

# Do households have a good sense of their long-term care risks?

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## Introduction

Many older adults will require some degree of long-term care (LTC) later in life, with more than half needing more intensive support, often for an extended period. The resources required to meet such high-intensity, long-duration care needs—provided by family members or through paid formal care—can be substantial. This paper addresses the questions of whether older adults understand their LTC risks and whether the accuracy of their perceptions varies by socioeconomic characteristics.

Despite the large literature on LTC risks and insurance, little research has focused on whether individuals have a good sense of how much help they may need with daily activities as they age. Those who overestimate their risk could limit their retirement wealth spend-down, unnecessarily restricting their consumption in retirement. Those who underestimate their risk could experience unmet needs or need to spend down to qualify for Medicaid.

This study uses the Health and Retirement Study (HRS) to compare two measures of self-assessed LTC risks with objective probabilities of ending up with high-intensity care needs. The first subjective measure is a person's perceived risk of ever moving into a nursing home. The second measure is the perceived risk of being unable to manage their own affairs due to cognitive limitations. The analysis aims to evaluate the extent to which individuals accurately perceive their risks and how their perceptions vary by socioeconomic group.

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The discussion proceeds as follows. The first section provides some background on LTC risks overall, how care is provided, and the limited research on self-assessed LTC risks. The second section describes the data and the questions used to solicit LTC perceptions. The third section discusses the model to predict future high-intensity care needs for current 65-year-olds. The fourth section assesses whether the available measures of subjective risks capture the same concept as the objective risks of high-intensity needs and reports on how subjective assessments vary by socioeconomic group. The final section concludes that neither of the subjective measures are good proxies for objective risk. But examining how the subjective responses vary by demographic does provide some useful insights, specifically that Blacks and Hispanics appear optimistic about their future needs relative to other groups. And while women seem to be aware of average LTC risks, they may not realize that they face higher-than-average risks of needing care. These findings are concerning as these groups not only have the highest objective risks of needing high-intensity, long-duration care, they also have fewer resources to provide for this care.

## Background

As people age, most eventually need help—almost certainly with housework or other instrumental activities of daily living (IADLs), like shopping or preparing meals, and sometimes with more essential tasks, i.e., activities of daily living (ADLs), like bathing, eating and toileting. While some can get by with help a few times a week (low intensity), over half of older adults will have high-intensity needs—that is, require help for two or more ADLs or have an Alzheimer's or dementia diagnosis—often for an extended period (see Table 1).<sup>1</sup>

Households cover these long-term care needs in two ways. The more common way is unpaid informal care provided by family members (see Figure 1). The less common way is paid formal care, financed primarily out-of-pocket or through Medicaid. But very few people have private LTC insurance—currently, less than 5% of adults—and qualifying for Medicaid requires households to impoverish themselves.<sup>2</sup>

Those with low or moderate care needs may be able to rely mostly on family, but caregiving places large physical, mental and often financial burdens on family members.<sup>3</sup> Those with high-intensity care needs, particularly for multiple years, will likely need to supplement informal care with some paid formal care. Figure 2 shows that while informal family caregivers provide the bulk of the care overall, for those who need high-intensity care, almost half the care hours come from paid formal care.

The resources required to meet high-intensity LTC needs, either from family members or paid formal care, can be substantial. To plan effectively, older adults need to have a

realistic assessment of their LTC risks. Unfortunately, the extent to which older adults have a good understanding of their own LTC risks is largely unknown.<sup>4</sup> While some surveys ask respondents whether they think they'll ever need LTC, few distinguish between the different levels of care, and almost none are able to compare self-assessed risks with actual risks.<sup>5</sup>

One of the few studies is Finkelstein and McGarry (2006), which examines the likelihood of individuals ages 72+ needing nursing home care in the next five years. The study found that, in aggregate, respondents had a reasonably good sense of their future nursing home needs. However, respondents who say they will likely need a nursing home in the next five years are likely to be in poor health already. It's not clear whether younger, healthier retirees or near-retirees will have a similar prediction about their future LTC needs.

Additionally, self-assessments may be good in aggregate, but they're not accurate at the individual level. For example, Boyer et al. (2012) compared older Canadians' subjective LTC risks with objective risks and found large misperceptions at the individual level. Certain characteristics—such as being from Quebec, being female, having an additional child, and having an employer pension—are linked to a person underestimating their LTC risks.<sup>6</sup> It's also unclear whether individual misperceptions arise because people don't understand the likelihood of needing care in general

1 ADLs include bathing, eating, walking, toileting, getting in and out of bed, and getting dressed. Studies on the intensity of LTC needs among the elderly have found three types of individuals: 1) those who need support with only IADLs (e.g., shopping or preparing meals) are considered to have low-intensity needs; 2) those who need support for one ADL have medium-intensity needs; and 3) those who require assistance with two or more ADLs or who have dementia have high-intensity needs. These definitions are consistent with Health Insurance Portability and Accountability Act (HIPAA) requirements and prior literature. See Spillman et al. (2014) and Johnson (2019).

2 LIMRA (2022) estimates that only 3% of Americans have long-term care insurance.

3 Pinquart and Sörensen (2007), Seltzer and Li (2000), Schulz and Eden (2016), Schulz and Sherwood (2008), and Spillman et al. (2014).

4 Much of the work on subjective LTC risks is from the perspective of whether individuals' perceptions influence decisions on buying LTC insurance (Pauly, 1990; Brown, Goda & McGarry, 2012; and Finkelstein & McGarry, 2006). The limitation is that very few people buy LTC insurance. Others, such as Henning-Smith and Shippee (2015), have examined characteristics associated with LTC risks, but they don't compare self-assessments with objective measures of risk.

5 See Associated Press-NORC (2015), Robison et al. (2013) and Khatutsky et al. (2017).

6 The focus of both Finkelstein and McGarry (2006) and Boyer et al. (2019) is also self-assessed LTC risks and the likelihood of having LTC insurance.

or because they don't realize their individual characteristics make them more or less likely to need care.<sup>7</sup>

This paper compares two measures of self-assessed risks of needing high-intensity LTC—the likelihood of ever needing nursing home care or being cognitively impaired—with predicted objective probabilities of having high-intensity care needs.

## Data

This project uses data from the HRS, a nationally representative biennial longitudinal survey of U.S. adults ages 51 and older and their partners. The data, which come from the 1998–2020 waves, include information on the number of ADLs for which the individual needs assistance and sociodemographic characteristics—such as marital status at age 65, age, education, race or ethnicity, cohort, and gender from older cohorts—to predict LTC needs for current 65-year-olds. Additional information is available from the exit interview, which includes ADLs for which the individual needed assistance in the two years before death, including hospice care. We exclude some individuals from the analysis due to missing data, leaving a final sample of 19,137 unique respondents.

While the HRS doesn't include any direct questions about respondents' expectations of needing LTC as they get older, it does include two questions that could potentially be indicators of expectations of high-intensity LTC needs—defined as needing help with two or more ADLs, or having received an Alzheimer's or dementia diagnosis. Both questions come from the expectations section of the HRS.

The first question asks respondents about their probability of needing nursing home care. Typically, respondents are asked about their probability of moving into a nursing home in the next five years. The problem is that most people who believe they'll move into a nursing home—which means they would require help with at least two ADLs or continuous supervision due to Alzheimer's or dementia—in the next five years likely already have some limitations. Fortunately, the first interview in the HRS for respondents younger than age 65 asks: "What is the percent chance that you will ever have to move to a nursing home?" The analysis focuses on responses from younger respondents to this initial question, when they're generally still healthy and could potentially prepare for future needs.

The second question asks respondents if they think they'll be free of serious cognitive problems later in life. This question is only asked of respondents at their first interview after they have turned 65. Specifically, respondents are asked: "Assuming that you are still living at age 85, what are the chances that you will be free of serious problems in thinking, reasoning, or remembering things that would interfere with

your ability to manage your own affairs?"<sup>8</sup>

For both questions, participants answer with a number between zero and 100, where zero means they see no chance that the event will happen, and 100 means they think the event will occur with certainty. In the case of the cognition question, the inverse of the response represents the respondent's perceived risks of having serious cognitive limitations. The answers to these two questions may provide some indication of the individuals' assessments of their LTC risks.

Neither question is an ideal measure of the need for high-intensity LTC. For the first question, people are likely to rate their prospects of moving to a nursing home lower than their perceived LTC needs, both because nursing homes are unpopular and because people can increasingly get some high-intensity care in their own homes.<sup>9</sup> For the second question, the wording is broad enough to cover milder forms of cognitive decline (e.g., sometimes forgetting to pay bills), which makes it likely to generate "higher" measures of perceived risk compared to a metric focused solely on an Alzheimer's or dementia diagnosis.<sup>10</sup>

A further limitation involving these two questions is that they aren't asked of respondents of the same age. The average age at which respondents are asked about their perception of ever needing nursing home care is around 55, compared with 67 for the question regarding cognitive impairment. Despite all these limitations, however, these two questions are the only ones available in the HRS to serve as proxies for expected LTC.

7 For example, assume three people with a 20%, 50% and 80% chance, respectively, of needing high-intensity care at older ages. Misperceptions can arise because they're unaware that, on average, 50% of people will need high levels of care. Or, they may all think their individual risks are equal to aggregate risks (50%). But the person with a 20% risk would be substantially overestimating their risk, while the person with an 80% risk would be substantially underestimating their risk.

8 Between ages 75 and 79, respondents are told to assume they're still alive at age 90. Between ages 80 and 84, they're told to assume they're still alive at age 95. And between 85 and 90, they're told to assume they're alive at 100.

9 An AP-NORC survey on long-term care found that 76% of Americans prefer to receive care in their home and 66% are moderately or very concerned about losing their independence as they get older (Associated Press-NORC Center for Public Affairs Research, 2021).

10 Recent studies have found that dementia can occur up to nine years before an official diagnosis (Swaddiwudhipong et al., 2023), and Alzheimer's and dementia diagnoses are more likely to be missed or delayed among Blacks and Hispanics, so they may be underdiagnosed (Hinton et al., 2024; Lin et al., 2022).

## Methodology

The methodology involves comparing: 1) an individual's self-assessment of needing LTC derived directly from the HRS questions with 2) a calculated measure of objective risk that the individual will need high-intensity LTC over their remaining lifetime. The objective measure is based on two conditions for high-intensity LTC: 1) requiring help with two or more ADLs for more than 90 days;<sup>11</sup> or 2) a diagnosis of Alzheimer's or other types of dementia. The focus is on needs that last more than 90 days for two reasons. First, many people who will need high-intensity care for short periods of time—for example, after a knee or hip replacement—aren't counted because those instances don't impact their long-term quality of life. Second, from a financing perspective, Medicare covers skilled nursing home stays after an acute event (such as surgery), limiting the out-of-pocket costs for families.

For those individuals observed from age 65 to death, it's easy to calculate the share who end up in a nursing home or need help with high-intensity needs. However, limiting the analysis to just those observed until death would likely bias the results by ignoring the LTC needs of younger individuals in the sample who might develop care needs at older ages.

Addressing this issue requires the estimation of a multinomial logit model, adapted from Belbase, Chen and Munnell (2021a), to determine the lifetime probability of needing each level of care (low, moderate or high intensity):

$$P(d_{it+1} = j | x_i, a_{it}, d_{it} = k) = \frac{\exp(x_i \gamma_{j,k} + a_{it} \gamma_{j,k}^a)}{\sum_{j'} \exp(x_i \gamma_{j',k} + a_{it} \gamma_{j',k}^a)}$$

The model includes four different states, denoted by  $d_{it}$ , for classifying each individual,  $i$ , in each time,  $t$ : 1) individual is still alive and doesn't have care needs; 2) individual is alive and has care needs; and 3) individual died without care needs; and 4) individual died with care needs. The intensity of care represents the highest level of care needed by the individual within that age group. The probability that an individual will enter into state  $j = 1, \dots, 4$  at time  $t + 1$ , given their current state  $k$  is determined by a vector of socioeconomic characteristics  $x_p$  and five-year age groups  $a_{it}$ . The results of this model generate a transition matrix for each race, gender, marital status and education group by five-year age groups from ages 65 to 109.<sup>12</sup> These transition matrices are then used to estimate lifetime risk of each intensity by simulating needs at each five-year age interval to construct a full life cycle.<sup>13</sup> While the model predicts the probability of needing low-, moderate- and high-intensity care over an older adult's lifetime, this analysis focuses on the risk of needing high-intensity care—care that requires a substantial amount of family and financial resources (recall Figure 2).

Individuals' lifetime needs are based on their most severe experience. That is, an individual who needs help cleaning and cooking in her 60s, then in her 70s has a bout of cancer that requires some support a few times a week, and in her 80s develops dementia that requires around-the-clock care would be counted once and classified as having high-intensity LTC needs.

With a measure of objective risk in hand, the exercise involves comparing that measure with a person's self-assessed risk for needing LTC later in life, proxied by their responses to the two questions mentioned above: 1) whether they think they will ever need to move into a nursing home and 2) whether they think they will have cognitive limitations that hinder them from managing their own life.<sup>14</sup> This comparison may help us determine whether the self-assessments appear to be useful proxies for capturing high-intensity LTC needs. It's also an opportunity to see how perceptions vary—by race or ethnicity, education, gender and marital status—and whether certain groups may have misperceptions of their potential LTC needs.

## Results

### Objective risks

As discussed earlier, while most older adults will need some support, the degree of assistance varies dramatically. Our results focus on the share of people who may need high-intensity care—the most feared outcome that puts enormous demand on both family and financial resources. The estimates of objective risk show that 52% of those age 65 or older will need high-intensity care for more than 90 days at some point over their remaining lifetime (see Table 2).

The risks of needing high-intensity care vary along the expected dimensions. Those with less than a high school degree have a 56% chance of needing high-intensity care, while the risk is 46% for those with a college degree or more. Black and Hispanic individuals are more likely to

11 We also exclude those who were “bedridden” right before death according to the proxy respondent. Most people are bedridden right before death and, similarly, from a financing perspective, Medicare pays for hospice care.

12 We treat ages 90 to 109 as one age group for sample-size reasons.

13 Specifically, we simulate probabilities at each age group 100,000 times and conduct a random draw from a normal distribution. Based on this draw and the transition probabilities, the model determines their state in the next five-year age group.

14 The typical requirement for entering a nursing home is needing help with two or more ADLs or requiring continuous surveillance due to Alzheimer's or dementia.

need high-intensity care (57% and 58%, respectively) compared with their white counterparts (50%). Women are also much more likely to need high-intensity care in their lifetime, largely because they live longer. Married women and unmarried women have a 56% and 55% probability, respectively—about 10 percentage points higher than their male counterparts.

One question that provides some insight into the duration of the required care is whether the need for care is triggered by physical limitations (needing help with two or more ADLs) or by Alzheimer's or dementia. Dementia patients can live for about five years, on average, after official diagnosis and close to 10 years from the onset of symptoms. Those with only physical limitations have a much shorter life expectancy of less than two years after disability.<sup>15</sup> Overall, among those at risk of high-intensity care needs, about half (25% of the total population) have only physical limitations while the other half face dementia (see Table 3). Those with a high school degree or some college are much more likely to have only physical limitations, while those with less than a high school degree and those with a college degree or more have a higher risk of dementia.<sup>16</sup> Blacks are not only more likely to have high-intensity care needs, but they're also at higher risk of developing dementia compared with just physical limitations. While the duration of care needs is outside the scope of this study, understanding the likely triggering mechanism can help people assess if they'll need more or less family and financial resources to provide such care.

### Subjective risks compared with objective risks

The second part of the results discussion shifts from estimated objective risks to self-assessed perceived risks. The initial exercise is to see how overall self-assessed risks compare to the objective risks. Specifically, we compare: 1) HRS respondents' subjective risk of ever ending up in a nursing home with the objective risk of needing any high-intensity care; and 2) respondents' subjective risk of needing help with cognitive decline with the objective diagnosis of Alzheimer's disease or other dementia (see Figure 3).

Unfortunately, these results match our expectations. Self-assessed nursing home risk—at 29%—is substantially lower than the objective measure of high-intensity LTC needs, as people generally dislike the idea of entering a nursing home and home care may be a viable alternative. Self-assessed cognitive risk—at 52%—is much higher than objective risk of Alzheimer's or dementia because the HRS cognitive question is so broad.

While the HRS questions are likely not good measures of older households' perceived high-intensity future needs, the variation in responses by demographics provides some useful insights. We first turn to the self-assessments of needing a long-term nursing facility, which typically requires residents to need help with two or more ADLs, or continuous

supervision for Alzheimer's or dementia (see Table 4). This subjective risk of nursing home use increases with educational attainment, which is interesting since actual probabilities of high-intensity care needs decrease with educational attainment. Blacks and Hispanics also believe they'll have a lower-than-average need for nursing homes despite having a higher need for high-intensity care. Women do report a slightly higher perceived likelihood of eventually needing a nursing home relative to men. But they're much more likely to need high-intensity care than men.

Regardless, predicted nursing home use may be far off from actual high-intensity care needs because many people near retirement and young retirees may not equate future high-intensity care needs with nursing home needs.<sup>17</sup> As noted above, this disconnect is not surprising since nursing homes are unpopular. A recent AP-NORC survey on long-term care found that 76% of Americans prefer to receive care in their home, and 66% are moderately or very concerned about losing their independence as they get older.<sup>18</sup> The growing preference for home-based care could mean that nursing home care is no longer a good indicator of whether older adults believe they'll need high-intensity long-term care in the future.<sup>19</sup>

The second subjective measure we examine is the self-assessed risk of being cognitively unable to manage one's

15 See Mueller et al. (2019), Todd et al. (2013) and White et al. (2020) for life expectancies after Alzheimer's or dementia diagnosis. See Ankuda et al. (2020) for estimates of life expectancy after an individual needs help with two or more ADLs.

16 There are two competing drivers for Alzheimer's or dementia risk. Medical research has found that cardiovascular diseases are a risk factor for Alzheimer's or dementia, and those with lower socioeconomic status are more likely to have cardiovascular diseases. At the same time, those with higher socioeconomic status also are more likely to live to older ages, when Alzheimer's or dementia risk is higher.

17 Comparing self-assessments and actual nursing home use—among those for whom we can actually observe nursing home use—older adults, on average, provide fairly accurate predictions (see Appendix Table A1). These results are consistent with Finkelstein and McGarry (2006). While the predictions are good on average, certain subgroups tend to underestimate their own probability of nursing home use. Those with less than a high school degree are much more likely to underestimate their future nursing home needs, as are Blacks and Hispanics, and unmarried men and unmarried women (see Appendix Table A1). One question is whether they underestimate the typical nursing home usage or if they're unaware that their sociodemographic characteristics make them more likely to need nursing home care. About 32% of older adults will need to stay at a nursing home at some point in their lives. Most older adults believe their own likelihood of nursing home use is smaller.

18 Associated Press-NORC Center for Public Affairs Research (2021).

19 Part of the decline in nursing home preference has been attributed to the rise in other forms of care (Lehnert et al., 2019) but earlier research, even from 30 years ago, found that only one third of respondents preferred nursing home care (McAuley & Blieszner, 1985).



own affairs. The average self-assessed risk for this measure is 52%, much higher than the average self-assessed likelihood of needing nursing home care. And 52% is also much higher than the objective risk of being diagnosed with Alzheimer's or dementia, again, likely because the HRS question may be measuring a much broader concept of cognitive decline. For example, a person may perceive that their memory will decline enough as they age that they need some help, but it could be as simple as using a service to help pay your bills on time—not a situation that requires high-intensity care.

As with the nursing home question, though, it can be useful to see whether some groups tend to perceive higher or lower levels of cognitive decline risk than the average. In contrast to the pattern for the nursing home question, those with higher levels of education tend to perceive a lower risk of cognitive decline than their counterparts with less education (see Table 5). Women, though, perceive close to average risks of any significant cognitive decline despite being at greater objective risk of an Alzheimer's or dementia diagnosis. And Blacks perceive an average level of risk, despite also being at greater objective risk.

The perception gap among different groups is not only interesting but has important implications for which groups may be more at risk of having unmet care needs as they get older or may need to spend down to Medicaid. Blacks and Hispanics may be underestimating their risks of at least some future LTC needs. And while women seem to be aware of average LTC risks, they may not realize that they face

higher-than-average risks of needing care. Prior research has shown these groups also have fewer resources to provide for such care (see Figures 4 and 6).<sup>20</sup> Almost half of Black retirees don't have any resources to cover even low-intensity care and 56% of unmarried women fall into this category, suggesting that the most vulnerable groups may have a substantial knowledge gap in understanding their needs.

## Conclusion

This paper examined two measures of self-assessed LTC risks along with objective probabilities of ending up with high-intensity care needs. The results indicate that neither of the self-assessed measures are good proxies for capturing self-assessed high-intensity needs. However, looking at the demographic breakdowns for the self-assessments does provide some useful insights. Specifically, Blacks and Hispanics may be underestimating their risks of future LTC needs; and while women seem to be aware of average risks, they may not realize that their risk is above average. Finally, these groups have fewer resources to provide for their care.

It's important to note that being aware of LTC risks doesn't equate to being financially prepared to handle the costs of providing high levels of care. Nonetheless, a first step in being prepared is understanding the extent to which these risks exist. Future research could design questions that better capture older adults' perceived LTC risks.

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20 Belbase, Chen and Munnell (2021b).

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TABLE 1. LIFETIME PROBABILITY OF A 65-YEAR-OLD NEEDING LTC, BY DURATION AND INTENSITY

Duration	None	Intensity		
		Low	Moderate	High
0 to 1 year	18%	10%	5%	14%
1 to 3 years		5	3	20
3+ years		5	2	18

Source: Authors' update of Belbase, Chen and Munnell (2021a).

TABLE 2. LIFETIME PROBABILITY OF A 65-YEAR-OLD NEEDING LTC, BY INTENSITY AND SOCIODEMOGRAPHIC CHARACTERISTICS

	Intensity		
	Low	Moderate	High
All	82%	61%	52%
Education			
Less than high school	86	65	56
High school	82	61	50
Some college	82	60	49
College or more	75	56	46
Race			
White	82	61	50
Black	83	66	57
Hispanic	84	66	58
Marital status			
Married men	79	58	47
Married women	85	65	56
Unmarried men	75	55	43
Unmarried women	84	64	55

Source: Authors' calculations using RAND Health and Retirement Study (HRS) longitudinal file (1992–2020v2) and University of Michigan, HRS (1998–2020).

**TABLE 3. LIFETIME PROBABILITY OF A 65-YEAR-OLD OF NEEDING HIGH-INTENSITY CARE BY TYPE AND SOCIODEMOGRAPHIC CHARACTERISTICS**

	Total	Alzheimer's/ dementia	2+ ADLs only
<b>All</b>	52%	29%	25%
<b>Education</b>			
Less than high school	56	32	29
High school	50	27	25
Some college	49	26	25
College or more	46	28	20
<b>Race</b>			
White	50	28	25
Black	57	34	26
Hispanic	58	31	32
<b>Marital status</b>			
Married men	47	26	23
Married women	56	31	28
Unmarried men	43	24	20
Unmarried women	55	32	27

Note: Estimated risks for Alzheimer's or dementia and two or more ADLs don't add up to the total risks because they involve separate models that have different transition probabilities and error terms.

Source: Authors' calculations using RAND HRS longitudinal file (1992–2020v2) and HRS (1998–2020).

**TABLE 4. SELF-ASSESSED RISK OF EVER MOVING INTO A NURSING HOME**

	Self-assessed nursing home risk
<b>All</b>	29%
<b>Education</b>	
Less than high school	18
High school grad	26
Some college	30
College or more	35
<b>Race</b>	
White	31
Black	22
Hispanic	18
<b>Marital status</b>	
Married men	27
Married women	31
Unmarried men	28
Unmarried women	29

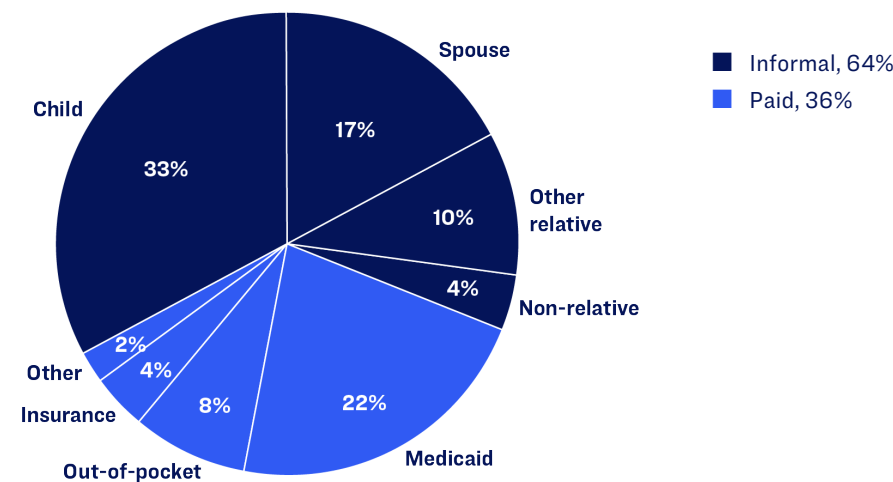
Source: Authors' calculations using RAND HRS longitudinal file (1992–2020v2) and HRS (1996–2020).

TABLE 5. SELF-ASSESSED RISK OF COGNITIVE DECLINE

	Self-assessed risk of cognitive decline
All	52%
Education	
Less than high school	61
High school grad	55
Some college	50
College or more	47
Race	
White	51
Black	52
Hispanic	58
Marital status	
Married men	53
Married women	49
Unmarried men	57
Unmarried women	51

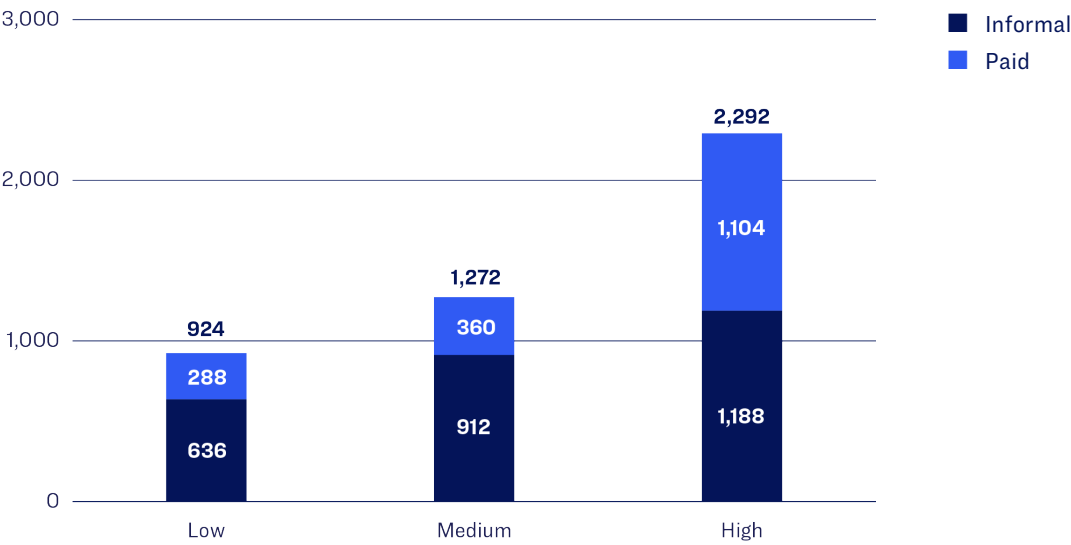
Source: Authors' calculations using RAND HRS longitudinal file (1992–2020v2) and HRS (1996–2020).

FIGURE 1. PERCENTAGE OF TOTAL CAREGIVING HOURS PROVIDED TO INDIVIDUALS AGES 65+, BY SOURCE



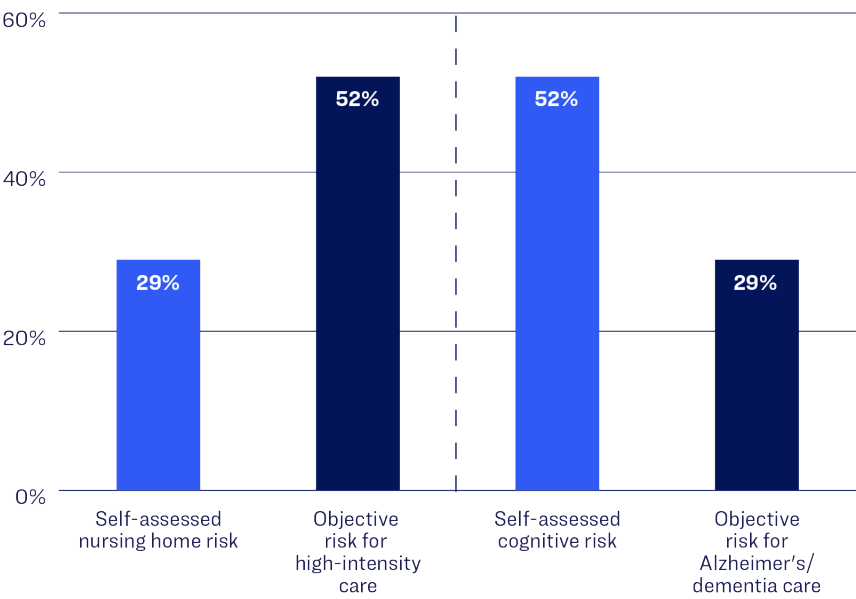
Source: Belbase, Chen, and Munnell (2021b).

FIGURE 2. MEDIAN ANNUAL HOURS OF TOTAL CARE RECEIVED BY INDIVIDUALS 65+, BY TYPE OF CARE AND LTSS INTENSITY



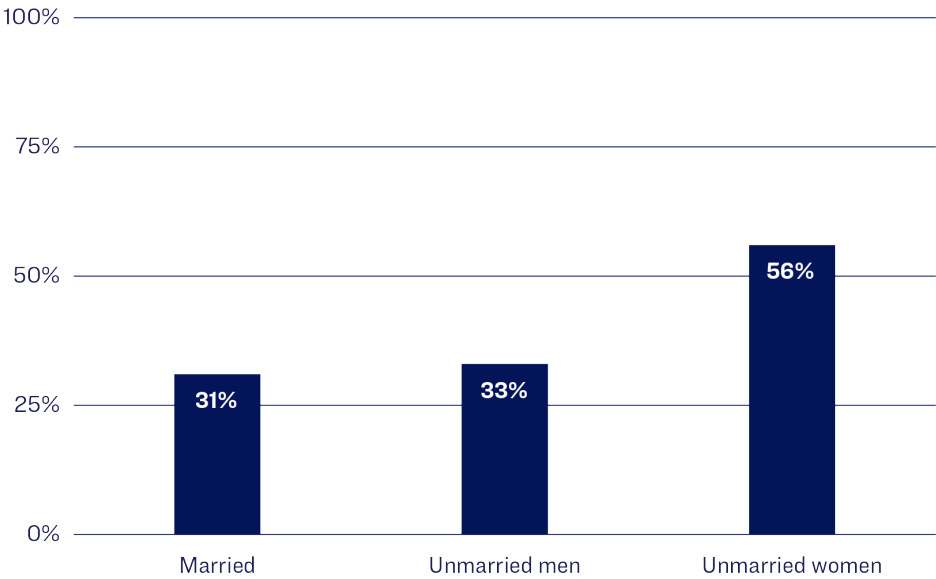
Source: Belbase, Chen and Munnell (2021b).

FIGURE 3. OBJECTIVE AND SUBJECTIVE RISK MEASURES, OVERALL AVERAGES



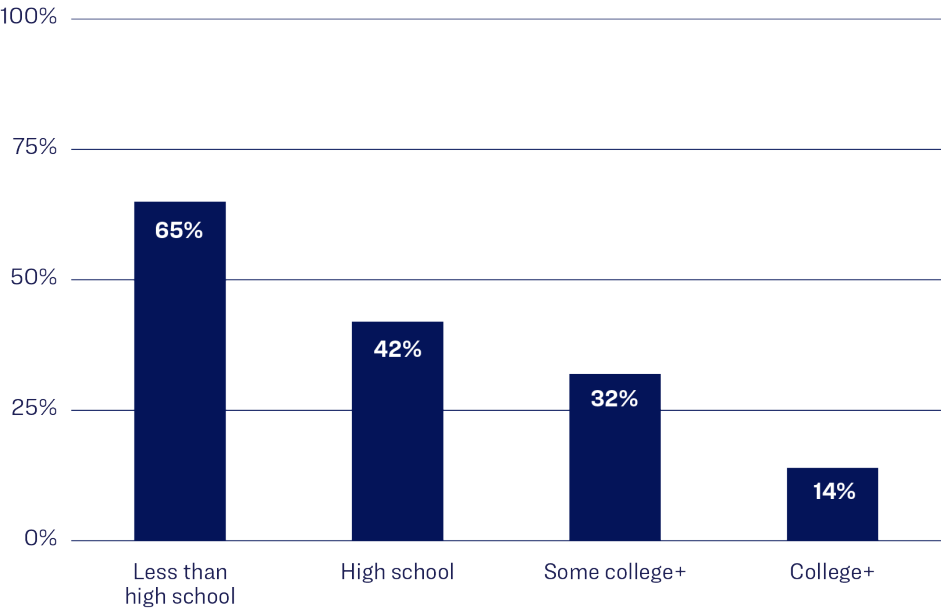
Source: Authors' calculations using RAND HRS longitudinal file (1992–2020v2) and HRS (1998–2020).

FIGURE 4. PERCENTAGE OF 65-YEAR-OLDS WHO DO NOT HAVE ENOUGH RESOURCES TO COVER ANY LEVEL OF CARE, BY MARITAL STATUS



Source: Belbase, Chen and Munnell (2021b).

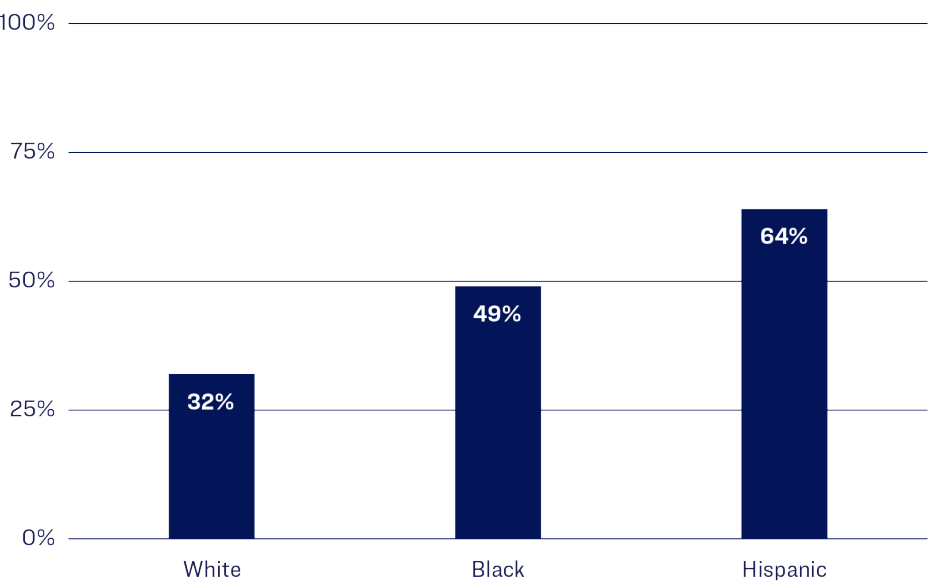
FIGURE 5. PERCENTAGE OF 65-YEAR-OLDS WHO DO NOT HAVE ENOUGH RESOURCES TO COVER ANY LEVEL OF CARE, BY EDUCATION



Source: Belbase, Chen and Munnell (2021b).



FIGURE 6. PERCENTAGE OF 65-YEAR-OLDS WHO DO NOT HAVE ENOUGH RESOURCES TO COVER ANY LEVEL OF CARE, BY RACE



Source: Belbase, Chen and Munnell (2021b).

Appendix

TABLE A1. SELF-ASSESSED RISK VERSUS ACTUAL RISK OF MOVING INTO A NURSING HOME FOR RESPONDENTS OBSERVED AFTER AGE 80

	Self-assessed risk of ever staying in a nursing home	Probability of ever staying in a nursing home	Gap
All	27%	32%	-5%
Education			
Less than high school	24	36	-12
High school grad	27	32	-5
Some college	27	32	-4
College or more	31	27	3
Race			
White	28	32	-4
Black	24	33	-9
Hispanic	20	31	-11
Marital status			
Married men	26	25	2
Married women	29	35	-6
Unmarried men	28	36	-9
Unmarried women	27	41	-14

Source: Authors' calculations using RAND HRS longitudinal file 1992–2020v2 and HRS (1998–2020).

## About the authors

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