Supplemental Material for: The Impact of Medical and Nursing Home Expenses on Savings and Welfare

1 Evidence on Health Expenses and Public Insurance

In this supplementary section we discuss the size, composition and public insurance coverage of health expenditures on aggregate. Among personal health expenditures, defined as national health expenditures net of expenditures on medical construction and medical research, we distinguish between medical and nursing home expenditures. Medical expenditures include expenditures on hospital, physician and clinical services, prescription drugs, dental care, other professional and personal health care, home health care, nondurables and durables. Nursing home expenditures include expenditures on skilled nursing facilities (facilities for individuals who require daily nursing care and living assistance) but not the costs of services provided by retirement homes or assisted-living facilities.[1] We take a look at two public health insurance programs: Medicare and Medicaid. While Medicare is a federal entitlement program for the elderly and disabled, Medicaid is a means-tested, federal/state program for the poor.

1.1 Personal Health Expenditures

According to the U.S. Department of Health and Human Services, personal health expenditures accounted for 13 percent of GDP in 2002. Thirty-five percent of these, or 4.4 percent of GDP, were expenditures on the elderly (individuals 65 years of age and over). In per capita terms, however, personal health expenditures on the elderly outweigh expenditures for the rest of the adult population. While the average expenditure on someone less than 65 years of age was close to the national average of 13 percent of per capita income, the average expenditure on a 65 to 74 year old was twice this amount, while for 75 to 84 year olds and individuals age 85 and up it was three times and five times this amount, respectively. Personal health expenditures by age as a percent of GDP and per capita income are provided in Table 1.

How were the large expenditures on the elderly financed? Table 2 shows that 34 percent of total personal health expenditures, or 1.5 percent of GDP, were privately financed either out-

[1] Retirement home expenses are not included in our definition of medical expenses and are not eligible for Medicaid coverage. The cost of assisted-living services within an assisted-living facility are counted as medical expenses however room and board in such facilities is not. Furthermore, Medicaid does not cover room and board expenses in assisted-living facilities and the criteria for eligibility of assisted-living services differs from that for nursing home care. See Mollica (2009) for details.

Table 1: Personal Health Expenditures, 2002

	by age %	total % of GDP	per capita % of p.c. income
All ages	100	13	13
Under 65	65	8.6	13*
65+	35	4.4	36
65-74	13	1.6	26
75-84	14	1.7	40
85+	8	1	66

The last column is the average medical expenditure of the specified age group divided by U.S. GDP per capita. Source: U.S. Department of Health and Human Services.

* 19-64 year olds

of-pocket, with private insurance or through other means, while the remaining 66 percent, or 2.9 percent of GDP, were publicly financed by either Medicare, Medicaid, or other public programs. Note that Medicaid finances a substantial portion – 14 percent – of the elderly's medical expenses, or 0.6 percent of GDP. Table 3 shows that medical expenditures of the elderly not covered by Medicare are primarily funded by private sources: either OOP directly or indirectly through insurance payments. Private payments of the elderly accounted for 12.3 percent of per capita GDP while Medicaid accounted for 5.2 percent. In addition, both private and Medicaid payments for medical care as a share of income per capita increase with age. Note that Medicaid's share of total expenditures net of Medicare increases with age as well: it is 22 percent for 65 to 74 year-olds, 29 percent for 75 to 84 year-olds, and 41 percent for individuals ages 85 and up. Older individuals are more likely to have large medical expenditures and to be impoverished by large OOP medical expenditures at earlier ages, making them eligible for Medicaid transfers.

1.2 Nursing Home Care

Nursing home costs are one of the largest OOP health expenses faced by the elderly. According to the Medicare Current Beneficiary Survey, in 2002 nursing home care accounted for 19 percent of personal health expenditures for individuals ages 65 and over and 0.85 percent of GDP. However, since only 4 percent of the elderly resided in nursing homes (Federal Agency Forum of Aging-Related Statistics), the cost per nursing home resident was substantially higher – 190 percent of income per capita. Consistent with these statistics, the Metlife Market Survey of Nursing Home and Assisted Living Costs reports that the average daily rate for a private room in a nursing home in 2005 was $203 or $74,095 annually while the average

Table 2: Personal Health Expenditures by How Financed for Individuals Ages 65 and Over, 2002

Source of Payment	% of total	% of GDP
All	100	4.4
Private	**34**	**1.5**
Out-of-pocket*	16	0.7
Private Insurance	16	0.7
Other	2	0.1
Public	**66**	**2.9**
Medicare	48	2.1
Medicaid	14	0.6
Other	4	0.2

* net of insurance premiums. Source: U.S. Department of Health and Human Services.

daily rate for a semiprivate room was $176 or $64,240 annually.

Nursing home expenses in the U.S. are predominantly financed either OOP or publicly by either the Medicare or Medicaid programs. However, Medicare coverage for nursing home care is limited in that it only covers costs for the first six months of care and partially subsidizes the next six months. Thus while Medicare is the primary payer of nursing home costs for residents with short-term stays (stays of less than one year) its contribution to costs after the first year is extremely small. In addition private insurance markets for long-term care are scarce. While this is in part due to supply-side problems that result in high costs and unreliable coverage, Brown and Finkelstein (2008) find that the lack of private long-term care insurance markets is largely due to the public insurance system (Medicare and Medicaid) crowding out private insurance. This occurs despite the fact that the public insurance system is far from satisfactory since it provides only a limited reduction in risk exposure except for the poorest individuals. As a result, relative to other health expenditures, only a small amount of nursing home care costs for individuals over 65 are covered by Medicare or through private insurance. Table 4 provides a breakdown of nursing home care expenses for individuals ages 65 and over by payment source. As shown in the table, the elderly's nursing home costs are primarily funded either out-of-pocket (37 percent) or by Medicaid (37 percent). The table also shows the breakdown of nursing home residents of all ages by primary payment type. Note that the majority, 58 percent, of nursing home residents at any given time are Medicaid recipients while the smallest percentage are primarily financed through Medicare.

Moreover, there are important differences in the Medicaid qualifications for medical ex-

Table 3: Per Capita Private, Medicare and Medicaid Health Expenditures as a Percent of Income Per Capita, 2002

Age	Private	Medicare	Medicaid
65+	12.3	17.5	5.2
65-74	9.7	12.6	2.7
75-84	12.7	20.9	5.2
85+	21.6	27.2	15.1

Source: U.S. Department of Health and Human Services.

penses versus nursing home expenses. In particular, non-nursing home recipients of Medicaid are allowed to keep their homes, cars, income, and other assets guaranteeing them a certain level of consumption. However, nursing home residents on Medicaid must contribute all their non-home, non-car assets in excess of $2,000 and all of their monthly income, excluding a small (between $30 and $90) "personal needs allowance" to their nursing home and medical expenses. Although they can keep their home and car while confined to a nursing home, these assets do not contribute much if any to their level of consumption. In a nursing home facility, Medicaid covers room and board, nursing care, therapy care, meals, and general medical supplies. However, Medicaid does not pay for a single room, personal television and cable, phone and service, radios, batteries, clothes and shoes, repairs of personal items, personal care services, among other goods and services. The result is that the quality of life delivered to Medicaid-funded nursing home residents falls well below that of privately-financed nursing home residents. This view is supported by survey evidence documented by Ameriks et al. (2007) who find that wealthy people tend to avoid public long-term care due to its low quality of life. This avoidance is termed "Medicaid aversion."

Most estimates suggest that at age 65 the probability of ever entering a nursing home before death is somewhere between 0.3 and 0.4 and the average duration of stay is approximately 2 years. However, while the majority of entrants will spend less than 1 year in a nursing home, with very little out-of-pocket expense risk thanks to Medicare, there is still a sizable risk of long-term stay in a nursing home resulting in large OOP expenses. For example, Brown and Finkelstein (2008) estimate, consistently with the findings of Dick, Garber, and MaCurdy (1994), that approximately 40 percent of entrants will spend more than 1 year in a nursing home, while approximately one fifth will spend more than 5 years.

In our theoretical analysis, we capture the differential public insurance for nursing home versus medical expenses by allowing for a differential in the consumption floor guaranteed under impoverishing medical expenses versus nursing home expenses and by calibrating the

Table 4: Percent of Nursing Home Residents by Primary Payment Source for Individuals of All Ages and Sources of Payment for Nursing Homes/Long-term care Institutions for Individuals Ages 65 and Over, 2002

Source of Payment	% of NH residents ‡	% of total NH exp.‡‡	% of GDP ‡‡
Total NH exp.	100	100	0.85
Private	**26**	**43**	**0.37**
Out-of-pocket		37	0.31
Private Insurance		2	0.02
Other		4	0.04
Public	**74**	**57**	**0.48**
Medicare	15	18	0.15
Medicaid	58	37	0.31
Other	1	2	0.02

‡ Source: Kaiser Commission on Medicaid and Uninsured, prepared by E. O'Brien and R. Elias, 2004

‡‡ Source: Medicare Current Beneficiary Survey, 2002.

differential to be consistent with the data on Medicaid's share of total nursing home expenses. We show that this differential insurance for medical versus nursing home expenses plays an important role in the saving behavior of the wealthy.