



NEW YORK STATE DEPARTMENT OF HEALTH SPECIAL REPORT

PEDIATRIC COVID-19 UPDATE



01.07.2022



Department
of Health

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EXECUTIVE SUMMARY



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On Dec. 24, 2021, the New York State Department of Health issued a [Health Advisory](#) to alert providers of a concerning increase in pediatric hospitalizations due to COVID-19. The Department continues to monitor the Health Electronic Response Data System (HERDS) and analyze results to provide a comprehensive situation assessment among this age group. This report includes data through Jan. 1, 2022, for children 0 – 18 years with a focus based on vaccine eligibility, 0 – 4, 5 – 11, and 12 – 17, showing:

- Laboratory-confirmed infection (e.g. positive test results, cases)
- New pediatric COVID-19 hospital admissions
- Total current pediatric COVID-19 hospitalizations
- COVID-19 symptoms, indicated reason for admission, and comorbidities among new hospital admissions
- Hospital admissions per 100 cases, a potential proxy measure of severity
- Vaccine effectiveness against breakthrough cases and hospitalization - determined by linking vaccination records in the Citywide Immunization Registry (CIR) and the New York State Immunization Information System (NYSIIS) to HERDS

**Please note, while the State has hospitalization data publicly available, new admission data by age as seen here is not publicly available in this format.*



EXECUTIVE SUMMARY

OVERVIEW

1

Seven out of ten children across New York State who contracted COVID-19 and were hospitalized were symptomatic and 54% had no comorbidities.

2

Hospitalizations due to COVID-19 rose across all age groups statewide, but none faster than for those 18 years and younger. Among people aged ≤ 18 years, admissions increased more than seven-fold statewide, while those for all age groups combined increased only 2-fold statewide. The hospitalization rate for 0 – 4-year-olds increased 791% from week of Dec. 5 – 11 to week of Dec. 26. – Jan. 1, 335% for those 5 – 11 years and 1047% for those 12 – 18 years during the same time period.

3

New pediatric hospital admissions are increasing most rapidly in New York City and the mid-Hudson Valley region, with a seventeen-fold and eight-fold increase, respectively, far surpassing the four-fold increase previously identified two weeks ago.

4

Of children newly admitted, 91% of 5 – 11-year-olds were unvaccinated and only 4% were fully vaccinated. Among 12-17-year-olds, 65% were unvaccinated while 26% were fully vaccinated. Moreover, 55% percent of hospitalizations were in children 0 – four-years-old, who comprise only 26% of the 0 – 18-year-old population and remain ineligible for vaccination.

5

In addition to foundational protection through vaccination, layered mitigation including masking is needed to keep children protected.

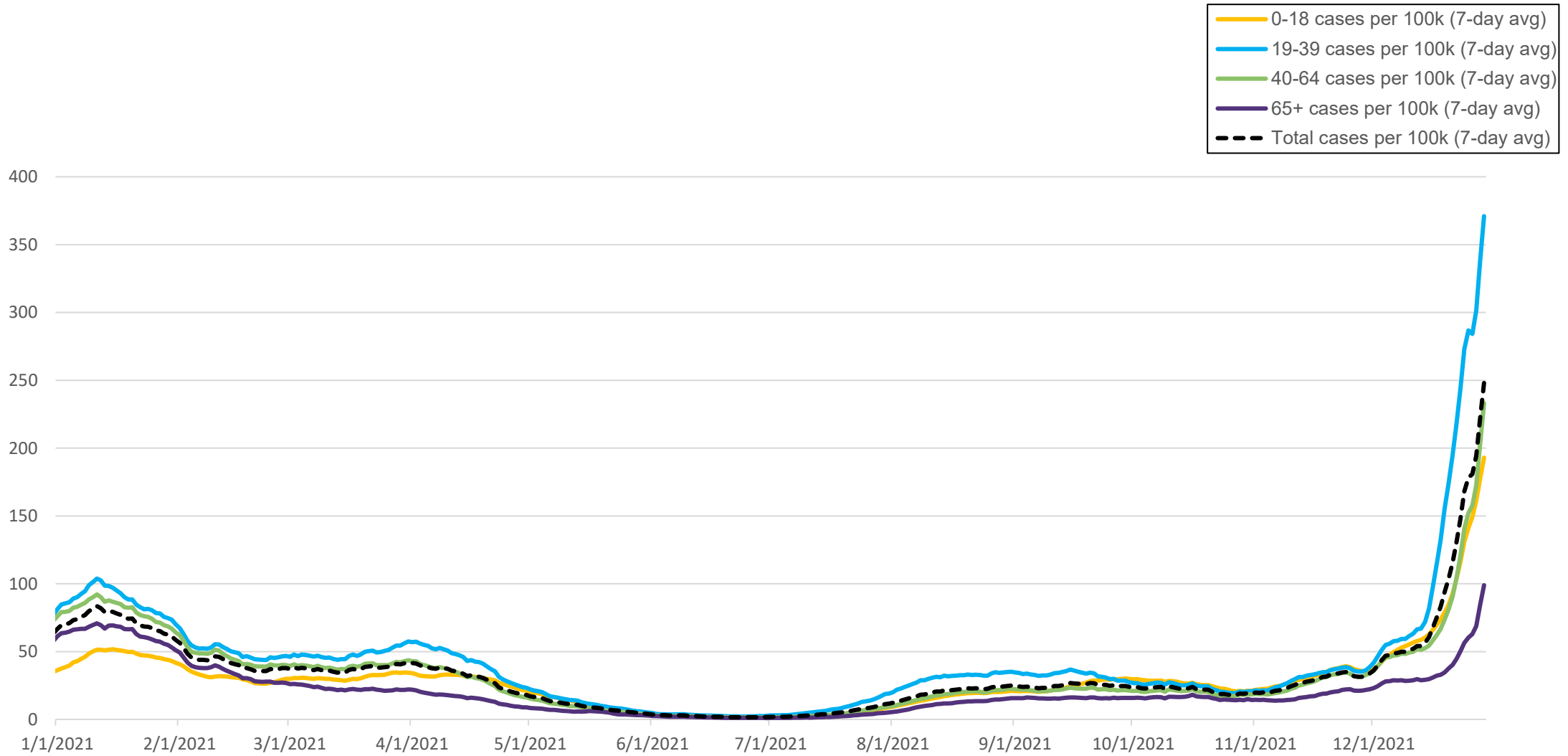


PEDIATRIC INFECTIONS



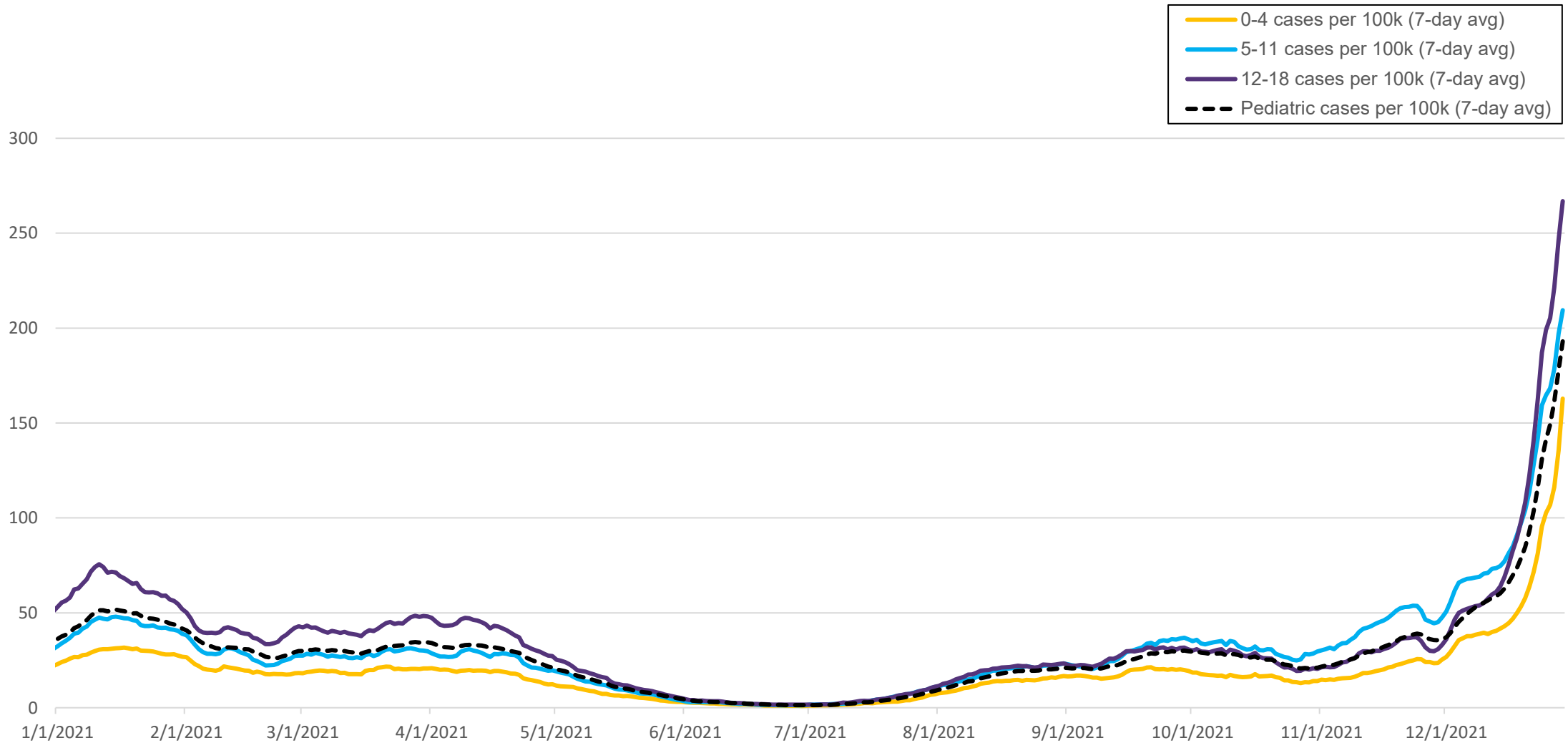
PEDIATRIC CASES

DAILY NEW CASES, BY AGE (PER 100K – 7-DAY AVERAGE)



PEDIATRIC CASES

DAILY NEW CASES, 0 – 18 YEARS (PER 100K – 7-DAY AVERAGE)



PEDIATRIC HOSPITALIZATIONS



HOSPITALIZATIONS INCREASING FASTEST AMONG CHILDREN

NEW HOSPITAL ADMISSIONS BY AGE

	0 – 4 YEARS		5 – 11 YEARS		12 – 18 YEARS		19 – 64 YEARS		65+ YEARS	
	RATE	CHANGE SINCE DEC 5. - 11	RATE	CHANGE SINCE DEC. 5 - 11	RATE	CHANGE SINCE DEC. 5 - 11	RATE	CHANGE SINCE DEC. 5 - 11	RATE	CHANGE SINCE DEC. 5 - 11
DEC. 5 – 11	0.44	-	0.18	-	0.13	-	1.87	-	7.62	-
DEC. 12 - 18	0.56	+29%	0.19	+5%	0.34	+153%	2.17	+16%	7.94	+4%
DEC 19 - 25 (EXCL. DEC. 25)	1.43	+226%	0.42	+130%	0.60	+353%	2.78	+48%	8.70	+14%
DEC. 26 – JAN. 1 (INCL. DEC. 25)	3.91	+791%	0.79	+335%	1.52	+1,047%	6.39	+241%	21.87	+187%

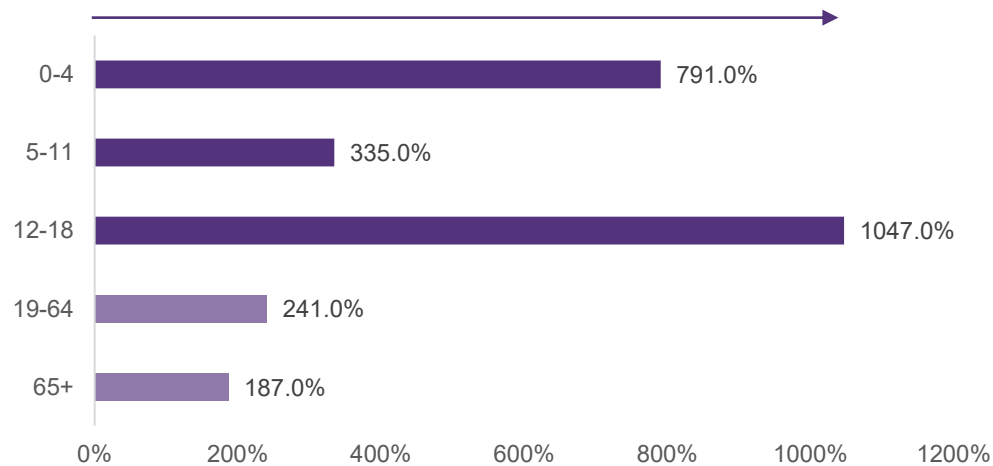
Rates are per 100,000 population

Source: HERDS, New COVID-19 hospital admissions by age group and week, Jan. 4 Pediatrics report (Table 2)



ALONGSIDE OMICRON EMERGENCE, PEDIATRIC HOSPITALIZATIONS ARE INCREASING

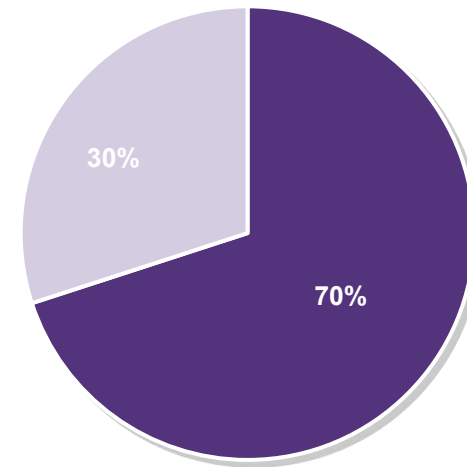
SINCE DEC. 5 – 11, RAPID INCREASES IN HOSPITALIZATIONS AMONG THOSE 0-18 YEARS



Change in 7-day average: Dec 26 – Jan 1 vs. Dec 5-11

Source: HERDS New COVID-19 hospital admissions by age group and week, Jan. 4 Pediatrics report (Table 2)

7 OF 10 CHILDREN HOSPITALIZED WITH COVID-19 WERE SYMPTOMATIC FOR COVID-19 AT TIME OF ADMISSION



■ Symptomatic COVID ■ Not reported as symptomatic

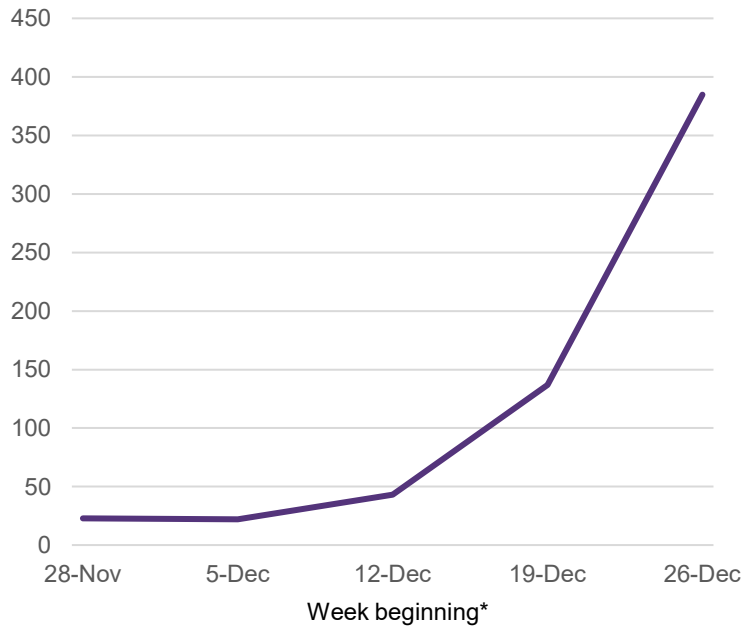
Source: HERDS New admissions symptom status among persons 0-18 years, most recent reporting period of Dec. 26, 2021 – Jan. 1, 2022 (includes Dec. 25) Jan. 4 Pediatrics report (Table 7)



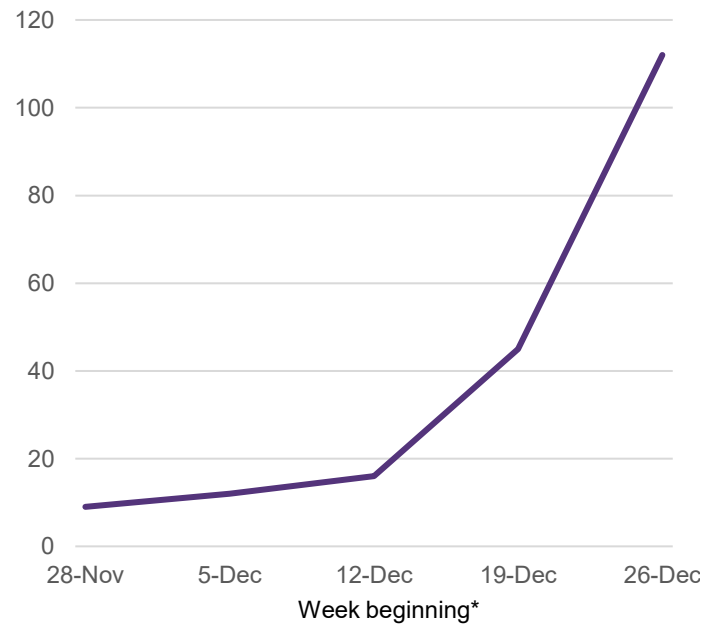
PEDIATRIC HOSPITALIZATION INCREASES ARE STEEPEST DOWNSTATE

Increases are steepest in New York City and the surrounding Mid-Hudson/Long Island region, with 17-fold and 8-fold increases, respectively.

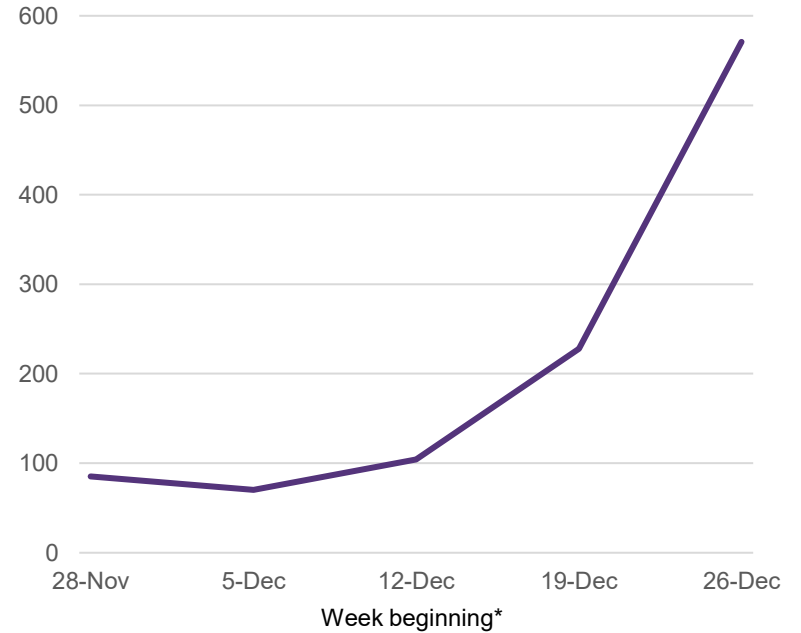
NEW YORK CITY



MID-HUDSON/LONG ISLAND



STATEWIDE



ADMISSION REASON, BY REGION

REGION	ADMISSION REASON	DEC. 19 – DEC. 25 (EXCL. DEC. 25)		DEC. 26 – JAN. 1 (INCL. DEC. 25)	
		n	%	n	%
NEW YORK CITY	For COVID-19	88	64%	227	59%
	For other reason, but with COVID-19	49	36%	158	41%
MID-HUDSON/ LONG ISLAND	For COVID-19	24	53%	66	59%
	For other reason, but with COVID-19	21	47%	46	41%
STATEWIDE	For COVID-19	137	60%	339	59%
	For other reason, but with COVID-19	91	40%	232	41%

- About 60% of admissions indicated as “for COVID-19”, consistently over time. The number of these admissions have rapidly grown.
- Admissions have also increased among those admitted for other reasons, but with COVID-19.
- It is unclear from these real-time admissions data whether COVID-19 was a contributing cause to the medical issue that necessitated hospitalization. This often requires in-depth medical chart review by clinical staff, after patients are discharged.
- If an individual was seen at the emergency department but was not admitted to the hospital they would not be included in these data.

Source: HERDS new COVID-19 hospital admissions by admission reason, region, and week; Jan. 4 Pediatrics report (Table 5)



REASONS FOR HOSPITAL ADMISSIONS AMONG CHILDREN WITH A POSITIVE COVID-19 RESULT (DEC. 26 – JAN. 1)

	NEW YORK CITY	MID-HUDSON/ LONG ISLAND	OTHER REGIONS	STATEWIDE
ADMISSION REASON FOR COVID-19	227	66	46	339

ADMITTED FOR OTHER REASON, BUT WITH COVID-19:

ACUTE MEDICAL CONDITION	70	20	15	105
CHRONIC MEDICAL CONDITION	21	6	4	31
GYNECOLOGY/ OBSTETRICS	6	5	5	16
INJURY/TRAUMA	10	2	0	12
MENTAL HEALTH/ SUBSTANCE ABUSE	13	6	1	20
NEWBORN CARE	12	3	2	17
SURGICAL/ PROCEDURES	8	4	0	12
NOT SPECIFIED / OTHER	18	0	1	19



NEW ADMISSIONS BY AGE, REGION, AND WEEK

WEEK	NEW YORK CITY				MID-HUDSON & LONG ISLAND				OTHER REGIONS				STATEWIDE
	0-4y	5-11y	12-18y	Total	0-4y	5-11y	12-18y	Total	0-4y	5-11y	12-18y	Total	Total
NOV. 28 – DEC. 4	11	3	9	23	2	2	5	9	25	11	17	53	85
DEC. 5 – 11	8	8	6	22	6	4	2	12	21	8	7	36	70
DEC. 12 – 18	20	11	12	43	6	5	5	16	19	5	21	45	104
DEC. 19 - 25 (EXCL. 25)	74	32	31	137	21	6	18	45	19	8	19	46	228
DEC. 26 – JAN. 1 (INC. 25)	224	60	101	385	54	16	42	112	34	11	29	74	571

Source: HERDS New COVID-19 hospital admissions by age, region, and week; Jan. 4 Pediatrics report (Table 3)



CHILDREN WITH AND WITHOUT COMORBIDITIES ARE BEING HOSPITALIZED WITH COVID-19

REGION	COMORBIDITIES	WEEK OF DEC. 26 – JAN. 1 (INCLUDES DEC. 25TH)	
		n	%
NEW YORK CITY	NO	204	53%
	YES	181	47%
MID-HUDSON/LONG ISLAND	NO	71	63%
	YES	41	37%
OTHER REGIONS	NO	32	43%
	YES	42	57%
STATEWIDE	NO	307	54%
	YES	264	46%

Source: New COVID-19 hospital admissions by comorbidities, region, and week; Jan. 4 Pediatrics report (Table 8)



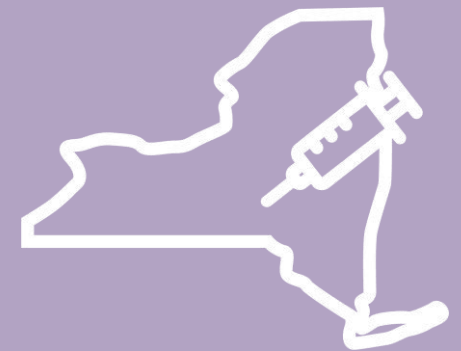
ADMISSIONS PER 100 CASES INCREASING FOR CHILDREN 0 – 11, A POSSIBLE SIGNAL OF SEVERITY

	TWO-WEEK PERIOD OF: NOV. 15 – 26 (PREDOMINANTLY DELTA VARIANT)			ONE-WEEK PERIOD OF: DEC. 20 – 26 (PREDOMINANTLY OMICRON VARIANT)			CHANGE IN ADMISSIONS PER 100 CASES
	CASES	NEW ADMISSIONS	ADMISSIONS PER 100 CASES	CASES	NEW ADMISSIONS	ADMISSIONS PER 100 CASES	
0 - 4 YEARS, UNVACCINATED	3,776	47	1.24	8,130	150	1.85	+ 48.2%
5 – 11 YEARS, UNVACCINATED	8,508	15	0.18	16,205	49	0.30	+ 71.5%
12 – 17 YEARS, UNVACCINATED	5,013	35	0.70	11,736	45	0.38	- 45.1%
18+ YEARS, UNVACCINATED	38,447	3,241	8.43	104,854	3,345	3.19	- 62.2%

Source: ECLRS Positive test results by age and week linked to NYSIIS/CIR vaccine records;
HERDS New COVID-19 hospital admissions by age and week linked to NYSIIS/CIR vaccine records;
Jan. 4 Pediatrics report (Table 12)



PEDIATRIC ADMISSIONS BY VACCINE STATUS



WEEKLY NEW ADMISSIONS, BY VACCINE STATUS

WEEK BEGINNING	DISTRIBUTION OF NEW HOSPITALIZATIONS BY VACCINE STATUS						RATES AND VACCINE EFFECTIVENESS			FULL-VACCINE COVERAGE
	VACCINATED		PARTIALLY-VACCINATED		UNVACCINATED		VACCINATED RATE PER 100K	UNVACCINATED RATE PER 100K	VE	%
	HOSP	% OF HOSP	HOSP	% OF HOSP	HOSP	% OF HOSP				
5 – 11 YEARS										
12/13/2021	0	0%	1	5%	19	95%	0	0.28	100%	5.4%
12/20/2021	2	4%	3	6%	49	91%	0.17	0.73	76%	12.0%
12 – 17 YEARS										
11/29/2021	2	9%	0	0%	20	91%	0.03	0.65	95%	60.7%
12/6/2021	1	8%	1	8%	11	74%	0.02	0.36	95%	61.1%
12/13/2021	7	23%	1	3%	22	62%	0.12	0.74	84%	61.6%
12/20/2021	18	26%	6	9%	45	65%	0.31	1.56	81%	62.1%

Source(s): HERDS New COVID-19 hospital admissions by age and week linked to NYSIIS/CIR vaccine records; Jan. 4 Pediatrics report (Table 11)



CONCLUSION AND DATA SOURCES



HOW DO WE PROTECT OUR CHILDREN'S
HEALTH?

These observed trends in hospital admissions for and with COVID-19 among those 18 years and younger highlight the need to redouble efforts to protect the health of our youngest New Yorkers.

Vaccination of children remains a critical, highly protective strategy and should be combined with other measures to reduce exposure, such as mask wearing.

Children four years of age and younger are not currently eligible for vaccination. Therefore, additional protective measures remain important to safeguard their health during the current winter wave, including vaccinating, boosting and masking by those around them.



DATA SOURCES

This report contains information from three statewide New York State databases, which have been used for ongoing public reporting and analyses since the outset of the COVID-19 pandemic:

- **Electronic Clinical Laboratory Reporting System (ECLRS):** This New York State Department of Health (NYS DOH) system collects all reportable COVID-19 test results (nucleic acid amplification test [NAAT] or antigen) in New York State.
- **Health Electronic Response Data System (HERDS):** This NYS DOH program includes a statewide, daily electronic survey of all inpatient facilities in New York. Data on new admissions and current hospitalizations with a laboratory-confirmed COVID-19 diagnosis are entered into HERDS daily by trained hospital staff members. Note, no information was reported to HERDS on December 25, 2021. Data for this day were reported on December 26.
- **New York State Immunization Information System (NYSIIS) and the Citywide Immunization Registry (CIR):** These two systems are respectively used by NYSDOH and NYCDOHMH collect and store all COVID-19 provider vaccination data for persons residing in New York State, outside of New York, and in New York City (excluding selected settings reporting only to the federal government).



THANK YOU.



Department
of Health