Reviewer's report

Title: Retrospective Analysis of the Diagnostic Yield of Newborn Drug Testing

Version: 1 Date: 1 April 2014

Reviewer: Christian CT Teter

Reviewer's report:

This retrospective research report has been submitted to BMC Pregnancy & Childbirth for publication consideration and describes a chart-review study from an academic medical center. Specifically, the authors collected data from medical records among cases in which drugs (or metabolites) were detected in the meconium or urine of newborns. The authors aimed to identify “high yield screening risk factors” to help detect nonmedical drug use during pregnancy. The authors report that nonmedical drug use was identified in meconium (approximately 9% of the tested samples) and that urine drug testing seemed to add little value. Furthermore, the authors propose risk factors that, when combined (e.g., history of maternal nonmedical drug use + tobacco use during pregnancy), can detect most/many cases of prenatal nonmedical drug exposure. The article certainly investigates an important and highly relevant topic…and the methods, results (including the tables), and conclusions are generally well-written, easy-to-follow, and interesting. Despite this enthusiasm, there are some issues that should be considered by the authors:

Per the journal instructions, I have separated my comments into the following categories:

MAJOR COMPULSORY REVISIONS:

1. Abstract, Conclusions (…and throughout manuscript): Authors should always be careful about speaking in absolutes. For example, the statement "...will detect almost all prenatal non-medical drug exposures" needs to be 'softened'. It is rare that one study can universally answer a question and provide the definitive answer. This study is no different, especially considering the bivariate analyses that were performed (i.e., other variables were not controlled for using multivariable analyses). Therefore, please consider ‘softer’ language, such as "...may detect many cases" or other preferred language.

2. Statistical analysis: The authors have done a nice job of presenting four comparison groups in their tables. However, these groups are not clearly defined for the reader in the methods section of the manuscript. Please correct.

3. Statistical analysis: The authors clearly mention the inclusion of post hoc analyses, yet never explain any details to the reader. Please correct.

MINOR ESSENTIAL REVISIONS:

4. Discussion: The authors mention a lack of clear evidence for cannabinoids
causing adverse effects during pregnancy. However, the American Psychiatric
Association Guidelines state an “increasingly robust evidence that marijuana use
during pregnancy is associated with a number of deleterious outcomes (APA,
2006). Please ensure a balanced discussion is provided.

5. Table 2: The term “Breakdown” seems colloquial. Please choose more
professional language for the table title.

6. References: There are a number of careless mistakes (e.g., incomplete
references, such as #5 and #20). Please correct.

DISCRETIONARY REVISIONS:

7. All manuscript sections: The authors use a fair amount of discipline-specific
jargon (e.g., gravida, para) that may not be familiar to all readers (i.e., outside of
the core audience for this particular journal). Recommend clarifying jargon for the
reader, when feasible.

8. Figure 2A: This particular chart is easy to read over the computer display, but
when printed in black-and-white, it is much more difficult to read (i.e., without
patterns within the bars, or other distinguishing features).

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.