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Long-Term Care Insurance Demand Limited By Beliefs About Needs, Concerns About Insurers, And Care Available From Family

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ABSTRACT **In spite of the high costs and major financial risks involved in long-term care, the majority of older Americans do not own long-term care insurance. We conducted a survey designed to learn more about the role of the following four broad factors in affecting the demand for long-term care insurance: preferences and beliefs, such as notions about the likelihood that one will become disabled; substitutes for insurance, such as savings that could be spent on long-term care; substitutes for formal care, such as care provided by family members; and features of the private market, such as concerns about the high costs of coverage. We found evidence that each of these factors was important in explaining low demand for long-term care insurance. For example, people who believed they might need long-term care were more likely to purchase long-term care coverage. People who had alternative ways to pay for care, such as through savings, or those who could use unpaid care from family members, were less likely to purchase insurance. Features of the private market, such as people's lack of trust in insurers and the high cost of coverage, made people less likely to buy long-term care insurance. We conclude that policy interventions designed to address only one factor limiting the purchase of long-term care insurance are unlikely to dramatically increase demand for long-term care insurance.**

Long-term care is the largest out-of-pocket expenditure risk for the elderly. Although most episodes of long-term care last one year or less, 17 percent of people age sixty-five or older will receive care in a long-term care facility for two or more years.[1] The cost of this care is substantial, with annual nursing home costs averaging more than $75,000 per year.[2] Despite this expenditure risk, only 10–15 percent of the elderly population is covered by private long-term care insurance.

Theories about the small size of the market for such insurance point to both supply-side and demand-side factors. Supply-side factors include transaction costs, or the costs incurred when selling policies, such as hiring brokers; asymmetric information, or the fact that buyers may know more about their likelihood of incurring long-term care expenses than insurers do; and issues that arise from long-term contracting, such as the difficulty insurers have in correctly predicting nursing home utilization many years into the future and thus pricing policies appropriately. Although supply-side market imperfections exist, research suggests that addressing them will not be effective unless demand-side issues are also taken into consideration.[3]

A few studies have examined hypotheses about specific factors that may affect the demand for long-term care insurance. These include the existence of Medicaid, which pays for nursing

home and home and community-based care for qualified people with disabilities;[4,5] the role of tax subsidies;[6,7] and bequest motives, or a person's desire to leave assets to loved ones and not spend his or her entire estate on long-term care.[8] However, these studies generally focus on one or two factors in isolation, and several other hypotheses have not been tested at all.

In this study we analyzed data from a survey we designed specifically to learn about factors limiting the demand for long-term care insurance. We asked respondents questions about insurance ownership as well as many other questions designed to test a comprehensive range of hypotheses about the purchase of such insurance. We organized the set of hypotheses into the following four broad categories: preferences and beliefs; substitutes for insurance; substitutes for formal care; and features of the private market.

Preferences and beliefs included factors such as bequests; state-dependent utility, or the notion that the satisfaction one derives from a good or service is not the same when one is healthy as when one is sick; and beliefs about the likely need for care. Substitutes for insurance included such factors as the ability to pay for care with savings, home equity, or family resources; a plan to rely on Medicaid; or mistaken beliefs that long-term care is covered by Medicare. Substitutes for formal care included primarily the expectation of care from family members rather than a reliance on formal market-based care. Features of the private market included concerns about cost or affordability of coverage and distrust of insurers. In our conclusion, we discuss the policy implications of our findings.

Study Data And Methods

DATA Our survey was fielded to the RAND American Life Panel, a sample of approximately 3,000 households whose members are regularly interviewed over the Internet.[9,10] We first asked people to rate their knowledge of long-term care insurance. We then provided the following information: "For purposes of this survey, when we use the term 'long-term care,' we are referring to assistance with personal care needs such as dressing, bathing, getting in and out of bed, using the bathroom or eating."

After posing questions regarding the coverage of long-term care by public insurance programs, described in more detail below, we defined *long-term care insurance* as "a type of insurance that helps to pay for extended stays in a nursing home or assisted living facility, or for personal or medical care in your home. It is typically separate from your regular health insurance and requires paying separate premiums." We then asked respondents if they owned a long-term care policy.

The remainder of the survey included three general types of questions. First, we asked for open-ended explanations of the most important reason respondents owned, or did not own, long-term care insurance. The advantage of an open-ended response box was that we were not prompting the respondents and were able to discern any important factors that the literature had not considered.

Second, we asked questions to ascertain characteristics of the respondents, such as their financial circumstances, financial literacy, and self-assessed chances of needing care in the future.

Third, and unique to our survey, we asked questions designed to assess respondents' attitudes toward factors related to long-term care, ranging from family issues to beliefs about whether long-term care was adequately covered by other programs or insurance policies, and views about insurance companies' solvency. In most cases, respondents were asked to report, on a five-point scale, whether they agreed or disagreed with relevant statements on the survey.

METHODS For each question we divided respondents into the following three groups: those who agreed or strongly agreed; those who neither agreed nor disagreed; and those who disagreed or strongly disagreed.[11] Exhibit 1 shows the ownership rate of long-term care insurance among respondents who disagreed or strongly disagreed with each statement, and the regression-adjusted change in ownership among those who agreed or strongly agreed, as explained in the exhibit notes. Additional details, including the fraction of respondents who agreed or disagreed and the long-term care insurance ownership rate in each category, are provided in the Technical Appendix.[10]

SAMPLE CHARACTERISTICS In the period May–September 2011 we surveyed all American Life Panel participants age fifty or older. We received 1,569 completed surveys, for a response rate of 79.5 percent. Exhibit 2 shows summary statistics for standard demographic characteristics. For example, the average age of respondents was sixty-one, and 16 percent reported themselves to be in fair or poor health on a five-point scale.

Although the American Life Panel attempts to recruit a nationally representative sample, our respondents differed from a benchmark sample of people older than age fifty in the Health and Retirement Study, which is itself nationally representative of this older population.[12] Our respondents were somewhat younger (sixty-one versus sixty-seven years old), less likely to be nonwhite (8 percent versus 14 percent), and less likely to report being in fair or poor health

EXHIBIT 1

Long-Term Care Insurance Ownership Rates By Response To Survey Statements, Respondents Age 50 Or Older, May–September 2011

Statement	Rate of ownership if disagree/strongly disagree	Regression-adjusted change in ownership if agree/strongly agree
It is important to leave an inheritance to my loved ones	17.2	9.4***
At some point in the future it is likely that I will no longer be able to live independently because of my health	14.2	12.0***
Even without long-term care insurance, I would have the means to pay for long-term care if I were to need it	23.1	-9.8***
Medicare covers the extended use of long-term care for those over 65	22.3	2.5
Medicaid covers the extended use of long-term care for those who qualify	18.6	4.4*
It is important to me that I not create a financial burden for my family if I need long-term care	17.5	5.1
If I need long-term care, a family member will be able to take care of me	27.3	-8.2***
I would prefer receiving care from a professional health aide or nurse rather than my spouse or another family member	15.7	9.1***
It is a child's obligation to help a parent with long-term care needs	23.2	-3.2
I am concerned about my ability to afford the premiums for a long-term care insurance policy	46.1	-29.4***
Long-term care insurance policies are appropriately priced given the cost of the care they cover	14.0	24.0***
I am concerned that an insurance company may not remain in business long enough to pay for my care	33.9	-14.6***
I am concerned that once I own a long-term care insurance policy, an insurance company might raise my premiums	35.3	-14.1***
I am concerned that an insurance company might deny reasonable claims for long-term care	30.0	-8.0***

SOURCE Authors' calculations. **NOTES** Regression-adjusted change represents the long-term care insurance ownership rate among respondents who agreed or strongly agreed with the statement minus the ownership rate among those who disagreed or strongly disagreed, controlling for age, sex, race or ethnicity, marital status, level of completed education, income, and wealth. Distribution of responses and raw ownership rates across responses are available in the online Technical Appendix (see Note 10 in text). The baseline level of long-term care insurance ownership in our sample is 21.86 percent. *$p < 0.10$ ***$p < 0.01$

(16 percent versus 28 percent) than participants in the Health and Retirement Study. Our sample was also more highly educated, with higher incomes and greater wealth. We also found higher rates of long-term care coverage (22 percent versus 13 percent) among our respondents, which are attributable to these sampling differences (for additional details, see the Technical Appendix).[10]

Our sample's self-reported knowledge of long-term care insurance was low. Seventy-two percent of respondents knew "a little," and only 7 percent knew "a lot" about it. Even among those who owned such insurance, only 18 percent responded that they "knew a lot." Nonetheless, 40 percent agreed or agreed strongly with the statement that they have "thought a lot about needing long-term care" (data not shown).

LIMITATIONS We emphasize that the results presented here have not established causality, and that they are subject to several potential sources of bias. First, people may rationalize their purchase of insurance by answering in ways that support the wisdom of this decision, such as agreeing with statements that the insurer will remain solvent.

Second, some of the correlations could be driven by reverse causality. For example, buying long-term care insurance may lead people to become more educated about the probability of needing care. Finally, the selected nature of our sample suggests some caution when generalizing the results.

Study Results

PREFERENCES AND BELIEFS

▶**STATE-DEPENDENT UTILITY:** Long-term care insurance is designed to transfer a person's wealth from one state, being healthy and paying premiums, to another, being sick or disabled and receiving care. Standard economic models assume that the marginal utility of consumption—or the satisfaction that one derives from an additional unit of a good or service—is the same regardless of which state one is in. If, instead, the marginal utility of consumption is different when one is healthy than when one is disabled, the desirability of long-term care insurance will change.

It may be that the marginal utility of another dollar is lower for a person in a nursing home than for a healthy person because the patient is unable to enjoy many of the goods and services on which healthy people typically spend money. Conversely, the marginal utility of another dollar

may be extremely high for a nursing home resident because it can pay for higher quality of care. The limited evidence suggests that the marginal utility of consumption declines as health deteriorates.[13] However, whether this result applies equally to all people and how the marginal utility of another dollar in healthy versus disabled states is related to insurance purchase have not been examined.

We employed a new question to assess whether financial resources were more valuable to people when they were healthy or when they were sick. Respondents were asked, "When thinking about long-term care, are financial resources more valuable to you when you are in poor health, so that you can use the resources to provide for your care, or when you are in good health, so that you can use the resources to pay for other goods and services that you enjoy?"

Respondents were relatively evenly divided between preferring financial resources in the healthy or sick states, with a sizable number also wishing to divide resources equally between the two states. Of those who preferred resources when sick, 24.6 percent had long-term care insurance—approximately five percentage points greater ($p = 0.0243$) than those who preferred resources when healthy, 19.2 percent. This difference persisted in a multivariate setting when we controlled for other differences across the two groups such as income, wealth, education, and health status. These results suggest both that people differ in whether they prefer to have additional financial resources when sick or when healthy and that this preference is an important component of demand for long-term care insurance.

▶**BEQUEST MOTIVES:** The effect of bequest motives on the demand for long-term care insurance is theoretically ambiguous.[8] On the one hand, long-term care insurance protects bequests by reducing out-of-pocket care expenses, which makes the coverage valuable to some people who wish to leave a bequest. On the other hand, those with a strong bequest motive may prefer to self-insure and avoid the cost of insurance premiums in the hope that not all money set aside for long-term care will be needed, and some of it can be left as a bequest.

We asked respondents to rate their agreement with the statement, "It is important to leave an inheritance to my loved ones." Exhibit 1 shows that after wealth was controlled for, rates of long-term care insurance coverage were approximately 9.4 percentage points higher among the 48 percent of respondents who valued leaving an inheritance, compared to those who disagreed or strongly disagreed with the statement. This highly significant result suggests that people with bequest motives were more likely to buy insurance—supporting the hypothesis that insurance protects resources that can be bequeathed.

EXHIBIT 2

Demographic Characteristics Of Respondents Age 50 Or Older, May–September 2011

Characteristic	Mean	Standard deviation
Percent owning long-term care insurance	21.86	41.34
Age (years)	61.28	8.42
Percent female	57.36	49.47
Percent married	63.86	48.06
Percent in fair/poor health	15.81	36.49
EDUCATION—PERCENT WITH:		
No more than high school diploma	19.06	39.29
Some college but no degree	37.54	48.44
College degree	23.52	42.42
Graduate degree	19.89	39.93
RACE/ETHNICITY—PERCENT WHO ARE:		
White	91.52	27.86
African American	5.93	23.62
Other race	2.55	15.77
Hispanic	3.12	17.40

SOURCE Authors' calculations. **NOTES** The table represents 1,569 observations. Respondents' ages ranged from 50 to 110 years. All entries other than age represent percentages.

▶**BELIEFS ABOUT THE NEED FOR CARE:** How highly people value long-term care insurance should depend on their expectation of needing care. We asked respondents to rate their agreement with the statement, "At some point in the future it is likely that I will no longer be able to live independently because of my health." Approximately 45 percent of the sample agreed or strongly agreed with this statement, and 20 percent disagreed or strongly disagreed. Among those who agreed, 27 percent had long-term care insurance, compared to only 14 percent of those who disagreed, and this difference persisted when we controlled for observable characteristics (Exhibit 1). Therefore, consistent with previous research,[14] we found that beliefs about the need for long-term care were strongly correlated with insurance coverage.[15]

Of course, reverse causality could be a factor, if the reduced cost of care stemming from insurance coverage leads people with insurance to anticipate using more care than people without insurance—an effect commonly referred to as moral hazard. However, the relationship may be understated if many of those who expect to need care cannot obtain insurance because of preexisting conditions or underwriting requirements.

SUBSTITUTES FOR INSURANCE

▶**SELF-INSURING:** We asked respondents to rate their agreement with the statement, "Even without long-term care insurance, I would have the means to pay for long-term care if I were to

need it." The majority of respondents (59 percent) disagreed or strongly disagreed with the statement. After we controlled for observable characteristics, those who disagreed or strongly disagreed with the statement were nearly ten percentage points more likely ($p = 0.0017$) to own long-term care insurance than those who agreed or strongly agreed (Exhibit 1). Thus, having other resources to pay for formal long-term care services can serve as a substitute for formal insurance.

▶**MEDICAID AND MEDICARE:** Previous research has shown that the structure of Medicaid can explain why many wealthy people do not purchase insurance.[4,16] For instance, Medicaid pays for long-term care services only after insurance benefits (if any) are applied, which implies that those who purchase insurance pay for benefits that may be redundant of what Medicaid would otherwise cover. Although Medicare does not cover much long-term care, some people may mistakenly believe that it does. If people believe that these programs provide adequate insurance, demand for private coverage would be reduced.

After defining *long-term care*, but before defining *long-term care insurance*, we asked respondents if they agreed with the following statements: "Medicare covers the extended use of long-term care for those over 65" and "Medicaid covers the extended use of long-term care for those who qualify." Although a majority of respondents answered these questions correctly, 29 percent mistakenly believed that Medicare covered such care.

However, these beliefs did not appear to be correlated with ownership of long-term care insurance. Respondents who believed that Medicaid covered the extended use of long-term care had higher rates of coverage than those who did not (Exhibit 1), although this difference was only weakly significant ($p = 0.0746$). This result may indicate that people who were knowledgeable about the Medicaid program wanted to ensure that they could afford to pay for long-term care in a higher-quality private-pay facility, rather than having access only to facilities that would accept Medicaid payment.

In results not shown, we also analyzed joint beliefs about Medicaid and Medicare and found no meaningful differences in ownership rates across different beliefs. However, the results were somewhat sensitive to how the responses were combined. The finding that beliefs about Medicare and Medicaid coverage were not correlated with ownership was not inconsistent with the findings of the prior literature that Medicaid can crowd out private insurance.[4,16] As long as people know that there is some means-tested payer of last resort, then the existence of these programs may still reduce people's demand for insurance.

▶**FAMILY RESOURCES:** Another source of financial resources may be the family. Risk sharing within families has been shown theoretically to reduce the demand for other insurance products such as annuities.[17] However, we know of no study that has examined whether this mechanism operates in the case of demand for long-term care insurance.

We asked respondents to rate their agreement with the statement, "It is important to me that I not create a financial burden for my family if I need long-term care." Eighty-seven percent agreed or strongly agreed with this statement. Rates of insurance ownership were ten percentage points higher for those who agreed or strongly agreed than for those who neither agreed nor disagreed, after we controlled for observable differences, and this difference was highly significant ($p = 0.0035$).

However, the 3.6 percent who disagreed or strongly disagreed did not provide enough statistical power for us to detect a significant difference between the two extreme categories (Exhibit 1). Nonetheless, we cannot rule out the possibility that the potential for financial support from family members plays a role in discouraging the demand for insurance.

SUBSTITUTES FOR FORMAL CARE Family members may also serve as direct substitutes for formal care. Indeed, estimates of the economic value of informal—that is, unpaid—care are in the hundreds of billions of dollars annually.[18–20] However, people differ in the availability of family members who can provide care and in preferences for formal versus informal care. Although family members may provide more personal and affectionate assistance, a parent may be uncomfortable having a child help with bathing, using the toilet, or similar needs.[21]

To examine these issues, we presented respondents with a series of statements regarding family care and asked them to rate their agreement on a five-point scale. More than one-third of respondents disagreed or strongly disagreed that a family member would be able to provide care, and these people were much more likely to own insurance. Insurance rates were 27 percent for those who did not anticipate having an available family member versus 18.5 percent for those who did. The regression-adjusted difference was 8.2 percentage points, or 30 percent (Exhibit 1).

As we hypothesized, respondents were relatively equally divided in their tastes for family care. Forty percent of respondents stated a preference for professional care, while 31 percent preferred care from family members, and the

remainder stated no preference. Among those who preferred care from professionals, 26.1 percent had long-term care insurance, compared to 15.7 percent among those who preferred care from family members. The regression-adjusted increase of 9.1 percentage points, or 58 percent (Exhibit 1), was large and highly significant, which suggests that preferences regarding the type of caregiver were an important factor in the decision to purchase long-term care insurance.

Finally, we assessed how attitudes differed with regard to familial obligations. Nearly 50 percent of respondents disagreed or strongly disagreed with the statement that it is a child's obligation to provide care for a parent with long-term care needs, while 20 percent agreed or strongly agreed. Despite the strong opinions on this point, there was relatively little difference in long-term care insurance coverage across the groups (Exhibit 1).

FEATURES OF THE PRIVATE MARKET

▶**PRICE AND AFFORDABILITY:** In the open-ended responses, the cost of long-term care insurance was the most frequently cited reason for not purchasing it, given by 57 percent of respondents. Many respondents simply gave the one-word answer, "Cost." This response could refer to any one of the following factors: the insurance price was not actuarially fair given the respondent's subjective risk assessment; the administrative expenses added to the price of the policy were too high; and although the respondent would value the insurance, he or she was unable to afford the premiums.

Almost one-fifth of the total sample specifically mentioned affordability, with comments such as: "I cannot afford it!" Fewer than 3 percent of the respondents mentioned costs versus benefits, in comments such as: "Too expensive for little coverage."

A large majority of respondents were concerned about the affordability of premiums. Seventy-one percent agreed or strongly agreed with the statement, "I am concerned about my ability to afford the premiums for a long-term care insurance policy." Not surprisingly, the rate of coverage was the greatest among those who were not concerned, reaching 46 percent (Exhibit 1). Of those who were concerned about paying the premiums, 14 percent already had coverage and perhaps were in danger of having their policy lapse because they could not continue to pay for it.

To assess the importance of "loads," or administrative expenses added to the price of the policy, as distinct from the cost of the insurance itself, we asked respondents to rate their agreement with the statement, "Long-term care insurance policies are appropriately priced given the cost of care they cover." Fifty-five percent of the respondents neither agreed nor disagreed with the statement, a result that was consistent with people generally knowing very little about the product. Respondents who agreed were significantly more likely to have coverage relative to those who disagreed (39 percent versus 14 percent) (Exhibit 1).

Certainly these results could be a result of justification bias, with respondents who had a policy validating their decision by stating that it was appropriately priced. However, the results were consistent with the idea that some people perceived that the insurance policy loads deterred purchases.

▶**COUNTER-PARTY RISK:** Long-term care insurance policies are typically purchased long before they are expected to pay benefits. If people have concerns about counter-party risk—that is, the risk of insurers' going bankrupt and leaving policy owners without recourse—demand for coverage would be reduced. Consumers might also interpret the recent exit of several major insurers from this market as cause for concern.

We asked respondents to rate their agreement with the statement, "I am concerned that an insurance company may not remain in business long enough to pay for my care." Forty-six percent of respondents agreed or strongly agreed with this statement, and only 19 percent disagreed or strongly disagreed.

Coverage was highly correlated with beliefs regarding counter-party risk, with ownership rates of 16.7 percent among those who were concerned that insurers may not remain in business versus 33.9 percent among those who were not (Exhibit 1). The regression-adjusted difference of 14.6 percentage points was both large and significant ($p < 0.001$), which suggests that counter-party risk was important in decisions about whether to buy coverage. Justification bias may have been present here as well, because respondents with long-term care insurance policies may have been less likely than others to acknowledge the risk of bankruptcy.

▶**TRUST IN INSURERS:** People may also have different beliefs about the degree to which they can trust insurers of long-term care in other respects. Insurers can raise premiums on classes of policies, and many have recently done so. There is also the perceived risk that an insurer might deny claims submitted by an insured person.

Respondents were concerned about these risks. Fifty-eight percent believed that premiums might go up, and 46 percent were concerned that an insurance company might deny reasonable claims. For those who agreed or strongly agreed that premiums might rise or that claims might

be denied, rates of long-term care insurance were 14.1 and 8.0 percentage points lower, respectively, than rates for those without such concerns, after we corrected for observable differences (Exhibit 1).

Discussion And Conclusion

Our results suggest that multiple factors limit demand for long-term care insurance. Preferences and beliefs concerning bequest motives, the marginal utility of consumption in sick versus healthy states, and the likelihood of needing care were correlated with long-term care insurance coverage. Respondents who had alternative ways to pay for care, such as savings or resources from other family members, were less likely than others to purchase private insurance. The ability to substitute unpaid care for formal care, and preferences among types of caregivers, also mattered. Finally, features of the private market—such as counter-party risk, a lack of trust in insurers, and pricing—also appeared to be important factors in decisions about purchasing long-term care insurance.

Our results have important implications for public policy. In recent years, policy makers have attempted to increase private coverage for long-term care. However, multiple factors appear to limit demand, and there are substantial differences in which factors people consider the most important. Thus, a policy intervention that addresses only one market limitation, such as pricing, without addressing other concerns, such as counter-party risk, is unlikely to increase demand dramatically. This conclusion may help explain the limited success of recent programs.[3]

As part of the Affordable Care Act of 2010, Congress acted to partially supplant the private market for long-term care insurance. Specifically, Congress established the Community Living Assistance Services and Supports (CLASS) Act, creating a public program for long-term care insurance, presumably to address concerns about pricing and counter-party risk.

Although our study suggests that these factors are relevant in the purchase decision, it also suggests that other factors—such as state-dependent utility—would limit demand for CLASS policies in the same way that they do for private policies. We may never know the extent to which this is true, because the CLASS program was placed on hold in October 2011, before it could be implemented, as a result of concerns about its projected drain on the federal treasury.

To the extent that limited demand for insurance results from consumers' preferences or the availability of substitutes for insurance, demand might be low even in a perfectly functioning market. Given this, the efficient allocation of scarce public resources for long-term care would need to balance the benefits of targeting resources to people who lack substitutes for private coverage, such as savings or access to informal care, with the cost of target assistance, such as the likely disincentives such policies would create with regard to savings behavior or insurance purchase decisions.

We anticipate that the results in this study will be useful in both guiding future research and informing policy discussions regarding strategies to reduce the out-of-pocket expenditure risk associated with long-term care. ■

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NOTES

1 Kemper P, Komisar HL, Alecxih L. Long-term care over an uncertain future: what can current retirees expect? Inquiry. 2005;42(4):335–50.
2 Iglehart J. Long-term care legislation at long last? Health Aff (Millwood). 2010;29(1):8–9.
3 Brown JR, Finkelstein A. The private market for long-term care insurance in the U.S.: a review of the evidence. J Risk Insur. 2009;76(1):5–29.
4 Brown J, Finkelstein A. The interaction of public and private insurance: Medicaid and the long-term care insurance market. Am Econ Rev. 2008;98(3):1083–102.
5 Brown J, Coe N, Finkelstein A. Medicaid crowd-out of private long-term care insurance demand: evidence from the Health and Retirement Survey. Tax Policy and the Economy. 2007;21:1–34.
6 Goda GS. The impact of state tax subsidies for private long-term care insurance on coverage and Medicaid expenditures. J Public Econ. 2011;

95(8):744–57.
7 Courtemanche C, He D. Tax incentives and the decision to purchase long-term care insurance. J Public Econ. 2009;93(2):296–310.
8 Lockwood L. Incidental bequests: bequest motives and the choice to self-insure late-life risks. Unpublished paper; 2010.
9 Details about the construction of the American Life Panel sample are provided in the online Technical Appendix (see Note 10) and at RAND. American Life Panel [Internet]. Santa Monica (CA): RAND; [last modified 2012 Feb 22; cited 2012 Apr 27]. Available from: http://www.rand.org/labor/roybalfd/american_life.html
10 To access the Appendix, click on the Appendix link in the box to the right of the article online.
11 Of course, as is usually the case with such subjective probability measures, choosing the middle option could also indicate that the respondent doesn't know or doesn't understand the question.
12 The Health and Retirement Survey is approximately nationally representative of the population age fifty or older and has been widely used to examine the health and economic behaviors of older Americans. Health and Retirement Study [home page on Internet]. Ann Arbor (MI): University of Michigan Institute for Social Research; [cited 2012 Apr 30]. Available from: http://hrsonline.isr.umich.edu/
13 Finkelstein A, Luttmer E, Notowidigdo M. What good is wealth without health? The effect of health on the marginal utility of consumption. Cambridge (MA): National Bureau of Economic Research; 2008. (NBER Working Paper No. 14089).
14 Finkelstein A, McGarry K. Multiple dimensions of private information: evidence from the long-term care insurance market. Am Econ Rev. 2006;96(4):938–58.
15 We note, however, that we did not use a numerical scale to denote how likely the outcome is, nor did we explicitly distinguish between living independently without care and receiving care in one's home in order to avoid institutional care.
16 Pauly M. The rational nonpurchase of long-term care insurance. J Polit Econ. 1990;98(1):153–68.
17 Kotlikoff L, Spivak A. The family as an incomplete annuities market. J Polit Econ. 1981;89(2):372–91.
18 Arno P, Levine C, Memmott MM. The economic value of informal caregiving. Health Aff (Millwood). 1999;18(2):182–8.
19 Arno P. Estimated prevalence and economic value of family caregiving, by state, 2004 [Internet]. Kensington (MD): National Family Caregivers Association ; 2006 [cited 2012 Mar 21]. Available from: http://www.caregiver.org/caregiver/jsp/content/pdfs/State_Caregiving_Data_Arno_20061107.pdf
20 Gibson MJ, Houser A. Valuing the invaluable: a new look at the economic value of family caregiving [Internet]. Washington (DC): AARP Public Policy Institute; 2007 Jun [cited 2012 Mar 21]. (Issue Brief). Available from: http://assets.aarp.org/rgcenter/il/ib82_caregiving.pdf
21 McGarry K. Caring for the elderly: the role of adult children. In: Wise DA, editor. Inquiries in the economics of aging. Chicago (IL): University of Chicago Press; 1998. p. 463–85.

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In this month's *Health Affairs*, Jeffrey Brown and coauthors report on their survey of older Americans to determine what factors affect their desire to purchase long-term care insurance. They found that the following four broad factors were at work: beliefs about future needs for care; the availability of savings or other assets that could be used for care; the availability of other sources of care, such as family members; and features of the private market, such as concerns about the high costs of coverage or insurance company solvency. Many of these make people less inclined to buy long-term coverage, raising the issue of whether public policy might best address the need to provide long-term care by focusing on people who lack substitutes for private coverage, such as savings or access to informal care.

"We decided to undertake this project to start filling the empirical void that exists in the literature regarding the reasons that so few individuals insure against the risk of long-term care expenditures," says Brown. "We hope that these initial findings will spur additional research—both by our team and by others—to test for causality for the various factors that we have shown to be correlated with long-term care purchase decisions."

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