

Stroke-Related Hospital and Emergency Department Discharges, Connecticut

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Stroke-Related Hospital and Emergency Department Discharges, Connecticut

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Stroke-Related Hospital and Emergency Department Discharges, Connecticut

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Abstract

The report — *Stroke-Related Hospital and Emergency Department Discharges, Connecticut* — provides statistics on stroke-related Emergency Department (ED) and inpatient hospital discharges among Connecticut residents for the years 2016 to 2022. The report presents the number of stroke-related ED and inpatient discharges along with crude and age-adjusted hospitalization rates per 100,000 population and the associated 95% confidence levels. The data source is the Connecticut Hospital Discharge Dataset. Among Connecticut residents from 2016 to 2022, there were approximately 1,700 stroke-related ED discharges annually. The age-adjusted stroke-related ED visit rate decreased from 2016 to 2022. The stroke-related ED visit rate does not vary significantly by gender. Connecticut residents who are non-Hispanic Black tend to have a higher age-adjusted stroke-related ED visit rate compared with other residents. Among all Connecticut residents, there were approximately 9,300 stroke-related inpatient discharges annually. The age-adjusted stroke-related inpatient discharge rate has remained constant from 2016 to 2022. On average, about 4,600 stroke-related inpatient discharges are among Connecticut men annually and 4,700 are among Connecticut women annually. However, the age-adjusted stroke-related inpatient hospital discharge rate among Connecticut men is higher than the rate among women. The age-adjusted stroke-related inpatient hospital discharge rate varies by race and ethnicity. Connecticut residents who are Black have the highest rate compared with all other residents. These statistics may be used by the Connecticut Department of Public Health (DPH) and its partners to implement and inform evidence-based policies and programs related to stroke prevention and care.

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About this report

The report — *Stroke-Related Hospital and Emergency Department Discharges, Connecticut* — provides statistics on stroke-related Emergency Department (ED) and inpatient hospital discharges among Connecticut residents for the years 2016 to 2022. The report presents the number of stroke-related ED and inpatient discharges along with crude and age-adjusted hospitalization rates per 100,000 population and the associated 95% confidence levels. These statistics are presented for the overall population of Connecticut and by gender and race and ethnicity. The statistical information presented in this report will be used by the Connecticut Department of Public Health (DPH) and its partners to implement and inform evidence-based policies and programs related to stroke prevention and care. DPH makes this report available to the public to provide the latest data on health trends in the state.

This report is organized into two parts. The first part contains brief summaries of age-adjusted ED and inpatient hospitalization rates for Connecticut residents overall and by gender and race and ethnicity. These summaries are accompanied by graphs. The second part of the report contains information on the methodologies used and detailed data tables.

Notes to the reader

The data source is the Connecticut Hospital Discharge Dataset. DPH receives the dataset annually from Connecticut Hospital Association (CHA). CHA submits Connecticut Hospital Information Management Exchange (CHIME) data on behalf of its member hospitals to DPH. The dataset includes patient demographics, up to 15 diagnosis codes, and up to 10 procedure codes.

The Connecticut Hospital Discharge Dataset has limitations. One limitation is the data are collected for administrative purposes such as billing and not with public health goals in mind. Another limitation is the dataset contains the number of hospital discharges and not unduplicated patients. A third limitation is the data are cross-sectional. This means the data are collected from individuals at a single point in time. Therefore, the data cannot be used to establish causation because the individuals were not followed over time.

Throughout this report, all racial groupings (for example, Black or African American, White) exclude persons of Hispanic ethnicity. A Hispanic or Latino/a ethnicity category is included reflecting data separate from race categories. Therefore, the modifier “Non-Hispanic or Latino/a” is assumed. Asian, Pacific Islander, American Indian or Alaskan Native, other race, and multiracial adults are reported as “Non-Hispanic Other Race” due to small numbers.

In this report, the term “statistical significance” is used to describe statistics with p-values less than 0.05 or those that have confidence levels that do not overlap. A lack of statistical significance does not mean the health events themselves are not significant; it simply reflects a high degree of statistical uncertainty about an estimate.

The counts and rates presented in this report vary from those published on the DPH’s Heart Disease and Stroke Surveillance System webpage (www.ct.gov/dph/heartstrokedata). This is

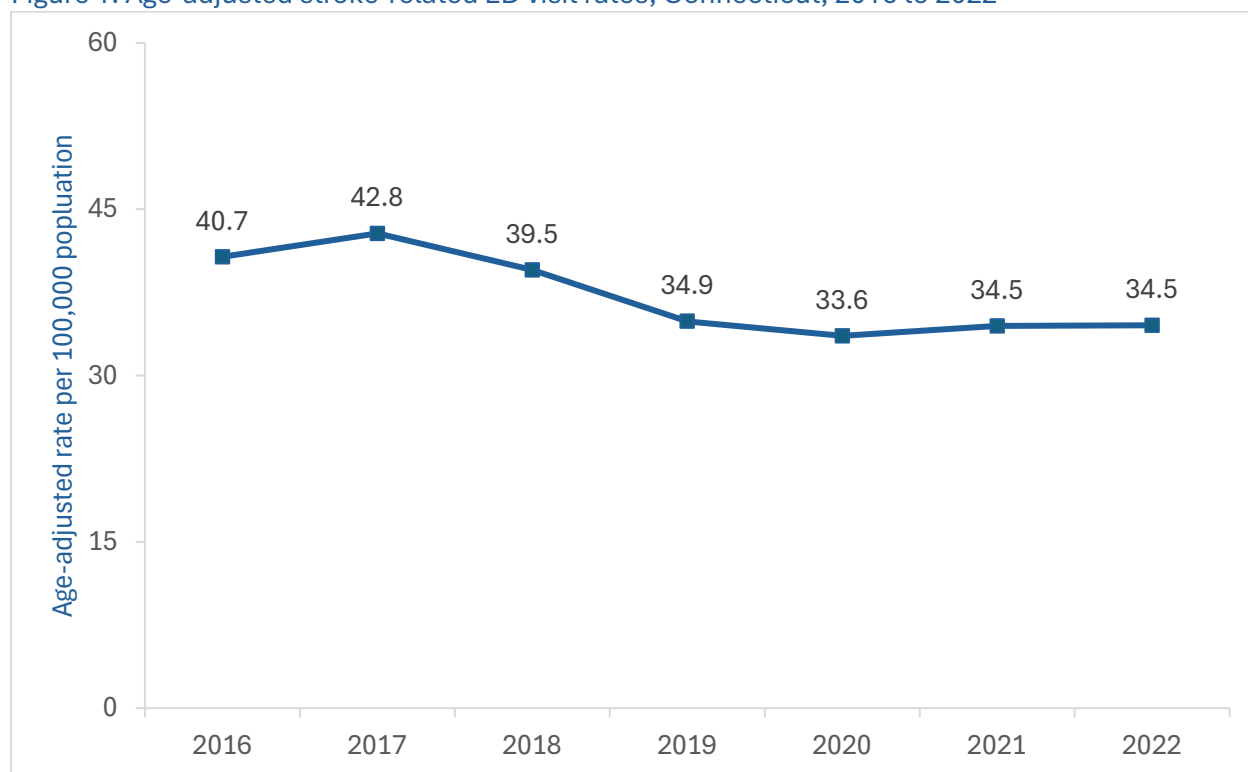
because stroke registry definitions are used in this report whereas national surveillance definitions are used for statistics posted on the Heart Disease and Stroke Surveillance System webpage. The stroke registry definition (i.e., the definition used in this report) includes discharges with ICD-10-CM codes I63, G45.0, G45.1, G45.2, G45.8, G45.9, I60, I61, I62.9 as any of the 15 diagnosis codes in the discharge record. The national surveillance definition includes ICD-10-CM codes I60-I69 as the principle (i.e., first-listed) diagnosis.

Stroke-related ED visits per 100,000 population, 2016 to 2022

Connecticut residents

The age-adjusted stroke-related ED visit rate in Connecticut has decreased over time. The rates in 2019 through 2022 are lower than those of 2016 through 2018.

Figure 1. Age-adjusted stroke-related ED visit rates, Connecticut, 2016 to 2022

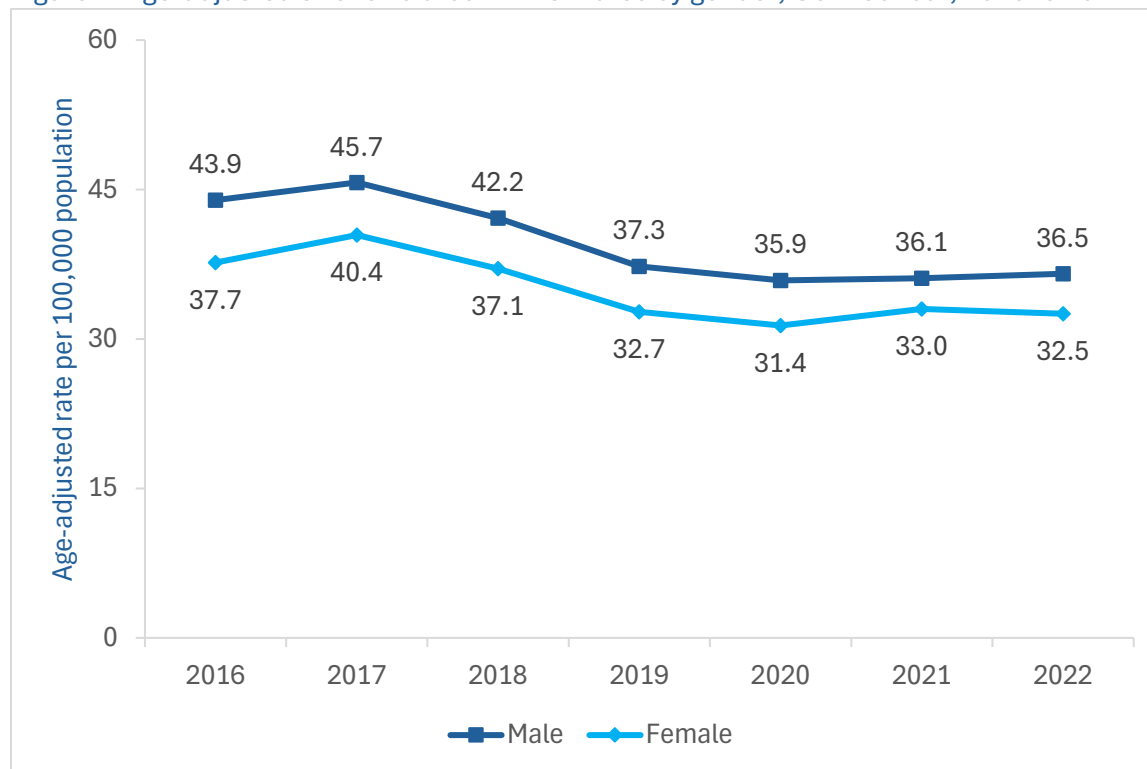


Data source: Connecticut Hospital Discharge Dataset

Gender

The age-adjusted stroke-related ED visit rate among Connecticut men is higher than the rate among women; however, the difference does not reach statistical significance. Among Connecticut men, the age-adjusted stroke-related ED visit rates are lower in 2020, 2021, and 2022 compared with the rates from 2016 through 2018. Among Connecticut women, the age-adjusted stroke-related ED visit rates are lower in 2019 through 2022 compared with the rates from 2016 through 2018.

Figure 2. Age-adjusted stroke-related ED visit rates by gender, Connecticut, 2016 to 2022

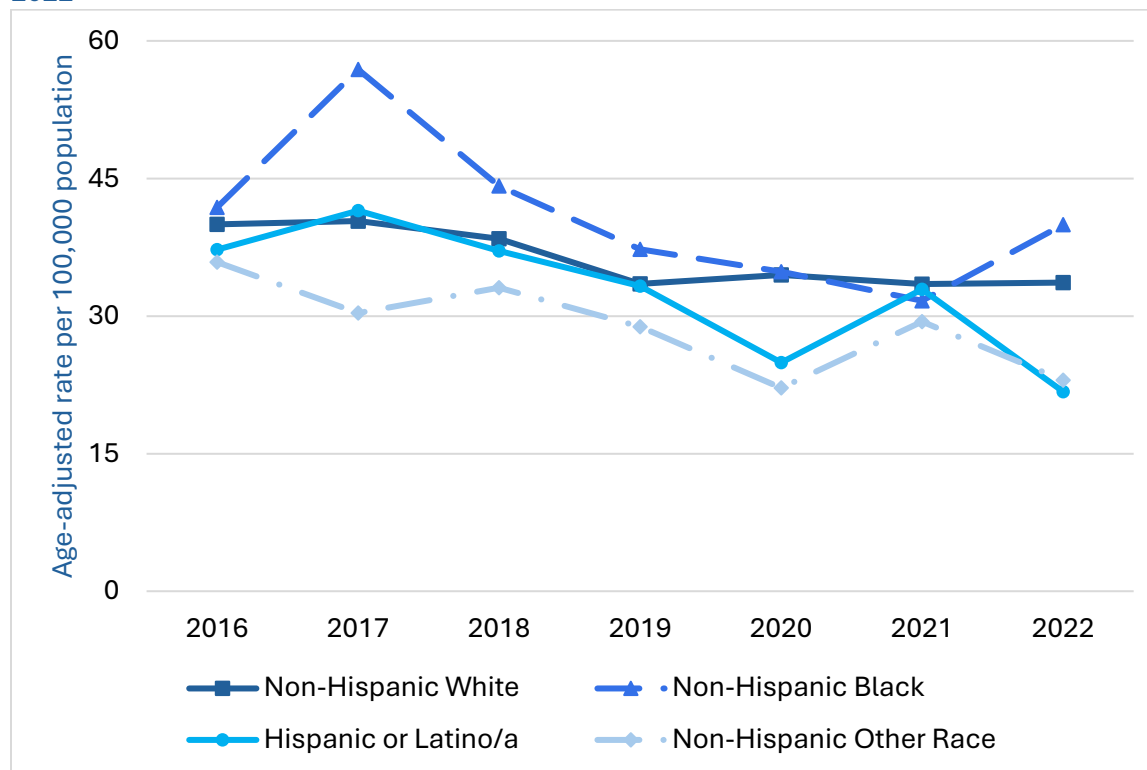


Data source: Connecticut Hospital Discharge Dataset

Race and ethnicity

The age-adjusted stroke-related ED visit rate varies by race and ethnicity. Connecticut residents who are Black have the highest rate compared with residents who are Hispanic or who have a race in the “other” category. Residents who are White have a higher rate compared with residents who have a race in the “other” category. In general, the age-adjusted stroke-related ED visit rates among residents who are White, Black, or Hispanic are higher in the years 2016 through 2019 compared with the rates in the years 2020 to 2022.

Figure 3. Age-adjusted stroke-related ED visit rates by race and ethnicity, Connecticut, 2016 to 2022



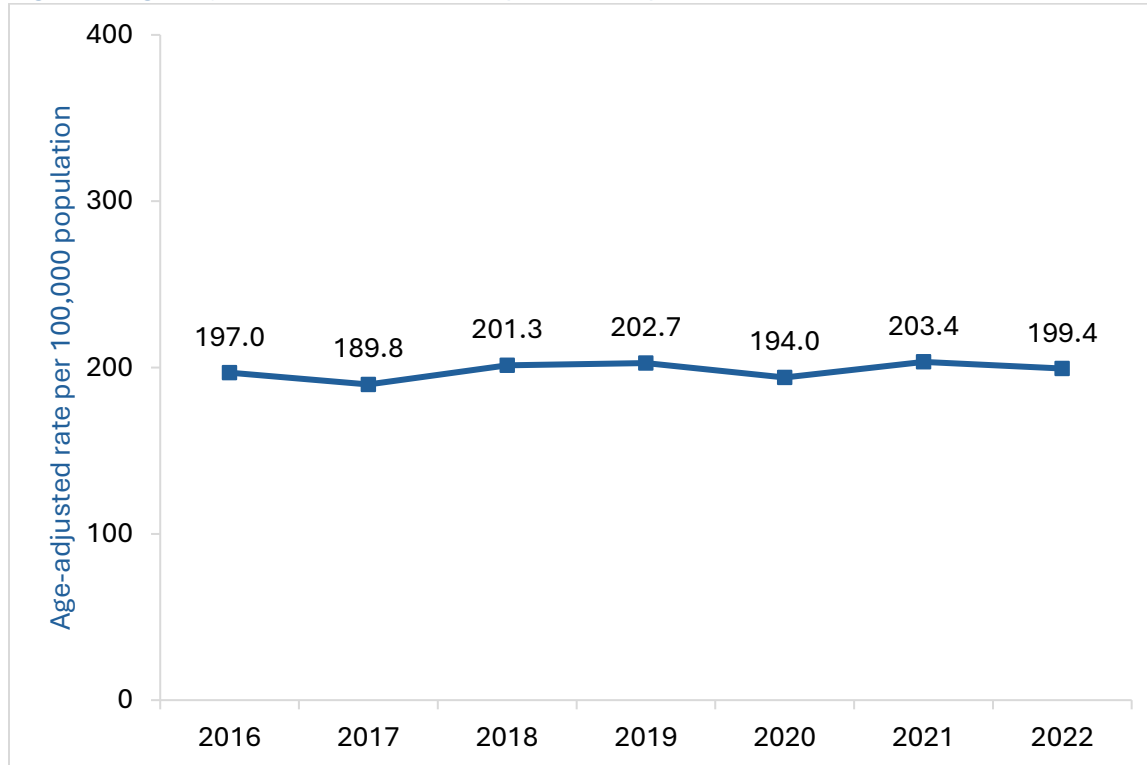
Data source: Connecticut Hospital Discharge Dataset

Stroke-related inpatient hospitalizations per 100,000 population, 2016 to 2022

Connecticut residents

The age-adjusted stroke-related inpatient hospitalization rate in Connecticut have changed little over time. The annual inpatient hospitalization rate is, on average, 198.2 inpatient hospitalization per 100,000 population.

Figure 4. Age-adjusted stroke-related inpatient hospitalization rates, Connecticut, 2016 to 2022

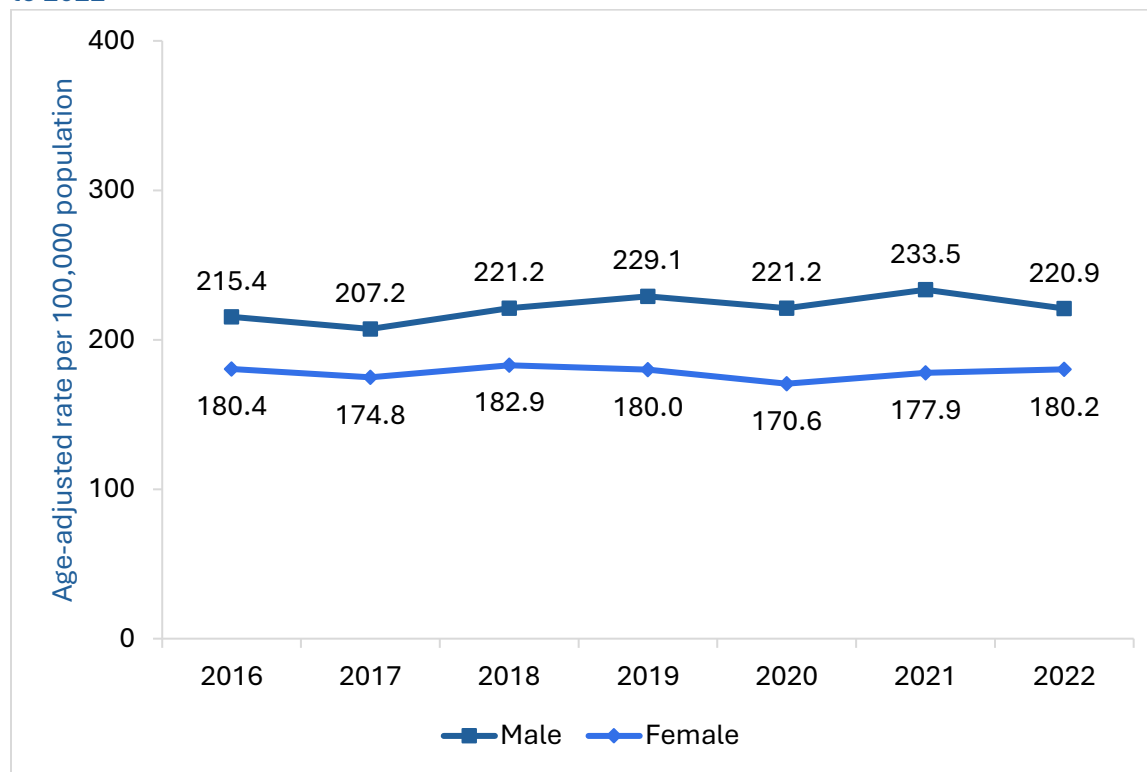


Data source: Connecticut Hospital Discharge Dataset

Gender

On average, about 4,600 stroke-related inpatient discharges are among Connecticut men annually and 4,700 are among Connecticut women annually. The age-adjusted stroke-related inpatient hospitalization rate among Connecticut men is higher than the rate among women. Among Connecticut men, the age-adjusted stroke-related inpatient hospitalization rate began increasing in 2019. Among Connecticut women, the age-adjusted stroke-related inpatient hospitalization rate remained constant over time.

Figure 5. Age-adjusted stroke-related inpatient hospitalization rates by gender, Connecticut, 2016 to 2022

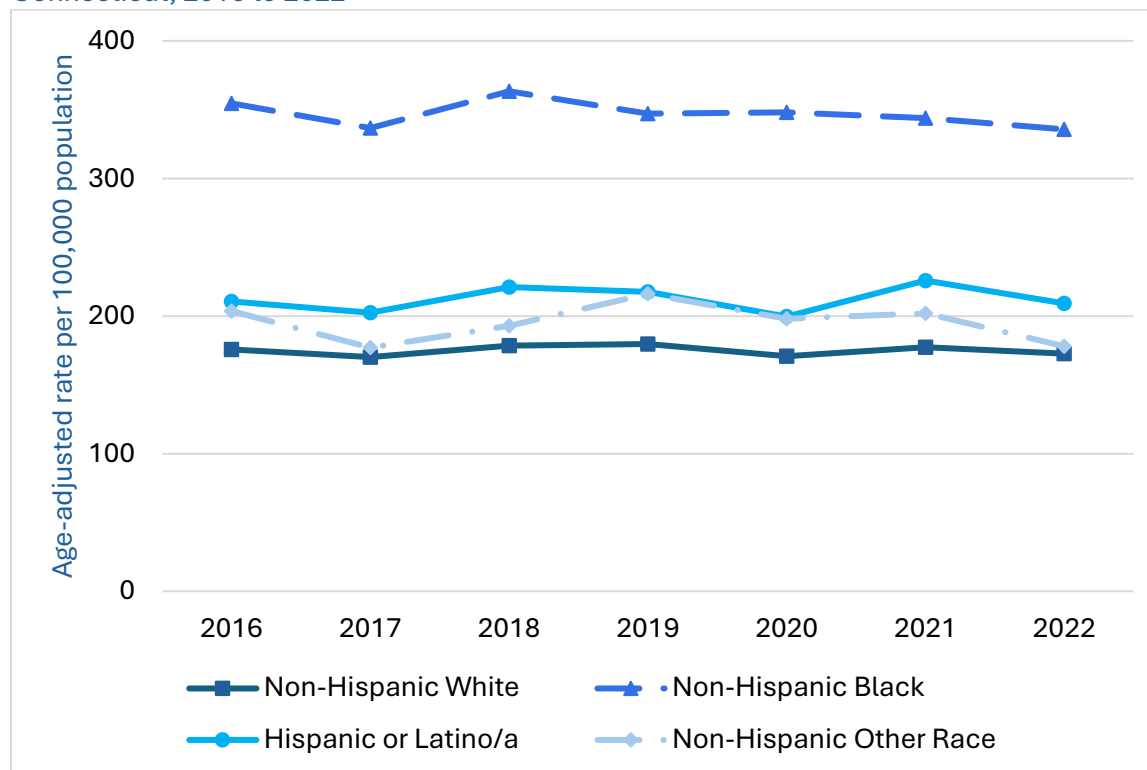


Data source: Connecticut Hospital Discharge Dataset

Race and ethnicity

The age-adjusted stroke-related inpatient hospitalization rate varies by race and ethnicity. Connecticut residents who are Black have the highest rate compared with all other residents. Residents who are White have the lowest rate compared with all other residents. Residents grouped in the “other” race category have a higher rate compared with residents who are Hispanic. The age-adjusted stroke-related inpatient hospitalization rates have remained constant over time for all racial and ethnic groups.

Figure 6. Age-adjusted stroke-related inpatient hospitalization rates by race and ethnicity, Connecticut, 2016 to 2022



Data source: Connecticut Hospital Discharge Dataset

Data Tables

Table 1. Stroke-related Emergency Department (ED) discharges, Connecticut residents, 2016

2016								
Demographic		Count	Crude Rate	LCL	UCL	AAHR	LCL	UCL
Connecticut	All	1,790	50.1	36.2	48.0	40.7	38.8	42.6
Age (in years)	0-4	*	*	*	*			
	5-9	*	*	*	*			
	10-14	*	*	*	*			
	15-19	*	*	*	*			
	20-24	14	5.7	1.0	10.3			
	25-29	19	8.6	2.9	14.4			
	30-34	12	5.4	0.9	10.0			
	35-39	37	17.4	9.2	25.5			
	40-44	64	30.5	19.7	41.3			
	45-49	95	38.1	26.0	50.2			
	50-54	127	46.3	32.9	59.6			
	55-59	163	59.7	44.5	74.8			
	60-64	166	71.7	55.1	88.3			
	65-69	162	86.0	67.8	104.2			
	70-74	170	125.3	103.4	147.3			
	75-79	201	215.1	186.4	243.9			
	80-84	172	245.5	214.8	276.2			
	85+	365	405.9	366.4	445.4			
Gender	Male	865	49.6	35.8	24.0	43.9	41.0	46.9
	Female	925	50.5	36.6	24.7	37.7	35.2	40.1
Race and Ethnicity	Non-Hispanic White	1,434	59.2	44.2	31.1	40.0	37.9	42.1
	Non-Hispanic Black	140	38.9	26.7	16.6	41.9	34.9	48.8
	Hispanic or Latino/a	140	24.9	15.1	7.5	37.2	31.1	43.4
	Non-Hispanic Other Race	58	24.8	15.0	7.4	35.9	26.7	45.1

Data source: Connecticut Hospital Discharge Dataset

Abbreviations: LCL = 95% lower confidence level; UCL = 95% upper confidence level; AAHR = age-adjusted hospitalization rate per 100,000

Note: The crude rate is the unadjusted hospitalization rate per 100,000 population

*Suppressed because the $1 \leq \text{count} < 11$

Stroke-Related Hospital and Emergency Department Discharges, Connecticut

Table 2. Stroke-related Emergency Department (ED) discharges, Connecticut residents, 2017

2017								
Demographic		Count	Crude Rate	LCL	UCL	AAHR	LCL	UCL
Connecticut	All	1,965	54.8	40.3	52.7	42.8	40.9	44.7
Age (in years)	0-4	*	*	*	*			
	5-9	*	*	*	*			
	10-14	*	*	*	*			
	15-19	*	*	*	*			
	20-24	*	*	*	*			
	25-29	19	8.5	2.8	14.3			
	30-34	35	15.8	8.0	23.6			
	35-39	26	12.1	5.3	18.9			
	40-44	43	20.8	11.8	29.7			
	45-49	77	31.6	20.6	42.6			
	50-54	136	50.7	36.7	64.6			
	55-59	181	66.5	50.5	82.5			
	60-64	177	74.3	57.4	91.2			
	65-69	190	100.9	81.2	120.6			
	70-74	232	154.7	130.3	179.0			
	75-79	216	215.8	187.0	244.6			
	80-84	193	270.3	238.1	302.5			
	85+	406	438.2	397.2	479.2			
Gender	Male	190	100.9	81.2	120.6	45.7	42.8	48.7
	Female	232	154.7	130.3	179.0	40.4	38.0	42.9
Race and Ethnicity	Non-Hispanic White	216	215.8	187.0	244.6	40.4	38.3	42.4
	Non-Hispanic Black	193	270.3	238.1	302.5	56.9	49.1	64.7
	Hispanic or Latino/a	406	438.2	397.2	479.2	41.5	35.3	47.7
	Non-Hispanic Other Race	54	22.5	13.2	20.3	30.3	22.2	38.4

Data source: Connecticut Hospital Discharge Dataset

Abbreviations: LCL = 95% lower confidence level; UCL = 95% upper confidence level; AAHR = age-adjusted hospitalization rate per 100,000

Note: The crude rate is the unadjusted hospitalization rate per 100,000 population

*Suppressed because the $1 \leq \text{count} < 11$

Stroke-Related Hospital and Emergency Department Discharges, Connecticut

Table 3. Stroke-related Emergency Department (ED) discharges, Connecticut residents, 2018

2018								
Demographic		Count	Crude Rate	LCL	UCL	AAHR	LCL	UCL
Connecticut	All	1,798	50.3	36.4	48.3	39.5	37.7	41.4
Age (in years)	0-4	*	*	*	*			
	5-9	*	*	*	*			
	10-14	*	*	*	*			
	15-19	*	*	*	*			
	20-24	11	†	†	†			
	25-29	23	10.3	4.0	16.6			
	30-34	15	6.7	1.7	11.8			
	35-39	37	17.0	8.9	25.1			
	40-44	50	24.3	14.7	34.0			
	45-49	90	38.3	26.2	50.4			
	50-54	123	47.3	33.8	60.8			
	55-59	160	59.4	44.3	74.5			
	60-64	165	68.1	51.9	84.3			
	65-69	192	100.9	81.2	120.6			
	70-74	180	117.5	96.2	138.7			
	75-79	200	186.2	159.5	213.0			
	80-84	208	287.7	254.5	321.0			
	85+	326	354.9	317.9	391.8			
Gender	Male	857	49.2	35.4	47.1	42.2	39.3	45.0
	Female	941	51.4	37.4	49.4	37.1	34.7	39.4
Race and Ethnicity	Non-Hispanic White	1,405	59.1	44.0	57.1	38.4	36.4	40.4
	Non-Hispanic Black	155	42.5	29.7	40.4	44.2	37.2	51.2
	Hispanic or Latino/a	155	26.3	16.2	24.1	37.1	31.3	43.0
	Non-Hispanic Other Race	59	24.4	14.7	22.3	33.1	24.7	41.5

Data source: Connecticut Hospital Discharge Dataset

Abbreviations: LCL = 95% lower confidence level; UCL = 95% upper confidence level; AAHR = age-adjusted hospitalization rate per 100,000

Note: The crude rate is the unadjusted hospitalization rate per 100,000 population

*Suppressed because the $1 \leq \text{count} < 11$

†Suppressed because relative standard error is greater than 30% indicating that the rate is statistically unreliable.

Stroke-Related Hospital and Emergency Department Discharges, Connecticut

Table 4. Stroke-related Emergency Department (ED) discharges, Connecticut residents, 2019

2019								
Demographic		Count	Crude Rate	LCL	UCL	AAHR	LCL	UCL
Connecticut	All	1,614	45.3	32.1	43.2	34.9	33.2	36.6
Age (in years)	0-4	*	*	*	*			
	5-9	*	*	*	*			
	10-14	*	*	*	*			
	15-19	*	*	*	*			
	20-24	*	*	*	*			
	25-29	16	7.1	1.9	12.3			
	30-34	19	8.5	2.8	14.3			
	35-39	42	19.1	10.5	27.7			
	40-44	46	22.2	13.0	31.4			
	45-49	55	24.4	14.7	34.1			
	50-54	116	46.1	32.8	59.5			
	55-59	149	55.6	41.0	70.2			
	60-64	173	70.5	54.0	86.9			
	65-69	162	83.0	65.2	100.9			
	70-74	202	128.1	105.9	150.2			
	75-79	177	157.6	133.0	182.2			
	80-84	162	219.5	190.4	248.5			
	85+	275	301.1	267.1	335.1			
Gender	Male	774	44.5	31.4	42.4	37.3	34.7	39.9
	Female	840	46.0	32.7	43.9	32.7	30.5	34.9
Race and Ethnicity	Non-Hispanic White	1,262	53.7	39.3	51.6	33.5	31.7	35.4
	Non-Hispanic Black	140	38.0	25.9	35.9	37.3	31.1	43.5
	Hispanic or Latino/a	145	24.1	14.5	22.0	33.3	27.9	38.7
	Non-Hispanic Other Race	54	22.0	12.8	19.8	28.8	21.1	36.5

Data source: Connecticut Hospital Discharge Dataset

Abbreviations: LCL = 95% lower confidence level; UCL = 95% upper confidence level; AAHR = age-adjusted hospitalization rate per 100,000

Note: The crude rate is the unadjusted hospitalization rate per 100,000 population

*Suppressed because the $1 \leq \text{count} < 11$

Stroke-Related Hospital and Emergency Department Discharges, Connecticut

Table 5. Stroke-related Emergency Department (ED) discharges, Connecticut residents, 2020

2020								
Demographic		Count	Crude Rate	LCL	UCL	AAHR	LCL	UCL
Connecticut	All	1,546	42.9	30.1	40.8	33.6	31.9	35.3
Age (in years)	0-4	*	*	*	*			
	5-9	0	0	0	0			
	10-14	*	*	*	*			
	15-19	*	*	*	*			
	20-24	*	*	*	*			
	25-29	*	*	*	*			
	30-34	27	12.0	5.2	18.8			
	35-39	28	12.3	5.5	19.2			
	40-44	51	23.7	14.1	33.2			
	45-49	61	27.6	17.3	37.9			
	50-54	101	40.2	27.8	52.6			
	55-59	142	52.3	38.1	66.5			
	60-64	160	63.4	47.8	79.0			
	65-69	164	80.5	62.9	98.1			
	70-74	169	103.6	83.6	123.5			
	75-79	186	163.8	138.7	188.9			
	80-84	148	205.2	177.1	233.2			
	85+	280	340.9	304.7	377.1			
Gender	Male	751	42.5	29.7	40.4	35.9	33.3	38.4
	Female	795	43.4	30.5	41.3	31.4	29.2	33.5
Race and Ethnicity	Non-Hispanic White	1,237	52.7	38.5	50.7	34.5	32.6	36.4
	Non-Hispanic Black	135	35.7	24.0	33.5	34.8	29.0	40.7
	Hispanic or Latino/a	109	17.5	9.3	15.2	24.9	20.3	29.6
	Non-Hispanic Other Race	40	15.9	8.1	13.6	22.2	15.3	29.0

Data source: Connecticut Hospital Discharge Dataset

Abbreviations: LCL = 95% lower confidence level; UCL = 95% upper confidence level; AAHR = age-adjusted hospitalization rate per 100,000

Note: The crude rate is the unadjusted hospitalization rate per 100,000 population

*Suppressed because the $1 \leq \text{count} < 11$

Stroke-Related Hospital and Emergency Department Discharges, Connecticut

Table 6. Stroke-related Emergency Department (ED) discharges, Connecticut residents, 2021

2021								
Demographic		Count	Crude Rate	LCL	UCL	AAHR	LCL	UCL
Connecticut	All	1,592	44.2	31.1	42.1	34.5	32.8	36.2
Age (in years)	0-4	*	*	*	*			
	5-9	*	*	*	*			
	10-14	*	*	*	*			
	15-19	*	*	*	*			
	20-24	*	*	*	*			
	25-29	13	5.8	1.1	10.5			
	30-34	18	7.9	2.4	13.4			
	35-39	33	14.3	6.9	21.7			
	40-44	49	22.2	13.0	31.5			
	45-49	52	24.5	14.8	34.2			
	50-54	111	44.8	31.7	58.0			
	55-59	145	54.5	40.0	69.0			
	60-64	164	64.4	48.6	80.1			
	65-69	151	72.1	55.4	88.7			
	70-74	179	105.9	85.7	126.1			
	75-79	171	146.8	123.0	170.5			
	80-84	186	252.2	221.1	283.3			
	85+	290	360.6	323.4	397.8			
Gender	Male	761	43.0	30.1	40.9	36.1	33.5	38.7
	Female	831	45.3	32.1	43.2	33.0	30.8	35.3
Race and Ethnicity	Non-Hispanic White	1,216	52.2	38.0	50.1	33.5	31.6	35.4
	Non-Hispanic Black	127	33.2	21.9	31.0	31.7	26.2	37.2
	Hispanic or Latino/a	148	23.2	13.8	21.1	32.9	27.6	38.2
	Non-Hispanic Other Race	62	24.3	14.6	22.1	29.4	22.1	36.7

Data source: Connecticut Hospital Discharge Dataset

Abbreviations: LCL = 95% lower confidence level; UCL = 95% upper confidence level; AAHR = age-adjusted hospitalization rate per 100,000

Note: The crude rate is the unadjusted hospitalization rate per 100,000 population

*Suppressed because the $1 \leq \text{count} < 11$

Stroke-Related Hospital and Emergency Department Discharges, Connecticut

Table 7. Stroke-related Emergency Department (ED) discharges, Connecticut residents, 2022

2022								
Demographic		Count	Crude Rate	LCL	UCL	AAHR	LCL	UCL
Connecticut	All	1,630	45.0	31.8	42.9	34.5	32.8	36.2
Age (in years)	0-4	*	*	*	*			
	5-9	*	*	*	*			
	10-14	*	*	*	*			
	15-19	*	*	*	*			
	20-24	*	*	*	*			
	25-29	12	5.4	0.8	9.9			
	30-34	23	10.0	3.8	16.2			
	35-39	28	11.9	5.2	18.7			
	40-44	47	20.9	11.9	29.8			
	45-49	55	26.2	16.2	36.2			
	50-54	92	38.1	26.0	50.2			
	55-59	133	51.1	37.1	65.1			
	60-64	189	74.0	57.1	90.8			
	65-69	190	88.9	70.4	107.4			
	70-74	176	105.9	85.7	126.1			
	75-79	246	195.5	168.1	222.9			
	80-84	156	202.5	174.6	230.4			
	85+	250	310.6	276.0	345.1			
Gender	Male	789	44.4	31.4	42.3	36.5	34.0	39.1
	Female	841	45.5	32.2	43.4	32.5	30.3	34.7
Race and Ethnicity	Non-Hispanic White	1,240	53.6	39.2	51.5	33.7	31.8	35.5
	Non-Hispanic Black	163	41.9	29.2	39.8	40.0	33.8	46.1
	Hispanic or Latino/a	111	16.8	8.8	14.6	21.8	17.7	25.8
	Non-Hispanic Other Race	48	18.3	9.9	16.1	23.0	16.5	29.5

Data source: Connecticut Hospital Discharge Dataset

Abbreviations: LCL = 95% lower confidence level; UCL = 95% upper confidence level; AAHR = age-adjusted hospitalization rate per 100,000

Note: The crude rate is the unadjusted hospitalization rate per 100,000 population

*Suppressed because the $1 \leq \text{count} < 11$

Table 8. Stroke-related inpatient discharges, Connecticut residents, 2016

2016								
Demographic		Count	Crude Rate	LCL	UCL	AAHR	LCL	UCL
Connecticut	All	8,935	249.8	218.9	247.8	197.0	192.9	201.0
Age (in years)	0-4	18	9.7	3.6	15.8			
	5-9	11	†	†	†			
	10-14	*	*	*	*			
	15-19	*	*	*	*			
	20-24	22	8.9	3.0	14.7			
	25-29	38	17.3	9.1	25.4			
	30-34	50	22.5	13.2	31.8			
	35-39	105	49.3	35.5	63.1			
	40-44	172	81.9	64.2	99.6			
	45-49	302	121.0	99.4	142.6			
	50-54	511	186.1	159.4	212.9			
	55-59	680	249.0	218.0	279.9			
	60-64	720	311.1	276.5	345.7			
	65-69	909	482.6	439.6	525.7			
	70-74	999	736.6	683.4	789.8			
	75-79	1,024	1,095.9	1,031.0	1,160.7			
	80-84	1,149	1,639.9	1,560.6	1,719.3			
	85+	2,209	2,456.4	2,359.3	2,553.6			
Gender	Male	4,224	242.0	211.5	240.0	215.4	208.9	221.9
	Female	4,711	257.3	225.9	255.3	180.4	175.3	185.6
Race and Ethnicity	Non-Hispanic White	6,672	275.7	243.1	273.7	175.6	171.4	179.8
	Non-Hispanic Black	1,185	329.3	293.7	327.3	354.6	334.5	374.8
	Hispanic or Latino/a	685	121.8	100.2	119.8	210.7	194.9	226.5
	Non-Hispanic Other Race	289	123.6	101.8	121.6	203.6	180.1	227.1

Data source: Connecticut Hospital Discharge Dataset

Abbreviations: LCL = 95% lower confidence level; UCL = 95% upper confidence level; AAHR = age-adjusted hospitalization rate per 100,000

Note: The crude rate is the unadjusted hospitalization rate per 100,000 population

*Suppressed because the $1 \leq \text{count} < 11$

†Suppressed because relative standard error is greater than 30% indicating that the rate is statistically unreliable.

Stroke-Related Hospital and Emergency Department Discharges, Connecticut

Table 9. Stroke-related inpatient discharges, Connecticut residents, 2017

2017								
Demographic		Count	Crude Rate	LCL	UCL	AAHR	LCL	UCL
Connecticut	All	8,999	250.8	219.8	248.8	189.8	185.9	193.7
Age (in years)	0-4	*	*	*	*			
	5-9	*	*	*	*			
	10-14	*	*	*	*			
	15-19	*	*	*	*			
	20-24	22	8.9	3.0	14.7			
	25-29	44	19.8	11.1	28.5			
	30-34	60	27.1	16.9	37.3			
	35-39	89	41.2	28.7	53.8			
	40-44	163	78.8	61.4	96.2			
	45-49	219	89.8	71.2	108.4			
	50-54	440	164.0	138.9	189.1			
	55-59	695	255.3	224.0	286.6			
	60-64	839	352.2	315.4	388.9			
	65-69	932	495.1	451.5	538.7			
	70-74	1,086	723.9	671.2	776.7			
	75-79	996	995.2	933.3	1057.0			
	80-84	1,098	1537.6	1460.8	1614.5			
	85+	2,290	2471.5	2374.1	2569.0			
Gender	Male	4,248	242.5	81.2	120.6	207.2	201.0	213.5
	Female	4,751	258.7	130.3	179.0	174.8	169.8	179.8
Race and Ethnicity	Non-Hispanic White	6,737	280.2	187.0	244.6	170.2	166.1	174.2
	Non-Hispanic Black	1,171	321.7	238.1	302.5	336.8	317.5	356.1
	Hispanic or Latino/a	717	123.9	397.2	479.2	202.5	187.6	217.3
	Non-Hispanic Other Race	286	118.9	97.5	116.9	177.1	156.5	197.6

Data source: Connecticut Hospital Discharge Dataset

Abbreviations: LCL = 95% lower confidence level; UCL = 95% upper confidence level; AAHR = age-adjusted hospitalization rate per 100,000

Note: The crude rate is the unadjusted hospitalization rate per 100,000 population

*Suppressed because the $1 \leq \text{count} < 11$

Stroke-Related Hospital and Emergency Department Discharges, Connecticut

Table 10. Stroke-related inpatient discharges, Connecticut residents, 2018

2018								
Demographic		Count	Crude Rate	LCL	UCL	AAHR	LCL	UCL
Connecticut	All	9,557	267.5	235.4	265.5	201.3	197.2	205.3
Age (in years)	0-4	15	8.2	2.6	13.8			
	5-9	*	*	*	*			
	10-14	*	*	*	*			
	15-19	12	5.0	0.6	9.3			
	20-24	19	7.8	2.3	13.3			
	25-29	58	26.0	16.0	36.0			
	30-34	61	27.4	17.2	37.7			
	35-39	100	45.9	32.6	59.2			
	40-44	177	86.2	68.0	104.3			
	45-49	300	127.7	105.5	149.8			
	50-54	493	189.6	162.6	216.6			
	55-59	766	284.3	251.2	317.3			
	60-64	907	374.3	336.4	412.2			
	65-69	1,001	526.0	481.0	570.9			
	70-74	1,095	714.5	662.1	766.9			
	75-79	1,107	1030.9	967.9	1093.8			
	80-84	1,164	1610.1	1531.5	1688.7			
	85+	2,268	2468.7	2371.3	2566.1			
Gender	Male	4,585	263.0	231.2	261.0	221.2	214.8	227.6
	Female	4,972	271.8	239.5	269.8	182.9	177.9	188.0
Race and Ethnicity	Non-Hispanic White	7,012	295.1	261.4	293.1	178.4	174.2	182.6
	Non-Hispanic Black	1,289	353.3	316.4	351.3	363.4	343.5	383.2
	Hispanic or Latino/a	842	142.8	119.3	140.8	221.0	206.0	235.9
	Non-Hispanic Other Race	314	129.9	107.6	127.9	193.0	171.6	214.3

Data source: Connecticut Hospital Discharge Dataset

Abbreviations: LCL = 95% lower confidence level; UCL = 95% upper confidence level; AAHR = age-adjusted hospitalization rate per 100,000

Note: The crude rate is the unadjusted hospitalization rate per 100,000 population

*Suppressed because the $1 \leq \text{count} < 11$

Stroke-Related Hospital and Emergency Department Discharges, Connecticut

Table 11. Stroke-related inpatient discharges, Connecticut residents, 2019

2019								
Demographic		Count	Crude Rate	LCL	UCL	AAHR	LCL	UCL
Connecticut	All	9,730	272.9	240.5	270.9	202.7	198.7	206.7
Age (in years)	0-4	13	7.2	1.9	12.4			
	5-9	*	*	*	*			
	10-14	*	*	*	*			
	15-19	15	6.3	1.4	11.2			
	20-24	20	8.3	2.7	14.0			
	25-29	48	21.3	12.3	30.3			
	30-34	79	35.5	23.8	47.2			
	35-39	115	52.3	38.1	66.5			
	40-44	154	74.3	57.4	91.2			
	45-49	275	122.0	100.3	143.6			
	50-54	472	187.7	160.9	214.6			
	55-59	719	268.3	236.2	300.4			
	60-64	984	400.8	361.6	440.1			
	65-69	996	510.6	466.3	554.8			
	70-74	1,125	713.2	660.9	765.6			
	75-79	1,237	1101.7	1036.6	1166.7			
	80-84	1,210	1639.3	1560.0	1718.7			
	85+	2,257	2471.3	2373.8	2568.7			
Gender	Male	4,815	276.8	244.2	274.8	229.1	222.6	235.5
	Female	4,915	269.2	237.0	267.2	180.0	175.0	185.0
Race and Ethnicity	Non-Hispanic White	7,116	302.8	268.7	300.8	179.7	175.5	183.8
	Non-Hispanic Black	1,268	343.8	307.4	341.8	347.2	328.1	366.3
	Hispanic or Latino/a	853	141.9	118.6	139.9	217.7	203.1	232.3
	Non-Hispanic Other Race	376	153.2	129.0	151.2	216.1	194.2	237.9

Data source: Connecticut Hospital Discharge Dataset

Abbreviations: LCL = 95% lower confidence level; UCL = 95% upper confidence level; AAHR = age-adjusted hospitalization rate per 100,000

Note: The crude rate is the unadjusted hospitalization rate per 100,000 population

*Suppressed because the $1 \leq \text{count} < 11$

Stroke-Related Hospital and Emergency Department Discharges, Connecticut

Table 12. Stroke-related inpatient discharges, Connecticut residents, 2020

2020								
Demographic		Count	Crude Rate	LCL	UCL	AAHR	LCL	UCL
Connecticut	All	9,147	254.1	222.8	252.1	194.0	190.1	198.0
Age (in years)	0-4	11	†	†	†			
	5-9	*	*	*	*			
	10-14	*	*	*	*			
	15-19	15	6.2	1.3	11.1			
	20-24	23	9.7	3.6	15.7			
	25-29	53	23.8	14.2	33.3			
	30-34	77	34.3	22.8	45.8			
	35-39	119	52.4	38.2	66.6			
	40-44	208	96.5	77.3	115.8			
	45-49	241	109.0	88.6	129.5			
	50-54	476	189.5	162.5	216.4			
	55-59	786	289.4	256.1	322.7			
	60-64	867	343.3	307.0	379.6			
	65-69	996	489.1	445.7	532.4			
	70-74	1,062	651.0	601.0	701.0			
	75-79	1,158	1019.7	957.2	1082.3			
	80-84	1,116	1547.0	1469.9	1624.1			
	85+	1,928	2347.1	2252.1	2442.0			
Gender	Male	4,629	261.9	230.2	259.9	221.2	214.8	227.5
	Female	4,518	246.5	215.7	244.5	170.6	165.6	175.6
Race and Ethnicity	Non-Hispanic White	6,488	276.6	244.0	274.6	170.8	166.6	174.9
	Non-Hispanic Black	1,334	352.4	315.6	350.4	348.1	329.4	366.7
	Hispanic or Latino/a	825	132.2	109.7	130.2	199.6	186.0	213.3
	Non-Hispanic Other Race	350	138.8	115.7	136.8	198.0	177.2	218.7

Data source: Connecticut Hospital Discharge Dataset

Abbreviations: LCL = 95% lower confidence level; UCL = 95% upper confidence level; AAHR = age-adjusted hospitalization rate per 100,000

Note: The crude rate is the unadjusted hospitalization rate per 100,000 population

*Suppressed because the $1 \leq \text{count} < 11$

†Suppressed because relative standard error is greater than 30% indicating that the rate is statistically unreliable.

Stroke-Related Hospital and Emergency Department Discharges, Connecticut

Table 13. Stroke-related inpatient discharges, Connecticut residents, 2021

2021								
Demographic		Count	Crude Rate	LCL	UCL	AAHR	LCL	UCL
Connecticut	All	9,633	267.2	235.1	265.2	203.4	199.3	207.4
Age (in years)	0-4	*	*	*	*			
	5-9	*	*	*	*			
	10-14	*	*	*	*			
	15-19	*	*	*	*			
	20-24	36	15.0	7.4	22.6			
	25-29	40	17.7	9.5	26.0			
	30-34	83	36.5	24.7	48.4			
	35-39	134	57.9	43.0	72.8			
	40-44	208	94.4	75.3	113.4			
	45-49	288	135.6	112.8	158.4			
	50-54	513	207.2	179.0	235.4			
	55-59	738	277.3	244.7	310.0			
	60-64	974	382.2	343.8	420.5			
	65-69	1,050	501.2	457.3	545.1			
	70-74	1,182	699.2	647.4	751.1			
	75-79	1,300	1115.6	1050.2	1181.1			
	80-84	1,159	1571.6	1493.9	1649.3			
	85+	1,897	2358.7	2263.5	2453.9			
Gender	Male	4,941	279.2	246.5	277.2	233.5	227.0	240.0
	Female	4,691	255.5	224.2	253.5	177.9	172.8	183.0
Race and Ethnicity	Non-Hispanic White	6,741	289.3	255.9	287.3	177.4	173.1	181.6
	Non-Hispanic Black	1,339	349.6	313.0	347.7	343.9	325.5	362.3
	Hispanic or Latino/a	975	153.0	128.8	151.0	225.8	211.6	240.0
	Non-Hispanic Other Race	384	150.5	126.4	148.5	202.0	181.8	222.2

Data source: Connecticut Hospital Discharge Dataset

Abbreviations: LCL = 95% lower confidence level; UCL = 95% upper confidence level; AAHR = age-adjusted hospitalization rate per 100,000

Note: The crude rate is the unadjusted hospitalization rate per 100,000 population

*Suppressed because the $1 \leq \text{count} < 11$

Stroke-Related Hospital and Emergency Department Discharges, Connecticut

Table 14. Stroke-related inpatient discharges, Connecticut residents, 2022

2022								
Demographic		Count	Crude Rate	LCL	UCL	AAHR	LCL	UCL
Connecticut	All	9,645	266.0	234.0	264.0	199.4	195.4	203.3
Age (in years)	0-4	14	7.7	2.3	13.2			
	5-9	*	*	*	*			
	10-14	*	*	*	*			
	15-19	11	†	†	†			
	20-24	28	11.5	4.9	18.1			
	25-29	52	23.2	13.8	32.7			
	30-34	73	31.8	20.7	42.8			
	35-39	120	51.2	37.2	65.2			
	40-44	171	75.9	58.8	92.9			
	45-49	274	130.5	108.1	152.9			
	50-54	479	198.2	170.6	225.8			
	55-59	772	296.8	263.0	330.5			
	60-64	1,014	396.7	357.7	435.8			
	65-69	1,084	507.2	463.1	551.3			
	70-74	1,097	660.0	609.7	710.4			
	75-79	1,337	1062.4	998.5	1126.3			
	80-84	1,202	1560.3	1482.9	1637.7			
	85+	1,902	2362.6	2267.4	2457.9			
Gender	Male	4,774	268.8	236.6	266.8	220.9	214.6	227.1
	Female	4,867	263.1	231.3	261.1	180.2	175.2	185.3
Race and Ethnicity	Non-Hispanic White	6,669	288.0	254.7	286.0	172.6	168.4	176.7
	Non-Hispanic Black	1,331	342.1	305.8	340.1	335.7	317.7	353.7
	Hispanic or Latino/a	959	145.5	121.9	143.5	209.2	196.0	222.4
	Non-Hispanic Other Race	350	133.4	110.7	131.3	178.1	159.4	196.7

Data source: Connecticut Hospital Discharge Dataset

Abbreviations: LCL = 95% lower confidence level; UCL = 95% upper confidence level; AAHR = age-adjusted hospitalization rate per 100,000

Note: The crude rate is the unadjusted hospitalization rate per 100,000 population

*Suppressed because the $1 \leq \text{count} < 11$

†Suppressed because relative standard error is greater than 30% indicating that the rate is statistically unreliable.

Methodology

Data source

The data source is the Connecticut Hospital Discharge Dataset. DPH receives the dataset annually from Connecticut Hospital Association (CHA). CHA submits Connecticut Hospital Information Management Exchange (CHIME) data on behalf of its member hospitals to DPH. The dataset includes patient demographics, up to 15 diagnosis codes, and up to 10 procedure codes. In this report, Emergency Department (ED) and inpatient discharges counts and rates are presented.

Definitions of variables

Age: Age is calculated by subtracting the birth date from the admission date. The age groups are based on the age groups used by the CDC United States Diabetes Surveillance System (<https://gis.cdc.gov/grasp/diabetes/diabetesatlas-surveillance.html>).

Gender: Each discharge record has gender categorized as male, female, unknown, or missing. Discharges with unknown or missing values were not included in this report.

Race and Ethnicity: All racial groupings (for example, Black or African American, White) exclude persons of Hispanic ethnicity. A Hispanic or Latino/a ethnicity category is included reflecting data separate from race categories. Asian, Pacific Islander, American Indian or Alaskan Native, other race, and multiracial adults are reported as “Non-Hispanic Other Race” due to small numbers and estimates of limited validity.

Stroke-related discharges: Discharges with ICD-10-CM codes for stroke (I63, G45.0, G45.1, G45.2, G45.8, G45.9, I60, I61, I62.9) as any of the 15 diagnosis codes in the discharge record.

Calculations

Age-adjusted hospital discharge rate: Hospital discharge data have been directly age-standardized using the 2000 US Standard Million. An age-standardized rate is a weighted average of age specific rates calculated based on the proportion of people in the corresponding age groups of a standard population. For more information on the age-adjusting methodology, view Appendix IV of the *Mortality and Its Risk Factors in CT: 1989-1998* report (<https://portal.ct.gov/-/media/departments-and-agencies/dph/hisr/hcqsar/mortality/riskfactorsreport/appendixivpdf.pdf>).

95% Confidence Levels: The following formula is used to calculate the upper and lower 95% confidence levels: $\text{rate} \pm (1.96 * \text{standard error})$.

Relative standard error: The relative standard error is calculated by dividing the standard error by the rate and then multiplying by 100.

Standard error: The standard error is calculated by dividing the rate by the square root of the count (i.e., the number of ED visits or inpatient hospitalizations).

Stroke-related crude hospital discharge rate: The sum of stroke-related hospitalizations (either ED or inpatient) in one year divided by the Connecticut population for that year. The rate is multiplied by 100,000. The formula for 95% confidence levels for the crude rate is $\text{count} \pm 1.96 * \sqrt{\text{count}}$.

Limitations

The Connecticut Hospital Discharge Dataset has limitations. One limitation is the data are collected for administrative purposes such as billing and not with public health goals in mind. Another limitation is the dataset contains the number of hospital discharges and not unduplicated patients. Another limitation is the data are cross-sectional. This means the data are collected from individuals at a single point in time. Therefore, the data cannot be used to establish causation because the individuals were not followed over time.