A key idea in the great health reform debate of 2009 is that uninsurance and the high costs of medical care are linked. Covering uninsured patients will improve their health over time, goes the claim, which in turn will offset some of the costs of providing insurance to these patients. This is almost certainly true; the debate is over the magnitude of the offset savings. In their provocative article in this issue, McWilliams and colleagues (1) estimated the size of the offset by using the concrete example of the link between uninsurance among near-elderly adults and future Medicare expenditures. Their work addresses a problem of great policy and scientific interest. The strength of this link matters in the policy setting because the high cost of health reform is a central impediment to legislative action, and it matters in the scientific setting because establishing the link between uninsurance and health in a statistically meaningful way has been difficult. The only randomized experiment on the topic—the RAND Health Insurance Experiment—found that even after 5 years, mortality rates and overall health status were essentially the same for people assigned free insurance as for people assigned much less generous insurance (2).

McWilliams and colleagues analyzed data from the Health and Retirement Study (HRS) survey, a longitudinal panel data set sponsored by the National Institute on Aging (1). They compared health care use and spending after age 65 years by a group of Americans who did not have health insurance before age 65 years with that of a group of Americans who were continuously insured. They found that the previously uninsured adults spent a mean of $1023 more in the first year after they enter Medicare at age 65 years. These differences in medical expenditures between uninsured and insured adults are larger for people with diabetes, heart disease, or arthritis diagnosed by age 67 years.

At this point, the authors address their key question: What if all people who were continuously uninsured before age 65 years had been continuously insured? They adopt the straightforward assumption that any differences in Medicare expenditures after age 65 years between previously uninsured and insured adults that were not accounted for by an extensive set of personal and health characteristics were attributable to the lack of insurance. Under this assumption, they calculate that providing insurance to uninsured near-elderly adults would result in $98 billion of savings (in present value terms) for Medicare in the first decade after that group becomes eligible for Medicare.

How confident can we be in these results? This calculation rests on the assumption that personal characteristics recorded in the HRS data account for all of the differences between the continuously insured and continuously uninsured groups that might affect their utilization after they become eligible for Medicare. The authors recognize that this assumption is unlikely to be true, and they take steps to address it. They adopt a statistical weighting technique designed to balance the observed characteristics of the insured and uninsured survey participants. However, their technique can only adjust for the characteristics measured in their data and cannot make up for the fact that insurance status is not randomly assigned.

The statistical problem is that the set of observed pre-Medicare characteristics is not detailed enough in the HRS data. For instance, consider two 64-year-olds with diabetes, one with insurance and one without. To be sure that these 2 people are similar enough that unobserved differences do not matter, a reasonable person might want to know some important clinical details: Do both have type 2 diabetes? What are their hemoglobin A1c levels? How long have they lived with diabetes? Do they have any renal or ocular complications? None of these details (or other important clinical variables) is observed in the HRS data or in any other longitudinal nationally representative data set. Because the authors did not observe such details, their estimate of the causal effect of insurance is certain to be biased.

Worse, the bias introduced by the considerations outlined undermines the authors’ conclusions. On every pre-Medicare variable that the authors analyzed, they found that whenever a difference in characteristics was statistically significant, the insured group was healthier than the uninsured group. For instance, the uninsured group was more likely to have smoked, to have impairments in performing activities of daily living, and to be diabetic. It would be surprising if the same were not true for the pertinent unobserved variables as well. Furthermore, preexisting health conditions are often a reason why the near-elderly population cannot obtain health insurance; that is, poor health leads to uninsurance, not the other way around. For these reasons, the difference in Medicare expenditures may only partially reflect a causal effect of insurance on health, and the estimated savings from covering the uninsured might be dramatically overstated.

The estimates of the savings to Medicare from covering the uninsured must be qualified for an additional reason. The authors assume that the uninsured group had significantly more unmet health care needs than the insured group before age 65 years, but they do not attempt to measure unmet need directly. Another analysis of the HRS data showed that among 51- to 61-year-olds with serious chronic illnesses, uninsured patients spent more out of pocket on medical care than did insured patients at the 70th percentile of expenditures and above (3). At the 95th percentile, uninsured chronically ill patients spent $30 519 annually, whereas insured chronically ill patients spent $16 855 (measured in 1992 U.S. dollars). Thus, contrary to the authors’ assumption, uninsured patients receive substantial care despite their insurance status. This does not
mean that the care was optimal or that the patients’ needs were met. But if care was inadequate despite high expenditures, health status was even more likely to be lower among the uninsured group, even after adjustment for the health characteristics that the authors accounted for.

McWilliams and colleagues’ estimates of future Medicare expenditure saving from covering uninsured adults are important and should generate substantial discussion, but their results should be interpreted with caution. In a comprehensive review of the literature on the link between insurance coverage and health, Levy and Meltzer (4) concluded that most observational studies on the topic “suggest an association between [health insurance coverage and health], but provide little evidence on whether this relationship is causal.” There are good reasons to believe that insurance coverage in the pre-Medicare years would reduce expenditures during the Medicare years, and health reform advocates will certainly take heart from McWilliams and colleagues’ conclusions. Unfortunately, because the data and methods used in this study do not support causal interpretations, the savings to Medicare are unlikely to be as large as suggested.

References