Reviewer’s report

Title: Incarceration as a Key Variable in Racial Disparities of Asthma Prevalence

Version: 2 Date: 15 April 2010

Reviewer: Deborah Pearlman

Reviewer’s report:

General comments

The responses to reviewers’ comments are comprehensive and satisfactory. There are no major concerns regarding the following:

1. The current study addresses an important public health problem. While in prison, few people incarcerated receive adequate health care or treatment, and when they return to their communities their health often deteriorates. Offenders commonly face a wide range of serious health problems including substance abuse, infectious diseases and mental illness. The burden of chronic diseases, such as asthma, diabetes and hypertension is much higher for racial/ethnic minorities than for whites. Since racial / ethnic minorities comprise the largest percentage of those in federal prisons, it is important to understand whether having a history of incarceration mediates the effect of racial/ethnic disparities on the prevalence of asthma and other chronic conditions.

2. The methods are appropriate and well described.

3. The New York City Health and Nutrition Examination Survey is an appropriate database for answering the proposed research questions.

4. The discussion and conclusions situate the study findings in the context of the peer-reviewed literature and are adequately supported by the data.

5. Study limitations are reported and clearly stated.

6. The title and abstract accurately convey the purpose of the study and study findings.

7. The manuscript is well written.

Minor Suggested Revisions

1. Introduction. Page 2. Paragraph 1. The first sentence would be clearer if a time period was given to support the statement that “incarceration has become increasingly frequent in the lives of Americans…”

2. Introduction. Page 2. Paragraph 1. The first sentence appears to have a typo. It should read “disproportionate contact with…” It would be clearer if the sentence read “in prison and after release.”
3. Methods. Chronic Disease Measures, Page 5. Paragraph 1. The first sentence states the purpose of the study. This seems out of place in the section defining the coding of variables. It could be moved to the Introduction or as a potential lead sentence for the conclusion.

4. Analytic Methods. Page 7. Paragraph 1. The sentence beginning “As a result…” is long and could be restated in two sentences.

5. Methods. Propensity Score Matching, Page 8 (bottom of page). The sentence beginning, “In contrast to traditional regression…” is long and could be restated in two sentences.

6. Methods. Propensity Score Matching, Page 9. Paragraph 1. The sentence that begins, “Common support matching refers to defining a common support region… “ is very long. This is a place where two sentences would be better.

7. Results. Page 11 (middle of page). Delete the extra parenthesis after 4.5%.

8. Table 3. One way to make Table 3 less cluttered would be to add a table note at the bottom of the table and list the reference groups. This would delete six rows.

9. Results. Page 11. Paragraph 1. Although some journals report adjusted odds ratios as (ORs), other journals use (AORs). The authors will want to check this with the journal editor.

10. Results. Page 12. Paragraph 1 (for Figure 1). In reporting the results for the figures please add the percentages for asthma attack and ED use for asthma. This change would make parallel structure with the other comparisons (access to health care provider and having health insurance). Adding percentages for all comparisons also makes it easier to interpret the Y-axis for the four figures.

11. Discussion. Page 14. Paragraph 1. The sentence that states, “Communities from larger correctional facilities are turning to other models…” is not clear. Please add a sentence to clarify “other models.”

Major Suggested Revisions

1. Results. Page 10. Paragraph 2. The data presented in the text for Table 2 are not shown in Table 2. If it is the authors’ preference to keep Table 2 as shown then the text explaining Table 2 could add (data not shown).

2. Results. Page 11. Paragraph 1. The sentence that reports the adjusted odds ratio for the likelihood of having a history of incarceration among Black, Latino and white respondents was added in response to the reviewer’s comment. The addition is appreciated. However since the data are not shown in Table 3, the text should note (data not shown).

3. Results. Page 11. Paragraph 1. The sentence explaining that the propensity score further lessened the odds that Blacks have asthma compared to whites
seems an overstatement. The adjusted odds ratio for Blacks in Model 2 was 1.75 (95\% CI = 0.98, 3.25). In Model 3 the adjusted odds ratio for Blacks was 1.76 (95\% CI = 0.91, 3.39). Adding the propensity score to Model 3 appeared to make very little difference in the adjusted odds ratios for the variables included in both Models 2 and 3. Please consider restating this sentence.

Excellent study.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

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

Declaration of competing interests:

I declare that I have no competing interests.