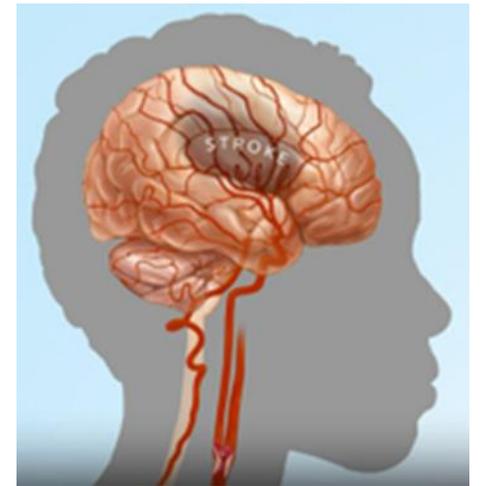


# Care Across the Ages

March 12, 2026

Stephanie Cox MS APRN AGCNS-BC

UCHealth University of Colorado Hospital Stroke Program CNS



uhealth

Learning outcome: at the end of this activity, participants will be able to describe the two types of strokes, review the incidence of stroke and impacts of an aging US population, and describe a strategy to reduce disparities in stroke care.

# UCHealth University of Colorado Hospital



903 licensed beds



**American Heart Association  
American Stroke Association**  
**CERTIFICATION**  
Meets standards for  
**Comprehensive Stroke Center**



> 2000 Stroke Alerts annually



>860 Stroke Patient Admissions a year

# Stroke Statistics



**795,000** Americans each year suffer a stroke

**KILLS 160,000**  
people every year

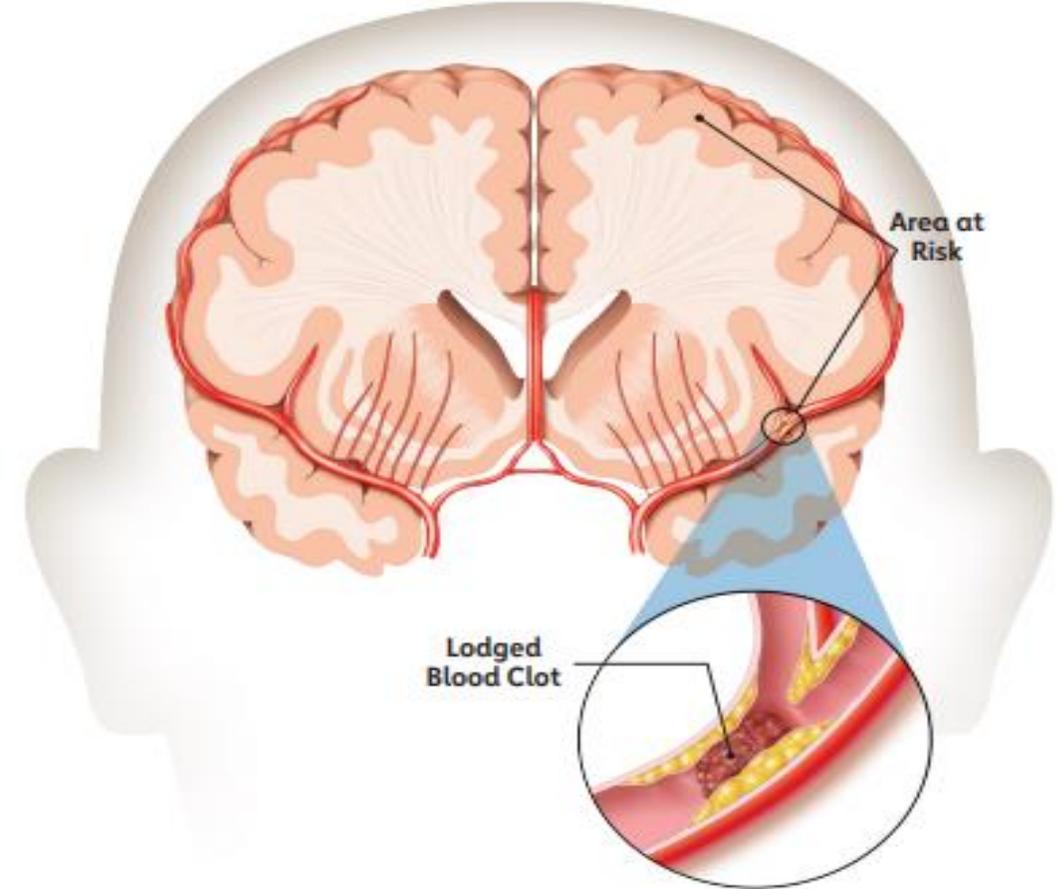
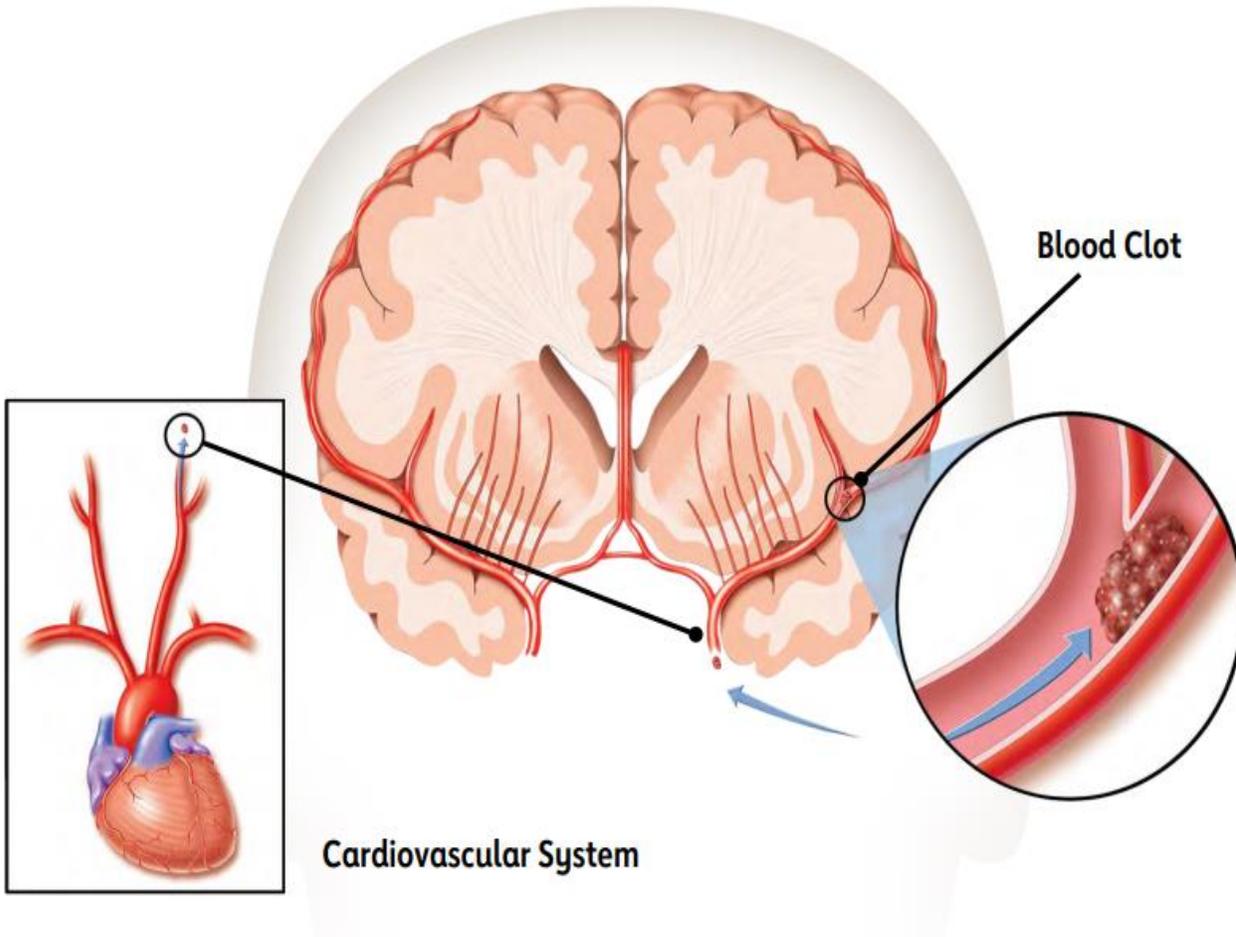
Every **40**  
**seconds**  
someone has a  
stroke

**#1**  
cause of disability  
of adults in US

**#4** cause  
of death for  
US adults

**40%**  
are large vessel  
occlusions

# Types of Stroke: Ischemic Stroke



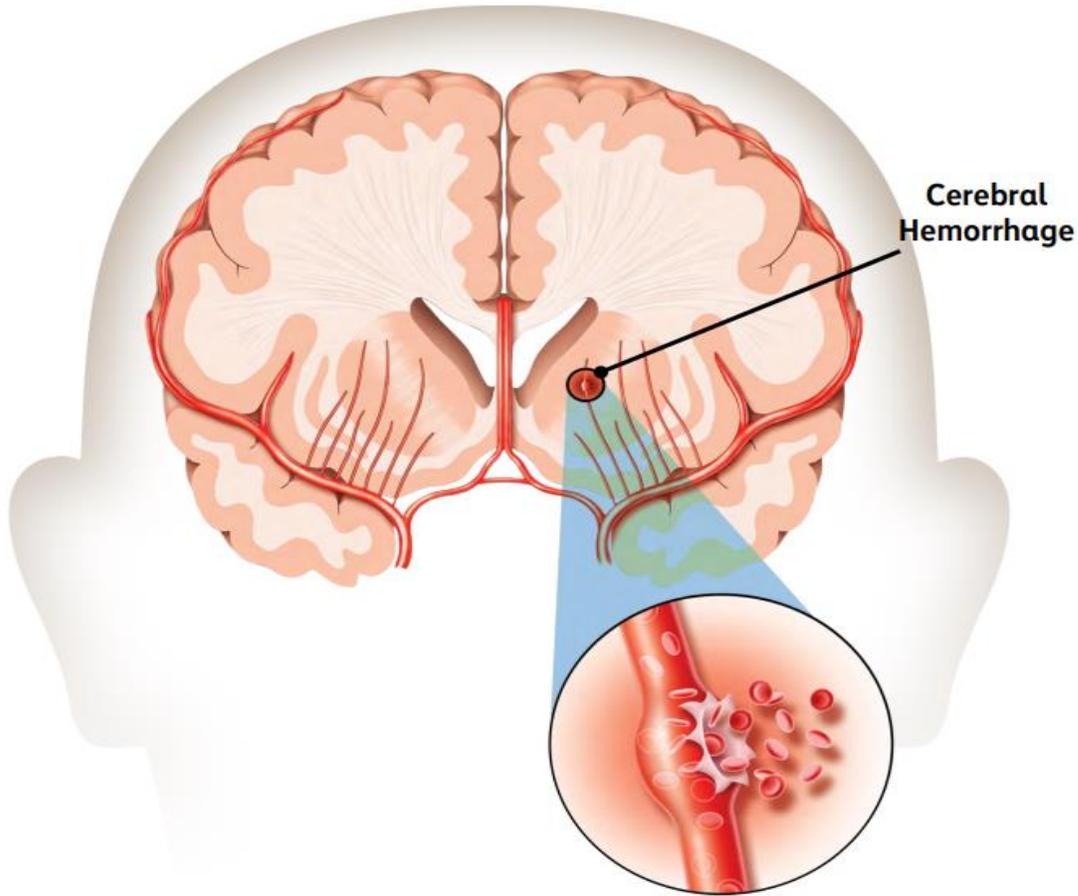
- Ischemic stroke most common type of stroke
  - Blood flow is blocked by a clot

**OR** when narrowed arteries and plaque also cause a blockage

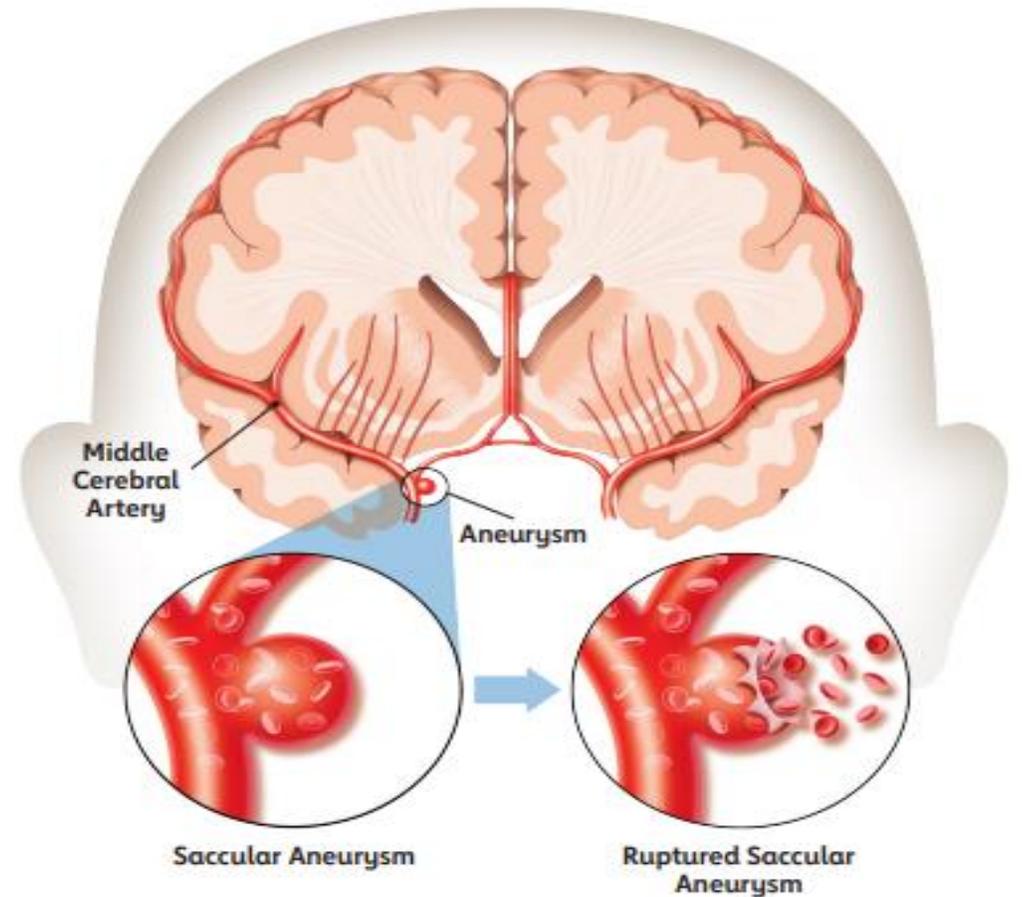
# Types of Stroke

## Hemorrhagic Stroke

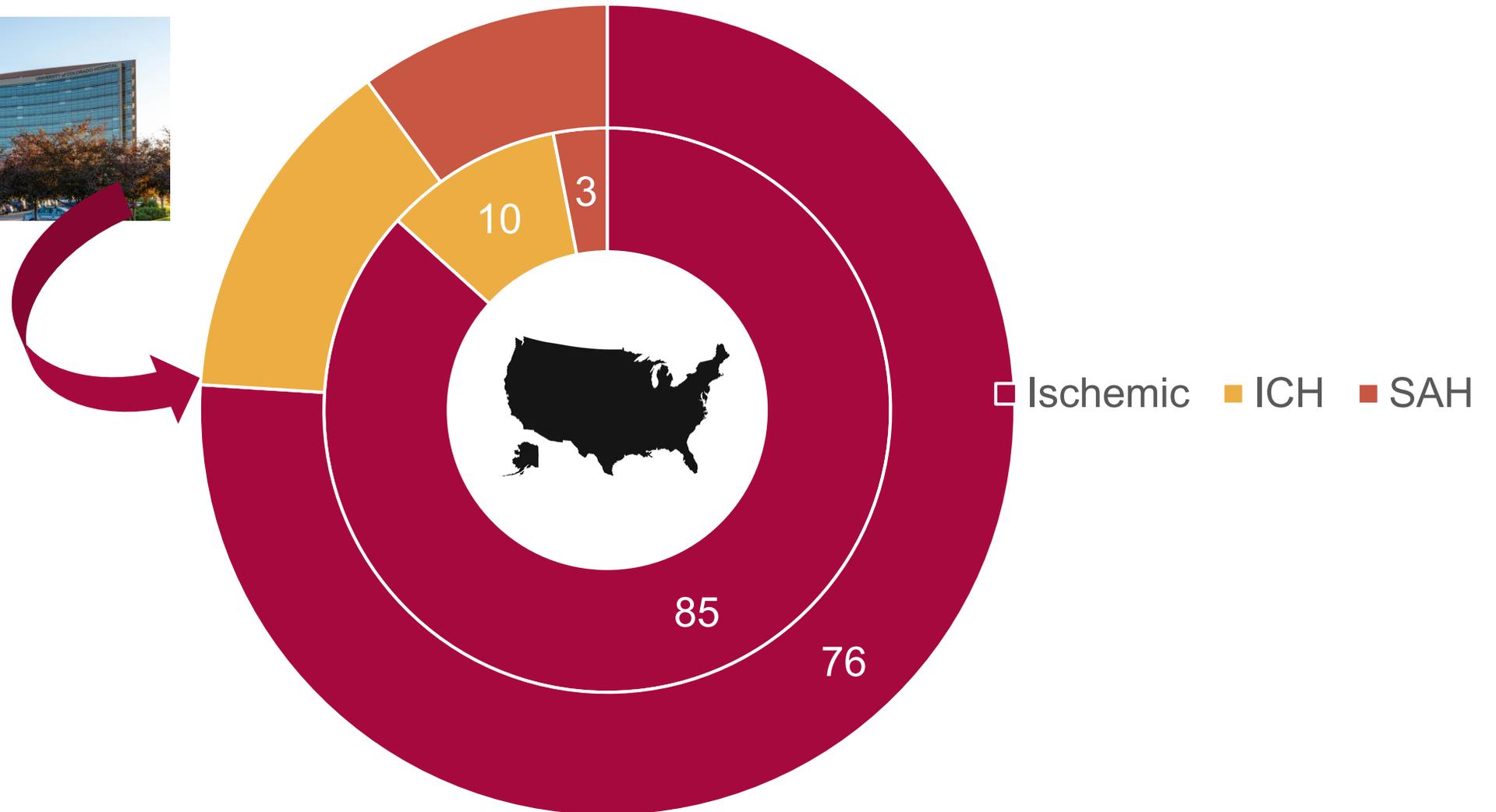
Intracerebral hemorrhage (ICH)



Subarachnoid hemorrhage (SAH)



# Annual Stroke Incidence



# Types of Stroke Centers



## Acute Stroke Ready

Stroke team and can give IV thrombolytics and transfer



## Primary Stroke Center

Stroke team and can give IV thrombolytics and Stroke beds (transfer more complex cases)



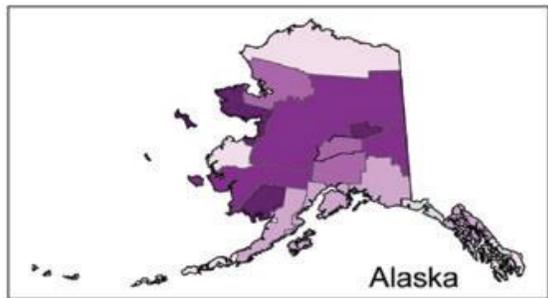
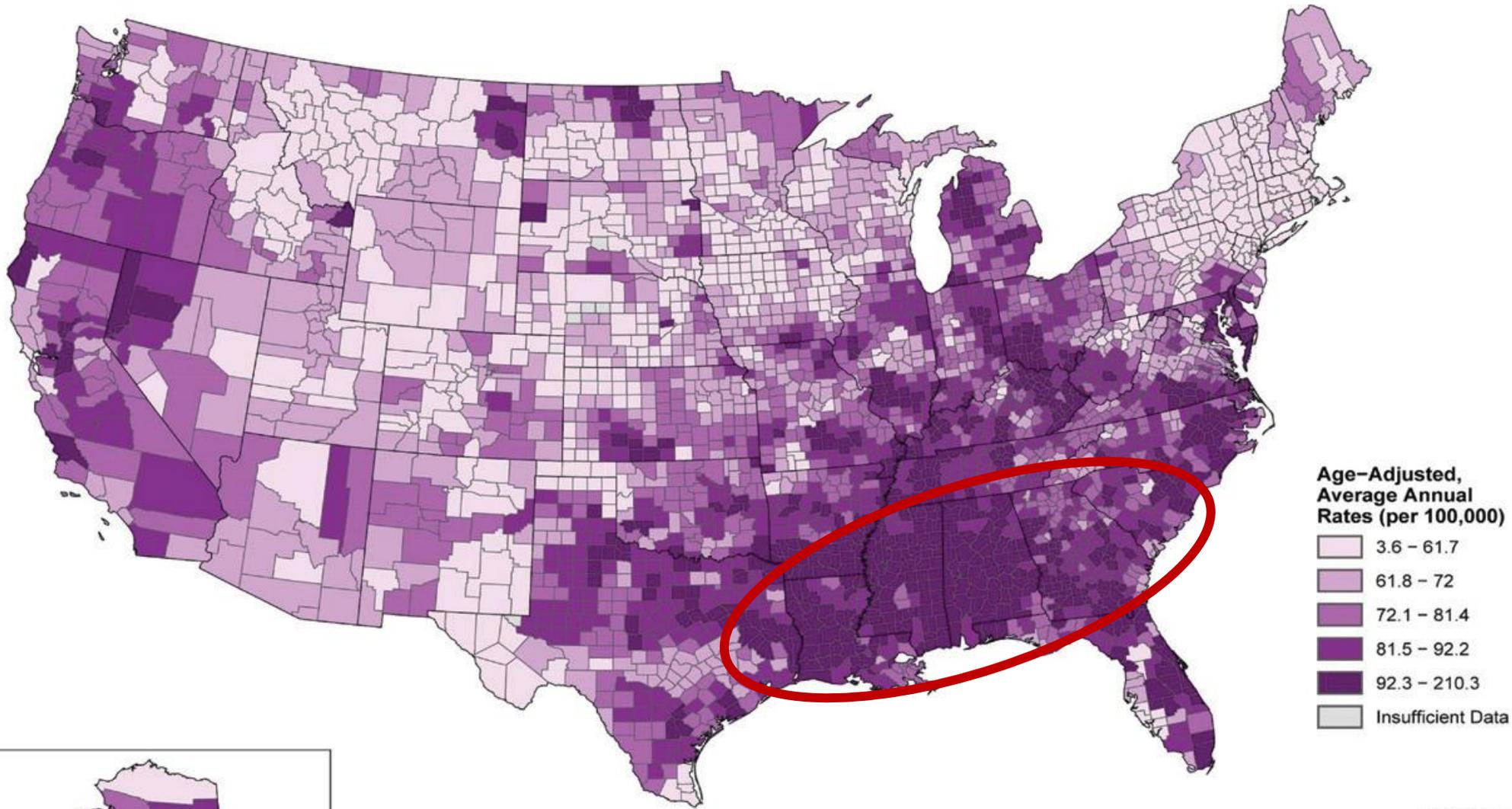
## Thrombectomy Capable

And offers 24/7 thrombectomy (transfer hemorrhagic cases)



## Comprehensive

24/7 Thrombectomy, 24/7 Neurosurgery for hemorrhagic stroke and complex cases



American Samoa

Guam

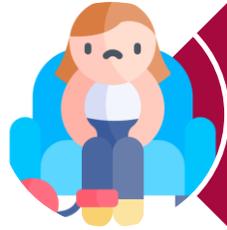
Northern Mariana Islands

Puerto Rico



Virgin Islands

Data source and methodology found at:  
[www.cdc.gov/dhisp/maps/atlas/statistical-methods](http://www.cdc.gov/dhisp/maps/atlas/statistical-methods)



78% of stroke survivors' time is spent as sedentary



nearly 50% do not have their blood pressures (BP) controlled



73% fall within 6 months and 4× more likely to fracture a hip when they fall



25% are readmitted to the hospital within 90 days

Circulation

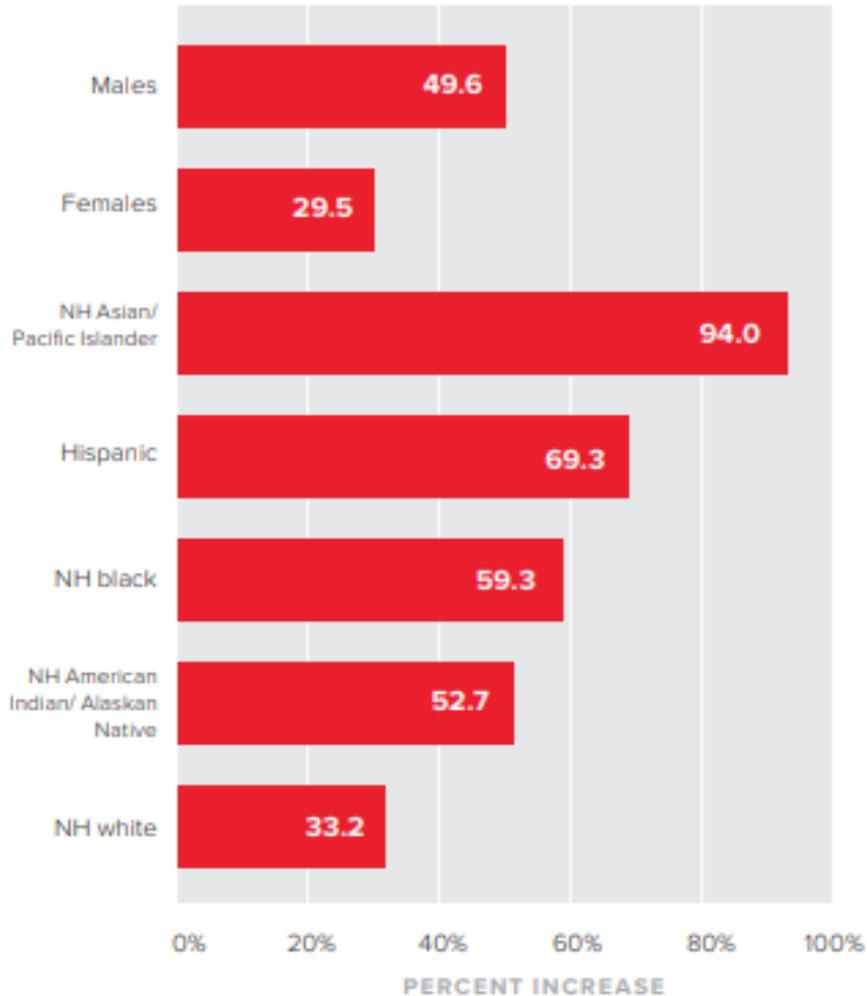
**AHA PRESIDENTIAL ADVISORY**

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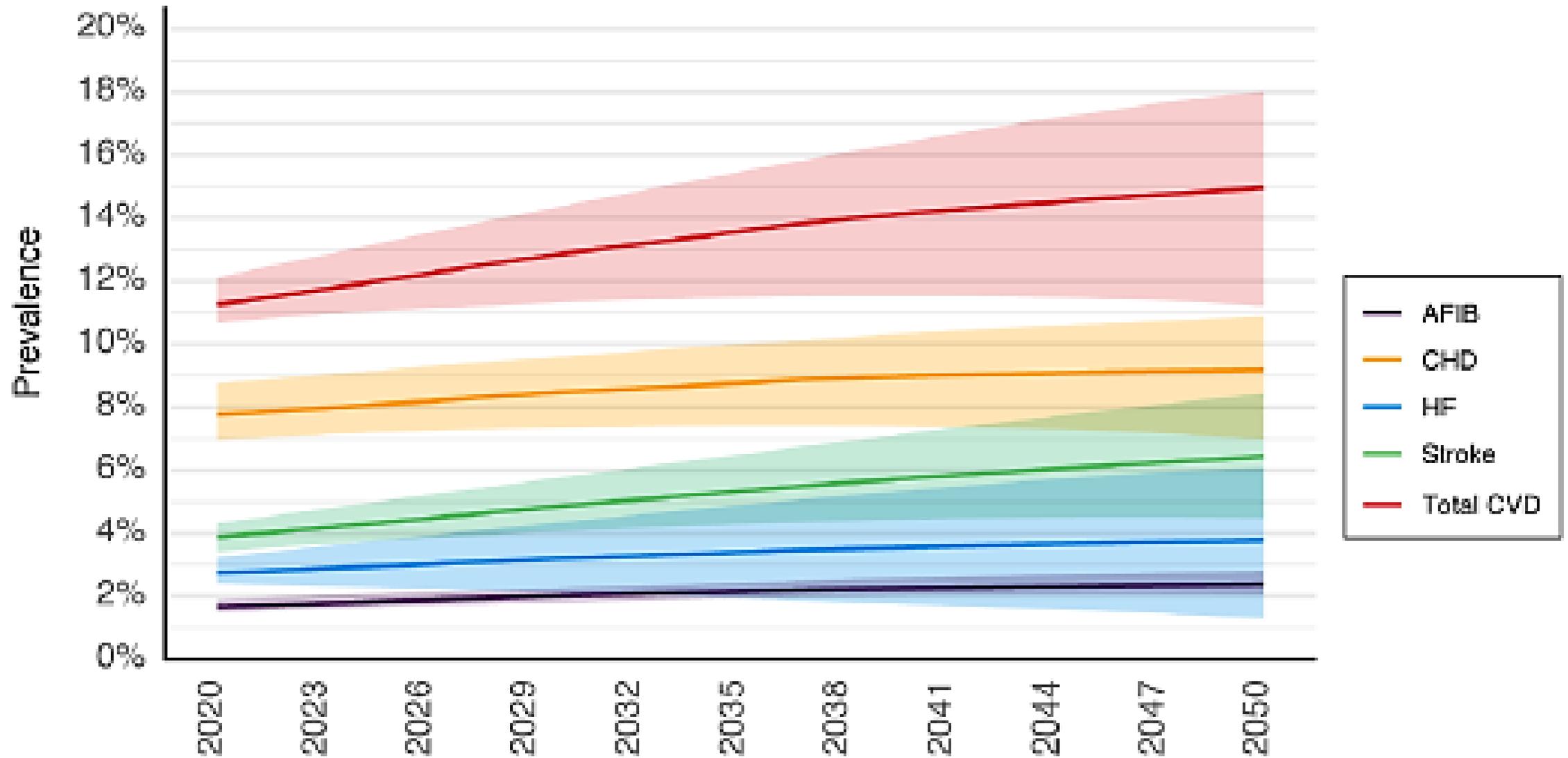
Forecasting the Burden of Cardiovascular Disease and Stroke in the United States Through 2050—Prevalence of Risk Factors and Disease: A Presidential Advisory From the American Heart Association



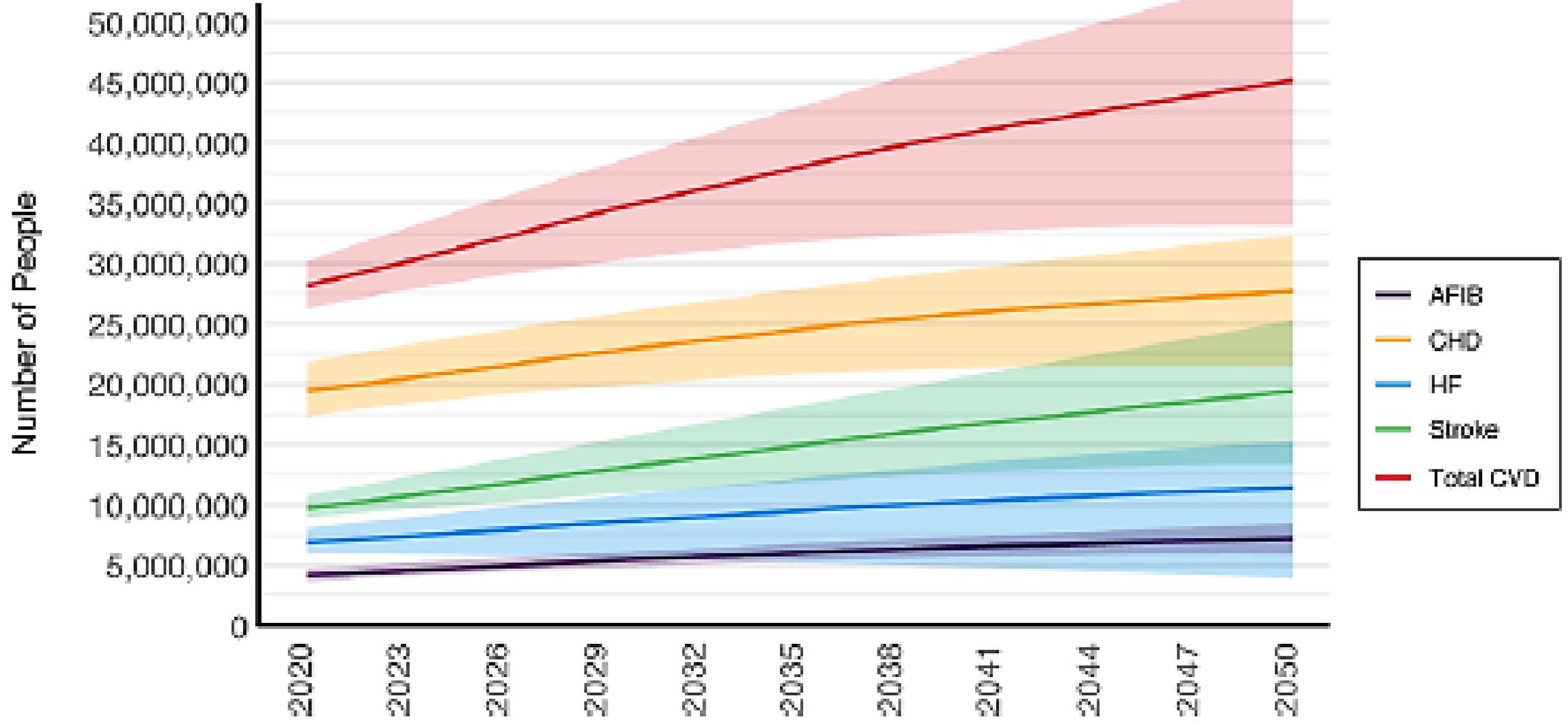
**FIGURE 3:**  
Percentage increase of heart failure deaths by gender  
and race/ethnicity, 2011 to 2017<sup>1</sup>



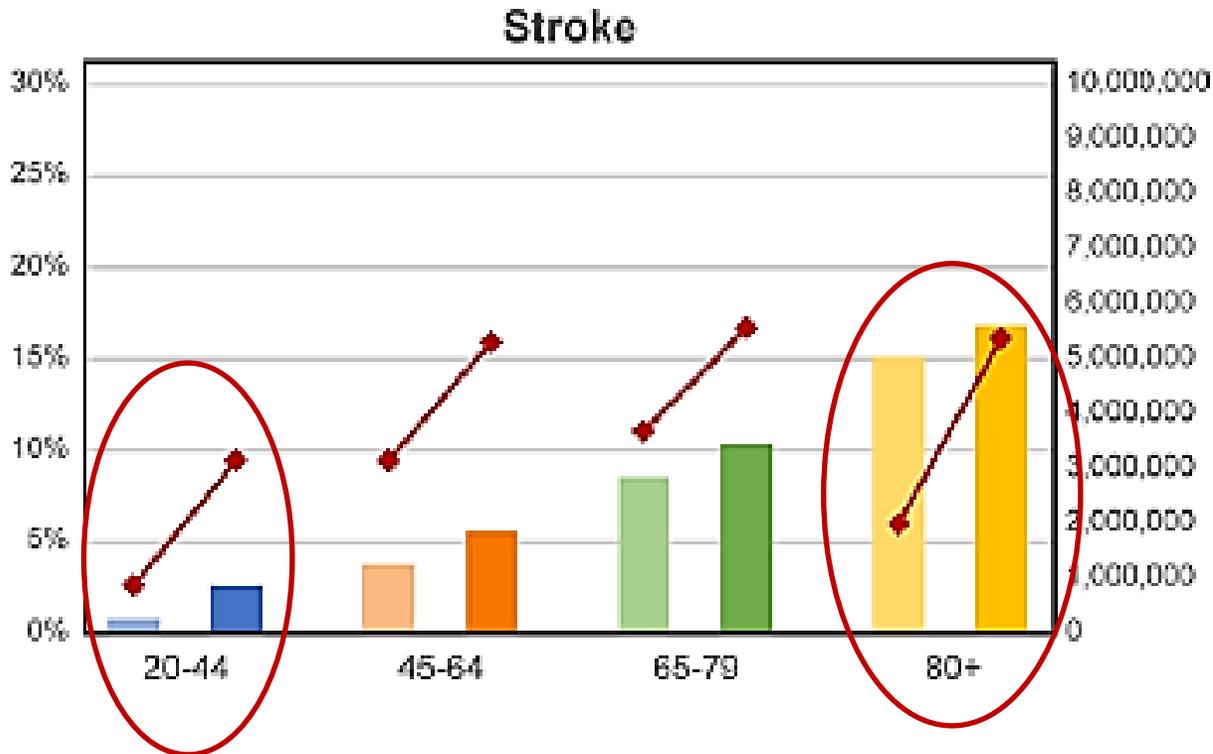
# Cardiovascular Conditions



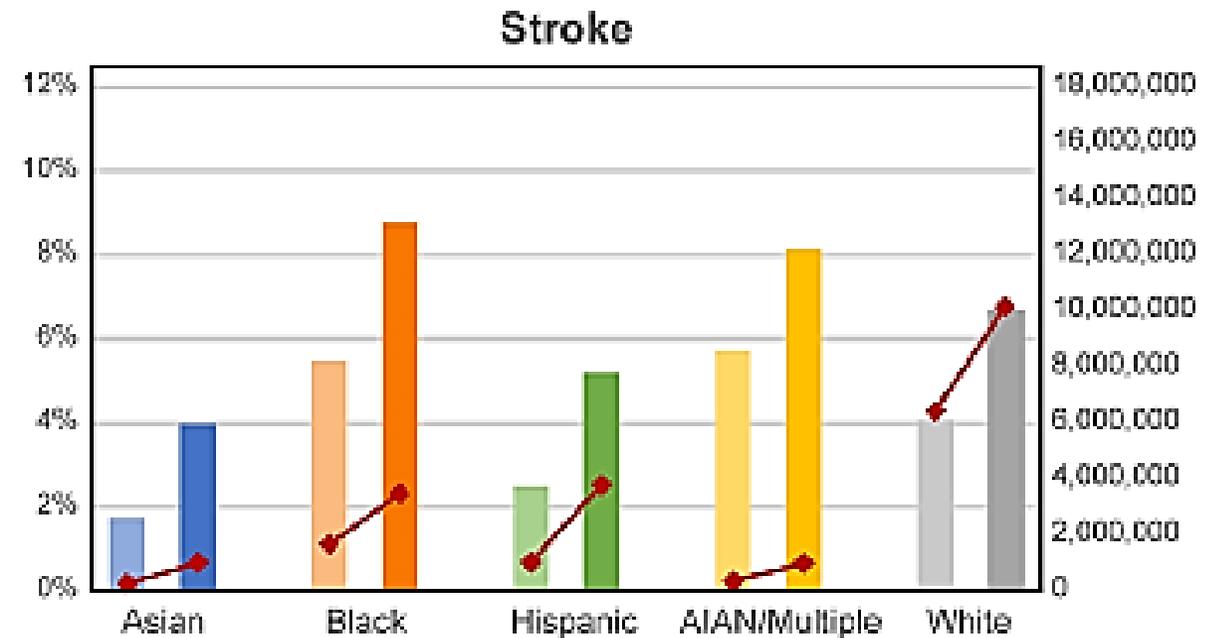
# Cardiovascular Conditions



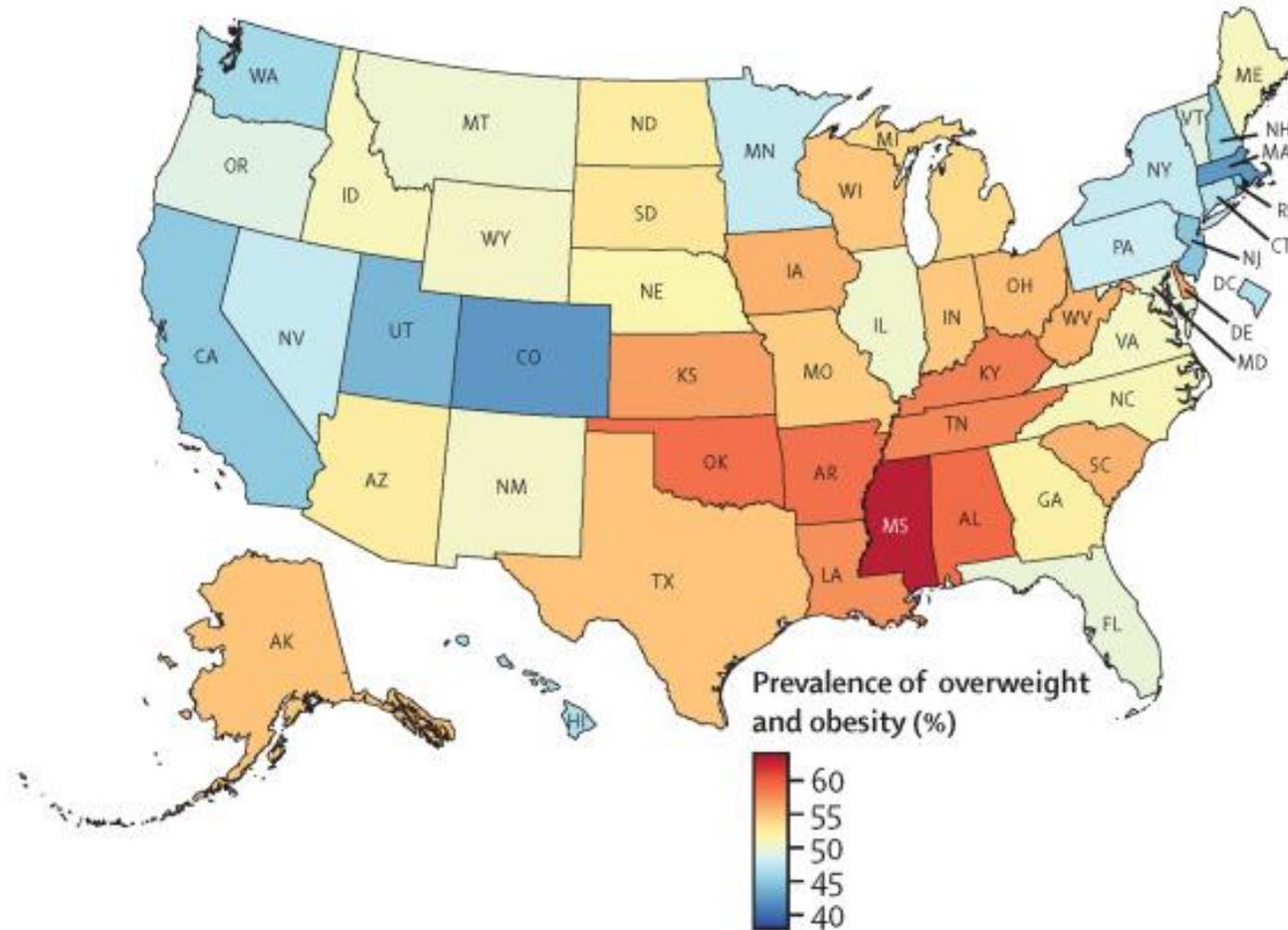
# Prevalence and Number of US adults with stroke



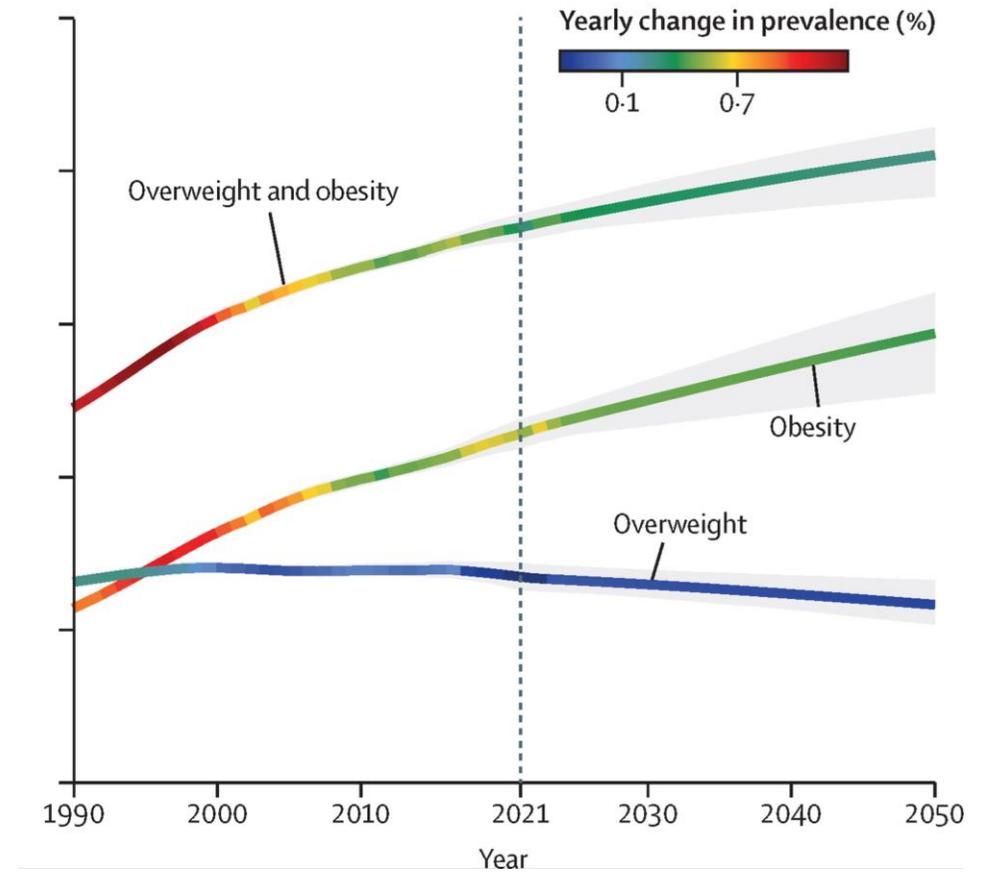
Bars = 2020 and 2050  
Prevalence (red)



**B Older adolescent females (aged 15–24 years)**



**F Females aged ≥25 years**



National-level and state-level prevalence of overweight and obesity among children, adolescents, and adults in the USA, 1990–2021, and forecasts up to 2050 Ng, Marie et al. The Lancet, Volume 404, Issue 10469, 2278 - 2298

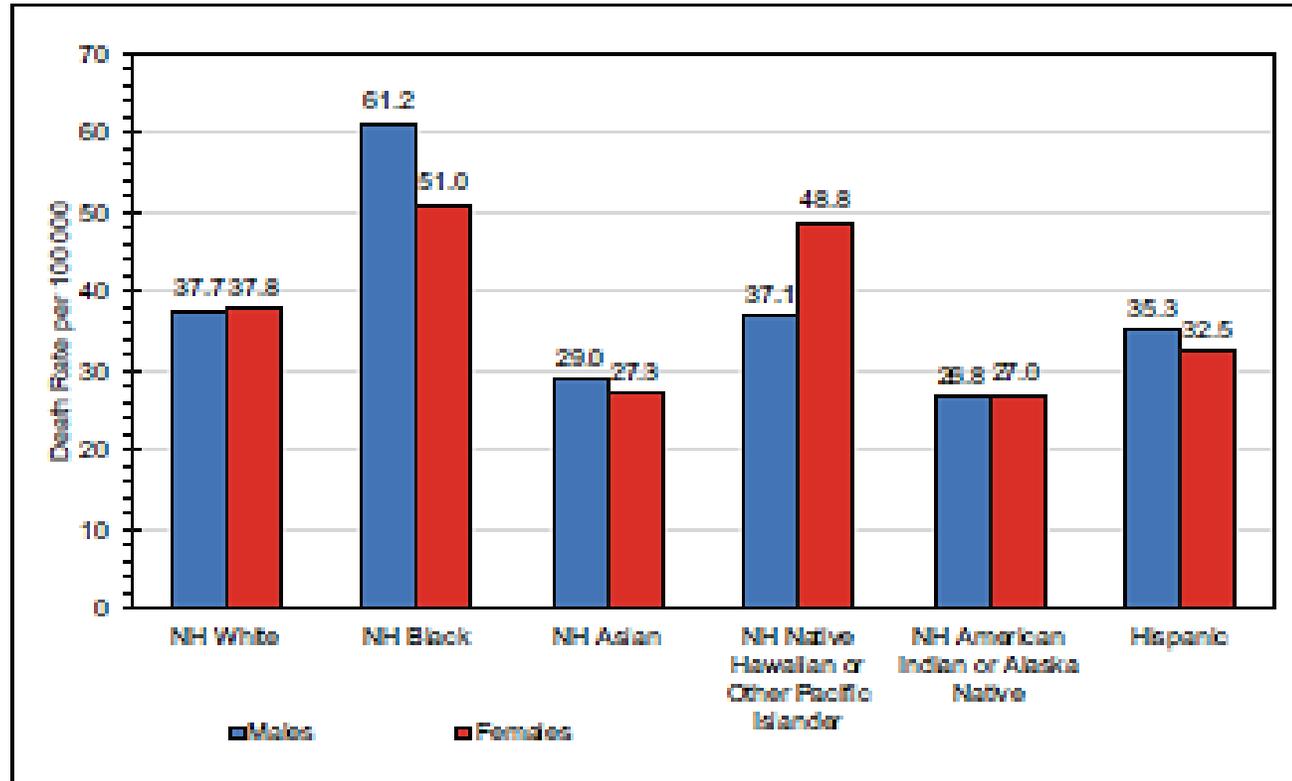
# Air pollution

The Lancet Neurology: Air pollution, high temperatures, and metabolic risk factors driving global increases in stroke, with latest figures estimating 12 million cases and over 7 million deaths from stroke each year

Published September 18, 2024



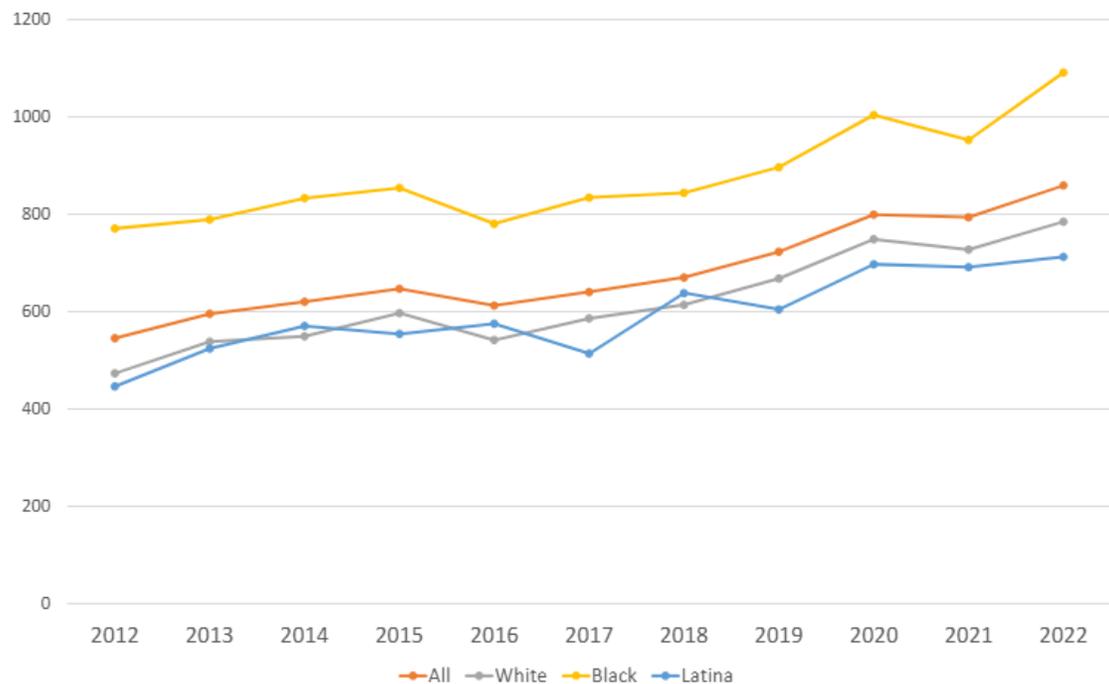
# Stroke is a disease of disparities



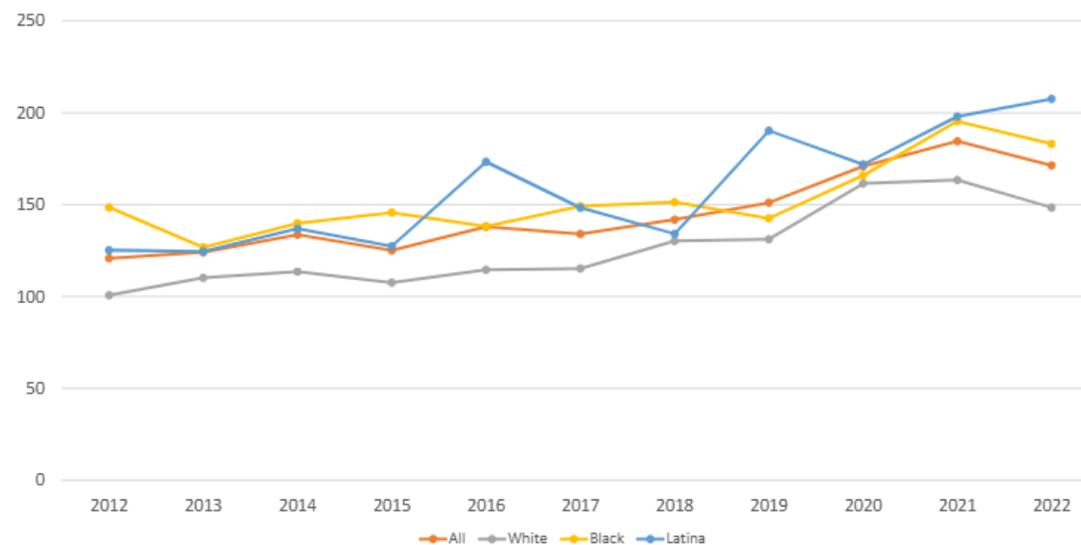
Of all the forms of inequality, injustice in health is the most shocking and inhuman.

~~Martin Luther King Jr  
AP, March 26, 1966

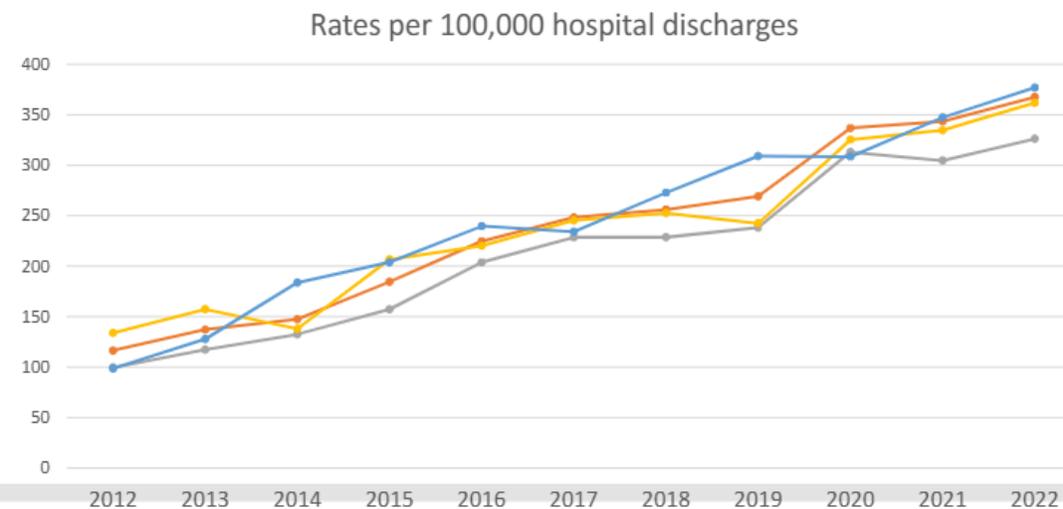
Ischemic Stroke Among Women of Reproductive Age, 2012-2022  
Rates per 100,000 hospital discharges



Subarachnoid Hemorrhage Among Women of Reproductive Age, 2012-2022  
Rates per 100,000 hospital discharges



Intracerebral Hemorrhage Among Women of Reproductive Age, 2012-2022  
Rates per 100,000 hospital discharges



**Table 1: Crude Odds Ratios of 2022 Rates vs 2012 Rates**

	Ischemic Stroke	SAH	ICH
<b>Overall</b>	1.59 (1.47-1.71)	1.47 (1.25-1.72)	3.23 (2.80-3.73)
<b>White</b>	1.66 (1.51-1.83)	1.47 (1.20-1.80)	2.30 (2.76-3.94)
<b>Black</b>	1.42 (1.27-1.59)	1.23 (0.95-1.61)	2.71 (2.15-3.42)
<b>Latina</b>	1.60 (1.36-1.88)	1.66 (1.23-2.24)	3.83 (2.85-5.13)

- Black women have the highest prevalence of high blood pressure. Only 25% of Black women have their blood pressure under control
- Almost 57% of Black women are obese, the highest percentage among all racial, ethnic, and sex groups
- Black women are more likely to have undiagnosed diabetes
- The prevalence of stroke for Black women is two times higher than that of white women
- The rate of maternal mortality for Black women is 3.5 times higher compared with non-Hispanic white women



**PREGNANT  
BLACK WOMEN  
ARE 57%  
MORE LIKELY  
TO HAVE A  
STROKE.**



# Equality

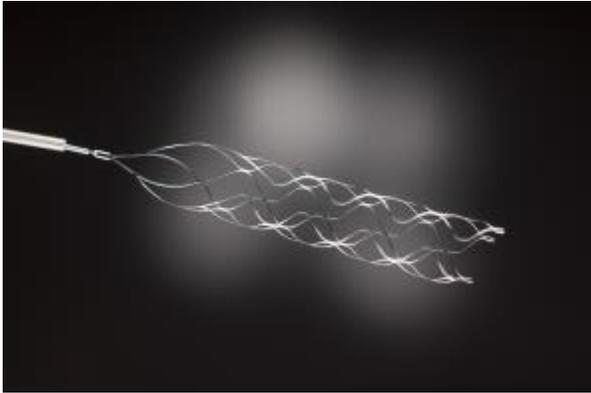
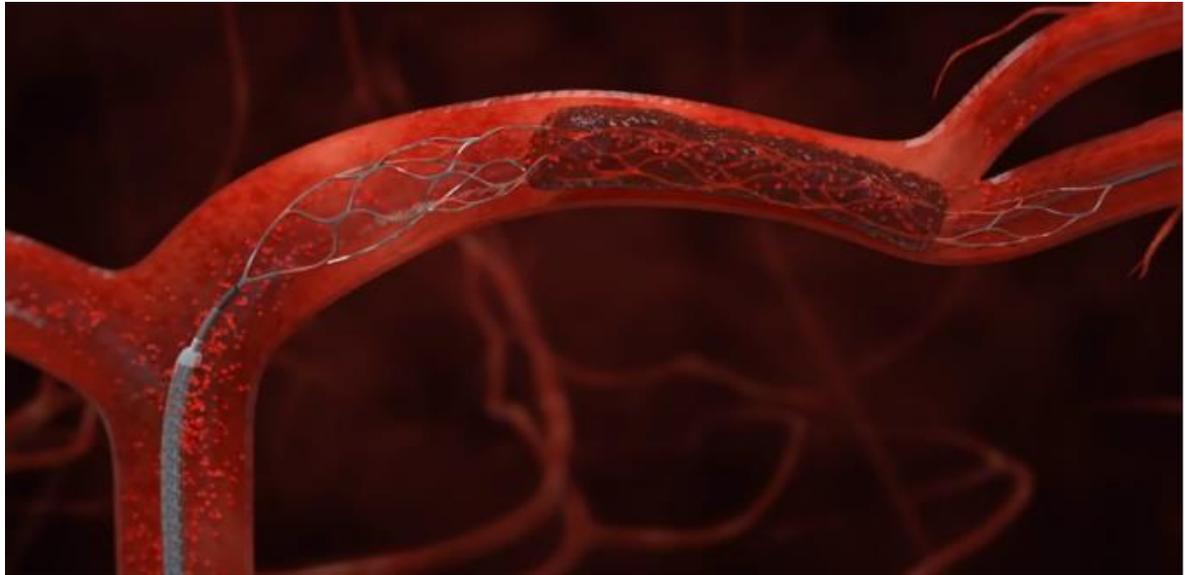


# Equity





# Stroke Treatments – Ischemic stroke (caused by a blockage)





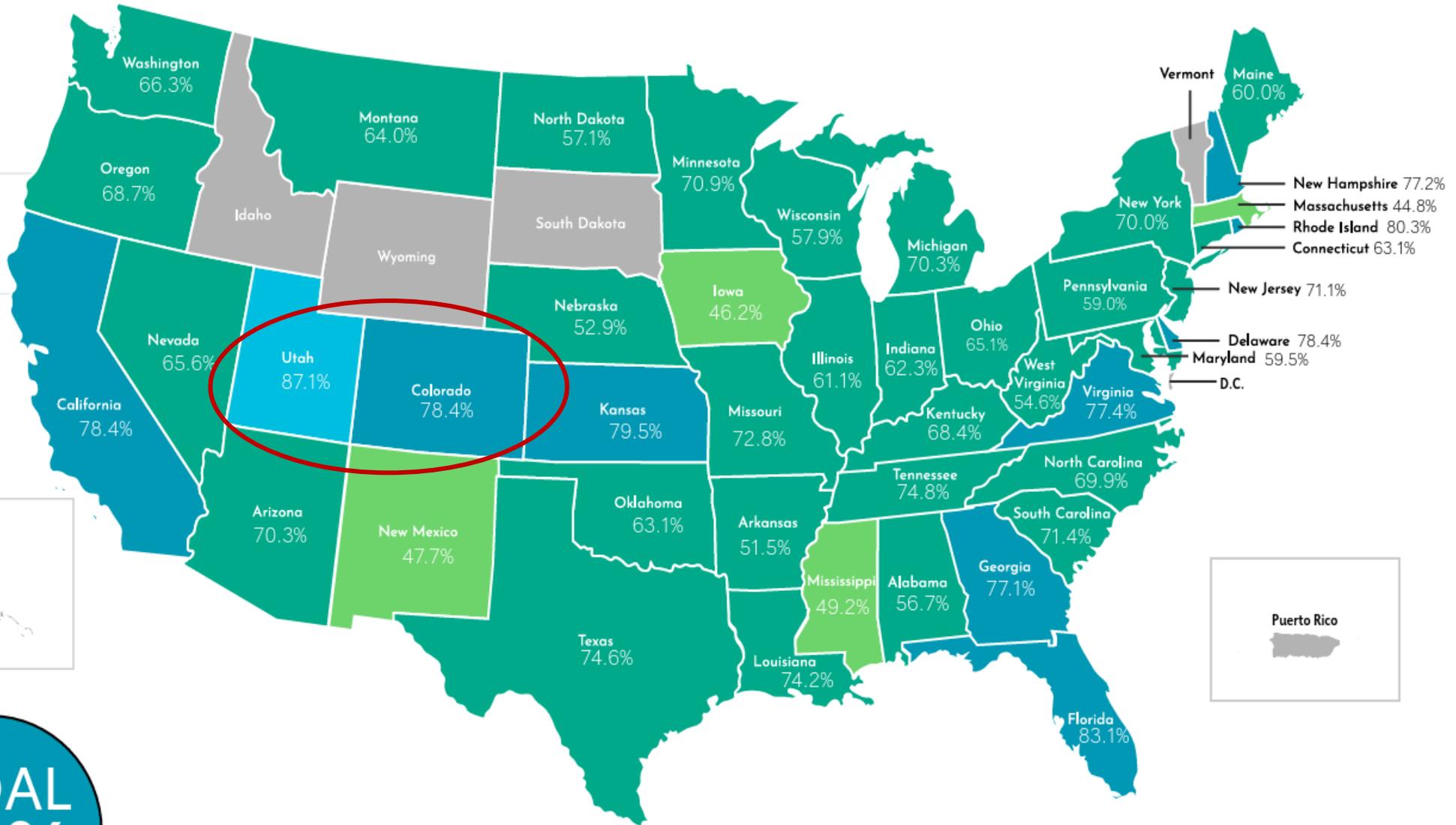
In a large vessel occlusion (ischemic stroke), every minute ~ 2 million brain cells die

# Target: Stroke<sup>SM</sup> Phase III: Door-to-Needle within 45 Minutes



American Heart Association.  
Get With The Guidelines.  
Stroke

TARGET:  
STROKE<sup>SM</sup>

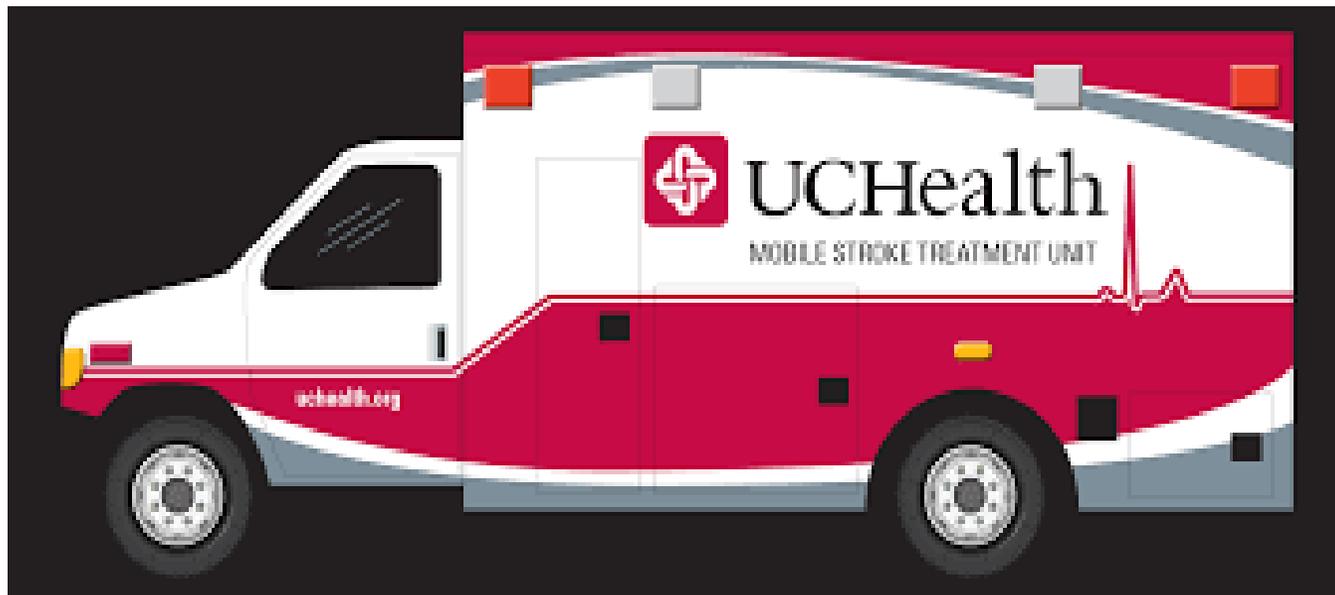


GOAL  
75%

Target: Stroke Phase III aims to achieve Door-to-Needle Times within 45 minutes in 75% or more of acute ischemic stroke patients treated with intravenous thrombolytics.

\*Eligible acute ischemic stroke patients treated between January 2023 - December 2023 per Get With The Guidelines<sup>®</sup>-Stroke

“Stroke is a disease of disparities....”



Strategies to Reduce Racial and Ethnic Inequities in Stroke Preparedness, Care, Recovery, and Risk Factor Control: A Scientific Statement From the American Heart Association. Towfighi et al. on behalf of the American Heart Association Stroke Council; Council on Cardiovascular and Stroke Nursing; Council on Cardiovascular Radiology and Intervention; Council on Clinical Cardiology; Council on Hypertension; Council on the Kidney in Cardiovascular Disease; and Council on Peripheral Vascular Disease. Stroke, Volume 54, Number 7, DOI:10.1161/STR.0000000000000437

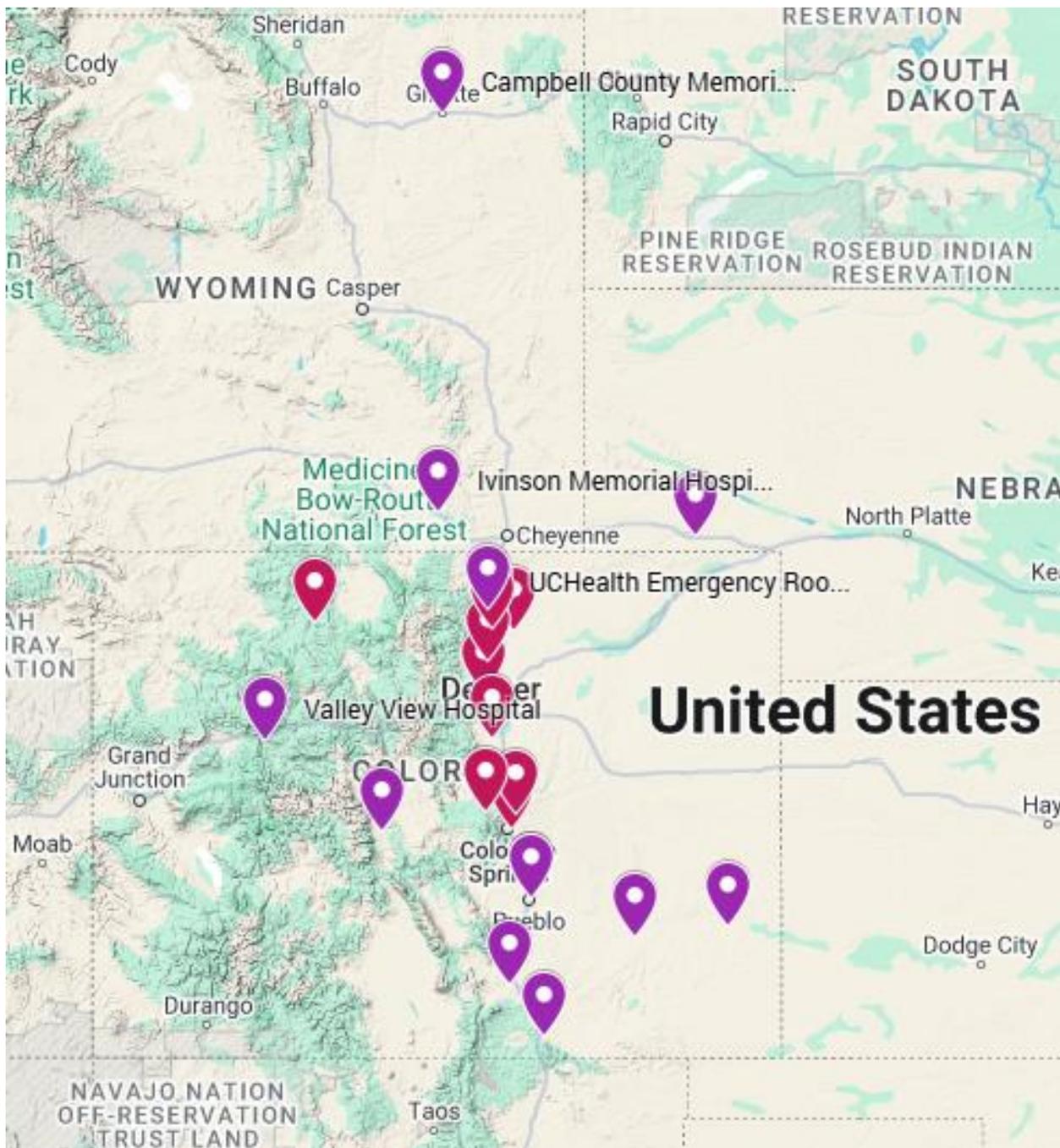


Image: <https://buyer-insight.com/telehealth/telehealth-products/teladoc-health-hardware-devices/>

# STOP A STROKE. B.E. FAST.

## KNOW THE SIGNS:

**BALANCE** : Sudden difficulty standing or walking.

**EYES** : Sudden loss of vision or double vision.

**FACE** : Uneven or drooping smile.

**ARM** : One arm is weak.

**SPEECH** : Slurred or jumbled speech.

**TIME TO CALL** : Call 911 if you suspect any symptoms.

## Did you know?

Stroke is the **4<sup>th</sup>** leading cause of death and the **leading** cause of disability in the United States.

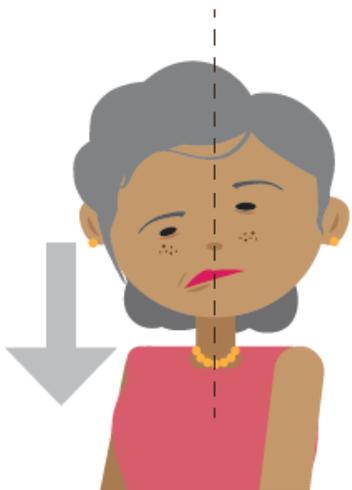
- Stroke is a medical emergency!
- Every **40** seconds, some has a stroke
- 1 person dies from a stroke every **3.2 minutes**.

## Can you recognize a stroke?

By knowing the signs and seeking help immediately you could save a life. Pay attention to any SUDDEN changes and call 9-1-1 immediately.

## How can you help?

Teach stroke signs in your community. Contact us at [stroke@uchealth.org](mailto:stroke@uchealth.org) if you have a group you would like us to speak with regarding stroke awareness.



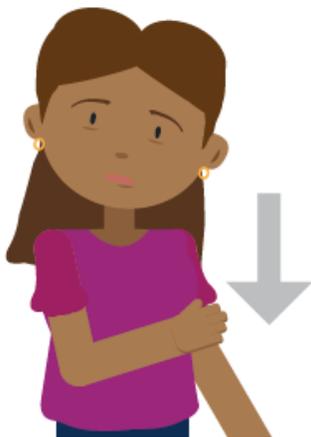
**R**

**Rostro caído**



**Á**

**Alteración del equilibrio**



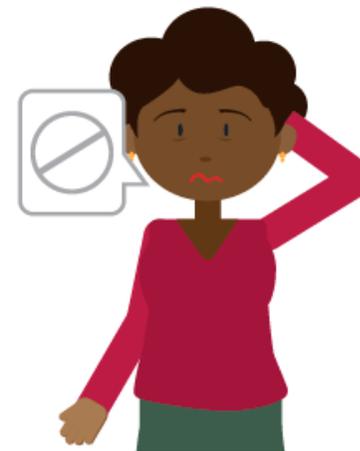
**P**

**Pérdida de fuerza en un brazo o una pierna**



**I**

**Impedimento visual repentino**



**D**

**Dificultad para hablar**



**O**

**Obten ayuda, llama al 911**

# What's new & emerging in stroke?

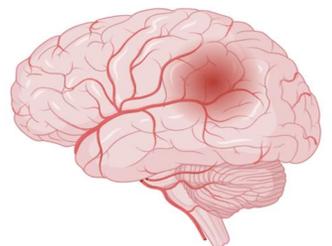
New focus on ICH : reporting into registry (BP control, outcomes)

Antiplatelet therapies for minor strokes (prevent another stroke)

Extended window for thrombolytics/ IV medication beyond 4.5 hours

2026 new standards/ management for pediatric stroke

*PUSH* for including more diverse populations in stroke research



# References

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2. Ruff, I.M., et al. 2024 AHA/ASA Performance and Quality Measures for Spontaneous Intracerebral Hemorrhage: A Report From the American Heart Association/ American Stroke Association. *Stroke*. 2024;55:300-e00. DOI: 10.1161/STR.0000000000000464
3. Schrag, M., Kirshner, H. Management of Intracerebral Hemorrhage. *JACC* 2020;75(15):1819-1831 doi.org/10.1016/j.jacc.2019.10.066
4. Murphy SL, Kochanek KD, Xu JQ, Arias E. Mortality in the United States, 2023. NCHS Data Brief, no 521. Hyattsville, MD: National Center for Health Statistics. 2024. DOI: <https://dx.doi.org/10.15620/cdc/170564>
5. AHA STATISTICS UPDATE 2026 Heart Disease and Stroke Statistics: A Report of US and Global Data From the American Heart Association, Palaniappan, LP, et al. *Circulation*. 2026;153:00–00. DOI: 10.1161/CIR.0000000000001412
6. Forecasting the Burden of Cardiovascular Disease and Stroke in the United States Through 2050—Prevalence of Risk Factors and Disease: A Presidential Advisory From the American Heart Association. Karen E. Joynt Maddox, MD, MPH, FAHA, Chair; Mitchell S.V. Elkind, MD, MS, FAHA; Hugo J. Aparicio, MD, MPH; Yvonne Commodore-Mensah, PhD, MHS, BSN, RN, FAHA; Sarah D. de Ferranti, MD, MPH, FAHA; William N. Dowd, BA; Adrian F. Hernandez, MD, MHS, FAHA; Olga Khavjou, MA; Erin D. Michos, MD, MHS, FAHA; Latha Palaniappan, MD, MS, FAHA; Joanne Penko, MS, MPH; Remy Poudel, MS, MPH, CPH; Véronique L. Roger, MD, MPH; Dhruv S. Kazi, MD, MSc, MS, FAHA, Vice Chair; on behalf of the American Heart Association *Circulation*. 2024;150:e65–e88. DOI: 10.1161/CIR.0000000000001256
7. Global, regional, and national burden of stroke and its risk factors, 1990–2021: a systematic analysis for the Global Burden of Disease Study 2021 GBD 2021 Stroke Risk Factor Collaborators *Lancet Neurol* 2024; 23: 973–1003
8. Towfighi et al. on behalf of the American Heart Association Stroke Council; Council on Cardiovascular and Stroke Nursing; Council on Cardiovascular Radiology and Intervention; Council on Clinical Cardiology; Council on Hypertension; Council on the Kidney in Cardiovascular Disease; and Council on Peripheral Vascular Disease. Strategies to Reduce Racial and Ethnic Inequities in Stroke Preparedness, Care, Recovery, and Risk Factor Control: A Scientific Statement From the American Heart Association. *Stroke*, Volume 54, Number 7, DOI:10.1161/STR.0000000000000437
9. Considerations in Addressing Social Determinants of Health to Reduce Racial/Ethnic Disparities in Stroke Outcomes in the United States. Skolarus, L.E., et al. 2020. *Stroke* 51:3433-3439. DOI: 10.1161/STROKEAHA.120.030426
10. Interventions Targeting Racial/Ethnic Disparities in Stroke Prevention and Treatment. Levine, D.A., et al. 2020. *Stroke* 51:3525-3432. DOI: 10.1161/STROKEAHA.120.030427
11. Evidence-Based Disparities in Stroke Care Metrics and Outcomes in the United States: A Systematic Review. Ikeme, S., et al. 2022. *Stroke* 53: 670-679. DOI: 10.1161/STROKEAHA.121.036263



Thank you, Questions?  
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