Reviewer's report

Title: Is Expanding Medicare Coverage Cost-Effective?

Version: 1 Date: 8 September 2004

Reviewer: Adam Atherly

Reviewer's report:

General

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

Overview

This paper examines the cost effectiveness of expanding Medicare coverage to include services covered by private supplementary insurance plans. The question posed by the authors is timely and interesting. However, the paper is limited by the endogeneity of the key variable in the model.

Major Compulsory Revisions

1. This paper addresses an interesting and important question: is there a health benefit from the extra services used by Medicare beneficiaries with supplementary coverage. But I am not convinced that the authors have demonstrated that there is, in fact, a gain in life expectancy from supplemental insurance.

The paper, in my view, rests fundamentally on the regression relating QALYs and private supplemental insurance. If this regression is flawed, than the Markov models and all other analysis that flows from the regression models is also flawed. In the regression, the authors have demonstrated an association between private supplemental insurance and QALYs, but not a causation because private supplemental insurance is endogenous to the model, i.e., is correlated with the error term in the regression.

Endogeneity is almost a reflexive criticism by economists, and I recognize that it is an easy criticism to make and often an overblown concern. However, in this case, I believe that it is critical to the analysis attempted by the authors. The authors are comparing expenditures and QALYs in two groups, those with private supplemental insurance and those with Medicare only, which are very different on almost every measurable dimension. The private supplemental insurance group is healthier, wealthier, better educated, younger, has fewer chronic illnesses, is more likely to be married and non-minority than the Medicare only group. In short, the private supplemental insurance group is “healthier” on virtually every dimension one can measure. Indeed, the Landerman (1998) cited by the authors even found that the Medicare only group were more likely to be overweight, cook with fat and to live in inadequate housing or in an unsafe neighborhood than the private supplemental insurance group. So to attribute differences in QALY (or expenditures) to private supplemental insurance, rather than unmeasured covariates, seems implausible.

This problem is exasperated by the relative oddity of the Medicare only group. This group is quite unusual; only around 10% of the Medicare population has Medicare coverage alone. The typical member of this group is not poor enough for Medicaid, not wealthy enough to buy a supplement and
lives somewhere without access to a decent HMO. Extrapolating from this unusual subgroup is particularly problematic.

The authors do address this problem in the limitations and in the Technical Appendix, but the solutions seem quite unsatisfactory. This problem is not necessarily fatal to the analysis, but does present a major analytical challenge. There are various approaches that are available, including a Heckman Selection Correction or a propensity model. Many studies of expenditures have addressed the endogeneity issue in some way, including Atherly (2002), Ettner (1997), McCall (1991), Taylor (1988), Wolfe and Goddeeris (1991) and Cartwright, et al. (1992). Given the large amount of work on this problem, and the multiple approaches to solving it in the published literature, the authors should be able to deal with the endogeneity issue more directly.

2. The authors need to include more detail on the sample in the body of the paper. Although everything necessary is included in the technical appendix, there needs to be more detail in the paper itself. In particular, (and at a minimum) the sample size and exclusion criteria need to be included.

References


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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

1. The discussion of the viewpoint taken by the study should be expanded. This is a particularly important point in this paper because most Medicare beneficiaries already have additional coverage. So expanding Medicare benefits would primarily serve to substitute private financing for public financing. From a societal perspective, this is irrelevant. However, from a government perspective, this would likely be a very inefficient use of resources, if one accepts the estimates in the paper. This point should be highlighted, along with an estimate of the welfare loss associated with the increase in taxation necessary to finance such an expansion in Medicare.

3. The text suggests on Page -3- that “some are likely to forgo care due to this expense”. This should be clarified. Do you mean that they will forgo buying insurance or that they will decide not to buy insurance and therefore implicitly reduce the use of services?

4. Page -6- states that employment status is a variable in the model. Individuals who are employed and have health insurance through their employer have Medicare coverage as secondary (supplemental coverage). Generally such persons are dropped from the analysis because their relationship with Medicare is so different.

Discretionary Revisions (which the author can choose to ignore)

Which journal?: Not appropriate for BMC Medicine: an article whose findings are important to those with closely related interests and more suited to a subject-specific BMC journal

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests:

none