



Prevalence of Selected Chronic Conditions Among Adults Age 45 and Older, by Age and Urbanization Level: United States, 2024

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Key findings

Data from the National Health Interview Survey

- For adults age 45 and older and 45–64, heart disease prevalence was highest in nonmetropolitan areas compared with medium and small, large fringe, and large central metropolitan areas.
- Cancer prevalence was lowest in large central metropolitan areas compared with medium and small, large fringe, and nonmetropolitan areas for adults age 45 and older and 45–64.
- For all age groups, chronic obstructive pulmonary disease (COPD) prevalence was highest in nonmetropolitan areas compared with medium and small, large fringe, and large central metropolitan areas.
- Stroke prevalence was higher in nonmetropolitan areas compared with medium and small, large fringe, and large central metropolitan areas for adults 45 and older and 45–64.

Introduction

Heart disease, cancer, cerebrovascular diseases (stroke), and chronic lower respiratory diseases, including chronic obstructive pulmonary disease (COPD), are consistently among the 10 leading causes of death for U.S. adults (1). Studies have suggested that variations exist in the prevalence of these conditions by age and urbanization level, prompting further exploration into these differences (2,3). This report uses 2024 National Health Interview Survey (NHIS) data

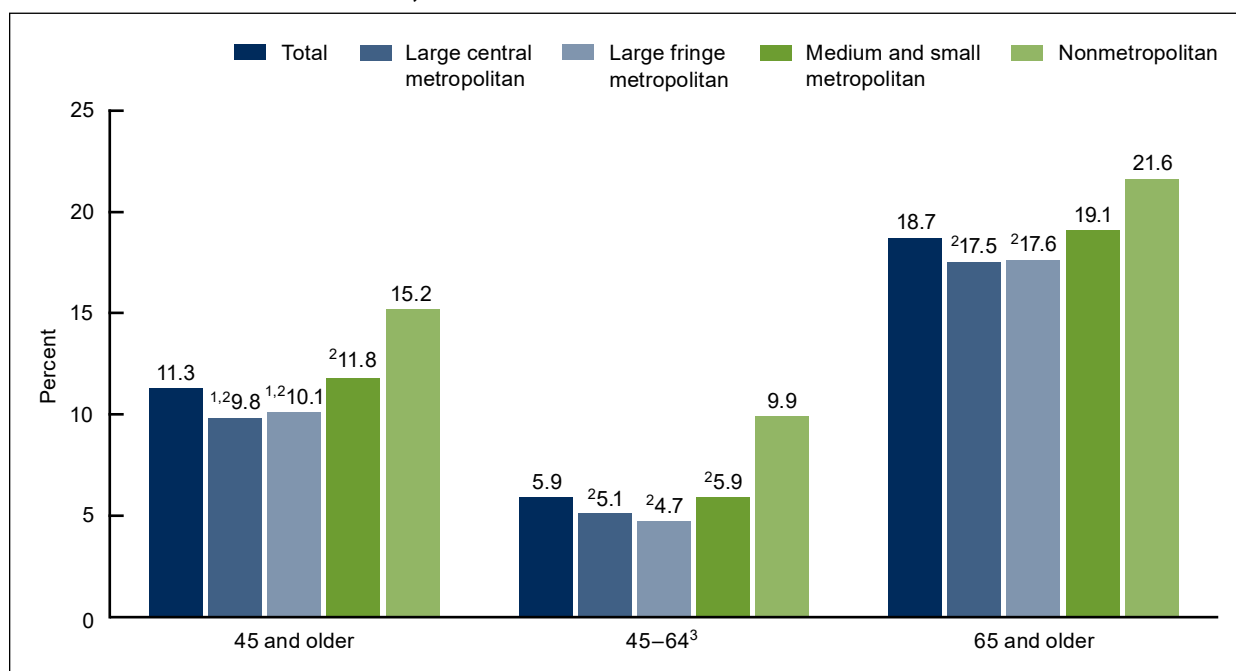


to describe the prevalence of heart disease, cancer, COPD, and stroke among adults age 45 and older by age and urbanization level.

Heart disease

- In 2024, 11.3% of adults age 45 and older had ever had heart disease (Figure 1, Table 1).
- Among adults age 45 and older, heart disease prevalence was similar between those living in large central metropolitan (9.8%) and large fringe metropolitan (10.1%) areas, increased to 11.8% in medium and small metropolitan areas, and was highest in nonmetropolitan areas (15.2%).
- Among adults ages 45–64, heart disease prevalence was highest in nonmetropolitan areas (9.9%) compared with those in large central metropolitan (5.1%), large fringe metropolitan (4.7%), and medium and small metropolitan (5.9%) areas.
- Among adults age 65 and older, heart disease prevalence was higher among those in nonmetropolitan areas (21.6%) compared with large central metropolitan (17.5%) and large fringe metropolitan (17.6%) areas. Observed differences between medium and small metropolitan (19.1%) and the other areas were not significant.

Figure 1. Percentage of adults age 45 and older who ever had heart disease, by age group and urbanization level: United States, 2024



¹Significantly different from adults living in medium and small metropolitan areas ($p < 0.05$).

²Significantly different from adults living in nonmetropolitan areas ($p < 0.05$).

³Significantly different from adults age 65 and older ($p < 0.05$).

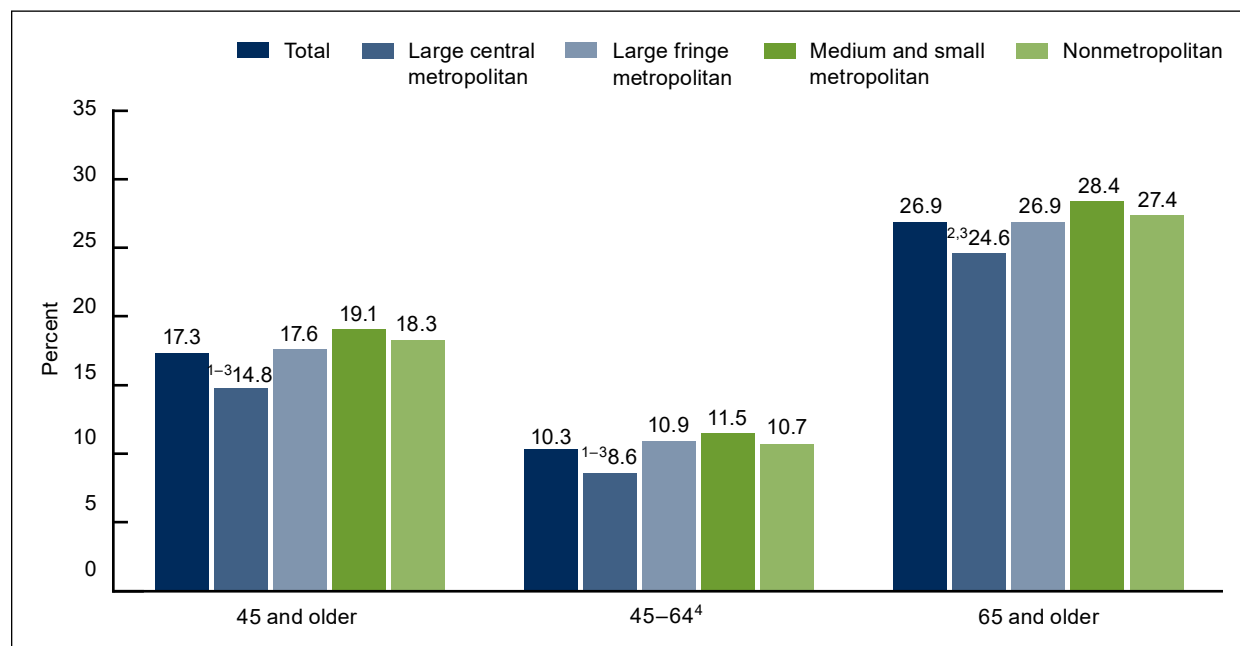
NOTE: Estimates are based on household interviews of a sample of the U.S. civilian noninstitutionalized population.

SOURCE: National Center for Health Statistics, National Health Interview Survey, 2024.

Cancer

- In 2024, 17.3% of adults age 45 and older were ever diagnosed with cancer (Figure 2, Table 2).
- Among adults age 45 and older, cancer prevalence was lowest in large central metropolitan areas (14.8%) compared with those living in large fringe metropolitan (17.6%), medium and small metropolitan (19.1%), and nonmetropolitan (18.3%) areas.
- Similarly, among adults ages 45–64, cancer prevalence was lowest among those in large central metropolitan areas (8.6%) compared with those living in large fringe metropolitan (10.9%), medium and small metropolitan (11.5%), and nonmetropolitan (10.7%) areas.
- Cancer prevalence among adults age 65 and older living in large central metropolitan areas (24.6%) was lower than among those in medium and small metropolitan (28.4%) and nonmetropolitan (27.4%) areas.

Figure 2. Percentage of adults age 45 and older who ever had cancer, by age group and urbanization level: United States, 2024



¹Significantly different from adults living in large fringe metropolitan areas ($p < 0.05$).

²Significantly different from adults living in medium and small metropolitan areas ($p < 0.05$).

³Significantly different from adults living in nonmetropolitan areas ($p < 0.05$).

⁴Significantly different from adults age 65 and older ($p < 0.05$).

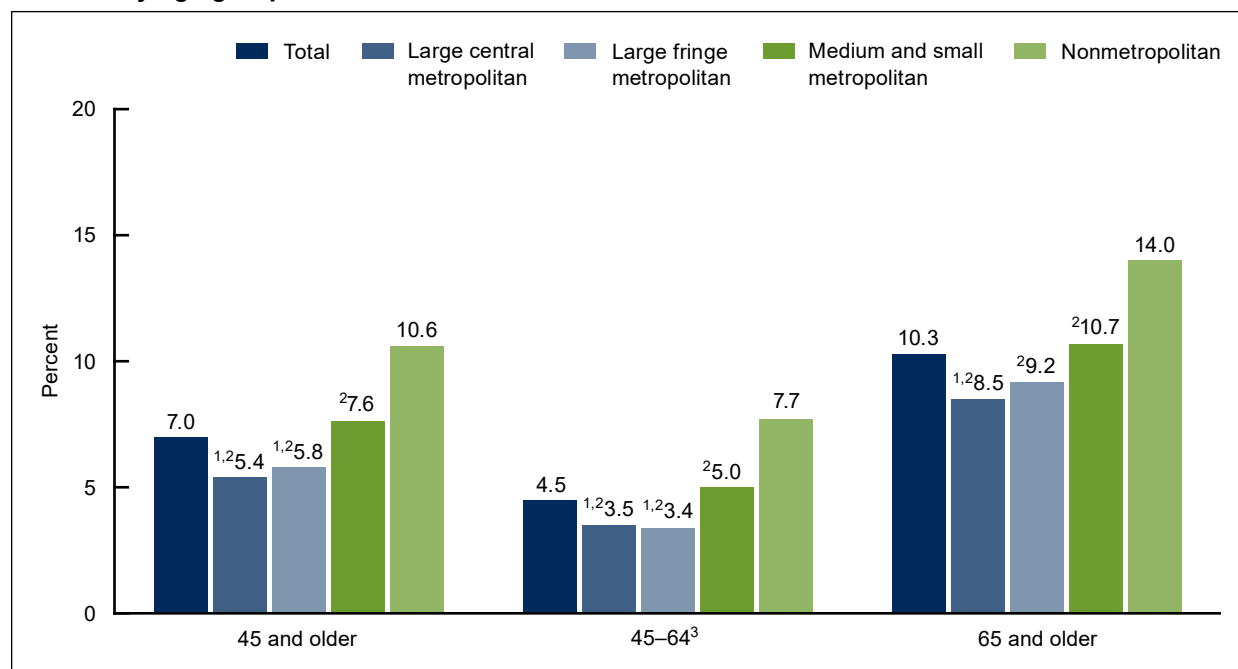
NOTE: Estimates are based on household interviews of a sample of the U.S. civilian noninstitutionalized population.

SOURCE: National Center for Health Statistics, National Health Interview Survey, 2024.

COPD

- In 2024, 7.0% of adults age 45 and older had ever had COPD (Figure 3, Table 3).
- Among adults age 45 and older, COPD prevalence was highest among those living in nonmetropolitan areas (10.6%) compared with the other areas. COPD prevalence was also higher among those living in medium and small metropolitan areas (7.6%) compared with those in large central metropolitan (5.4%) and large fringe metropolitan (5.8%) areas. Patterns were similar among adults ages 45–64.
- Among adults age 65 and older, COPD prevalence was highest among those living in nonmetropolitan areas (14.0%) compared with those in large central metropolitan (8.5%), large fringe metropolitan (9.2%), and medium and small metropolitan (10.7%) areas. Prevalence was also higher among those in medium and small metropolitan areas compared with large central metropolitan areas.

Figure 3. Percentage of adults age 45 and older who ever had chronic obstructive pulmonary disease, by age group and urbanization level: United States, 2024



¹Significantly different from adults living in medium and small metropolitan areas ($p < 0.05$).

²Significantly different from adults living in nonmetropolitan areas ($p < 0.05$).

³Significantly different from adults age 65 and older ($p < 0.05$).

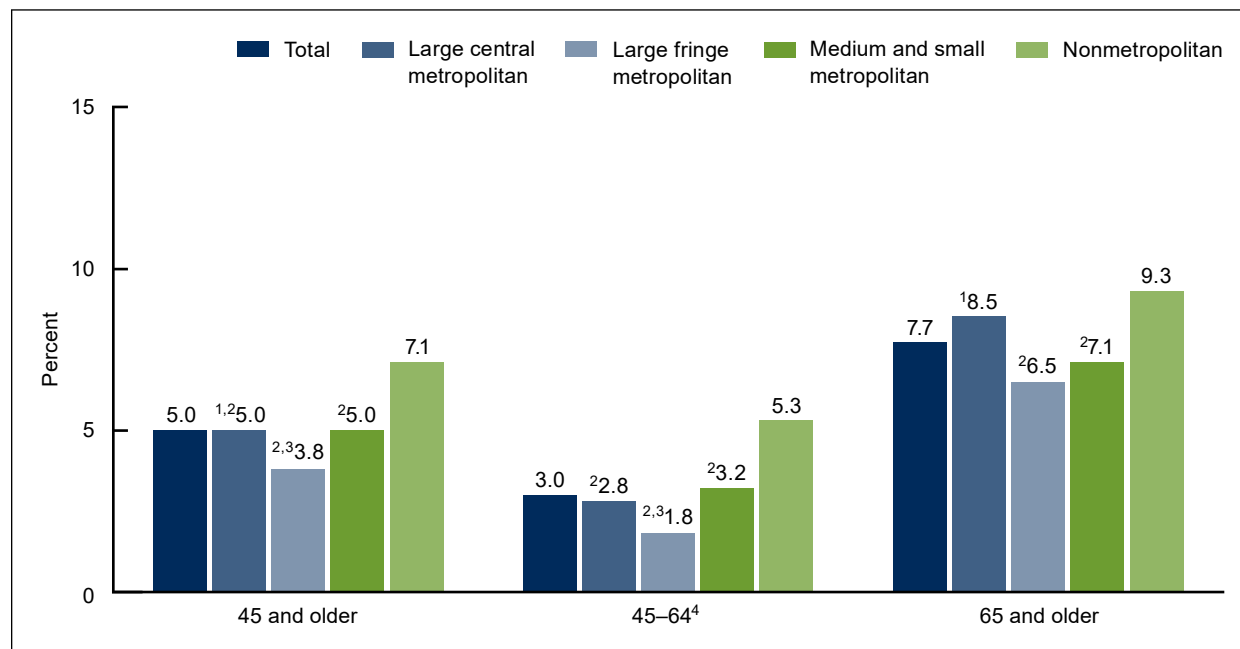
NOTE: Estimates are based on household interviews of a sample of the U.S. civilian noninstitutionalized population.

SOURCE: National Center for Health Statistics, National Health Interview Survey, 2024.

Stroke

- In 2024, 5.0% of adults age 45 and older had ever had a stroke (Figure 4, Table 4).
- Among adults age 45 and older, stroke prevalence was higher in nonmetropolitan areas (7.1%) compared with the other areas and was lowest in large fringe metropolitan areas (3.8%).
- Among adults ages 45–64, stroke prevalence was highest in nonmetropolitan areas (5.3%) compared with large central metropolitan (2.8%), large fringe metropolitan (1.8%), and medium and small metropolitan (3.2%) areas. Stroke prevalence was lower in large fringe metropolitan areas compared with medium and small metropolitan areas.
- Among adults age 65 and older, stroke prevalence was higher in nonmetropolitan areas (9.3%) compared with large fringe metropolitan (6.5%) and medium and small metropolitan (7.1%) areas. Stroke prevalence in large central metropolitan areas was higher compared with large fringe metropolitan areas.

Figure 4. Percentage of adults age 45 and older who ever had a stroke, by age group and urbanization level: United States, 2024



¹Significantly different from adults living in large fringe metropolitan areas ($p < 0.05$).

²Significantly different from adults living in nonmetropolitan areas ($p < 0.05$).

³Significantly different from adults living in medium and small metropolitan areas ($p < 0.05$).

⁴Significantly different from adults age 65 and older ($p < 0.05$).

NOTE: Estimates are based on household interviews of a sample of the U.S. civilian noninstitutionalized population.

SOURCE: National Center for Health Statistics, National Health Interview Survey, 2024.

Summary

In 2024, 11.3% of U.S. adults age 45 and older had ever had heart disease, 17.3% had cancer, 7.0% had COPD, and 5.0% had a stroke. Overall, adults age 45 and older living in nonmetropolitan areas were more likely to have heart disease, COPD, and stroke compared with those in all other urbanization levels. Adults living in large central metropolitan areas were generally the least likely to have had cancer compared with those in all other urbanization levels, and the prevalence was similar for adults living in nonmetropolitan, medium and small metropolitan, and large fringe metropolitan areas.

Definitions

Cancer: Based on a “yes” response to the survey question, “Have you ever been told by a doctor or other health professional that you had cancer or a malignancy of any kind?”

Chronic obstructive pulmonary disease (COPD): Based on a “yes” response to the survey question, “Have you ever been told by a doctor or other health professional that you had chronic obstructive pulmonary disease, COPD, emphysema, or chronic bronchitis?”

Heart disease: Based on a “yes” response to one or more of the following survey questions, “Have you ever been told by a doctor or other health professional that you had coronary heart disease?”, “Have you ever been told by a doctor or other health professional that you had angina, also called angina pectoris?”, and “Have you ever been told by a doctor or other health professional that you had a heart attack, also called myocardial infarction?”

Stroke: Based on a “yes” response to the survey question, “Have you ever been told by a doctor or other health professional that you had a stroke?”

Urbanization level: Metropolitan status and size were determined using the 2023 National Center for Health Statistics Urban–Rural Classification Scheme for counties (4). Large metropolitan areas are metropolitan statistical areas of 1 million people or more and are categorized into central and fringe counties. Medium metropolitan areas are counties in metropolitan statistical areas of 250,000–999,999 people, and small metropolitan areas are counties in areas of less than 250,000 people. Nonmetropolitan areas are counties in micropolitan statistical areas and noncore counties.

Data source and methods

Data from the 2024 NHIS were used for this analysis. NHIS is a nationally representative household survey of the U.S. civilian noninstitutionalized population. It is conducted continuously throughout the year by the National Center for Health Statistics (NCHS). Interviews are typically initiated face-to-face in respondents’ homes, with follow-ups conducted by telephone as needed. For more information on the survey, visit the NHIS website: <https://www.cdc.gov/nchs/nhis/index.htm>.

Point estimates and their corresponding variances were calculated using SAS-callable SUDAAN software (5) to account for the complex sample design of NHIS. Differences between percentages were evaluated using two-sided significance tests at the 0.05 level. All estimates in this report meet NCHS standards of reliability (6).

About the authors

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Figure tables

Data table for Figure 1. Percentage of adults age 45 and older who ever had heart disease, by age group and urbanization level: United States, 2024

Age group and urbanization level	Percent (95% confidence interval)	Standard error
45 and older		
Total	11.3 (10.8–11.9)	0.27
Large central metropolitan	^{1,2} 9.8 (8.9–10.9)	0.51
Large fringe metropolitan	^{1,2} 10.1 (9.1–11.1)	0.51
Medium and small metropolitan	² 11.8 (10.8–12.9)	0.53
Nonmetropolitan	15.2 (13.9–16.6)	0.69
45–64 ³		
Total	5.9 (5.4–6.5)	0.29
Large central metropolitan	² 5.1 (4.1–6.1)	0.49
Large fringe metropolitan	² 4.7 (3.7–6.0)	0.58
Medium and small metropolitan	² 5.9 (4.8–7.1)	0.57
Nonmetropolitan	9.9 (8.3–11.6)	0.83
65 and older		
Total	18.7 (17.8–19.7)	0.47
Large central metropolitan	² 17.5 (15.7–19.4)	0.92
Large fringe metropolitan	² 17.6 (15.9–19.4)	0.90
Medium and small metropolitan	19.1 (17.3–20.9)	0.91
Nonmetropolitan	21.6 (19.6–23.7)	1.03
¹ Significantly different from adults living in medium and small metropolitan areas ($p < 0.05$). ² Significantly different from adults living in nonmetropolitan areas ($p < 0.05$). ³ Significantly different from adults age 65 and older ($p < 0.05$). NOTE: Estimates are based on household interviews of a sample of the U.S. civilian noninstitutionalized population. SOURCE: National Center for Health Statistics, National Health Interview Survey, 2024.		

Data table for Figure 2. Percentage of adults age 45 and older who ever had cancer, by age group and urbanization level: United States, 2024

Age group and urbanization level	Percent (95% confidence interval)	Standard error
45 and older		
Total	17.3 (16.7–18.0)	0.32
Large central metropolitan	¹⁻³ 14.8 (13.6–16.0)	0.59
Large fringe metropolitan	17.6 (16.5–18.7)	0.55
Medium and small metropolitan	19.1 (17.8–20.4)	0.65
Nonmetropolitan	18.3 (17.1–19.6)	0.62
45–64 ⁴		
Total	10.3 (9.6–11.0)	0.35
Large central metropolitan	¹⁻³ 8.6 (7.4–10.0)	0.65
Large fringe metropolitan	10.9 (9.5–12.3)	0.70
Medium and small metropolitan	11.5 (10.2–12.9)	0.69
Nonmetropolitan	10.7 (9.3–12.3)	0.75
65 and older		
Total	26.9 (25.9–27.9)	0.51
Large central metropolitan	^{2,3} 24.6 (22.7–26.6)	0.98
Large fringe metropolitan	26.9 (24.9–29.0)	1.02
Medium and small metropolitan	28.4 (26.5–30.4)	1.00
Nonmetropolitan	27.4 (25.6–29.3)	0.95

¹Significantly different from adults living in large fringe metropolitan areas ($p < 0.05$).

²Significantly different from adults living in medium and small metropolitan areas ($p < 0.05$).

³Significantly different from adults living in nonmetropolitan areas ($p < 0.05$).

⁴Significantly different from adults age 65 and older ($p < 0.05$).

NOTE: Estimates are based on household interviews of a sample of the U.S. civilian noninstitutionalized population.

SOURCE: National Center for Health Statistics, National Health Interview Survey, 2024.

Data table for Figure 3. Percentage of adults age 45 and older who ever had chronic obstructive pulmonary disease, by age group and urbanization level: United States, 2024

Age group and urbanization level	Percent (95% confidence interval)	Standard error
45 and older		
Total	7.0 (6.5–7.4)	0.22
Large central metropolitan	^{1,2} 5.4 (4.7–6.2)	0.39
Large fringe metropolitan	^{1,2} 5.8 (5.0–6.6)	0.40
Medium and small metropolitan	² 7.6 (6.8–8.4)	0.41
Nonmetropolitan	10.6 (9.4–11.8)	0.59
45–64 ³		
Total	4.5 (4.1–5.0)	0.24
Large central metropolitan	^{1,2} 3.5 (2.7–4.3)	0.40
Large fringe metropolitan	^{1,2} 3.4 (2.6–4.4)	0.44
Medium and small metropolitan	² 5.0 (4.1–6.0)	0.48
Nonmetropolitan	7.7 (6.5–9.1)	0.66
65 and older		
Total	10.3 (9.6–11.0)	0.35
Large central metropolitan	^{1,2} 8.5 (7.2–9.9)	0.67
Large fringe metropolitan	² 9.2 (7.8–10.7)	0.71
Medium and small metropolitan	² 10.7 (9.5–12.0)	0.63
Nonmetropolitan	14.0 (12.2–15.9)	0.91
¹ Significantly different from adults living in medium and small metropolitan areas ($p < 0.05$). ² Significantly different from adults living in nonmetropolitan areas ($p < 0.05$). ³ Significantly different from adults age 65 and older ($p < 0.05$). NOTE: Estimates are based on household interviews of a sample of the U.S. civilian noninstitutionalized population. SOURCE: National Center for Health Statistics, National Health Interview Survey, 2024.		

Data table for Figure 4. Percentage of adults age 45 and older who ever had a stroke, by age group and urbanization level: United States, 2024

Age group and urbanization level	Percent (95% confidence interval)	Standard error
45 and older		
Total	5.0 (4.6–5.4)	0.19
Large central metropolitan	^{1,2} 5.0 (4.3–5.8)	0.37
Large fringe metropolitan	^{2,3} 3.8 (3.2–4.5)	0.32
Medium and small metropolitan	² 5.0 (4.3–5.7)	0.36
Nonmetropolitan	7.1 (6.1–8.2)	0.52
45–64 ⁴		
Total	3.0 (2.7–3.5)	0.21
Large central metropolitan	² 2.8 (2.1–3.6)	0.37
Large fringe metropolitan	^{2,3} 1.8 (1.3–2.6)	0.32
Medium and small metropolitan	^{2,3} 2.2 (2.4–4.1)	0.41
Nonmetropolitan	5.3 (4.1–6.9)	0.69
65 and older		
Total	7.7 (7.1–8.3)	0.32
Large central metropolitan	¹ 8.5 (7.2–9.9)	0.69
Large fringe metropolitan	^{2,6} 5.5 (5.3–7.8)	0.62
Medium and small metropolitan	^{2,7} 7.1 (6.0–8.4)	0.59
Nonmetropolitan	9.3 (8.0–10.6)	0.64

¹Significantly different from adults living in large fringe metropolitan areas ($p < 0.05$).
²Significantly different from adults living in nonmetropolitan areas ($p < 0.05$).
³Significantly different from adults living in medium and small metropolitan areas ($p < 0.05$).
⁴Significantly different from adults age 65 and older ($p < 0.05$).
NOTE: Estimates are based on household interviews of a sample of the U.S. civilian noninstitutionalized population.
SOURCE: National Center for Health Statistics, National Health Interview Survey, 2024.

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