Reviewer’s report

Title: Using flawed, uncertain, proximate and sparse (FUPS) data in the context of complexity: learning from the case of child mental health

Version: 1 Date: 17 Mar 2018

Reviewer: Chrysanthi Papoutsi

Reviewer's report:

This very interesting paper raises important issues about the role of data in complex health systems. There are various reasons why data can often be 'unreliable' and instead of ignoring them, the authors present ways of making them useful to open up debate and discussion.

It may be worth slightly expanding on complexity theory in the background section. This would then allow the 'case study' to be discussed against principles from complexity theory - the authors have started doing this already but structuring this more explicitly as application of a theoretical framework to analyse a specific case in a certain setting, would better signpost the readers to the logic of the argument.

It would be good to explain a little bit more about the context of the CYP IAPT service and how data were collected, by whom, when, under what circumstances, what types of data did the dataset include, who aggregated and analysed that data, etc. I understand the authors provide an infographic that explains some aspects of data collection to families but more detail in the main body of the paper would help understand the dataset better.

It is unclear what the authors mean by 'business intelligence' - the paragraph in page 10 could be expanded to make the argument clearer

The paragraph on 'Impact in child mental health' (page 12) could be reviewed to remove bullet points and explain what it has meant that the data acted as a vehicle for discussion rather than a source of truth. Relevance to other healthcare settings should also be considered.

The paper primarily uses plural ('we') but there are instances where it reverts to singular ('I' or 'my'), e.g. page 12, lines 24 and 25, and page 8, line 10

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