# *COVID-19 Update July 22, 2021*

As of **July 21, 2021**, the total of laboratory-confirmed and probable COVID-19 cases reported among Connecticut residents is **351825**, including **321522** laboratory-confirmed and **30303** probable cases. **Sixty-six** patients are currently hospitalized with laboratory-confirmed COVID-19. There have been **8286** COVID-19-associated deaths.

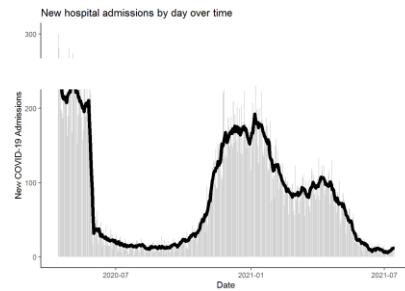| Overall Summary	Total*	Change Since Yesterday
COVID-19 Cases (confirmed and probable)	351825	+295
COVID-19 Tests Reported (molecular and antigen)	9803237	+13270
Daily Test Positivity		2.22%
Patients Currently Hospitalized with COVID-19	66	+8
COVID-19-Associated Deaths	8286	+4

**Includes confirmed plus probable cases
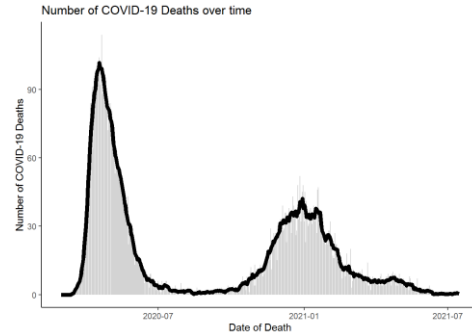
Cases
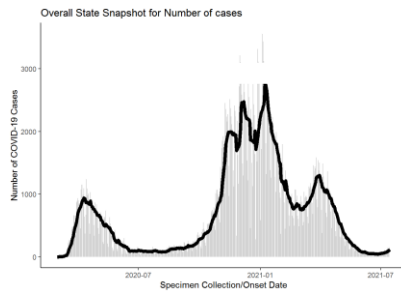
Total Cases: 351,825

Admissions

Total Hospitalizations: 36,680

Hospital Census
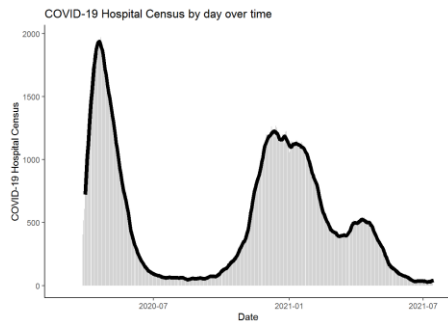
Hospital Census: 7/21/2021: 66

Deaths

Total Deaths: 8286

All data are preliminary and subject to change.

COVID-19 Cases and Associated Deaths by County of Residence as of 07/21/21.

County	COVID-19 Cases		COVID-19-Associated Deaths	
	Confirmed	Probable	Confirmed	Probable
Fairfield County	92,051	9,035	1,775	429
Hartford County	79,411	5,840	2,004	438
Litchfield County	13,075	1,708	259	39
Middlesex County	11,788	1,189	287	87
New Haven County	83,377	9,652	1,840	294
New London County	21,448	1,332	349	102
Tolland County	8,819	906	149	38
Windham County	10,541	470	154	41
Pending address validation	1,012	171	0	1
Total	**321522**	**30303**	**6817**	**1469**

National COVID-19 statistics and information about preventing spread of COVID-19 are available from the Centers for Disease Control and Prevention.
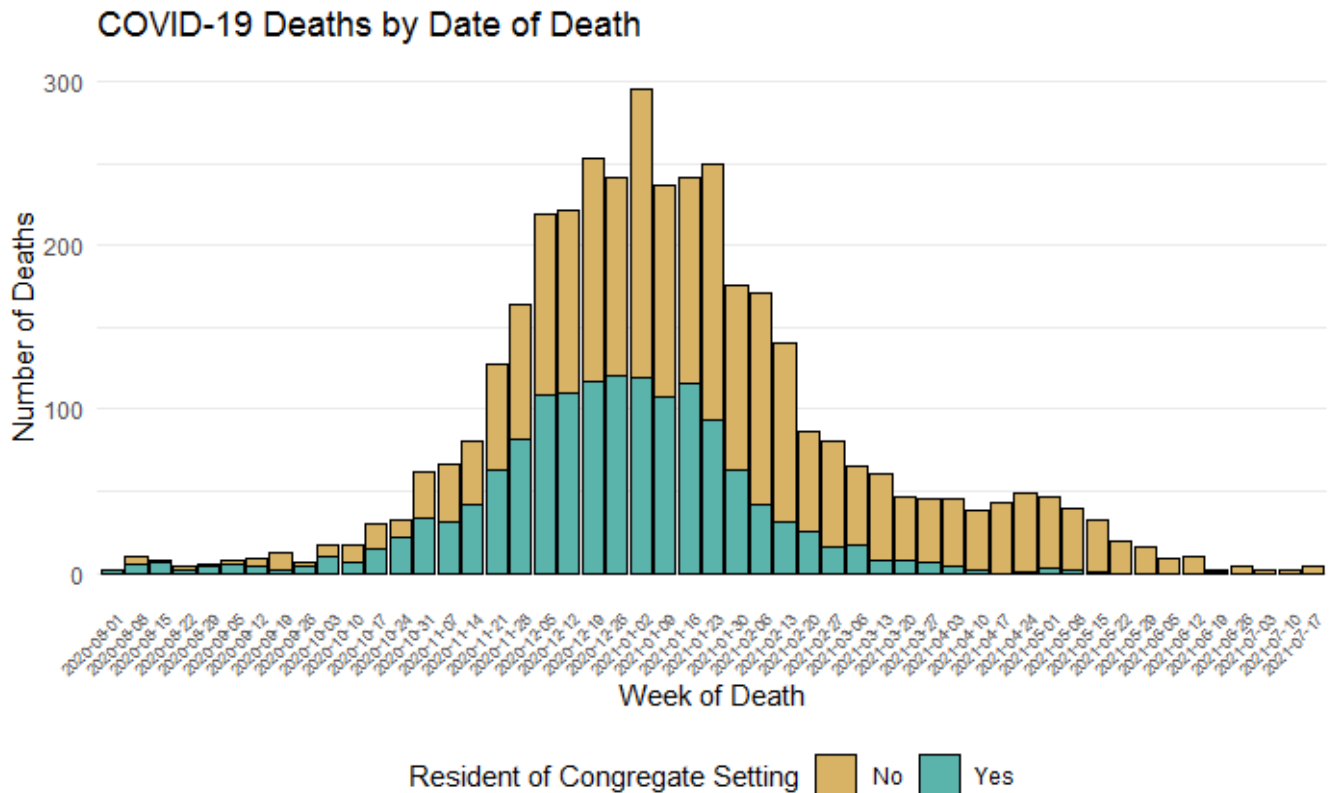
Day-to-day changes reflect newly reported cases, deaths, and tests that occurred over the last several days to week. All data in this report are preliminary; data for previous dates will be updated as new reports are received and data errors are corrected. Hospitalization data were collected by the Connecticut Hospital Association. Deaths reported to either OCME or DPH are included in the daily 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 now includes probable cases based on positive antigen test results. During the past two weeks (July 04-17), there were 1484 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.

Number of COVID-19 Cases among Connecticut Residents by Week of Specimen Collection or Onset
July 03, 2021-May 29, 2021

Values shown: 3345, 2514, 1769, 1258, 784, 534, 385, 339, 308, 385, 517, 967, 583

Y-axis: Number of COVID-19 Cases
X-axis: Specimen Collection/ Onset Date (May-01, May-08, May-15, May-22, May-29, Jun-05, Jun-12, Jun-19, Jun-26, Jul-03, Jul-10, Jul-17, Jul-24)

Shading indicates data are incomplete for the current week.

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.
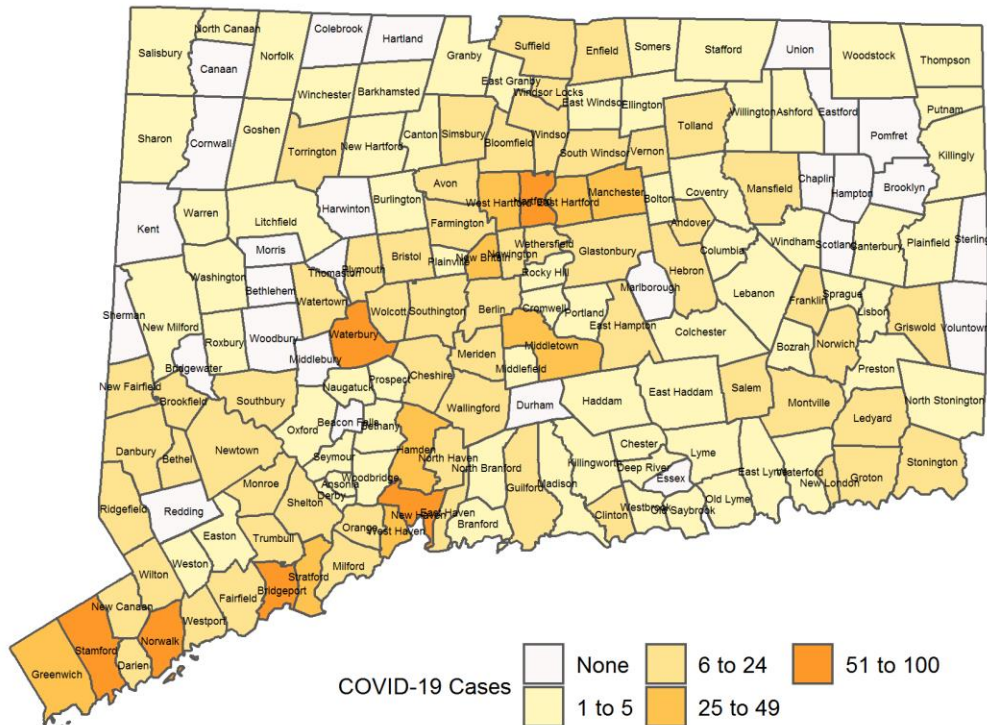
COVID-19 Deaths by Date of Death

Y-axis: Number of Deaths
X-axis: Week of Death

Resident of Congregate Setting: No / Yes

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All data are preliminary and subject to change.

Community Transmission of COVID-19

Among 1484 new COVID-19 cases with specimen collection or onset date during July 04-17, there were 1483 cases among people living in community settings, as shown in the map below. This corresponds to an average of 2.97 new COVID-19 cases per day per 100,000 population. Cases among people residing in nursing homes, assisted living facilities, and correctional facilities are excluded. Darker colors indicate towns with more cases.

During this two-week period, there weren't any towns with more than 100 new COVID-19 cases.

Number of COVID-19 Cases among People Living in Community Settings by Town with Specimen Collection or Onset Date During July 04-17
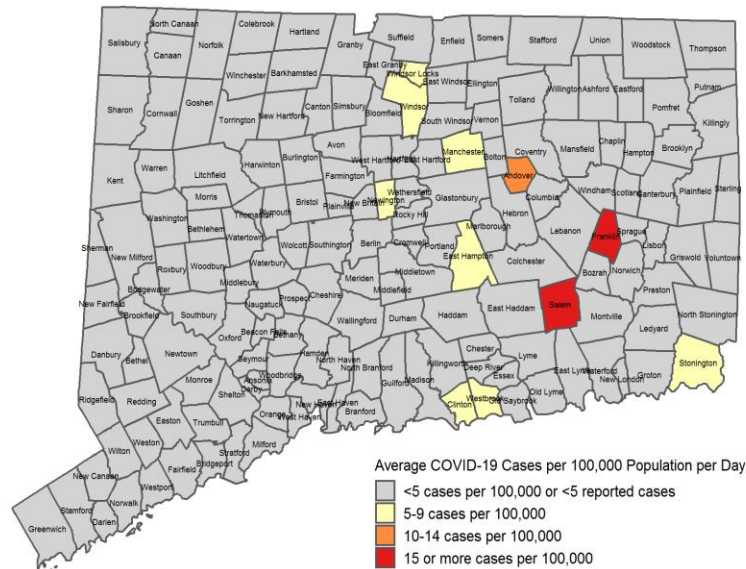

Map does not include 10 *cases pending address validation*

All data are preliminary and subject to change.

Because towns with larger populations are likely to have more cases, it is also important to look at the number of new cases per 100,000 population. The maps below show the average number of new cases per 100,000 population per day, with darker colors indicating higher rates. Cases among people residing in nursing homes, assisted living facilities, and correctional facilities are excluded.
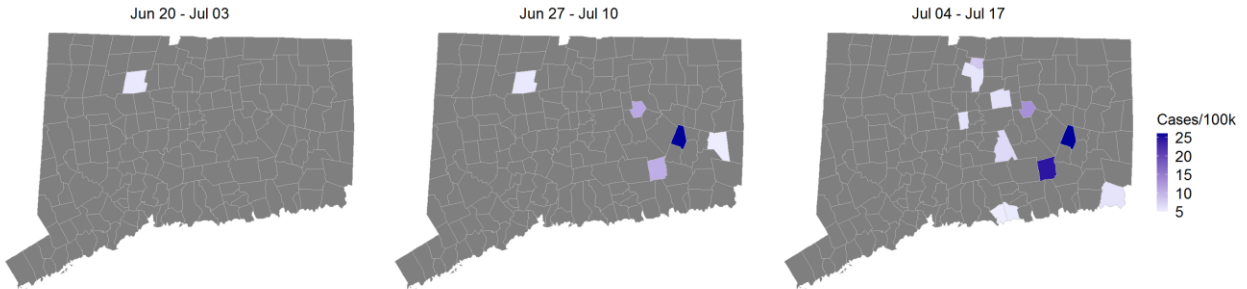
Among towns with at least 5 new cases during July 04-17, 2 towns had an average rate of 15 or more cases per 100,000 population per day, shown in red in the map below.

Average Daily Rate of COVID-19 Cases among People Living in Community Settings per 100,000 Population by Town with Specimen Collection or Onset Date During July 04-17

Map does not include 10 *cases pending address validation*

All data are preliminary and subject to change.

SARS-CoV-2 Variant Surveillance

The Centers for Disease Control and Prevention (CDC) have identified three types of SARS-CoV-2 variants: variants of interest, variants of concern 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, both the Pango lineage and sub-lineages (used by CDC) and the WHO label are listed (if available) for each variant described.

Data provided are from the Global Initiative for Sharing Avian Influenza Data (GISAID). GISAID is a global science initiative established in 2008 that provides open-access to genomic data of influenza viruses and the SARS-CoV-2 virus responsible for the COVID-19 pandemic. Laboratories performing whole genome sequencing are encouraged to share their data on this website. More information about GISAID can be found at GISAID - Initiative. This data source provides the ability to monitor all variants of the SARS-CoV-2 virus that are circulating and might be identified in the future.
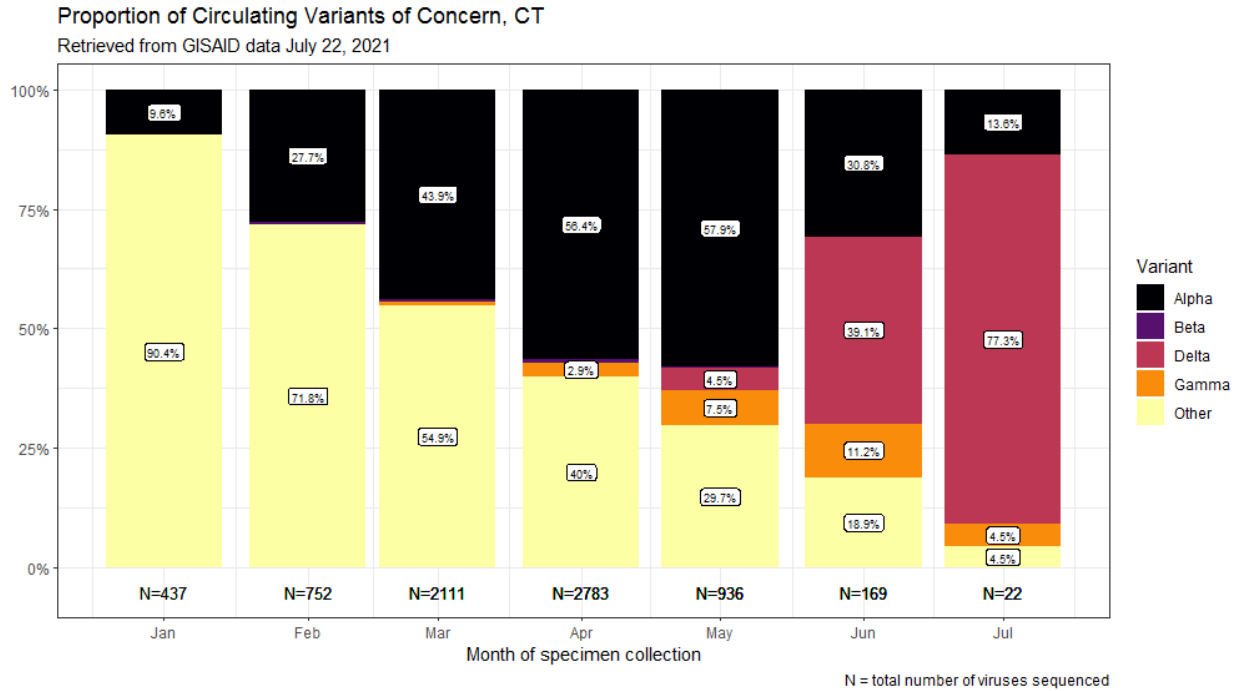
Below are data on variants of concern, variants of interest and substitutions of therapeutic concern identified among Connecticut residents. No variants of high consequence have been defined by CDC to date.

Data are from GISAID as of 07/22/2021 and represent sequences from specimens with dates of collection from 3/2/2020–7/6/2021. **The total number of SARS-CoV-2 sequences in GISAID for Connecticut residents are 8,032.**

|	**Number**	**Percentage**
Variants of Concern		
B.1.1.7 (Alpha)	3,347	41.7%
B.1.351 (Beta)	35	0.4%
P.1 (Gamma)	183	2.3 %
B.1.617.2/AY.1/AY.2/AY.3 (Delta)	126	1.6%
Variants of Interest		
B.1.427/B.1.429 (Epsilon)	211	2.6%
B.1.525 (Eta)	21	0.3%
B.1.526 (Iota)	1,780	22.2%
B.1.617.1 (Kappa)	2	0.02%
B.1.617.3	0	0%
Substitutions of Therapeutic Concern		
E484K	1,101	13.7%
L452R	632	7.9%

SARS-CoV-2 Variant Surveillance, continued.

The plot below, based on data extracted from GISAID on 7/22/2021, shows the change in proportion of circulating variants of concern by month. Data include sequences from specimens with dates of collection from 1/1/2021–7/06/2021. Data reflect the overall small number of specimens that tested positive in the month of June.

Proportion of Circulating Variants of Concern, CT
Retrieved from GISAID data July 22, 2021

	Jan	Feb	Mar	Apr	May	Jun	Jul
Alpha	9.6%	27.7%	43.9%	56.4%	57.9%	30.8%	13.6%
Delta					4.5%	39.1%	77.3%
Gamma			2.9%	7.5%	11.2%	4.5%
Other	90.4%	71.8%	54.9%	40%	29.7%	18.9%	4.5%
N	N=437	N=752	N=2111	N=2783	N=936	N=169	N=22

Month of specimen collection

N = total number of viruses sequenced

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Connecticut nursing homes are required by the Connecticut Department of Public Health (DPH) and the Centers for Medicare and Medicaid Services (CMS) to report on the impact of COVID-19 on their residents and staff through CDC's National Healthcare Safety Network (NHSN). CT DPH uses data submitted to NHSN to produce a weekly nursing home report to depict recent COVID-19 activity in nursing homes. The following graph and table provide a quick overview of COVID-19 in CT nursing homes. For the complete DPH nursing home report, please see Nursing Home and Assisted Living Facilities Data.

Figure 1. Nursing Homes with Positive Staff or Residents October 6, 2020–July 20, 2021[1,2]
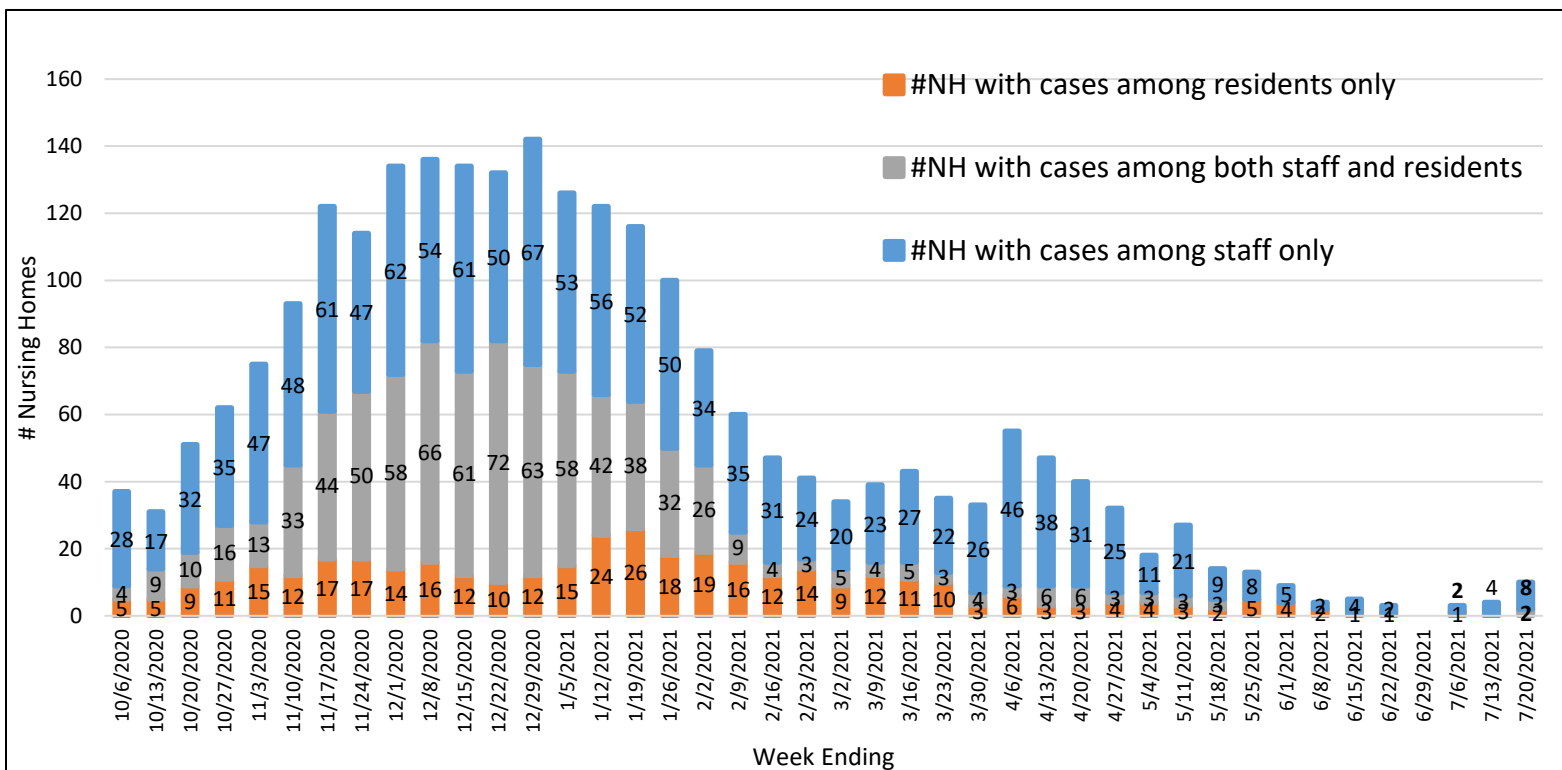
[1] For more detailed information on COVID-19 reporting and NHSN, please see here.
[2] Similar to DPH, CMS makes COVID-19 nursing home data, including vaccination rates, publicly available. Please see CMS' COVID-19 Nursing Home Data website.

Table 1: Statewide COVID-19 Vaccination coverage among nursing home residents and staff from NHSN[1,2]

	Statewide COVID-19 Vaccination Rate Data as of July 11, 2021	
	Resident Vaccination Rates N= 208 homes	Staff Vaccination Rates N= 206 homes
Average Vaccination Rate	89%	71%
Median Vaccination Rate	92%	72%
Range of Vaccination Rates	24-100%	27-100%
% of the reporting nursing homes with vaccination rate ≥ 75%	93%	43%

[1] NHSN vaccine reporting instructions for nursing homes can be found here.
[2] Similar to DPH, CMS makes COVID-19 nursing home data, including vaccination rates, publicly available. Please see CMS' COVID-19 Nursing Home Data website.

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All data are preliminary and subject to change.

COVID-19 Molecular and Antigen Tests during July 04-17

Among 123,951 molecular and antigen tests for COVID-19 with specimen collection date during July 04-17, 118,908 (96%) tests were conducted among people who did not reside in congregate settings (including nursing homes, assisted living, and correctional facilities). Of these 118,908 tests, 1807 (2%) were positive. The map below shows the number of molecular and antigen COVID-19 tests by town with specimen collection date during July 04-17 that were conducted among community residents.

Number of Molecular and Antigen Tests for COVID-19 among
People Living in Community Settings by Town
with Specimen Collection Date During July 04-17
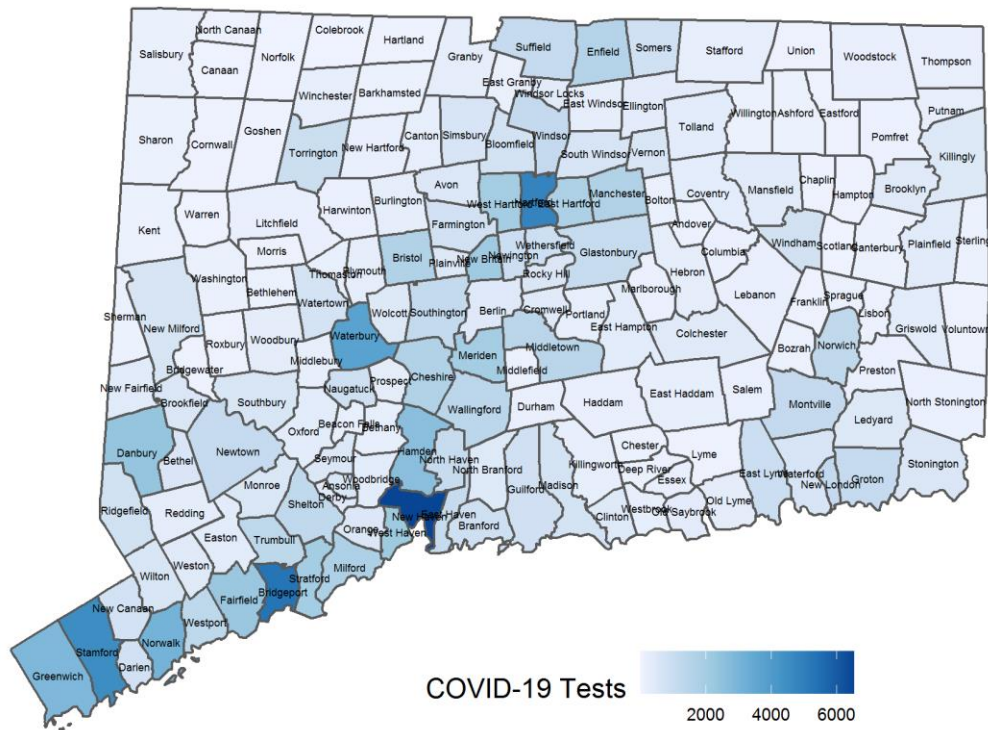
Map does not include tests pending address validation

All data are preliminary and subject to change.

Age Distribution of COVID-19 Cases with Specimen Collection or Onset During July 04-17, 2020

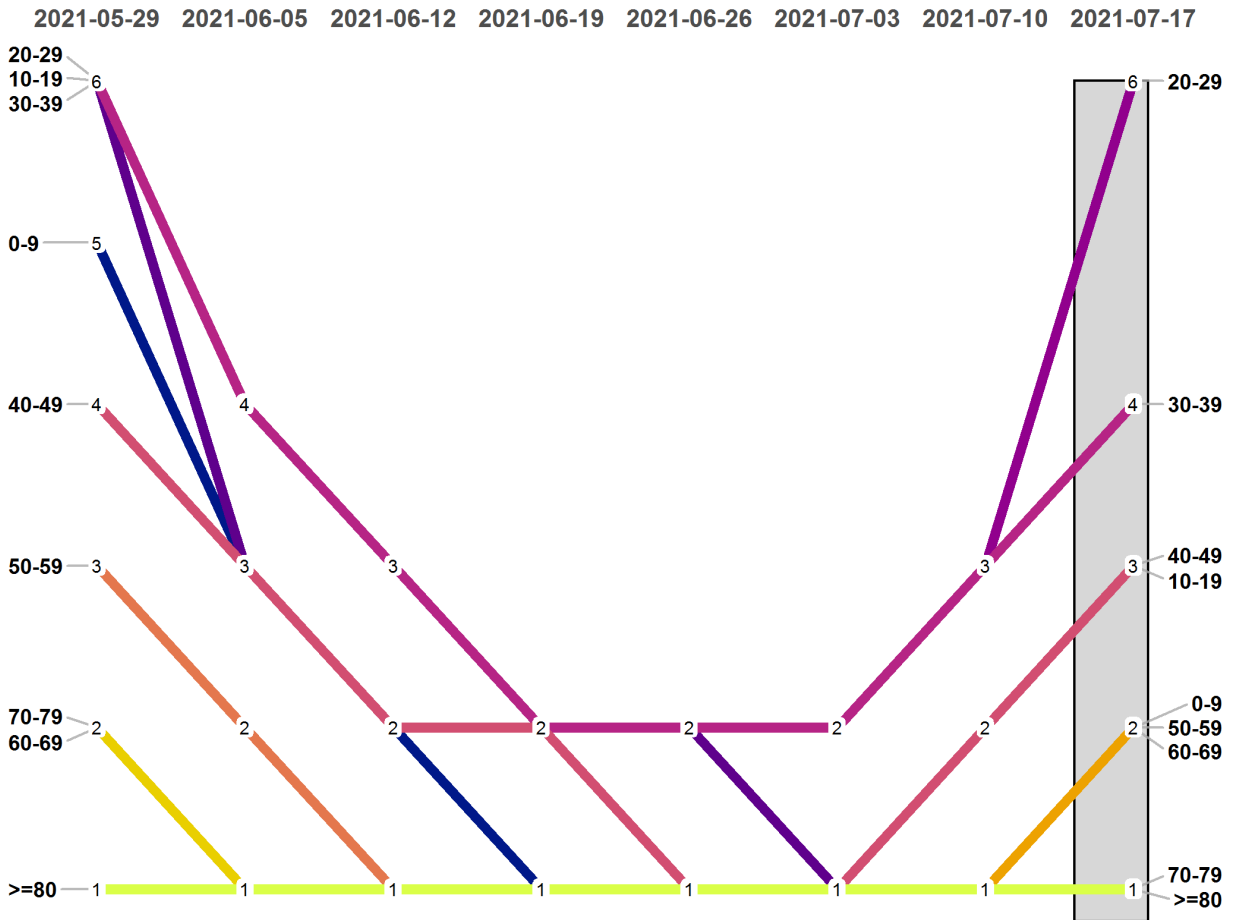Number of New COVID-19 Cases by Age Group with Collection or Onset during July 04-17
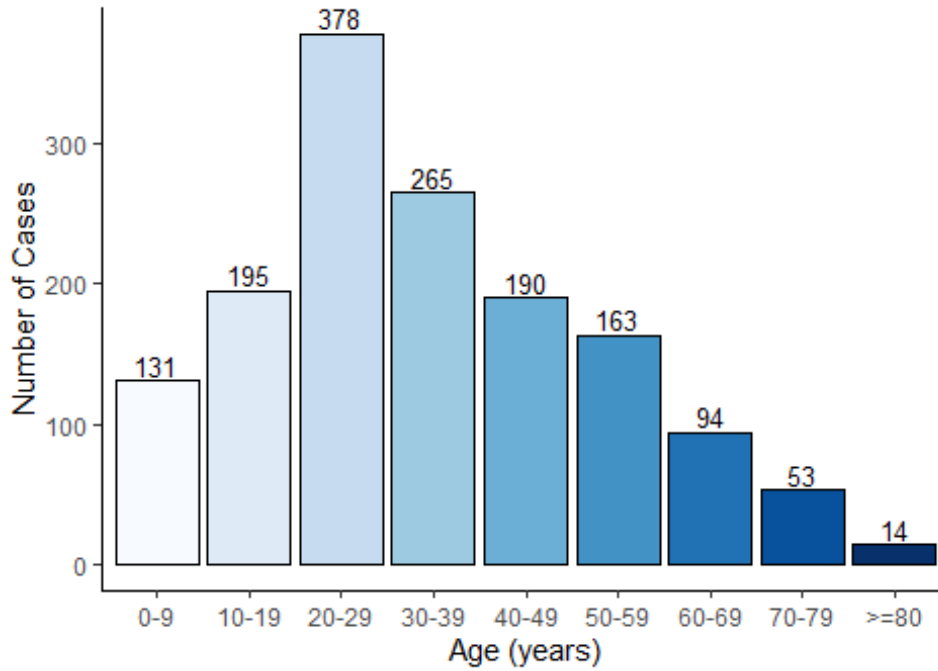
Average Daily Incidence by Age Group

The chart below shows the average number of new COVID-19 cases per day per 100,000 population by age group. The rates in this chart are calculated by averaging the number of new cases diagnosed each day during the previous two weeks, dividing by the annual population in each age group, and then multiplying by 100,000.

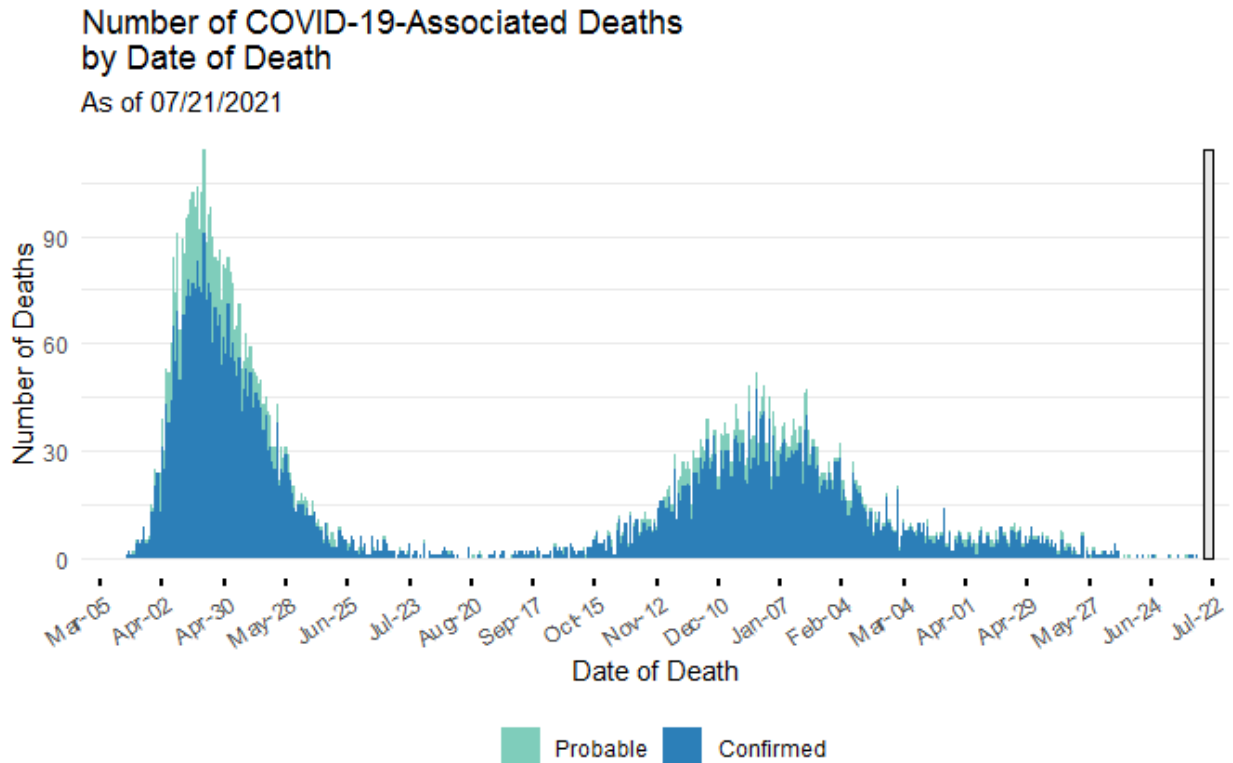## Average daily rate of COVID-19 cases by age group

As of 07/21/2021

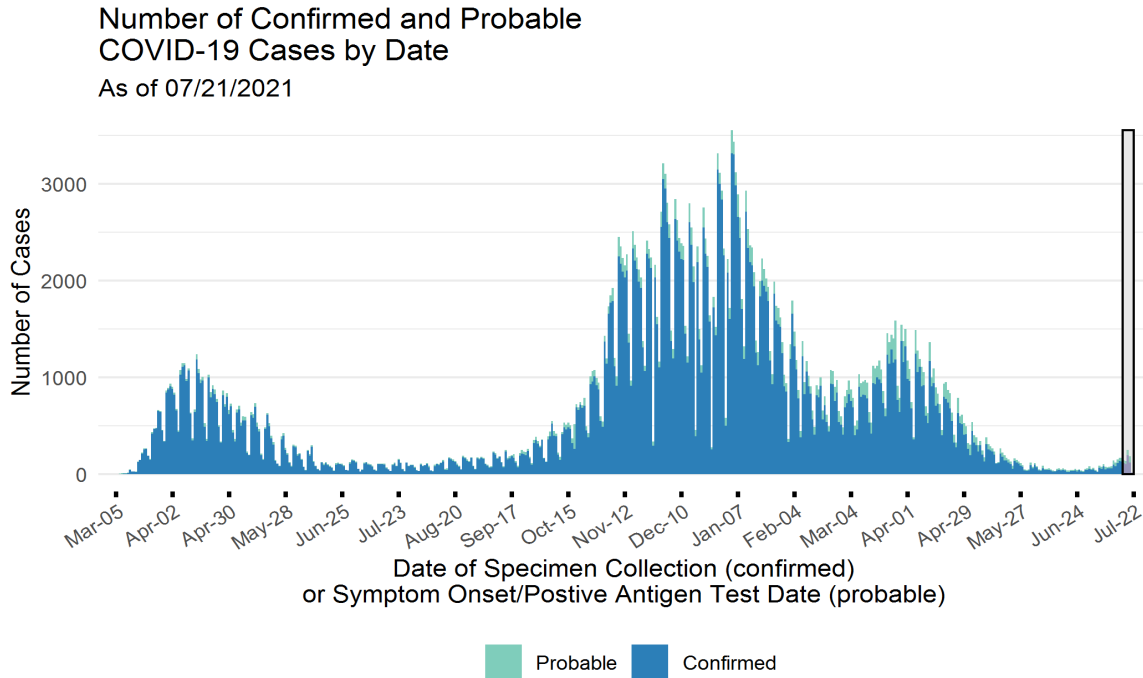All data are preliminary and subject to change.

Average Daily Incidence by County

The chart below shows the average number of new COVID-19 cases per day per 100,000 population in the state of Connecticut and for each Connecticut county. The rates in this chart are calculated by averaging the number of new cases diagnosed each day during the previous two weeks, dividing by the annual estimated population, and then multiplying by 100,000.

Average daily rates of COVID-19 cases by county
As of 07/21/2021

All data are preliminary and subject to change.
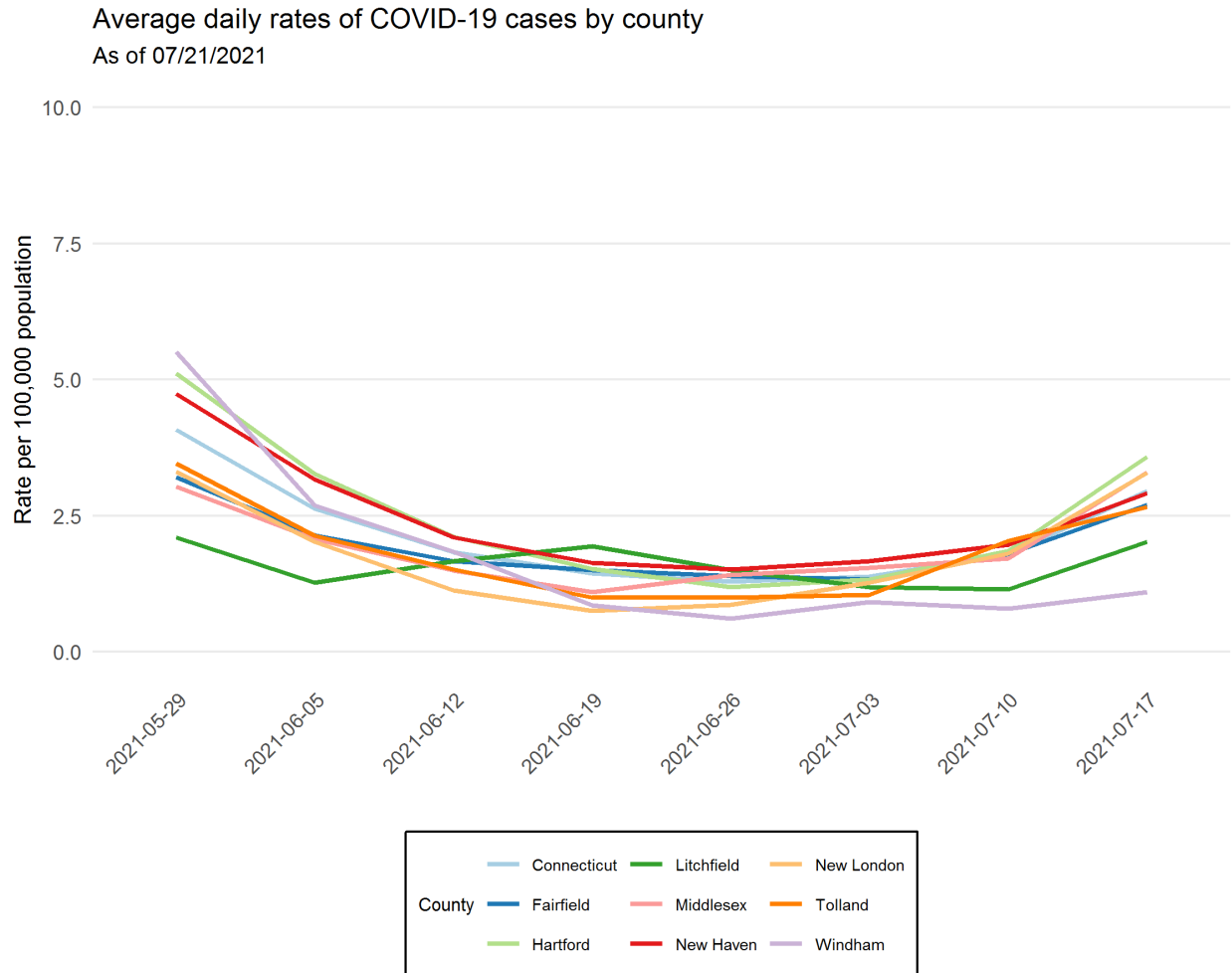
Cumulative Number of COVID-19 Cases and COVID-19-Associated Deaths by Date

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.

Number of Confirmed and Probable
COVID-19 Cases by Date
As of 07/21/2021

Date of Specimen Collection (confirmed)
or Symptom Onset/Postive Antigen Test Date (probable)

Probable   Confirmed

Number of COVID-19-Associated Deaths
by Date of Death
As of 07/21/2021

Date of Death

Probable   Confirmed

All data are preliminary and subject to change.

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 since yesterday in parentheses.

Patients Currently Hospitalized by Connecticut County

Distribution by location of hospital not patient residence. Data from the Connecticut Hospital Association.
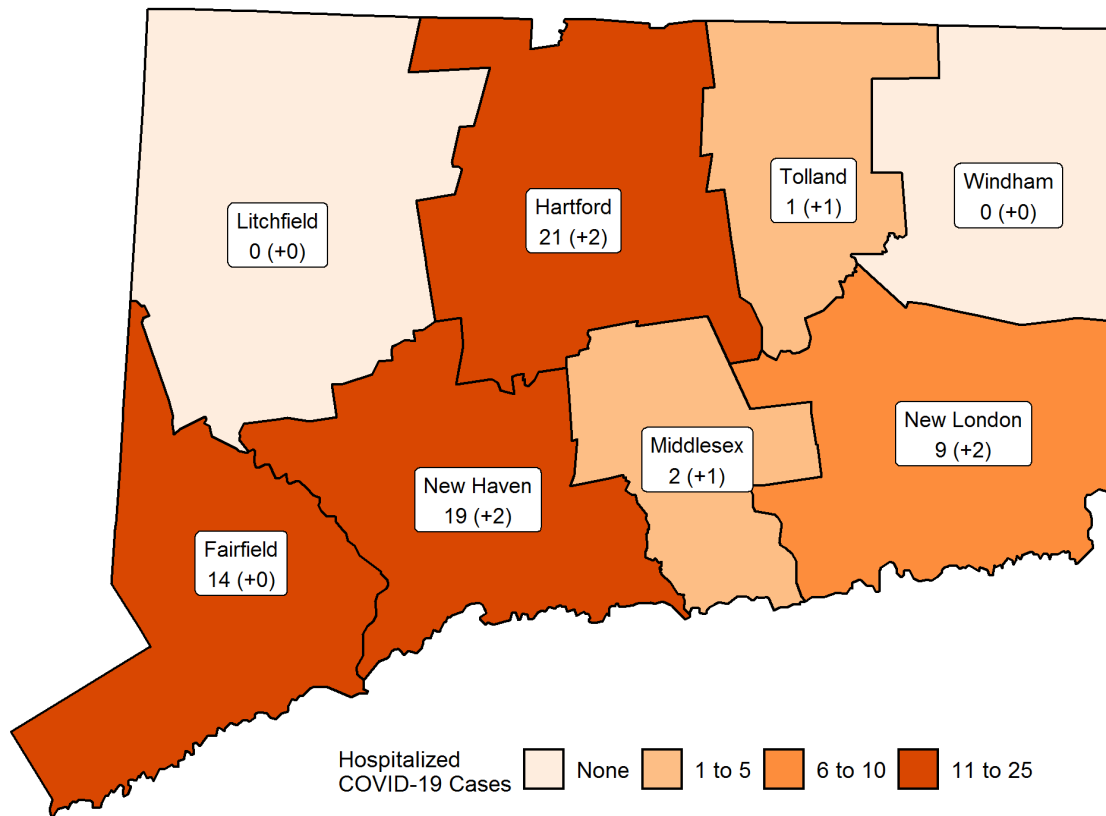
More information about hospitalized cases of COVID-19 in New Haven and Middlesex Counties is available from COVID-NET.

All data are preliminary and subject to change.

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 August 1, 2020

All data are preliminary and subject to change.
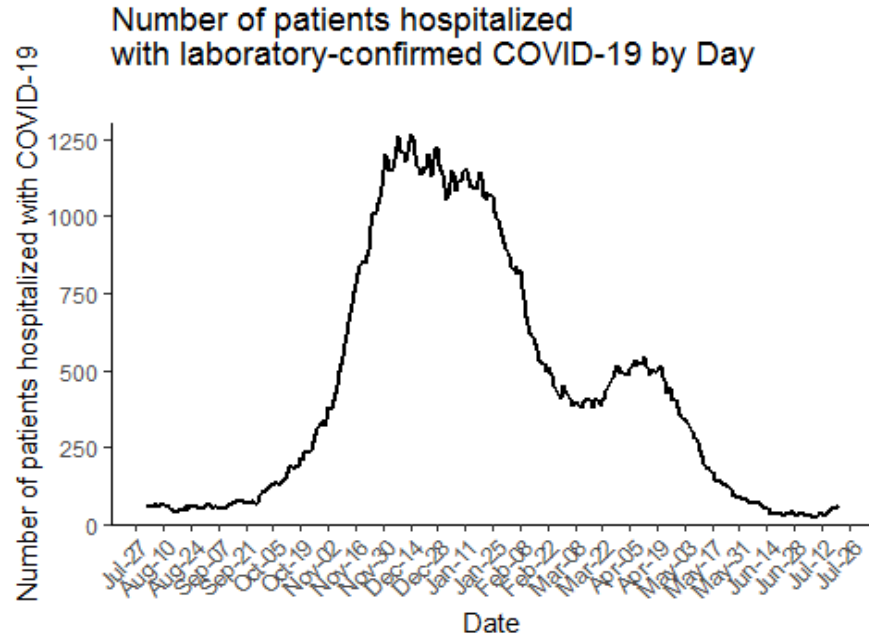
Daycare Surveillance

Licensed daycare providers are required to report cases of COVID-19 among attendees and staff to the Department of Public Health (DPH) and the local health department. This figure shows the number of cases among daycare attendees and staff reported to DPH since September 1, 2020. Data are preliminary and like other passive surveillance systems, under reporting occurs and the true incidence of disease is more than the number of cases reported.
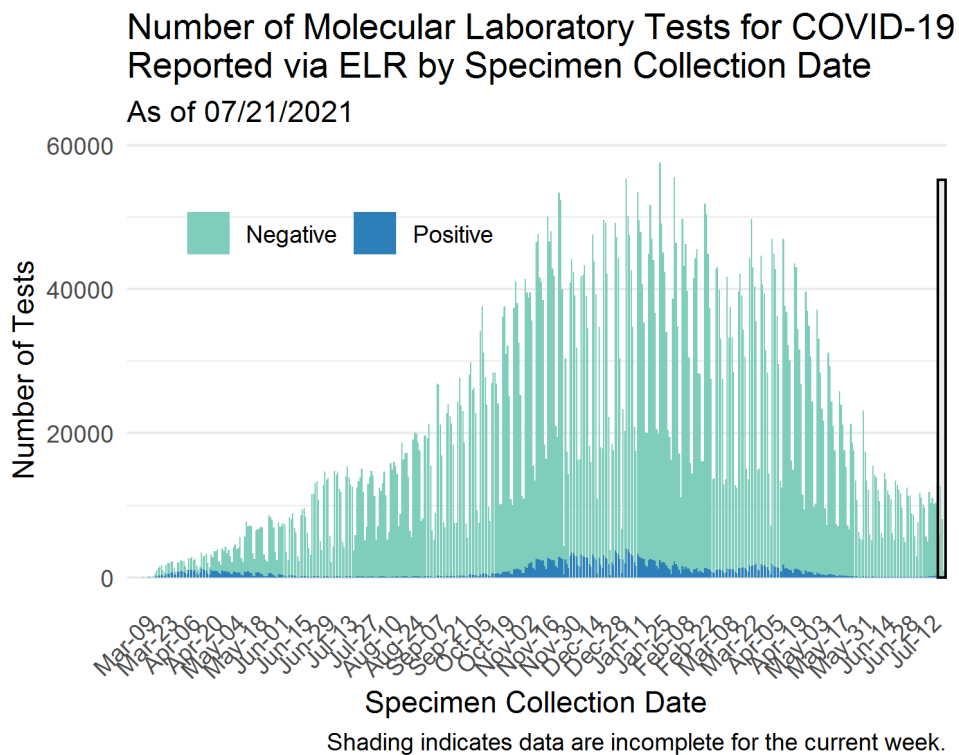

Daycare Associated Cases

All data are preliminary and subject to change.
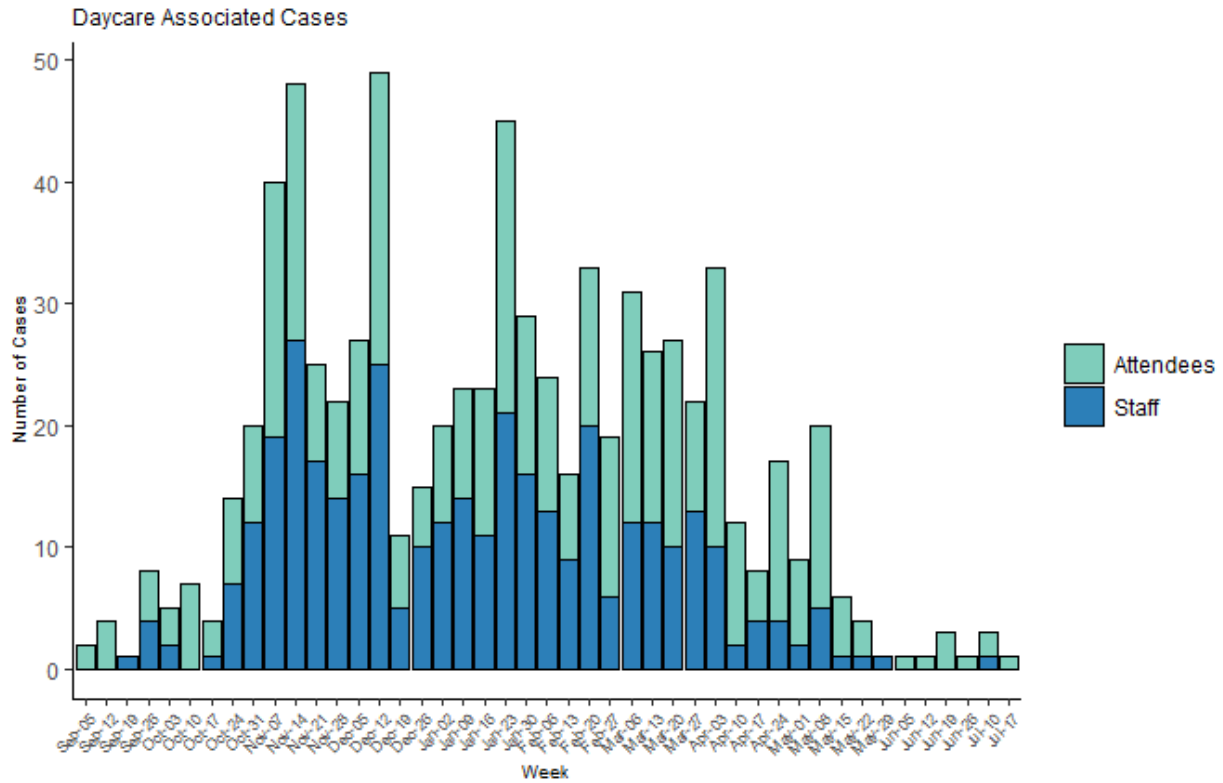
Laboratory Surveillance

Molecular Tests

To date, DPH has received reports on a total of 9,049,319 molecular COVID-19 laboratory tests; of these 8,836,658 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.

Number of Molecular Laboratory Tests for COVID-19 Reported via ELR by Specimen Collection Date
As of 07/21/2021

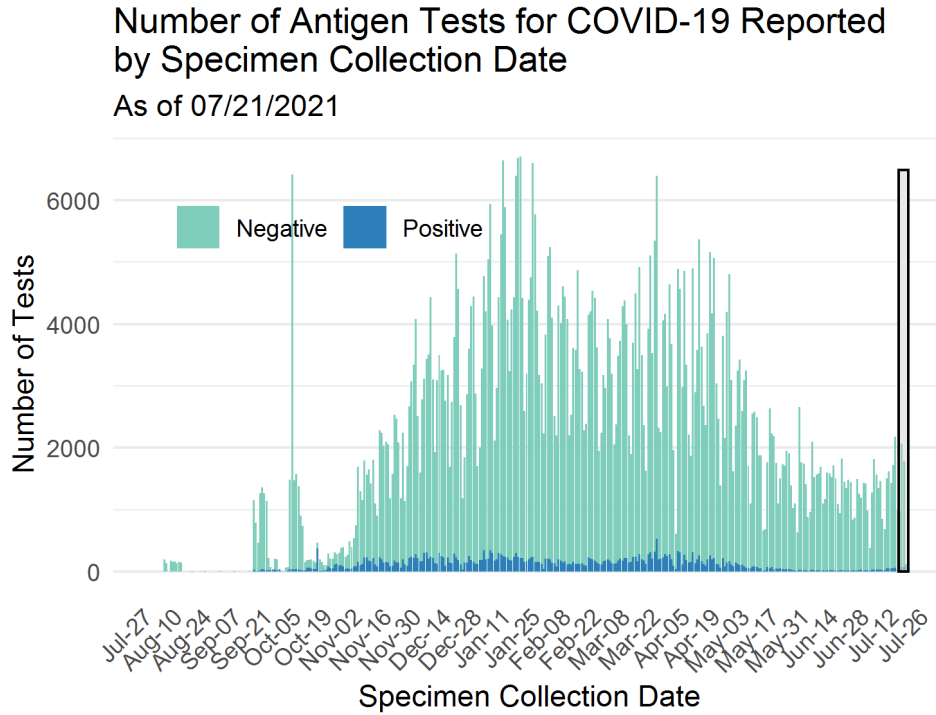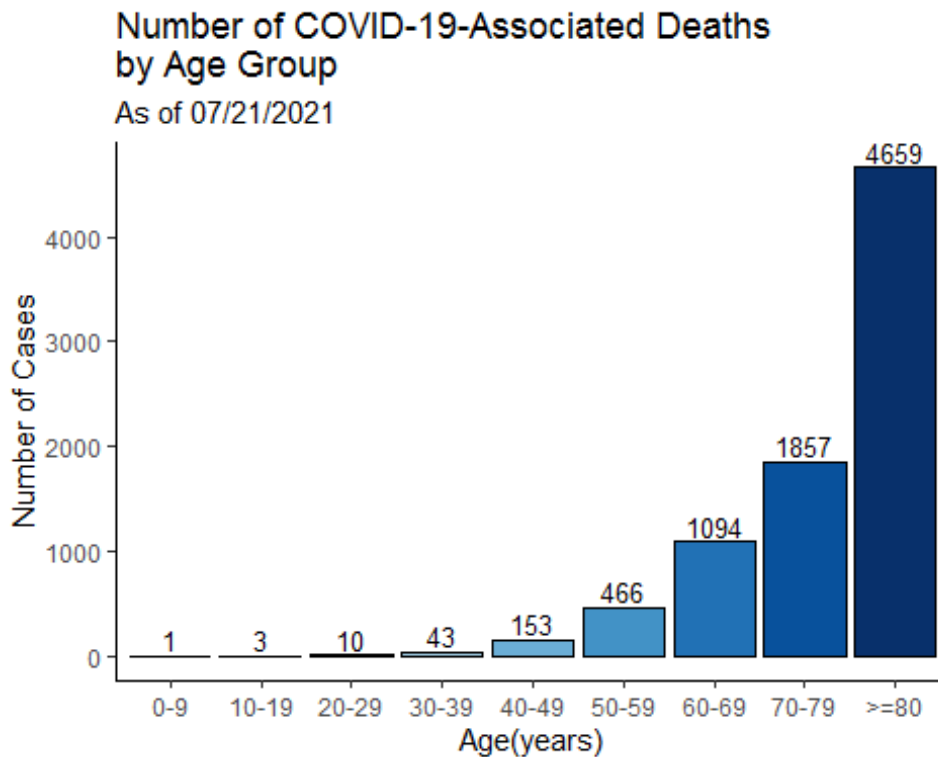Shading indicates data are incomplete for the current week.

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

All data are preliminary and subject to change.

Antigen Tests

To date, DPH has received reports on a total of 753,918 COVID-19 antigen laboratory tests. The chart below shows the number of antigen tests reported to DPH by specimen collection date 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.
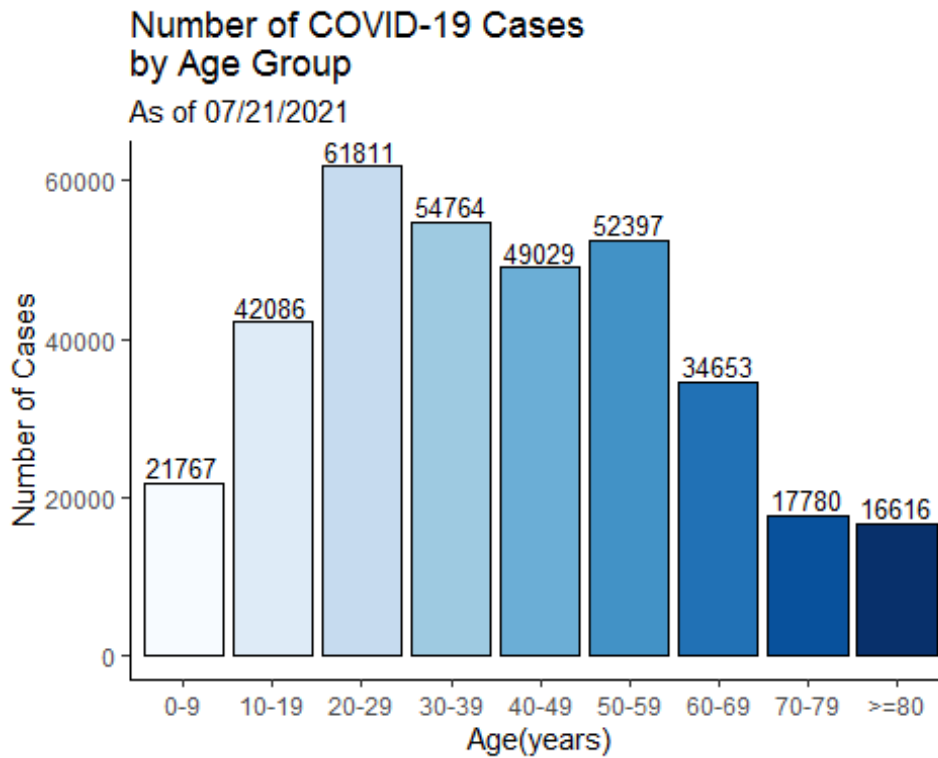
Number of Antigen Tests for COVID-19 Reported by Specimen Collection Date
As of 07/21/2021

Shading indicates data are incomplete for the current week.

Testing of recently collected specimens is ongoing and does not reflect a decrease in testing.
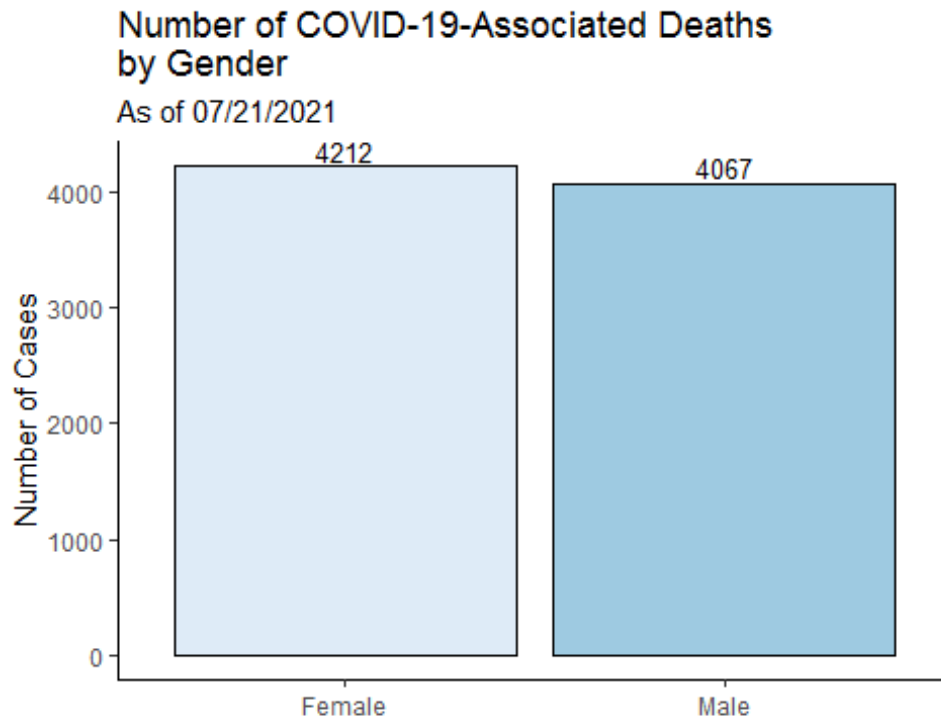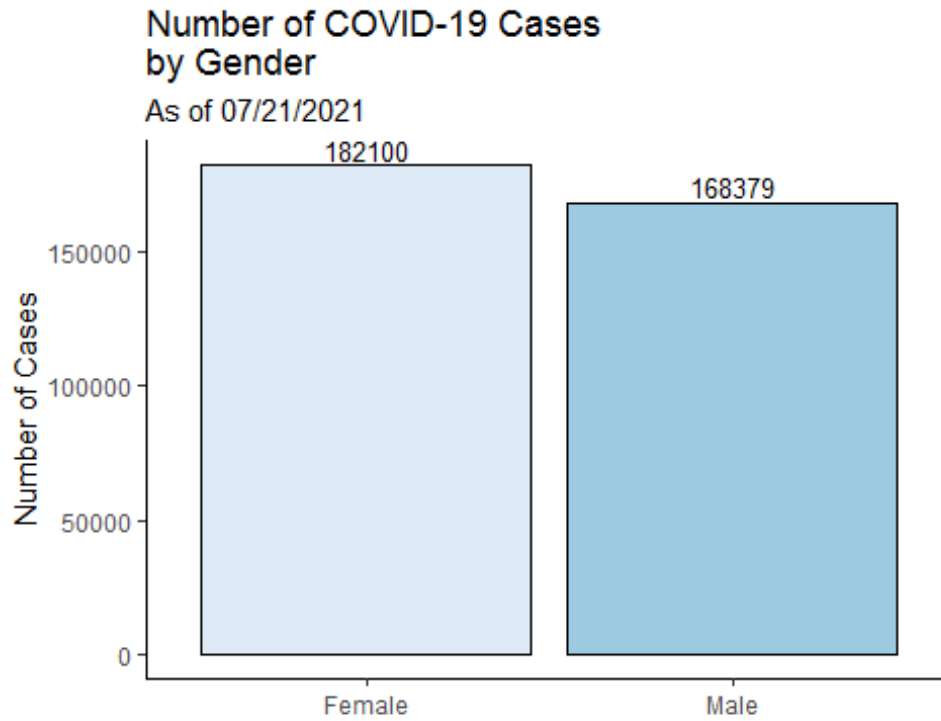
Characteristics of COVID-19 Cases and Associated Deaths

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

Number of COVID-19 Cases by Age Group
As of 07/21/2021

Age(years)	Number of Cases
0-9	21767
10-19	42086
20-29	61811
30-39	54764
40-49	49029
50-59	52397
60-69	34653
70-79	17780
>=80	16616

Number of COVID-19-Associated Deaths by Age Group
As of 07/21/2021

Age(years)	Number of Cases
0-9	1
10-19	3
20-29	10
30-39	43
40-49	153
50-59	466
60-69	1094
70-79	1857
>=80	4659

All data are preliminary and subject to change.

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

Number of COVID-19 Cases by Gender

As of 07/21/2021

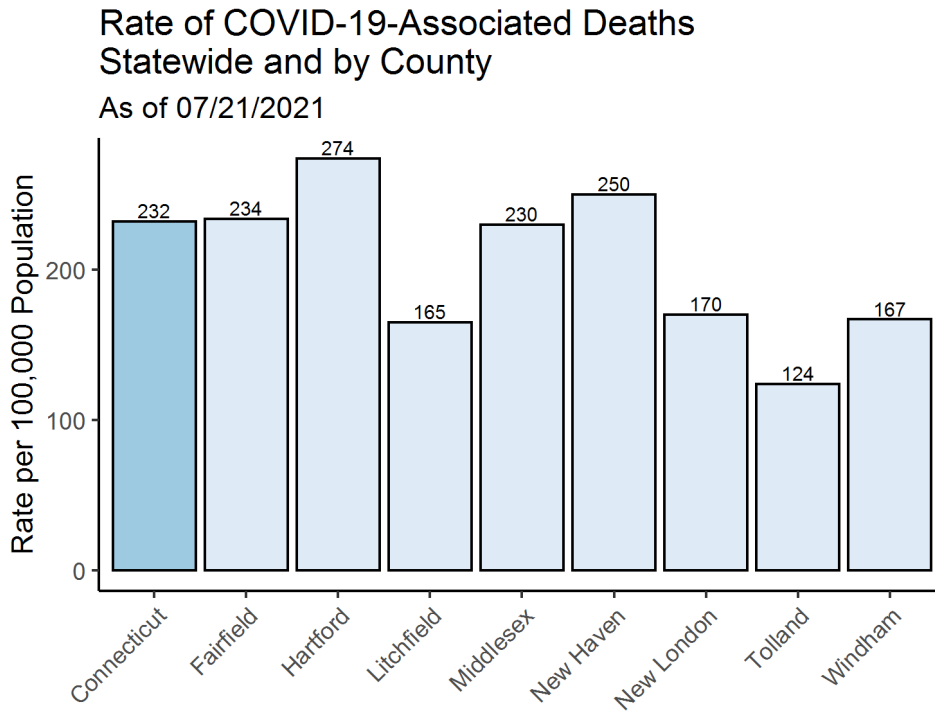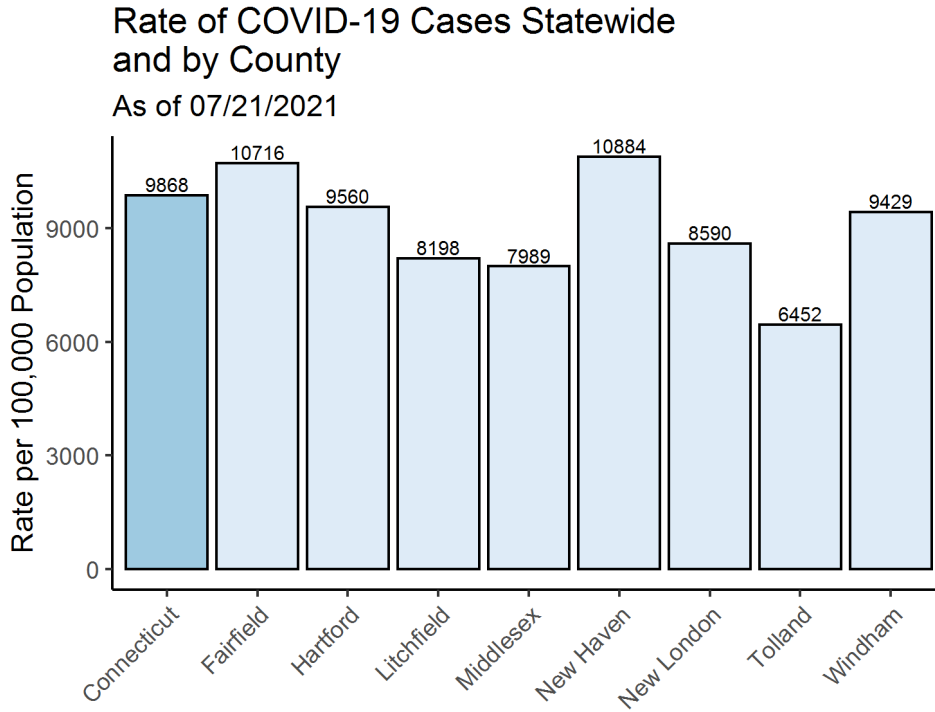## Number of COVID-19-Associated Deaths by Gender

As of 07/21/2021

Cumulative Number of COVID-19 Cases by Town
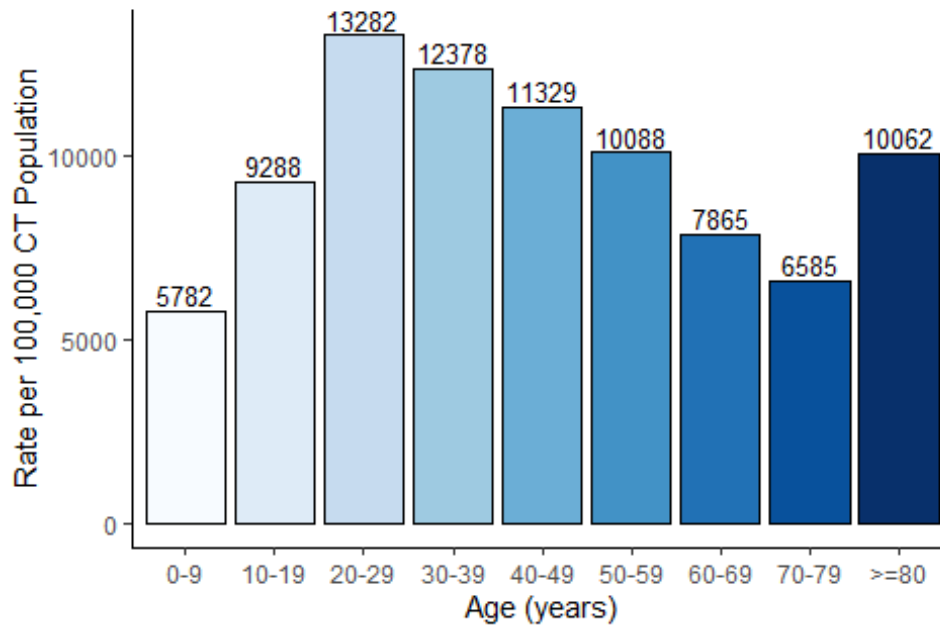
Map does not include 1183 cases pending address validation
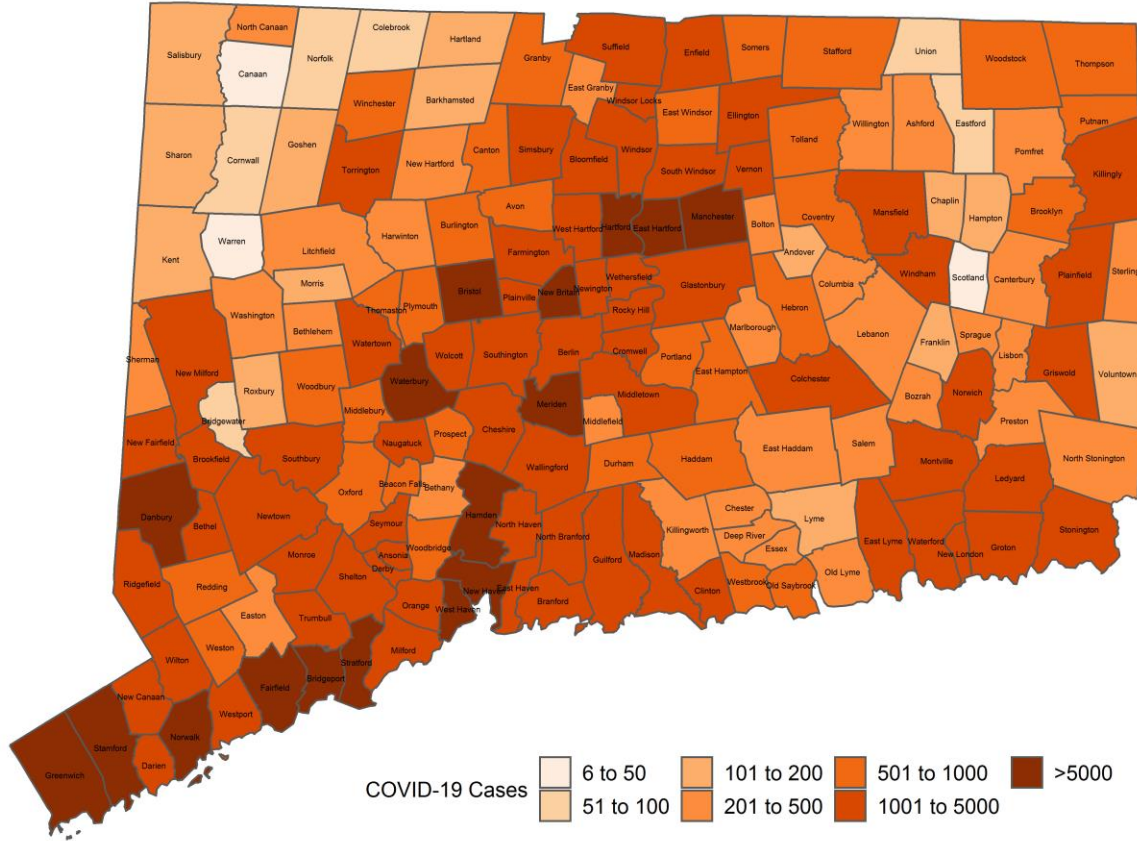
All data are preliminary and subject to change.

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
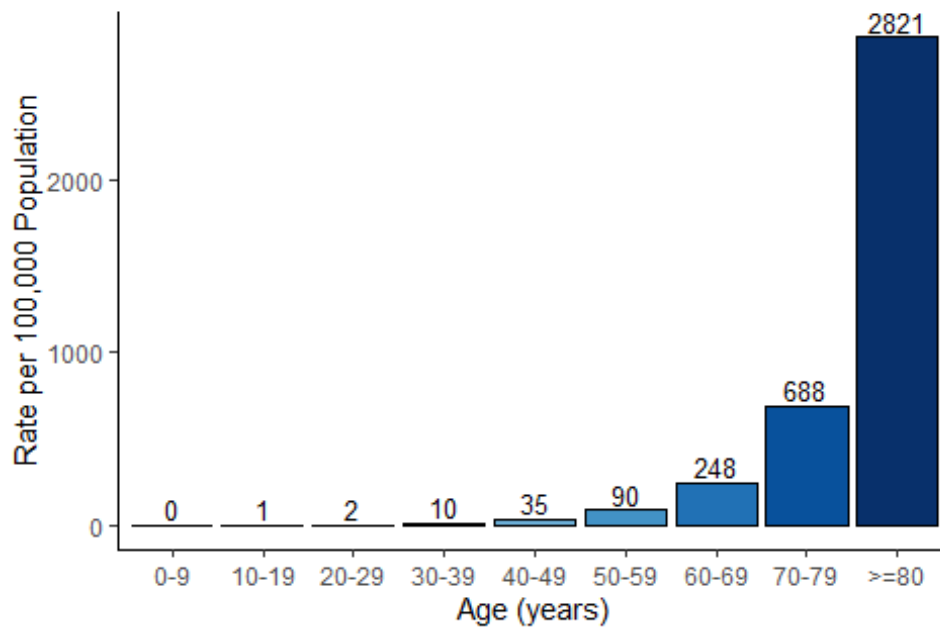
Rate of COVID-19 Cases Statewide and by County
As of 07/21/2021

Rate of COVID-19-Associated Deaths Statewide and by County
As of 07/21/2021

All data are preliminary and subject to change.

Rate of COVID-19 Cases
by Age Group
As of 07/21/2021

Rate of COVID-19-Associated Deaths
by Age Group
As of 07/21/2021

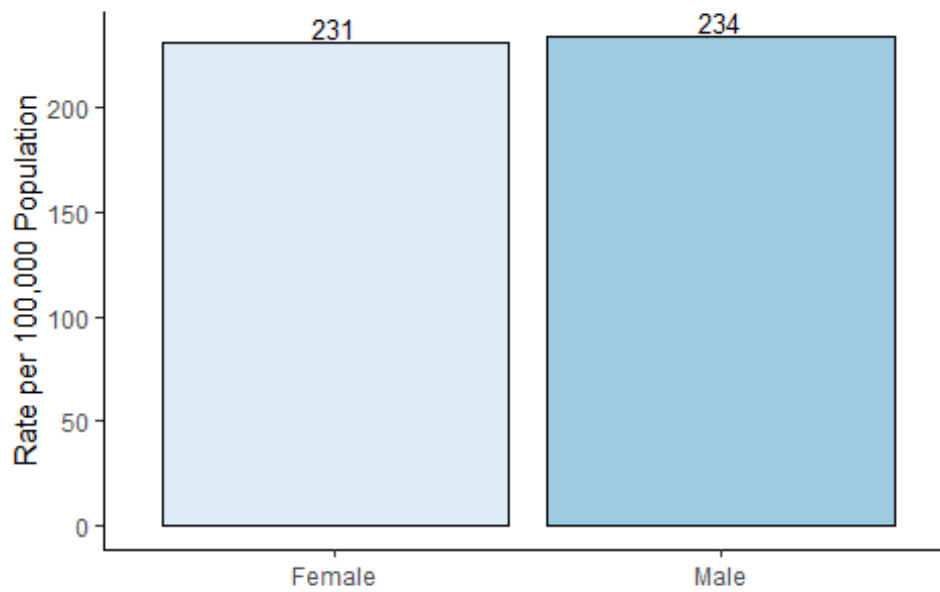All data are preliminary and subject to change.

Rate of COVID-19 Cases
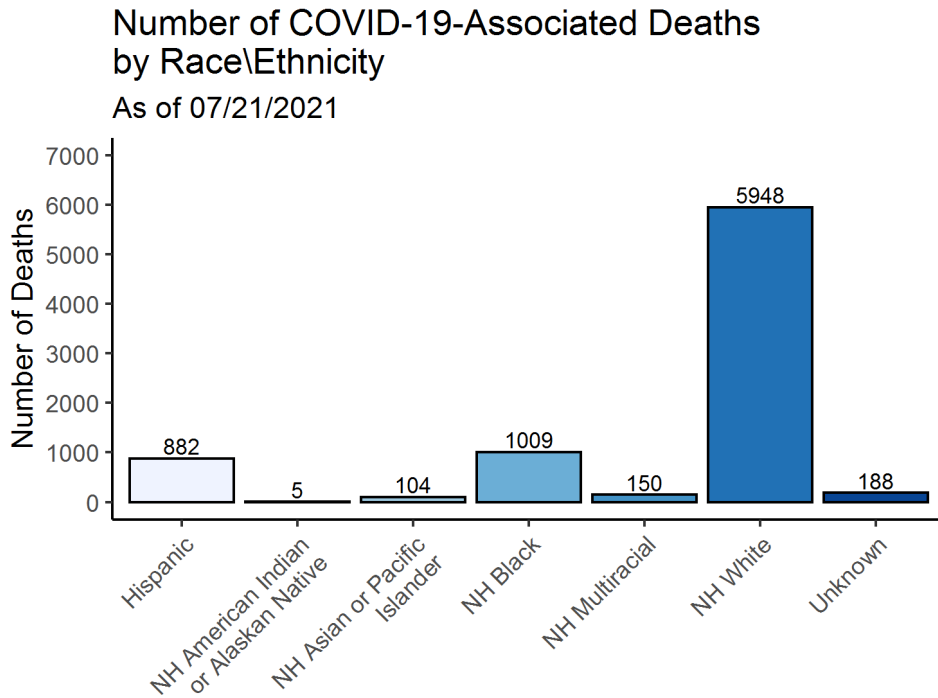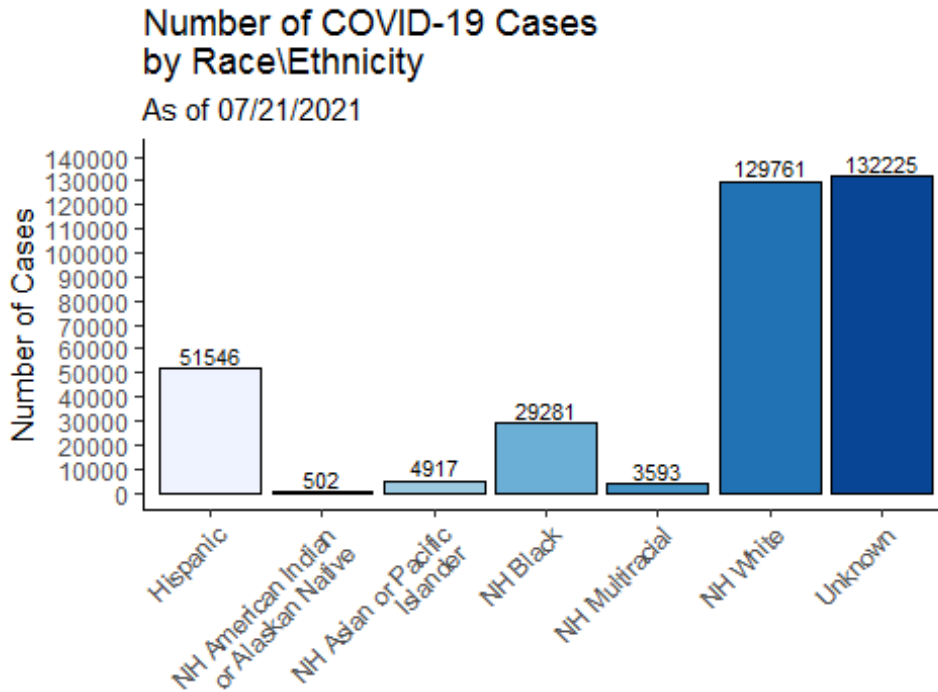## by Gender
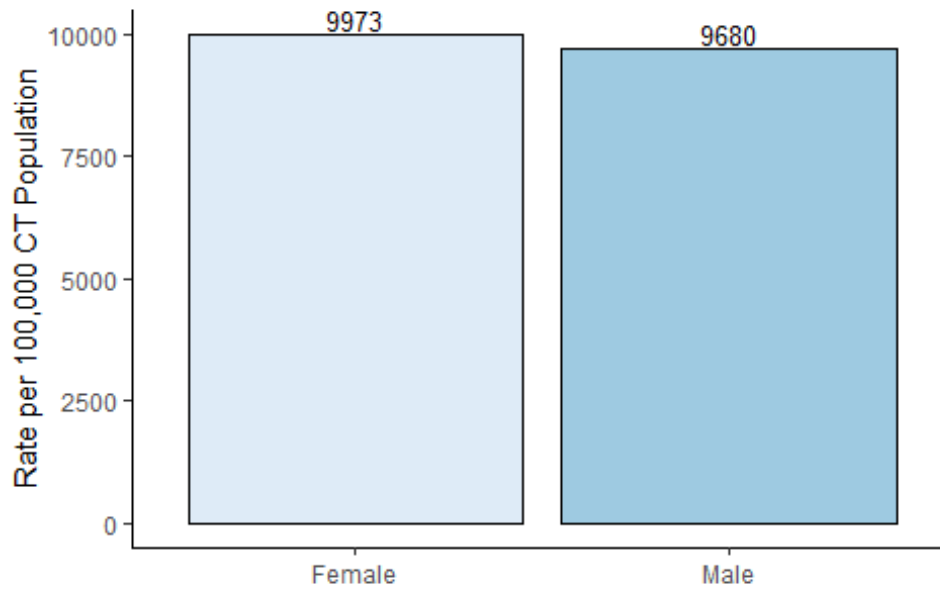
As of 07/21/2021

Rate of COVID-19-Associated Deaths
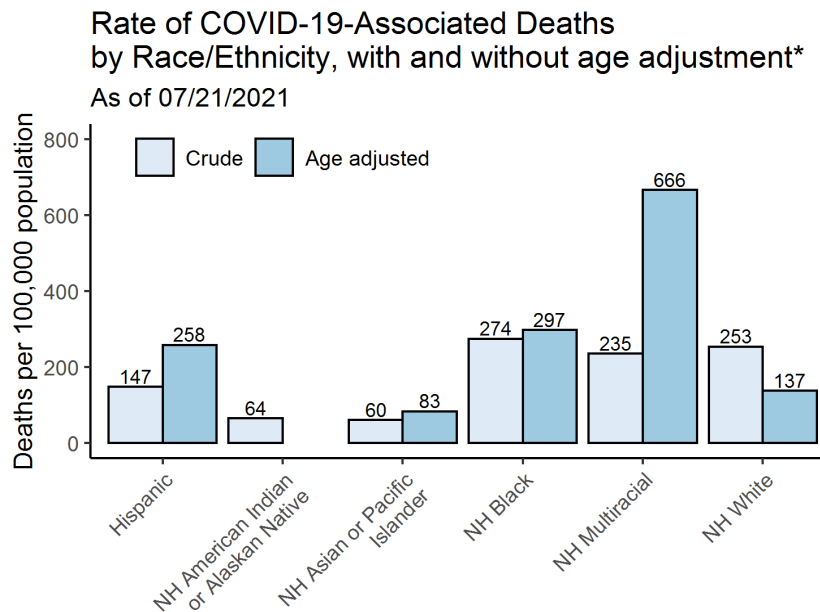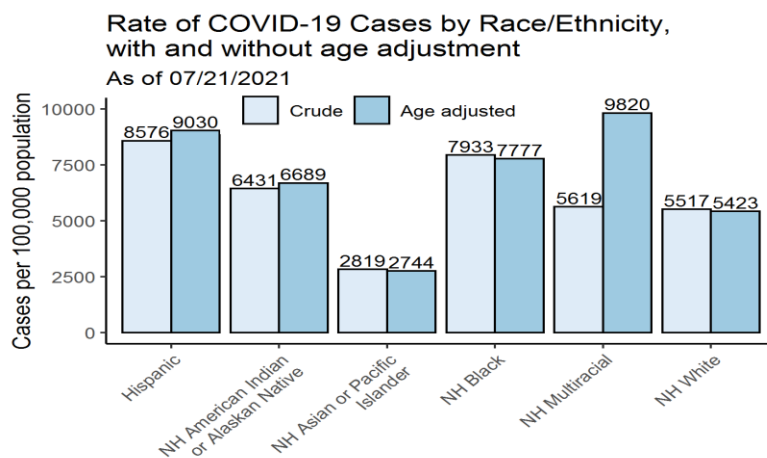## by Gender

As of 07/21/2021

APPENDIX C. 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*

Number of COVID-19 Cases by Race\Ethnicity
As of 07/21/2021

Number of COVID-19-Associated Deaths by Race\Ethnicity
As of 07/21/2021

All data are preliminary and subject to change.

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. Because most non-Hispanic white residents who died were over 75 years of age, the age-adjusted rates are lower than the unadjusted rates. In contrast, Hispanic residents who died tend to be younger than 75 years of age which results in higher age-adjusted rates.

The 2018 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*

Rate of COVID-19 Cases by Race/Ethnicity, with and without age adjustment
As of 07/21/2021

Rate of COVID-19-Associated Deaths by Race/Ethnicity, with and without age adjustment*
As of 07/21/2021

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

All data are preliminary and subject to change.