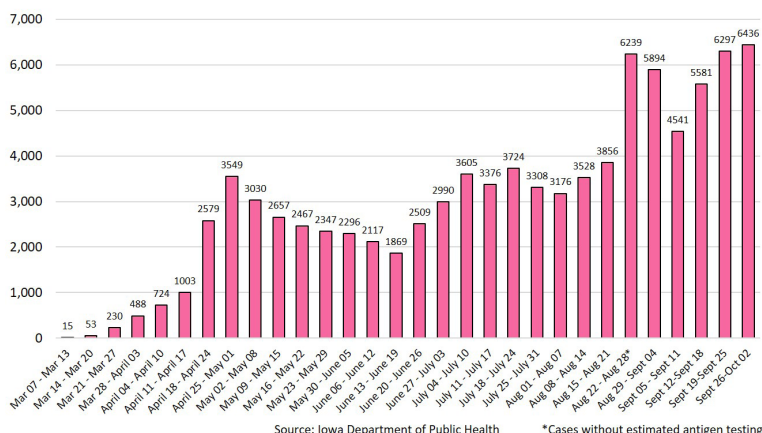


Covid-19 in Iowa: Six Months of Cases by Age

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



Through October 2nd, the Iowa Department of Public Health¹ (IDPH) had reported 91,861 total Covid-19² cases in the state. Since mid-August, Iowa has recorded the highest week-by-week³ increases in new cases since reporting in Iowa began in early March, 2020. The number of weekly new cases in recent weeks is more than 1.5 times higher than the highest weeks of April, May, or July (Figure 1, Table 1).

Statewide, cases are reported by five age groups.⁴ Through October 2nd, the highest cumulative number of cases (43,580) is reported for those age 18-40; those 81 or older have the fewest reported cases (3,380). In the weeks since mid-April, the weekly numbers of new cases reported have been consistently highest for the 18-40 age group, second highest for those 41-60, and lowest for those 81 or older (Figure 2, Table 1).

The weeks of August 22nd and August 29th were particularly notable for the large number of new cases for the age 18-40 group.⁴ In those weeks, the number of new cases were approximately double what had been reported for the week of August 15th for that age group. Those two weeks also showed significant gains for those age 17 or younger. It is very likely that students returning to school had an impact on the increased number of cases during those weeks.

During the two weeks in August noted above, the gain in new cases for the 18-40 group pushed the weekly percentages for that group to 57% and 58%. In Figure 3, the surge in the proportion for that age group is unmistakable. Previously, it was only in the later weeks of June that the 18-40 group had been at that high proportion of new cases. The large numerical and percentage increase in the age 18-40 group lowered the weekly proportions for the other age groups serving to somewhat minimize the changes for those groups (Figure 3, Table 1).

For the week of September 5th, there were fewer new total cases than in the previous weeks and the changes by age moderated somewhat. However, the most recent three weeks since September 12th have again seen an increase to weekly highs as well as a change in the pattern of new cases by age.

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

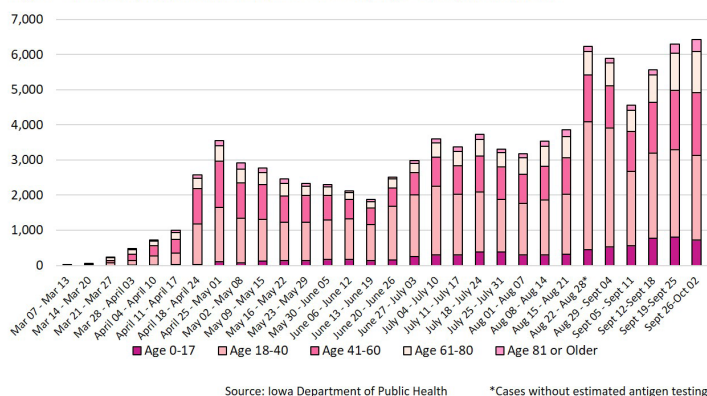
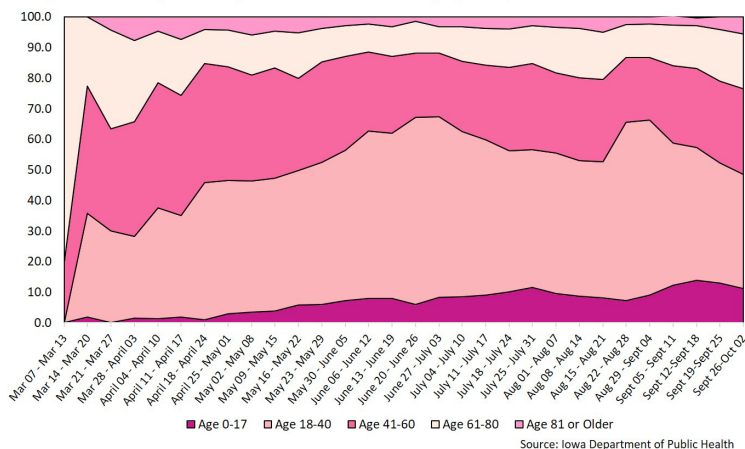


Figure 3. Percentage of Weekly Additional Covid-19 Cases by Age Group, Iowa, 2020



Covid-19 in Iowa: Six Months of Cases by Age

New cases for those age 18-40 have been relative constant (2,402-2,485) each week. In contrast, the other age groups are registering more new cases each week. The last week reported here (September 26 - October 2), had the highest number of weekly new cases ever reported in Iowa for those age 41-60 (1,800), those age

61-80 (1,160) as well as for persons age 81 and older (353). For those 17 or younger, the highest number of new cases (812) was the previous week of September 19th. These increases across the groups suggest a generalized and very concerning community spread of Covid-19 across Iowa (Figures 1,2; Table 1).

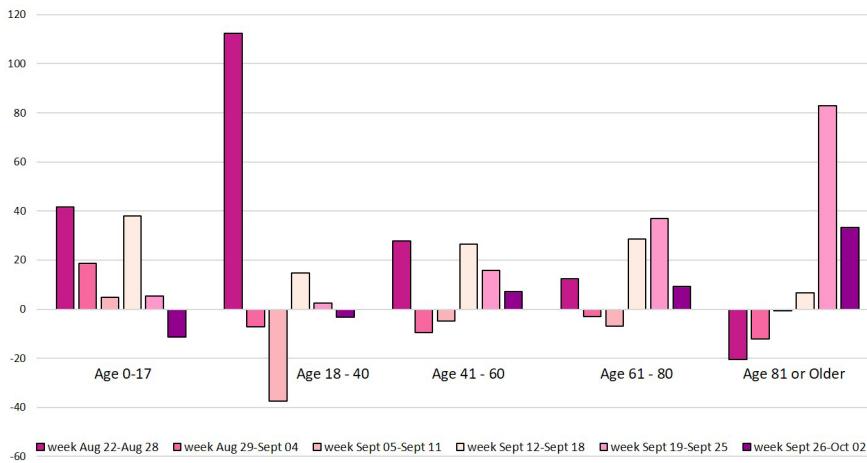
A look at the percentage change in new cases by age group confirms the trends noted for the last several weeks (Figure 4, Tables 1, 2). The cases for age 18 - 40 during the week of August 22nd increased 112% over the cases of that age for the previous week. That week also recorded a 41% increase in cases 17 or younger.

Table 1. Cumulative and Weekly Covid-19 Cases by Age, Iowa, 2020.¹

Week	Cumulative	Weekly Number of Covid-19 Cases by Age						Weekly Percentage of Covid-19 Cases by Age				
	Cases	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
Mar 07 - Mar 13	18	15	0	0	3	12	0	0.0	0.0	20.0	80.0	0.0
Mar 14 - Mar 20	68	53	1	18	22	12	0	1.9	34.0	41.5	22.6	0
Mar 21 - Mar 27	298	230	0	69	77	74	10	0.0	30.0	33.5	32.2	4.3
Mar 28 - April 03	786	488	7	131	183	129	38	1.4	26.8	37.5	26.4	7.8
April 04 - April 10	1510	724	9	262	296	122	33	1.3	36.3	41.0	16.9	4.7
April 11 - April 17	2513	1003	18	334	395	183	75	1.8	33.2	39.4	18.2	7.4
April 18 - April 24	5092	2579	26	1155	1004	289	105	1.0	44.8	38.9	11.2	4.1
April 25 - May 01	8641	3549	102	1549	1319	428	146	2.9	43.6	37.2	12.1	4.2
May 02 - May 08	11671	3030	70	1267	1019	385	177	3.4	42.9	34.7	13.1	5.9
May 09 - May 15	14328	2657	128	1185	983	351	127	3.8	43.5	36.0	12.1	4.6
May 16 - May 22	16795	2467	143	1084	745	366	129	5.8	43.9	30.2	14.8	5.2
May 23 - May 29	19142	2347	136	1092	770	255	88	5.9	46.6	32.8	10.9	3.8
May 30 - June 05	21438	2296	167	1127	704	232	66	7.3	49.1	30.7	10.1	2.9
June 06 - June 12	23555	2117	169	1158	548	194	50	8.0	54.7	25.9	9.1	2.4
June 13 - June 19	25424	1869	147	1012	468	185	58	7.9	54.1	25.0	9.8	3.1
June 20 - June 26	27933	2509	150	1537	524	260	38	6.0	61.3	20.9	10.4	1.5
June 27 - July 03	30923	2990	248	1767	619	262	93	8.3	59.1	20.7	8.8	3.1
July 04 - July 10	34528	3605	304	1949	824	409	116	8.5	54.1	22.9	11.3	3.2
July 11 - July 17	37904	3376	305	1713	822	406	131	9.0	50.7	24.3	12.0	3.9
July 18 - July 24	41628	3724	375	1720	1016	467	149	10.1	46.2	27.3	12.5	4.0
July 25 - July 31	44936	3308	383	1488	935	407	94	11.6	45.0	28.3	12.3	2.8
Aug 01 - Aug 07	48112	3176	304	1457	835	470	112	9.6	45.9	26.3	14.8	3.5
Aug 08 - Aug 14	51640	3528	306	1562	960	567	133	8.7	44.3	27.2	16.1	3.8
Aug 15 - Aug 21	55496	3856	317	1712	1039	594	196	8.2	44.4	26.9	15.4	5.1
Aug 22 - Aug 28 Estimated <i>Without</i> 1,377 Antigen Cases ²	61735	6239	449	3637	1329	668	156	7.2	58.3	21.3	10.7	2.5
August 22 - August 28, PCR + Antigen Testing ²	63112	7616	552	4438	1621	806	180	7.2	58.3	21.3	10.7	2.5
Aug 29 - Sept 04	69006	5894	533	3374	1202	647	137	9.0	57.2	20.4	11.0	2.3
Sept 05 - Sept 11	73547	4541	559	2111	1146	602	136	12.3	46.5	25.2	13.3	3.0
Sept 12 - Sept 18	79128	5581	771	2422	1449	775	145	13.8	43.4	26.0	13.9	2.6
Sept 19 - Sept 25	85425	6297	812	2485	1678	1062	265	12.9	39.5	26.6	16.9	4.2
Sept 26 - Oct 02	91861	6436	720	2402	1800	1160	353	11.2	37.3	28.0	18.0	5.5
Cumulative Age Totals	91861		7762	43580	25006	12111	3380	8.4	47.4	27.2	13.2	3.7

¹Source: Iowa Department of Public Health; ²On August 27th, 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 27th, the reported state cumulative positive totals were based on PCR testing.

Figure 4. Percentage Change in New Cases from Previous Week's New Cases by Age, Iowa, 2020.¹



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

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
September 26 - October 02 New Cases	6436	720	2402	1800	1160	353
Change in Cases from Previous Week	+139	-92	-83	+122	+98	+88
Percentage Change from Previous Week	+2.2%	-11.3%	-3.3%	+7.3%	+9.2%	+33.2%
September 19 - September 25 New Cases	6297	812	2485	1678	1062	265
Change in Cases from Previous Week	+716	+41	+63	+229	+287	+120
Percentage Change from Previous Week	+12.8%	+5.3%	+2.6%	+15.8%	+37.0%	+82.8%
September 12 - September 18 New Cases	5581	771	2422	1449	775	145
Change in Cases from Previous Week	+1040	+212	+311	+303	+173	+9
Percentage Change from Previous Week	+22.9%	+37.9%	+14.7%	+26.4%	+28.7%	+6.6%
September 05 - September 11 New Cases	4541	559	2111	1146	602	136
Change in Cases from Previous Week	-1353	+26	-1263	-56	-45	-1
Percentage Change from Previous Week	-23.0%	+4.9%	-37.4%	-4.7%	-7.0%	-0.73%
August 29 - September 04 New Cases	5894	533	3374	1202	647	137
Change in Cases from Previous Week	-354	+84	-263	-127	-21	-19
Percentage Change from Previous Week	-5.5%	+18.7%	-7.2%	-9.6%	-3.1%	-12.2%
August 22 - August 28 New Cases, Estimated Without 1,377 Antigen Cases ¹	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

¹Adjusted for cumulative antigen cases added during week. See report footnotes for further explanation.

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.

Turning to more recent weeks, there was a 37% increase in new cases for persons 17 or younger during the week of September 12th, again likely related to the opening of schools. It is, however, the increased cases for the older age groups that are of particular concern in the last few weeks. New cases increased each week since the week of September 12th for the three oldest age groups (Figure 4, Tables 1, 2). Most notable was an 82% increase in new cases for those age 81 or older during the week of September 19th.

Covid-19 can be serious for persons of any age but it is especially dismaying to have increases among the older age groups. Older persons have a greater likelihood than younger persons of having serious complications from Covid-19 and are more likely to die from the virus. On October 2nd, Iowa had reported 1,377 deaths attributed to Covid-19. IDPH reported that 89% of these deaths from Covid-19 have been among persons in the two oldest age groups. That would mean of Iowa's 1,377 deaths reported at that time, 1,225 deaths have occurred among Iowa's oldest Covid-19 patients.

Recent weeks have seen consistent, sustained increases in cases across most of Iowa's age groups. Iowa is experiencing weekly new cases at record levels. Increased vigilance and precautions are needed across Iowa in order to stem the community spread of Covid-19.

Covid-19 in Iowa: Six Months of Cases by Age

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

¹The source for the Covid-19 data reviewed here is the Iowa Department of Public Health (IDPH). 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>

²Coronavirus 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>

³Although 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.

⁴On August 27, 2020, IDPH revised the reported statewide Covid-19 cases by adding an estimated cumulative 1,377 previous cases that had not been reported as positive cases. 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. 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. 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). In Table 1, both the adjusted and the unadjusted numbers are included. Figures 1, 2, and 4 use the adjusted numbers.

See <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.

Sandra Charvat Burke
Iowa State University
Ames, IA
515-294-9307
schurke@iastate.edu
October 7, 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

Iowa State University Extension and Outreach Indicators Portal: www.indicators.extension.iastate.edu

IOWA STATE UNIVERSITY
Extension and Outreach
Community and Economic Development