Review of: "Blood pressure thresholds in pregnancy for identifying maternal and infant risk: a secondary analysis of Community-Level Interventions for Pre-eclampsia (CLIP) trial data"

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The authors conducted a secondary analysis based on the high quality data from CLIP trial to evaluate associations between blood pressure categories and adverse outcomes as well as the diagnostic performance of the blood pressure cutoffs in low-resource settings. They found that the risk of adverse gestional outcomes signifcantly increased only in “Stage 2 hypertension” category and continually increased in “sever Stage 3 hypetension” category. None of the blood pressure threshods showed acceptable sensitivity in predicting adverse composite outcomes, and the author concluded that the current diagnostic thresholds for hypertension in pregnancy should be retained in these settings.

1. Distribution of Figure 1. Most women recgonized their pregnancy later than 6-7 weeks and go to their first antinatal care later than that date. Figure 1 shows levels of maximum blood pressure for gestational week 4 and 5 and as late as 43-44 weeks, which is hard to image. Average frequency of blood pressure readings/visits should be summaried.
2. Table 3. provided most important and informative results in terms of the study aim. Results showed that comapred with “Normal blood pressure category” , “Elevated blood pressure” did not significantly higher risk of outcomes, and the increment of the outcome risk became significant in Stage 2 to Stage 3 groups. This results did not support “Elevation of blood pressure ” or “Stage 1 hypertenison” bejing clinically indicative. In the results of “Comparisons bewtwen higher vs. lower categories”, Althought the increment of outcome risk occured in the “Elevated blood pressure” group, it is more likely attribute to the contribution of the other three categories of more severe hypertension and the larger sample size and power in this comparisons.
3. It is unclear whether antihypertensive medications used before or during gestation were considered in the maximum blood pressure categorizing? This can be included as an sensitivity analysis for the association analyses.
4. Most oucomes defined as composite, we should not expect good prediction of blood pressure classifications only to these comprehensive outcomes.The analyses presented in Table 4 are less biologically rational. As discussed by the author, it is not superising that disgnostic test performance (poor sensitivity) were observed for all composite outcomes, since hypertensive disorders contribute

only partly to the development of the comprehensive outcomes. The idea of assess appropriateness of current cutoff of blood pressure using diagnostic test performance of blood pressure categories in predicting maternal and neonatal composite outcomes is not a good idea. The information presented in the paper except for Table 4 are more important to readers.