

Butler County General Health District COVID-19 Update (07/14/2020)

Confirmed and Probable COVID-19 Cases Reported to Butler County* Butler County Residents, 2020

Total # of Cases:	1973*
Confirmed Deaths (07/14):	45
First Case Reported:	3/11/2020
Last Case Reported (so far):	7/14/2020
Confirmed Cases:	1939
Probable Cases:	34
Age Range:	<1-101
Median Age:	41
Mean Age:	42.4
Incidence Rate:	515.0 per 100,000

Figure 1: Cases Reported to Butler County by Symptom Onset Date*, 2020
(Confirmed and Probable)

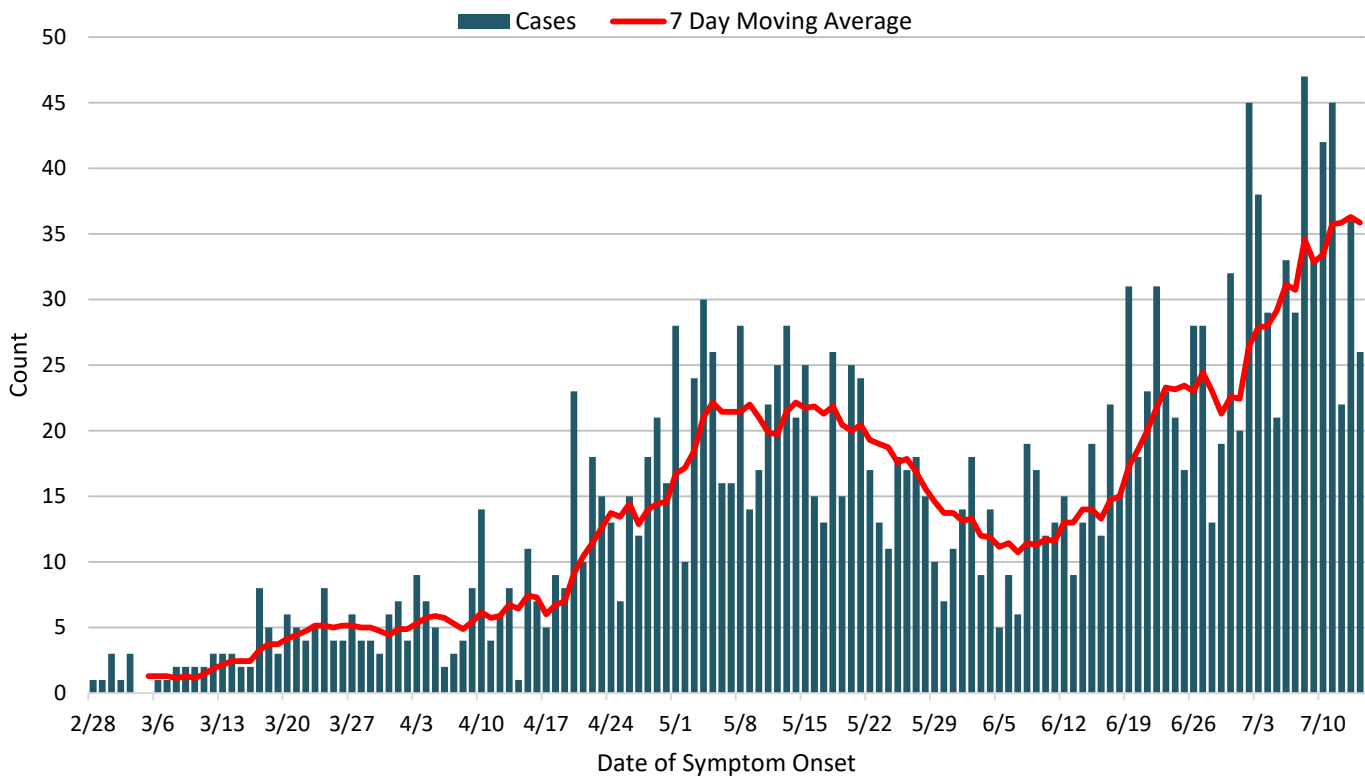


Figure 1 shows the daily incidence (new cases) by date of symptom onset. Figure 2 shows the cumulative (total ongoing) case count. The summer weather, reopening of the county, celebrations, and the increase of movement in the county coincide with the dramatic increase in cases reported to Butler County. Cases have now surpassed the previous peak that had occurred in early May. NOTE: Each case reported represents a unique individual that meets case definition. Duplicate tests are removed as are tests that are performed to verify infection status. **Each person is only counted once regardless of how many tests they take.** All confirmed cases are confirmed via PCR test. Serology (antibody or antigen tests) are considered probable cases and only if they also show symptoms or have an exposure to a confirmed case. **Persons getting antibody tests to check immunity status only are NOT included in the totals of cases or deaths.**

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Figure 2. Cumulative Cases Reported to Butler County by Date Reported*, 2020
(Confirmed and Probable)

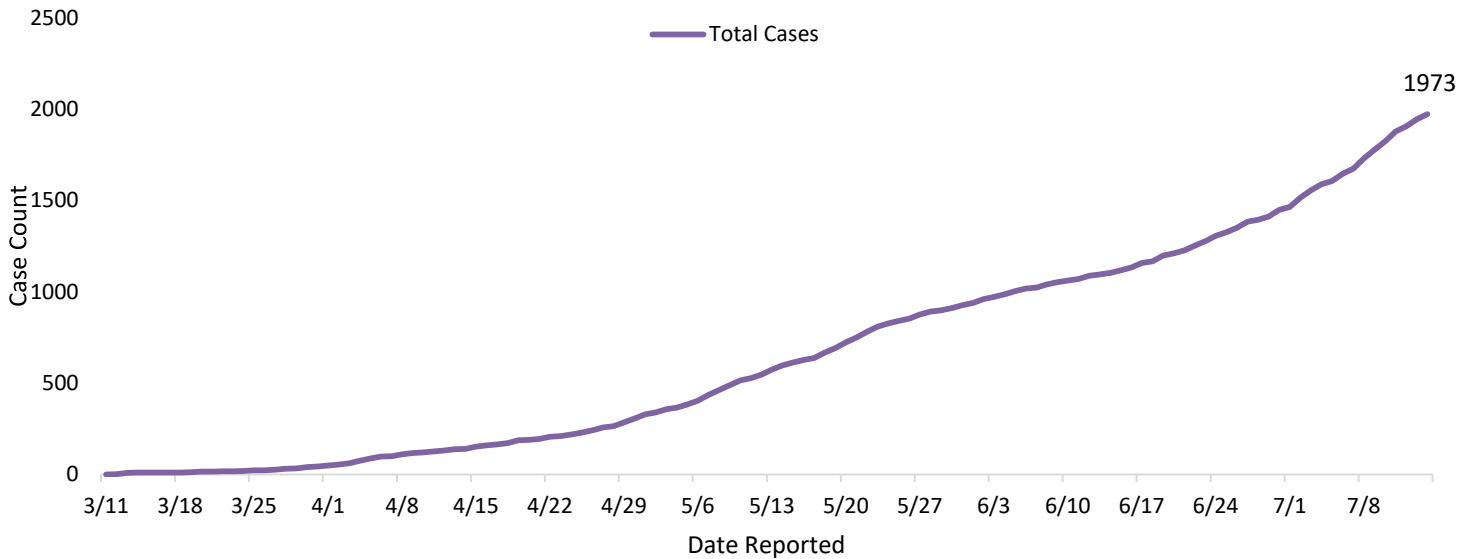
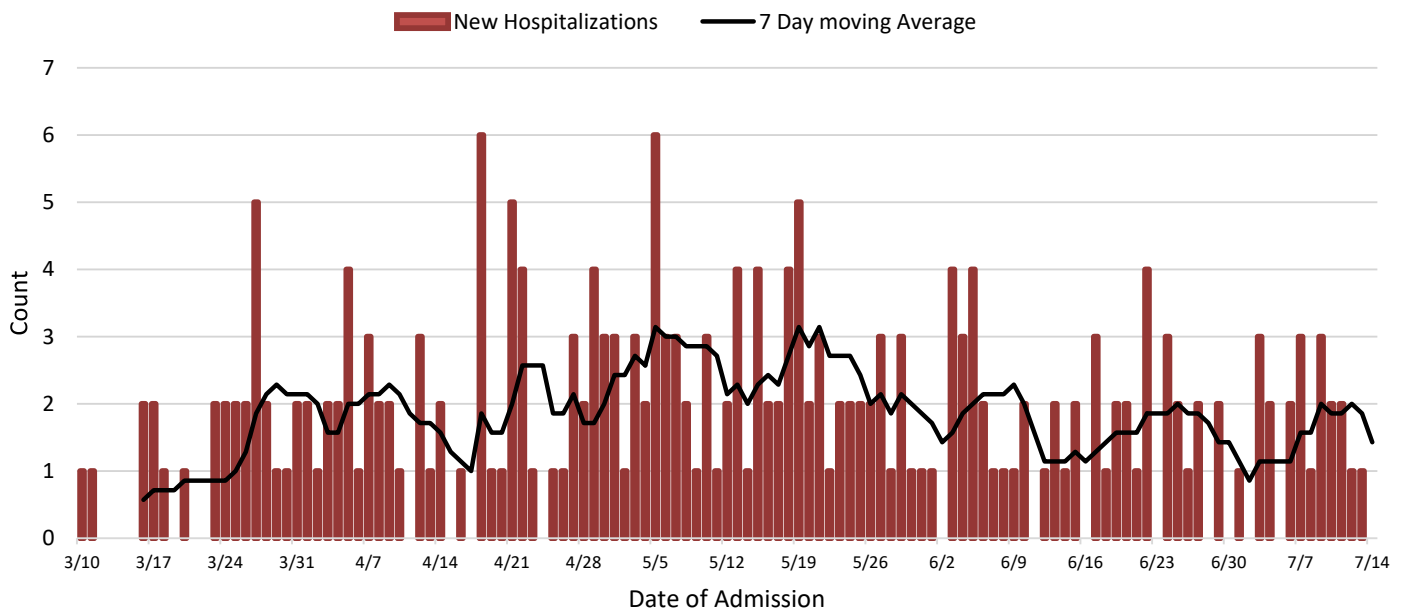


Figure 3. New Hospitalizations of Butler County Residents by Admission Date, 2020*

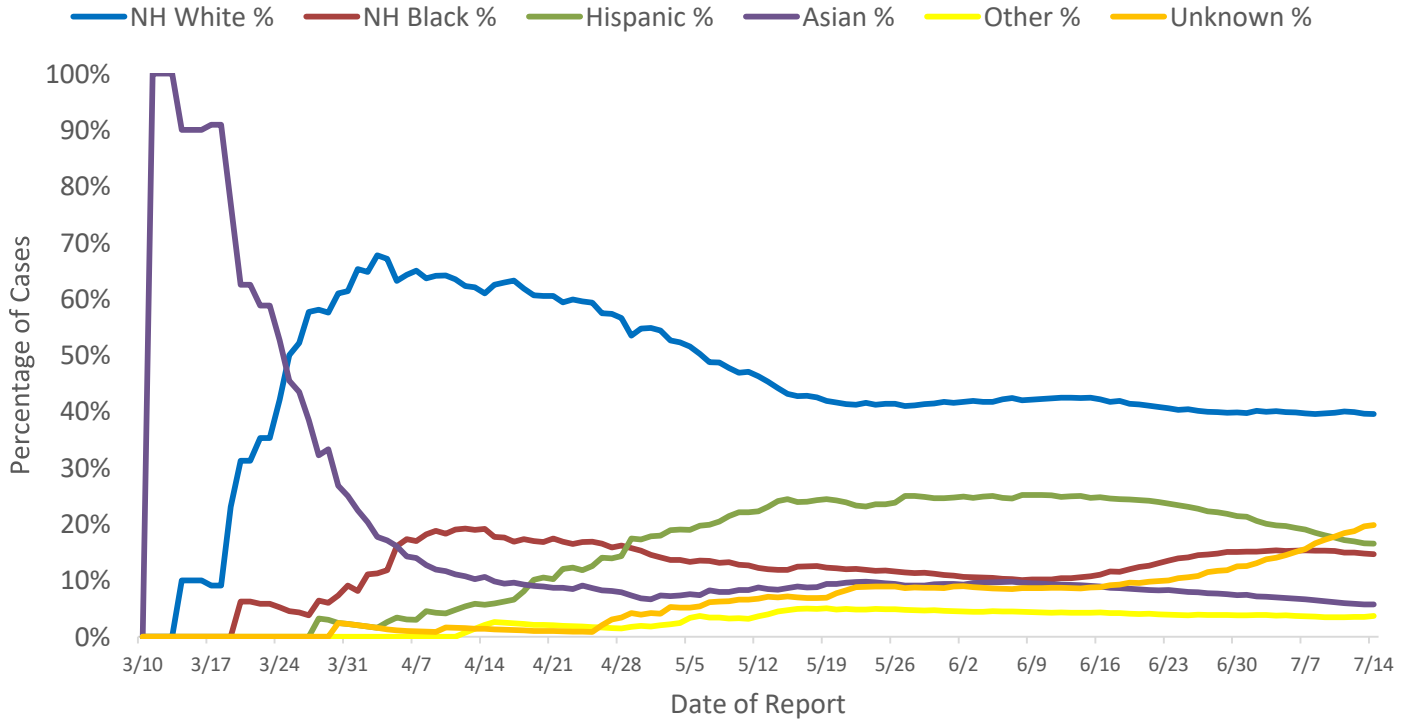


While regional hospitalization numbers are inching up, Butler County hospitalizations have remained steady, and a consistent pattern is emerging. Possible explanations for the lack of rise in hospitalizations is that those who are most at risk for severe complications have decreased in proportion to 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. Hospitalizations appear to be decreasing both in count and as a percentage of cases. **Due to delays in reporting, and the time it takes for illness to become severe enough to require hospitalization, it is too early to tell whether this trend will continue.** Figure 8 also shows an increase in low-risk cases being reported. **This is not a hospitalization bed/ICU usage analysis.** These are only Butler County residents in hospitals which may be outside of Butler County, and do not include the residents of other counties hospitalized in Butler County.

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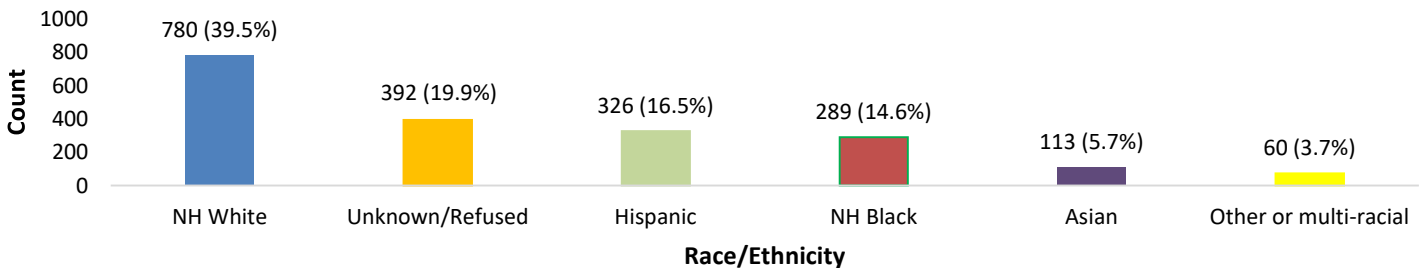
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Figure 4. Race and Ethnicity as a Percentage of Cases Reported by Date of Report*, 2020



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 (NH) White cases made up the majority of cases until May. For another week NH White cases continued to decrease as a percentage of cases reported. 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 17% of cases. Many of these cases have been linked to workplaces and secondary spread in housing. The share of Hispanic cases has been dropping since early June. 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 15% of COVID cases. Cases refusing interview are increasing and no racial or ethnic statistics can be attained if not reported resulting in an increase of “unknown/refused” cases.

Figure 5. Cases Reported to Butler County by Race/Ethnicity*, 2020



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Demographics of COVID-19 Cases Reported to Butler County*

Butler County Residents, 2020
(as of 1700 EDT 07/14/2020)

Table 1: Total Reported* Cases by ZIP Code			
ZIP Code	Number of Cases	Rate per 100,000	% of Confirmed Cases
45014	464	1056.5	23.5%
45011	396	568.3	20.1%
45044	290	549.0	14.7%
45069	232	472.9	11.8%
45013	146	277.5	7.4%
45042	85	321.3	4.3%
45015	82	681.2	4.2%
45056	67	247.8	3.4%
45067	54	388.5	2.7%
45050	32	374.4	1.6%
45241	21	-	1.1%
45246	19	-	1.0%
45053	10	292.4	0.5%
Cases lacking zip code information or from zip codes with <5 cases	75	-	3.8%
Butler County (inclusive)	1973		100%

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. Zip-codes with fewer than 5 cases have been removed for privacy concerns.

The 45014 zip code has remained, by far, the hardest hit community in Butler County. However, that zip-code's share is dropping. The large percentage of high-risk population and proximity to congregate living settings has contributed to the sustained transmission in 45014. In the past two weeks, 45044, 45013, 45042, and 45069 have all increased in their portion of cases, while 45014's absolute numbers have remained rather consistent. 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

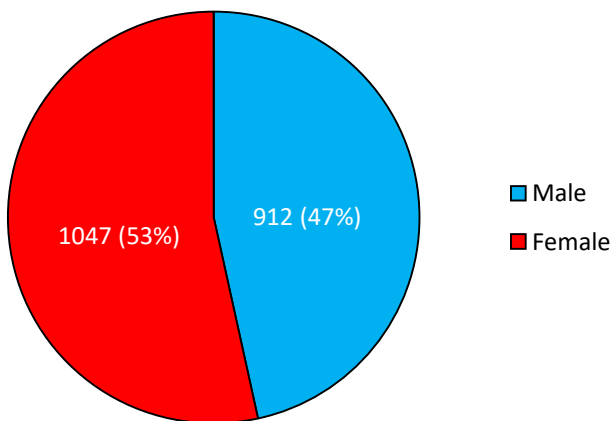
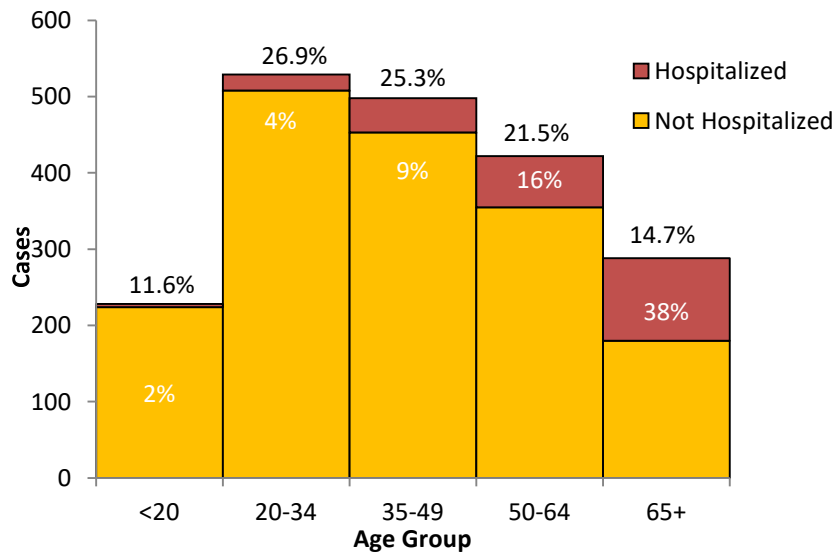


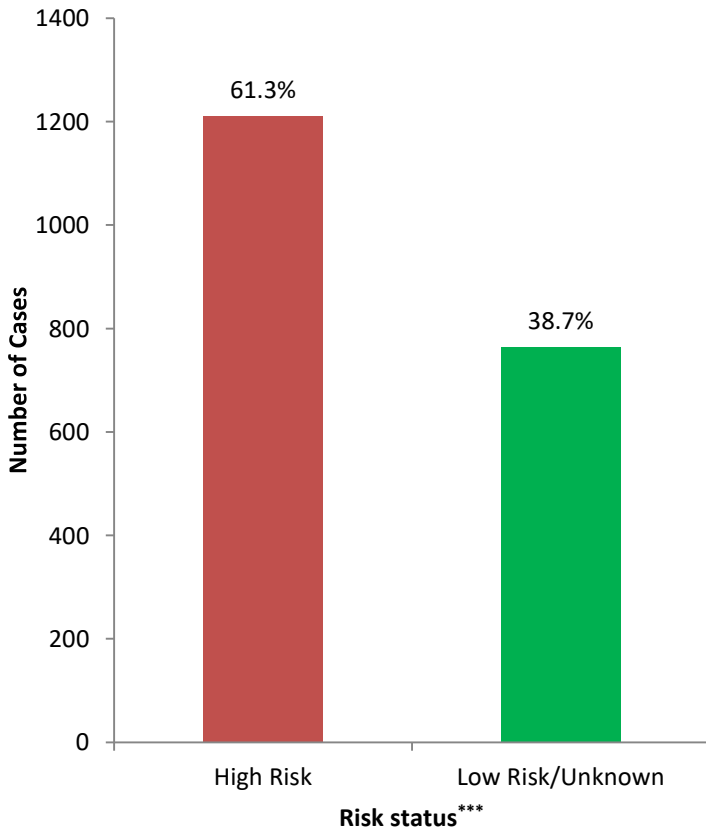
Figure 7. Reported Confirmed Cases by Age Group*
Butler County Residents, 2020



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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

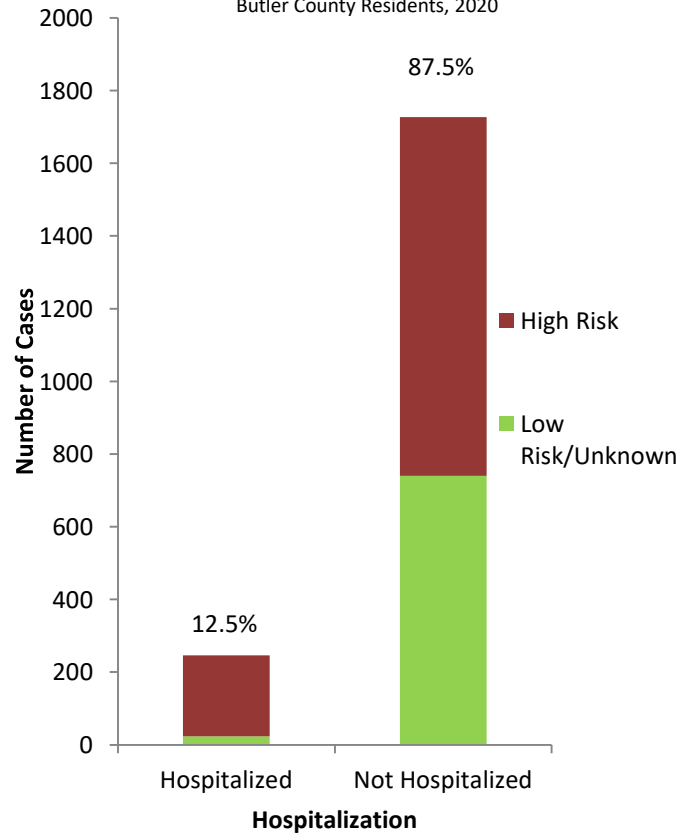
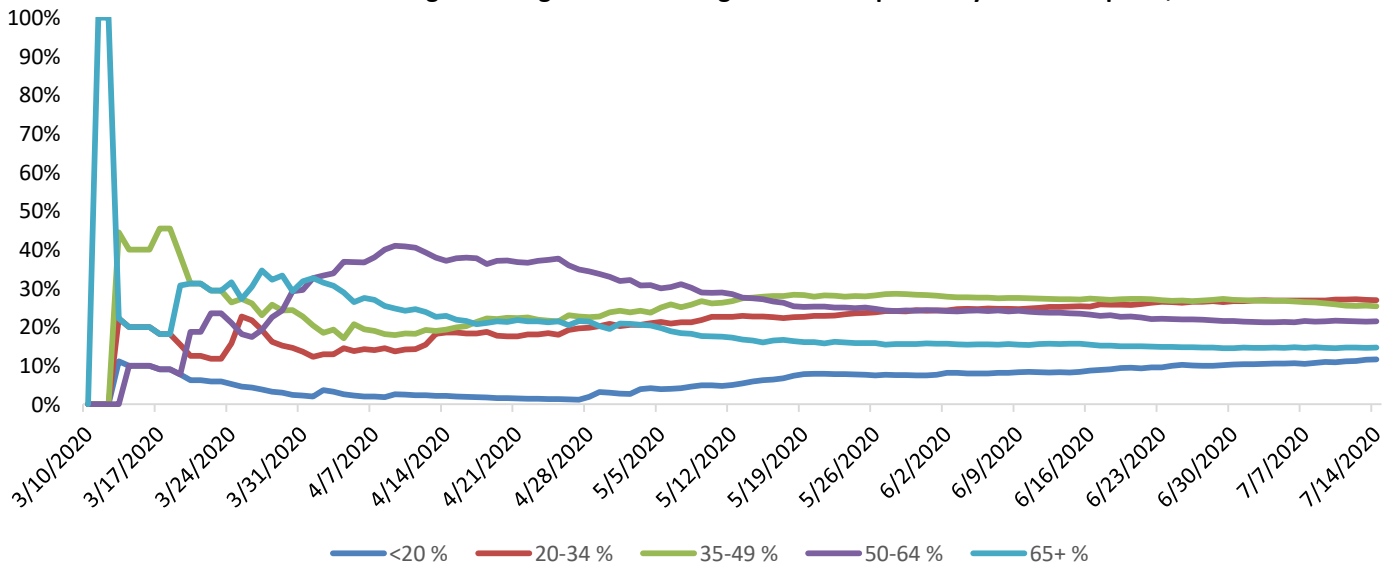


Figure 10. Age as a Percentage of Cases Reported by Date of Report*, 2020



Figures 7 and 10, as mentioned above, show that both <20 and 20-34 age groups are increasing and those age groups are now disproportionately affected.

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Clinical Statistics for Reported Butler County Cases

Butler County Residents, 2020

(as of 1700 EDT 07/14/2020)

Table 2. Laboratory Statistics (03/11/2020-07/14/2020)				
	Overall	Private Laboratories	Hospital Laboratories	Public Laboratories
Confirmatory Tests with information	1892	1296	544	42
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- 07/14/2020)			
	N	Percentage of Hospitalized Cases	Percentage of all cases
Total Hospitalized	246	100%	12.5%
Cases with information	230	93.5%	11.7%
Admitted to Intensive Care Unit (ICU)	27	11.7%	1.4%
Required intubation	21	9.1%	1.1%
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 12.5% which is within range of the national data.

Table 4. Symptoms Reported (02/29/2020-7/07/2020)		
	N	Percentage
Cases with Information	1284	100%
Cough	701	54.6%
Fever	674	52.5%
Myalgia	550	42.8%
Headache	472	36.8%
Shortness of Breath	387	30.1%
Chills	360	28.0%
Loss of Taste or Smell	278	21.7%
Sore throat	247	19.2%
Runny nose	233	18.1%
Nausea	204	15.9%
Diarrhea	201	15.7%
Asymptomatic	170	13.2%
Abdominal Pain	101	7.9%
Conjunctivitis	27	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 and this symptom is considered as an early sign associated with 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 having mild symptoms.

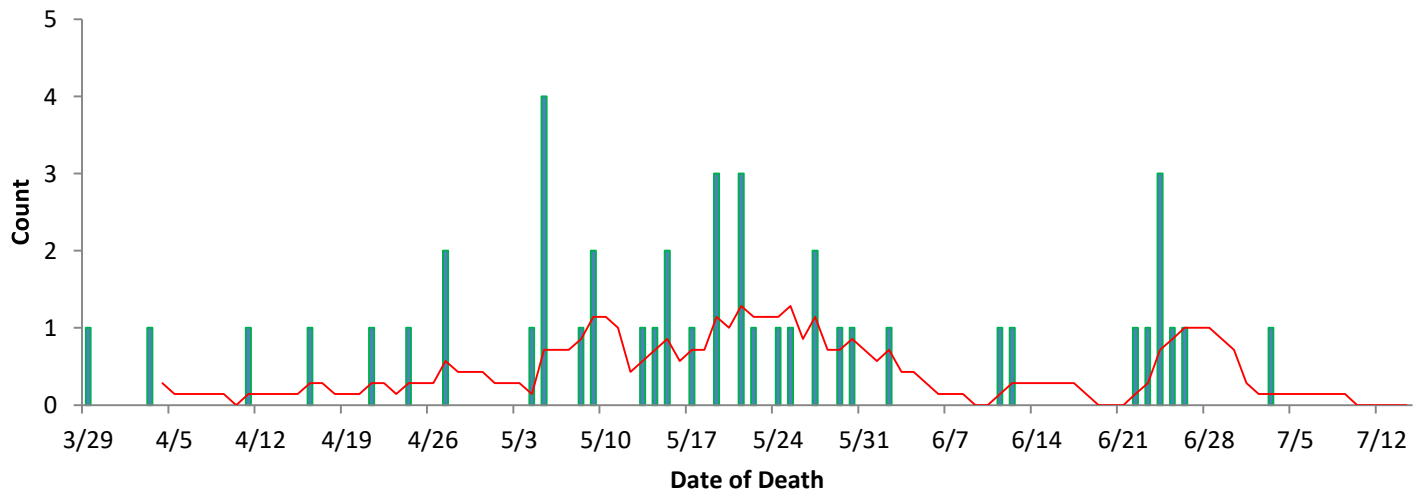
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Table 5. Death Statistics, 2020		
	N	%
Confirmed Deaths	45	2.3%
Age		
Range	43-101	
Median	75	
Mean	74.7	
Race		
NH White	31	68.9%
NH Black	11	24.4%
Asian	2	4.4%
Unknown	1	2.2%
Risk Status		
High Risk**	44	97.8%

**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. There was a full seven days with no deaths, and the spacing of deaths may once again be increasing. As is the case with the other numbers, most newly reported deaths are delayed reports from previous weeks back, and is therefore difficult to tell the accuracy or longevity of the trend. 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. Case definition regarding deaths is complicated and may take many weeks to make a final decision regarding cause of death as well as reconciling jurisdiction. Therefore, there may be inconsistencies in reporting between ODH and the three Butler County jurisdictions. For this reason we only include those deaths that have been confirmed and reviewed in our count while the state also includes probable deaths. **Deaths are included in this count only if COVID-19 is listed as immediate or directly underlying cause of death on the death certificate.**

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