

Stroke survivors could gain the most from new blood pressure guidelines

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Treating high blood pressure in stroke survivors more aggressively, could cut deaths by one-third, according to new research in *Journal of the American Heart Association*, the Open Access Journal of the American Heart Association/American Stroke Association.

"The potential to reduce mortality and recurrent stroke is immense, because more than half of all strokes are attributable to uncontrolled high [blood pressure](#)," said Alain Lekoubou, M.D., M.S., study lead author and clinical instructor in neurology at the Medical University of South Carolina in Charleston.

In the AHA/ACC guideline for hypertension, released in 2017, the threshold for stage 1 hypertension, or high blood pressure was changed to at or above 130 mmHg for the top number or 80 mmHg for the bottom number. The previous threshold for high blood pressure was, at or above 140/90 mmHg.

Overall, while many more people will be diagnosed with hypertension under the new guideline, there will be only a small increase in the percentage of people who require medication. However, blood pressure-lowering medications are recommended for all stroke survivors with blood pressures of 130/80 mmHg or higher, and additional drugs if needed to reduce blood pressure below that threshold.

In the new study, researchers used data from the National Health and Nutrition Examination Surveys to estimate the nationwide impact of

applying that approach. The surveys, conducted between 2003 and 2014, included blood pressure measurement and asked participants about their stroke history and blood pressure treatment.

If clinicians fully shift from the previous guidelines to the new ones, the researchers calculated the impact on stroke would be:

- a 66.7 percent increase in the proportion of stroke survivors diagnosed with hypertension and recommended for pressure-lowering medication (from 29.9 percent to 49.8 percent);
- a 53.9 percent increase in the proportion of stroke survivors already taking pressure-lowering drugs who will be prescribed additional medication to reach their target blood pressure (from 36.3 percent to 56 percent); and
- a 32.7 percent reduction in deaths, based on the difference in death rates in stroke survivors above and below the 130/80 mmHg target blood pressure (8.3 percent vs. 5.6 percent).

"The new guideline offers physicians and policymakers a unique opportunity to reinforce the already decreasing stroke-related mortality trends of the last few decades," Lekoubou said. "It is our responsibility to ensure that stroke survivors identified with hypertension are treated more aggressively and to ensure that those on treatment remain on treatment."

While the potential to prevent recurrent strokes and save lives is large, the researchers acknowledge that there are special challenges in treating [blood pressure](#) in stroke survivors.

"Stroke survivors can face many hurdles in adhering to treatment, including major neurological impairments and depression, which can reduce the motivation to take medication. Caring for stroke survivors may be complicated because it is primarily a disease of the elderly, who

are often taking several medications to treat their medical conditions," said Lekoubou.

The study is limited by relying on self-reports of a history of [stroke](#) and the inability to separately analyze the impact of the new guidelines on survivors of clot-caused or bleeding strokes.

"The true magnitude of the impact of these changes in [high blood pressure](#) definition and treatment recommendations will best be evaluated by prospective studies, which will also offer the opportunity to identify gaps and improve treatment protocols among [stroke survivors](#)," Lekoubou said.

More information: *Journal of the American Heart Association* (2018). [DOI: 10.1161/JAHA.118.008548](https://doi.org/10.1161/JAHA.118.008548)

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