PEER REVIEW HISTORY

ARTICLE DETAILS

TITLE (PROVISIONAL)	Health profiles and racial disparities among individuals on probation in Hennepin County, 2016: a cross-sectional study
AUTHORS	Olson, Marin; Shlafer, Rebecca J.; Bodurtha, Peter; Watkins, Jonathan; Hougham, Courtney; Winkelman, Tyler N.A.

VERSION 1 – REVIEW

REVIEWER	Demir, Bahadir Gaziantep Universitesi
REVIEW RETURNED	09-Feb-2021

GENERAL COMMENTS	I congratulate the authors for working on this important topic. I think working with this proposal will improve. Employment situations rates and health profiles of the participants can be discussed. It can be discussed whether there is a difference by referring to the employment rates in current and different countries studies on probation.

REVIEWER	Hawks, Laura Medical College of Wisconsin
REVIEW RETURNED	12-Feb-2021

GENERAL COMMENTS	I credit the authors with considering a novel data source to examine a population for whom health outcomes are poorly understand. My major concern with this paper is that it does not add significantly to the literature. That substance use disorders and mental illness are greater among those on probation compared to the general population is a highly expected finding. While the racial disparities point to a very well-established system of structural racism in the criminal justice system, this again is an expected finding and as the discussion as it currently reads does not enhance our understanding of how to understand or remedy this (indeed structural racism is not explicitly addressed, at all) . The proposed policy implications of these racial disparities are difficult to understand as written. The paper seemingly implies that we should provide less care for opioid use disorder and mental illness. Here are my specific comments: Abstract Line 17: either define high level probation in the abstract or remove it as a descriptor in this section

	Line 22: remove discussion of warrant status from the abstract Line 31: you bring up use of safety-net services in the abstract, but do not explore these findings in the discussion of the paper. If this outcome is important enough to mention in the abstract, it should be discussed in more detail in the paper. Line 50: you mention physical health conditions for racial disparities but do not provide any numbers. You also do not provide chronic disease findings for probation as a whole, which i would recommend Methods: page 6 line 54 - i think you need to justify why you chose the population of high-level probation in addition to defining it page 7 line 15 - I do not think you need to include an explanation of violation status. You could omit this sentence altogether page 9 line 8: what does "estimating pregnancy" mean? this is particularly important to define because your report rate of 10.6% which seems too high even if most women are of childbearing age In general, it strikes me as analytically problematic that there is no comparator group for demographics. page 9 link 42: One one hand, I like the inclusion of these variables, though I might chose to frame them as measures of social determinants of health, for readers to better understand how they link health needs. They are also are the most unique measures in your study. On the other hand, I'm a little concerned that there is no comparison group - are you able to compare to the general population of Hennepin county? I do think either way you need to qualify in a limitation that they do not capture all the ways in which the individuals in your study will experience barriers to receiving these benefits. Also, addressed above, there is no mention in the discussion, which there should be. page 12 - how are SUD defined? ICD 10 codes? this seems like very high % cannabis use disorder for ICD codes second paragraph of page 14- this paragraph is simply a rewording w/out numbers of the results. it does not really improve the readers understanding of the findings or their implications. does not even mention structural racism! Tables: MHCP is used frequently - needs to be defined Table 3- "women of childbearing age who meet prior enroll criteria" --- meaning of this is not clear to this reviewer As a general suggestion, the formatting of the tables with multiple rows per statistical finding is very difficult for reviewers to interpret. (IE point estimate and 95% should always be on the same line). Recommend a more readable format for future submissions.

VERSION 1 – AUTHOR RESPONSE

Comment	Response	Line # (tracked edits version)	
Reviewer #1			
1	I congratulate the authors for working on this important topic. I think working with this proposal will improve. Employment situations rates and health profiles of the participants can be discussed. It can be discussed whether there is a difference by referring to the employment rates in current and different countries studies on probation.	Thank you for your thoughtful assessment. The primary purpose of our study was to describe individuals on probation in Hennepin County to 1) Inform a local response to supportive services for people on probation and 2) Illustrate for a larger audience the health challenges faced by a probation population in a large urban county, as well as the utility of merged cross-sector data for identifying health challenges in this population. To address the reviewer's interest in employment comparisons, we do now report state unemployment rates during the study period in the results. We agree that this is an interesting area for future research and hope that the information we report here will inform future studies.	Page 10, line 19
Reviewer #2			

2	I credit the authors with considering a novel data source to examine a population for whom health outcomes are poorly understand. My major concern with this paper is that it does not add significantly to the literature. That substance use disorders and mental illness are greater among those on probation compared to the general population is a highly expected finding. While the racial disparities point to a very well-established system of structural racism in the criminal justice system, this again is an expected finding and as the discussion as it currently reads does not enhance our understanding of how to understand or remedy this (indeed structural racism is not explicitly addressed, at all). The proposed policy implications of these racial disparities are difficult to understand as written. The paper seemingly implies that we should provide less care for opioid use disorder and mental illness.	Thank you for these comments, which helped us recognize how to better clarify our goals of the manuscript. Our first goal was to describe the high-level probation population specifically in Hennepin County using a novel data source. Our second goal was to compare our health findings with national survey results. We have updated our introduction and methods to better reflect these goals and feel the manuscript is more focused as a result. While our findings may be expected, there is value in confirming and extending prior work, primarily based on survey data, using a unique administrative data source with comprehensive, cross-sector data. We appreciate this reviewer's attention to the complex ways that structural racism contributes to disparities in the criminal legal and health care systems. In the revised manuscript, we note the racial disparities in the probation population and revisit this in the discussion.	Page 4, lines 5-6 Page 5, lines 15-20 Page 9, lines 4-16 Page 14, lines 6-12 and 20-22
3	**Abstract** Line 17: either define high level probation in the abstract or remove it as a descriptor in this section	Thank you. We have removed this descriptor from the abstract.	Page 2, line 7

4	Line 22: remove discussion of warrant status from the abstract	We agree that this did not add to an understanding of the study design and have removed this from the abstract.	Page 2, line 8
5	Line 31: you bring up use of safety-net services in the abstract, but do not explore these findings in the discussion of the paper. If this outcome is important enough to mention in the abstract, it should be discussed in more detail in the paper.	Thank you for bringing this to our attention. We have added a discussion of safety-net service use and the opportunity for collaboration between health and community services in the probation population.	Page 13, lines 9-11 Page 14, lines 20-22
6	Line 50: you mention physical health conditions for racial disparities but do not provide any numbers. You also do not provide chronic disease findings for probation as a whole, which i would recommend	We have added values for physical health conditions in racial disparities as well as values for chronic physical conditions in the probation population as a whole.	Page 2, lines 15-21

7	**Methods** page 6 line 54 - i think you need to justify why you chose the population of high-level probation in addition to defining it	We chose high-level supervision because individuals regularly interact with a probation officer where this is more opportunity for potential intervention or modification of programming. In addition, we also defined the cohort with input for our County partners who thought a focus on high-level supervision was most relevant for their practice. We now clarify why we selected high-level supervision as our cohort of interest in the methods as follows: “We chose to examine individuals on high-level supervision because they frequently interact with probation officers. Thus, there are more opportunities for modifications to programming and outreach than for individuals on low- or mid-level supervision.”	Page 6, lines 8-11
8	page 7 line 15 - I do not think you need to include an explanation of violation status. You could omit this sentence altogether	Sentence omitted.	Page 6, line 11
9	page 9 line 8: what does "estimating pregnancy" mean? this is particularly important to define because your report rate of 10.6% which seems too high even if most women are of childbearing age	We have revised this sentence for clarity. We now note that the assessed rates of pregnancy are from any pregnancy in the past year among women of childbearing age (ages 18-44).	Page 7, line 17

10	In general, it strikes me as analytically problematic that there is no comparator group for demographics.	Thank you for this feedback. We did not have research questions about the differences in demographic characteristics between our sample and a comparison group (e.g., the MN population, the US population). Instead, our goal of Table 1 was simply to describe our sample. As per above, we have updated our introduction to reflect this.	Page 5, lines 15-20
11	page 9 link 42: One one hand, I like the inclusion of these variables, though I might chose to frame them as measures of social determinants of health, for readers to better understand how they link health needs. They are also are the most unique measures in your study. On the other hand, I'm a little concerned that there is no comparison group - are you able to compare to the general population of Hennepin county? I do think either way you need to qualify in a limitation that they do not capture all the ways in which the individuals in your study will experience barriers to receiving these benefits. Also, addressed above, there is no mention in the discussion, which there should be.	Thank you. To better separate our first descriptive goal from our second goal comparing health characteristics to a national survey sample, we have combined Tables 1 and 2. We appreciate your feedback and think that our goals will be clearer and more focused to readers. As per above, we have also included the implications of frequent safety-net service use in the discussion.	Table 1 Page 13, lines 9-11 Page 14, lines 20-22
12	**Results** page 12 - how are SUD defined? ICD 10 codes? this seems like very high % cannabis use disorder for ICD codes	Yes, we defined substance use disorders using ICD 9 and ICD 10 codes. Our lookback period was 3 years (i.e., any code in the past three years).	N/A

13	**Discussion** second paragraph of page 14- this paragraph is simply a rewording w/out numbers of the results. it does not really improve the readers understanding of the findings or their implications. does not even mention structural racism!	Our goal in this paragraph was to place our findings in the context of existing literature. We agree from this and an above comment that this was missing a crucial discussion on structural racism to help the reader's understanding of the many factors contributing to our findings. We have revised this paragraph to incorporate a discussion of structural factors leading to racial disparities.	Page 14, lines 6-12
14	**Tables** MHCP is used frequently - needs to be defined	Thank you. In addition to including this in the table footnotes, we have included a definition of the acronym MHCP earlier in the methods section.	Page 6, lines 14-15
15	Table 3- "women of childbearing age who meet prior enroll criteria" --- meaning of this is not clear to this reviewer	Our cohort was limited to individuals with 6+ months of Medicaid enrollment between 2013 and 2016. This was the enrollment criteria referred to, though we admit it was unclear. We removed mention of enrollment criteria from the body of the table and now specify the enrollment criteria in the footnotes of the tables.	Table 2
16	As a general suggestion, the formatting of the tables with multiple rows per statistical finding is very difficult for reviewers to interpret. (IE point estimate and 95% should always be on the same line). Recommend a more readable format for future submissions.	We apologize for this confusion; there appears to be an issue with the conversion from Word to PDF in the submission process. We have addressed this with the resubmission.	Tables 1-4, Supplemental table 1