Reviewer’s report

Title: Outdoor Advertising, Obesity, and Soda Consumption: A cross-sectional study

Version: 1 Date: 14 August 2012

Reviewer: Amy Hillier

Reviewer’s report:

This is a well-conceptualized and well-written manuscript. The research question—whether there is an association between outdoor food ads and obesity—is clear and important. Most of the research on outdoor advertising has only described demographic patterns in the location and content of ads and not connected ads to health outcomes. Even though this research cannot show a causal link, the evidence that there is an association represents an important contribution to the public health literature.

The authors used a unique data set including directly observed outdoor ads and a telephone survey with residents living in those same areas. The authors provide clear results and discussion sections and identify many of the limitations to this research.

Minor essential revisions

The one limitation the authors fail to acknowledge is that of self-selection bias. This issue has received substantial attention in the neighborhood effects literature. Is self-selection bias relevant to the association the authors found? Do propensity scores offer a means for controlling for this potential bias?

The main independent variable used was the percent of ads that were for food. This treats all ads as equal, regardless of size, correct? The authors might consider a measure that looks at percent of ad sheets (consistent with Yancey et al 2009) since this may better reflect exposure.

Were there meaningful differences between outdoor ads in LA and New Orleans? Do those two cities have different local regulations about signage?

Opening sentence: “Obesity is one of the world’s most intractable worldwide health problems.” World should not appear twice (world’s and worldwide)

Third paragraph “Given that food marketing predominantly promotes foods that are high in calories and added sugars.” This needs a reference.

Discretionary Revisions

The authors acknowledge the limitation of using census tracts of residence as the measure of exposure, but they don’t discuss why they used this measure. Use of census tracts is usually a practical consideration because finer scale
geographic data are not available. However, because they have GPS coordinates for the ads, they could have used some form of density measure based on the proximity of survey respondents' homes (if they have home address for respondents). Also, the authors acknowledge that places where people spend time may be as relevant to exposure as home address. Could they suggest some additional questions to ask in future surveys to capture such exposure, such as how much time survey respondents spend at home, in their neighborhood, and in other locations?

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests.