Reviewer's report

Title: Influence of mandatory generic substitution on pharmaceutical sales patterns: a national study over five years

Version: 7 Date: 26 October 2007

Reviewer: Michael A Fischer

Reviewer's report:

General
The authors have addressed some of the initial limitations in the manuscript. The largest concern remains the unanswered question of whether the change in prescribing seen when a patent expires is different in the post-policy period from what the change in prescribing was after patent expiry in the pre-policy period. The authors stated in their reply point (3) that their data did not allow them to do this for ACE inhibitors. Given this, they will need to be much more circumspect in their statements that the effects of the policy are more notable for a product that goes off-patent after the reform. They did not perform the comparison that would allow them to make this statement. In their response to point (5) they mention experiences with patent expiration in Sweden before the policy was in place, but since they do not include those data in the manuscript, readers cannot make these comparisons. They need to temper the discussion in a few points to make this clear.

I will go through specific points, some of which are new:

Page 2, 3rd line from bottom: Given the points just discussed above, I think this sentence is problematic. Saying in the abstract that the changes were most pronounced for drugs with patent expiry after the reform implies a degree of causality that, as noted, cannot be proven based on these data.

Response to point (1): The response letter describes this as paragraph 3 but it is paragraph 2 in the copy I got. Nonetheless, this part is much clearer now. The final two sentences about accumulated cost of drugs in the PBS are not at all clear to me (I am not familiar with the coverage arrangements in Sweden) so if these sentences are included in the final manuscript then some additional clarification will be needed.

Paragraph 3 of background (described as 4 in response letter): This appears to be in response to another reviewer’s comments, which I did not see, but as currently written this paragraph is long and confusing.

General note: The manuscript refers in several places to the “development” of sales patterns, notably at the end of the background. This is not the right word in this context. “Change” would be OK, as would many other words.

Results, 1st paragraph: This is confusing, not sure if the authors changed this
since the first version, but needs to be fixed now. The paragraph begins with the three long-term classes, setting us up to look for the two short-term classes next, but then PPI’s are described together with statins and antivirals together with ACE’s. The results are all there, but I had to read this paragraph multiple times while cross-referencing back and forth to Figure 1, needs to be easier or readers will be lost here.

Results second paragraph/figure 2: The figure is very hard to read. In some of the graphs I cannot tell which drug is which, so I cannot correlate it to the text.

Response to point (5): The first sentence of this response (paragraph 3 of discussion) is fine. The second sentence is a problem. The magnitude of the changes may depend on policies that enable dispensing of generic alternatives, it may depend on physician prescribing habits, it may depend on patient cost-sharing for drugs, it may depend on a lot of things. The statement “will largely depend” would only be supported if the authors had made some kind of clear comparison to shifts towards generic prescribing in other scenarios. They have not done so.

Response to point (6): This is a reasonable point, is only undermined by the lack of clarity in Figure 2 (noted above), so it was hard for me to check this out for antivirals.

Response to point (7): We had some terminology problems here, as much my fault as the authors. I understand the distinction that they make between substitutable and non-substitutable products generally. The situation I was talking about was when patients do what the authors described in the background section as “opposing substitution.” Then they will have to pay more for their drug, leading to the rest of this point. Unless the phenomenon of patients opposing substitution is widely observed in Sweden, I see no reason to push this point any further, not a big deal for the overall analysis.

As noted above, Figure 2 is too hard to read, it is good to have less figures but they need to be legible.

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

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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)

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Discretionary Revisions (which the author can choose to ignore)

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.

Declaration of competing interests:
I declare that I have no competing interests