FACT SHEET

Preventable. Treatable. Beatable.

Stroke in the U.S.

OVERVIEW

Stroke is the nation's No. 5 killer and a leading cause of serious long-term disability.[1, 2] Each year, about 795,000 people suffer a stroke.[2] Approximately 610,000 of these individuals have never experienced a stroke before, and almost 185,000 have a recurrent attack.[2] On average, someone in the U.S. has a stroke every 40 seconds, and every 3 minutes 30 seconds someone dies from one.[2] Stroke was the primary cause of about one in every 20 deaths in 2014.[3]

As these facts illustrate, stroke is already a very serious problem and is projected to get worse. There are currently 7.6 million American adults living with stroke, and the number is projected to increase by 3.4 million by 2030.[2] Research suggests costs for treating stroke will rise as well; between 2015 and 2035, total direct medical-related costs for stroke are estimated to increase from $36.7 billion to $94.3 billion.[2] Including indirect costs, the cost of stroke in the United States between 2017 and 2018 reached nearly $53 billion.[2]

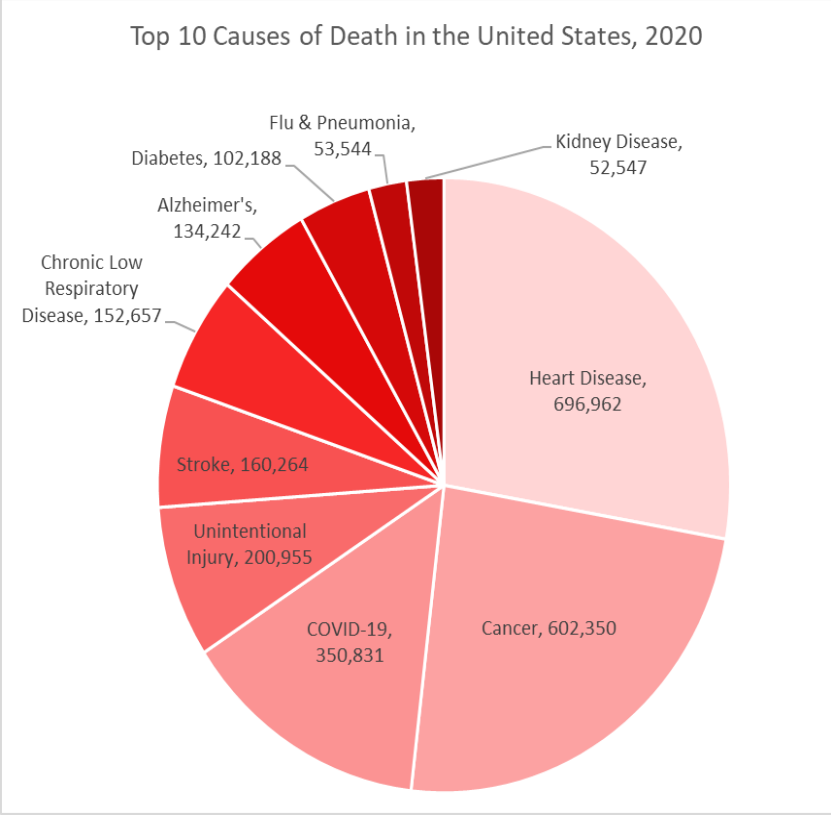
Certain segments of the population have a disproportionately high risk of stroke. Hispanic and Black people have around one and a half to two times the risk of stroke as whites, respectively.[2] Further, Black people are nearly one and a half times more likely to die after a stroke compared to whites.[2] Disparities also exists across gender. Each year, around 55,000 more women than men have a stroke, and stroke remains the No. 4 killer of women.[2,4] Although stroke is often thought of as a disease of adulthood, between 2001 and 2020 it remained among the top 10 causes of death of Americans including children and young adults.[5]

PREVENTING STROKE

Known, changeable risk factors, such as smoking, high blood pressure, lack of physical activity, diabetes, nutrition, and atrial fibrillation (a condition where the upper chambers of the heart contract in an uncoordinated fashion and blood clots may form) are linked to an increased incidence of stroke.[2]

Reducing or eliminating these risk factors decreases the risk of stroke.

- Current smokers have 2 to 4 times increased risk of stroke compared with nonsmokers or those who have quit for more than 10 years. While reductions in cigarette consumption can reduce stroke risk, even low cigarette consumption (~1 cigarette per day) has up to 50% the risk of developing a stroke as higher cigarette consumption (~20 cigarettes per day).[2]
- Adults treated for hypertension who have tight blood pressure control (<130 mm Hg) can reduce their risk of stroke by 42% compared to



Source: Centers for Disease Control and Prevetnion WISQARS™ — Web-based Injury Statistics Query and Reporting System

standard blood pressure control (130-139 mm Hg).[2]
- Physical inactivity is responsible for nearly 3% of stroke burden in high-income countries like the United States.[2]
- High-fiber diets can reduce the risk of stroke by 22% compared to diets with the lowest fiber intake. Consuming 25 to 29g of fiber per day has the greatest health benefits.[2]

TREATING & BEATING STROKE

A major advancement in the treatment of ischemic stroke was approved by the FDA in 1996—a clot-dissolving drug called tPA. tPA can significantly reduce the debilitating effects of stroke if administered as soon as possible within 4.5 hours of symptom onset. Given its efficacy, AHA has sought to provide resources to help hospitals improve tPA administration through its Target: Stroke program since 2010. Hospitals participating in Target: Stroke receive information about best practice strategies, clinical decision support tools, and recognition for meeting goals.[6] Phases I and II of Target: Stroke sought to shorten the time of tPA administration once a patient with stroke arrives at the hospital Phase III, sets even more aggressive goals for time to tPA administration. It also introduces goals for a newer treatment of ischemic stroke: endovascular therapy.[7]

For over two decades, tPA was the only proven causal treatment of acute ischemic stroke.[8] While its uptake has improved, not all patients arrive at the hospital in time for it to be effective.[12] For some patients, endovascular thrombectomy—a procedure where a clot is removed manually via insertion of a retrievable stent and/or microcatheter into the brain, can be effective.[12]

Target: Stroke efforts appear to be working as tPA administration is improving. In 2008, just 26.4% of patients with stroke received tPA within 60 minutes of arriving at the hospital and only 10.7% received tPA within 45 minutes; this proportion increased to 66.2% and 40.5% by 2017, respectively.[9] Additionally, there is a growing body of evidence that supports utilization of endovascular thrombectomy for patients with stroke who arrive at the hospital outside of the window where tPA would be effective.[10,11]

Despite Target: Stroke's successes and the emergence of a treatment for patients with stroke who do not appear at the hospital promptly, it is still critical that patients experiencing stroke symptoms arrive at the hospital as soon as possible. However, there are still barriers to prompt stroke treatment – many of which can be addressed through public policy. One major barrier is that patients often do not recognize the symptoms of stroke and do not arrive at the hospital in a timely manner.

- 68.3% of those surveyed in 2014 in the National Health Interview Survey (NHIS) recognized all five stroke symptoms. Further, there was variability in recognition across these symptoms of stroke:[12]
    - 93.7% recognized numbness of the face, arm, leg, or side;
    - 92.8% recognized confusion or trouble speaking;
    - 90% recognized trouble walking as a stroke symptom;
    - 82.9% recognized sudden trouble seeing; and
    - 76.1% recognized sudden severe headache as stroke symptoms.
- While awareness of every stroke symptom knowledge of all five stroke symptoms has improved since the 2009 NHIS, knowledge is still suboptimal.[12]
- Only 66.2% of 2014 NHIS respondents knew all five stroke symptoms and to call 9-1-1.[12]
- Racial disparities exist in presentation to the hospital for stroke. Black patients with stroke arrive at the hospital later than White patients. Interventions to increase awareness of stroke symptoms may help reduce these disparities.[13]

THE AHA/ASA Advocates

The American Stroke Association, a division of the American Heart Association, urges policymakers to support the following policy recommendations for preventing stroke and improving the quality of care that stroke patients receive:

- Protect investments in stroke prevention including support for tobacco cessation, physical activity, and nutrition;
- Increase funding for stroke awareness so that all Americans can recognize the five symptoms of stroke and know to call 9-1-1. This investment is especially important in underserved communities where patients with stroke symptoms appear at the hospital later after symptom onset.
- Fund and provide technical assistance to help integrate regional Emergency Medical Services (EMS) into stroke systems of care including providing screening tools, education, stroke destination plans, and pre-hospital stroke notification protocols.[14]
- Increase the National Institutes of Health's investment in stroke research, which currently constitutes only 1% of NIH's budget.

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