

# Response to Letter to the Editor Regarding “Hypertension Awareness, Treatment, and Control in Mexico: An Opportunistic Medical Student-led Blood Pressure Screening Campaign – A Cross-Sectional Study”

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## Dear Editor:

This letter is in response to the letter by García-Espinosa, P.<sup>1</sup> which discussed our paper entitled “Hypertension Awareness, Treatment, and Control in Mexico: An Opportunistic Medical Student-led Blood Pressure Screening Campaign – A Cross-Sectional Study”.<sup>2</sup> We highly appreciate the interest in our article and the connection that has been made between our findings and stroke prevention. As previously noted in our original paper, hypertension is a growing risk factor for cardiovascular disease, and it has been highlighted as the most important modifiable risk factor for stroke globally.<sup>3</sup>

The primary goal of our study was to describe the current state of hypertension awareness, treatment, control, and its associated factors in the Mexican population. However, there are several other studies that have assessed the association of knowledge, awareness, treatment and control of hypertension with the risk of stroke.<sup>3,7</sup> We found that 5.1% of the hypertensive group had a history of stroke, compared with only 0.3% of the non-hypertensives. Those with a history of a stroke had a mean surplus of 12.11 mmHg in systolic blood pressure (SBP) and 6.64 mmHg in diastolic blood pressure (DBP).<sup>2</sup> These findings are of great interest, because they suggest people with a history of stroke were not properly controlled, although hypertension is considered the most important predictor of stroke recurrence.<sup>8</sup>

Stroke education campaigns are a pivotal step to the prevention of cerebrovascular accidents and their long-lasting sequelae. Such campaigns should include strategies to increase hypertension awareness and control, stressing the primary prevention and early treatment of hypertension. This is supported by data from Murray et al.<sup>4</sup> in which only 34.9% of their study population knew that hypertension was a risk factor for stroke. On the other hand, a study

by Barengo et al.<sup>5</sup> showcased that despite antihypertensive drug treatment and adequate control, the risk of stroke remains relatively high.

In our article, most uncontrolled hypertensive patients in Mexico belonged to marginalized states, and the greatest proportion of people unaware of having hypertension were found in the least marginalized regions.<sup>2</sup> This has several implications for public health policy and future research and advocacy. Howard et al.<sup>6</sup> found a similar pattern in which Black participants were more aware of their hypertension but less likely of having their blood pressure controlled than white participants, even though stroke mortality is higher in the “Stroke Belt” (South East) region among Blacks in the United States.

We believe that interventions at all sociodemographic levels should be implemented to increase stroke awareness and prevention. A study by O'Donnell et al.<sup>3</sup> demonstrates that lack of knowledge, detection and treatment of hypertension are the biggest contributors to the risk of stroke in lower-income countries. On the other hand, Joffres et al.<sup>7</sup> reported a strong relationship between hypertension awareness and stroke mortality in the United States, Canada and the United Kingdom. This proves that, although differences in hypertension awareness, treatment and control have been observed between regions at the national and international level,<sup>2</sup> stroke does not discriminate with the same rules.

There is a great area of opportunity to study the associations between hypertension awareness and control with stroke risk in our country. We commend our colleagues for their efforts in the prevention of stroke and hope this response ignites their curiosity to further explore these topics through research. As medical students, it is in your hands to generate the data will enable us to put our countries in the research map.

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