Valuing Health Insurance in the CE Interview Survey

Using data on the cost of public and private health insurance we construct a value of health insurance for each family in the CE Survey for the years 1980-1981 and 1988-2004. Because the public use files of the CE Survey for 1972-1973 and 1982-1987 do not provide information on enrollment in Medicaid or private health insurance coverage, we cannot calculate the value of health insurance for these years. We construct values for four separate types of coverage—private health insurance, Medicare, Medicaid, and Medigap—based on average cost data.

Data on the average cost of private health insurance come from the 1977 National Medical Care Expenses Survey (NMCES) and the Mercer Foster Higgins National Survey of Employer-Sponsored Health Plans from 1984-1997 and 2004-2005. The data for Medicare expenditures by state and year come from the National Health Expenditure Data provided by the Centers for Medicare and Medicaid Services. Medicaid values are based on data from the Division of Medicaid Statistics at the Health Care Financing Administration and the Medicaid Statistical Information System. Data on Medigap costs come from Weiss Ratings, Inc. and other sources.

We estimate costs for each of the four types of coverage separately. For private health insurance, we include the cost to both the employer and the employee. The cost is estimated as the three-year moving average of the cost of private insurance by plan type (single or family), region, and year. For Medicare, we do not distinguish between costs for different enrollee types. Rather, we calculate a per adult cost for Medicare by state and year. The cost for Medigap is based on national average Medigap premium rates. We calculate the average cost for Medicaid as the ratio of expenditures to enrollees in a state and year for three different eligibility groups: those 65 and over, adults, and children.

We merge these data on the cost of health insurance with data from the CE Survey. The total value of health insurance for each consumer unit depends on the number of members in the unit that are covered by each type of insurance. For private health insurance, we determine coverage using the reported number of individuals in the consumer unit that are covered by all private plans for that unit. For Medicare, we assume that all individuals 65 and over are enrolled. We assume that any private coverage for individuals 65 and over is Medigap. For Medicaid, we determine coverage using the reported number of individuals in the consumer unit that are enrolled.

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1 Data on costs are available separately for nine regions of the U.S. We do not adjust for family type, education, etc. because these variables have little predictive power in the NMES and NMCES.
2 In 1980 and 1981 the CE Survey included information on whether the plan was for individual or family coverage, rather than the number of members covered. We assume that individual plans cover only one person, while family plans cover all members of the consumer unit. Starting in 1988, respondents report the number of unit members that are covered by each plan.
3 Because the CE Survey does not report which members of the family are covered by private insurance, we calculate the number of members covered by Medigap as the difference between the total number with private coverage and the number of members under 65.
The total value of Medicare, Medicaid, and Medigap coverage for the family is calculated as the number of members enrolled in each of these programs times the respective cost. In the case of private insurance, if more than one member of the consumer unit is covered, then we calculate the family value of private coverage as the three-year average for a family plan in a given region and year divided by the mean family size for those with family coverage in that region and year times the number of members in the unit under 65 covered by private health insurance. If only one member of the consumer unit is covered by private insurance, then we calculate the family value of private coverage as the three-year average for an individual plan in that region and year.

The value a family places on health coverage may exceed its cost because of its insurance value. On the other hand, public insurance may be valued at much less than cost given the one size fits all nature of insurance and the lower value of purchases of most goods by the poor. Spending on health care has a positive income elasticity, but the income elasticity is less than 1—health care spending is a necessity. The compromise that we consider here is to count desired health expenditures. Assuming that desired health expenditures by those with few resources can be characterized by Cobb-Douglas preferences with a coefficient of 0.33 on health and 0.67 on other goods, only the value of health insurance up to one-third of total expenditures is included. Our results are not sensitive to the precise location of this kink in health care consumption. This compromise values health coverage at cost for those with substantial resources as they likely spend less than one-third of consumption on health, but at much less than cost for those with few other resources. We should note that this approach may understate the contribution of health care to well-being. That individuals choose not to spend more of their own resources on health insurance does not mean the marginal dollar of health care spending has no value to them.

To calculate equivalence scale adjusted total consumption including health insurance, we add the per capita value of total health insurance to the NAS scale adjusted value of consumption excluding health insurance. By using a per capita equivalence scale for health insurance, we do not differentiate between adults and children and we assume that there are no economies of scale in health insurance.