Author's response to reviews

Title: Hypertension: Comparison of self reported data on hypertension and measured blood pressure in a tri-ethnic community

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Author's response to reviews: see over
Dear Deesha Majithia, MSc,
Executive Editor

Enclosed is a copy of our manuscript titled “Hypertension: Comparison of self reported data on hypertension and measured blood pressure in a tri-ethnic community”. In this manuscript we draw on a multiethnic sample from Detroit, Michigan, to examine the accuracy of self-reported survey data in describing prevalence of clinically measured hypertension in racially and ethnically diverse urban areas, and provide a mechanism to correct self-report data in order to reflect more accurate the true clinical HBP prevalence. Our findings suggest that there are unique aspects of urban areas that should be considered when creating estimates of hypertension prevalence based on self-report data. Not only are the self-reported and clinically assessed estimates of hypertension prevalence higher in urban compared to national datasets, but the differences between self-reported and clinically measured HBP were larger in urban compared to national samples. This difference was largest in the Detroit based sample, which also had the highest rates of HBP (regardless of type of measure) suggesting that reliance on self-report data may disproportionately underestimate prevalence of HBP in low to moderate income, racially and ethnically diverse urban communities such as Detroit.

Furthermore, we developed and applied prediction models to adjust self-reported data on high blood pressure to more closely approximate clinical measures of HBP in urban samples. Such models can improve the accuracy of estimates of prevalence of HBP derived from self-reported data, which is much less costly to collect than clinically measured HBP. As a result, such prediction models offer a low cost approach to improve prevalence estimates and thus the ability to plan prevention and treatment efforts to reduce high blood pressure and its negative health effects. Given limited funds available for public health surveillance, health promotion and treatment efforts, prediction models that enable accurate estimates at lower costs may allow limited funds to be shifted toward health promotion and treatment efforts in high risk urban populations.

Sincerely,

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