Author's response to reviews

Title: A Randomized Study of Contingency Management and Spirometric Lung Age for Motivating Smoking Cessation among Injection Drug Users

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Dear BMC Public Health Editorial Board,

My co-authors and I are pleased to submit the enclosed original research publication titled “A Randomized Trial of Contingency Management and Spirometric Lung Age for Motivating Smoking Cessation among Injection Drug Users” for consideration for publication. Injection drug users (IDUs) have among the highest prevalence of tobacco use, yet few studies have examined novel smoking cessation interventions in this understudied population. Contingency management, an approach which provides a structured incentive contingent upon changes in a participant’s behavior, has shown utility in adherence to methadone maintenance. A second novel approach to smoking cessation uses the concept of spirometric “lung age” as a motivational tool for smoking cessation. While these interventions have been described as having efficacy in improving tobacco cessation in non-IDU settings, they have not been evaluated in the IDU population.

To address this question, we completed a randomized, factorial design trial of contingency management and spirometric lung age separately or combined, versus usual care in a population of 100 current and former IDUs. The primary outcome 6-month biologically-confirmed smoking cessation, with secondary outcomes including differences in self-reported and biologically-confirmed cessation at interim visits, number of visits attended and quit attempts, smoking rates at interim visits, and changes in Fagerstrom score and self-efficacy. We found that six-month biologically-confirmed smoking cessations rates were highest in contingency management, and that secondary outcomes including total number of visits with exhaled carbon monoxide-confirmed abstinence and reduction in Fagerstrom score were higher for contingency management than non-contingency management participants. Lung age had no impact on cessation outcomes.

These observations demonstrate that contingency management, but not spirometric lung age, as a motivational tool for smoking cessation improves smoking habits and levels of nicotine addiction over a six month period. Ultimately, contingency management may help decrease the substantial burden of tobacco dependence in similar underserved populations with excessive tobacco use. We feel these findings are of interest to the BMC Public Health readership given the impact of lung disease, tobacco abuse and underserved populations on public health.
Thank you for taking the time to review what we feel is an exciting manuscript. Please do not hesitate to contact me with any questions.

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