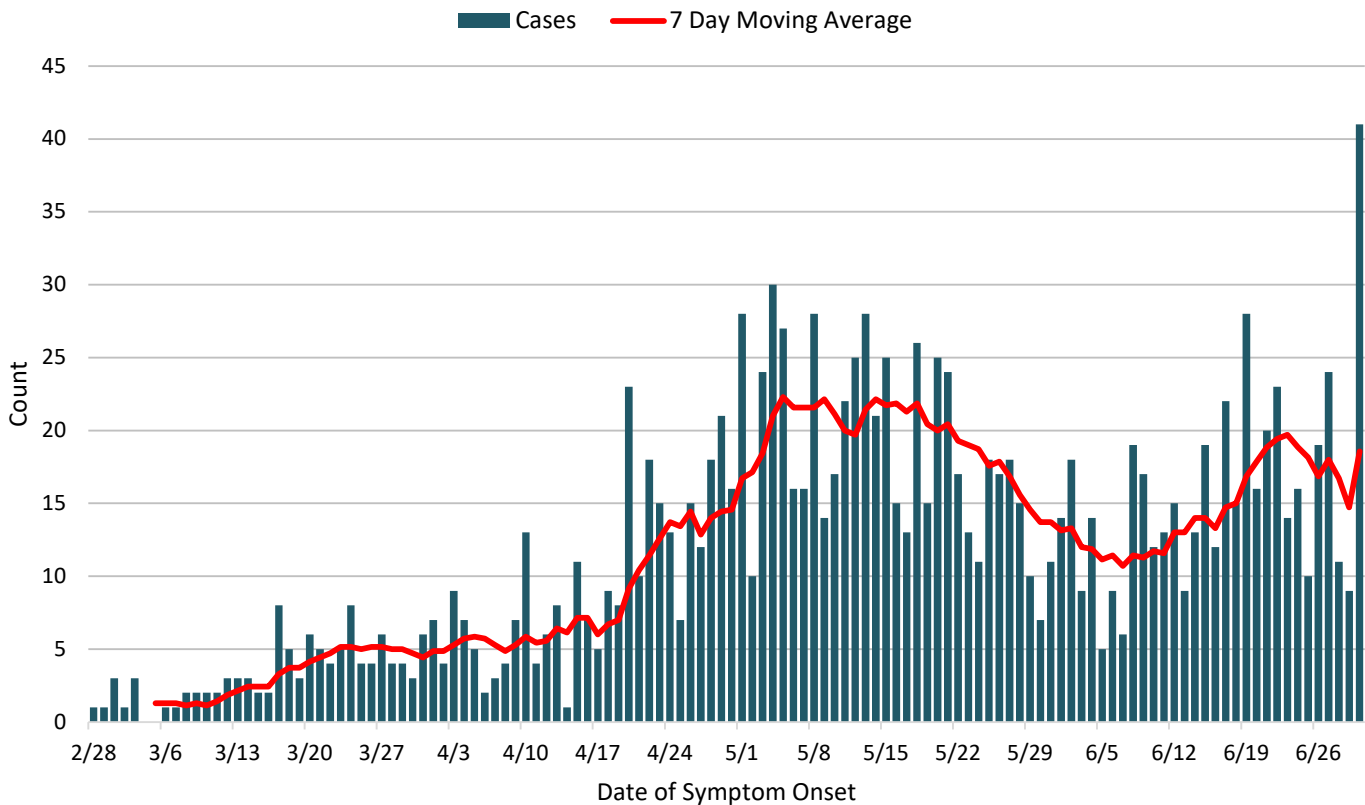


Butler County General Health District COVID-19 Update (06/30/2020) Confirmed and Probable COVID-19 Cases Reported to Butler County* Butler County Residents, 2020

| | |
|-------------------------------------|-------------------|
| Total # of Cases*: | 1453* |
| Confirmed Deaths (06/30): | 41 |
| First Case Reported: | 3/11/2020 |
| Last Case Reported (so far): | 6/30/2020 |
| Confirmed Cases: | 1422 |
| Probable Cases: | 31 |
| Age Range: | <1-101 |
| Median Age: | 41 |
| Mean Age: | 43.0 |
| Incidence Rate: | 380.0 per 100,000 |

Figure 1: Cases Reported to Butler County by Symptom Onset Date*, 2020



Figures 1 and 2 show the daily incidence in count of cases and total cumulative for confirmed and probable cases of COVID-19 that have been reported to the health department. Butler County towards the end of May had done an excellent job of flattening the curve; however, there has been a reversal of that trend through June. This coincides with two major events that have occurred in the past weeks that could account for the increase. Celebrations of Memorial Day and the unofficial start of summer that brought large groups of people together with the relaxing of social distancing, and the demonstrations that occurred through the early part of the month. An increase in testing does reasonably explain some of the increase, but the increase in positivity rate as well as the shifting demographics likely point to a true increase in cases. The steep spike in cases that occurred on 06/30 more accurately reflects the date of report, and as investigations continue onset dates will be backdated appropriately.

All figures show reported cases of COVID-19 in Butler County as of 1700 EDT 06/30/2020. Due to delays in reporting, the numbers of confirmed and probable cases on Figure 1 are subject to change between reports and confirmed and probable case counts are likely to increase. *This should not be assumed to be the total disease burden of COVID-19 in Butler County only those that have been laboratory confirmed OR meet ODH probable case criteria AND reported to Public Health.

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Figure 2. Cumulative Cases Reported to Butler County by Date Reported*, 2020

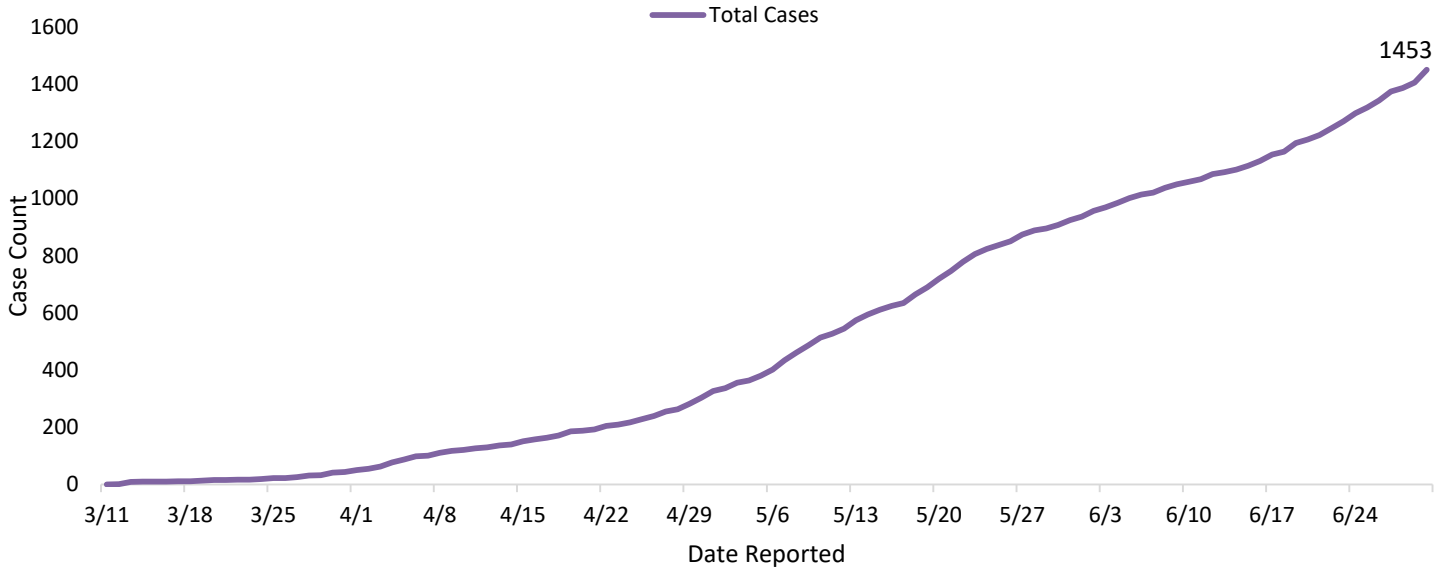
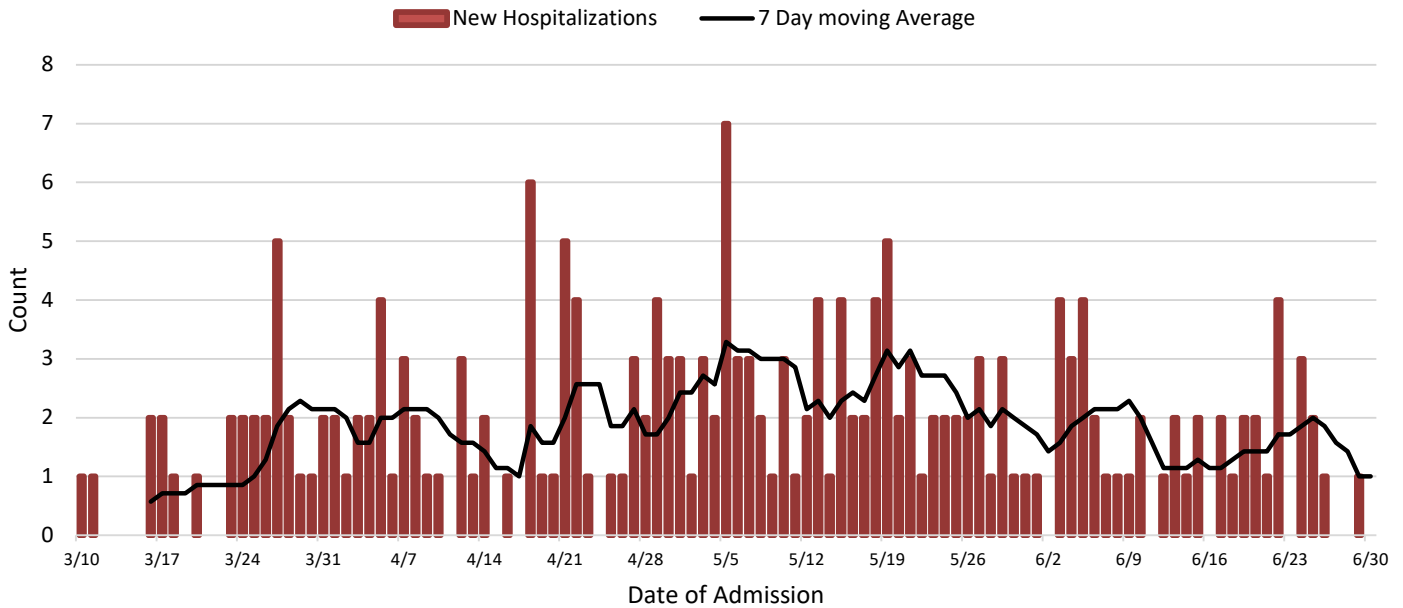


Figure 3. New Hospitalizations by Admission Date, 2020

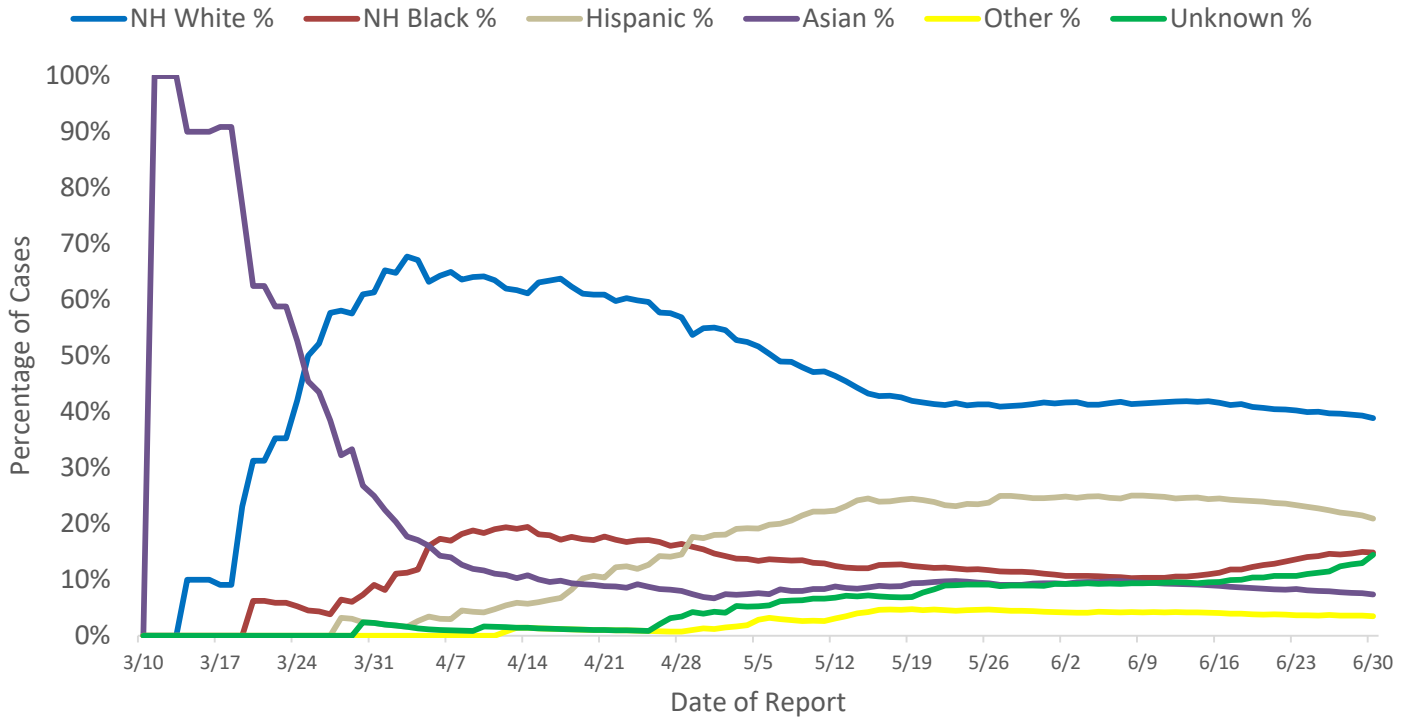


Hospitalization rates have remained consistent despite the large increase in cases. Possible explanations for the lack of rise in hospitalizations is that those who are most at risk for a severe complications have decreased in proportion to the cases that are testing positive. As seen in Figures 7 and 10, younger individuals are largely driving the increase in cases and are less likely to need hospitalizations. Across the country and in the region young people (<30) are also increasingly being hospitalized. Though we have not seen this in Butler County yet, it is important to be mindful that young people are not immune from severe disease and should continue to be responsible and practice social distancing.

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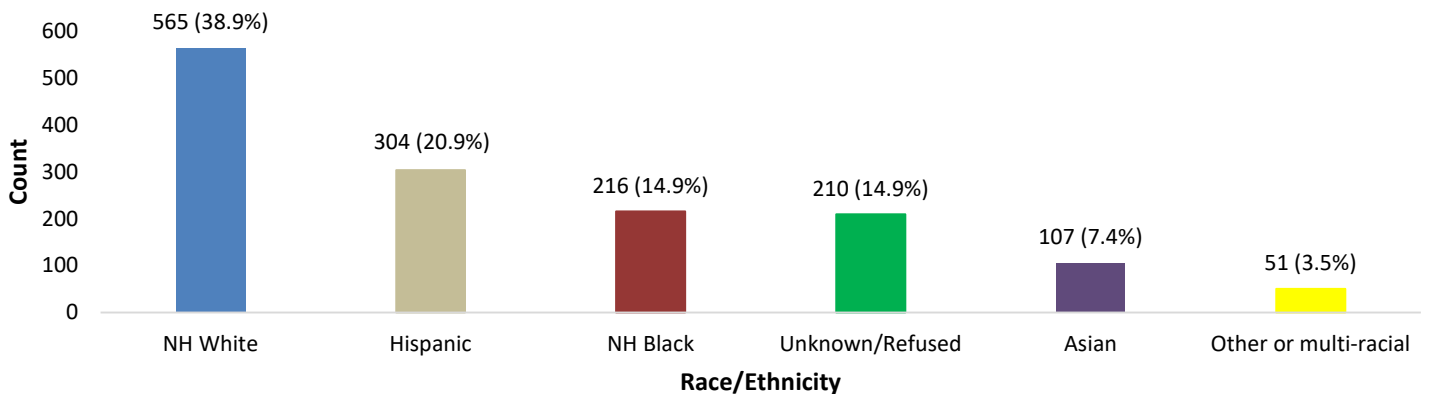
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Figure 4. Race and Ethnicity as a Percentage of Cases Reported by Date of Report, 2020



Figures 4 and 5 relate to race and ethnicity in COVID-19 cases. While Asian cases represented the vast majority of cases at the start of the outbreak, none of these cases were imported from China and were likely introduced from domestic interstate travel. Since that time, the portion of Asians has continued to decrease. Non-Hispanic white cases made up the majority of cases until May. While they are still the plurality of cases, they are still underrepresented in COVID-19 cases for the amount of Butler County’s population that they make up. The Hispanic population has been the hardest hit with the percentage of Hispanic cases far exceeding the percentage of the population that they make up. The Hispanic population makes up approximately 5% of Butler County, yet represents 21% of cases. Many of these cases have been linked to workplaces and secondary spread in housing. The Non-Hispanic Black population of Butler County makes up another area of concern. In Butler County, the NH Black population makes up around 9% of population, but account for 14% of COVID cases.

Figure 5. Cases Reported to Butler County by Race/Ethnicity



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Demographics of COVID-19 Cases Reported to Butler County

Butler County Residents, 2020
(as of 1700 EDT 06/30/2020)

| Table 1: Total Reported* Cases by ZIP Code | | | |
|--|-----------------|------------------|----------------------|
| ZIP Code | Number of Cases | Rate per 100,000 | % of Confirmed Cases |
| 45014 | 381 | 867.5 | 26.2% |
| 45011 | 295 | 423.4 | 20.3% |
| 45044 | 203 | 384.3 | 14.0% |
| 45069 | 164 | 334.3 | 11.3% |
| 45013 | 97 | 184.4 | 6.7% |
| 45015 | 71 | 589.8 | 4.9% |
| 45042 | 55 | 207.9 | 3.8% |
| 45056 | 47 | 173.8 | 3.2% |
| 45067 | 41 | 295.0 | 2.8% |
| 45050 | 21 | 245.7 | 1.4% |
| 45246 | 16 | - | 1.1% |
| 45241 | 15 | - | 1.0% |
| 45053 | 6 | 175.4 | 0.4% |
| Butler County (inclusive) | 1412 | | 97.2% |

Zip-codes not calculated have most of their population outside of Butler County. Rate given for comparison by population and will be higher than the actual amount. Eleven cases have no recorded address. Zip-codes with fewer than 5 cases have been removed for privacy concerns.

The zip-codes of reporting have not really changed significantly over the past month. The 45014 zip code has remained, by far, the hardest hit community in Butler County. The large percentage of high-risk population and proximity to congregate living settings has contributed to the sustained transmission in this zip-code. The other zip codes that remain above the county level in terms of incidence rate are 45011, 40544, and 45015. It is important to take these numbers in stride as they only represent the residence of the cases, not where they may work, shop, worship, and socialize.

Figure 6. Reported Confirmed Cases by Sex*
Butler County Residents, 2020

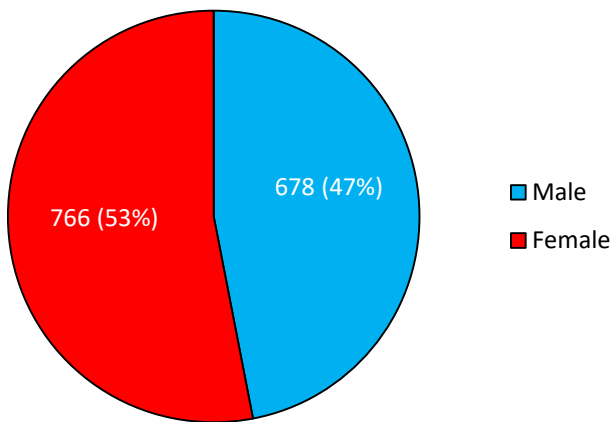
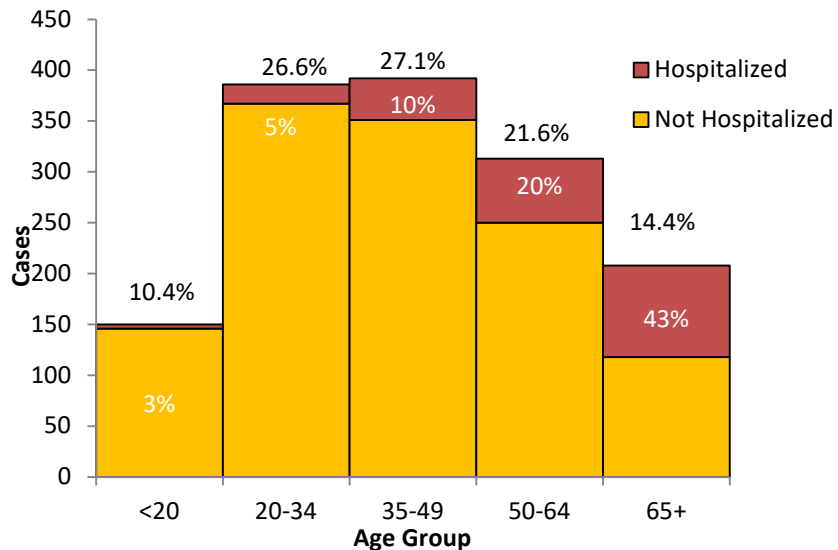


Figure 7. Reported Confirmed Cases by Age Group*
Butler County Residents, 2020

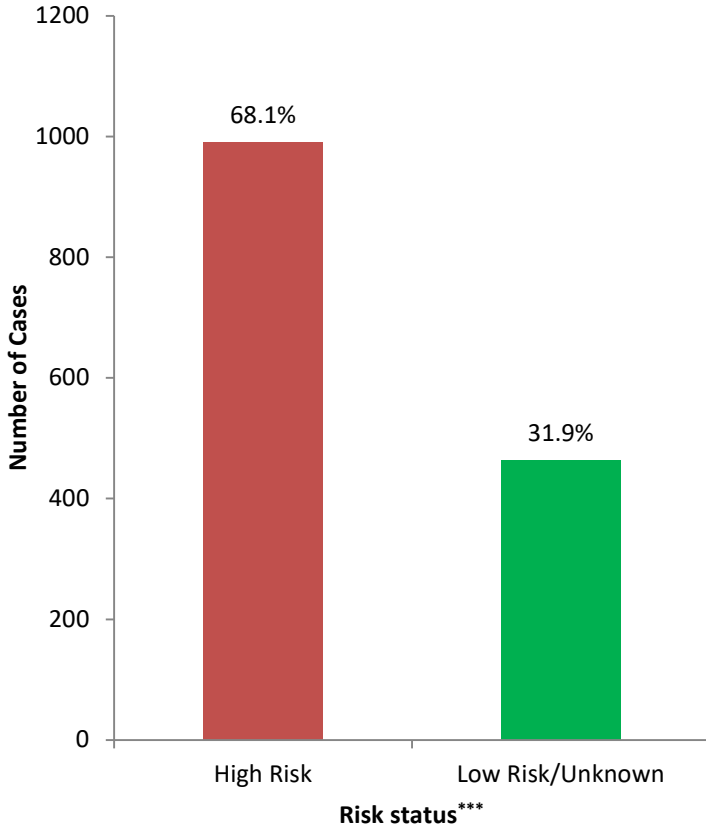


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Figure 8. Reported Confirmed Cases by Risk*

Butler County Residents, 2020



(Underlying Health Conditions or Older than 65)

***High risk status does not necessarily make one more susceptible to transmission, but does increase the likelihood of a more severe illness

Figure 9. Reported confirmed Cases by Hospitalization

Butler County Residents, 2020

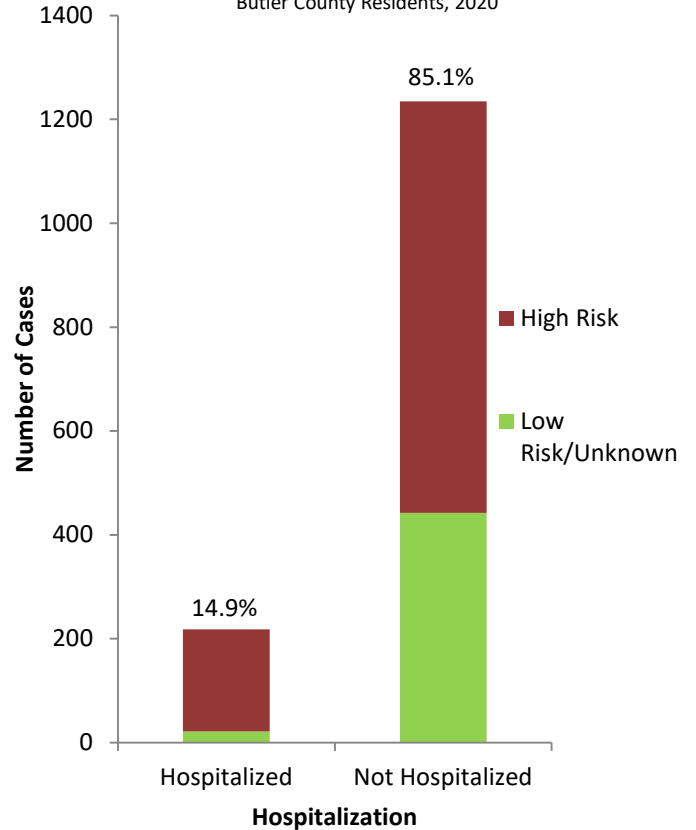
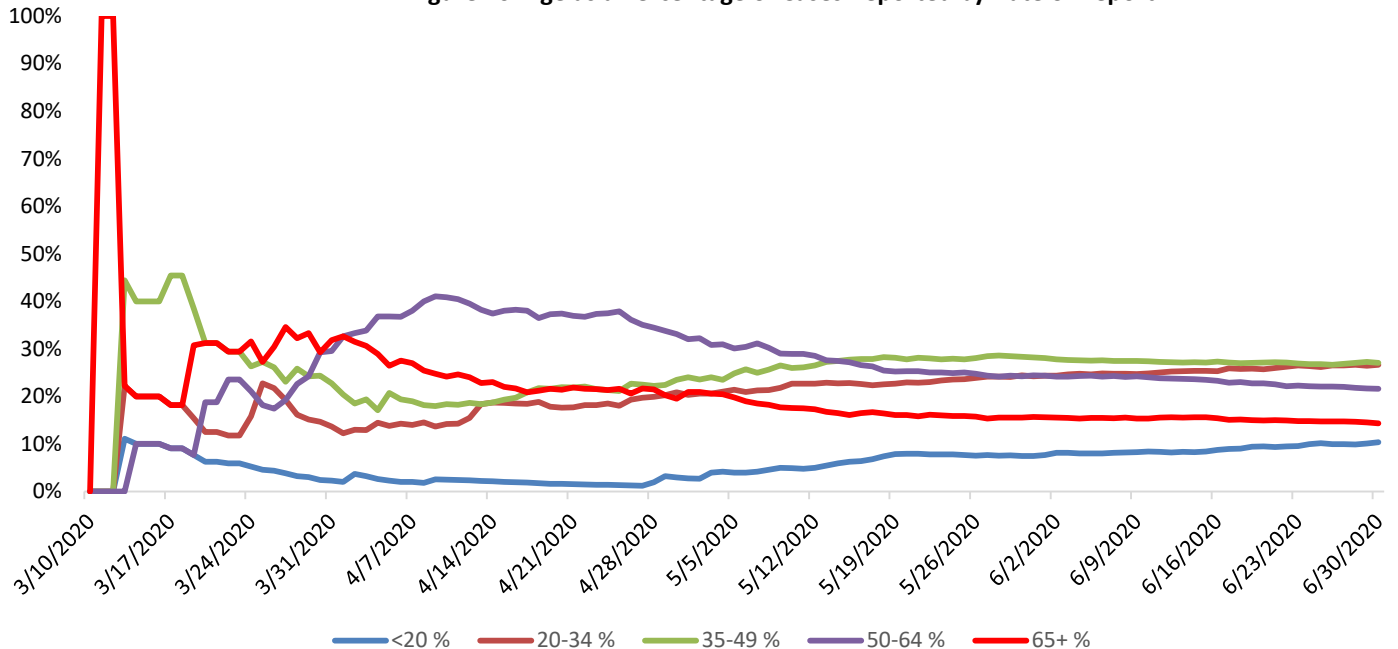


Figure 10. Age as a Percentage of Cases Reported by Date of Report



Figures 7 and 10, as mentioned above, show that age groups that are driving the increase are those that are younger and the 20-34 age groups is now disproportionately affected.

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Clinical Statistics for Reported Butler County Cases

Butler County Residents, 2020
(as of 1700 EDT 06/30/2020)

| Table 2. Laboratory Statistics (03/11/2020-6/30/2020) | | | | |
|---|---------|----------------------|-----------------------|---------------------|
| | Overall | Private Laboratories | Hospital Laboratories | Public Laboratories |
| Confirmatory Tests with information | 1387 | 955 | 391 | 31 |
| Range (in days) | <1-27 | <1-27 | <1-5 | 1-4 |
| Median (in days) | 2 | 2 | 1 | 1 |

| Table 3. Hospitalization Statistics (03/11/2020- 06/30/2020) | | | |
|--|-------|----------------------------------|-------------------------|
| | N | Percentage of Hospitalized Cases | Percentage of all cases |
| Total Hospitalized | 217 | 100% | 14.9% |
| Cases with information | 205 | 94.5% | 14.1% |
| Admitted to Intensive Care Unit (ICU) | 26 | 12.0% | 1.8% |
| Required intubation | 20 | 9.2% | 1.4% |
| Range of Length of Stay (in days) | <1-43 | - | - |
| Median Length of Stay (in days) | 5 | - | - |

Tables 2 and 3 are related to facility-based statistics. The lab results have remained rather consistent. The median times for test results from all labs has dropped down to 2 days, meaning half of tests should be expected to be resulted and reported before 2 days.

There has been a steady increase in cases that require intensive care, but the number of days in the hospital has decreased, and overall number of hospitalizations is down to about 15% which is expected based on national data.

| Table 4. Symptoms Reported (02/29/2020-6/30/2020) | | |
|---|-------------|-------------|
| | N | Percentage |
| Cases with Information | 1133 | 100% |
| Cough | 628 | 55.4% |
| Fever | 611 | 53.9% |
| Myalgia | 495 | 43.7% |
| Headache | 409 | 36.1% |
| Shortness of Breath | 349 | 30.8% |
| Chills | 315 | 27.8% |
| Loss of Taste or Smell | 240 | 21.2% |
| Sore throat | 228 | 20.1% |
| Runny nose | 204 | 18.0% |
| Nausea | 177 | 15.6% |
| Diarrhea | 169 | 14.9% |
| Asymptomatic | 135 | 11.9% |
| Abdominal Pain | 87 | 7.7% |
| Conjunctivitis | 24 | 2.1% |

Symptomology has remained consistent across the board. Cough, fever, myalgia, headache, and shortness of breath remain the most common symptoms that are reported. Loss of taste or smell has been increasing from the past and this symptom is associated as an early sign in young people who are driving the increase in Butler County. Asymptomatic people make up a very small portion of cases in Butler County, and the fact that it remains far lower than what national data suggests says that there are likely many cases that never get tested or seek treatment due to being asymptomatic or mild conditions.

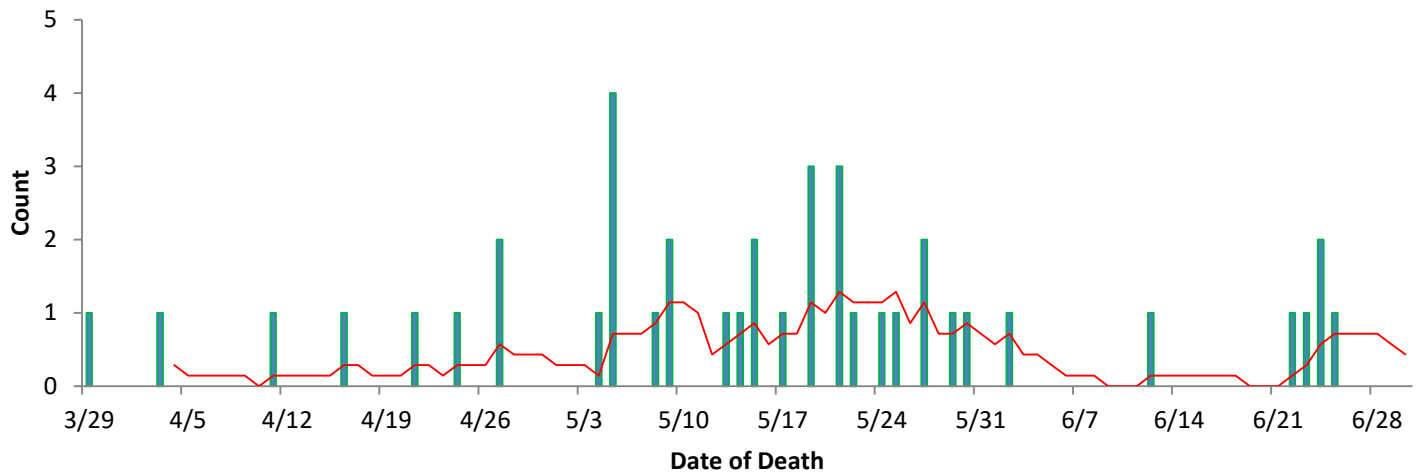
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| Table 5. Death Statistics, 2020 | | |
|---------------------------------|--------|-------|
| | N | % |
| Confirmed Deaths | 41 | 2.8% |
| Age | | |
| Range | 43-101 | |
| Median | 77.5 | |
| Mean | 75.9 | |
| Race | | |
| NH White | 28 | 68.3% |
| NH Black | 10 | 24.4% |
| Asian | 2 | 4.9% |
| Unknown | 1 | 2.4% |
| Risk Status | | |
| High Risk** | 40 | 97.6% |

**Individuals who are high risk are those with underlying health conditions that could exacerbate a SARS-CoV-2 infection including those who are immunocompromised or immunosuppressed or individuals who are older than 65 years of age. High risk status does not imply higher likelihood of disease transmission, but a higher likelihood of a severe illness.

Figure 11. Confirmed COVID-19 Deaths by date of death, 2020



The deaths in Butler County have almost entirely been high risk individuals, either by age or by pre-existing health conditions that would lead to a more severe outcome. Like the trend in hospitalizations and incidence there was a peak in early to mid-May and a slow decrease after that. Through early June this remained a hopeful trend, but in the last two weeks there has been an increase in deaths both in number and frequency. This is another indicator that the downward trend has been reversed. Noteworthy is that though they make up a disproportionate number of cases, there have been no deaths in the Hispanic community attributed to COVID-19.

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