Reviewer’s report

Title: From positive screen to engagement in treatment: a preliminary study of the impact of a new model of care for prisoners with serious mental illness

Version: 0 Date: 16 Sep 2015

Reviewer: Allan Seppanen

Reviewer's report:

This article describes a timely and justified AB-type study of an intervention method introduced to the New Zealand prison psychiatric healthcare system. However, properly assessing the study and its conclusions is challenging for an international reader due to unclear concepts and methodological issues. The text needs to be revised into a more explanatory tone for the benefit of the international audience the journal aims to reach.

As for the statistics, I do not question their validity and the conclusions based on them seem plausible, but I cannot purport to be an expert in statistical analysis.

Details:

1. In Method it is stated that "all new inmates have a prison primary nursing assessment at the point of arrival" including the screening tool as part of the PMOC initiative. How is this compatible with the statement under Results that "only 30.3% of new receptions were screened"? It is unclear if "a new reception" and "a new inmate" are synonymous or refer to completely different things.

2. For the international reader it is unclear how in-reach services (a term used throughout the article) differ from prison health services (Fig.1): is there an organizational difference or are these terms used synonymously? Perhaps an elaboration on the NZ service delivery system in Background would help comprehension.

3. What is a triage assessment in this context? Does triage refer to the classified timeframes (8h, 72h, one week) defined at the time of referral or to a further classification conducted by the triage-nurse when deciding on whether to pass on the referral to MDT assessment?
This is not explained. Is "forensic triage nurse" (fig.1) the same thing as "in-reach mental health nurse" (under Method, line 153).

4. In what sense is PMOC evidence-based; i.e. for what end-result is there already evidence or what elements of it are based in previous evidence? Or do the authors mean that it will become evidence-based as soon as publications such as this, that study it's efficacy etc., are published?

5. Expected prevalence rate of SMI is 10-15%. This study reports only 10.9% caseload in post-period, including all psychiatric cases, not only SMI. This warrants further discussion.

6. Although the title claims to describe the impact of the new model of care from screen to treatment, very little is said about the actual treatment and release planning, which are of course central to the final impact of this intervention.

7. Fig 1. What does "modified ACT" mean?

8. Diagnostic mix of caseload: when, exactly, was the post-implementation case load recorded (in relation to the dates in fig. 3)?

9. line 264: what is "the secondary caseload"?

10. line 280: how was the improved outcome measured?

11. line 292: integrity of clinical processes were maintained. What does this mean?

**Are the methods appropriate and well described?**

If not, please specify what is required in your comments to the authors.

No

**Does the work include the necessary controls?**

If not, please specify which controls are required in your comments to the authors

Yes

**Are the conclusions drawn adequately supported by the data shown?**

If not, please explain in your comments to the authors.

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