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:** 30 Sep 2015

**Reviewer:** Conor O'Neill

**Reviewer's report:**

This paper refers to an important area with a limited research and evidence base. The paper describes the preliminary stages of implementation of a prison model of care in five prisons in Northern New Zealand. These were a mixed female prison, a male remand prison and three mixed male prisons.

They describe this model of care as a five stage process. The paper uses a one year pre- and post-implementation method to assess the effectiveness of the first three stages (screening, referral and assessment). The authors state that screening is supplemented by referrals from various sources, including an initial assessment by prison nursing staff. The paper should refer to previous similar work in the literature (eg McInerney et al. International Journal of Mental Health Systems 2013, 7:18 http://www.ijmhs.com/content/7/1/18).

The authors refer to a screening tool previously validated for male prisoners in New Zealand, which was implemented over the course of the post-implementation year. They state that "the implementation of the model was staggered at approximately three month intervals across different prison sites....". this suggests only 15% of persons in the mixed remand prison were screened and 35% of those in the three mixed male prisons. This would suggest that the process was implemented for 15% of the year "post implementation" for male remands and for approximately four months of the "post implementation" year for mixed male prison settings. It would be helpful for this to be clarified, and if the case, then the paper may be better titled a "preliminary" or "pilot" study, unless they choose to include data from subsequent years.
Numbers of referrals did increase in the four male prisons overall. It is unclear whether this refers to referrals as described or a combination of those referred plus some of those who were identified through screening. Numbers taken onto the case load increased, although decreased as a proportion of referrals in both settings. The authors advise that this is due mainly to persons being released or transferred before assessment was possible.

Earlier in the paper, the authors report that persons were classified according to acuity to be seen within timeframes of 8 hours, 72 hours or one week. This process is described in a flow chart. No data is presented with regard to whether or to what degree these timeframe standards were met.

For female prisoners, numbers of prisoners and new receptions were higher in the pre-implementation period. The authors state that this was due to earthquakes in New Zealand leading to transfer of prisoners. A screening process had already been in place prior to the implementation of the PMOC method described.

In the pre-implementation period, the proportion of new committals referred for assessment was considerably higher- this may be understandable in the context of the natural disaster described. However, in the post-implementation period, while the numbers of females referred had reduced considerably, both in terms of absolute numbers, in both groups less than 50% of those referred received formal assessment.

Thus, I do not see the benefit of including the female prisoners in the analysis due to the particular circumstances leading to altered pathways through care and which lead to an apparent reduction in numbers assessed and taken onto caseloads. I note that screening was already in place for this group prior to the implementation of the PMOC model.

I do not see that the graph in figure 2 adds to the information in table 1. It would be helpful for graphs to be accompanied by the relevant data in table form.

That the percentage of prisoners on case load approximately doubled from 5% in 2010 to 10% in 2015 based on six one day censuses is of considerable interest and would suggest that the model is functioning.
However that the proportions on caseload with mental illness (showing approximately two-thirds of both groups to have schizophreniform, bipolar and/or major depressive disorders) in figure 4 on what appears to represent the 2010 and 2011 census dates (although this is not clearly indicated in the legend to the chart), does not imply that that these proportions remained similar in the following four census dates. This information would be better presented as a table. No information is presented regarding longitudinal diagnostic breakdown of diagnostic groups.

In summary,

* This is an important area of mental health research with a relatively limited information base, and it is important that there be papers to enable international comparisons.

* If published, the title should refer to this as a preliminary or pilot project.

* Given that the screening process was only in part implemented during the "post-implementation" study period, data from further years is required, to show the impact of more complete implementation of the PMOC-as described earlier, only 15% of new committals were screened in the male remand prison and one third in the three mixed prisons.

* Given that screening had already been implemented prior to the implementation of the PMOC and the unusual pathways over the period described, it may be best to exclude females from the dataset for analysis.

* Including data from some of the four years since the end of the study period and confining analysis to males (ideally separated into remand and sentenced if possible) would enable a clearer evaluation of the effectiveness of the process, which is of considerable importance and mirroring similar processes described elsewhere in the literature on this important topic (eg McInerney et al. International Journal of Mental Health Systems 2013, 7:18 http://www.ijmhs.com/content/7/1/18).

Are the methods appropriate and well described?

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