Out-of-Pocket Health Care Expenditures

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Introduction

There is a long literature in health economics on health expenditures—what

predicts them at the national level and at the individual level (e.g., Newhouse, 1992;

Wagstaff et al., 1999; Meara, White, and Cutler, 2004). The existing evidence has almost

always focused on total health expenditures, or public health expenditures, in order to

answer questions about total or public resources devoted to health. Surprisingly little

literature addresses out-of-pocket expenditures, yet out-of-pocket health care

expenditures are important because,, for certain elderly people, they are large in both

absolute terms and relative to income. Knowing the extent of out-of-pocket health care

expenditures and who faces the highest risk is important to understand the distributional

consequences of public health insurance and any economic behaviors resulting from

facing a expenditure risk.

Our analysis is motivated by two striking graphs of out-of-pocket health care

expenditures paid by elderly Americans. The first graph shows that mean monthly out-

of-pocket health care expenditures rise steadily as a function of age (see Figure 1), based

on data from the Medicare Current Beneficiary Survey 1992-1998 (described in detail in

the data section). Average out-of-pocket health care expenditures increase nearly six-

fold, from $85 per month at age 66 to $485 per month at age 95. Figure 1 also reveals the

fundamental difference between long-term care expenditures and expenditures on all

other services. The increase in total out-of-pocket health care expenditures is driven

entirely by long-term care. Other out-of-pocket expenditures—primarily inpatient care,

physician services, and pharmaceuticals—are essentially independent of age. So the young elderly face entirely different health care expenditure risk than older elderly in both magnitude and composition.

The second graph shows that the expenditure risk relative to income also increases with age (see Figure 2). Furthermore, out-of-pocket health care expenditures are a substantial fraction of income for many elderly persons. By age 81, more than 10 percent of elderly persons spend half of their income on health care. By age 90, more than 25 percent do. When individuals face this level of financial risk, it is bound to affect personal finance decisions.

For elderly persons, out-of-pocket health care expenditures are important for both distributional and behavioral reasons. The distributional concern stems from having the vast majority of elderly covered by public insurance, or a combination of public and private. The structure of insurance benefits will largely determine how much people will pay out-of-pocket. The public insurance of Medicare and Medicaid was not designed to favor any one group. Therefore, substantial differences in out-of-pocket expenditures by socio-demographic characteristics might argue for a change in benefits.

The behavioral importance of out-of-pocket expenditures arises because health expenditures are the largest expenditure risk most elderly face, so out-of-pocket health care spending necessarily influences all other personal finance as well as choices between certain types of health care services. Consumption, savings, bequests, inter-vivos transfers, and decisions about formal versus informal care all depend on whether someone is likely to incur large medical bills. One reason that people do not follow the simple life-cycle model, which predicts that adults save during their working years and

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spend-down their wealth in retirement to die with no assets, is uncertainly about health care expenditures. It is this risk that drives many personal decisions.

Therefore, we address two basic questions in this paper. Who are the people who face the highest expenditure risk? And what are the distributional and behavioral implications of this risk? From our multivariate analysis of out-of-pocket health care expenditures, we draw conclusions about the distributional and behavioral effects of out-of-pocket health care expenditures.

Conceptual Framework

Out-of-pocket health care expenditures fall into two general categories, distinguished by type of care, provider, and insurance. Acute illness tends to be treated by physicians in hospitals or clinics and covered by Medicare. The out-of-pocket portion of expenditures for acute illness is limited by Medicare and Medigap insurance. Chronic illness and disability tends to be treated by nurses in nursing homes and covered (if at all) by Medicaid. Out-of-pocket expenditures on long-term care is generally proportional to length of stay, and can add up unrelentingly. Despite its simplicity, this division is important for understanding out-of-pocket expenditure risk. As shown in Figure 1, the pattern of expenditure risk for long-term care out-of-pocket expenditures is fundamentally different than all other categories combined. Therefore, all of our analyses are divided between long-term care and non-long-term care expenditures..

To answer the question of who has the highest out-of-pocket health care expenditures and who has the highest burden relative to income, consider which factors predict acute health care expenditures. Non-long-term care expenditures are obviously be

related to health status, with those who are sicker paying more. The other main predictors are access to care and insurance. Access to care varies across geographic areas, and between urban and rural areas. As for insurance, supplemental Medigap insurance pays for some of the co-payments and deductibles not covered by Medicare. Roughly two-thirds of elderly persons have private Medigap insurance. Those eligible for Medicaid have public Medigap insurance. This is particularly helpful for prescription drugs. The 18 percent or so of the elderly without any Medigap insurance are typically in the lower income groups. The amount of out-of-pocket expenditures is therefore slightly related to income, in an inverse U-shape.

In summary, in a regression to predict out-of-pocket non-long-term care expenditures, after controlling for health status and geographic region, we would not expect demographic characteristics to predict out-of-pocket expenditures. The marginal *R*-squared for these variables should be low.

Long-term care out-of-pocket expenditures are expected to have an entirely different pattern. Medicare pays for relatively little nursing home care, with benefits falling after 20 days and constrained to 100 days per benefit period. Only a small percentage of elderly hold private long-term care insurance (Murtaugh, Kemper, and Spillman, 1995; Cohen and Kumar, 1997). Medicaid is the safety net for most people. However, because Medicaid requires a deductible roughly equal to one's wealth less $2,000, and a co-payment nearly equal to ones income, out-of-pocket expenditures for nursing home care are high, even after becoming eligible for Medicaid. For example, for a typical middle-class elderly widow who enters a nursing home for a few years, out-of-pocket expenditures will likely exceed income until her wealth is nearly depleted, and

then Medicaid will only pay the additional amount required over monthly income including the Social Security payment. Therefore, persons who use long-term care pay a lot out of pocket, even when covered by Medicare and Medicaid.

In summary, in a regression to predict out-of-pocket long-term care expenditures, the R-squared should be higher than for non-long-term care expenditures. The high spenders as a group should be fairly predictable, given their health status, geographic region, and income, with a relatively high marginal R-squared for other variables.

Methods

We ran multivariate logit regressions to predict the probability that an individual exceeds a threshold level of out-of-pocket health care expenditures in a month. The basic model controls for age, sex, race and ethnicity, education, income, rural area, marital status, year, and census region. We did not control for insurance status, which is clearly endogenous, to focus on the demographic variables. We estimated separate models for non-long-term care expenditures and for long-term care expenditures. All standard errors were corrected for heteroskedasticity.

The thresholds were chosen based on the distribution of out-of-pocket expenditures by type of expenditures. For non-long-term care expenditures, the thresholds were $100 and $500. For long-term care expenditures the thresholds were $100 and $1000.

To understand who is most likely to have high monthly out-of-pocket health care expenditures, we look at the sign and statistical significance of each the coefficients on

the demographic variables, as well as the marginal pseudo *R*-squared of the variables as a group.

In addition to the models reported in the tables, we tried numerous related models. We estimated two-part models, but found that most of the relevant variation was in the first part which predicted the likelihood of any health care expenditures. This finding was especially true for long-term care expenditures, for which expenditures are much less skewed than other health care expenditures in the positive part of the distribution, and well over 90 percent of people have no expenditures in a month. We also tried running regressions to predict out-of-pocket expenditures as a fraction of income. These results are driven largely by the denominator, for which there appear to be a number of misreported values. Therefore, we focus on models that predict absolute expenditures. We split the non-long-term care expenditures into their component parts. However, the general results for inpatient care, physician services, and pharmaceuticals were quite similar, but with less power. We believe that the main story is between long-term care and non-long-term care out-of-pocket expenditures. Although fixed effects models are often appropriate for panel data, they would have eliminated many of the variables of interest, which are time invariant.

Data

We analyzed data from the 1992–1998 Medicare Current Beneficiary Survey (MCBS) Cost and Use files. The MCBS is a continuous, multi-purpose survey of over 10,000 Medicare beneficiaries each year sponsored by the Centers for Medicare and Medicaid Services (CMS). The Cost and Use files are a combination of the MCBS

survey data and Medicare claims as well as other data from the CMS administrative files.

The combined data files provide complete and accurate information on health services

received, amounts paid, and sources of payment. The MCBS includes information on use

and cost of prescription drugs and long-term care, which are often not covered by

Medicare. The CMS claims files include data on use, cost, and payment source of

various health services received by Medicare beneficiaries such as inpatient

hospitalizations, physician services, and durable medical equipment (MCBS Public Use

File Documentation, 1993). These features make it ideal for our study describing and

analyzing financial risk and financial burdens of health services for elderly Americans.

Our analysis includes MCBS respondents age 66 to 95. There are many Medicare

beneficiaries under age 65, but we want to limit the analysis to elderly persons. We keep

only people who are in both Medicare Part A and Part B. We deleted respondents who

are 95 or older due to the small sample in this age group. Our sample includes 709,413

observations at the person-month level for 24,636 unique people. On average, each

person has approximately 29 months of data. Within the sample, 24 percent were

surveyed for less than twelve months, 21 percent for between twelve and twenty-three

months, 39 percent for between twenty four and thirty-five months, and 15 percent for

between 36 and 60 months. Because people who die usually have less than 12 months in

their last calendar year of life, aggregation to the annual level is not appropriate. For

example, if someone dies in February, we only average their expenditures over the two

months they were alive, not over the entire year which would bias downwards their mean

expenditures. Instead, we calculated the average expenditures per month during the

calendar year by dividing the total expenditures by the number of months observed. The

final analysis file has 62,028 observations at the person-year level, and expenditures are the average monthly expenditure per calendar year.

The main dependent variable for our analyses is the average monthly out-of-pocket health expenditures of the elderly (see Table 1 for descriptive statistics). The average value is $151 per person per month, but the distribution is highly skewed. Ten percent spend $5 or less out of pocket per month, the median is only $51, the 90th percentile is $252, and the 99th percentile is $2,520. In addition to absolute out-of-pocket expenditures, we also explored relative burden and risk of out-of-pocket health expenditures by generating ratios of out-of-pocket expenditures to income and out-of-pocket expenditures to total health expenses. The ratio of out-of-pocket health expenditures to income has a mean of 19 percent, but a median of only 3.4 percent. The ratio of out-of-pocket to total health expenditures, which ranges between zero and 100 percent, has a mean of 38 percent and a median of 30 percent.

In addition to total out-of-pocket health expenditures, we also analyze two important components of total out-of-pocket health expenditures: non-long-term care expenditures and long-term care expenditures. On average, elderly people spend $28 out of pocket on drugs per month, and the median expenditure is $13. It is also a highly skewed distribution. The ratio of out-of-pocket drug expenditures to income is 3 percent on average, and the median is less than 1 percent. However, 10 percent of the observations spent more than 7 percent of average monthly income on drugs per year. Long-term care expenditures include expenditures on long-term facilities and skilled nursing homes. Although 94 percent of the person-year observations did not incur any out-of-pocket long-term care expenditures, 6 percent of individuals spent $231 on

average per month per year. So a small proportion of high-spending elderly drove the

mean out-of-pocket expenditure for long-term care to $70 per month per year. Because

94 percent of the observations did not have any out-of-pocket long-term care

expenditures, the ratio of out-of-pocket long-term care expenditures to income is zero at

the 90th percentile. However, the mean of the long-term care expenditures to income

ratio is 11 percent. This is due to the high end of the long-term care to income ratio

distribution: 6 percent of the person-year observations spent more than a quarter of

average monthly income on monthly long-term care.

The mean age of the whole sample is 75 years old. About forty percent of the

people are men. Whites account for 89 percent, African-Americans account for eight

percent, and just over one percent are Hispanic. Twenty-six percent of the observations

live in non-metropolitan areas. More than half of the people in the sample are married

while 37 percent are widowed. The mean grade achieved is 10th grade and less than one-

fourth of the people have more than a high school education. The mean monthly income

of the observations is $1,911, the median is $1,320, the 75 percentile is over $2,200, and

the maximum reaches over a million. Thirteen percent are Medicaid eligible. Less than

fifteen percent of the observations are enrolled in an HMO, and the largest HMO

enrollment (eight percent of sample) are in a Medicare Risk HMO.

All monthly expenditures were adjusted for inflation to 1998 dollars using the

medical care component of the Consumer Price Index (Bureau of Labor Statistics, US

Department of Labor). We used cross-sectional weights and adjusted for the complex

survey design for the estimates of the means and standard errors of monthly expenditures.

Results

The main regression results confirm the hypotheses set forth in the conceptual framework. For non-long-term care expenditures, the overall pseudo R-squared is quite low, less than 0.03. The marginal pseudo R-squared is also quite small. After controlling for health status, census region, and year dummy variables, the remaining demographics control for little of the observed variation in out-of-pocket health care expenditures. The effect of age is not consistent; sometimes the age splines are positive and sometimes negative. The race and ethnicity variables are negative and statistically significant in the model that predicts expenditures of at least $100. Likewise, marital status is a significant predictor of spending at least $100 in a month. Those who are white and married are more likely to spend at least $100 per month on non-long-term care expenditures. However, even though a number of the demographic variables are statistically significant (particularly in the $100 threshold equation), they do not explain a large amount of the variation in the dependent variable.

In contrast, the results for the long-term care out-of-pocket health care expenditures have much higher pseudo R-squared values. The pseudo R-squared for the two logit regressions are 0.37 and 0.27, and the marginal pseudo R-squared exceed 0.05 for both. The coefficients on age are always positive, and generally statistically significant, confirming the graphical analysis that out-of-pocket long-term care expenditures increase gradually with age. As has been well documented in the literature, whites are more likely to enter a nursing home than blacks or Hispanics, thus the out-of-pocket health care expenditures are higher for whites on average. Unlike non-long-term care expenditures, those who are not currently married spend far more.

Discussion

Our results show that for most people, the major source of expenditure risk is from long-term care expenditures, particularly late in life. Hospital, physician, and pharmaceutical expenditures, although quite large in total, are generally well insured in the United States. Individuals generally spend little out-of-pocket on these other types of health care. As expected, multivariate analysis did not predict non-long-term care expenditures well, after controlling for underlying geographic differences, time trends, and health status. The marginal *R*-squared of demographic characteristics was quite small. In contrast, the models to predict long-term care expenditures had relatively high marginal *R*-squared for demographic characteristics. The results have three distributional implications and five behavioral implications.

First, for non-long-term care insurance, there do not seem to be major distributional issues. No single demographic group appears to face substantially higher risk of out-of-pocket payments. Therefore, there does not seem to be cause for reforming Medicare on the basis of this particular issue.

Second, in contrast to Medicare, Medicaid appears to incomplete insurance in several ways. Some demographic groups, such as the oldest old, women, and unmarried persons, face substantial expenditure risk. The probability of paying a large amount out-of-pocket is high in absolute terms for these groups. Our results are consistent with a paper by Brown and Finkelstein (2004) who argue that the way Medicaid long-term care insurance is structured makes it incomplete and welfare reducing. Medicaid implicitly taxes any private long-term care insurance benefits, which by law is the primary payer.

Private insurance often duplicates what Medicaid would have paid, so many people choose not to purchase it. As a result, elderly people buy less private insurance coverage than they would otherwise, and face higher expenditure risk than they prefer.

Third, we find that married persons are less likely to pay large long-term care expenditures compared to non-married persons. One explanation is that married persons are less likely to enter a nursing home because of informal care from spouse and children. Another explanation is that the Medicare Catastrophic Coverage Act of 1988 achieved its goal of reducing the risk of spousal impoverishment when one spouse enters a nursing home and becomes eligible for Medicaid. Even after most of the provisions were repealed in 1989, the spousal impoverishment act remained in effect. The details of the benefits that were not repealed after 1989 are complicated, but in essence allow the community spouse to retain more wealth and income than before (Norton and Kumar, 2000). The MCCA actually increases the probability that a married person enters a nursing home, because it lowers both the copayment and the deductible. Because we do not have pre- and post-data, we cannot test if the probability of entering a nursing home changes. However, we would expect that, conditional on entry and controlling for income, a married resident would pay less out-of-pocket than an unmarried resident. Indeed, in a two-part model, married persons have lower predicted out-of-pocket long-term care expenditures conditional on having any and controlling for income (results not reported in tables).

The behavioral implications are wide ranging. First, the risk of high out-of-pocket expenditures affects savings over the life cycle. Our results support the model of Hubbard, Skinner, and Zeldes (1995), who showed that because Medicaid provides a

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safety net for long-term care insurance, some persons will save less than they would without the means-tested insurance. They predict that persons with relatively small amounts of wealth will intentionally under-save because it is optimal to consume more now and let Medicaid pay for more in the event of needing long-term care. The marginal propensity to consume out of wealth is negative for a critical range of wealth. Others have also studied this problem (Carroll and Samwick, 1998; Kazarosian, 1997; Palumbo, 1999).

Second, our results add to the "red herring" literature on the importance of age in predicting end-of-life expenditures. Zweifel and colleagues (1999) argue that age is not an important predictor of health expenditures after controlling for time until death. The empirical evidence by others has been mixed, with some finding no relationship between age and end-of-life expenditures, while others find a weak relationship (Yang, Norton, and Stearns, 2003; Seshamani and Gray, 2004; Chernichovsky and Markowitz, 2004). We find that age weakly predicts non-long-term care out-of-pocket expenditures, even after controlling for time until death, while age strongly predicts long-term care out-of-pocket expenditures. Therefore, increases in longevity, if they have no other effect (such as on use of new medical technologies), will raise the risk of high long-term care expenditures.

Third, if the recent gradual increases in longevity are unanticipated, then elderly may not have saved enough over the life cycle. Elderly persons who saved during their working years for retirement may not have saved the optimal amount if they did not anticipate the gradual lowering of mortality rates among elderly persons. Because out-of-

pocket expenditures increase with age, greater longevity implies higher out-of-pocket expenditures.

Fourth, some economists have worried about low marginal benefit for health care expenditures. This is sometimes called flat-of-the-curve medicine. If patients make decisions in part on out-of-pocket expenditures, but not on total expenditures (as well as expected benefits), then our data imply that low marginal benefit is potentially a great concern for non-long term care, but is unlikely for long-term care.

Fifth, high out-of-pocket expenditures among the oldest old may provide an alternative motivation for the exchange of financial assets from elderly parents to their adult children for time and attention. The literature on intergenerational giving through bequests and inter-vivos transfers has identified exchange as one motive for savings above and beyond that needed for the basic life cycle model. However, if informal care is a substitute for formal care (Van Houtven and Norton, 2004), then an adult child may use informal care to achieve exchange, even if the parent makes no inter-vivos transfers and divides their bequest equally among all children. A child might use informal care as a low cost substitute to formal care, thereby increasing their share of the bequest.

In summary, out-of-pocket health care expenditures, although not studied in the literature, have strong patterns and broad implications. Out-of-pocket health care expenditures are generally small for non-long-term care, but increasing in age for long-term care. The latter also become a large percentage of income for a sizable fraction of the elderly American population. We argue that these expenditures have implications for individual behavior.

References

Brown, J.R., and A. Finkelstein. 2004. The interaction of public and private insurance: Medicaid and the Long-term Care insurance market. NBER Working Paper Series #10989.

Carroll, C. D., and A. A. Samwick 1998. How Important Is Precautionary Saving? *Review of Economics and Statistics* 80(3):410-419.

Chernichovsky, D. and S. Markowitz. 2004. "Aging and aggregate costs of medical care: conceptual and policy issues" *Health Economics* 13(6):543-562.

Cohen, M. A., and A. K. N. Kumar. 1997. The Changing Face of Long-Term Care Insurance in 1994: Profiles and Innovations in a Dynamic Market. *Inquiry* 34:50-61.

Hubbard, R. G., J. Skinner. and S. P. Zeldes. 1995. Precautionary Saving and Social Insurance. *The Journal of Political Economy* 103(2):360-399.

Kazarosian, M. 1997. Precautionary Savings - A Panel Study. *Review of Economics and Statistics* 79(2):241-247.

Liu, H., and Sharma, R. 2002. Health & Health Care of the Medicare Population: Data from the 1998 Medicare Current Beneficiary Survey. Rockfille, MD: Westat.

Meara, E., C. White, D.M. Cutler. 2004. Trends in medical spending by age, 1963-2000. *Health Affairs* 23(4):176-183.

Murtaugh, C. M., P. Kemper, and B. C. Spillman. 1995. Risky Business: Long-Term Care Insurance Underwriting. *Inquiry* 32:271-284.

Newhouse, J.P. 1992. "Medical-care Costs: How Much Welfare Loss?" *Journal of Economic Perspectives* 6(3):3-21.

Norton, E.C. 2000. "Long-term Care." In *Handbook of Health Economics, Volume IB*, A.J. Culyer and J.P. Newhouse, eds, pp. 956–994. New York, NY: Elsevier Science B.V.

Norton, E.C. and V. Kumar. 2000. "The Long-run Effect of the Medicare Catastrophic Coverage Act." *Inquiry* 37(2):173–187.

Norton, E. C., and J. P. Newhouse. 1994. Policy Options for Public Long-Term Care Insurance. *Journal of the American Medical Association* 271(19):1520-1524.

Palumbo, M. G. 1999. Uncertain Medical Expenses and Precautionary Saving Near the End of the Life Cycle. *Review of Economic Studies* 66(2):395-421.

Pauly, M. V. 1990. The Rational Nonpurchase of Long-Term-Care Insurance. *The Journal of Political Economy* 98(1):153-168.

Seshamani, M., and A. Gray. 2004. Ageing and health-care expenditures: The red herring argument revisited. *Health Economics* 13(4):303-314.

Stearns, S.C. and E.C. Norton. 2004. "Time to Include Time to Death? The Future of Health Care Expenditure Predictions." *Health Economics* 13(4):315–327.

Van Houtven, C.H. and E.C. Norton. 2004. "Informal care and health care use of older adults." *Journal of Health Economics* 23(6):1159–1180.

Wagstaff, A., E. van Doorslaer, H. van der Burg, et al. 1999. "Equity in the finance of health care: Some further international comparisons." *Journal of Health Economics* 18(3):263-290.

Yang, Z., E.C. Norton, and Sally C. Stearns. 2003. "Longevity and Health Care Expenditures: The Real Reasons Older People Spend More." *Journal of Gerontology* 58:S2–S10.

Zweifel, P., S. Felder, and M. Meiers. 1999. Ageing of population and health care expenditure: A red herring? *Health Economics* 8(6):485-496.

Table 1. Summary statistics for study sample, Medicare Current Beneficiary Survey 1992–1998, adjusted for survey weights

	Mean	Min	Max
Monthly out-of-pocket expenditures (1998$)			
Total	176.70	0	33,919
Long-term care	97.65	0	33,722
Prescription drugs	27.67	0	1,902
Medical provider	32.01	0	13,180
Other expenditures	79.05	0	12,454
Monthly out-of-pocket expenditures/Income			
Total/income	.1931	0	176.56
Long-term care/income	.1058	0	174.86
Prescription drug/income	.03209	0	20.71
Medical provider/income	.0314	0	85.72
Other expenditures/income	.02383	0	77.83
Respondent characteristics			
Age	74.59	66	95
Male	.403	0	1
Race			
Asian	.006	0	1
Black	.079	0	1
Hispanic	.012	0	1
White	.885	0	1
Other or unknown	.018	0	1
Marital status			
Married	.523	0	1
Never married	.043	0	1
Separated or divorced	.065	0	1
Widowed	.369	0	1
Education (years)	10.02	0	18
Monthly Income/1000 (1998$)	1.927	0	933
Rural	.260	0	1
Number of observations (person-year)	63,653		

Table 2. Logit results to predict the probability that monthly out-of-pocket health care expenditures exceed a threshold

Variables	Non LTC Expenditures		LTC Expenditures	
	> $100	> $500	> $100	> $1000
Constant	−4.22 **	−.02	−5.5	−9.3
	(.87)	(3.3)	(3.4)	(5.6)
Age splines				
66≤Age<70	.047 **	−.044	.033	.059
	(.013)	(.048)	(.049)	(.082)
70≤Age<75	.017	.044	.094 **	.132 *
	(.010)	(.036)	(.032)	(.052)
75≤Age<80	−.021 *	−.062	.122 **	.156 **
	(.010)	(.035)	(.024)	(.035)
80≤Age<85	−.011	−.125 **	.073 **	.017
	(.011)	(.043)	(.019)	(.028)
85≤Age<90	−.086 **	.018	.020	.069 *
	(.016)	(.016)	(.021)	(.029)
90≤Age<95	−.031	.026	−.005	−.082 *
	(.029)	(.084)	(.033)	.042
Male	−.035	.285 **	−.158 *	.059
	(.028)	(.092)	(.066)	(.092)
Race				
Asian	−.92 **	−1.2	−.64	−1.07
	(.20)	(1.0)	(.49)	(.98)
Black	−.429 **	−.09	−.61 **	−1.83 **
	(.049)	(.15)	(.11)	(.24)
Hispanic	−.32 **	−.12	−1.69 **	—
	(.12)	(.45)	(.54)	
Other or unknown	−.173	.11	−.67 **	−.38
	(.099)	(.28)	(.21)	(.26)
Marital status				
Never married	−.311 **	−.31	.96 **	.84 **
	(.067)	(.22)	(.13)	(.17)
Separated/divorced	−.222 **	−.20	.93 **	.45 *
	(.055)	(.18)	(.13)	(.22)
Widowed	−.108 **	−.06	.769 **	.68 **
	(.032)	(.10)	(.075)	(.11)
Education (years)	.0547 **	.050 **	−.0988 **	−.0295 **
	(.0037)	(.011)	(.0069)	(.0099)
Pseudo *R*-squared	.029	.089	.368	.269
Marginal Pseudo *R*-squared	.017	.016	.074	.052
N	63,653	63,653	63,653	62,180

Notes: Robust standard errors are in parentheses. Regressions also controlled for time until death, number of ADLs and IADLs, rural area, 9 Census regions and 6 year dummies. * Statistically significant at 5% level. ** Statistically significant at 1% level. Two variables and 1,473 observations were dropped from the fourth model due to perfect prediction.

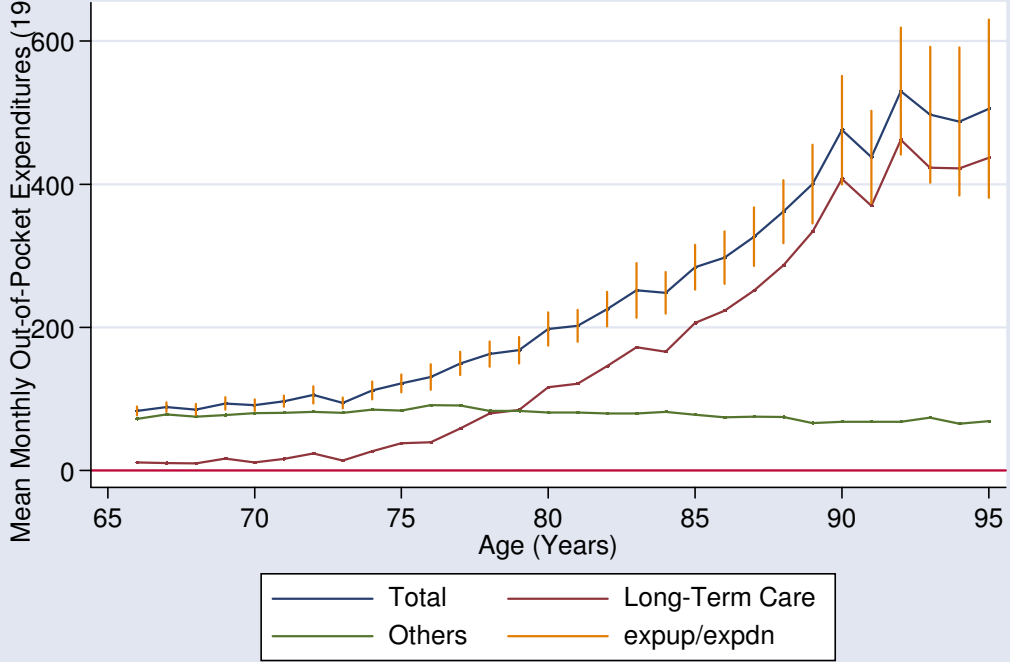Figure 1: Out-of-Pocket Expenditures (Means) by Age and Type

Figure 2: Total Out-of-Pocket Expenditures/Income by Age