Reviewer's report

Title: Quantitative analysis of health insurance and utilization: evidence from one middle-income country using household survey data

Version: 1 Date: 6 March 2007

Reviewer: Firas Raad


Comments by Firas Raad, World Bank

Dear Harps Editorial Team,

Thank you for giving me the opportunity to review the draft article prepared on Bjorn Ekman on health insurance coverage in Jordan and its impact on utilization and expenditures related to outpatient health services.

My comments below are divided into two sections: general comments and more specific comments.

General Comments

Relevancy of Topic - The chosen topic of health insurance is highly relevant in middle-income countries around the world, particularly in the Middle Eastern and North Africa region. Expanding coverage to larger segments of the population, particularly through social health insurance, is of great policy interest at the moment in countries from the Mashreq (Syria, Lebanon, Jordan) to countries in the Maghreb (Morocco, Tunisia). In between, Egypt is embarking on an initiative to consolidate its public sector insurance programs and expand coverage to hitherto uninsured parts of the population.

An important part of the agenda to expand health insurance coverage ‘towards universal coverage’ in many countries is reducing overall fragmentation of health financing arrangements. Lebanon is a case in point. There are over six public insurance funds (in addition to a multitude of private insurance companies) with varying levels of governments subsidies, beneficiary contribution levels and covered benefits – yet over 50 percent of the population is uninsured. There is an attempt now to harmonize (and possibly integrate) the coverage provided by the public funds to reduce the overall administrative costs associated with such a system.

In Jordan, health insurance reforms have focused more on expanding coverage through existing public insurance schemes than the policy of reducing fragmentation in the sector. Successive governments since 2000 have laid out explicit objectives to expand the ‘umbrella’ of insurance to vulnerable groups through voluntary schemes (i.e. elderly and children under five) and have indeed moved in that direction. More recently there has been some discussion of activating the role of the National Social Security Corporation to provide coverage to workers in the formal private sector. The existing fragmentation in the sector, however, and its impact on ‘equity’ and ‘efficiency’ has not received much policy attention.

On this issue the author makes an important contribution by bringing up the ‘costs’ associated with maintaining such an uncoordinated system of multiple insurance funds while driving towards universal coverage. But this issue should be better articulated upfront in the beginning of the paper and towards the end. What are the exact efficiency and equity effects of such a system? They are mentioned and assumed (e.g. fourth line in page 28) but never discussed as important health system performance objectives. Moreover, why do they matter from an ethical perspective? Why should society care?

Context - The author is fortunate given the relatively unchanging health policy environment in the country since 2000. Even though the data is seven years old, it still reflects overall the existing context in 2007 with some minor exceptions. There are few changes and developments that could be better reflected in the ‘context’ section. First, as mentioned before, the Civil Insurance Program, has recently expanded coverage...
to children under the age of five and is moving towards including other groups in Jordan. Second, the Social Security Corporation, a potentially large insurer, is examining the possibility of implementing a social health insurance scheme for its enrollees in the private sector. Third, the private health insurance sector has grown rapidly over the last few years. Fourth, and most important of all, coverage provided by the Royal Court, has increased tremendously over the last few years. This additional ‘insurance program’ (which acts as an insurer of last resort and represents an important and growing leakage in the system) was not picked up by the household survey study in 2000. This last point should be brought up and weighed by the author as part of the revision work.

Econometric Model - Does the last issue of the Royal Court have any bearing on the results of the econometric models specified by the author? Some of the 48,543 individuals surveyed by the study in 2000 could have reported themselves as ‘uninsured’ but in fact were using the coverage extended by the Royal Court. The Royal Court refers patients for treatment in Ministry of Health, Royal Medical Services and Jordan University Hospitals facilities at the expense of the treasury. Most of the Jordanian patients who petition the Royal Court for help are ‘poor’; and since the econometric models control for income; the effect of this extra program could more or less be captured. But the system maintained by the Royal Court is not means-tested and relies on self-selection as a targeting system.

This issue could contribute to the ‘hidden impact’ of health insurance (as mentioned in page 27) at the aggregate level in the country; i.e. dampen the general ‘insurance effect’ on utilization of services. It could help explain this overall puzzling result of the survey that insurance coverage at the aggregate level is not associated with the use of outpatient care; it is also not associated with the use of inpatient care. In fact, use rates of inpatient care by the uninsured (88.92 stays per thousand population) were higher than the use rates of inpatient care by the insured (88.40 stays per thousand population). In terms of policy implications, these findings suggest that the uninsured, generally, are not particularly disadvantaged in terms of utilizing health services.

Specific Comments (minor essential and discretionary revisions)

There a number of specific comments related to parts of the text:

• The principal-agent framework model of healthcare demand is laid out in page 6 and is contrasted with the Grossman model; and it is argued that this model better represents true behavior in the healthcare sector. It also has implications for the methods employed for analysis. It would be a good idea to bring back this framework towards the end of the paper and discuss briefly what the findings have revealed about its assumptions. It is sort of presented in the beginning and not tied it at the end.
• I would recommend altering the title to better reflect the true focus of the paper. The suggested title would be: ‘The Impact of Health Insurance on Outpatient Utilization and Expenditure: Evidence from….’
• There is somewhat of an inconsistency between the general findings of the study, as stated in different sections of the article. In the abstract on Page 2, it is stated that ‘generally, insurance is found to increase the probability of care’ whereas on Page 27, it is stated that ‘specifically, model (1) shows that, in general, health insurance does not affect the probability of utilizing health care.’ I would recommend changing the language in the abstract to make it more consistent with the general findings of the analysis which are discussed towards the end of the paper. Moreover it is stated that the probability of using health services rises significantly with coverage by the Civil Insurance Program – but it is only at the 10 percent significance level.
• Another point I would add to the end of the first paragraph on page 5 (to show low value for money in the Jordanian system), in addition to mentioning the large coverage gap of 40 percent, is the level of overall health spending in the country. It is over 10 percent of GDP and is the second highest level of health spending in the region after Lebanon. This point is mentioned later in the article but I thought it would be good to mention it upfront in the paper.
• In the literature review (page 9) the author mentions that ‘only one study’ looks at multiple insurance program simultaneously in reference to the work in Australia. I am familiar with the Yip and Berman work on school health insurance in Egypt and they do look at and include ‘other’ insurance schemes in their econometric model.
• Two minor types were noticed: (i) first sentence of last paragraph of page 7 needs to be revised and (ii) the second sentence of the second paragraph should read ‘more well off’ rather than ‘will off’.
• The various tables presented by the paper should have been included in this draft for peer review comments. Seven tables were mentioned in the body of the text but never appeared for review.
What next?: Accept after minor essential revisions

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

Quality of written English: Needs some language corrections before being published

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