Reviewer's report

**Title:** Moral hazard and double agents. The agency relationship in drug prescription in the Spanish National Health System.

**Version:** 1  **Date:** 15 February 2011

**Reviewer:** Andrew Sfekas

Reviewer's report:

The purpose of this paper was to determine whether physicians act as agents for their patients. The actual meaning of "agency" in this context is left undefined. The authors do provide a partial concept of agency in the context of the doctor and the government (the doctor would consider the prescription's effect on the total health care budget).

The specific hypotheses tested are that:

1) the total average price of prescribed drugs will be higher when consumers face a 0 price, relative to when consumers face a positive price
2) the difference in average price between 0 cost to consumers and positive cost to consumers will be lower when the cost is lower
3) the difference in average price will be higher when the price of treatment is higher

On the third hypothesis, it is somewhat unclear what is meant by the price of treatment.

Compulsory revisions:

1) The paper intends to test the agency relationship between physicians and patients, but the relationship itself is not spelled out. Presumably the question is whether the physician is maximizing the consumer's preferences, which would involve the cost of treatment. This would perhaps be in contrast to a situation in which the physician is an agent for the government (and therefore considers the cost of treatment even when the price to consumers is 0) or him/herself only, in which case the physician may wish to maximize reputation by prescribing the most effective drug regardless of cost. I would like to see that spelled out in greater detail.

2) The authors acknowledge that the data are from prescriptions actually filled, not prescriptions written. If physicians wrote out the same prescriptions for everyone, and non-pensioners tend not to fill the more expensive ones, the results would be the same--average price for non-pensioners is less than average price for pensioners. However, the results would be due to the fact that consumers are cost-conscious, rather than that physicians consider the cost to consumers. I would consider this to be the main empirical problem in the paper.
3) Shouldn’t I expect pensioners to be older and retired, and therefore to require more expensive drugs? Without some additional controls, it seems like it would be hard to attribute a price difference to agency.

4) One of the authors’ hypotheses is that the price difference should be less for the drugs with reduced copay. Of course that would be holding all else equal. Why are these drugs reduced copay, and what does that imply for the model? I would like to see some explanation of how drugs end up in either category.

5) I am not sure what the price of treatment refers to in models M2 and M3, so it’s difficult to evaluate those results.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.