



# **Incorporating Data on Assets into Measures of Financial Burdens for Health**

**Jessica S. Banthin and Didem Bernard**

The elderly and non-elderly devote different proportions of their family income to health care because both parts of the equation – their expected health care needs and their resources to meet those needs – are very different. What is an appropriate threshold for a non-elderly individual or family compared to an elderly individual or family? If the thresholds are not the same, is there a way to develop a consistent threshold for elderly and non-elderly families that recognizes their very different resources and needs regarding medical care as a part of their overall household budget? In the work that follows, we show that the distributions of burdens for elderly and non-elderly families are quite different. We then investigate the distribution of assets in both groups. Finally, we compute burdens using different thresholds and different measures of resources to define high burdens. One approach incorporates 5 percent of total net assets into the resources available to elderly families to pay medical expenses as a simplified method for drawing down assets in retirement. We do not make this adjustment for non-elderly families since they are expected to be saving for the future rather than drawing down on current savings.

Jessica S. Banthin, Ph.D.  
Senior Advisor, Health and Human Resources Division  
Congressional Budget Office  
Washington, DC 20515  
Email: [Jessica.Banthin@CBO.GOV](mailto:Jessica.Banthin@CBO.GOV)

Didem Bernard, Ph.D.  
Senior Economist, Division of Modeling and Simulation  
Center for Financing, Access and Cost Trends  
Agency for Healthcare Research and Quality  
Email: [DBernard@AHRQ.GOV](mailto:DBernard@AHRQ.GOV)

## **Introduction**

In assessments of out of pocket burdens for health care, annual income is used to measure the available resources.<sup>1</sup> This approach is consistent with poverty measurement, which is also based on gross annual income as reported in the Current Population Survey of households. Assets, on the other hand, are counted only to the extent that asset income, such as interest and dividends, is included in the measure of total money income. While asset holdings may be difficult to measure well in household surveys it is likely that asset holdings serve as an important financial resource for families confronted by a temporary loss of income resulting from, for example, a spell of unemployment. Similarly, assets are likely to serve as an important financial resource for families with high out of pocket medical expenses, especially in the case of unexpected medical expenses.

If asset holdings are generally correlated with income then ignoring assets in measures of poverty or out of pocket burdens for health care may not result in biased or misleading comparisons between population subgroups. That is, if we don't believe certain groups have systematically higher levels of assets than other groups with similar income, the current approach measures poverty or health care burdens consistently across policy-relevant subgroups. It is worth examining these assumptions, however, with respect to the elderly, who, simply by virtue of age, have had more time to accumulate assets than younger individuals with the same

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<sup>1</sup> Some studies have computed annual disposable income net of taxes whereas other studies have used gross annual income as reported by survey respondents.

income.<sup>2</sup> If the elderly do have systematically higher levels of assets, all other things equal, then income based measures of financial deprivation may be misleading. This issue may be particularly relevant to the measurement of medical care burdens, because health care expenses due to illness and disability are widely recognized as one of the major financial risks of old age for which to save. The question then becomes one of how to incorporate assets into an income-based measure.

A growing literature has examined out of pocket expenditures for medical care as a function of income. The literature typically defines one or more thresholds, say 10 and 20 percent of family income, so that the distribution of the population according to the thresholds can be reported. As explained elsewhere, this approach reduces bias due to reporting error in income and provides an intuitive measure of the risk of incurring high medical burdens.<sup>3</sup> This threshold approach mirrors the method used in measuring poverty, which is also based on thresholds.

As far as we are aware, however, the literature has always analyzed medical care financial burdens and risks separately for the elderly and non-elderly sub-populations. There are two main reasons for this distinction. First, the two groups differ in their primary sources of insurance coverage. Thus, the reasons for and the policy implications of high out pocket medical care burdens also differ by subpopulation. Since almost all persons aged 65 and over are covered by Medicare,

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<sup>2</sup> The self-employed are another group who may have systematically higher levels of assets. They are treated in the appendix.

<sup>3</sup> See Jessica S. Banthin and Didem M. Bernard, 2006, "Changes in Financial Burdens for Health Care: National Estimates for the Population Younger Than 65 Years, 1996 to 2003," *JAMA*, December 13, 2006, Vol. 296, No. 22:(2712-2719).

the policy implications of high burdens among the elderly center on the Medicare program. Individuals under age 65, on the other hand, are covered primarily by employment-sponsored insurance, individually purchased policies, and Medicaid. Many are uninsured. The policy implications of high burdens among non-elderly are related to the functioning of private insurance markets. A second and equally important reason for analyzing the two groups separately is methodological. Since elderly and non-elderly individuals and families spend very different proportions of their income on health care it is difficult to define a single threshold for both age groups.

The elderly and non-elderly devote different proportions of their family income to health care because both parts of the equation – their expected health care needs and their resources to meet those needs – are very different. What is an appropriate threshold for a non-elderly individual or family compared to an elderly individual or family? If the thresholds are not the same, is there a way to develop a consistent threshold for elderly and non-elderly families that recognizes their very different resources and needs regarding medical care as a part of their overall household budget? In the work that follows, we show that the distributions of burdens for elderly and non-elderly families are quite different. We then investigate the distribution of assets in both groups. Finally, we compute burdens using different thresholds and different measures of resources to define high burdens. One approach incorporates 5 percent of total net assets into the resources available to elderly families to pay medical expenses as a simplified method for drawing down assets in retirement. We do not make this adjustment for non-elderly families since

they are expected to be saving for the future rather than drawing down on current savings.

### **Prior literature on health care burdens**

In a previous study, we estimated changes in annual financial out of pocket burdens for medical care, for the population under age 65.<sup>4</sup> Our key estimate of total financial burden included out of pocket expenditures for health care services plus out of pocket expenditures for premiums as a function of family income. High financial burdens were defined using thresholds of 10 and 20 percent of family income. In another paper we applied a threshold of 5 percent of income to non-elderly families living below 200% of poverty.<sup>5</sup> Other studies apply 5 and 10 percent thresholds to indicate high burdens among non-elderly individuals and families.<sup>6</sup> Under the Affordable Care Act there are premium and cost-sharing subsidies broadly consistent with these thresholds that apply to the low-income population under age 65.

Researchers take a broader approach in analyzing out of pocket medical care spending in the elderly population. While some papers have looked at annual burdens for medical care, another vein of research has focused on the amount of money needed to pay for medical care, including long term care, over a lifetime. Among papers that do examine annual burdens, one of us assessed changes in

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<sup>4</sup> Ibid.

<sup>5</sup> See Jessica Banthin, Peter Cunningham, and Didem Bernard, "Financial Burden of Health Care," *Health Affairs*, 2008, January/February; 27(1):185-195.

<sup>6</sup> See Cathy Schoen, Michelle Doty, Ruth Robertson, and Sara Collins, "Affordable Care Act Reforms Could Reduce the Number of Underinsured U.S. Adults by 70 Percent," *Health Affairs*, September 2011, 30(9): 1762-1771.

annual out of pocket burdens for medical care for the elderly between 1987 and 1996 and applied thresholds of 20 and 40 percent of after tax family income to indicate individuals living in families with high burdens.<sup>7</sup>

The methodological challenge arises because the elderly and non-elderly sub-populations differ in terms of health care spending as a function of income. Setting a common threshold for both groups against which to assess financial burden or risk is difficult. The reasons for their differences are worth reviewing. The non-elderly population is a working age population and many live in families with children. Working age families tend to be larger in size and have higher incomes than retired families, although their official poverty rates are higher compared to the elderly.<sup>8</sup> Working age families have more competing demands on their resources. For example, they typically incur work-related and child-rearing expenses and spend more on transportation compared to older families. In addition, working age families should be saving from current income for future retirement or to invest in the education of their children. On average their health needs are lower than those of the elderly.

In contrast, most individuals age 65 and over are retired or close to retirement and few in this age group are still raising children. Upon retirement, individuals and families typically begin drawing down on their assets rather than continuing to save. In addition, the need for medical care grows as people age. The implication of these different consumption and saving patterns is that elderly and

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<sup>7</sup> See Thomas M. Selden and Jessica S. Banthin, "Health Care Expenditure Burdens Among Elderly Adults: 1987 and 1996," *Medical Care* 2003, Vol. 41, No. 7, Supplement, pages iii-13-iii-23.

<sup>8</sup> As of 2010, 9.0 percent of persons aged 65 or more lived in poverty compared to 22.0 percent of children and 13.7 percent of non-aged adults.

non-elderly families would be expected to devote different shares of family income to out of pocket medical care and health insurance premiums.

## **Data and Methods**

The Medical Expenditure Panel Survey includes detailed information on medical expenditures by source of payment including out of pocket payments. Information is also collected on out of pocket premiums, income, assets, and other individual and household data. While data on income and expenditures support annual estimates, the information on assets are collected only once per panel at the end of Round 5. In this paper we pool three panels together in order to increase sample sizes for the elderly and self-employed and to support analyses of the distribution of assets across different poverty groups. In the MEPS, a new panel is started each year. Panels 10, 11, and 12 started in 2005, 2006, and 2007. Since asset information is collected in the second year of the panel, all measures of assets and income are adjusted for inflation to bring them to 2008 using the Consumer Price Index for Urban Areas.

Although the MEPS asset variables are not currently available on public use files, they are available to any researcher to use in the AHRQ Data Center. We have published other papers using these variables and have compared MEPS national estimates of various definitions of wealth to estimates from the Survey of Income and Program Participation and the Survey of Consumer Finances.<sup>9</sup> The MEPS asset data compare well to asset information collected in the Survey of Income and

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<sup>9</sup> See Didem Bernard, Jessica Banthin, and William Encinosa, "Wealth, Income and the Affordability of Health Insurance," *Health Affairs* 2009 (May/June); 28(3):887-896.

Program Participation, however, both surveys appear to underreport wealth holdings compared to information collected in the Survey of Consumer Finances. The value of the MEPS asset variables for this study is in the consistency of information collected across the whole population including both under and over 65 along with information on income and out of pocket medical expenses. Regardless of underreporting, there is no indication of bias by age.

For this analysis family is defined at the Health Insurance Eligibility Unit (HIEU), which consists of all those individuals related by blood or marriage that would typically be eligible for a family policy under most private insurance plans. Families with half or more of their members age 65 and over are designated as elderly families. The rest are designated as non-elderly families for purposes of examining family level assets.

#### *Construction of measures of out of pocket burden*

For this analysis, we rely on the same approach we have refined in several previous papers to calculate financial out of pocket burden for medical care. We define out of pocket burden for medical care as a family level concept in the same way that poverty is a family level concept because in both measures it is assumed that family level resources are shared among individual family members. Thus, we sum out of pocket expenditures on health care services and premiums across all members of the family to define the numerator. Family income is used to define the denominator.

In some variations of our estimates, we add 5 percent of total net assets to annual income in the denominator. We do this for elderly families since they are expected to be drawing down their assets in retirement. We do not make this adjustment for non-elderly families because they are expected to be saving for their future retirement. We chose 5 percent of total net assets as the draw down percent because this is very close to what some financial planners advise.

We then compute the share of family income used to cover all medical expenses and assign this value to each individual in the family. Thus, if a three-person family spends 8 percent of total family income on combined spending for health care services and premiums for all family members, each individual is assigned the 8 percent value. The resulting distribution is highly skewed with a long tail of individuals living in families that spend high proportions of family income on medical care. We analyze this distribution by counting individuals with burdens that exceed a certain threshold (say 5, 10, or 20 percent). We do not truncate the estimates since it is theoretically possible for some families to spend more than 100% of income on medical care in certain situations and a truncation would affect the mean.

## **Results**

Table 1 shows the percentile distribution of out of pocket burdens for the elderly and non-elderly to illustrate the differences between the two groups. Overall, the median burden for elderly individuals was 10.7 percent compared to just 2.9 for non-elderly individuals. This means that the median individual age 65 or

older lived in a family that spent almost 11 percent of family income on medical care. As expected, younger families devoted a much small share of family income to medical care. The median individual less than 65 lived in a family that spent about 3 percent on medical care. Among individuals living in poverty, at the median the elderly spent about 13.5 percent of family income on medical care while the non-elderly spent about 2.7 percent of family income.

These differences between elderly and non-elderly populations were similar across poverty groups at the median and increased at higher points in the distribution. At the 75<sup>th</sup> percentile the burden for the elderly was 20.7 percent of family income compared to 7 percent of family income for non-elderly individuals. If we were to use the 75<sup>th</sup> percentile to suggest a cut-off point as the basis for measuring high burdens, then the thresholds would also be quite different for the two age groups.

Table 2 presents the distribution of total net assets by family age group. This measure includes the net value of all financial and non-financial assets.<sup>10</sup> In the first column of figures, at the overall median, elderly individuals reported \$146,000 in family net wealth while non-elderly reported \$20,000. Thus, at the median, elderly individuals have about 7 times as much family net wealth as do non-elderly individuals.

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<sup>10</sup> Not shown are tables that examined the distribution of financial assets and retirement assets. We chose to focus on total net assets since this measure conveys the large differences between the two age groups.

The large disparities in net assets can be seen along all points of the distribution. Overall, at the 20<sup>th</sup> percentile, elderly individuals reported about \$5,000 in net family assets compared to zero reported by non-elderly individuals. While at the 90<sup>th</sup> percentile, elderly individuals reported about \$797,000 in net assets compared to \$433,000 held by non-elderly individuals.

The remaining columns of numbers report the distribution of assets by poverty status. Among individuals living below poverty, at the median elderly individuals reported more than \$20,000 in net family wealth while non-elderly individuals reported zero. Among low income individuals (with family income between 100 and 199 percent of poverty), the median net assets for an elderly individual was about 33 times as much as that for a non-elderly individual (\$77,000 versus \$2,300).

Table 3 presents four measures of burden. In the column labeled BURD10, we see the percent of individuals whose families were spending 10% or more of family income on medical care. Overall, about 53 percent of elderly and 17 percent of non-elderly individuals had high burdens according to this threshold. In the next column, BURD20, we see that about 26 percent of elderly and 8 percent of non-elderly individuals lived in families spending 20% or more on medical care. In the final two columns we use the same thresholds of 10 and 20 percent of family income, but we adjust the family income measure of elderly families to include five percent of the value of total net assets. We do not make this adjustment for the non-elderly since they are supposed to be saving for the future rather than drawing down on their accumulated assets. Overall, the adjustment shifts average income up

by about \$16,000 for elderly individuals. In the second to last column, under BURD10ADJ, we see that 40 percent of elderly individuals versus 17 percent of non-elderly individuals had high out of pocket burdens according to this measure. In the last column, under BURD20ADJ, we see that about 16.5 percent of elderly individuals had high burdens according to this measure compared to about 7.7 percent of non-elderly individuals.

Among elderly individuals living below poverty (as classified by the original reported income), the adjustment increases average income from \$6,550 to almost \$12,000 while simultaneously shifting the percent with medical burdens exceeding 20 percent of family income down from 44 percent to about 29 percent. Similar shifts are seen among low-income elderly, where average income increases by about \$7,000 and the percent with medical burdens exceeding 20 percent of family income shifts down from about 41 percent to about 27 percent.

## **Discussion**

The preliminary analyses presented here suggest further work is needed to develop consistent measures of medical risk that combine the elderly and non-elderly populations. Drawing down assets or annuitizing wealth is one approach to take in measuring the resources of retired persons. Applying different thresholds to different sub-populations is another approach. For example, as mentioned above, using the 75<sup>th</sup> percentile of the distribution of out of pocket medical burdens from Table 1 as a guide, one could apply thresholds of 20 percent of income for elderly households and 10 percent (rounded up from 7 percent) of income for non-elderly

households to indicate high burdens. Combining these approaches, we see in Table 3 that about 16.5 percent of elderly individuals have medical care burdens exceeding 20 percent of *adjusted* income compared to about 17.0 percent of non-elderly individuals with medical care burdens exceeding 10 percent of reported income. Based on the very different distribution of burdens this method is worth considering. It is clear from the data presented here that ignoring assets in the measurement of economic deprivation has far-reaching implications in comparing the relative status of elderly and non-elderly sub-populations.

## References

Banthin, Jessica S. and Didem M. Bernard, 2006, "Changes in Financial Burdens for Health Care: National Estimates for the Population Younger Than 65 Years, 1996 to 2003," *JAMA*, December 13, 2006, Vol. 296, No. 22:(2712-2719).

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## Appendix

### **Comparing the Self-Employed and Employed (Non-elderly) in terms of Burdens and Distribution of Assets**

Another group that may have higher levels of assets relative to other groups with similar levels of income is the self-employed. In this appendix we also investigate the distribution of burdens and assets among non-elderly families where at least one person is self-employed and compare them to other non-self-employed families. The same data and methods described above are used to analyze the self-employed. We identify self-employed families as non-elderly families with at least one person age 25 or older who reports being self-employed. Employed families are the rest of non-elderly families.

Appendix Tables 1 through 3 present the same estimates for comparing the self-employed to the non-self-employed, restricting the comparison to those under age 65. The major concern with the self-employed was that they might have high burdens that are misleading because of their assets. Unlike the elderly, however, the self-employed as defined in this analysis do not have substantially higher burdens than their non-self-employed counterparts. Although median burdens for the self-employed are 3.3 compared to 2.9 for the non-self-employed (Table 1), this difference is not large from a policy perspective.

As we expected, the self-employed do report higher net family assets across all deciles of the distribution (Table 2). Their business assets, however, only affect the top two deciles. So, while the self-employed do have higher assets, they also have higher levels of average income (Table 3). We can see that the self-employed have higher average family incomes than the non-self-employed (Table 3). Unadjusted income based measures of financial burden show that the self-employed have higher burdens when using the 10 percent threshold compared to the non-self-employed (20.1 versus 16.6). Using the 20 percent threshold, the two groups are not statistically significantly different in their level of burden (7.6 and 7.7). Although they have higher incomes, it is likely that the self-employed have higher burdens than their non-self-employed counterparts, perhaps due to non-group premium payments.

In conclusion, there does not appear to be any strong argument for incorporating the business assets of self-employed individuals into their measure of resources. It is not clear that any special measurement procedures are needed to account for the health care burdens faced by this group, although a narrower definition of self-employment might reach different conclusions.

**Table 1 - Percentiles of out-of-Pocket Total Burden, Elderly and Non-elderly HIEUs, pooled Panels 10-12 (2008 dollars)**

<b>Poverty</b>	<b>N</b>	<b>PCT50</b>	<b>PCT75</b>	<b>PCT90</b>
<b>Overall</b>				
<b>ELDERLY</b>	3,970	10.65 (0.25)	20.67 (0.60)	37.64 (1.35)
<b>NON-ELDERLY</b>	17,513	2.93 (0.05)	7.01 (0.11)	16.00 (0.41)
<b>&lt;100% Poverty</b>				
<b>ELDERLY</b>	685	13.47 (2.14)	57.96 (20.06)	*
<b>NON-ELDERLY</b>	3,260	2.74 (0.31)	19.09 (1.51)	*
<b>100-199% Poverty</b>				
<b>ELDERLY</b>	1,134	16.53 (0.56)	27.93 (1.27)	43.07 (2.01)
<b>NON-ELDERLY</b>	3,849	2.58 (0.17)	9.04 (0.32)	20.36 (0.98)
<b>200-399% Poverty</b>				
<b>ELDERLY</b>	1,069	13.19 (0.45)	20.34 (0.77)	31.67 (1.77)
<b>NON-ELDERLY</b>	5,190	3.74 (0.12)	8.05 (0.21)	14.78 (0.46)
<b>400%+ Poverty</b>				
<b>ELDERLY</b>	1,082	6.44 (0.21)	10.53 (0.34)	17.21 (0.83)
<b>NON-ELDERLY</b>	5,214	2.60 (0.05)	5.01 (0.10)	8.50 (0.20)

Source: Medical Expenditure Panel Survey- Household Component, Panels 10-12

Note: Standard errors are in parentheses.

\* Sample size is too small to make reliable estimates.

**Table 2: Distribution of total net HIEU-level assets by family age for pooled Panel 10-12 HIEUs**

<b>Percentiles</b>	<b>Overall</b>	<b>&lt;100% Poverty</b>	<b>100-199% Poverty</b>	<b>200-399% Poverty</b>	<b>400%+ Poverty</b>
<b>Nonelderly HIEUs</b>					
10	-318 (203)	-4,113 (908)	-3,871 (799)	-961 (513)	-8 (6)
20	0 (0)	-43 (11)	-40 (11)	0 (0)	10,295 (1,092)
30	1,500 (204)	-28 (8)	-15 (5)	2,134 (302)	37,024 (2,909)
40	6,408 (446)	-14 (4)	501 (188)	6,500 (546)	79,230 (3,962)
50	20,151 (1,296)	0 (38)	2,341 (261)	15,518 (1,092)	133,838 (6,266)
60	53,843 (2,564)	1,023 (134)	5,515 (490)	34,967 (2,523)	207,507 (7,831)
70	111,069 (3,866)	3,115 (296)	14,137 (1,447)	72,021 (4,094)	307,964 (10,214)
80	210,245 (6,779)	7,840 (1,148)	39,498 (3,010)	129,015 (4,730)	460,008 (13,658)
90	432,096 (13,090)	45,923 (5,943)	105,752 (6,426)	242,669 (12,301)	788,162 (27,702)
95	729,088 (26,304)	119,340 (10,434)	198,769 (19,051)	404,244 (23,215)	1,236,414 (52,333)
<b>N</b>	<b>17,513</b>	<b>3,260</b>	<b>3,849</b>	<b>5,190</b>	<b>5,214</b>
<b>Elderly HIEUs</b>					
10	-8 (3)	-63 (18)	-18 (6)	17 (193)	7,788 (4,843)
20	4,997 (1,005)	-13 (41)	1,063 (435)	6,622 (2,323)	102,772 (14,466)
30	37,356 (4,433)	779 (313)	9,641 (2,342)	32,122 (7,436)	187,887 (13,612)
40	88,161 (6,051)	3,313 (2,698)	40,222 (5,447)	89,808 (9,805)	265,312 (11,498)
50	146,334 (6,515)	20,686 (6,095)	77,301 (6,073)	136,472 (7,924)	355,370 (21,152)
60	215,083 (8,927)	51,848 (9,929)	111,150 (6,733)	190,027 (10,334)	469,780 (27,918)
70	298,604 (9,729)	101,682 (13,996)	159,509 (12,221)	252,973 (11,908)	640,134 (32,898)
80	450,609	185,478	234,056	348,177	959,475

	(17,681)	(24,155)	(12,678)	(18,702)	(47,838)
90	796,624	302,952	376,518	546,099	1,432,970
	(38,581)	(17,667)	(30,868)	(39,165)	(64,339)
95	1,226,427	423,549	522,502	807,366	2,128,943
	(66,078)	(60,816)	(39,722)	(58,823)	(143,601)
<b>N</b>	<b>3,970</b>	<b>685</b>	<b>1,134</b>	<b>1,069</b>	<b>1,082</b>

Source: Medical Expenditure Panel Survey- Household Component, Panels 10-12

Note: Standard errors are in parentheses.

**Table 3: Alternative income measures and percent with high burdens (5% asset added to elderly) for elderly and non-elderly HIEUs, pooled Panels 10-12**

	<b>N</b>	<b>TOTINC</b>	<b>ADJINC</b>	<b>BURD10</b>	<b>BURD20</b>	<b>BURD10 ADJ</b>	<b>BURD20A DJ</b>
<b>Overall</b>							
<b>ELDERLY</b>	3,970	41,592 (992)	57,644 (91,417)	52.53 (0.94)	26.06 (0.90)	40.01 (0.98)	16.54 (0.72)
<b>NON-ELDERLY</b>	17,513	53,751 (682)	53,751 (682)	17.02 (0.36)	7.68 (0.27)	17.02 (0.36)	7.68 (0.27)
<b>&lt;100% Poverty</b>							
<b>ELDERLY</b>	685	6,550 (199)	11,962 (575)	54.09 (2.50)	43.52 (2.53)	43.48 (2.49)	28.64 (2.41)
<b>NON-ELDERLY</b>	3,260	7,282 (141)	7,282 (141)	33.20 (1.19)	24.54 (1.04)	33.20 (1.19)	24.54 (1.04)
<b>100-199% Poverty</b>							
<b>ELDERLY</b>	1,134	15,435 (162)	22,628 (461)	70.75 (1.55)	40.72 (1.88)	57.40 (1.72)	26.58 (1.57)
<b>NON-ELDERLY</b>	3,849	20,516 (212)	20,516 (212)	22.43 (0.87)	10.23 (0.68)	22.43 (0.87)	10.23 (0.68)
<b>200-399% Poverty</b>							
<b>ELDERLY</b>	1,069	30,295 (418)	41,772 (730)	63.51 (1.58)	26.01 (1.61)	48.48 (1.76)	15.37 (1.22)
<b>NON-ELDERLY</b>	5,190	40,140 (339)	40,140 (339)	18.77 (0.70)	5.90 (0.42)	18.77 (0.70)	5.90 (0.42)
<b>400%+ Poverty</b>							
<b>ELDERLY</b>	1,082	85,197 (2,050)	116,230 (2,981)	27.35 (1.50)	7.76 (0.89)	17.00 (1.39)	4.91 (0.74)
<b>NON-ELDERLY</b>	5,214	96,085 (1,013)	96,085 (1,013)	7.46 (0.36)	2.05 (0.22)	7.46 (0.36)	2.05 (0.22)

Source: Medical Expenditure Panel Survey- Household Component, Panels 10-12

Note: Standard errors are in parentheses.

**Appendix Table 1. Percentiles of burdens for self-employed, employed non-elderly HIEUs, pooled Panels 10-12**

	<b>N</b>	<b>PCT50</b>	<b>PCT75</b>	<b>PCT90</b>
<b>Overall</b>				
<b>Self-employed</b>	2,069	3.32 (0.16)	8.11 (0.33)	17.15 (0.80)
<b>Employed</b>	15,444	2.86 (0.06)	6.81 (0.11)	15.69 (0.45)
<b>&lt;100% Poverty</b>				
<b>Self-employed</b>	213	2.44 (1.40)	22.64 (9.40)	*
<b>Employed</b>	3,047	2.74 (0.32)	19.00 (1.39)	*
<b>100-199% Poverty</b>				
<b>Self-employed</b>	406	3.34 (0.65)	12.62 (1.60)	27.23 (3.57)
<b>Employed</b>	3,443	2.49 (0.17)	8.59 (0.34)	19.67 (0.87)
<b>200-399% Poverty</b>				
<b>Self-employed</b>	606	4.23 (0.48)	9.93 (0.64)	17.91 (1.03)
<b>Employed</b>	4,584	3.69 (0.12)	7.85 (0.21)	14.37 (0.42)
<b>400%+ Poverty</b>				
<b>Self-employed</b>	844	3.03 (0.15)	6.55 (0.32)	11.01 (0.66)
<b>Employed</b>	4,370	2.51 (0.06)	4.80 (0.10)	8.01 (0.23)

Source: Medical Expenditure Panel Survey- Household Component, Panels 10-12

Note: Standard errors are in parentheses.

\* Sample size is too small to make reliable estimates.

**Appendix Table 2 - Distribution of HIEU-level assets by employment type for non-elderly HIEUs, pooled Panels 10-12**

Percentiles	Net Assets	
	Employed Non-elderly	Self-employed Non-elderly
10	-626 (279)	-114 (49)
20	0 (0)	5,335 (1,419)
30	831 (131)	29,103 (4,146)
40	4,803 (308)	71,515 (6,381)
50	13,785 (950)	131,849 (7,310)
60	39,459 (2,278)	211,128 (14,943)
70	86,891 (3,774)	333,701 (19,810)
80	173,412 (6,339)	543,679 (29,910)
90	357,911 (10,413)	985,398 (54,411)
95	581,271 (18,430)	1,702,469 (151,266)
N	15,444	2,069

Source: Medical Expenditure Panel Survey- Household Component, Panels 10-12

Note: Standard errors are in parentheses.

**Appendix Table 3: Percent with high burdens for non-elderly HIEUs, pooled Panels 10-12 (2008 dollars)**

	<b>N</b>	<b>PREMOOPX</b>	<b>TOTINC</b>	<b>BURD10</b>	<b>BURD20</b>
<b>Overall</b>					
<b>Self-employed</b>	2,069	3,993 (121)	76,803 (1,699)	20.07 (1.05)	7.56 (0.67)
<b>Employed</b>	15,444	2,196 (36)	50,304 (680)	16.57 (0.40)	7.69 (0.28)
<b>&lt;100% Poverty</b>					
<b>Self-employed</b>	213	1,562 (253)	9,803 (633)	33.24 (4.24)	27.26 (4.12)
<b>Employed</b>	3,047	822 (65)	7,097 (143)	33.20 (1.23)	24.34 (1.06)
<b>100-199% Poverty</b>					
<b>Self-employed</b>	406	2,573 (264)	25,383 (766)	29.61 (2.89)	15.12 (2.37)
<b>Employed</b>	3,443	1,304 (49)	19,882 (207)	21.50 (0.91)	9.59 (0.67)
<b>200-399% Poverty</b>					
<b>Self-employed</b>	606	3,574 (204)	48,923 (1,051)	24.95 (2.10)	7.03 (1.23)
<b>Employed</b>	4,584	2,295 (55)	38,909 (337)	17.91 (0.74)	5.74 (0.41)
<b>400%+ Poverty</b>					
<b>Self-employed</b>	844	5,051 (192)	119,829 (2,396)	12.16 (1.18)	2.63 (0.62)
<b>Employed</b>	4,370	3,069 (66)	91,418 (1,073)	6.54 (0.38)	1.94 (0.23)

Source: Medical Expenditure Panel Survey- Household Component, Panels 10-12

Notes: Standard errors are in parentheses.

PREMOOPX includes out-of-pocket expenditures for care and insurance premiums.