Reviewer's report

Title: Emergency department utilization among recently released ex-prisoners: a retrospective cohort study

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Reviewer: Margot B Kushel

Reviewer's report:

This is an interesting paper on an important topic. The authors should be commended for addressing this important question and for making good use of available data. The authors were able to link data on a cohort of individuals released from Rhode Island Prisons to ED data from a major hospital system in Rhode Island. These data were compared to ED visits made by residents of specified zip codes in Rhode Island. The authors are specifically interested in comparing proportions of visits for mental health, substance use and ambulatory care sensitive conditions between the former prisoners and other Rhode Island residents.

Major Compulsory Revisions:

The authors should clarify, throughout the manuscript, that the unit of analysis throughout is the ED visit. With this, the authors are unable to comment on rates of visits per person. The manuscript would be greatly improved by improving the clarity of the research question. This manuscript described the comparative proportion of all ED visits for former prisoners (as compared to the general population) for three classes of conditions (mental health visits, substance abuse visits, ambulatory care sensitive conditions). The introduction led me to believe that the study would examine rates of visits, not comparative proportions of visits for selected conditions.

The finding of such a small increase in proportion of visits for ACSC conditions is somewhat surprising; the authors should be more modest about conclusions drawn about ACSC conditions as the finding barely reached statistical significance. This could potentially be due to crowding out by high levels of other causes of ED visits (e.g. unintentional injuries) which could be explored. However, the authors should consider deemphasizing this finding in the discussion as the effect size is very small.

It is difficult to interpret the meaning of the elevated proportion of visits for these three causes without knowing what made up the other reasons for admissions. For example, if former prisoners had higher absolute rates of visits for unintentional injuries than the general population (see Wang et al AJPH 2012), then the relative proportion of visits for ACSC could be lower than expected among former prisoners. The authors should be careful to not confuse rates of ED visits with comparative proportions of total visits.

The authors could improve the clarity of the writing throughout by reducing their
use of the passive voice and by being clear as to what are the relevant comparisons.

Minor essential revisions

The authors make statements about the proportion of visits by men and African-Americans. If the authors would like to include these, they should frame them for the reader by noting what the proportion of prisoners who were in these groups. While a larger proportion of visits to the ED among former prisoners were by men, it is unclear if this reflects the proportion of men among the former prisoners. What proportion of former prisoners in this sample were men?

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests