Hospital Emergency Department (ED) Care in New York State – 2017 – 2021 SPARCS data

January 30, 2023

Statewide and Regional Trends in Emergency Department Use

ED Timely and Effective Care

Annual ED Visit Trends

- The number of ED visits has remained stable at over 8 million visits annually for 19.6 million New Yorkers (41.4 visits per 100 residents) for 2017- 2019. The volume and visits per capita decreased in 2020 and while it increased in 2021, it is not to the prior level.

- For 2019, Approximately 17% of ED visits result in an inpatient admission, consistent with previous years. The percentage increased to 20% in 2020 and declined to 19% in 2021.

	2017	2018	2019	2020*	2021*
NYS Population	19,590,719	19,542,209	19,903,676	19,519,266	19,402,459
ED Visits (includes Admissions)	8,114,943	8,086,743	8,372,506	6,464,111	7,132,958
ED Visits per Capita / 100	41.4	41.4	42.1	33.1	36.8
% Admitted through ED	17%	17%	17%	20%	19%

Notes: Data Source is Statewide Planning and Research Cooperative System (SPARCS).
* SPARCS data are incomplete for 2020 and 2021. Visit volume includes visits resulting in an inpatient admission.

NEW YORK STATE | Department of Health

Most Frequent Conditions Seen

Looking at the primary reason for ED visits shows that many of the most common reasons could have been treated in a different, less costly primary or preventive care setting.

Respiratory Infections	Abdominal Pain and Digestive Signs and Symptoms	Viral Infections (including COVID-19)	Diseases of the Heart
Urinary System Diseases, Urinary Tract Infections	Open Wounds	Back Problems, Back Pain	Fractures, Injuries, Contusions, Sprains and Strains
	Alcohol-Related Disorders	Headaches and Migraines	Non-specific Chest Pain

NEW YORK STATE | Department of Health

Notes: Data Source is SPARCS,2019-2021. Includes visits resulting in an inpatient admission.

ED Visit Volume Trends by Region

Over time and across all payers, rates of regional hospital ED visits of all visits decreased with variation across regions. Caution should be used as 2020 and 2021 data are incomplete.

Patient Region	ED Visits Per 1,000 Visits			Average Annual Growth	% Change
	2019	2020*	2021*		
Capital District	659.7	648.4	619.3	-3.9%	-6%
Central NY	666.2	670.8	673.9	0.9%	1%
Hudson Valley	732.0	726.6	723.3	-1.0%	-1%
Long Island	671.9	672.1	666.3	-0.4%	-0.8%
New York City	733.4	730.0	715.7	-1.4%	-2%
Western NY-Buffalo	678.8	669.9	656.4	-2.3%	-3%
Western NY-Rochester	690.0	692.2	686.8	-0.1%	-0.5%
Statewide	**705.9**	**701.6**	**692.5**	**-1.3%**	**-2%**

Notes: Data Source SPARCS.
*SPARCS data are incomplete for 2020 and 2021. ED visit volume includes visits resulting in an inpatient admission. Visit denominator includes all Inpatient, Emergency Department and Ambulatory Surgery visits for every facility reporting to SPARCS for the region.

NEW YORK STATE | Department of Health

ED Visits per Capita (per 100), 2021

The ED per capita visit rate in Central NY, NYC, and Western – Rochester regions are higher than the Statewide ED per capita visit rate.

Statewide
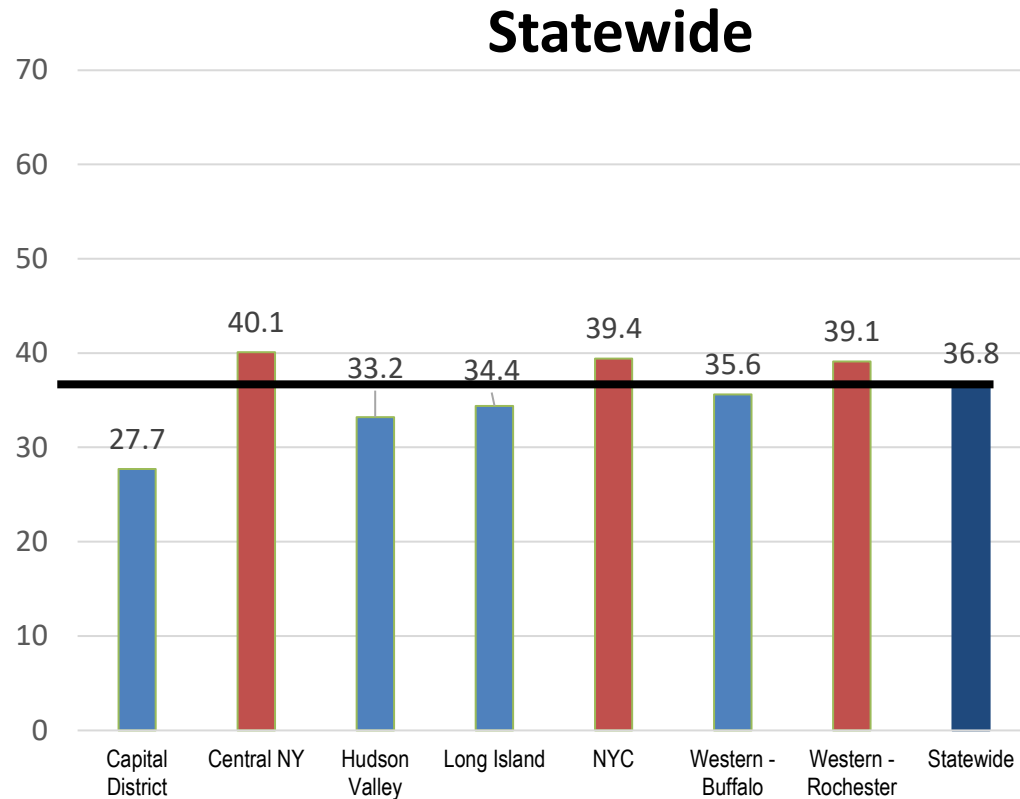
Notes: Data Source is SPARCS. SPARCS data are incomplete for 2021. Per capita rates are based on NYS population (visits/population)*100.

NEW YORK STATE | Department of Health

Trend in Per Capita ED Visits & Percent Admitted through ED

Region	Per Capita ED Visits / 100					% Admitted Thru ED				
	2017	**2018**	**2019**	**2020***	**2021***	**2017**	**2018**	**2019**	**2020**	**2021**
Capital District	39.7	39.1	41.1	32.8	27.7	15%	16%	15%	18%	18%
Central NY	38.8	40.4	43.6	37.2	40.1	15%	15%	15%	16%	16%
Hudson Valley	33.9	33.3	36.4	29.0	33.2	18%	17%	17%	20%	19%
Long Island	34.4	33.0	35.2	28.7	34.4	22%	22%	23%	26%	23%
New York City	44.8	45.2	45.3	34.4	39.4	16%	16%	16%	19%	18%
WNY-Buffalo	42.0	41.4	43.2	33.8	35.6	15%	16%	14%	17%	17%
WNY-Rochester	38.7	40.5	43.9	36.5	39.1	18%	16%	17%	18%	19%
Statewide	**41.4**	**41.4**	**42.1**	**33.1**	**36.8**	**17%**	**17%**	**17%**	**20%**	**19%**

Red indicates higher that statewide.

Notes: Data Source is SPARCS.

*SPARCS data are incomplete for 2020 and 2021. Includes visits resulting in an inpatient admission.

NEW YORK STATE | Department of Health

Timely and Effective Care

- NYS wait times in the ED for patients being discharged are higher than national averages (OP_18b and OP_18c)

  – Median wait times for NYS patients being discharged from the ED are <mark>27% higher than the national median wait time</mark>

- According to CMS Hospital Compare data, NYS does not look different from national averages for patients leaving the ED without being seen 3% for both) (OP_22)

  – Statewide, median percentages of patients leaving without being seen has a small incremental increase comparing low to very high ED volume

Notes: Data Source is CMS Hospital Compare data, 1/1/21-12/31/21 and 4/1/2021-3/31/2022.

ED Timeliness of Care, CMS Hospital Compare, 2021

For both ED timely and effective care measures, the NYS median time in elapsed minutes is higher than the national median time. In a few instances, High or Very High Volume EDs have the highest difference.

Measure Description (A low number is desirable)		All Reporting Hospitals Median Time in Minutes	Emergency Department Volume (EDV)			
			Low	Medium	High	Very High
Median time in minutes from ED arrival to ED departure for discharged ED patients (OP-18b)	National	159	127	170	202	188
	New York State	202	133	183	258	216
		+43	+6	+13	+56	+28
Median time in minutes from ED Arrival to ED Departure for Discharged ED -Psychiatric/Mental Health Patients (OP-18c)	National	264	201	271	342	327
	New York State	332	214	273	335	383
		+68	+13	+2	-7	+56

Header above table: **Average (Median) Time in Elapsed Minutes**

Note: Data source is CMS Hospital Compare, 2021. Patient volume in the ED does not reflect the number of providers caring for that volume in the ED.

NEW YORK STATE | Department of Health

ED Timeliness of Care – By NYS Region, 2021

Long Island and NYC regions have the longest wait times for discharged ED patients and for discharged ED psychiatric/mental health patients.

Measure	Time	Capital District	Central	Hudson Valley	Long Island	NYC	Wester - Buffalo	Western - Rochester
Median time from ED arrival to ED departure for discharged ED patients (OP-18b)	Elapsed Minutes	194	180	186	213	206	173	191
	Hours	3.2	3.0	3.1	3.6	3.4	2.9	3.2
Median Time from ED Arrival to ED Departure for Discharged ED -Psychiatric/Mental Health Patients (OP-18c)	Elapsed Minutes	331	290	286	394	338	232	254
	Hours	5.5	4.8	4.8	6.6	5.6	3.9	4.2

Note: Data source is CMS Hospital Compare, 2021

NEW YORK STATE | Department of Health

ED Timeliness of Care, CMS Hospital Compare, 2021

The question for the timeliness of admissions for patients from admit decision were changed in 2021. Information for 2021 was included in the hospital data set from CMS Hospital Compare. National and State data sets did not include ED_2_strata results. Caution should be used in interpretation given the very low volume of hospitals reporting the information in 2021.

|		All Reporting Hospitals Median Time in Minutes	Admit Decision until Departure		
			Min	Max	# of hospitals reporting
Median admit decision time to ED departure time for admitted patients in minutes - non psychiatric/mental health disorders(ED-2- Strata 1)	New York State	116	6	675	27
Median admit decision time to ED departure time for admitted patients in minutes - psychiatric/mental health disorders(ED-2- Strata 2)	New York State	121	7	238	12

NEW YORK STATE | Department of Health

Potentially Avoidable Visits

2016

- 1) ■ 2) ■ 3) ■ 4)

19.7
35.2
10.0
35.1

2017

- 1) ■ 2) ■ 3) ■ 4)

20.2
34.6
9.9
35.3
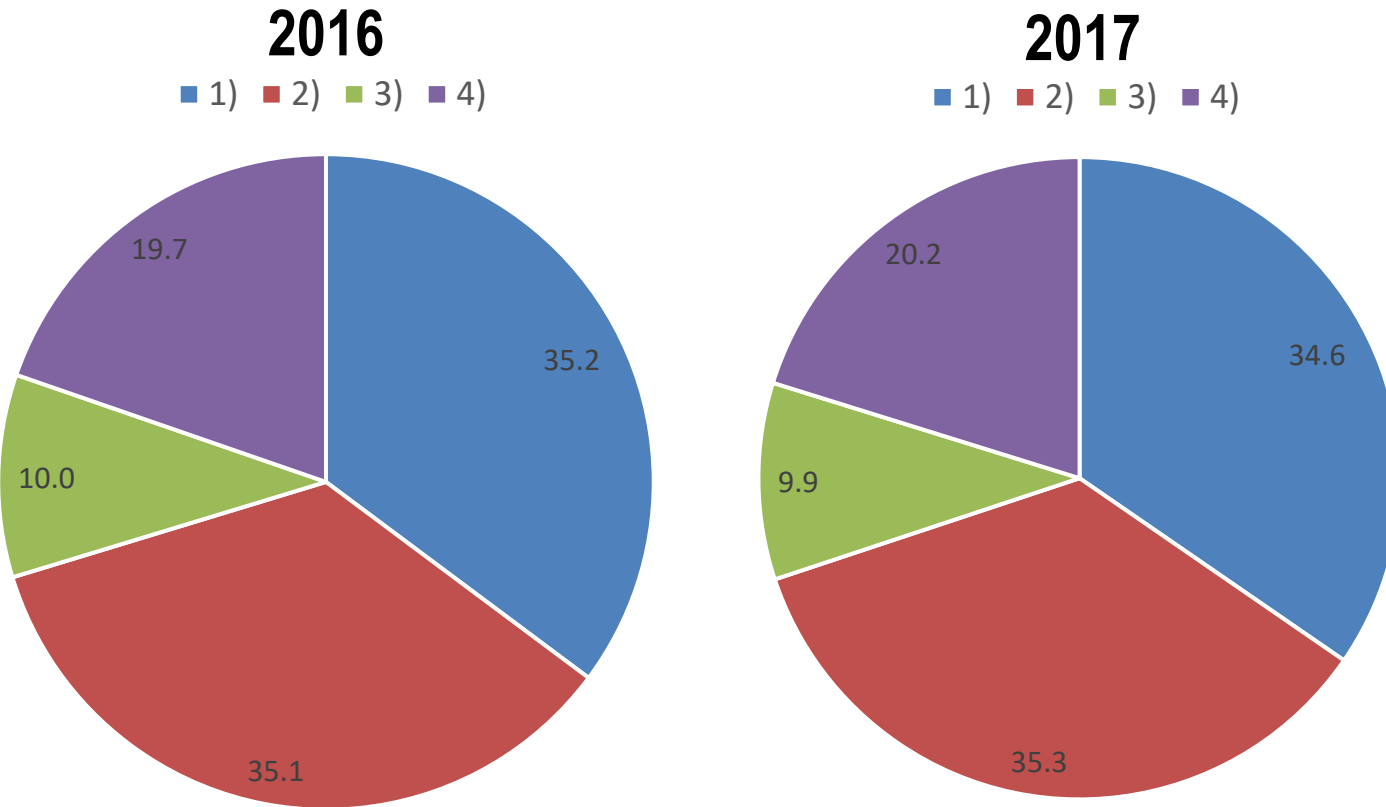
1) **Non-Emergent**
2) **Emergent, Primary Care Treatable**
3) **Emergent, ED Care Needed, Preventable/Avoidable**
4) **Emergent, ED Care Needed, Not Preventable/Avoidable**

Approximately **70%** of hospital based ED visits are either non-emergent and/or could have been treated in a primary care setting. This percentage has remained stable over time.

Note: NYU Algorithm used to classify visits. Excludes alcohol, drug, mental health, injury and unclassified visits.
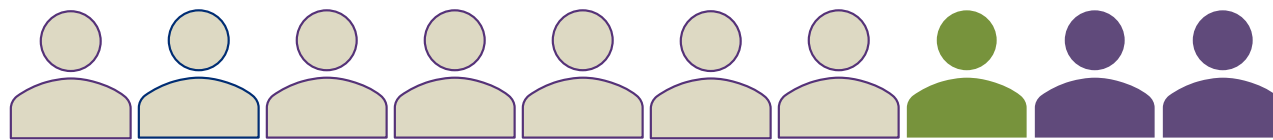
7 out of 10 patients don't require ED level care

NEW YORK STATE | Department of Health

Notes: Data Source is SPARCS.

Reference: Region Definition

Regions are defined in the table below. Hospitals were mapped to regions based on their county of location.

Region	Counties
Capital District	Albany, Clinton, Columbia, Delaware, Essex, Franklin, Fulton, Greene, Hamilton, Montgomery, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington
Central	Broome, Cayuga, Chenango, Cortland, Herkimer, Jefferson, Lewis, Madison, Oneida, Onondaga, Oswego, St. Lawrence, Tioga, Tompkins
Hudson Valley	Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster, Westchester
Long Island	Nassau, Suffolk
New York City	Bronx, Kings, New York, Queens, Richmond
Western-Buffalo	Allegany, Cattaraugus, Chautauqua, Erie, Genesee, Niagara, Orleans, Wyoming
Western-Rochester	Chemung, Livingston, Monroe, Ontario, Schuyler, Seneca, Steuben, Wayne, Yates

NEW YORK STATE | Department of Health

Reference: CMS Hospital Compare Measures for ED Timely & Effective Care

Current Year	Measure Description	Values
2021	**EDV**: Emergency department volume (classification by total patients seen over a year)	Low, Medium, High, Very High
2021-22	**OP-18b**: Average (median) time patients spent in the emergency department before leaving from the visit	Whole Elapsed Minutes
2021-22	**OP-18c**: Average (median) time patients spent in the emergency department before leaving from the visit- Psychiatric/Mental Health Patients.	Whole Elapsed Minutes
2021	**OP-22**: Percentage of patients who left the emergency department before being seen	0% - 100%
2021	**ED_2_Strata 1**: Average (median) time spent in the emergency department from the time of decision to admit to leaving - non psychiatric/mental health disorders	Whole Elapsed Minutes
2021	**ED_2_Strata 2**: Average (median) time spent in the emergency department from the time of decision to admit to leaving - psychiatric/mental health disorders	Whole Elapsed Minutes

NEW YORK STATE | Department of Health