

COVID-19 Trends in St. Louis County

07/08/2021

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Key Findings

- Rates of new COVID-19 cases increased by 63 percent over the last two weeks – St. Louis County is currently averaging 100 newly diagnosed cases per day and rising.
- St. Louis County’s PCR positivity rate is currently 7.5 percent and rising quickly, which indicates that community transmission is increasing, but not enough people are being tested. More testing is urgently needed to facilitate identification and isolation of cases and notification, quarantine, and testing of their contacts.
- While rates of new infections are rising across all age groups, racial groups, and regions of St. Louis County, the highest rates are being observed among younger age groups, Black or African American residents, and residents of the northern regions of St. Louis County – the groups with the lowest rates of COVID-19 vaccination.
- Rates of new COVID-related hospital admissions in the St. Louis metro area increased by 36 percent over the last two weeks. The rates themselves remain relatively low for the moment, but recent trends in other parts of the state suggest that they could increase very sharply very quickly.
- COVID-related mortality remains low for the moment, but trends in deaths tend to lag behind trends in new cases by several weeks. Currently, St. Louis County DPH is aware of four St. Louis County residents who died of COVID-19 between 06/22 and 07/05 – all four were unvaccinated.

Overall Trends

	06/08–06/21	06/22–07/05
1. Rate of new cases	●	●
2. Trend in new cases	●	●
3. Test positivity rate	●	●
4. Hospital admissions	●	●
5. Deaths	●	●
6. Daily tests	●	●
7. ICU occupancy	●	●

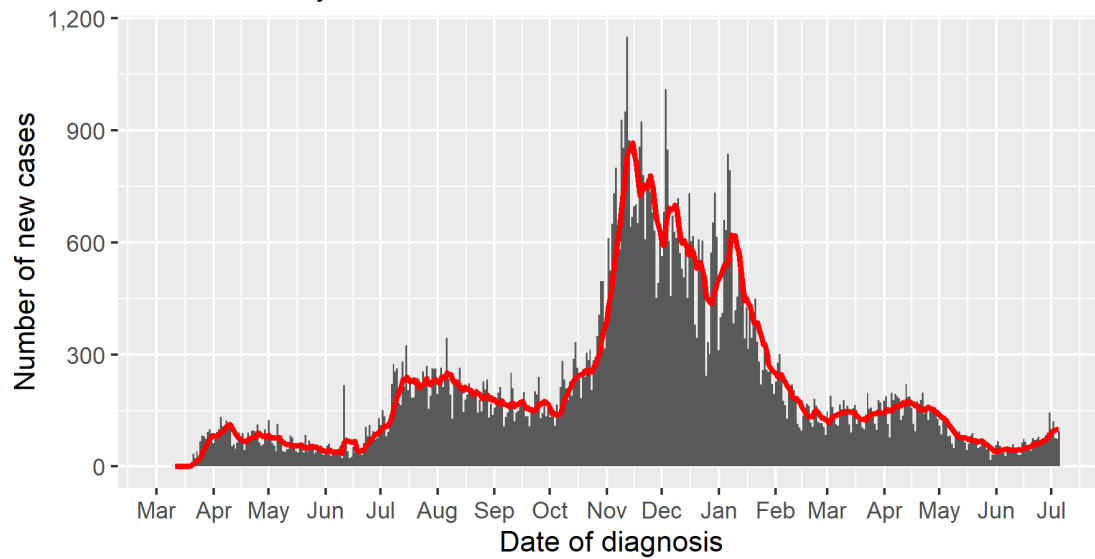
NOTE: To account for reporting and data entry delays, this report focuses on data about COVID-19 cases diagnosed through 07/05. Unless otherwise specified, all averages are seven-day rolling averages. Data are current as of 07/08.

New Cases ●●

Between 06/22 and 07/05, the average number of new COVID-19 cases diagnosed among St. Louis County residents increased by 63 percent from 61.3 to 100.0 cases per day. The current rate of daily COVID-19 diagnoses (10.0 cases per 100,000 residents per day) is high.

Reported COVID-19 Cases Over Time

St. Louis County residents

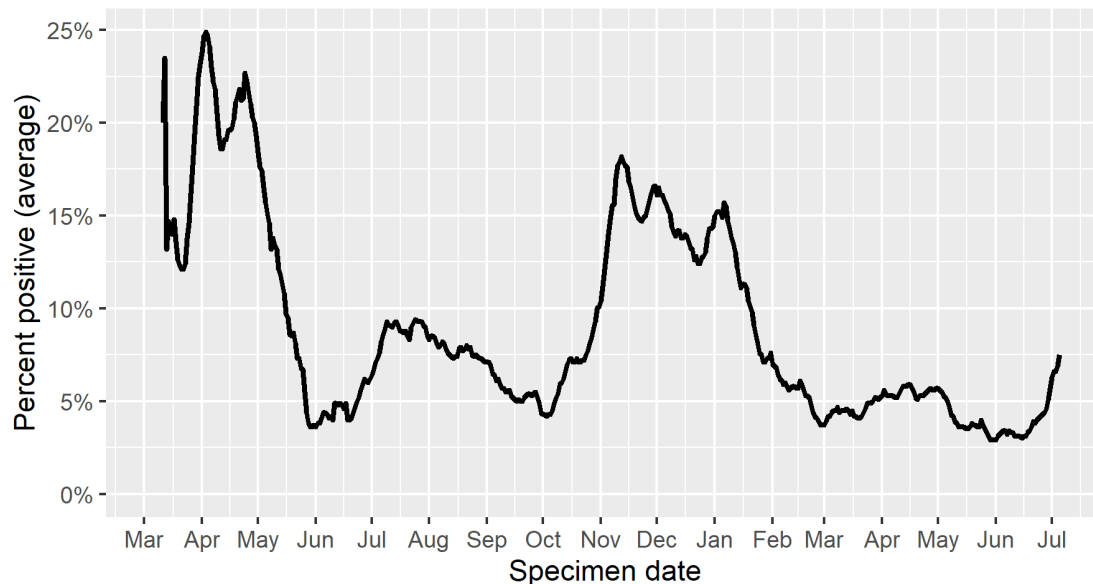


The red line is a rolling seven-day average.

Test Positivity Rate ●

As of 07/05, the seven-day positivity rate among St. Louis County residents receiving PCR testing for COVID-19 is 7.5 percent and rising quickly.

Proportion of Specimens Testing Positive for SARS-CoV-2 RNA St. Louis County residents



Hospital Admissions ●

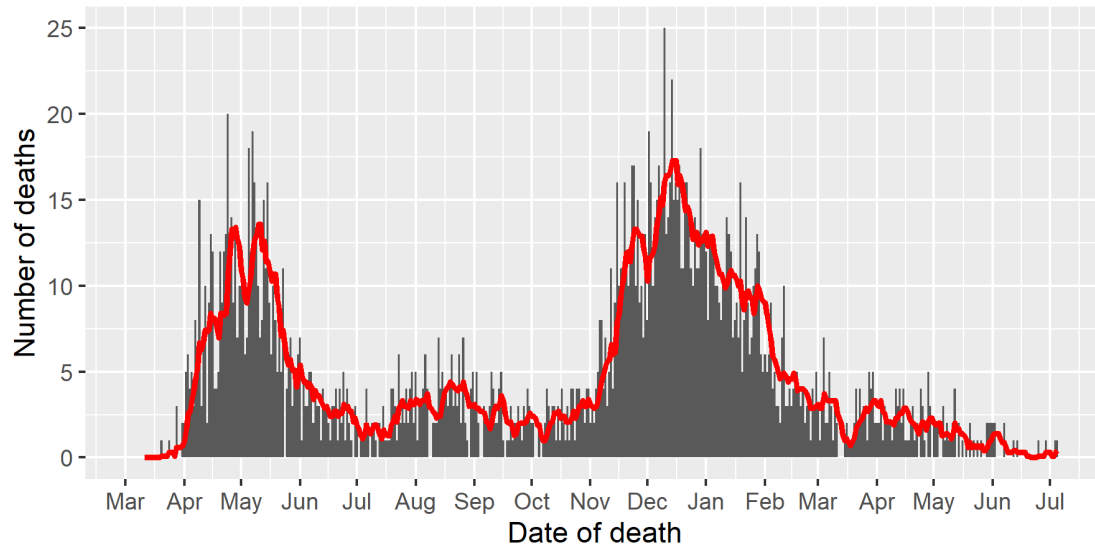
Based on data released by the St. Louis Metropolitan Pandemic Task Force and [analyzed by Dr. Christopher Prener at St. Louis University](#), the number of average daily hospital admissions for COVID-19 at SSM, BJC, Mercy, and St. Luke's hospitals in the St. Louis metro area increased by 36 percent from 06/22 (20.4 new patients per day) to 07/05 (27.7 new patients per day).

Deaths ●

As of 07/05, at least 1 in 439 St. Louis County residents has died of COVID-19 (2,275 total COVID-19 deaths). Between 06/22 and 07/05, reported COVID-19-associated deaths increased from 0 to 0.4 deaths per day. However, these numbers should be evaluated in context:

- Deaths are a lagging indicator of the severity of the COVID-19 pandemic. For people who die of COVID-19 infection, the time from onset of illness to death is often several weeks.
- St. Louis County DPH is almost certainly not yet aware of all COVID-related deaths that occurred between 06/22 and 07/05. We sometimes do not learn of a patient's death until their death certificate has been filed and the Missouri Department of Health and Senior Services matches death certificate data with COVID-19 surveillance data, which can take several weeks. For recent dates, we may be aware of fewer than half of the true number of COVID-19 deaths.

Reported COVID-19 Associated Deaths Over Time St. Louis County residents

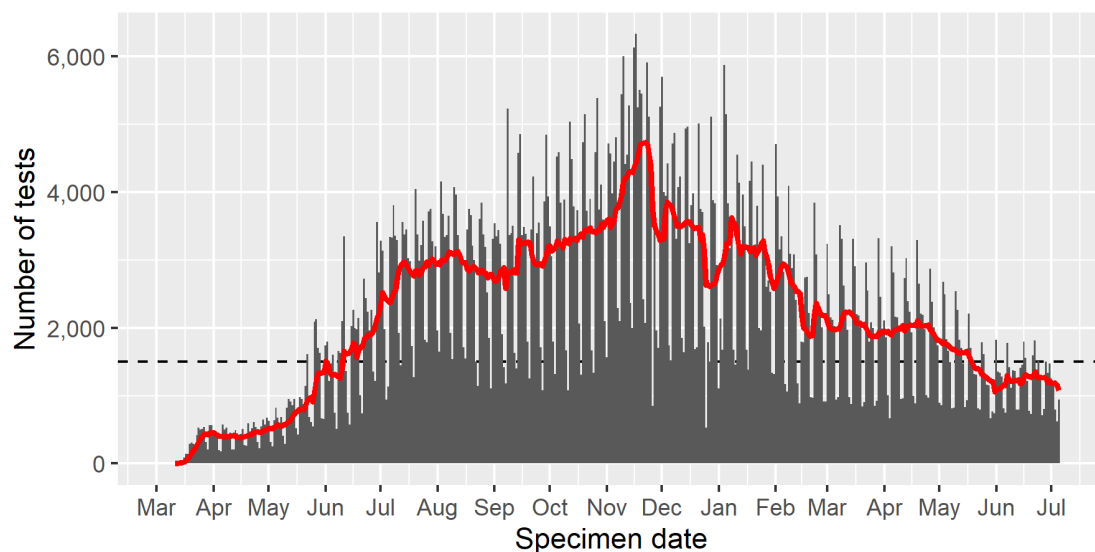


The red line is a rolling seven-day average.

Tests per Day ●

As of 07/05, an average of 1,082 specimens are being collected for confirmatory COVID-19 testing (i.e., PCR testing) per day from St. Louis County residents. This is well below St. Louis County's established target of 1,500 PCR tests per day. More importantly, the current PCR positivity rate of 7.5 percent and rising suggests that the current rate of testing is leaving many infections undiagnosed.

COVID-19 Tests per Day St. Louis County residents



The red line is a rolling seven-day average.

ICU Occupancy ●

According to data released by the Pandemic Task force, 55 intensive care unit (ICU) beds at SSM, BJC, Mercy, and St. Luke's hospitals in the St. Louis metro area were occupied by confirmed or suspected COVID-19 patients as of 07/05 – 6.3 percent of total ICU capacity, assuming a total capacity of 871 ICU beds.

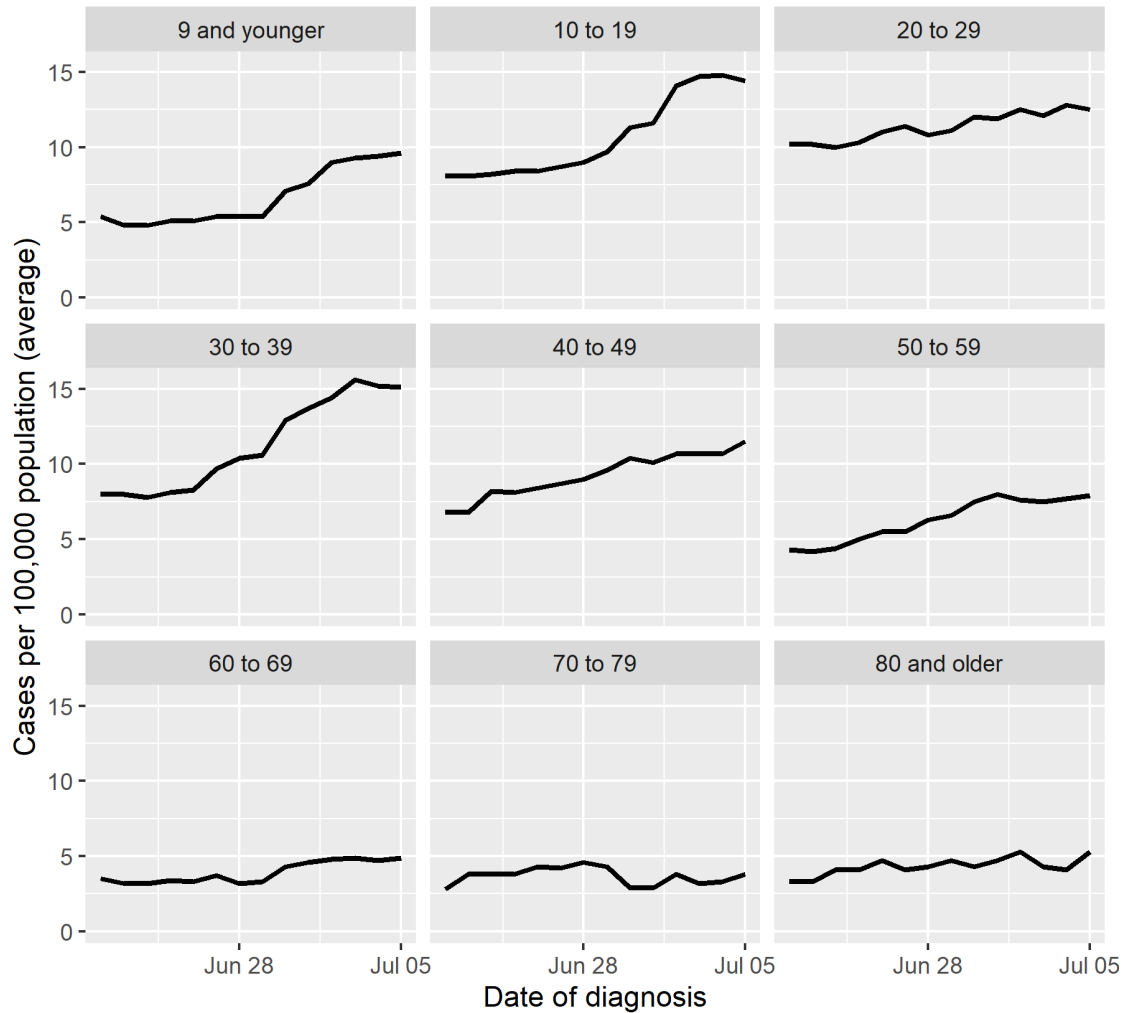
Demographic Trends

Age Groups

Average rates of new COVID-19 diagnoses increased substantially among all age groups between 06/22 and 07/05, with the largest increase (in relative terms) observed among 30–39 year-olds (+89 percent). As of 07/05, average rates of new cases are highest among 30–39 year-olds (15.1 cases per 100,000 per day), though rates are higher than 10 cases per 100,000 per day among 10–19, 20–29, 30–39, and 40–49 year-olds. Rates remain lowest among older adults, although those rates have increased, too. Currently, 70–79 year-olds have the lowest rate of new infections (3.8 cases per 100,000 per day).

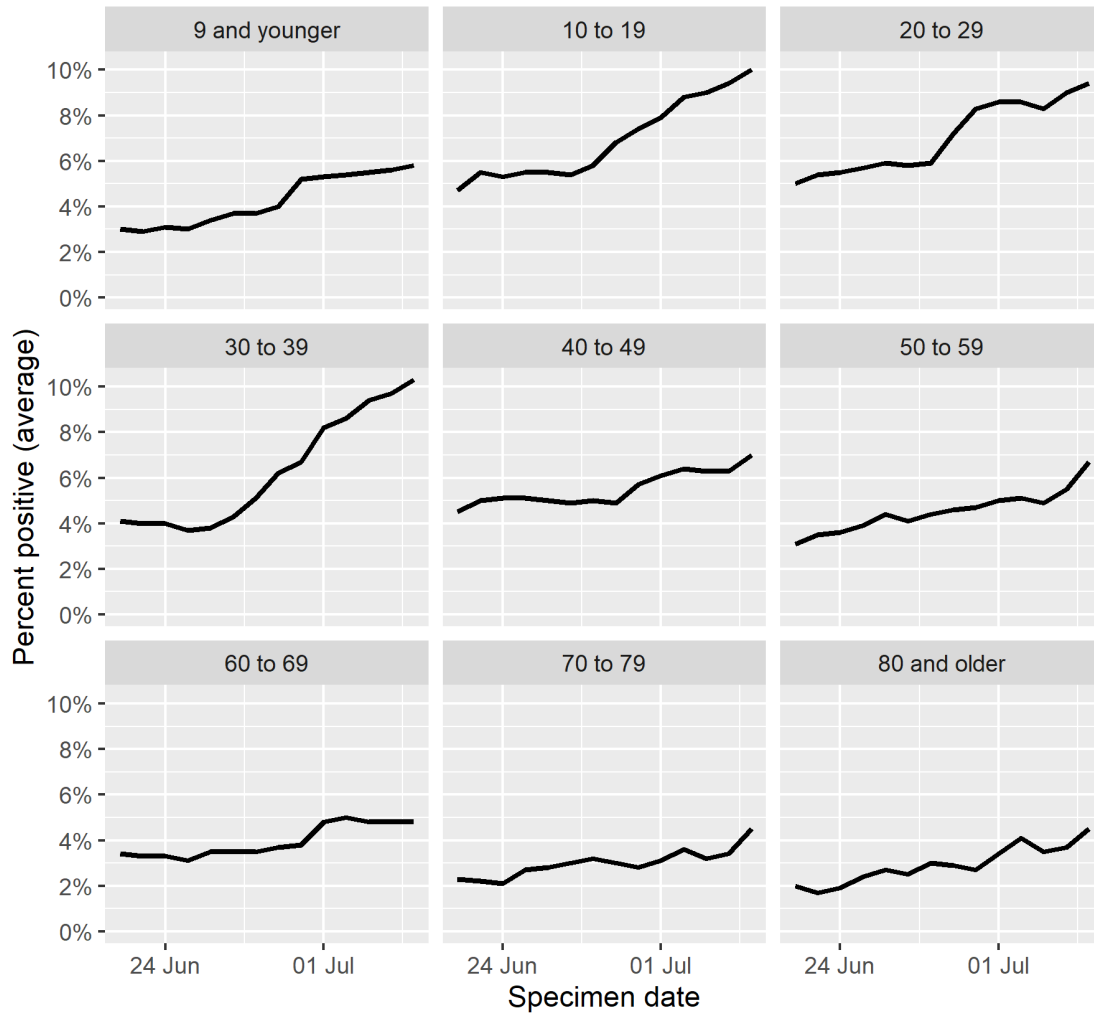
Rate of New COVID-19 Diagnoses by Age Group

St. Louis County residents, 06/22 to 07/05



As of 07/05, seven-day positivity rates among those receiving PCR testing range from 4.5 percent among 70–79 and 80-plus year-olds to 10.3 percent among 30–39 year-olds. Age-stratified positivity rates increased by at least one point among all age groups between 06/22 and 07/05, with dramatic four- to six-point increases among 10–19, 20–29, and 30–39 year-olds in just two weeks.

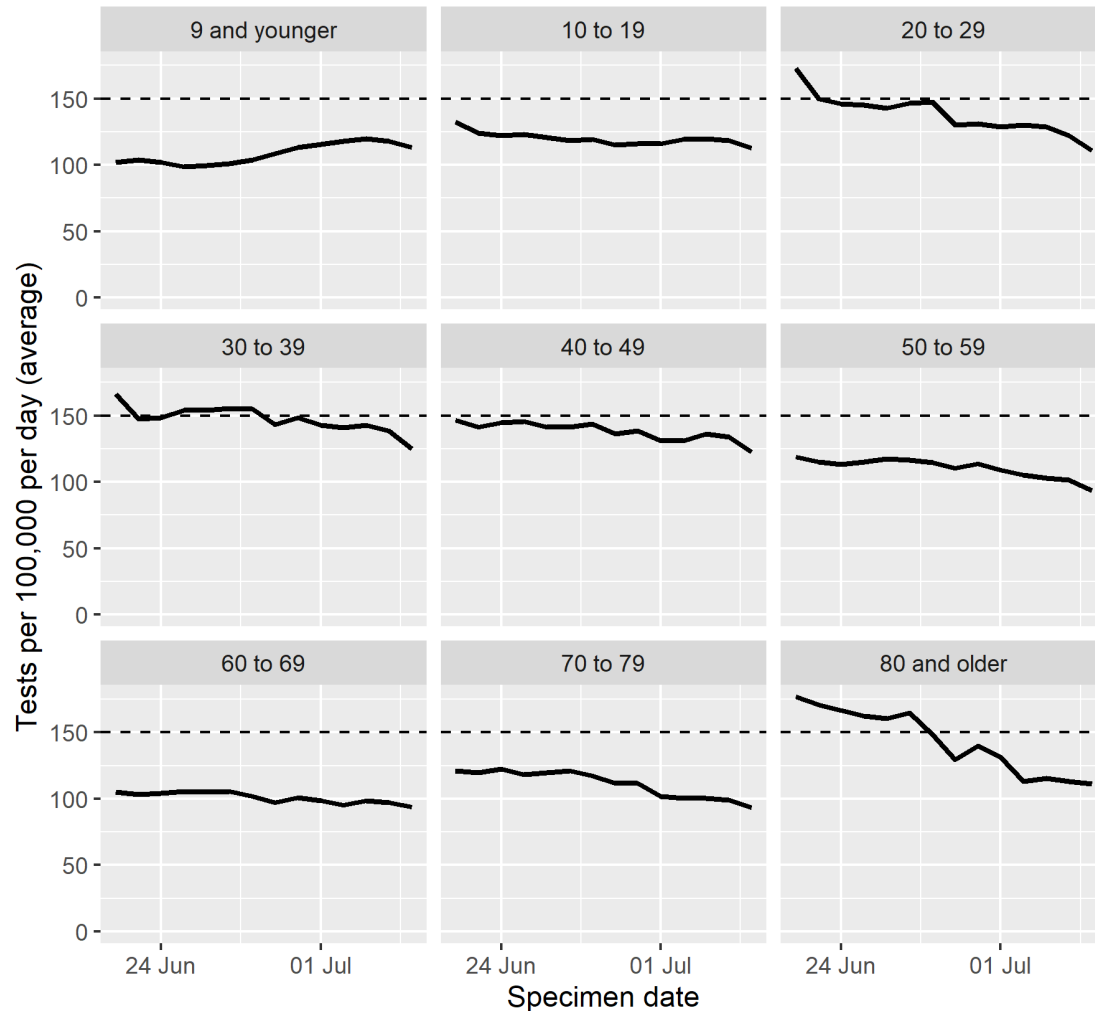
Percent Positive by Age Group St. Louis County residents, 06/22 to 07/05



As of 07/05, PCR testing volume is below St. Louis County's target of 150 tests per 100,000 per day among all age groups, with rates ranging from 94 tests per 100,000 per day among 50–59, 60–69, and 70–79 year-olds to 125 among 30–39 year-olds. Current positivity rates indicate that more testing is urgently needed, particularly among people aged 59 years and younger.

Testing Volume by Age Group

St. Louis County residents, 06/22 to 07/05



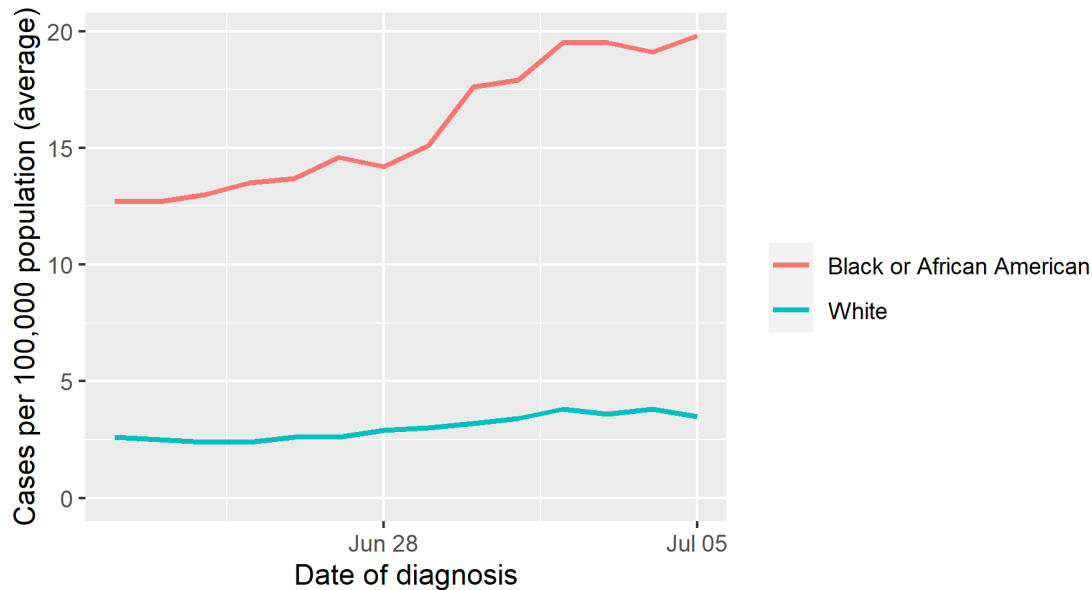
Race

Race is currently unknown for 25 percent of COVID-19 cases diagnosed the week ending 07/03, which complicates analysis of trends by racial group. Nevertheless, between 06/22 and 07/05, for cases where race is known, the average rate of new COVID-19 diagnoses increased by 56 percent among Black or African American residents of St. Louis County and by 35 percent among white residents. As of 07/05, the average rate of newly diagnosed infections among Black residents (19.8 cases per 100,000 per day) is 5.7 times the rate among white residents (3.5 cases per 100,000 per day), possibly reflecting the wide racial disparity in COVID-19 vaccination rates.

Racial groups with fewer than five cases diagnosed during this reporting period (Asian, American Indian/Alaska Native, Native Hawaiian/Other Pacific Islander, multiracial, and “some other race”) have been excluded from this analysis.

Rate of New COVID-19 Diagnoses by Race

St. Louis County residents, 06/22 to 07/05



Ethnicity

Ethnicity is currently unknown for 38 percent of COVID-19 cases diagnosed during the week ending 07/03, which complicates analysis of trends by ethnic group. For cases where ethnicity is known, the rate of new diagnoses increased by 43 percent between 06/22 (4.4 cases per 100,000 per day) and 07/05 (6.3 cases per 100,000 per day) among non-Hispanic residents of St. Louis County. Too few cases were reported among Hispanic or Latino residents during the same period to report on here, so the graph comparing trends among the two groups has been omitted. That graph will be included in future versions of this report if and when 5 or more cases are reported among Hispanic or Latino residents during the reporting period. Cumulative COVID-19 rates by ethnicity can always be found on St. Louis County's [COVID-19 surveillance dashboard](#).

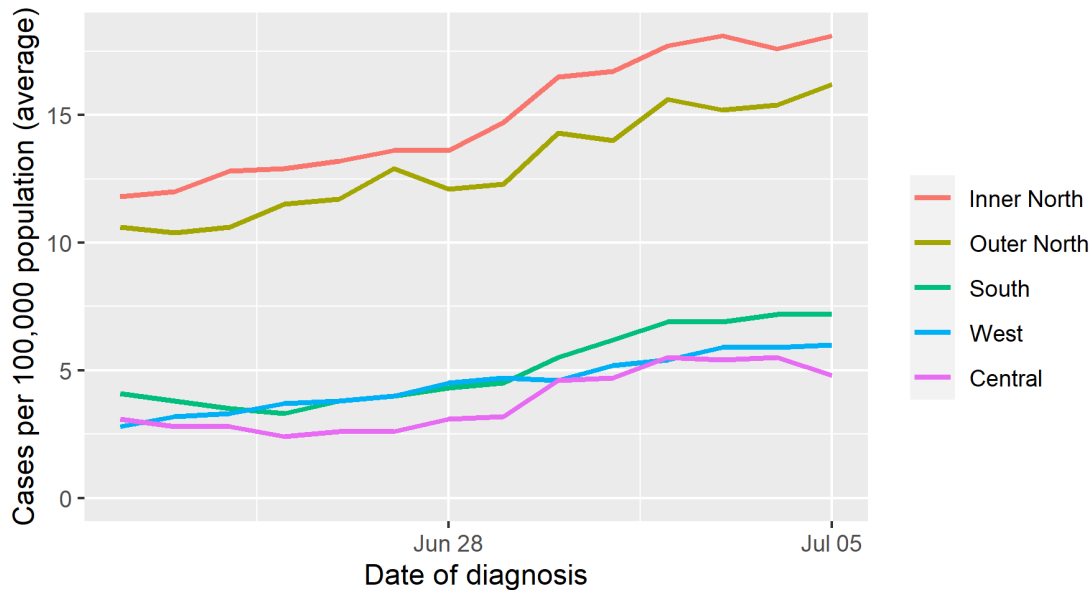
Region

St. Louis County DPH often divides the county by ZIP Code into five regions, based on economic and demographic factors, for the purpose of measuring broad geographic trends below the county level.



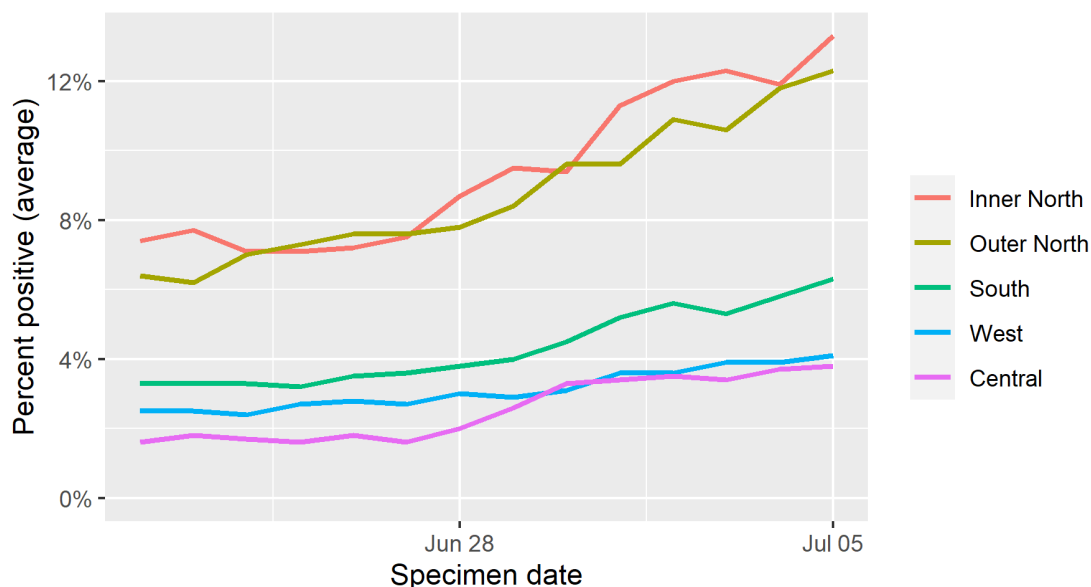
Average rates of new COVID-19 diagnoses increased markedly in all five regions between 06/22 and 07/05. The largest increase in relative terms was observed in the West region (+114 percent), but this is partly a reflection of the already-low rates in that region in recent weeks. In absolute terms, the greatest increases were observed in the Inner North (+6.3 cases per 100,000 per day; from 11.8 to 18.1) and Outer North (+5.6 cases per 100,000 per day; from 10.6 to 16.2). As of 07/05, the average rate of new COVID-19 diagnoses is highest in the Inner North region (18.1 cases per 100,000 per day), followed by the Outer North (16.2), South (7.2), West (6.0), and Central (4.8) regions. The large gap between the two northern regions and the other three regions is notable, and likely reflects regional disparities in COVID-19 vaccination rates.

Rate of New COVID-19 Diagnoses by Sub-County Region St. Louis County residents, 06/22 to 07/05



The seven-day positivity rate among those receiving PCR testing increased in all five regions between 06/22 and 07/05, with dramatic six-point increases observed in the two northern regions. As of 07/05, the PCR positivity rate is highest by far in the Inner North (13.3 percent positive) and Outer North (12.3 percent) regions, followed by the South (6.3 percent), West (4.1 percent), and Central (3.8) regions. These rates indicate that too-low rates of testing are leaving many infections undiagnosed, further fueling increases in community transmission, particularly in the two northern regions, but also in the South region.

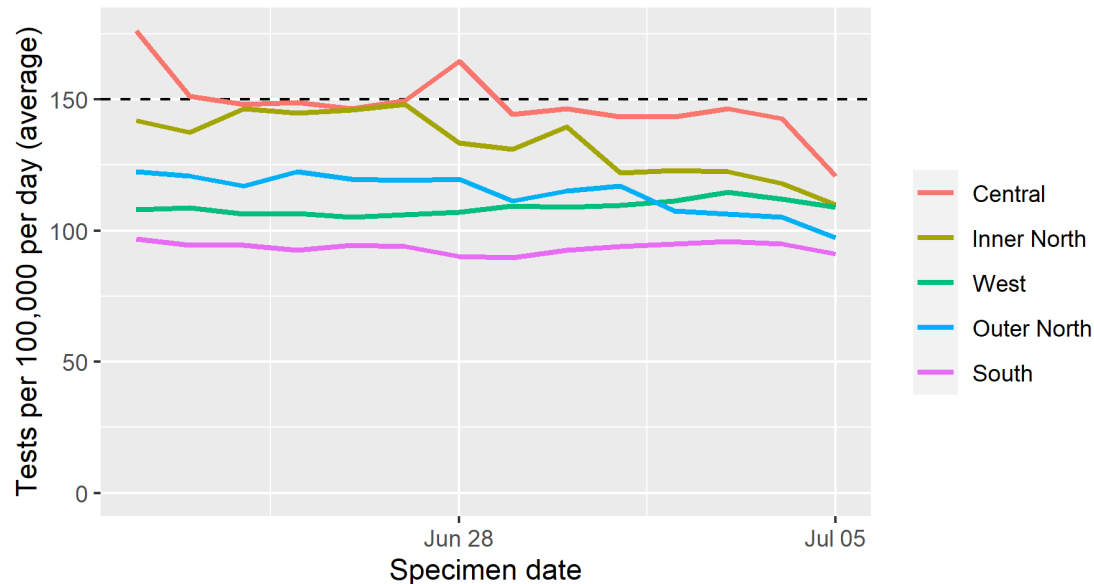
Percent Positive by Sub-County Region St. Louis County residents, 06/22 to 07/05



As of 07/05, the average rate of confirmatory COVID-19 testing ranges from 91 tests per 100,000 per day in the South region to 121 in the Central region. Reported PCR testing volume is well below St. Louis County’s target of 150 tests per 100,000 per day in every region. Current positivity rates for the Inner North, Outer North, and South regions suggest that more testing is urgently needed to identify a higher proportion of cases and bring transmission under control through isolation of cases and notification/quarantine of their close contacts.

Testing Volume by Sub-County Region

St. Louis County residents, 06/22 to 07/05

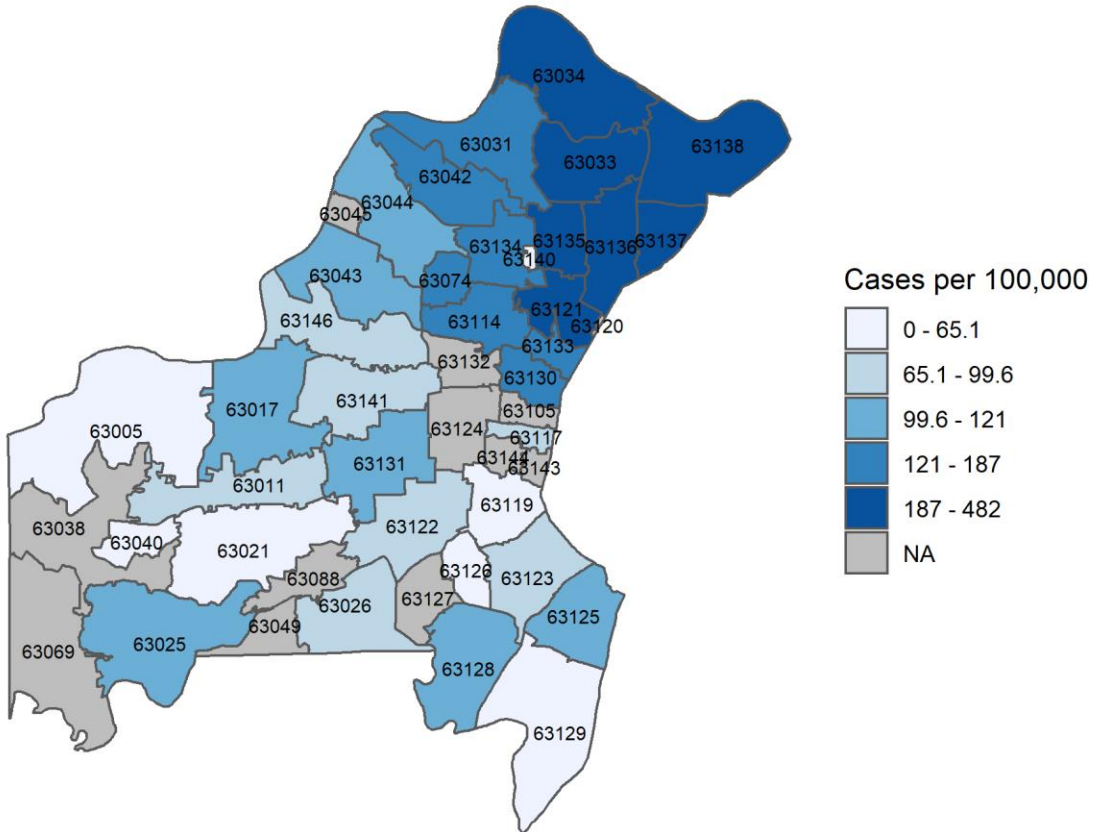


ZIP Code

Between 06/22 and 07/05, the 14-day rate of new diagnoses among St. Louis County residents ranged from 0 cases in the 63140 ZIP Code tabulation areas (ZCTA) to 482 cases per 100,000 in the St. Louis County portion of the 63137 ZCTA.

See below for a map of COVID-19 rates by ZIP Code tabulation area (ZCTA) over a fourteen-day period. ZCTAs have been excluded from the analysis if they had between one and four cases diagnosed between 06/22 and 07/05 or if their residential population is less than 100 people. For counts and rates of new and cumulative COVID-19 cases by ZIP Code, please visit St. Louis County’s [COVID-19 statistics dashboard](#) or [Open Government page](#).

Rate of New COVID-19 Diagnoses by ZIP Code
 St. Louis County residents, 06/22 to 07/05



Youth Supplement

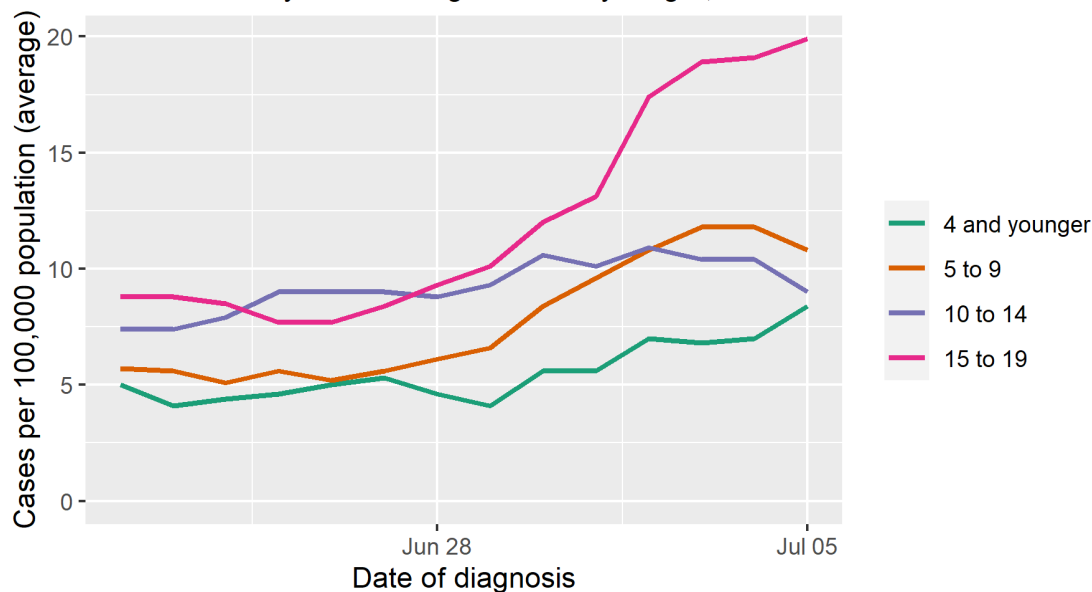
The following section takes a closer look at COVID-19 trends among St. Louis County residents aged 19 years and younger.

Cases by Age Group

Between 06/22 and 07/05, average rates of new COVID-19 diagnoses increased among all youth age groups, including a 126 percent increase among 15–19 year-olds (from 8.8 to 19.9 cases per 100,000 per day). As of 07/05, the average rate of new diagnoses is highest among 15–19 year-olds (19.9 cases per 100,000 per day), followed by 5–9 year-olds (10.8), 10–14 year-olds (9.0), and 0–4 year-olds (8.4).

Rate of New COVID-19 Diagnoses by Age Group

St. Louis County residents aged 19 and younger, 06/22 to 07/05

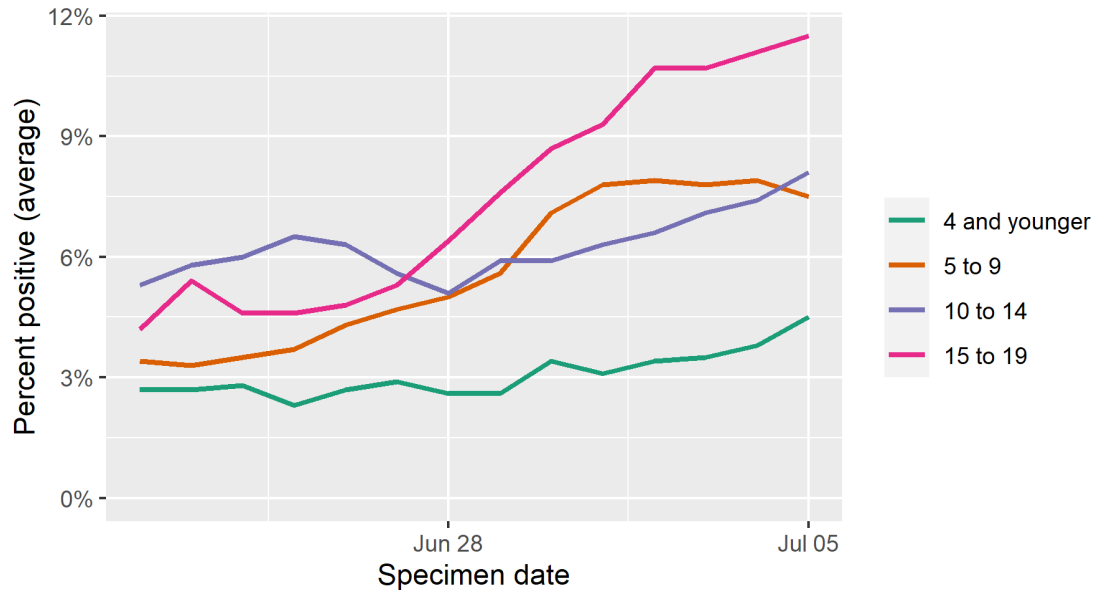


Positivity by Age Group

Between 06/22 and 07/05, SARS-CoV-2 positivity on PCR tests increased among all youth age groups, including a seven-point increase among 15–19 year-olds (from 4.2 to 11.5 percent positive). As of 07/05, PCR positivity rates are highest among 15–19 year-olds (11.5 percent positive), followed by 10–14 year-olds (8.1 percent), 5–9 year-olds (7.5 percent), and 0–4 year-olds (4.5 percent).

Percent Positive by Age Group

St. Louis County residents aged 19 and younger, 06/22 to 07/05

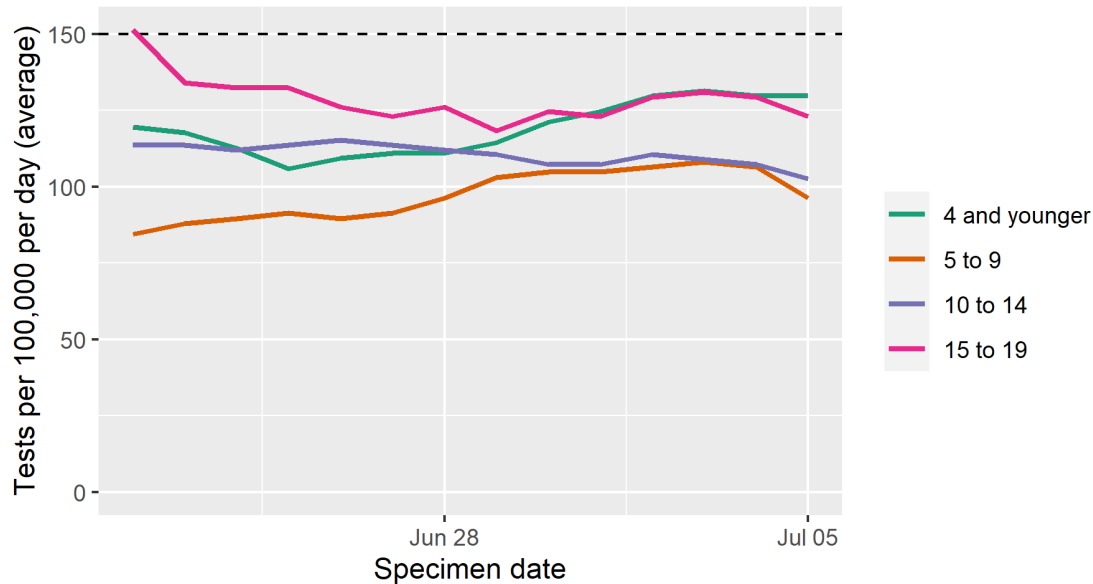


Testing Coverage by Age Group

As of 07/05, average PCR testing volume is well below St. Louis County's target of 150 tests per 100,000 per day among all youth age groups, with rates ranging from 96 tests per 100,000 per day among 5–9 year-olds to 130 tests per 100,000 per day among 0–4 year-olds. High and rapidly rising positivity rates among most St. Louis County youth suggest that more testing is urgently needed to identify additional cases among these age groups and bring transmission under control through isolation and quarantine.

Testing Volume by Age Group

St. Louis County residents aged 19 and younger, 06/22 to 07/05

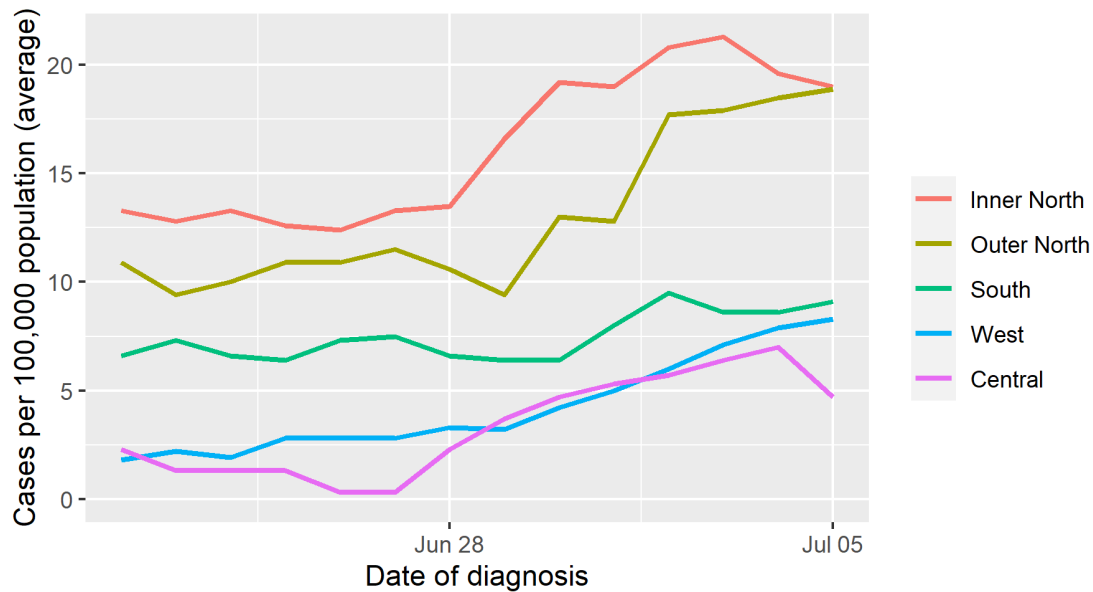


Cases by Region

Average rates of new COVID-19 diagnoses increased among youth in all five regions between 06/22 and 07/05. As of 07/05, the average rate of new youth diagnoses is highest in the Inner North (19.0 cases per 100,000 per day) and Outer North (18.9) regions, followed by the South (9.1), West (8.3), and Central (4.7) regions.

Rates of New COVID-19 Diagnoses by Region

St. Louis County residents aged 19 and younger, 06/22 to 07/05



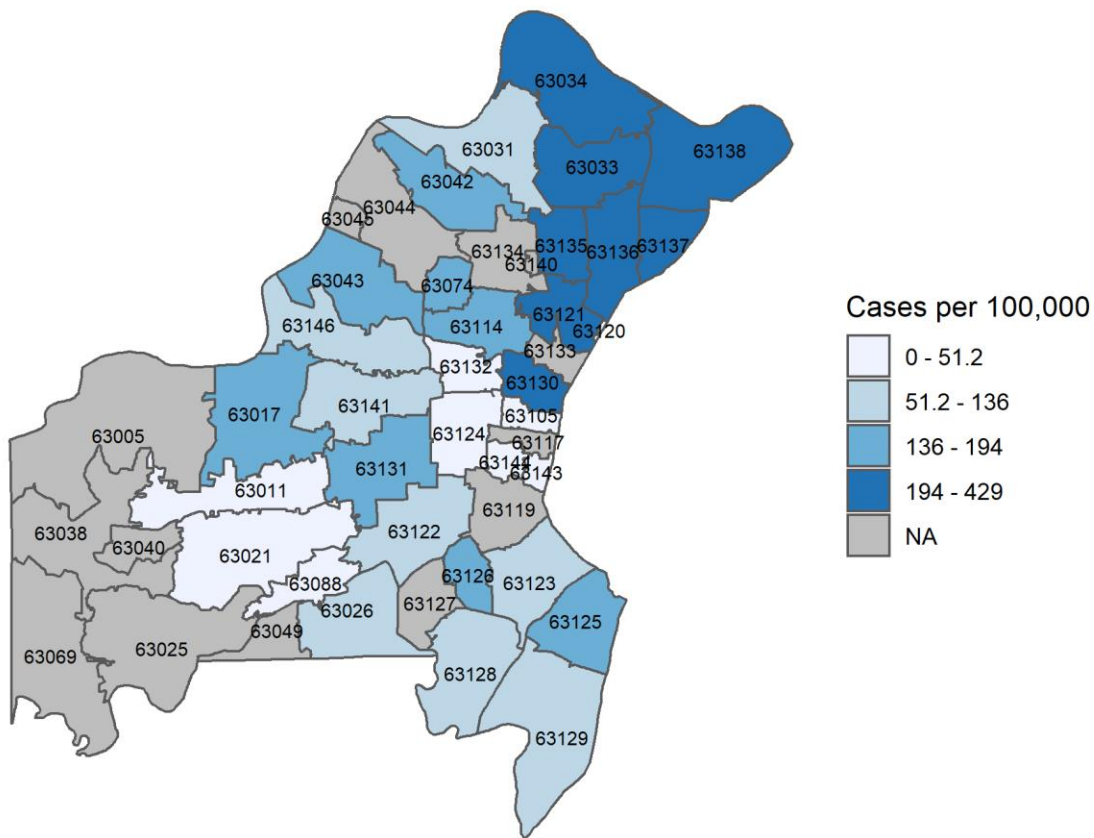
Cases by ZIP Code

Between 06/22 and 07/05, the 14-day rate of new COVID-19 diagnoses among St. Louis County youth ranged from 0 cases in seven ZIP Code tabulation area (ZCTAs) to 429 cases per 100,000 in the St. Louis County portion of the 63137 ZCTA.

See below for a table of COVID-19 case counts and rates among St. Louis County youth by ZIP Code tabulation area (ZCTA). ZCTAs have been excluded from the analysis if they had between one and four youth cases diagnosed between 06/22 and 07/05 or if their youth population is less than 100 people.

Rate of New COVID-19 Diagnoses by ZIP Code

St. Louis County residents aged 19 and younger, 06/22 to 07/05



ZIP Code	Youth cases, last 14 days	Youth population	Youth cases per 100,000 population, last 14 days
63137	18	4192	429.4
63135	24	6179	388.4

63034	16	4133	387.1
63121	16	5388	297.0
63033	32	11965	267.4
63138	13	5471	237.6
63130	13	5517	235.6
63136	24	12285	195.4
63042	9	4628	194.5
63131	9	4803	187.4
63043	8	4703	170.1
63114	14	8636	162.1
63074	7	4388	159.5
63017	13	8766	148.3
63125	10	6852	145.9
63126	5	3509	142.5
63123	13	9538	136.3
63141	5	4172	119.8
63031	16	13372	119.7
63128	7	5944	117.8
63146	5	5675	88.1
63026	5	6062	82.5
63122	8	10048	79.6
63129	7	11222	62.4
63011	5	9762	51.2
63021	7	14567	48.1
63088	0	1694	0.0
63105	0	5127	0.0
63120	0	179	0.0
63124	0	2422	0.0
63132	0	3760	0.0
63143	0	1500	0.0
63144	0	1651	0.0

Industry

During the time period included in this report (06/22/2021 through 07/05/2021), DPH completed case interviews on 51.7% of eligible cases of all ages and 53.7% of eligible cases aged 5 to 18 years. Among the subset of cases for whom DPH completed case interviews, the following information was reported regarding workplace exposures:

- The healthcare industry had the most reported cases (63) and the largest number of reported cases who worked/were present while infectious (46).
- The proportion of case-patients who worked while infectious (i.e., within 48 hours of symptom onset for symptomatic cases or specimen collection for asymptomatic cases) ranged from 38.5% in the education/childcare industry to 81.8% in the restaurant/bar industry.

The school-related portion of this report has been temporarily suspended while local schools are out of session for the summer.

Total number of cases and percent who worked while infectious, by industry type*, 06/22 through 07/05

Industry	Total cases	Cases present while infectious	Proportion who worked while infectious
Healthcare	63	46	73.0%
Retail/sales (clothing, furniture, vehicles, electronics, grocery, etc.)	35	24	68.6%
Other	33	19	57.6%
Transportation (people, materials, or supplies)	25	20	80.0%
Restaurant/bar	22	18	81.8%
Manufacturing/production (goods, food, or supplies)	17	12	70.6%
Education/childcare (school, university, daycare, library, etc.)	13	5	38.5%
Business/finance/legal	12	8	66.7%
Construction	10	5	50.0%
Personal care and services (barber, aesthetician, spa, nail, etc.)	8	5	62.5%
Military/government	7	<5	--
Architecture/IT/engineering	5	<5	--
Maintenance/repair/installation (plumbing, electrical, flooring, etc.)	5	<5	--
Community/social services	<5	<5	--

First responder (fire, police, EMS)	<5	<5	--
Janitorial/cleaning (home, business, industrial)	<5	<5	--
Utilities (electric, gas, trash/recycling/waste, sewer, internet/cable, etc.)	<5	<5	--
Entertainment/media/arts/design	<5	<5	--
Sports/recreation/fitness	<5	<5	--
Faith-based (religious affiliation)	<5	<5	--
Agriculture/farming/forestry/fishing/hunting/ mining	<5	<5	--
Lawn care/landscaping/tree service	<5	<5	--

* Industries with fewer than five cases have been suppressed to protect the identity of individual cases.

Indicators and Thresholds

Indicator 1: Rate of new cases

Data are collected daily and include all new cases among St. Louis County residents. This is the rolling seven-day average of new confirmed or probable cases diagnosed among St. Louis County residents per 100,000 population.

- Red: Greater than 8 cases per 100,000 per day
- Yellow: Between 4 and 8 cases per 100,000 per day
- Green: Less than 4 cases per 100,000 per day

Indicator 2: Trend in new cases

Data are collected daily and include all new cases among St. Louis County residents. This is the change in the seven-day rolling average of new confirmed or probable COVID-19 cases over a fourteen-day period.

- Red: If cases are increasing (more than a 10% increase) during the fourteen-day period.
- Yellow: If cases are flat (less than a 10% change in either direction) during the fourteen-day period.
- Green: If cases are decreasing (more than a 10% decrease) during the fourteen-day period.

Indicator 3: Number of non-household contacts per case

This is an average of the total number of contacts divided by the total number of cases (using a 7-day moving average), where the number of cases and contacts is taken from our case investigation and contact tracing databases.

- Red: If the average number of non-household contacts is increasing (more than a 10% increase) during the fourteen-day period.
- Yellow: If the average number of non-household contacts is flat (less than a 10% change in either direction) during the fourteen-day period.
- Green: If the average number of non-household contacts is decreasing (more than a 10% decrease) during the fourteen-day period.

Indicator 4: Percent positivity

Data on the number of positive and negative PCR tests for COVID-19 are provided daily by the Missouri Department of Health and Senior Services. This metric is the proportion of SARS-CoV-2 PCR tests that were positive over a rolling seven-day period.

- Red: Greater than 10 percent positive
- Yellow: 5 percent to 10 percent positive
- Green: Less than 5 percent positive

Indicator 5: New hospital admissions

Data on the number of new hospital admissions provided daily by the regional pandemic task force across the four major hospital systems. This metric uses the 7-day moving average of new COVID-19 related hospital admissions.

- Red: If new hospital admissions are increasing (more than a 10% increase) during the fourteen-day period.
- Yellow: If new hospital admissions are flat (less than a 10% change in either direction) during the fourteen-day period.
- Green: If new hospital admissions are decreasing (more than a 10% decrease) during the fourteen-day period.

Indicator 6: Number of COVID-associated deaths

Data are collected daily and include all COVID-19 associated deaths among Saint Louis County residents. This is the change in the seven-day rolling average of COVID-19-associated deaths over a fourteen-day period.

- Red: If deaths are increasing (more than a 10% increase) during the fourteen-day period.
- Yellow: If deaths are flat (less than a 10% change in either direction) during the fourteen-day period.
- Green: If deaths are decreasing (more than a 10% decrease) during the fourteen-day period.

Indicator 7: Percent of test target

This is the rolling seven-day average of COVID-19 PCR tests conducted among St. Louis County residents, relative to St. Louis County's target of 150 tests per 100,000 population per day.

- Red: Less than 50 percent of the target
- Yellow: Between 50 and 99 percent of the target
- Green: 100 percent of the target or greater

Indicator 8: COVID-19-related ICU occupancy

Data about the total number of confirmed and suspected patients currently admitted to intensive care units (ICUs) across the four major hospital systems (BJC, Mercy, SSM, and St. Luke's) is provided daily by the St. Louis Metropolitan Pandemic Task Force.

- Red: More than 20 percent of ICU beds occupied by COVID-19 patients.
- Yellow: Between 10 and 20 percent of ICU beds occupied by COVID-19 patients.
- Green: Fewer than 10 percent of ICU beds occupied by COVID-19 patients.