clock in, track their hours, or log their effort. As a result, informal care is typically unobserved and unmeasured. This has led to a wide range of estimates of the value of informal care, from \$86 billion to more than \$500 billion. The existence of informal care complicates standard public insurance design. The public sector must decide not only how much to pay for formal care but also when to pay, given that a private alternative—informal care—exists. Across the world, approaches vary. The Dutch system, for example, explicitly reduces a married beneficiary's eligibility for publicly funded care when a healthy spouse is present. As a result, the Dutch effectively raise the price of formal care when informal care is available. The long-term-care system in Germany does something close to the opposite—charging higher premiums to adults without children because they're more likely to need formal care. America's Medicare program, in contrast, offers identical coverage to all beneficiaries regardless of access to informal care. Those contradictory rules signal genuine uncertainty regarding how public coverage of long-term care should take the availability of informal care into account.

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In this work, we address this question in two steps. In the first step, we use novel data from the U.S. Medicare program identifying couples to provide causal evidence on the value of informal care from a healthy spouse. Using an event-study design, we find when one spouse suffers a sudden heart attack or stroke (the “shock spouse”), the probability that their partner (the “outcome spouse”) enters a skilled nursing facility (SNF) increases by 18%. The sudden loss of a caregiver thus shifts the demand curve for formal care.

There are two main mechanisms that can drive the increase in formal care. We first assess the presence of a health effect. Motivated by prior work, we test the hypothesis that adverse health shocks to one spouse can lead to a worsening of the other spouse’s health and thus a greater need for care. Health effects may arise when those with preexisting conditions experience the short-term disruption associated with a spouse’s health shock. That short-term disruption, in turn, may stem from emotional distress, a deterioration in sleep quality, or the transition to a new type of care provision at home. Overall, outcome spouses exhibit an increased risk of hospitalization of 8.9% in the first month following the event, where the risk of an emergency department (ED) visit increases by 23.3% in that month.

We next examine evidence for a potential substitution effect. Outcome spouses with existing needs for care may switch from informal care to formal care once their partner is incapacitated. In line with this conjecture, we find that the effects are larger when the spouse who experiences the heart attack or stroke is incapacitated for a longer period of time. We also show stronger effects when the outcome spouse is sicker and has more care needs.

We decompose the increase in SNF stays into marginal stays due to declining health of the outcome spouse versus substitution away from informal care toward formal care, conditional on health. We find that around 90% of the overall effect is substitution. That is, much of the increase is driven by a shift from informal care to formal care that must be covered by Medicare. This then amounts to a fiscal externality of the index event. In aggregate, we estimate that Medicare pays \$734.3 million in care driven by that externality each year.

In addition, we study a particular feature of Medicare’s reimbursement for formal care: a sharp rise in out-of-pocket costs after 20 days in a SNF. Beneficiaries with an able spouse at home are far more likely to exit on day 20, just before copayments increase, than those whose spouse was just incapacitated. That pattern suggests the loss of informal care leads to a more price-inelastic demand for formal care—one that persists for some time after the initial health shock. We show that in a standard model this differential demand response implies people are willing to pay roughly four times more for formal care when their spouses become incapacitated.

In the second step of our analysis, we interpret these estimates with a simple insurance-design framework. We use our estimates of price sensitivity to show that those whose spouses are incapacitated get much more surplus from SNF stays than those who have healthy spouses at home. We then use our framework to show that because households without an able spouse face a steeper marginal-utility loss from leaving formal care and thus a lower demand-response to coverage, optimal coverage is more generous for them. Our estimated model implies optimally tailoring coverage in this way would cut moral-hazard-driven deadweight loss by roughly two-thirds while holding government spending constant.

Our results demonstrate the importance of the public provision of formal elderly care when spouses cannot provide informal care. One policy response is a family-specific deductible. Such a deductible would effectively provide formal care at lower prices to households with an incapacitated spouse. As a result, family-specific deductibles would lower copayments for those whose demand curves for formal care have become more inelastic, and thus whose consumption is less driven by moral hazard. Our findings also speak to the long-term secular trends in the aging of the population. Gerontologists sometimes refer to elderly patients who lack a family member to care for them as “elder orphans.” As the population ages, elder orphans are predicted to become more prevalent, and, in turn, their increasing number may indeed translate to a greater need for more resources to be devoted to formal care.

## About the authors

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