COVID-19 Trends in St. Louis County

10/15/2020

Contents

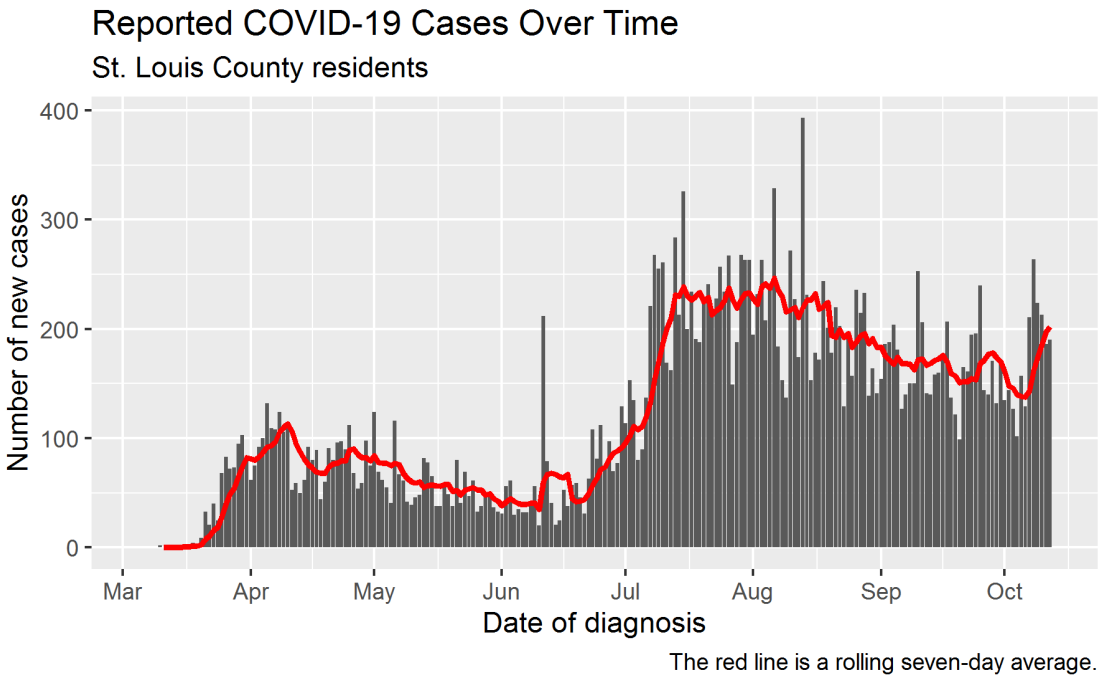
Overall Trends

	9/15–9/28	9/29–10/12
1. Rate of new cases	🔴	🔴
2. Trend in new cases	🟡	🔴
3. Contacts per case*	⚫	⚫
4. Test positivity rate	🟢	🟡
5. Hospital admissions	🟡	🔴
6. Deaths	🟢	🟢
7. Daily tests	🟢	🟢
8. Hospital capacity	🟡	🟡

NOTE: To account for reporting and data entry delays, this report focuses on data about COVID-19 cases diagnosed and laboratory specimens collected for COVID-19 testing through 10/12. Unless otherwise specified, all averages are seven-day rolling averages. Data are current as of 10/15. *Indicator still in development.

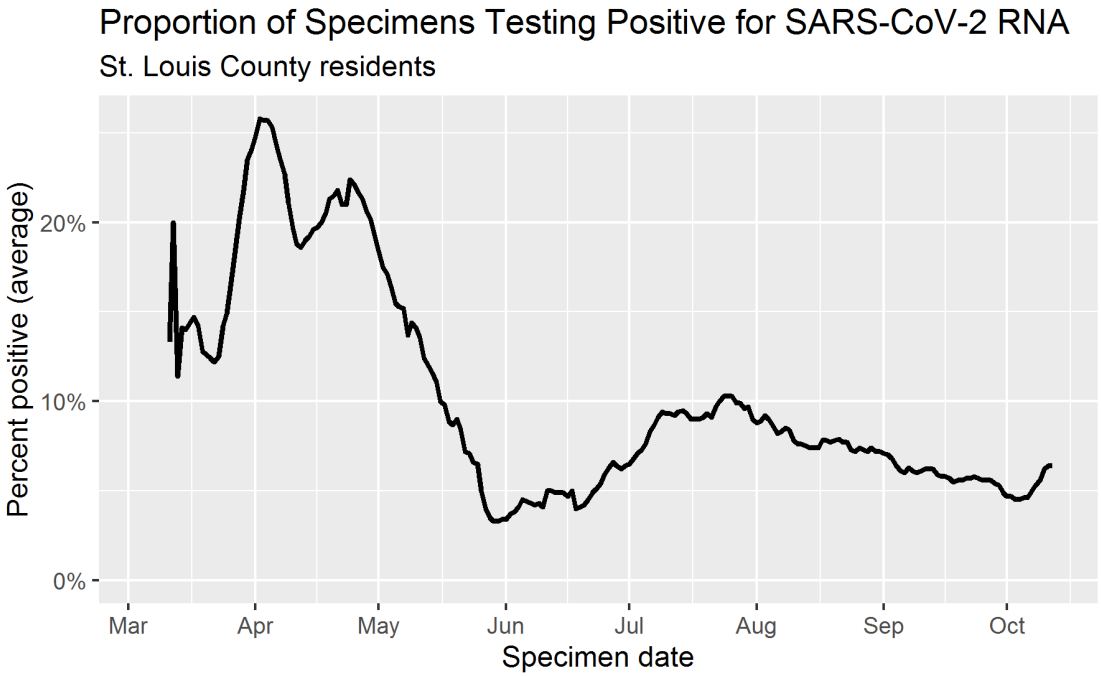
New Cases

Between 09/29 and 10/12, the average number of new COVID-19 cases diagnosed among St. Louis County residents increased by 16 percent from 174.0 to 202.4 cases per day. The current rate of daily diagnoses (20.3 cases per 100,000 residents per day) is very high.



Test Positivity Rate

The COVID-19 positivity rate among St. Louis County residents is 6.4 percent as of 10/12. Approximately 36,000 negative PCR test results from June through October have been excluded from this analysis because they were assigned to St. Louis County on the basis of the reporting laboratories' addresses (these test results were reported without addresses for the patient or the ordering provider). As a result of removing these negative results from the analysis, the positivity rates for some dates in the graph below may be as much as 1 percent higher than indicated in previous versions of this report.



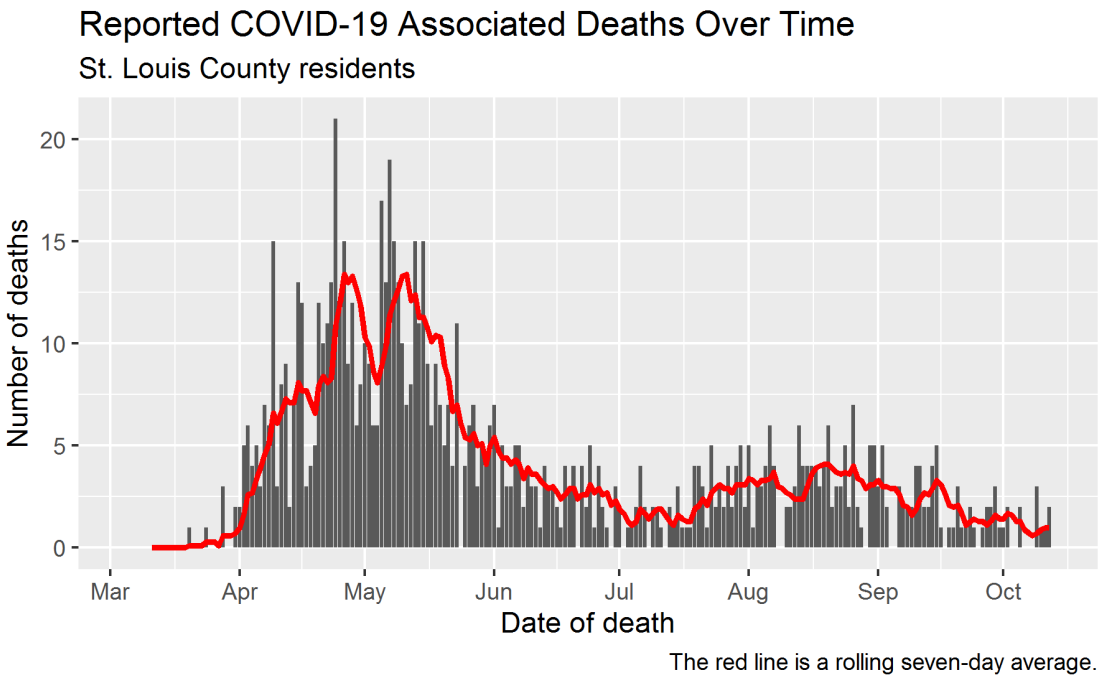
Hospital Admissions

Based on data released by the Pandemic Task Force and analyzed by Dr. Christopher Prener at St. Louis University, average new hospitalizations for COVID-19 at SSM, BJC, Mercy, and St. Luke's hospitals in the St. Louis metro area increased by 15.1 percent between 09/29 (37.86 admissions per day) and 10/12 (43.57 admissions per day).

St. Louis County DPH is still developing its ability to more specifically track COVID-19-associated hospitalizations among St. Louis County residents.

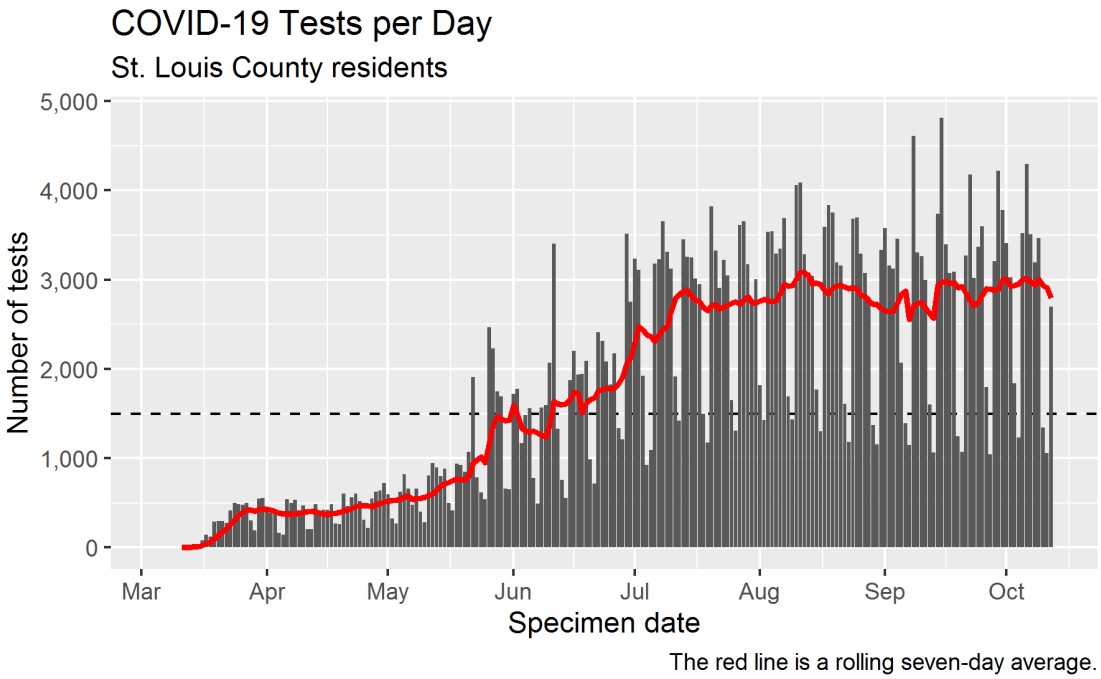
Deaths

COVID-19-associated deaths decreased by 38 percent between 09/29 (1.6 deaths per day) and 10/12 (1.0 deaths per day). However, it should be noted that deaths are a lagging indicator of the severity of the COVID-19 pandemic, and St. Louis County DPH is likely not yet aware of all COVID-19 deaths that occurred during this reporting period.



Tests per Day

As of 10/12, an average of 2,795 specimens are being collected for confirmatory COVID-19 testing per day from St. Louis County residents, which is 186 percent of St. Louis County's target of 1,500 tests per day (approximately 150 tests per 100,000 residents per day).



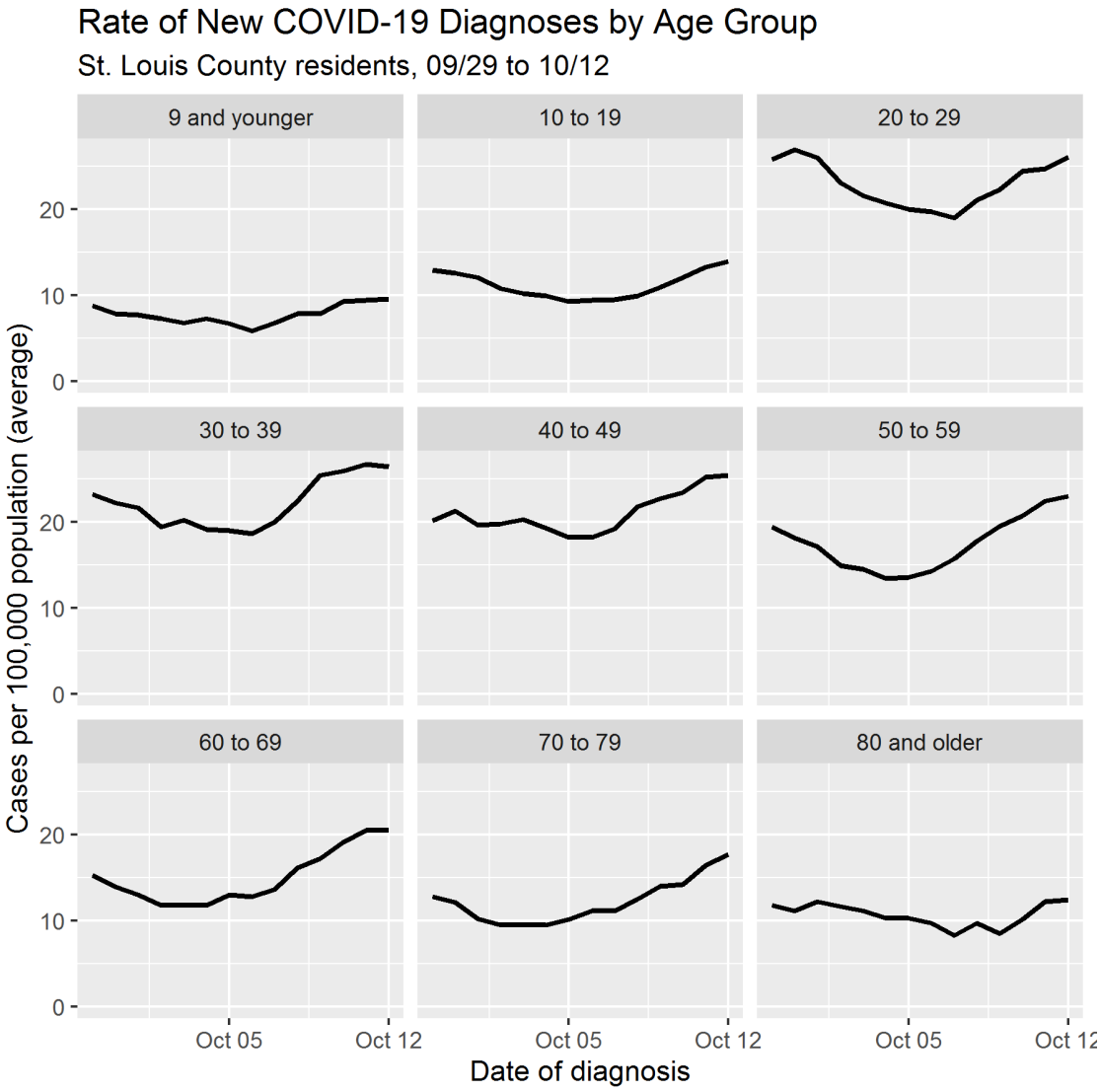
Hospital Capacity

According to data released by the Pandemic Task force, 71.2 percent of the inpatient beds at SSM, BJC, Mercy, and St. Luke's hospitals in the St. Louis metro area are filled as of 10/12.

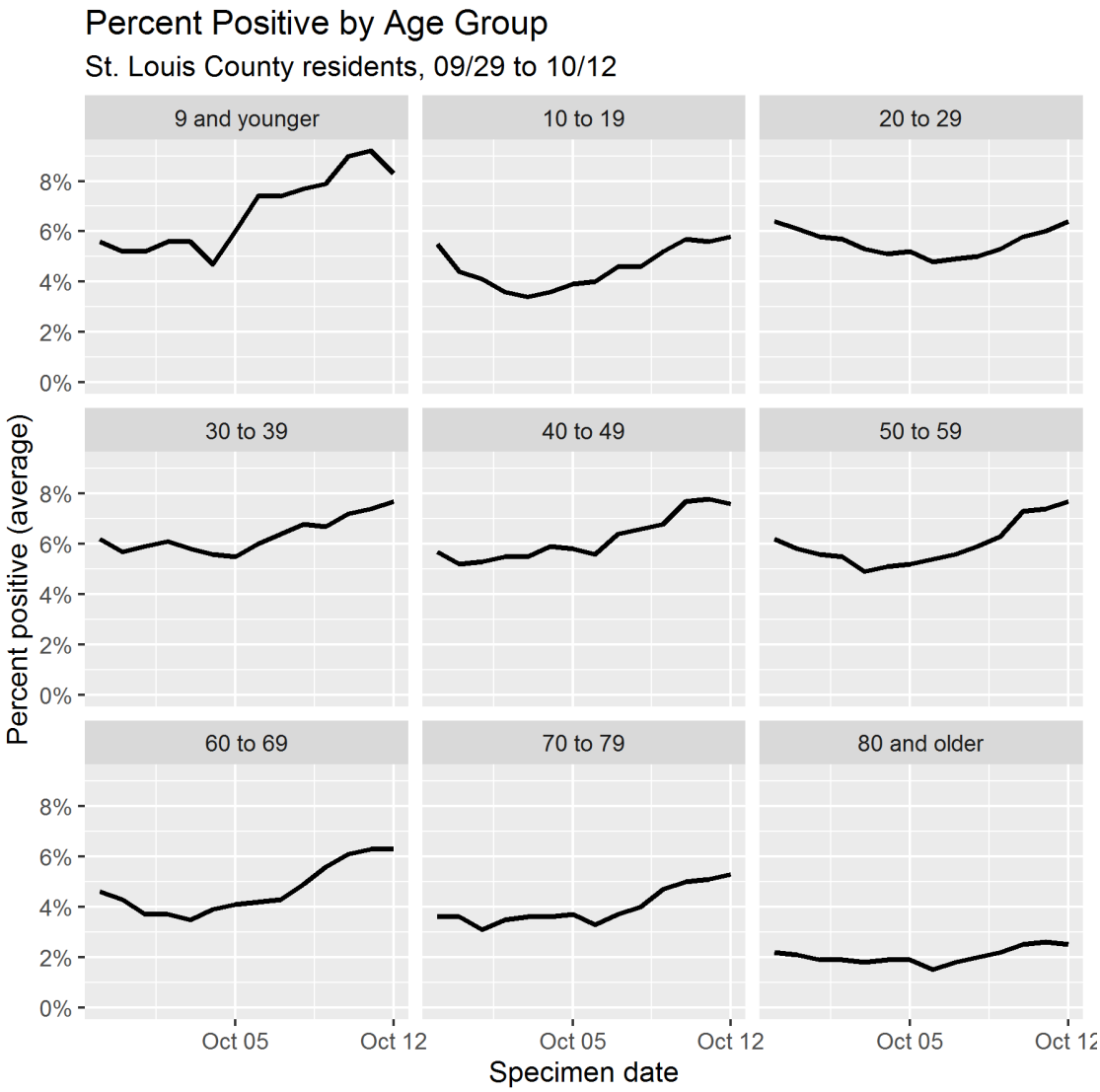
Demographic Trends

Age Groups

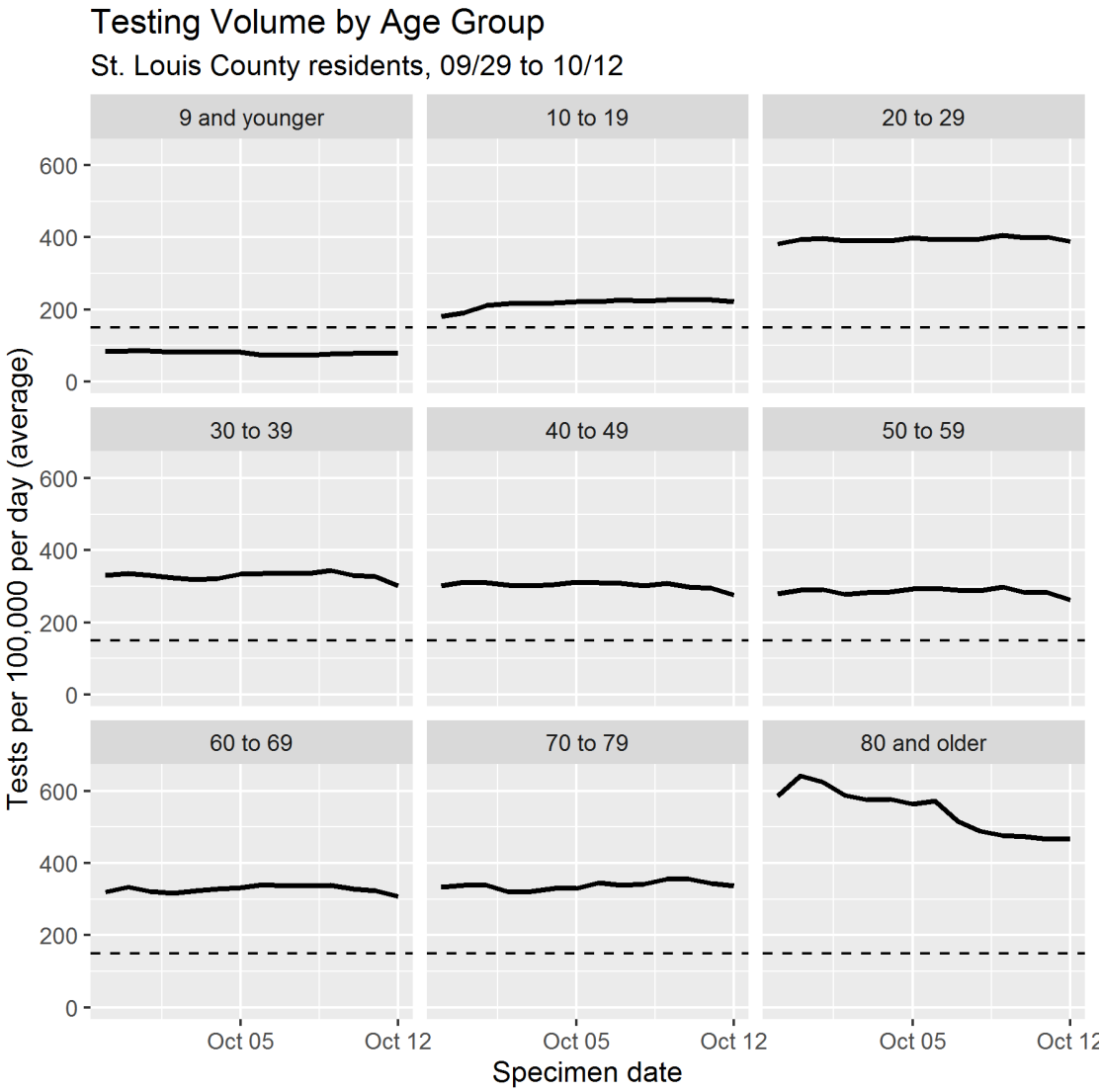
Between 09/29 and 10/12, new COVID-19 diagnoses increased across all age groups. In relative terms, the largest increases were observed among people aged 70–79 (+38 percent), 60–69 (+34 percent), and 40–49 years (+26 percent). Increases among young people were smaller, but measurable: +9 percent among children aged 9 years and younger, +8 percent among 10–19 year-olds, and +1 percent among 20–29 year-olds. The average rate of new diagnoses is currently highest among 30–39 year-olds (26.4 cases per 100,000 per day), followed closely by 20–29 year-olds (26.1) and 40–49 year-olds (25.4).



Positivity among people tested for COVID-19 remained relatively stable among 10–19 and 20–29 year-olds and increased among all other age groups between 09/29 and 10/12. COVID-19 positivity rates are currently highest among children aged 9 years and younger (8.3 percent), but this should be considered in the context of relatively low testing volume for this age group. Positivity is currently lowest among people aged 80 years and older (2.5 percent). For all other age groups, positivity ranges from 5.3 percent among 70–79 year-olds to 7.7 percent among 30–39 and 50–59 year-olds.



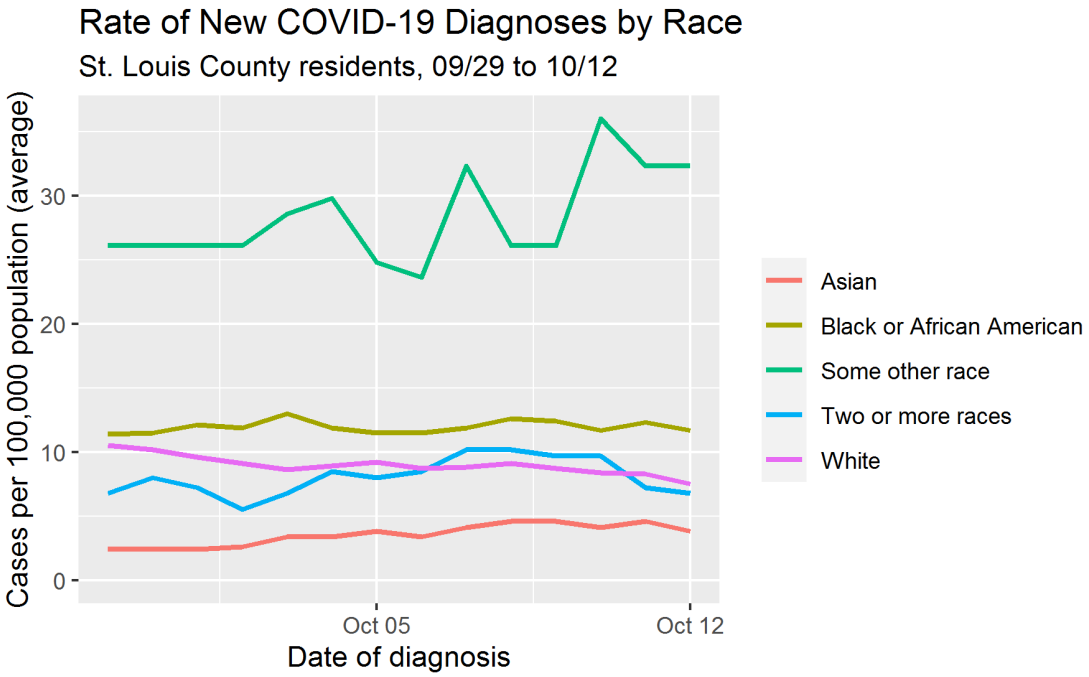
Testing coverage remains below St. Louis County's target of 150 tests per 100,000 population per day for children aged 9 years and younger (78.4 tests per 100,000 per day). Testing coverage is at or above that threshold for all other age groups. Testing coverage remains very high (469 tests per 100,000 per day) among people aged 80 years and older, due in part to the aggressive COVID-19 surveillance and prevention strategies being implemented in long-term care facilities.



Race

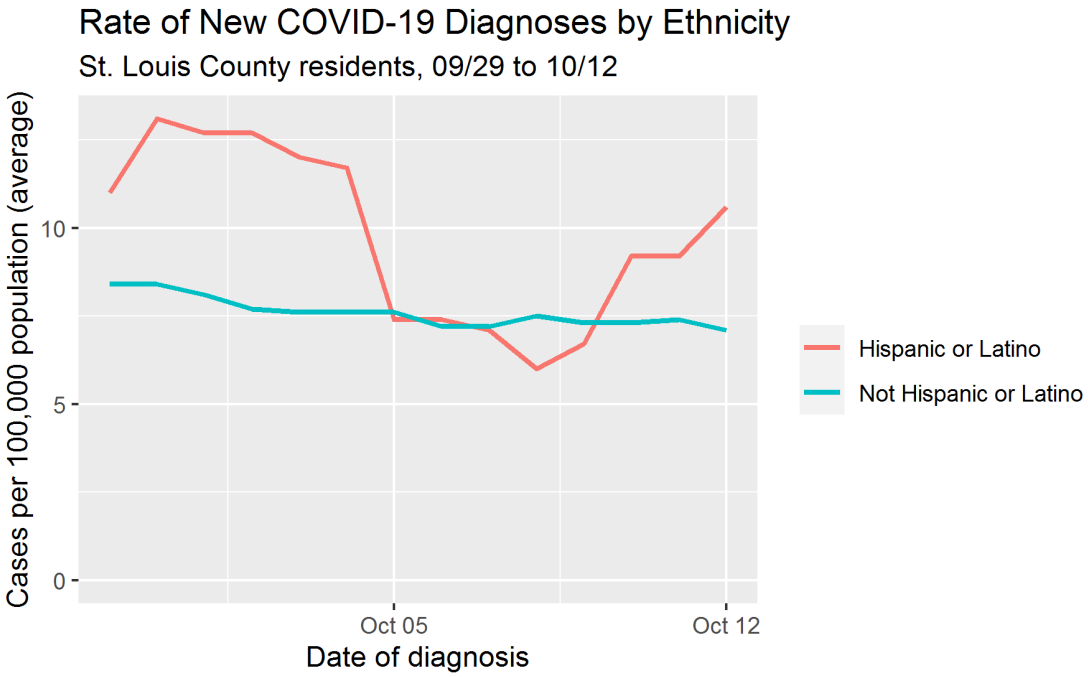
Between 09/29 and 10/12, the average rate of new COVID-19 diagnoses decreased among white residents of St. Louis County (-29 percent), remained stable among multiracial residents, and increased among all other racial groups: +3 percent among Black or African American residents, +58 percent among Asian residents, and +24 percent among residents who identify as “some other race.” As of 10/12, rates of newly diagnosed cases are highest among residents of “some other race” (32.3 cases per 100,000 per day), followed by Black or African American (11.7), white (7.5), multiracial (6.8), and Asian residents (3.8).

Racial groups with fewer than one case diagnosed per day (American Indian/Alaska Native and and Native Hawaiian/Other Pacific Islander) have been excluded from this analysis.



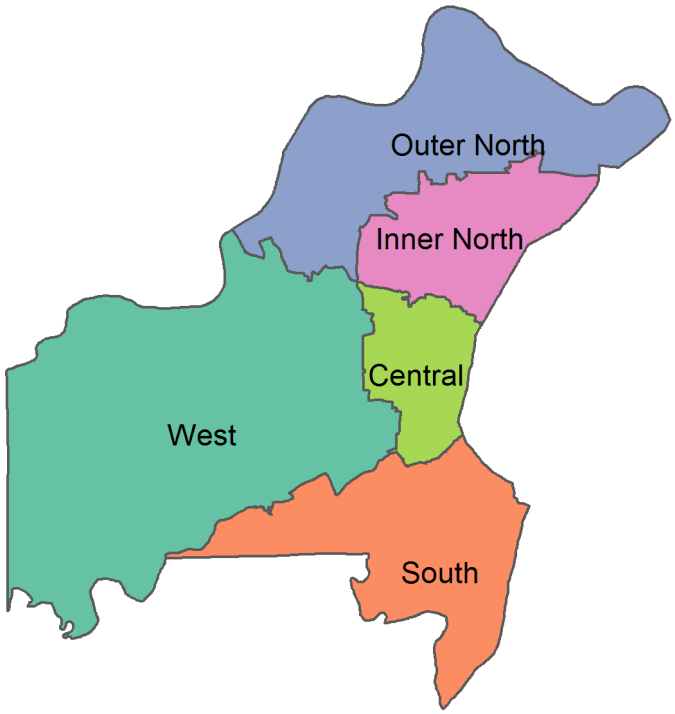
Ethnicity

As many as 50 percent of St. Louis County COVID-19 cases diagnosed in recent weeks have been reported with the case's ethnicity missing. However, among cases where ethnicity is known, rates of new COVID-19 diagnoses decreased by 4 percent among Hispanic or Latino residents of St. Louis County and by 16 percent among non-Hispanic residents between 09/29 and 10/12. The average rate of new diagnoses among Hispanic residents (10.6 cases per 100,000 per day) is currently 1.5x the rate among non_Hispanic residents (7.1 per 100,000 per day).

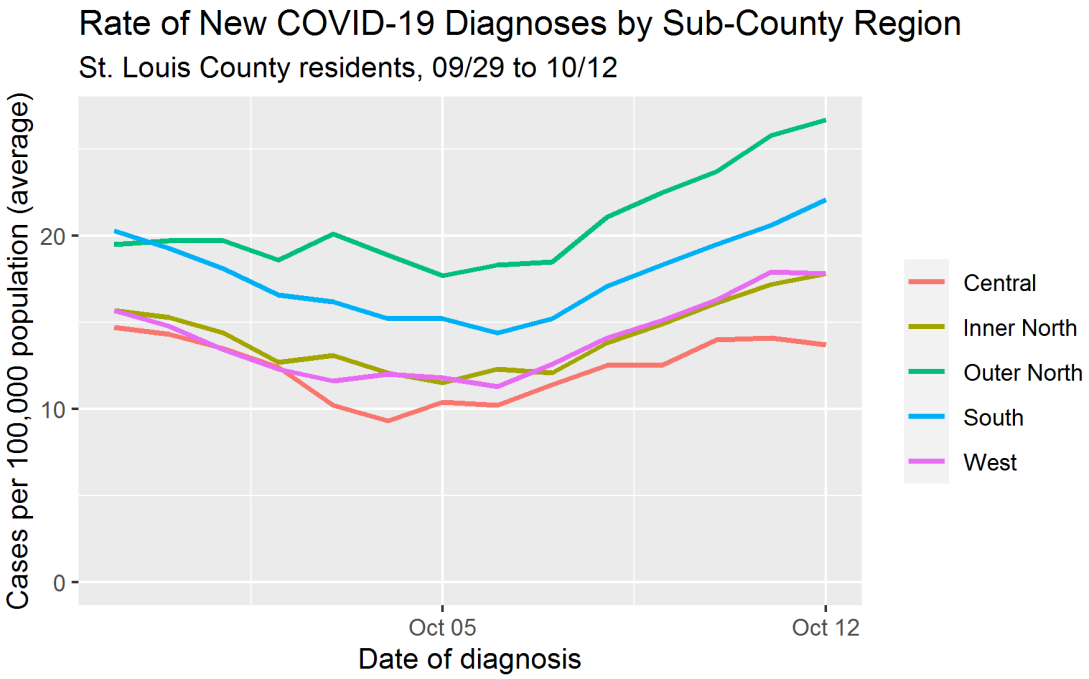


Region

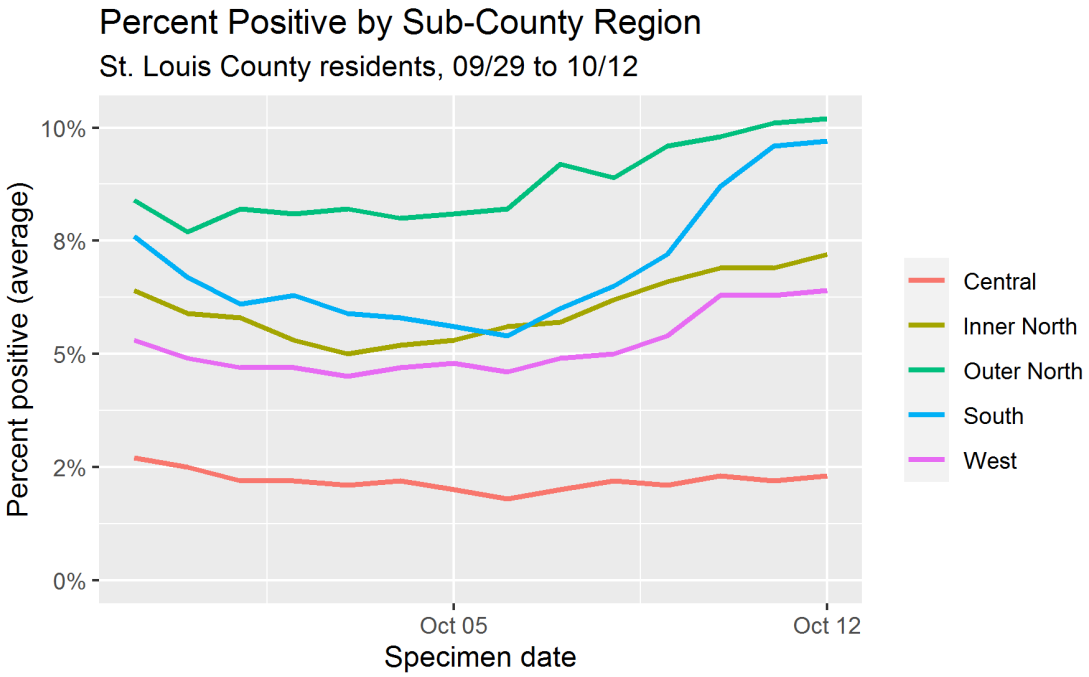
St. Louis County DPH often divides the county by ZIP Code into five regions, based on economic and demographic factors, for the purpose of measuring broad geographic trends below the county level.



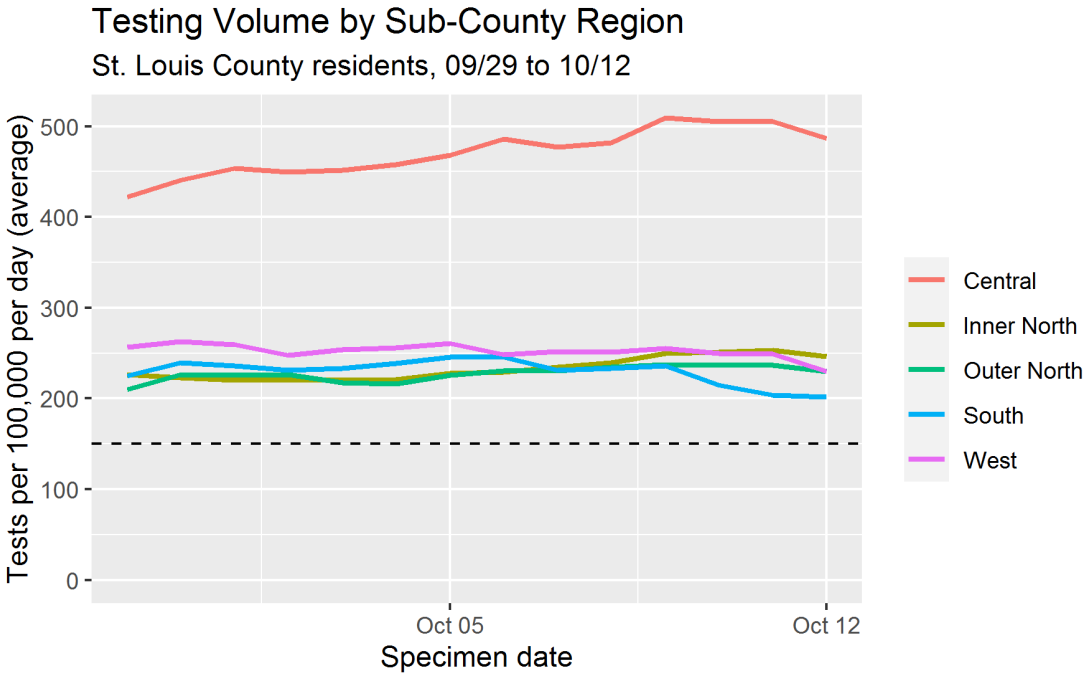
Between 09/29 and 10/12, average rates of new COVID-19 diagnoses decreased in the Central region of St. Louis County (–7 percent) and increased in the Inner North (+13 percent), Outer North (+37 percent), South (+9 percent), and West (+13 percent) regions. Currently, the average rate of new diagnoses is highest in the Outer North region (26.7 cases per 100,000 residents per day) and lowest in the Central region (13.7 per 100,000 per day).



COVID-19 positivity among those tested remained stable (i.e., a net change of less than 1 percent) in the Central and Inner North regions of St. Louis County between 09/29 and 10/12 while increasing in the other three regions. As of 10/12, the positivity rate is highest in the Outer North (10.2 percent) and South (9.7 percent) regions and lowest in the Central region (2.3 percent).



As of 10/12, testing coverage is highest among residents of the Central region (487 tests per 100,000 per day). Coverage is similar across the other four regions, ranging from 202 tests per 100,000 per day in the South region to 246 in the Inner North region. Testing coverage continues to exceed St. Louis County's target of 150 tests per 100,000 population per day among residents of all five regions.



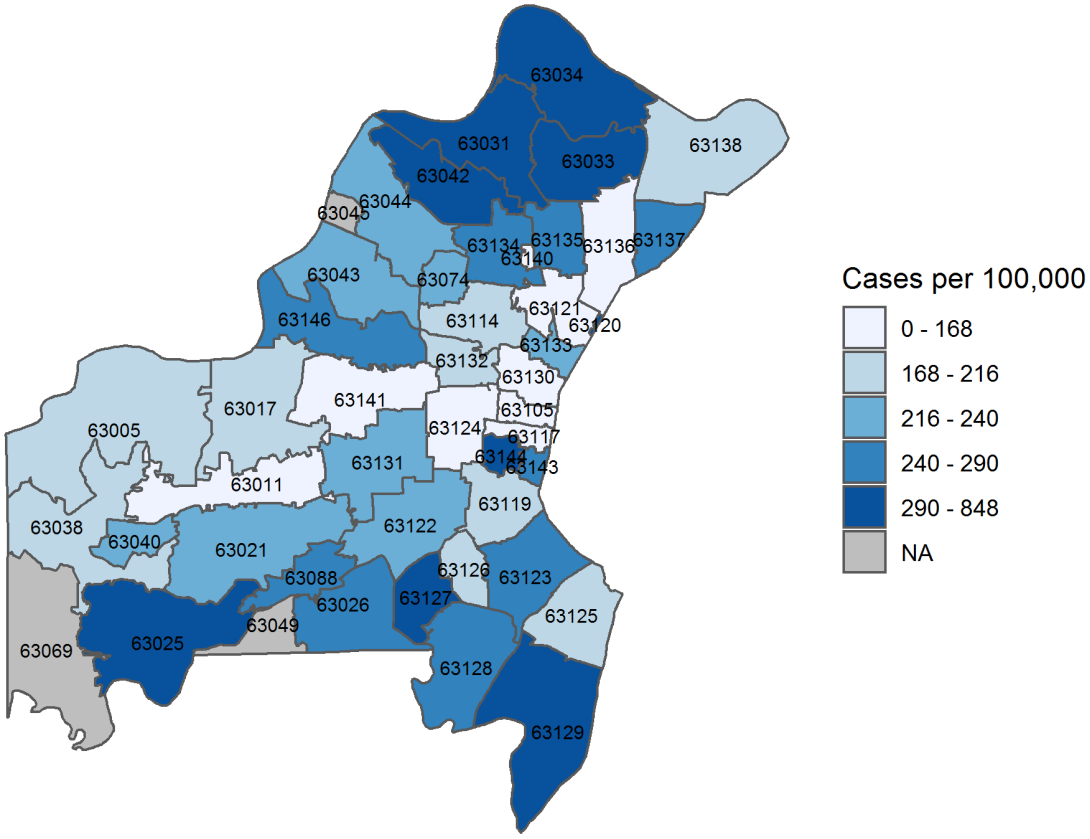
ZIP Code

Between 09/29 and 10/12, the rate of new diagnoses among St. Louis County residents ranged from 0 cases in the 63140 ZIP Code tabulation area (ZCTA) to 848 cases per 100,000 in the St. Louis County portion of the 63120 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 09/29 and 10/12 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, 09/29 to 10/12

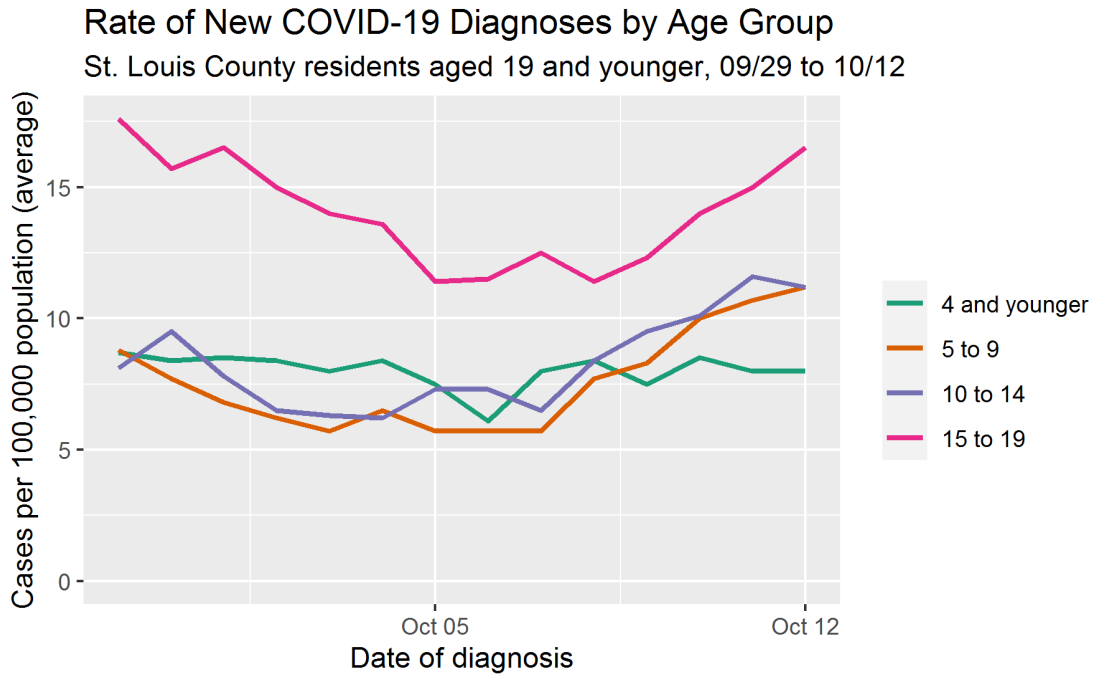


Youth Supplement

Given the close attention being paid to youth sports and the start of the 2020–2021 school year, the following section takes a closer look at COVID-19 trends among St. Louis County residents aged 19 years and younger.

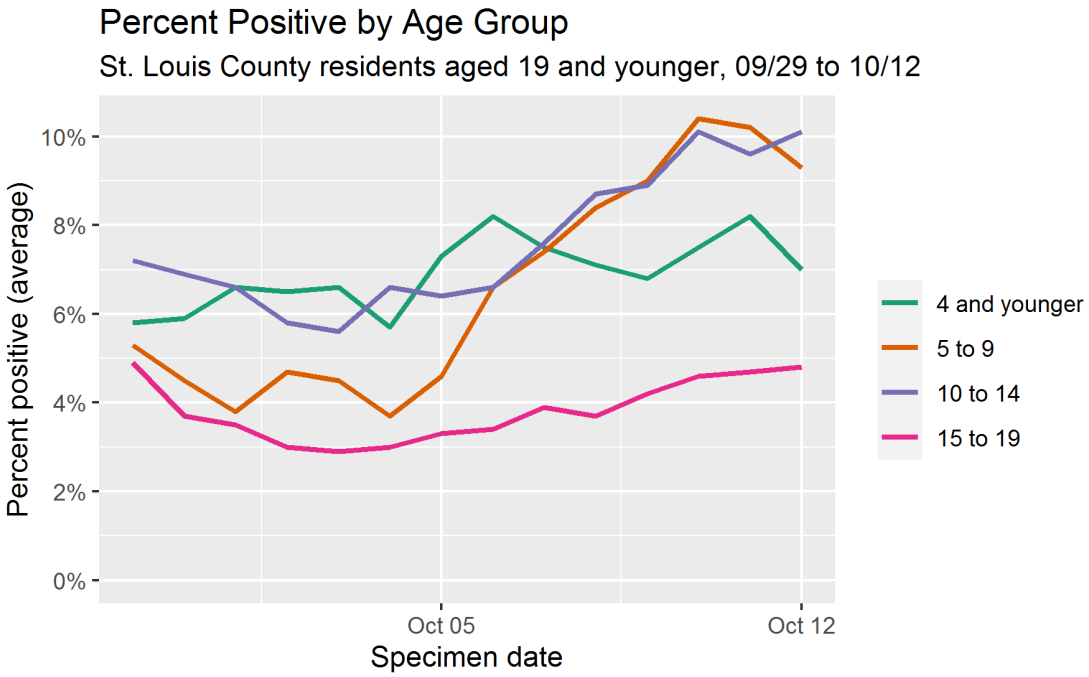
Cases by Age Group

The average rate of new COVID-19 diagnoses among St. Louis County youth ages 15–19 decreased by 6 percent from 17.6 to 16.5 cases per 100,000 per day between 09/29 and 10/12, but has followed a distinctly upward trajectory since about 10/08. During the same two-week reporting period, average daily diagnoses decreased among children aged 4 years and younger (–8 percent) and increased among children aged 5–9 years (+27 percent) and 10–14 percent (+38 percent).



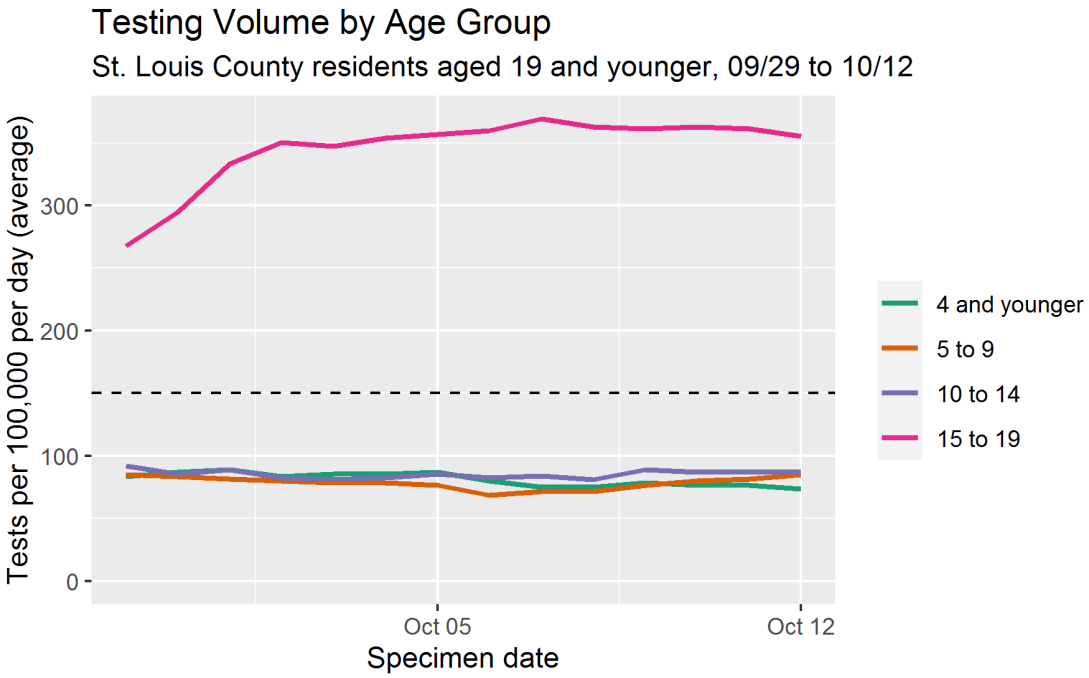
Positivity by Age Group

Between 09/29 and 10/12, COVID-19 positivity increased from 5.8 percent to 7.0 percent among 0–4 year-olds, from 5.3 percent to 9.3 percent among 5–9 year-olds, and from 7.2 percent to 10.1 percent among 10–14 year-olds, while remaining relatively stable at 4.8 percent among 15–19 year-olds. However, this analysis is complicated by significant and persistent disparities in testing coverage between 15–19 year-olds and all other age groups.



Testing Coverage by Age Group

As of 10/12, testing coverage is well below St. Louis County's target of 150 tests per day per 100,000 population among youth aged 14 years and younger – these groups are currently being tested at rates of between 70 and 90 tests per 100,000 residents per day. Testing coverage among 15–19 year-olds is currently well above the target level at 355 tests per 100,000 per day.

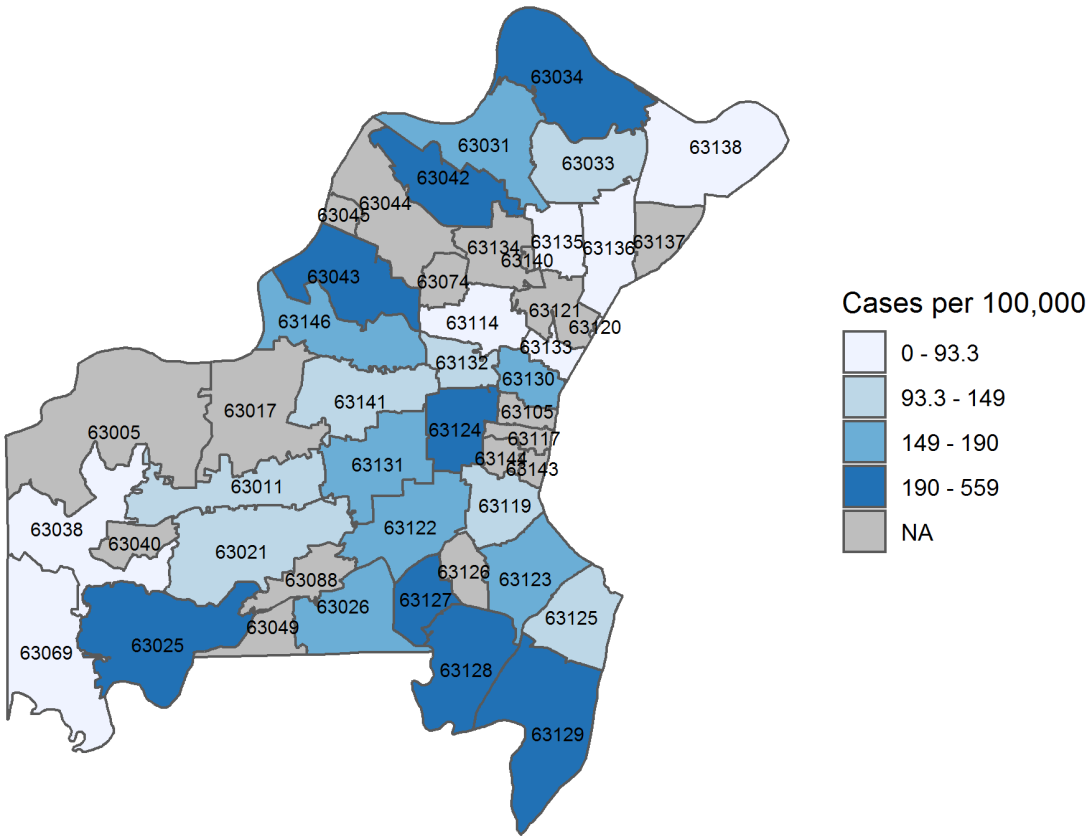


Cases by ZIP Code

Between 09/29 and 10/12, the rate of new COVID-19 diagnoses among St. Louis County youth ranged from 0 cases in several ZIP Code tabulation areas (ZCTAs) to 559 cases per 100,000 in the 63127 ZCTA. See below for a map and data 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 09/29 and 10/12 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, 09/29 to 10/12



ZIP Code	Youth cases, last 14 days	Youth population	Youth cases per 100,000 population, last 14 days
63127	7	1252	559.1
63025	10	2589	386.2
63042	13	4885	266.1

63034	10	4150	241.0
63129	29	12159	238.5
63043	10	4783	209.1
63124	5	2576	194.1
63128	12	6205	193.4
63130	11	6106	180.2
63031	26	14652	177.5
63026	11	6459	170.3
63122	19	11155	170.3
63146	10	5943	168.3
63131	8	5039	158.8
63123	15	10009	149.9
63132	6	4050	148.1
63125	10	7557	132.3
63141	6	4703	127.6
63033	16	12636	126.6
63021	19	15202	125.0
63011	13	10867	119.6
63119	10	9434	106.0
63135	6	6736	89.1
63114	6	9698	61.9
63136	7	13840	50.6
63038	0	1906	0.0
63069	0	1252	0.0
63120	0	193	0.0
63133	0	2388	0.0
63138	0	6222	0.0

Impact on Schools

In addition to individual case data among youth in Saint Louis County, DPH also works with schools and school districts to understand the impact of COVID-19 at the school level. The information below is derived from reports from and discussions with individual schools and school districts. It includes K–12 schools, both public and private, that reported to DPH a positive case and/or a contact among staff or students from 10/01/2020 through 10/15/2020.

- Thirty-seven students tested positive for COVID-19. Among these:

  - At least 11 resulted in school-related exposures to staff, students, or both. These exposures resulted in over 59 students and staff members being placed in quarantine.
  - The remaining students tested positive for COVID-19, but without any school-related exposure or transmission to staff or students.
  - Forty-nine percent of cases were among high school students, 20 percent were among middle school students, and 31 percent were among elementary school students.
- Thirty-five staff members tested positive for COVID-19. Among these:
  - At least 18 resulted in school-related exposures to staff, students, or both. These exposures resulted in more than 115 students and staff members being placed in quarantine.
  - The remaining staff members tested positive for COVID-19, but without any school-related exposure or transmission to staff or students.
- More than 35 students and staff were required to quarantine after exposure to positive cases that were not school-related. The majority of these missed in-school instruction, activities, or work due to their quarantine.
- Although we know that school-related transmission has occurred, we are still looking into how many secondary cases resulted from school-related transmission.

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

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: Hospital bed capacity

Data about hospitalizations are provided daily by the Pandemic Task Force. Calculating this metric is dependent on those data continuing to be collected and available.

- Red: Occupancy is more than 80 percent (extremely low availability of beds).
- Yellow: Occupancy is between 60 and 80 percent (low availability of beds).
- Green: Occupancy is below 60 percent (sufficient availability of beds).