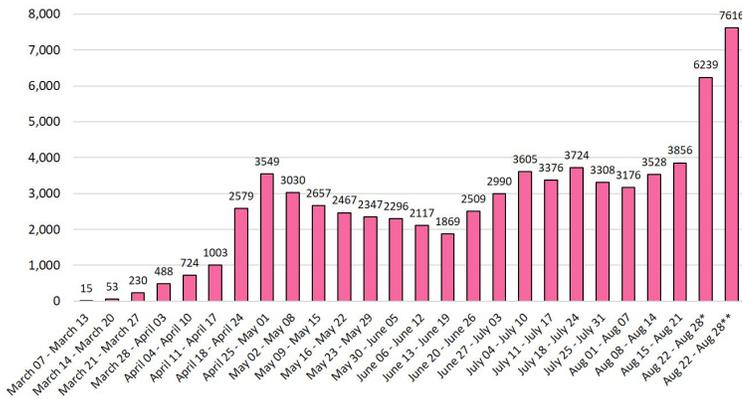


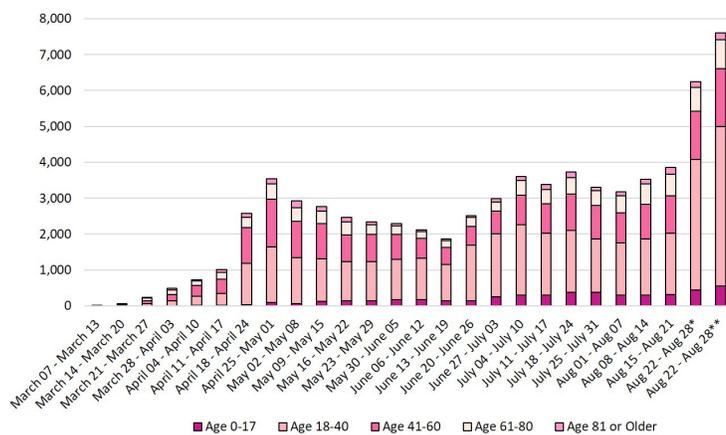
## Covid-19 in Iowa: Updates on Cases, Age, and Deaths

Figure 1. Weekly Additional Covid-19 Cases, Iowa, 2020



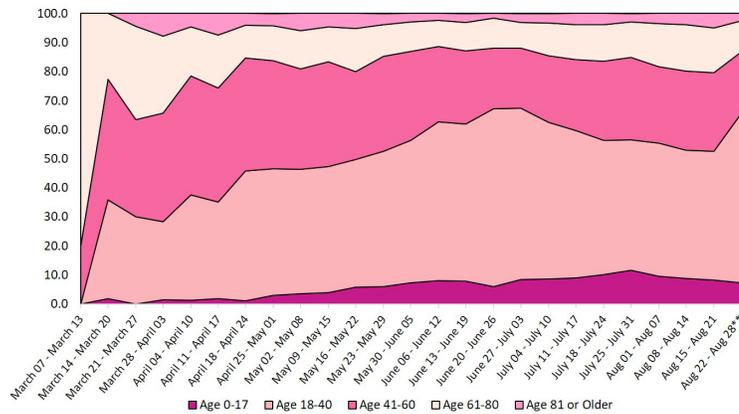
Source: Iowa Department of Public Health \*Cases without estimated antigen testing \*\*Cases with estimated antigen testing

Figure 2. Weekly Additional Covid-19 Cases by Age Group, Iowa, 2020



Source: Iowa Department of Public Health \*Cases without estimated antigen testing \*\*Cases with estimated antigen testing

Figure 3. Percentage of Weekly Additional Covid-19 Cases by Age Group, Iowa, 2020



Source: Iowa Department of Public Health \*\*Cases with estimated antigen testing

Covid-19<sup>1</sup> cases have been reported in Iowa since early March, 2020. This report reviews week-by-week<sup>2</sup> changes in reported cases, deaths, cases by age as well as Covid-19 reporting changes made by the Iowa Department of Public Health. The source for the Covid-19 data reviewed here is the Iowa Department of Public Health (IDPH).<sup>3,4</sup>

On August 27, 2020, IDPH revised the reported statewide Covid-19 positive cases by adding an estimated cumulative 1,377 previous cases that had not been reported as positive cases.<sup>3,4</sup> These cases were from many previous weeks and months, not from that current week. These cases came from an additional method of diagnosis using rapid antigen technology instead of the usual PCR (polymerase chain reaction) technology.<sup>5</sup> This number of 1,377 additional antigen cases is used in this report to adjust the case counts for the week of August 22 - August 28 to better reflect the changes that actually took place during that week without the addition of cumulative cases from previous weeks and months. For comparison purposes, Table 1 and Figures 1 and 2 report the cases both with and without the additional antigen cases.

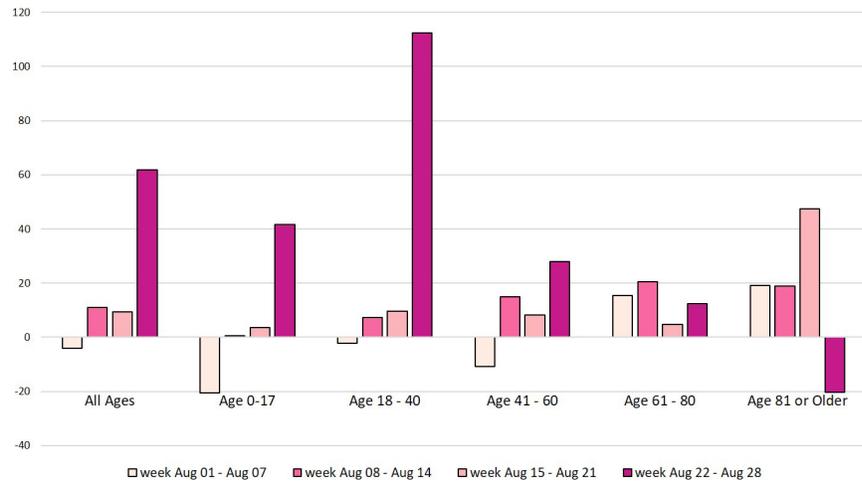
Through August 28th, IDPH reported 63,112 total Covid-19 cases in the state. Without the 1,377 antigen cases from previous weeks, this total would be 61,735, thus giving a weekly increase of 6,239 cases. This is, by far, the largest weekly statewide change reported through the nearly six months since Covid-19 started in Iowa in early March. As a comparison, for the previous seven weeks, total weekly cases ranged between 3,176 and 3,856. Although those weeks were higher than the weeks of May - June, they were significantly lower than the week of August 22nd (Figure 1, Table 1).

Statewide, cases are reported by five age groups. Overall, through August 28th, the highest cumulative number of cases (30,786) is reported for those age 18-40; those 81 or older have the fewest reported cases (2,344) (Table 1). In order to better understand the changes by age for the week of August 22nd, it is useful to explore the case changes *without* the effect of the added antigen cases. Using the calculated total cases (6,239) for that week along with the percentages of cases by age before the antigen cases were added<sup>6</sup> on August 27th, it

# Covid-19 in Iowa: Updates on Cases, Age, and Deaths

is possible to make estimates of the cases by age at the end the week on August 28th that take into account the added antigen cases (Figures 2, 4; Tables 1-2).<sup>6</sup> Persons age 18-40 accounted for 3,637 (58.3%) of all the new cases that week (Figures 2, 3). The case numbers for each age group, except those oldest (81+), increased as well. Although the age group for those 18-40 had previous weeks when the group's percentage of cases ranged at that high level, in recent weeks the group's figure had been at 46% or lower (Figure 3, Table 1). The large numerical and percentage increase in the age 18-40 group lowered the weekly proportions for the other age groups from those of the previous week.

Figure 4. Percentage Change in New Cases from Previous Week's New Cases by Age, Iowa, 2020.<sup>1</sup>



<sup>1</sup>The cases for the week of August 22 – August 28 use the numbers estimated without the cumulative antigen cases

Table 1. Cumulative and Weekly Covid-19 Cases, Deaths, and Covid-19 Cases by Age, Iowa, 2020.<sup>1</sup>

Week	Cumulative Cases	Weekly Number of Covid-19 Cases by Age						Weekly Percentage of Covid-19 Cases by Age					Deaths	
		All Ages	Age 0-17	Age 18-40	Age 41-60	Age 61-80	Age 81 or Older	Age 0-17	Age 18-40	Age 41-60	Age 61-80	Age 81 or Older	Cumulative	Weekly Additional
March 07 - March 13	18	15	0	0	3	12	0	0.0	0.0	20.0	80.0	0.0	0	0
March 14 - March 20	68	53	1	18	22	12	0	1.9	34.0	41.5	22.6	0	0	0
March 21 - March 27	298	230	0	69	77	74	10	0.0	30.0	33.5	32.2	4.3	3	3
March 28 - April 03	786	488	7	131	183	129	38	1.4	26.8	37.5	26.4	7.8	14	11
April 04 - April 10	1510	724	9	262	296	122	33	1.3	36.3	41.0	16.9	4.7	34	20
April 11 - April 17	2513	1003	18	334	395	183	75	1.8	33.2	39.4	18.2	7.4	74	40
April 18 - April 24	5092	2579	26	1155	1004	289	105	1.0	44.8	38.9	11.2	4.1	112	38
April 25 - May 01	8641	3549	102	1549	1319	428	146	2.9	43.6	37.2	12.1	4.2	175	63
May 02 - May 08	11671	3030	70	1267	1019	385	177	3.4	42.9	34.7	13.1	5.9	252	77
May 09 - May 15	14328	2657	128	1185	983	351	127	3.8	43.5	36.0	12.1	4.6	346	94
May 16 - May 22	16795	2467	143	1084	745	366	129	5.8	43.9	30.2	14.8	5.2	444	98
May 23 - May 29	19142	2347	136	1092	770	255	88	5.9	46.6	32.8	10.9	3.8	528	84
May 30 - June 05	21438	2296	167	1127	704	232	66	7.3	49.1	30.7	10.1	2.9	598	70
June 06 - June 12	23555	2117	169	1158	548	194	50	8.0	54.7	25.9	9.1	2.4	650	52
June 13 - June 19	25424	1869	147	1012	468	185	58	7.9	54.1	25.0	9.8	3.1	681	31
June 20 - June 26	27933	2509	150	1537	524	260	38	6.0	61.3	20.9	10.4	1.5	704	23
June 27 - July 03	30923	2990	248	1767	619	262	93	8.3	59.1	20.7	8.8	3.1	721	17
July 04 - July 10	34528	3605	304	1949	824	409	116	8.5	54.1	22.9	11.3	3.2	748	27
July 11 - July 17	37904	3376	305	1713	822	406	131	9.0	50.7	24.3	12.0	3.9	787	39
July 18 - July 24	41628	3724	375	1720	1016	467	149	10.1	46.2	27.3	12.5	4.0	826	39
July 25 - July 31	44936	3308	383	1488	935	407	94	11.6	45.0	28.3	12.3	2.8	872	46
August 01 - August 07	48112	3176	304	1457	835	470	112	9.6	45.9	26.3	14.8	3.5	925	53
August 08 - August 14	51640	3528	306	1562	960	567	133	8.7	44.3	27.2	16.1	3.8	973	48
August 15 - August 21	55496	3856	317	1712	1039	594	196	8.2	44.4	26.9	15.4	5.1	1030	57
August 22 - August 28, PCR + Antigen Testing <sup>2</sup>	63112	7616	552	4438	1621	806	180	7.2	58.3	21.3	10.7	2.5	1108	78
Cumulative Age Totals			4367	30786	17731	7865	2344	6.9	48.8	28.1	12.5	3.7		
August 22 - August 28, Estimated Without 1,377 Antigen Cases <sup>2</sup>	61735	6239	449	3637	1329	668	156	7.2	58.3	21.3	10.7	2.5		

<sup>1</sup>Source: Iowa Department of Public Health; <sup>2</sup>On August 27<sup>th</sup>, the Iowa Department of Public Health added the cumulative positive Covid-19 cases identified by antigen testing (1,377) to the state cumulative Covid-19 total cases identified by PCR (polymerase chain reaction) testing. The department also began reporting the statewide cumulative total of cases identified by antigen testing. Before August 27<sup>th</sup>, the reported state cumulative positive totals were based on PCR testing.

Another way to view the age changes during the week of August 22nd, is to compare the new weekly cases for each age group with the weekly new cases from the previous week. These comparisons show that the cases for age 18 - 40 increased 112% over the cases of that age for the previous week. By either numerical or percentage comparison, then, the cases stemming from persons age 18 - 40 had the most substantial impact on cases in Iowa during the week of August 22nd.

The cases for persons age 17 and younger grew 41.6%. The weekly gain for this age group (449) is of particular

note as it was the highest weekly numerical increase for that age of any week recorded in Iowa (Figure 4, Table 2). Contrasting with these gains, the cases for the oldest age group decreased by 20%. Although week by week there have been variations in the proportion of cases reported for each age group, the changes for the week of August 22nd have been unusually high and of particular note (Figures 1 - 4, Tables 1 - 2).

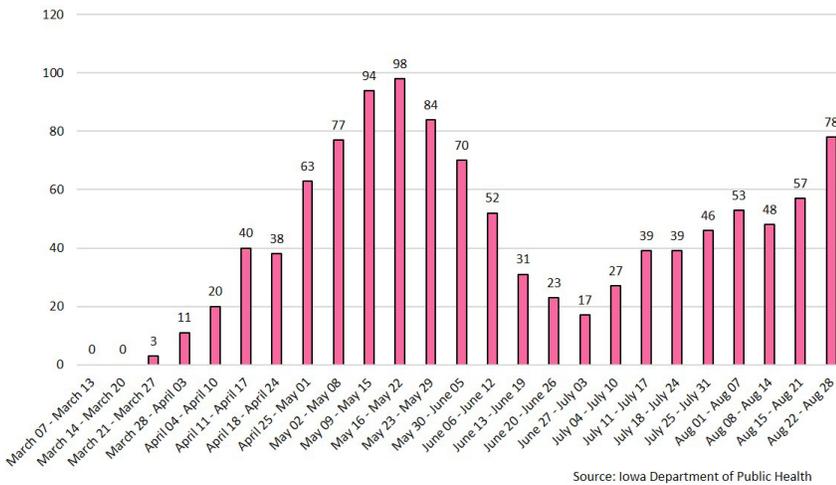
Included in Table 1 are the week to week numbers of deaths reported statewide. By August 28th, cumulative deaths attributed to Covid-19 had reached

1,108 with 78 reported for the week of August 22nd - 28th (Figure 5, Table 1). The highest weekly number of deaths was 98 reported for the week of May 16th. The reporting during the week of August 22nd of the additional cases from antigen testing does *not* affect the reporting of deaths.

Although deaths reported in any given week can be resulting from cases reported in any of the previous weeks, recent weeks in Iowa have seen an increase in deaths. The rise in deaths may be due to the increases in cases among the two oldest age groups (61-80, 81 or older) reported during several weeks in August (Figures 4-5, Tables 1-2). IDPH reports that 89% of deaths attributed to Covid-19 in Iowa have been among persons in those age groups.<sup>3</sup>

Overall, the week of August 22nd was unusual for Covid-19 cases in Iowa. The high increases in cases statewide were largely driven by the spread of Covid-19 among persons age 18-40. Although IDPH added the cumulative positive antigen cases during the week, that addition had little effect on the overall trends. The spread of cases among those 18-40 was already in the numbers reported before the antigen cases were added. Further vigilance is needed for this age group as well as for those younger than 18. It is troubling to see the weekly rise in cases among the youngest Iowans.

Figure 5. Weekly Reported Deaths from Covid-19, Iowa, 2020



Source: Iowa Department of Public Health

Table 2. Weekly New Cases, Numerical and Percentage Change from Previous Week's New Cases, Iowa, 2020.

Week	All Ages	Age 0-17	Age 18-40	Age 41-60	Age 61-80	Age 81 or Older
August 22 - August 28 New Cases, Estimated Without 1,377 Antigen Cases <sup>1</sup>	6239	449	3637	1329	668	156
Change in Cases from Previous Week	+2383	+132	+1925	+290	+74	-40
Percentage Change from Previous Week	+61.8%	+41.6%	+112.4%	+27.9%	+12.5%	-20.4%
August 15 - August 21 New Cases	3856	317	1712	1039	594	196
Change in Cases from Previous Week	+328	+11	+150	+79	+27	+63
Percentage Change from Previous Week	+9.3%	+3.6%	+9.6%	+8.2%	+4.8%	+47.4%
August 08 - August 14 New Cases	3528	306	1562	960	567	133
Change in Cases from Previous Week	+352	+2	+105	+125	+97	+21
Percentage Change from Previous Week	+11.1%	+0.66%	+7.2%	+15.0%	+20.6%	+18.8%
August 01 - August 07 New Cases	3176	304	1457	835	470	112
Change in Cases from Previous Week	-132	-79	-31	-100	+63	+18
Percentage Change from Previous Week	-4.0%	-20.6%	-2.1%	-10.7%	+15.5%	+19.1%
July 25 - July 31 New Cases	3308	383	1488	935	407	94

<sup>1</sup>Adjusted for cumulative antigen cases added during week. See text for explanation.

# Covid-19 in Iowa: Update on Cases, Age, and Deaths

This report, others in the series, along with other information related to Covid-19 in Iowa and nationwide is available at: <https://indicators.extension.iastate.edu/Indicators/COVID19/>

## Notes

<sup>1</sup>Coronavirus disease 2019 (COVID-19) is defined as illness caused by a novel coronavirus now called severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2; formerly called 2019-nCoV) <https://www.medscape.com/answers/2500114-197401/what-is-covid-19>

<sup>2</sup>Although cases, deaths, and hospitalized patients are reported on a daily basis, there are day-by-day variations in reporting that include weekends and holidays that make it useful to aggregate cases and reporting on a weekly basis to look at trends. The weeks reported here start with cases and tests reported for a Saturday and end with the reporting for the following Friday.

<sup>3</sup>Through the months that Covid-19 cases have been reported in Iowa, the Iowa Department of Public Health has utilized several methods of reporting the cases and testing in Iowa. These include press reports, web sites, data tables and files, mapping, and graphing. The data in this report have been gathered from a number of these methods. Several web sites directly from or affiliated with the Iowa Department of Public Health have been used. These include: <https://www.idph.iowa.gov/>; <https://idph.iowa.gov/Emerging-Health-Issues/Novel-Coronavirus/>; <https://coronavirus.iowa.gov/>; <https://coronavirus.iowa.gov/pages/access>; <https://open-iowa.opendata.arcgis.com/datasets/iacovid19-demographics>; and <https://open-iowa.opendata.arcgis.com/datasets/ia-covid19-cases>

<sup>4</sup>On August 27, 2020, IDPH revised the reported statewide Covid-19 cases by adding an estimated cumulative 1,377 previously unreported cases. These cases were from many previous weeks and months, not from that current week. In order to get a more appropriate idea of what were the actual new cases just for that week only, the case totals are adjusted downward by using the number (1,377) of cumulative antigen cases added on August 27th. In Table 1 and Figures 1 and 2, for comparison purposes, both the adjusted and the unadjusted numbers are included. See the following news release: <https://idph.iowa.gov/News/ArtMID/646/ArticleID/158374/IDPH-updates-COVID-19-antigen-test-results-following-increased-testing-volume-and-new-CDC-guidance>. At this writing, county level adjustments for the additional positive antigen testing cases are not available. One other data adjustment to note. During the week of August 15 - 21, 2020, the Iowa Department of Public Health made revisions to the cumulative counts of cases and tests for some counties to adjust for previous reporting errors. The numbers reported here for that week reflect the counts after the adjustments were made and reflect the revised totals at that time.

<sup>5</sup>Discussion of testing types for Covid-19 can be found at: <https://www.mayoclinic.org/tests-procedures/covid-19-diagnostic-test/about/pac-20488900> and <https://www.fda.gov/consumers/consumer-updates/coronavirus-testing-basics>. Also see the IDPH news release on August 28, 2020: <https://idph.iowa.gov/News/ArtMID/646/ArticleID/158374/IDPH-updates-COVID-19-antigen-test-results-following-increased-testing-volume-and-new-CDC-guidance>

<sup>6</sup>On August 26, 2020, the day before IDPH revised the cumulative, statewide count of positive Covid-19 cases, the weekly counts and percentages of new cases by age were: age 0-17 (283, 7.1%); age 18-40 (2320, 58.0%); age 41-60 (827, 20.7%); age 61-80 (439, 11.0%); age 81 or older (131, 3.3%). Since these percentages differed little from the percentages using the entire reported cases by age (Table 1), the percentages for the total cases were used to adjust the 6,239 cases (without the added antigen cases) for the week into the estimated counts for the five age groups (Figure 2, Table 1).

*Sandra Charvat Burke*  
*Iowa State University*  
*Ames, IA*  
*515-294-9307*  
*schurke@iastate.edu*  
*September 3, 2020*

This institution is an equal opportunity provider. For the full non-discrimination statement or accommodation inquiries, go to [www.extension.iastate.edu/diversity/ext](http://www.extension.iastate.edu/diversity/ext)

*Iowa State University Extension and Outreach Indicators Portal: [www.indicators.extension.iastate.edu](http://www.indicators.extension.iastate.edu)*

**IOWA STATE UNIVERSITY**  
Extension and Outreach  
Community and Economic Development