**Reviewer’s report**

**Title:** Can learning health systems help organisations deliver personalised care?

**Version:** 0  **Date:** 05 Jun 2017

**Reviewer:** Laura Ramsey

**Reviewer’s report:**

This opinion piece was a nice summary of the ways that precision medicine and learning health systems could be brought together by data science and implementation research. I have only a few recommendations for how to improve the piece.

1. The authors should include how they see clinical trials fitting into the picture. They advocate for changing medical practice based on clinical research but don't address how randomized clinical trials or pragmatic clinical trials fit into the picture. See PMIDs: 24830497, 28340241.

2. The authors define learning health systems but give no examples of how they have been implemented or used to improve patient care/outcomes. I would like to see more discussion of this in the manuscript, and how LHS's can decrease adverse events.

3. The authors state that asthma biomarkers are being used for research purposes but not clinically. An expansion of why this hasn't been done and how a LHS would facilitate it would be helpful.

4. Linking small amounts of genomic data to clinical EHRs has been done in pharmacogenetics and elsewhere. Many of the ethical, policy, economic, and technical challenges have been addressed by these groups but the technical challenges will grow as the amount of data to be included grows. PMIDs: 24645908, 25612602, 25292429

5. Figure 2 contains some abbreviations that need to be defined in the figure legend (AHR, BM).

Overall I think this is an important topic that will be interesting to many readers.

**Quality of written English**

Please indicate the quality of language in the manuscript:

Acceptable

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