

PERSONAL AND SOCIAL EXTREME EVENTS: THE CASE OF HEALTH INSURANCE

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Much of my research deals with health insurance and, within that area, with catastrophic medical care events. Whether viewed as a substantial shift in one's health state or as a potential shock to one's wealth, the occurrence of a serious illness is a high loss event from an individual's perspective. Suffering a stroke, receiving a diagnosis of lung cancer, or being rendered quadriplegic in an accident are all extreme events for the person. But from the viewpoint of the insurer (or the doctor specializing in such conditions), these events are relatively common. In contrast, events such as an earthquake or a terrorist attack, while having a similar potential effect on the well-being of an individual as a health related event, have much more of a societal impact.

The difference between the two cases is that, across those at risk, except for epidemics or contagious disease, the health-related catastrophic events are independent, whereas the societal catastrophes are more highly correlated in time and/or space. The question of interest to me is whether individuals demanding insurance, or firms supplying insurance, have similar or different behaviors across these two classes of events. Do buyers seek insurance, and at what price are insurers willing to supply it? Does the form of insurance differ across the two situations? Do individuals' descriptions of the decision-making processes differ?

Catastrophic medical events and health insurance.

We know that there is both a demand for and supply of health insurance against catastrophic medical events. Except for prescription drugs, the great bulk of health insurance policies now sold do provide

catastrophic protection. If there are upper limits, they usually are in the six or (more commonly) seven figure range (the movie *John Q* to the contrary notwithstanding). At the other end of the spectrum, there is some research suggesting that individuals are willing to accept deductibles in health insurance, though with some reluctance. The provision of almost all private health insurance as a tax subsidized workplace benefit makes it hard to interpret data on purchasing, but it does seem to be broadly speaking consistent with the expected utility model.

There are some special features that still puzzle. Health insurance does generate moral hazard, and the appropriate treatment of this phenomenon for relatively low priced events (like a visit to the doctor) are well understood. Recently, however, John Nyman has been arguing that people buy medical insurance against medical events whose cost might be greater than their lifetime wealth (e.g., paying for a lung transplant) *with the purpose of* causing moral hazard in the sense of making such care financially feasible. He correctly argues that differences between insured and uninsured spending in such cases may have the usual welfare interpretation given to moral hazard in the conventional theory.

Another puzzle is empirical. In the debate over provision of prescription drug coverage for Medicare beneficiaries, proposals to provide catastrophic coverage, despite their superb theoretical pedigree, have been derided as undesirable because “who wants insurance that almost no one will collect from”? Instead. Proposals across the political spectrum have displayed the “hole in the donut” property: after a quite small deductible, benefits would be paid up to a relatively modest limit (say, \$2000). Then benefits would stop over a range of spending until total out of pocket spending hit some higher limit (say, \$5000) after which catastrophic coverage would kick in. At least political leaders seem to think that this type of coverage should sound attractive to voters.

The third puzzle is also empirical and related to drug expenses. Average expenses for drugs have risen more than 50% over the last five years, largely driven by recommendations for more costly but beneficial new products. The nominal form of coverage for medical expenses, which specifies coverage in the form of a list of products or services, has generally meant that these costs were automatically covered. So while

this expense was not “marginally catastrophic” for individuals, it has been so for some insurers. More generally, unexpected market-wide trends pose major challenges to insurers’ willingness to supply coverage, and some have turned to inserting upper dollar limits on total benefits as a way of dealing with them.

With the exception of the last point, however, there generally are not severe supply-side problems in health insurance, and there generally is a willingness if not an eagerness to buy coverage against low probability high loss events. For natural disasters and events such as terrorism, the supply side has been more of a problem. Moreover, there is considerable evidence that people do not demand coverage against such low probability high loss events even when it appears to be favorably priced. My interest here is primarily on the demand side: does the peculiar (and, in a sense risky) nature of supply of insurance against natural disasters interact with consumer decision processes to discourage demand for insurance even when it is available? In contrast, does the more stable supply of health insurance contribute to the emergence of more rational purchasing there? And finally, is the situation with regard to health insurance really as good as I have described.