Reviewer's report

Title: Breast cancer management guidelines: does compliance depend on the local cancer organisation?

Version: 1 Date: 7 September 2010

Reviewer: Erin Strumpf

Reviewer's report:

This is a well-written piece, but in my opinion it requires substantial revisions before it is suitable for publication.

• Major Compulsory Revisions
  o Explanatory variables include patient-, tumor-, and healthcare-system level variables. You could be more explicit about the “literature review” that these come from. From literatures on practice variations and organizational behavior, I would also expect physician- and institution-level characteristics (beyond teaching status) to be important predictors of practice and treatment patterns, and therefore compliance with CPGs. Since you have detailed clinical records, can you not extract provider or institution IDs, if not actual characteristics? Being able to include such variables, compare their importance with the ones you currently include and/or examining their marginal contribution after controlling for other factors seems like it would be a significant contribution.
  
  o You also have a very interesting context in which to explore whether, and how, different providers and institutions treat “similar” patients differently. This would tie into literatures on disparities in cancer treatment and outcomes across SES groups and on provider discrimination. How much of the variation in treatment patterns/compliance with CPGs is coming from variation within vs across providers?
  
  o In the results for factors associated with treatment compliance, you cite patient age, hospital status and region as maintaining significant associations in the multivariate and mixed models. The implications of these results require more discussion: does this reflect patient preferences? The appropriateness of treatments? Does this infer that the CPGs are “wrong” in certain cases? It seems to me that your criteria of NC vs J actually gives you quite a bit of information to address these questions that you are essentially throwing away by only considering a binary outcome. I would suggest using 3 outcome categories and a multinomial logistic regression model in order to understand how your right-hand side variables are predicting each of the 3 outcomes, since the distinction between C and J is actually meaningful.
  
  o Your discussion section, as it currently stands, gives the reader no sense that this research contributes to the literature beyond what has already been done. You need to do a better job of clarifying your contribution with this study.
  
  o In the beginning of the discussion, you acknowledge the importance of delay to
radiotherapy in driving your results. What are important system-level factors that would affect these delays? Have there been changes to them? Can you explore this in your empirical analysis? I saw this as a major gap that you did not address.

- You motivate the paper in part by describing recent policies to create LCUs and implement CPGs. However, it is unclear where your data fall with respect to the implementation timing of these policies. It would be helpful to clarify this. Further, in the discussion you acknowledge that one of your two regions had already implemented breast cancer CPGs before your study period. It seems to me that you have the potential to answer some very interesting and relevant questions (for both health policy and public health) in terms of the impact of such policies, though it’s not clear you can do so with the data presented here.

- More emphasis on explaining how this work relates to public health, rather than health services research, is needed for this particular journal.

  - Minor Essential Revisions: none
  - Discretionary Revisions: none

**Level of interest:** An article of limited interest

**Quality of written English:** Acceptable

**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.