Reviewer's report

Title: The science of clinical practice: disease diagnosis or patient prognosis? Evidence about "what is likely to happen" should shape clinical practice

Version: 3 Date: 28 November 2014

Reviewer: R Moynihan

Reviewer's report:

General comment on revised manuscript

I think the authors have succeeded in responding to my initial reviewers comments.

As per my initial comments, I recommend publication, but again have some minor suggestions below for small revisions, largely about clarity. Given the strength of the work, and the strong response to my comments, I do not feel the need to see the paper again before publication.

My one key general suggestion, perhaps offered to both the editors and the authors, is that in any final revision from the authors, authors be given some level of autonomy and encouragement to make clarity and coherence and argument-flow key priorities in their ultimate draft of the manuscript.

Given the complexity and importance of the material, and the somewhat divergent comments from the two initial rounds of review, there is a (low) risk that if authors are obliged to too slavishly follow a second wave of isolated reviewer/editor demands, the overall flow may be in some way compromised.

Discretionary Revisions

1. In the final paragraph of the section on overdiagnosis - there is currently this sentence:

"There is debate about breast cancer screening for example, and whether outcomes such as premature mortality are improved by the programme and whether the nature and rate of adverse consequences of screening are acceptable, i.e. whether population prognosis changes as a result of a screening programme (19)"

Given the finding of the review in the reference 19 - that there is a reasonable estimate of overall breast cancer mortality benefit - I would soften the sentence and change it to something like this:

"There is debate about breast cancer screening for example, and about how much outcomes such as premature cancer mortality are reduced by the programme and to what extent the nature and rate of adverse consequences of screening are acceptable, i.e. how population prognosis changes as a result of a
screening programme (19)"

2. In the 3rd paragraph after this sub-heading, "Patient prognosis is determined by more than disease diagnosis"

This line is not quite clear enough to me and feels a little too complex:

"Modelling an individual’s prognosis can incorporate and organise information from a range of continuously distributed or categorical prognostic factors, which include but extend widely beyond diagnostic information and treatment responsiveness."

3. In the last paragraph before the sub-head "The pros and cons of labelling" ...

I think it is greatly improved by acknowledging potential downsides. I wonder though whether you might consider a new sentence added to this paragraph, or perhaps just a few words, hinting at or explicitly raising the challenges for working with this new (information rich) prognosis paradigm within the reality of general practice.

4. Second last paragraph in section on labelling

In comment on patients ....

Consider "some patients may be more interested..... (unless there is data you are explicitly referring to)

5. 1st paragraph under sub head - "Prognosis provides a natural framework for modern clinical practice"

I don’t understand what you mean by "Data on outcomes among consulters” (I’m not sure who you mean by consulters)

And, importantly, the natural flow of argument seems to be cut in the jump from the 1st paragraph to the second single line about stratified care…..and I think the reader may need a gentle reminder of what you mean by stratified care.

I think this first and second paragraph need to be a little clearer and stronger and punchier - as this is the point to give a strong statement of your opinion/argument.

Quality of written English: Acceptable

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

Declaration of competing interests:

No competing interests.