COVID-19 Update December 22, 2022

As of **December 21, 2022**, the total of laboratory-confirmed and probable COVID-19 cases reported among Connecticut residents is **942,022**; **3,569** have been reported in the past 7 days. **Five hundred seventy-four** patients are currently hospitalized with laboratory-confirmed COVID-19; of these, **179** (31.18%) are not fully vaccinated.

Overall Summary	Cumulative (except for hospital census)	Past 7 days*
Positive PCR/NAAT Tests	1,022,401	4,272
All PCR/NAAT Tests	15,991,913	33,402
Test Positivity (pos/all PCR/NAAT)		12.79%
Patients currently hospitalized with COVID-19	574	+59
COVID-19-Associated Deaths	11,733	+74

*This column indicates all PCR/NAAT tests by specimen collection date from the past 7 days. Test positivity is calculated as a rolling 7-day test positivity by specimen collection date; all positive molecular (PCR/NAAT) test results are divided by all molecular (PCR/NAAT) test results (positive and negative) for the last 7 days and multiplied by 100 to reach a percentage. Hospitalizations over the past 7 days indicates the change in the number of patients hospitalized with COVID-19 over that period. Deaths over the past 7 days indicates the number of new COVID-19 associated deaths reported; deaths are reported once weekly.

Cumulative COVID-19 Cases and Associated Deaths by County of Residence

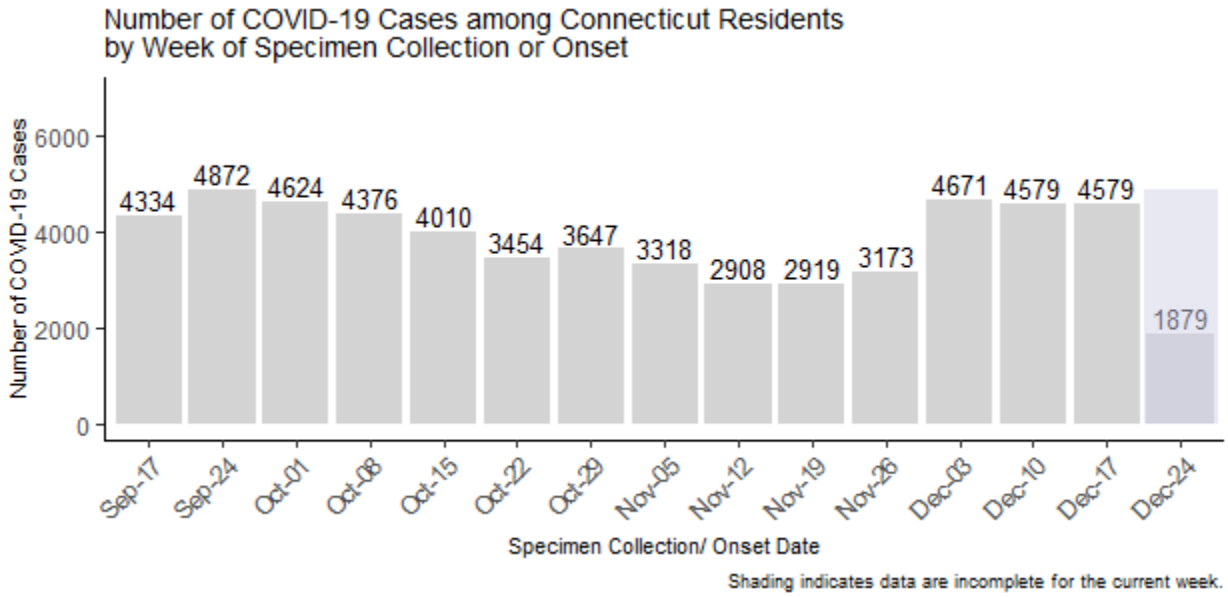
County	COVID-19 Cases		COVID-19-Associated Deaths	
	Confirmed	Probable	Confirmed	Probable
Fairfield County	228,254	27,380	2,331	562
Hartford County	201,079	27,574	2,733	634
Litchfield County	34,191	5,965	426	75
Middlesex County	34,012	3,534	363	162
New Haven County	219,431	28,815	2,628	422
New London County	63,924	7,302	585	162
Tolland County	23,670	3,194	216	90
Windham County	28,510	2,117	263	73
Pending address validation	2,652	418	1	7
Total	**835723**	**106299**	**9546**	**2187**

Information about preventing spread of COVID-19 are available from the Centers for Disease Control and Prevention.

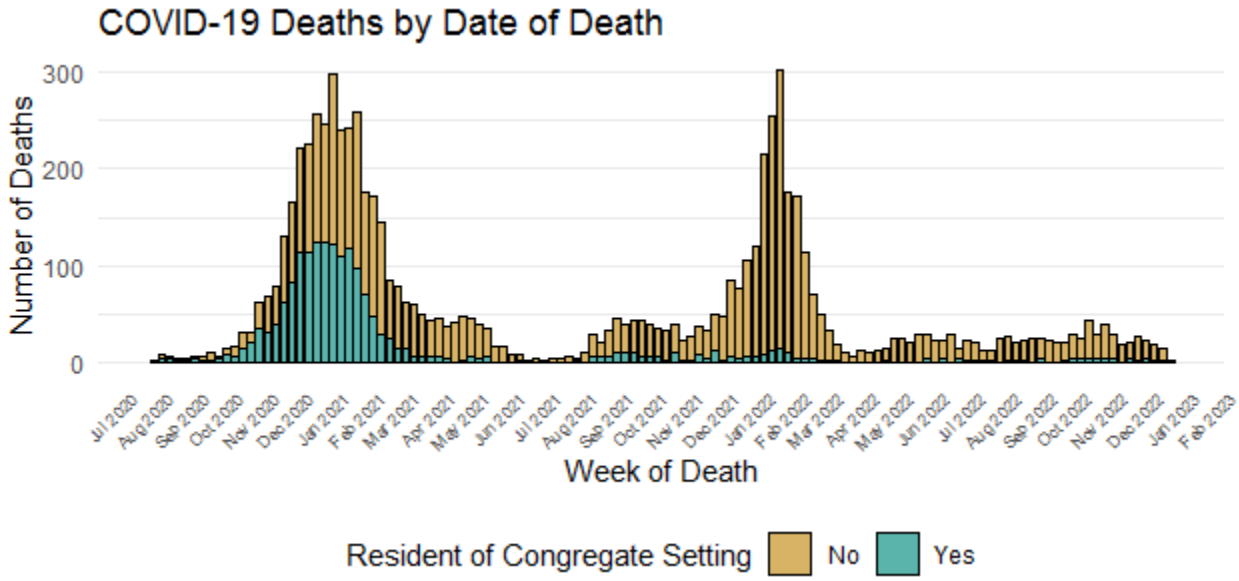
Day-to-day changes reflect newly reported cases, deaths, and tests that occurred over the last several days to week. All data in this report are preliminary; data for previous dates will be updated as new reports are received and data errors are corrected. Hospitalization data were collected by the Connecticut Hospital Association. Deaths reported to either OCME or DPH are included in the weekly COVID-19 update.

COVID-19 Cases and Deaths Over Time

The chart below shows the number of new COVID-19 cases reported to CT DPH by week of specimen collection or onset of illness. Case data includes probable cases based on positive antigen test results. During the previous 7 days (December 15-21), there were 3,569 new COVID-19 cases, including cases among people residing in the community and congregate settings, such as nursing homes, managed residential communities, and correctional facilities.



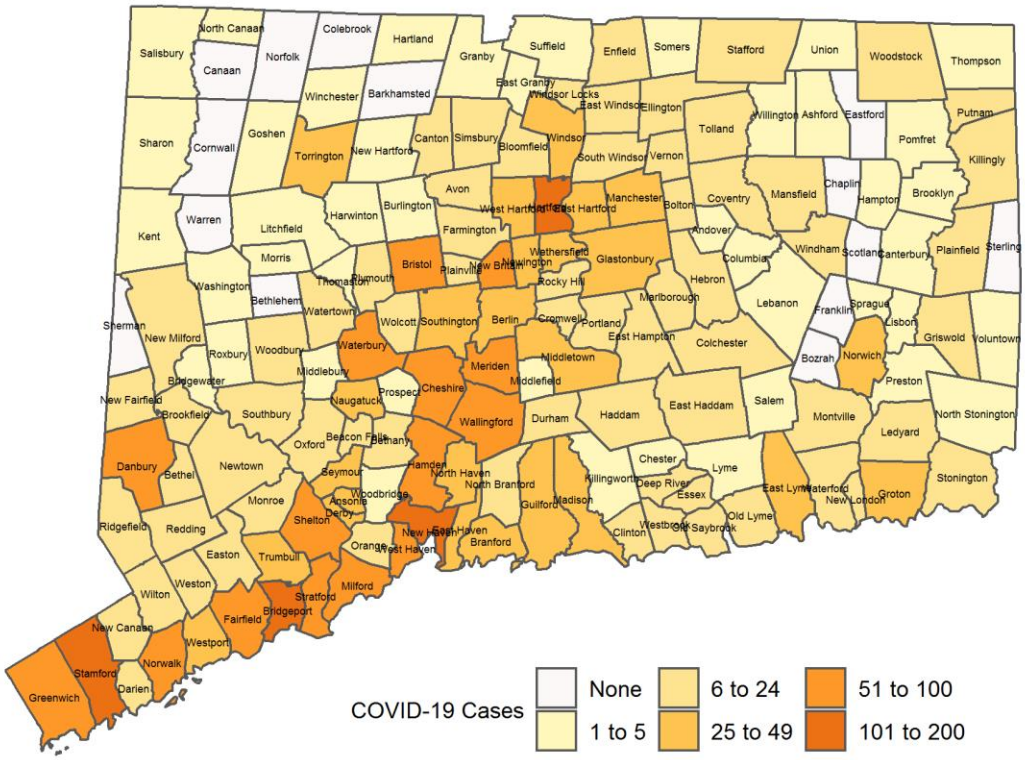
The graph below shows the number of COVID-19 associated deaths since August 1, 2020 by week of death and whether the person was residing in a congregate setting, such as a nursing home, managed residential community, or correctional facility.



Community Transmission of COVID-19

There were 3,569 new COVID-19 cases with specimen collection date during December 15-21, as shown in the map below. During this seven-day period, the statewide case rate was 98.975 per 100,000 CT population; there were more than 100 new COVID-19 cases in 4 towns.

Number of COVID-19 Cases by Town
with Specimen Collection date during December 15-21



Map does not include 10 *cases pending address validation*

Epidemiology of COVID-19 by Vaccine Status

Methodology

To determine cases of COVID-19 among fully vaccinated persons or among those who have received an additional dose of COVID-19 vaccine, DPH matches COVID-19 case data with the vaccine registry to determine which cases meet the definition of being fully vaccinated or having received an additional dose and which are also vaccine breakthrough cases.

- A case of COVID-19 in a fully vaccinated person (e.g., vaccine breakthrough case) is defined as a person who has a positive PCR/NAAT or antigen test in a respiratory specimen collected ≥14 days after completing the final dose of an FDA-authorized or approved COVID-19 vaccine series and who did not have a previously positive COVID-19 test <90 days prior to the positive test currently under investigation.
- A case of COVID-19 in a fully vaccinated person who has received an additional dose is defined as a person who has a positive PCR/NAAT or antigen test in a respiratory specimen collected ≥14 days after receiving an additional dose of any COVID-19 vaccine and who did not have a previously positive COVID-19 test <90 days prior to the positive test currently under investigation.

All data presented below are preliminary and subject to change.

Data

The table below shows new COVID-19 cases for the previous 7 days December 15, 2022 - December 21, 2022 by vaccination status. The percentage of cases among fully vaccinated individuals is influenced by the high proportion of the population that is eligible for and has completed a vaccine series, and should be considered in light of the overall proportion of vaccinated individuals who have contracted the virus.

Status	Case Count	Percent
New Cases	3,566	
Not Fully Vaccinated	2,028	56.9
Fully Vaccinated	1,538	43.1

As of **December 07, 2022**, 305,718 cases of COVID-19 among fully vaccinated persons in Connecticut have been identified. Those 305,718 cases account for 10.18 percent of the 2,773,773 persons who are fully vaccinated.

Since the beginning of the pandemic, 636,304 cases have been identified among individuals who are not fully vaccinated.

One thousand three hundred fifty-four COVID-19 related deaths have occurred among the 305,718 fully vaccinated persons confirmed with COVID-19.

The table below shows cases and deaths among fully vaccinated persons, and among persons who have received an additional dose, by age group. As shown below, persons who have received an additional dose are a subset of those cases that are fully vaccinated.

Cases and Deaths Among Fully Vaccinated Persons and Persons with Additional Doses by Age Group

Age groups	# (%) Cases	# (%) 1 Add Dose Cases	# (%) 2 Add Dose Cases	# (%) Deaths	# (%) 1 Add Dose Deaths	# (%) 2 Add Dose Deaths
0-4	50 (0%)					
5-11	6,783 (2.2%)	182 (0.1%)	9 (0.1%)	1 (0.1%)		
12-15	10,773 (3.5%)	1,278 (1%)	24 (0.1%)			
16-24	36,223 (11.8%)	9,388 (7.2%)	78 (0.5%)	2 (0.1%)	1 (0.2%)	
25-34	47,546 (15.6%)	15,964 (12.2%)	321 (2%)	4 (0.3%)		
35-44	48,778 (16%)	18,940 (14.4%)	401 (2.5%)	16 (1.2%)	2 (0.4%)	
45-54	48,334 (15.8%)	21,033 (16%)	1,391 (8.6%)	35 (2.6%)	11 (2.2%)	
55-64	50,535 (16.5%)	26,736 (20.4%)	4,031 (24.8%)	141 (10.4%)	41 (8.1%)	6 (7.8%)
65-74	31,199 (10.2%)	20,648 (15.8%)	5,104 (31.4%)	214 (15.8%)	72 (14.3%)	9 (11.7%)
75+	25,497 (8.3%)	16,926 (12.9%)	4,895 (30.1%)	941 (69.5%)	378 (74.9%)	62 (80.5%)
Total	305,718	131,095	16,254	1,354	505	77

SARS-CoV-2 Variant Surveillance

The Centers for Disease Control and Prevention (CDC) have identified three types of SARS-CoV-2 variants: variants of concern, variants being monitored, and variants of high consequence. The definitions for the three different variant categories and substitutions of therapeutic concern can be found here: SARS-CoV-2 Variants of Concern | CDC.

Different terminology has been developed by international scientists for naming SARS-CoV-2 variants. Recently, the World Health Organization (WHO) developed new labels for describing these variants to the public. Below, the WHO label are listed for each variant described.

Below are data on variants of concern and variants being monitored identified among Connecticut residents. No variants of high consequence have been defined by CDC to date.

Data presented are based on variant data reported directly to DPH and include data since January 2021-present.

Data below represent sequences that have been reported to DPH as of 12/21/2022 with specimen collection dates between 01/12/2021 and 12/16/2022. **The total number of SARS-CoV-2 sequences reported to DPH with a valid specimen collection date is 51633.** Data are preliminary and updated as new data are received.

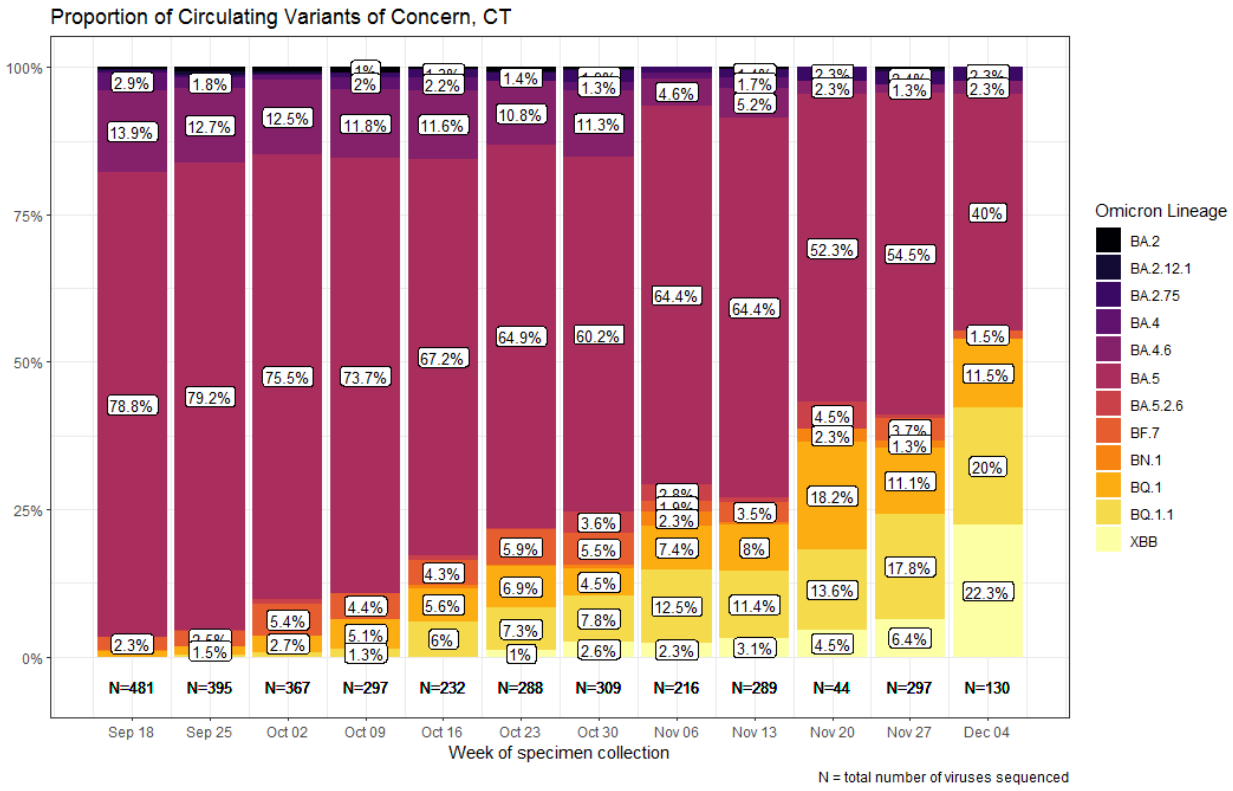
Variant	Number	Percentage
Omicron	29,384	56.91
Delta	17,235	33.38
Alpha	2,525	4.89
Iota	1,083	2.10
Other	1,051	2.04
Gamma	137	0.27
Mu	84	0.16
Epsilon	60	0.12
Lambda	38	0.07
Beta	23	0.04
Eta	10	0.02
Kappa	2	0.00
Zeta	1	0.00

SARS-CoV-2 Variant Surveillance, continued

The figure below shows the change in proportion of circulating variants of concern by week reported to DPH through December 21, 2022. Variants identified as Omicron are shown by sublineage and all other variants are included as "Other Variants". Data include sequences from specimens with dates of collection from 01/12/2021–12/16/2022.

As of July 21, 2022, the plot below has been updated to reflect the following changes:

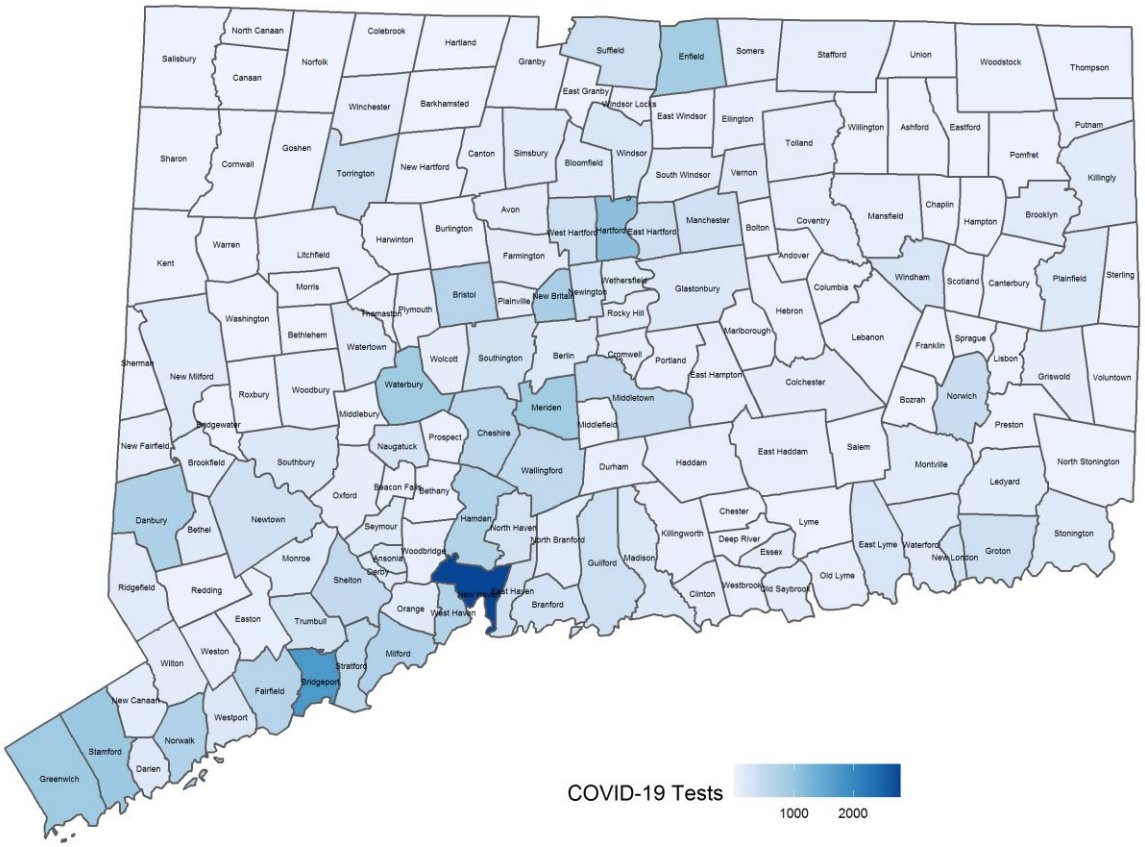
- BA.2 includes BA.2 and all sublineages except BA.2.12.1, BA.2.75, BN.1, and XBB.



COVID-19 Molecular and Antigen Tests during December 15 - December 21, 2022

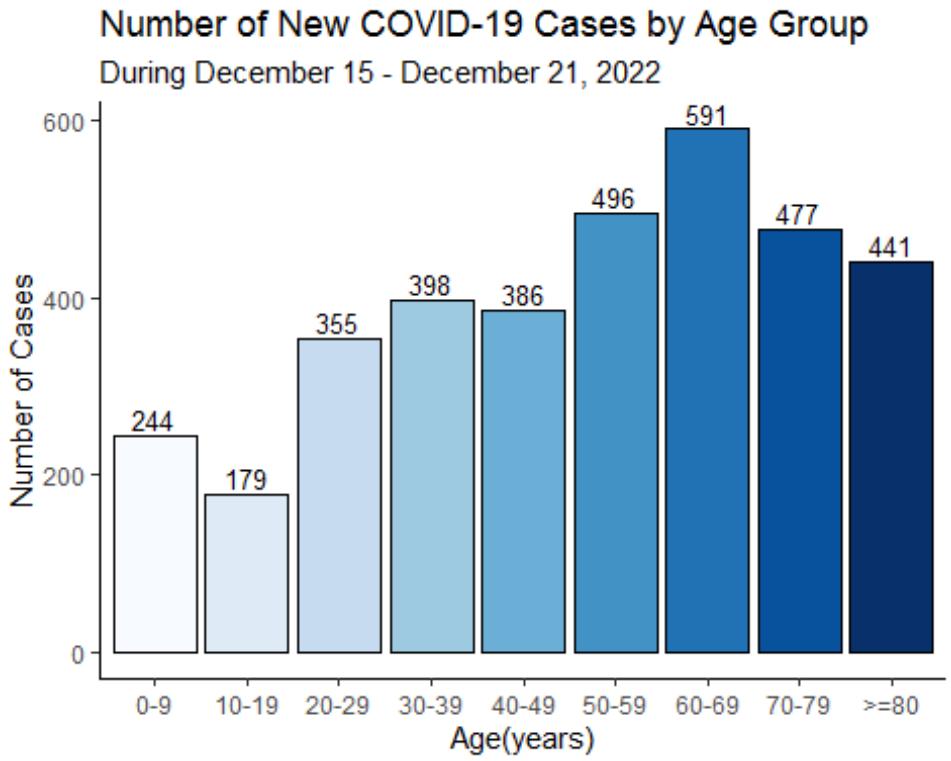
There were 35,447 molecular and antigen tests for COVID-19 performed with specimen collection date during December 15 - December 21, 2022. The map below shows the number of molecular and antigen COVID-19 tests by town with specimen collection date during December 15 - December 21, 2022.

Number of Molecular and Antigen Tests for COVID-19
with Specimen Collection Date During December 15-21



Map does not include tests pending address validation

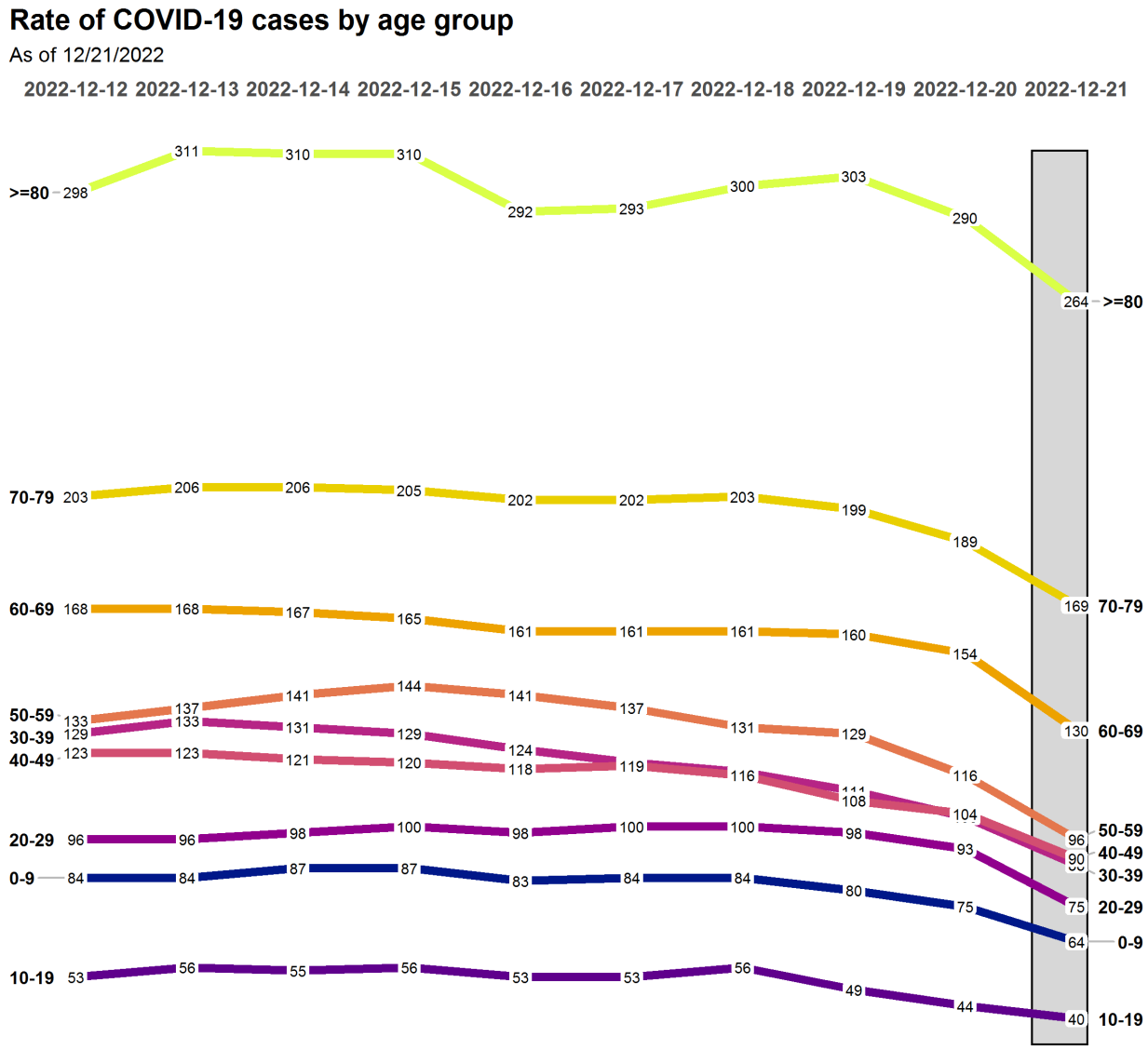
Age Distribution of COVID-19 Cases with Specimen Collection or Onset During December 15 - December 21, 2022



All data are preliminary and subject to change.

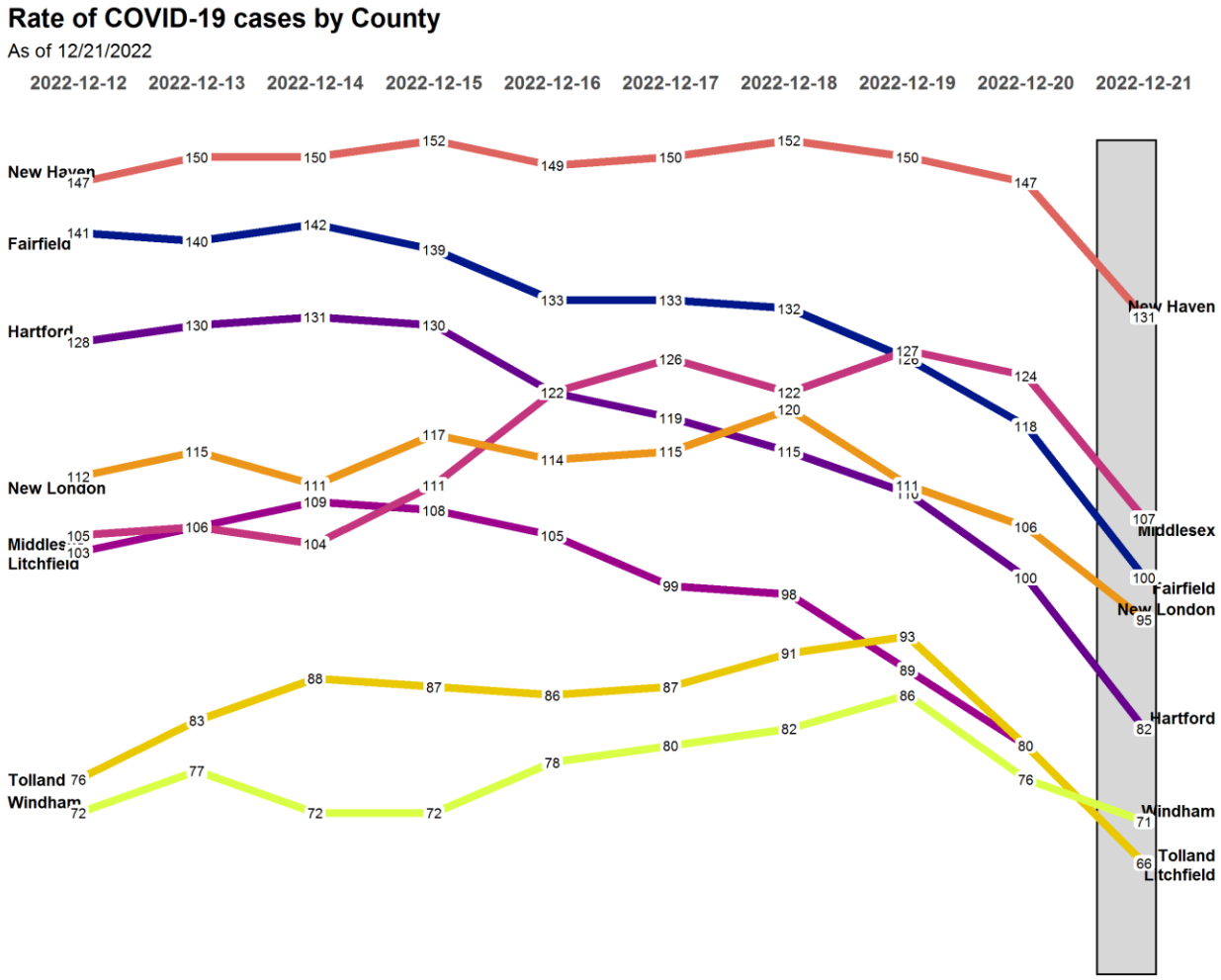
Weekly Incidence by Age Group

The chart below shows a rate of new COVID-19 cases per 100,000 population by age group based on a weekly sum of new cases. The rates in this chart are calculated by dividing the sum of the number of new cases diagnosed each day and the previous 7-days and then dividing by the annual population in each age group, and then multiplying by 100,000.



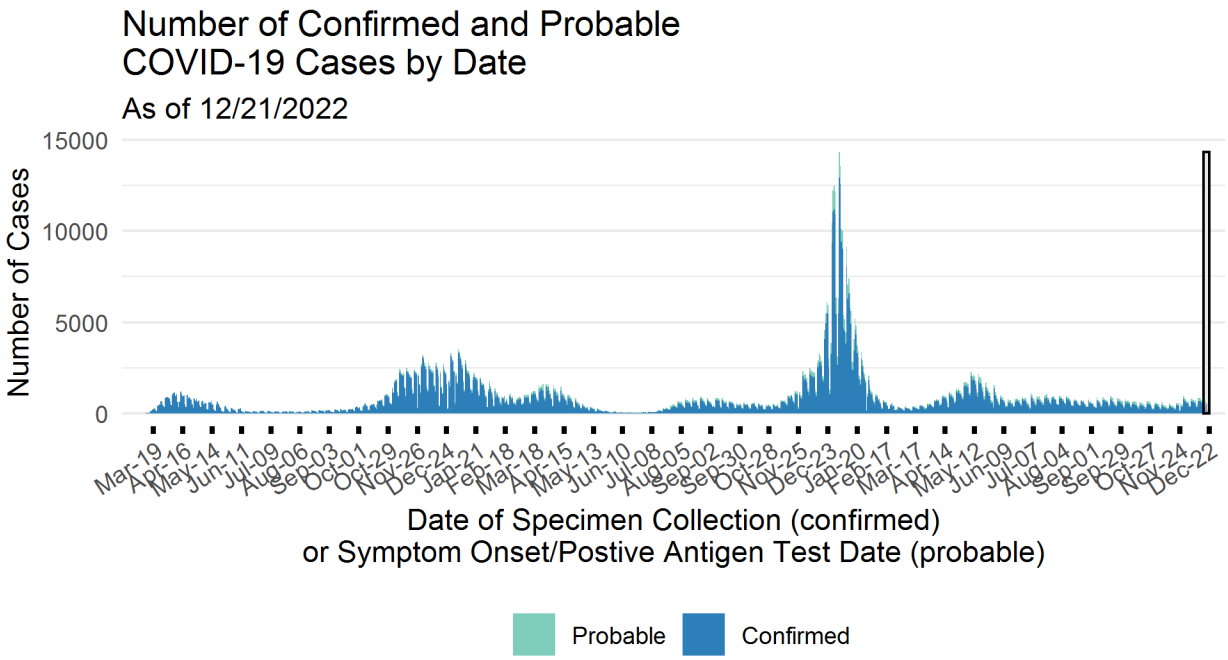
Weekly Incidence by County

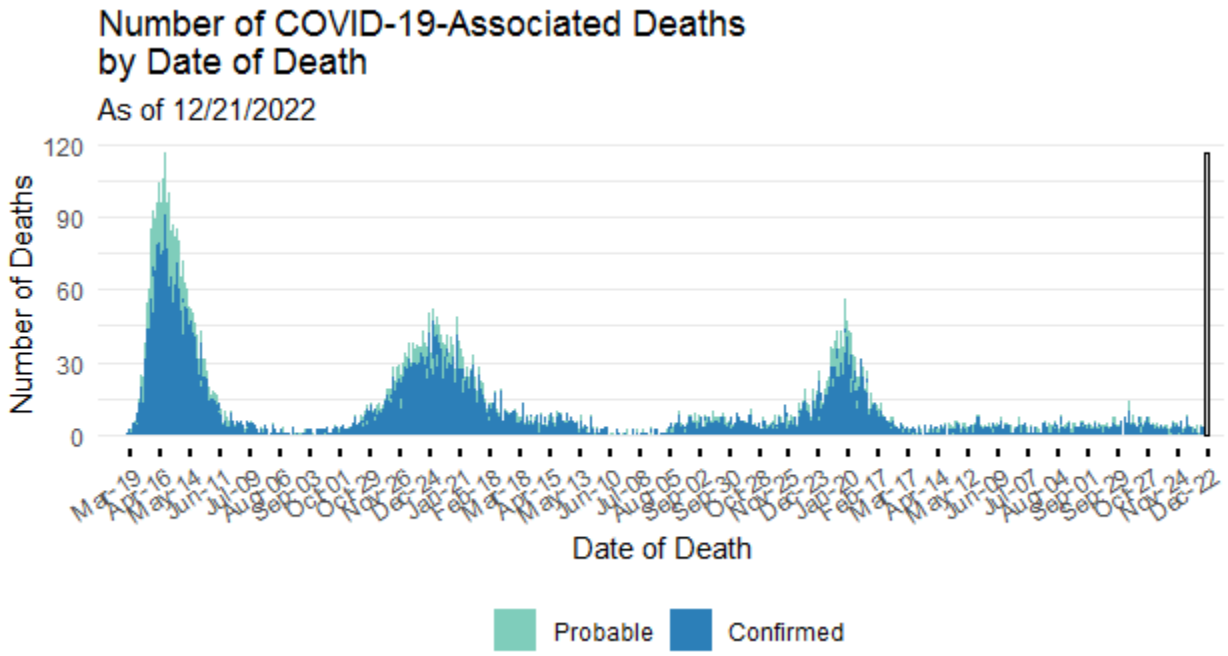
The chart below shows a rate of new COVID-19 cases per 100,000 population by county based on a weekly sum of new cases. The rates in this chart are calculated by dividing the sum of the number of new cases diagnosed each day and the previous 7-days and then dividing by the annual population in each county, and then multiplying by 100,000.



Cumulative Number of COVID-19 Cases and COVID-19-Associated Deaths by Date

Test results may be reported several days after the result. Data are incomplete for most recent dates shaded in grey. Data from previous dates are routinely updated.



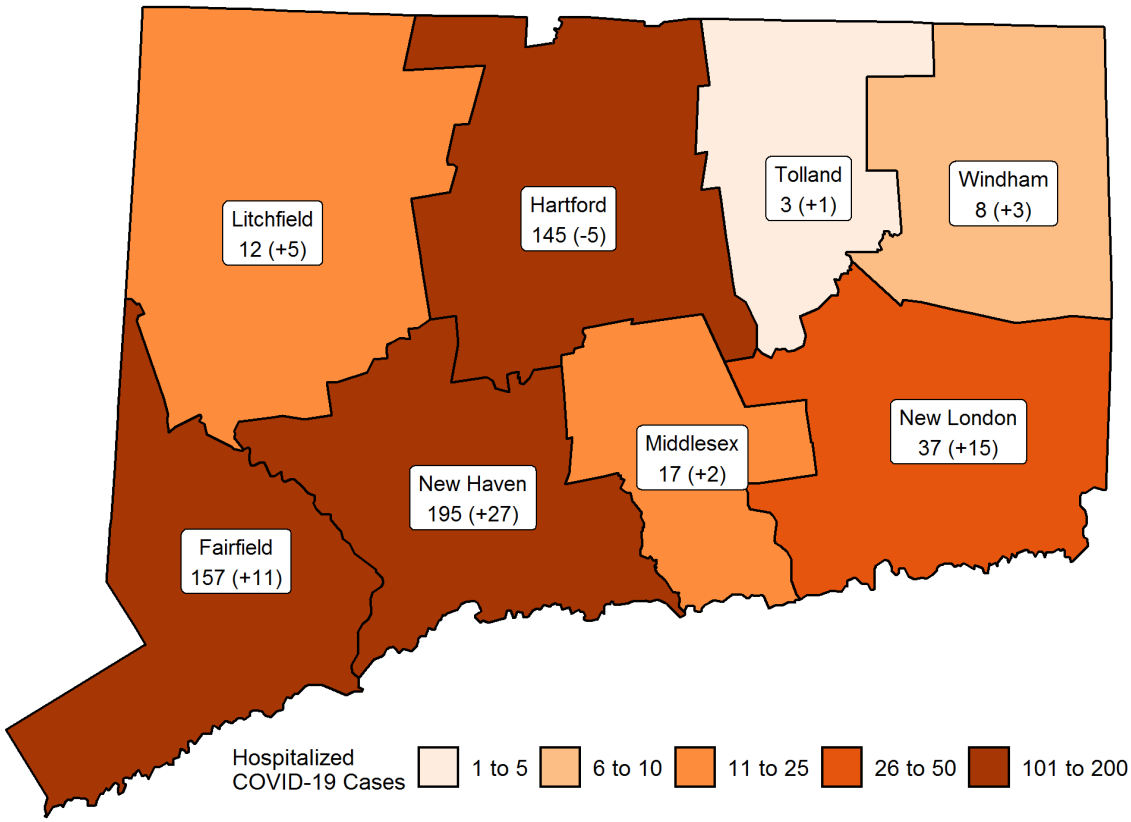


Hospitalization Surveillance

The map below shows the number of patients currently hospitalized with laboratory-confirmed COVID-19 by county based on data collected by the Connecticut Hospital Association. The distribution is by location of hospital, not patient residence. The labels indicate the number of patients currently hospitalized with the change from 7 days ago in parentheses.

Patients Currently Hospitalized by Connecticut County

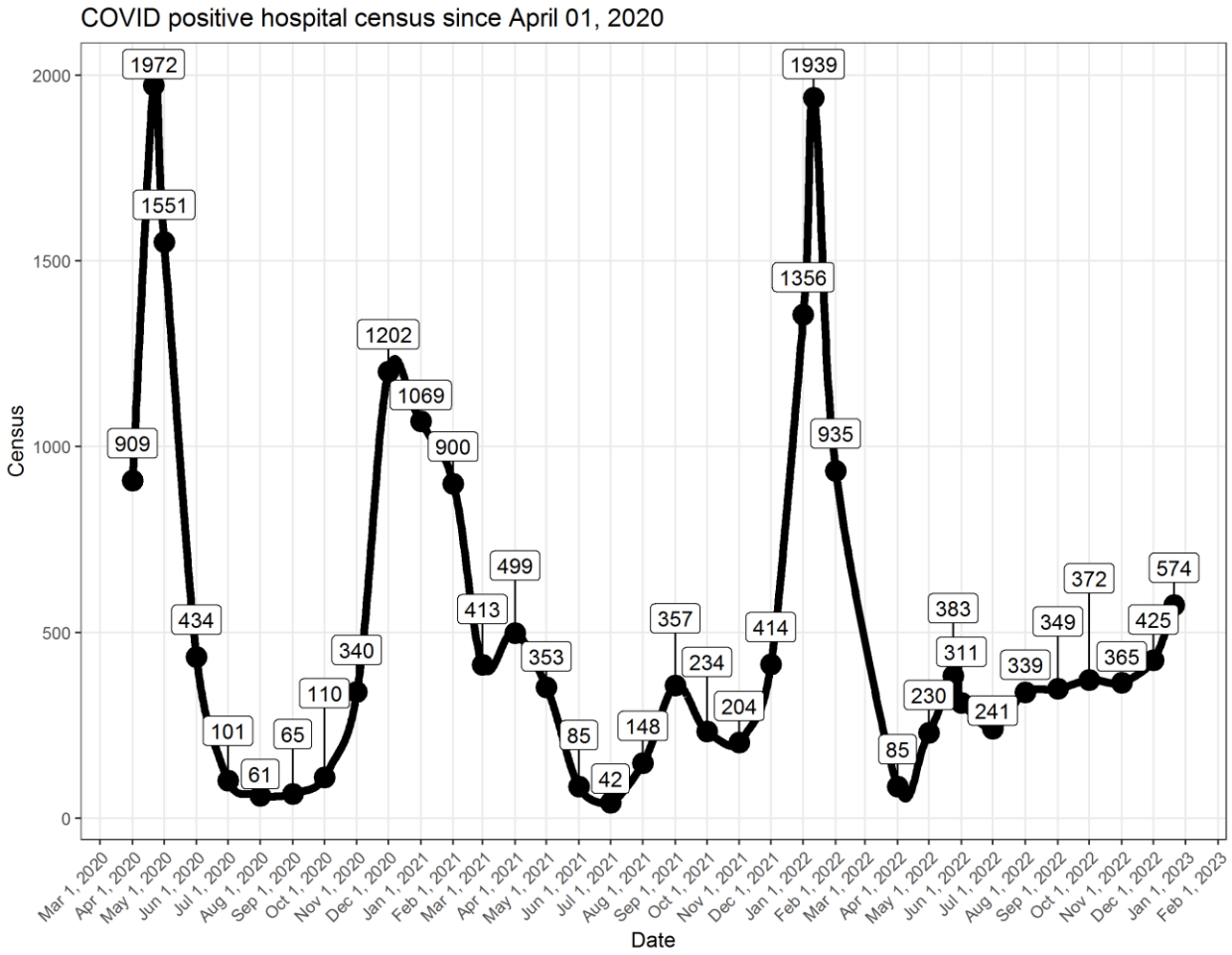
Distribution by location of hospital not patient residence. Data from the Connecticut Hospital Association.



More information about hospitalized cases of COVID-19 in New Haven and Middlesex Counties is available from COVID-NET.

COVID-19 Hospital Census in Connecticut

The chart below shows the COVID-19 hospital census, which is the number of patients currently hospitalized with laboratory-confirmed COVID-19 on each day. Data were collected by the Connecticut Hospital Association and are shown since April 1, 2020.

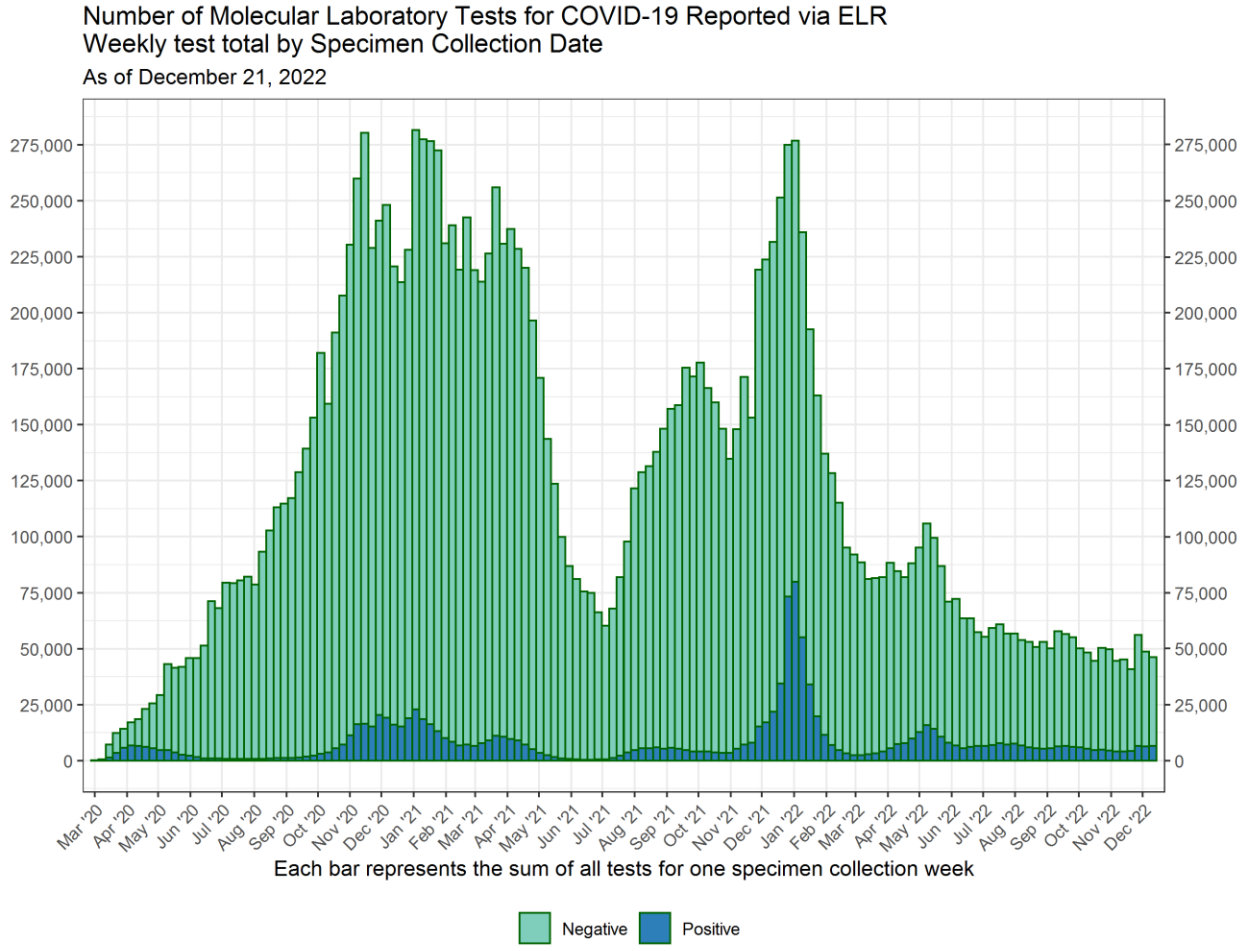


Laboratory Surveillance

Molecular Tests

To date, DPH has received reports on a total of 15,991,913 molecular COVID-19 laboratory tests; of these 15,856,638 test results were received via electronic laboratory reporting (ELR) methods from commercial laboratories, hospital laboratories, and the Dr. Katherine A. Kelley State Public Health Laboratory. The chart below shows the number of tests reported via ELR by date of specimen collection and test result.

Test results may be reported several days after specimen collection. Data are incomplete for most recent dates shaded in grey. Data for previous dates are routinely updated.

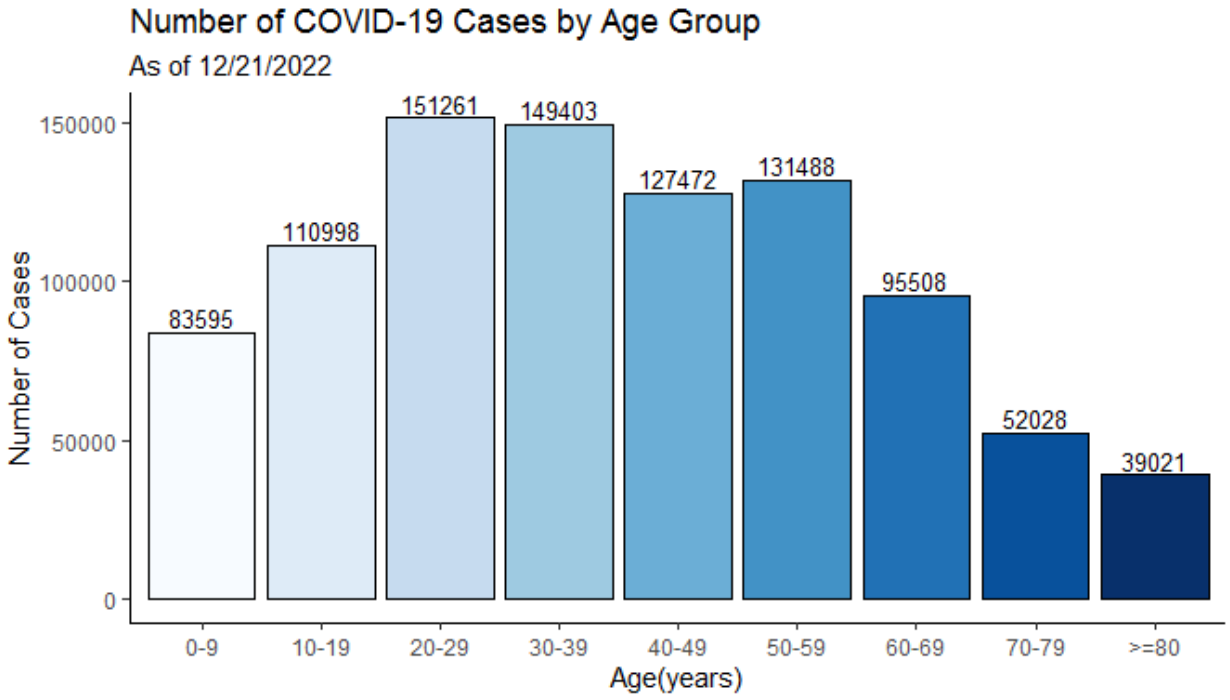


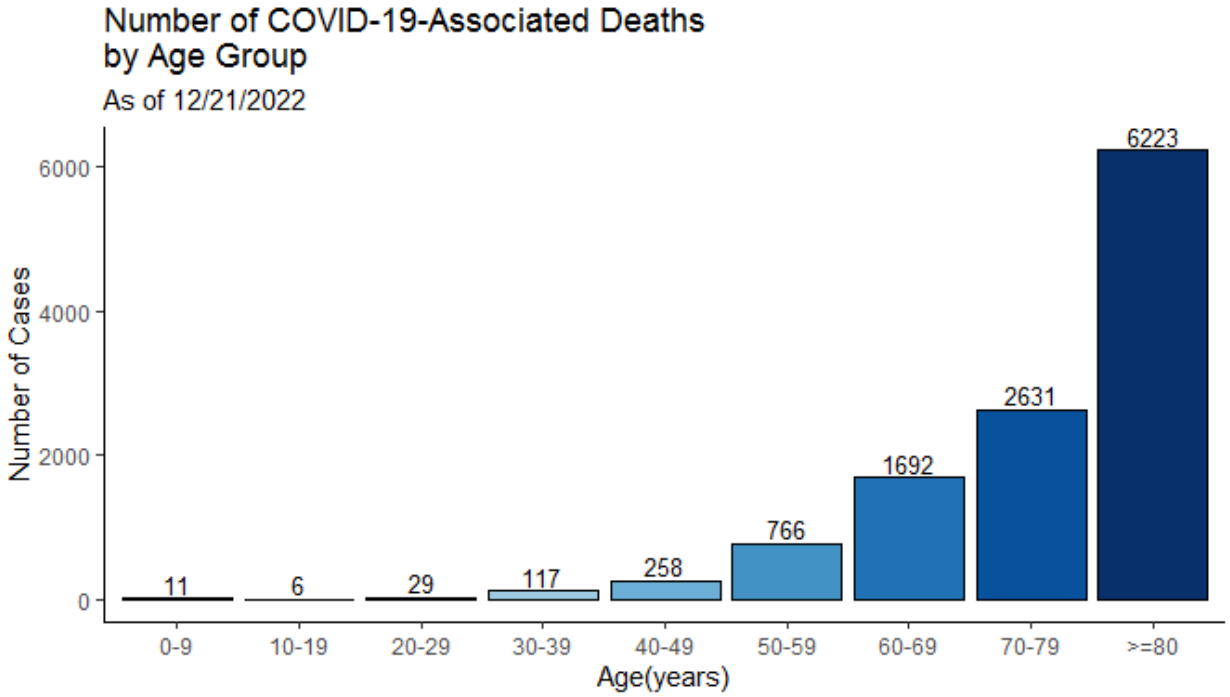
Testing of recently collected specimens is ongoing and does not reflect a decrease in testing. Chart only includes test results received by electronic laboratory reporting.

ELR = Electronic Laboratory Reporting

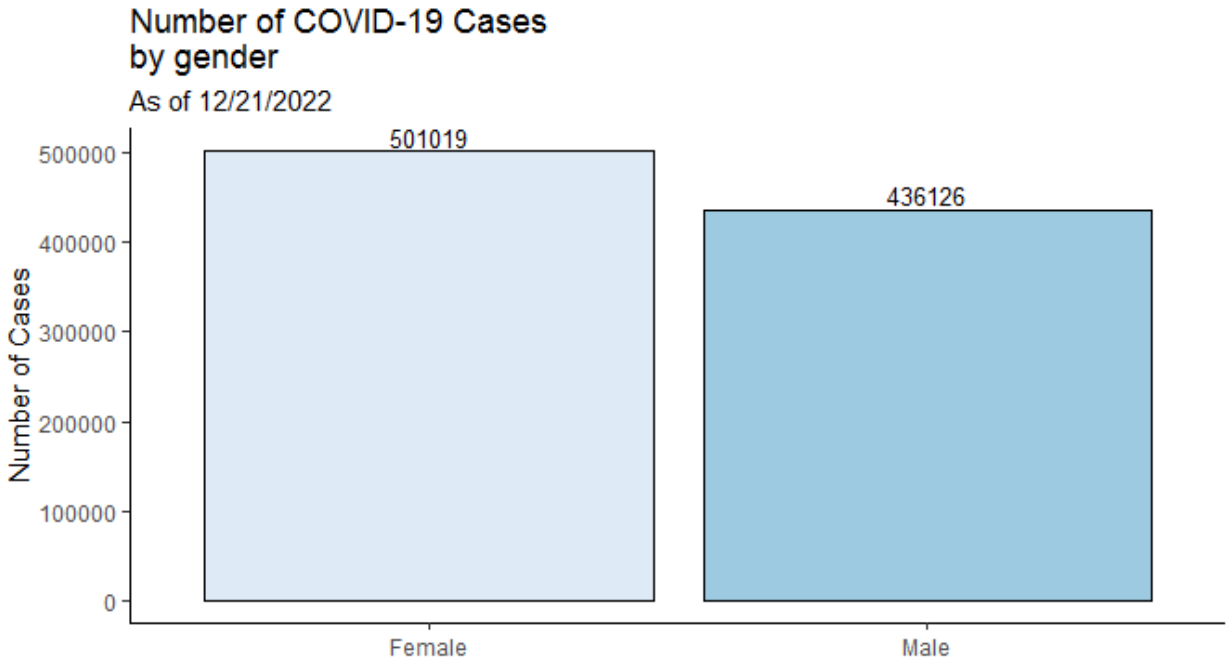
Characteristics of COVID-19 Cases and Associated Deaths

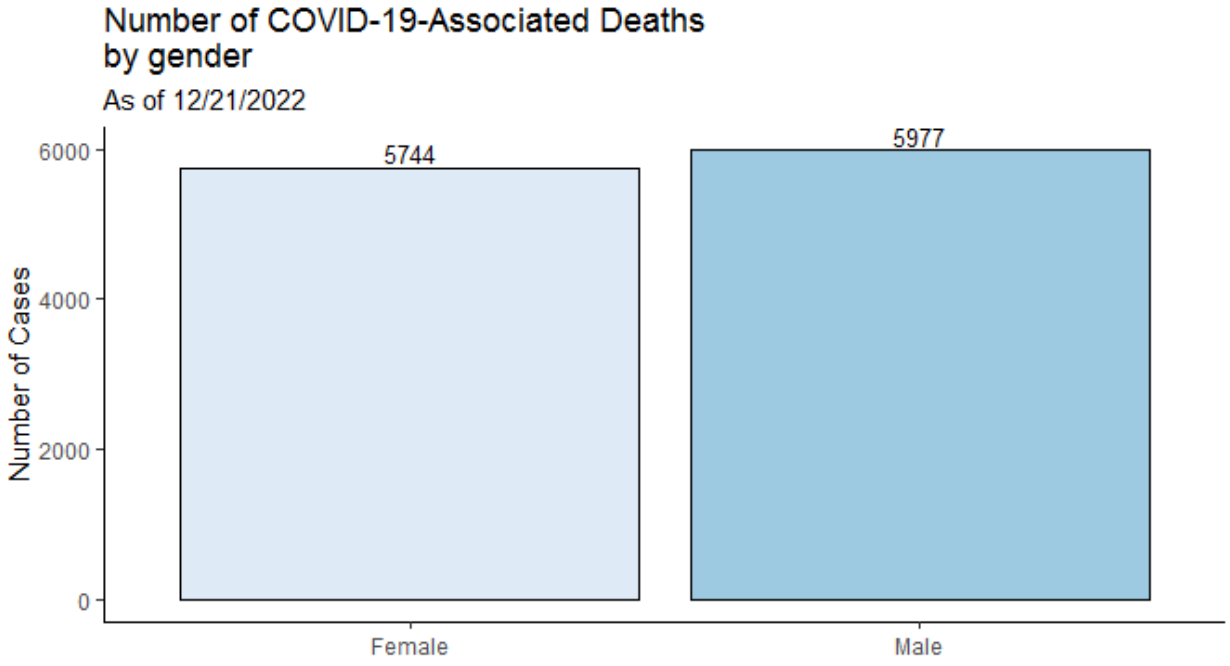
Counts may not add up to total case count because demographic data may be missing.





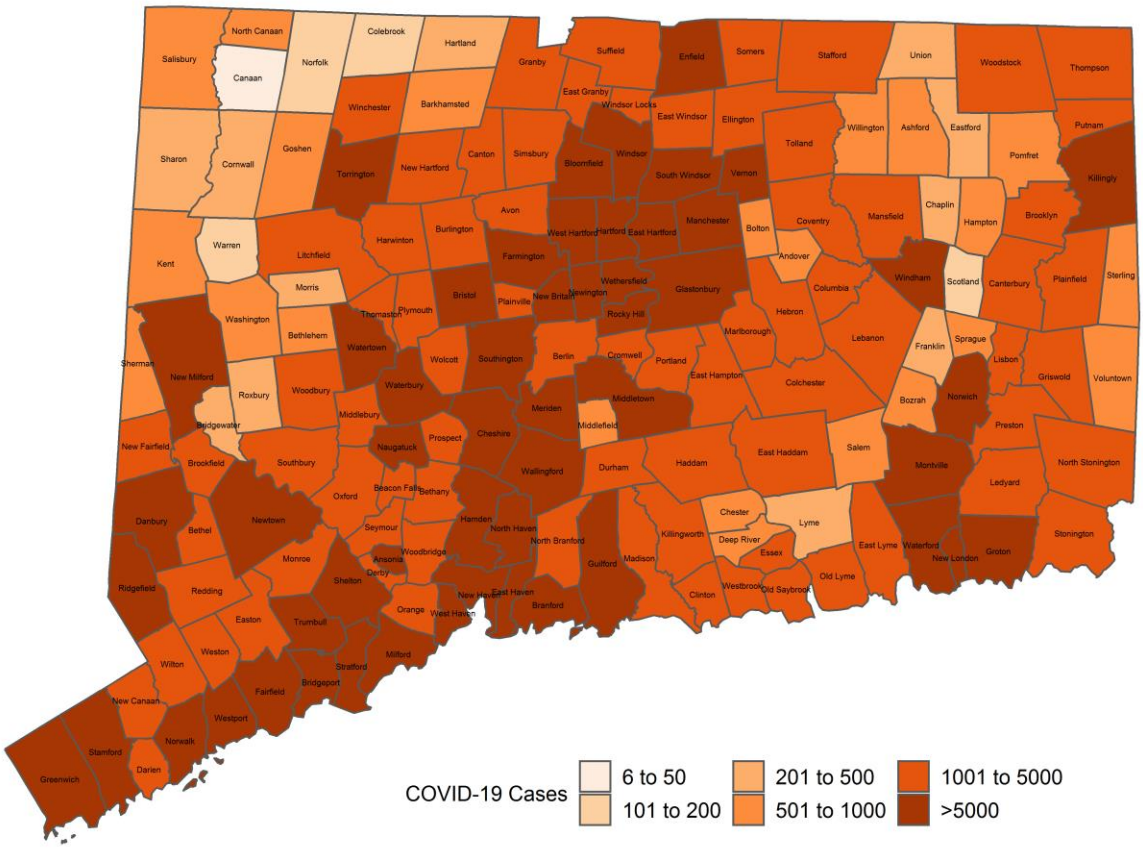
Counts may not add up to total case count because demographic data may be missing.



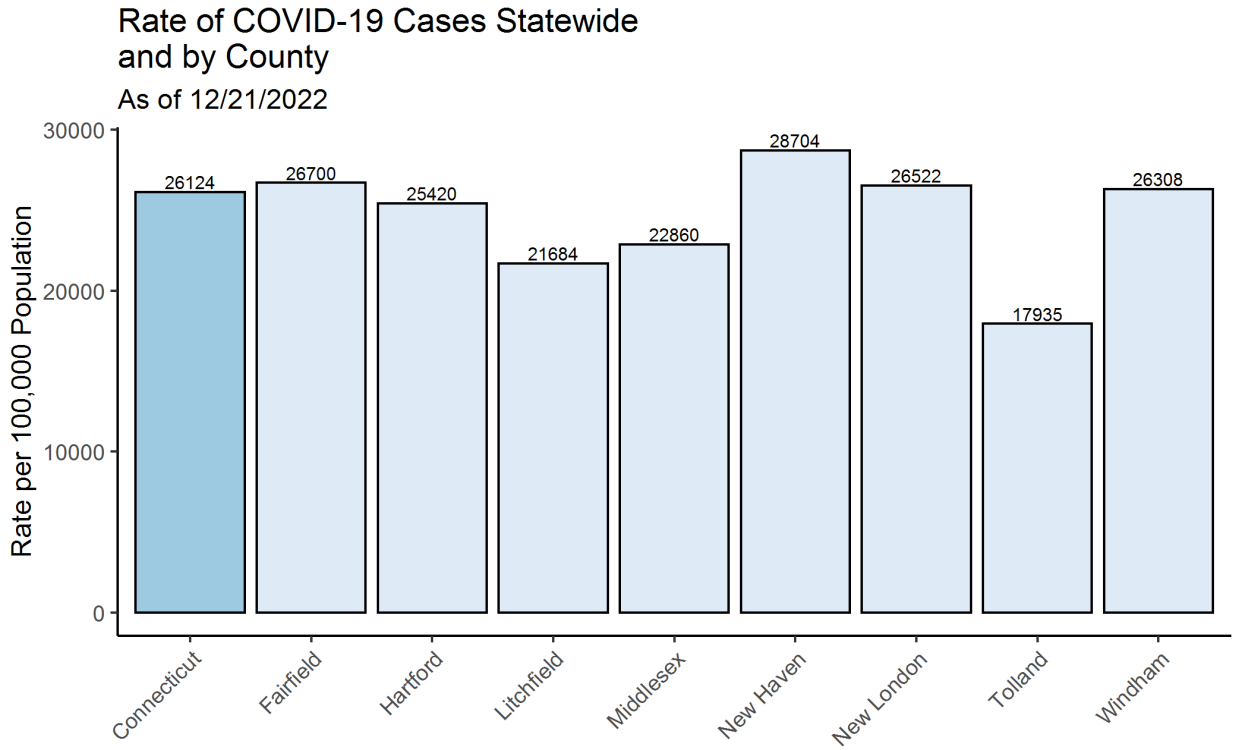


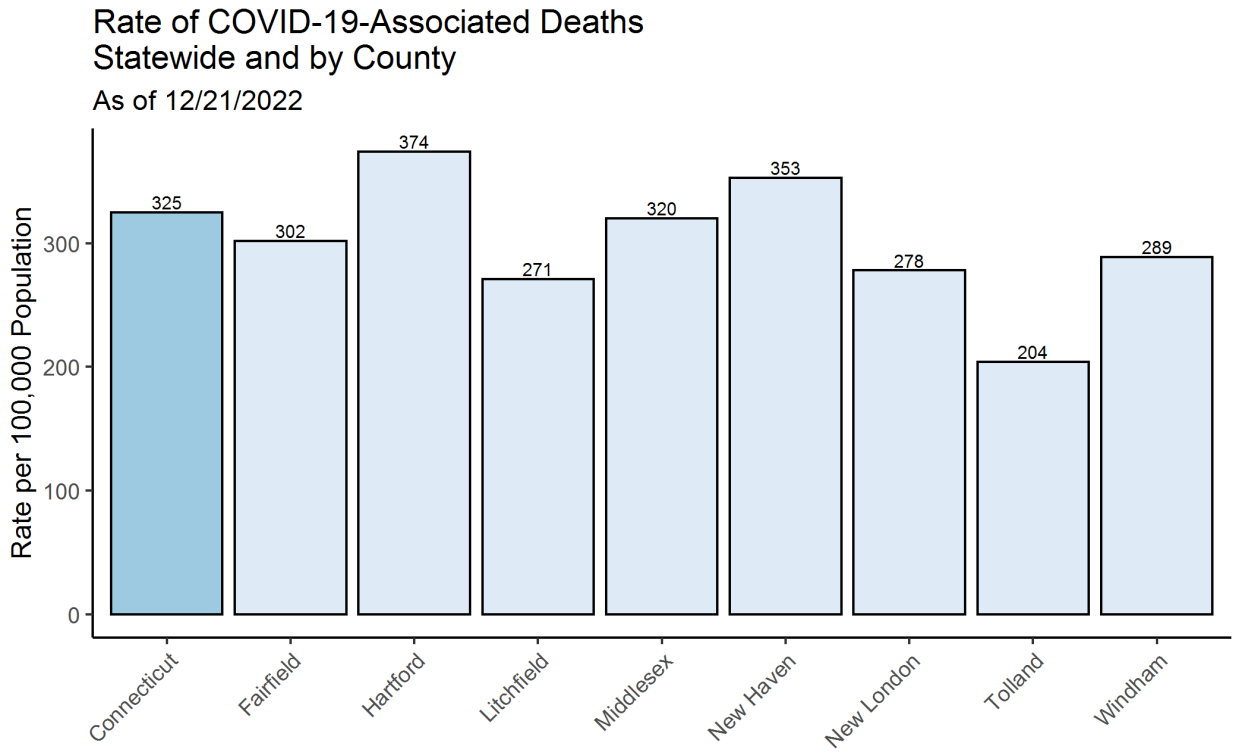
Cumulative Number of COVID-19 Cases by Town

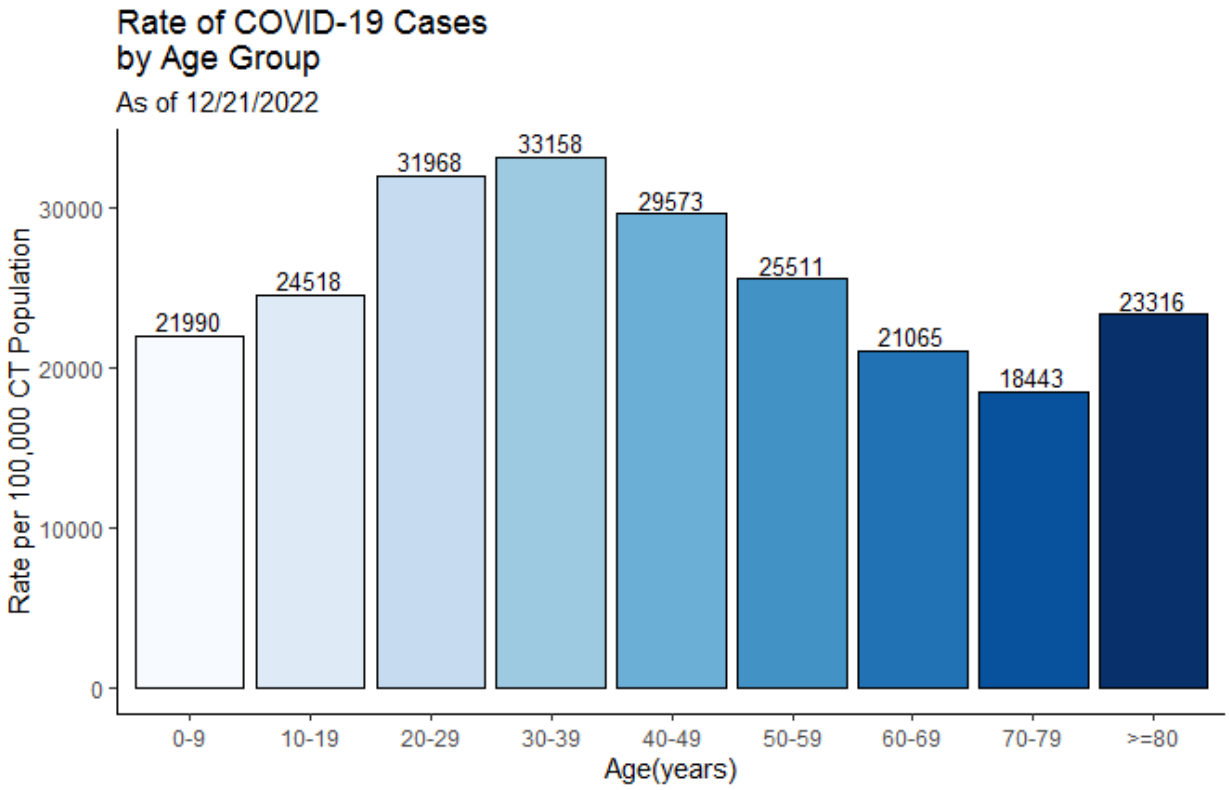
Map does not include 3070 cases pending address validation

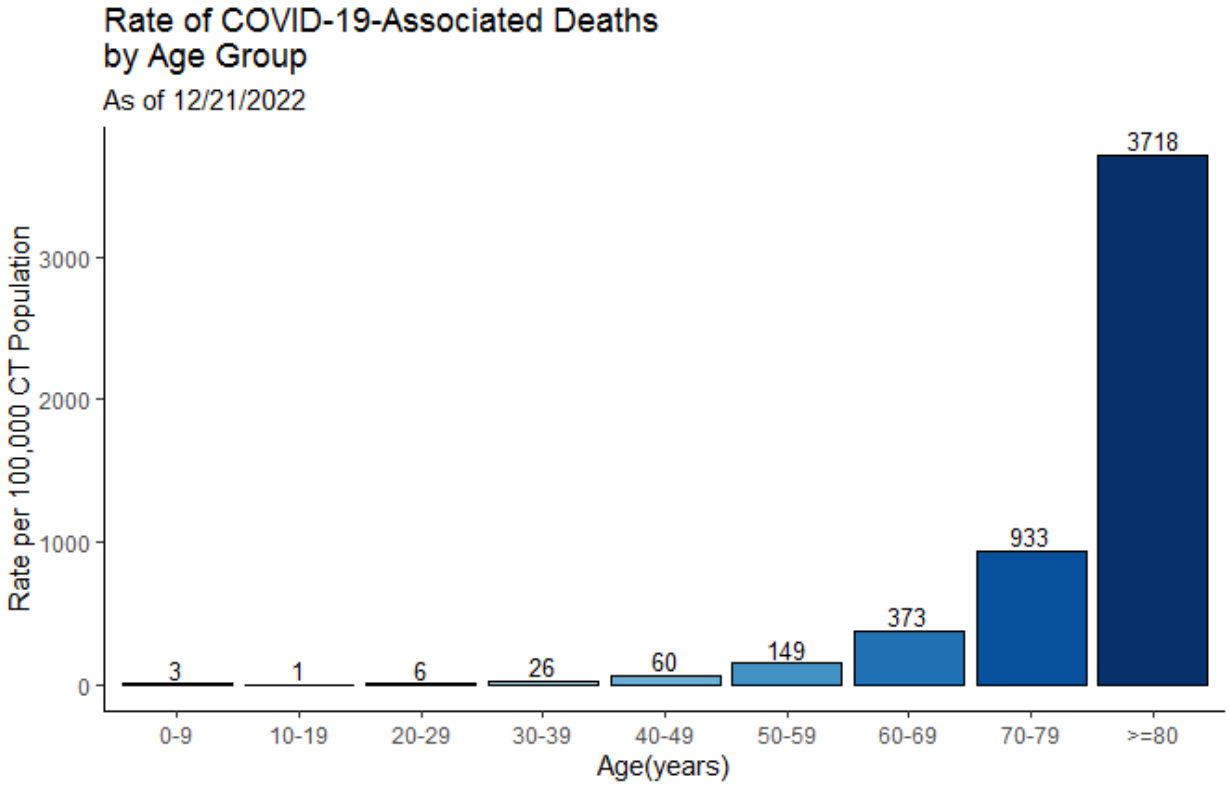


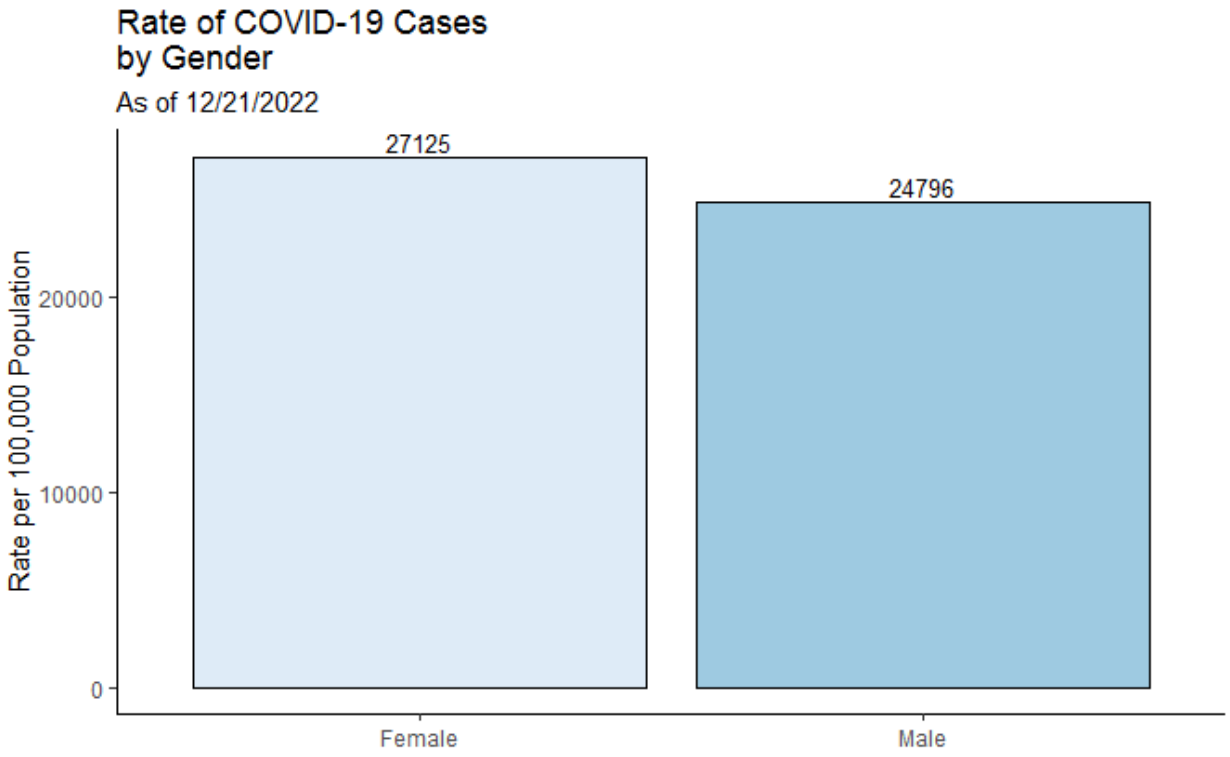
APPENDIX A. The following graphs show the number of cases per 100,000 Connecticut residents statewide and by county, age group, and gender. Population estimate from: DPH Population Statistics

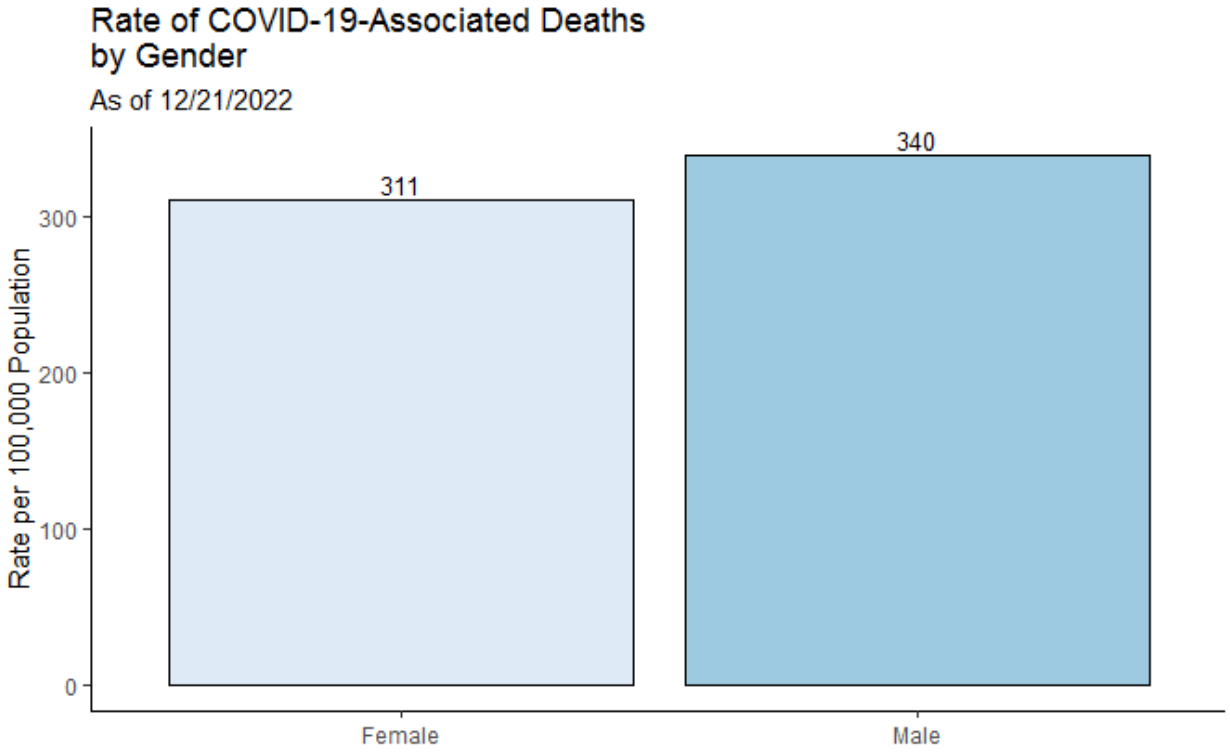




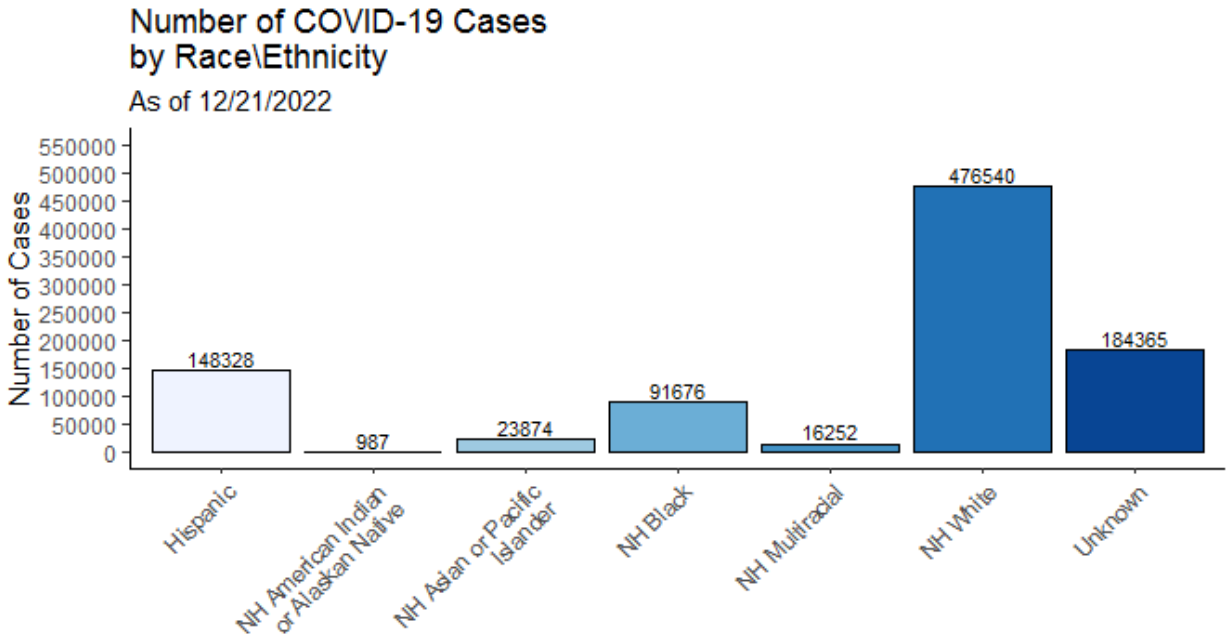

Rate of COVID-19 Cases
by Age Group
As of 12/21/2022
Rate per 100,000 CT Population
0
10000
20000
30000
21990
24518
31968
33158
29573
25511
21065
18443
23316
0-9
10-19
20-29
30-39
40-49
50-59
60-69
70-79
>=80
Age(years)

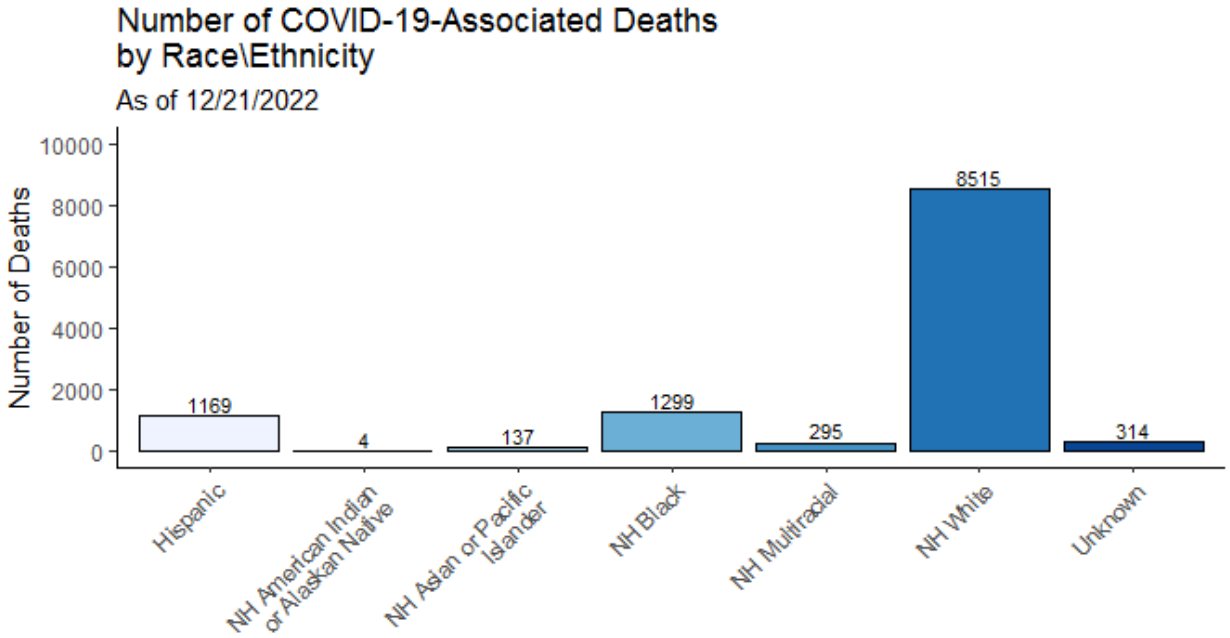

Rate of COVID-19-Associated Deaths
by Age Group
As of 12/21/2022
Rate per 100,000 CT Population
0
1000
2000
3000
3
1
6
26
60
149
373
933
3718
0-9
10-19
20-29
30-39
40-49
50-59
60-69
70-79
>=80
Age(years)


Rate of COVID-19 Cases
by Gender
As of 12/21/2022
27125
24796
Rate per 100,000 Population
20000
10000
0
Female
Male


Rate of COVID-19-Associated Deaths
by Gender
As of 12/21/2022
311
340
Rate per 100,000 Population
300
200
100
0
Female
Male

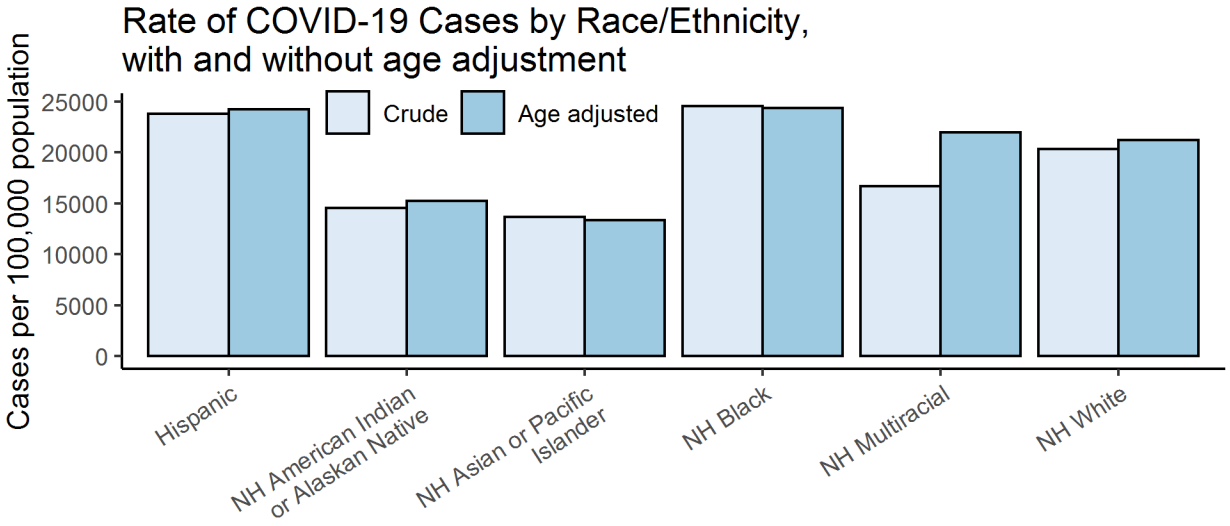
APPENDIX B. The following graphs show the number of cases and deaths by race and ethnicity. *Categories are mutually exclusive. The category "multiracial" includes people who answered 'yes' to more than one race category. NH=Non-Hispanic*

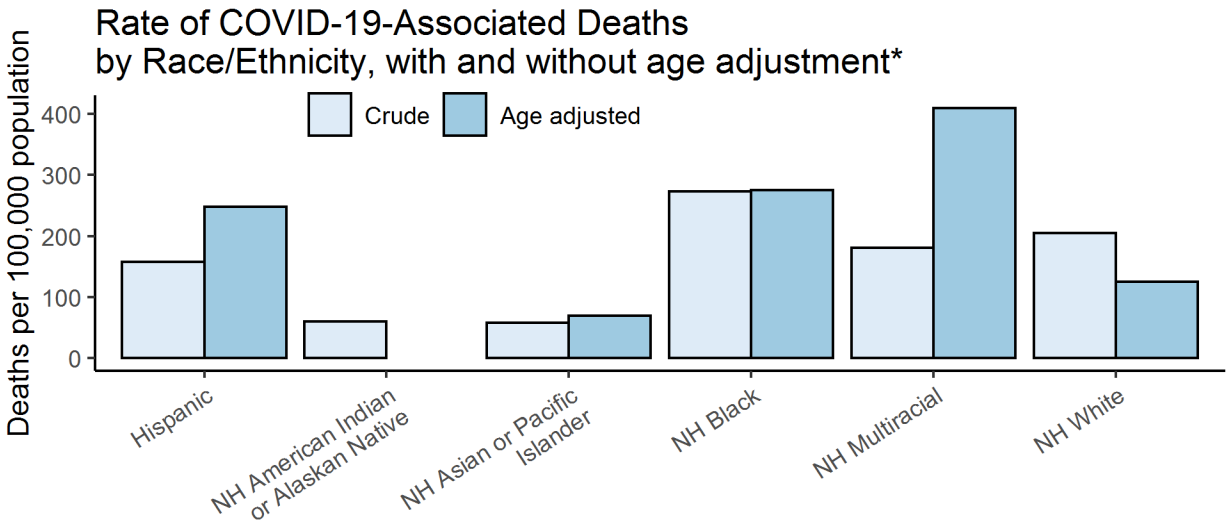




The following graphs show the number of COVID-19 cases and COVID-19-associated deaths per 100,000 population by race and ethnicity. Crude rates represent the total cases or deaths per 100,000 people. Age-adjusted rates consider the age of the person at diagnosis or death when estimating the rate and use a standardized population to provide a fair comparison between population groups with different age distributions. Age-adjustment is important in Connecticut as the median age of among the non-Hispanic white population is 47 years, whereas it is 34 years among non-Hispanic blacks, and 29 years among Hispanics.

The 2020 Connecticut and 2000 US Standard Million populations were used for age adjustment; population estimates from: DPH Population Statistics. *Categories are mutually exclusive. Cases missing data on race/ethnicity are excluded from calculation of rates. NH=Non-Hispanic*





**Age adjusted rates only calculated for groups with at least 30 deaths*