Reviewer’s report

Title: Personalising health care: feasibility and future implications for all stakeholder groups

Version: 1 Date: 12 February 2013

Reviewer: George P Browman

Reviewer’s report:

This is a comprehensive narrative review including 230 citations of emerging and future issues to be addressed for the practice, resourcing, and policy implications of personalized medicine. The table at the end of the manuscript is the most relevant message given this reviewer’s understanding of the main purpose of the review, which is to examine from different stakeholder perspectives, most prominent among them, policy makers and payers, the actions that will be required to address issues and barriers in personalized medicine.

This is the most comprehensive description this reviewer has seen of the relevant issues in personalized medicine and there are valuable nuggets of information generously distributed throughout the review that make it interesting reading.

The most important contribution that this paper could make, would be to clearly and explicitly identify key factors for each stakeholder group to address in terms of the future of personalized medicine (as in the table), but the main messages are completely submerged by the extraordinary detail provided within many of the sections dealing with clinical and biomedical specifics and in most cases far too many examples that confuse rather than clarify the main messages relevant to the policy perspective. For example, the discussion below the subheading ‘biomarkers’ contains 14 examples, and there are 10 more examples under the following two headings - ‘Host genotypes influence responses and toxicities to drug therapies’ and ‘Challenges and concerns for routine use of diagnostic tests’ - there are even more examples comprehensively referenced within the background and ‘general’ sections. Furthermore, there is much too much follow-up information provided for each of these examples that is not relevant to the main thrust of the paper.

In the specific statement of objectives (a bit unclear and contradictory in this reviewer’s opinion) the authors say, “For the purposes of this paper, personalised medicine involves a degree of pharmacogenomic/ genetic testing” and go on to state ...” We do not include drugs that target for instance a specific protein as opposed to classic cytotoxic chemotherapy, where there are no baseline biomarkers to determine likely responses or genotyping to assess the risk of toxicity or prognosis.” Yet in the following sections there are myriad examples provided of drugs/biological agents targeted to specific protein receptors.

While the authors claim that “the objective of this paper is to integrate current
knowledge about targeted diagnostic and prognostic tests and targeted drug therapies from a payer perspective,” this relatively important and appropriately narrower perspective is lost in the comprehensiveness of the discussion that includes various biological, clinical and organizational issues.

What comes across as clear from this review is that the authors collectively have a vast store of knowledge in this area, have thoughtfully considered the ramifications of personalized medicine from various points of view, have a good sense of the key issues to be addressed – but their objective to integrate their knowledge and insights into a focused coherent message has been lost in unnecessary details that obscure the message for the reader.

There also is one set of essential issues missing from the discussion under what has been coined “melsi” issues (medical, ethical, legal and social) with ethical and social considerations less represented in the discussion. Related to this, the role of societal values in informing policy decisions around funding priorities is missing and would seem to be a relevant area to cover, especially since these societal values are expressed differently in healthcare policies of the US, Canada and different parts of Europe and Latin America. This reviewer is not suggesting that this very comprehensive piece be further extended by including a discussion on ethics, values and societal issues, only that in the context of informing payers and policy makers, this would seem the more important areas to consider and perhaps should supersede a lot of the other biologically and medically oriented discussion with the over abundance of redundant examples – compelling as each example may be.

This reviewer suggests that the issues raised by the authors be re-framed, that the objectives be clearer and more narrowly focused, that the dominant perspective(s)/ audience for whom the paper is intended be clarified and that perhaps Table 1 be used as the starting point for deciding how to frame the text.

The authors might also consider using tables rather than text to illustrate examples of biomarkers and their application, and summarizing the main messages that the examples are supposed to illustrate.

There definitely are a few language issues that will need editing. Statistical review is not applicable.

**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 have no conflicts of interest