

Covid-19 in Iowa: Cases and Testing

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

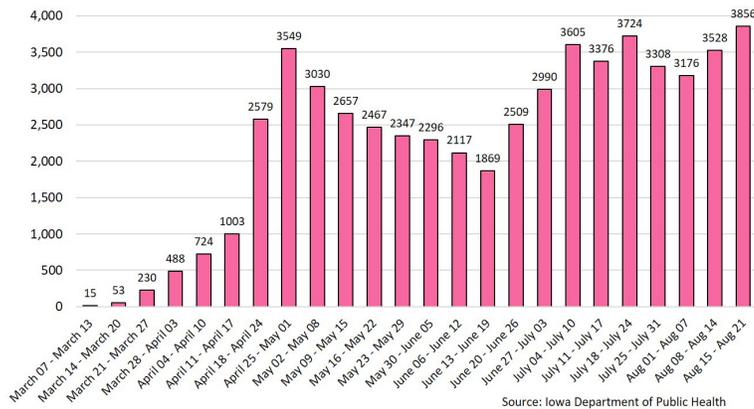


Figure 2. Weekly Additional Covid-19 Tests, Iowa, 2020

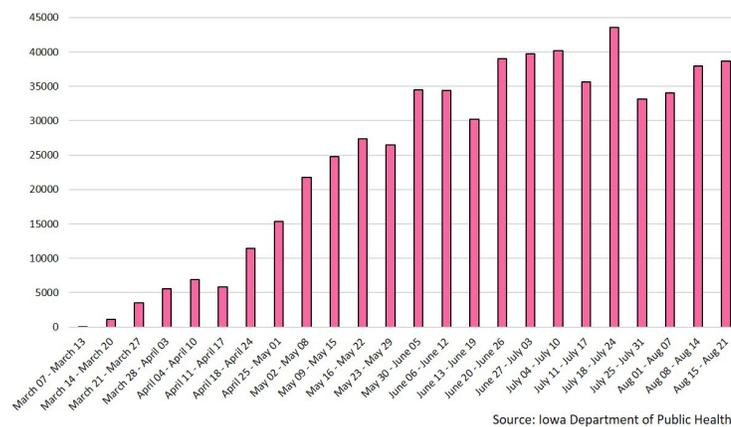
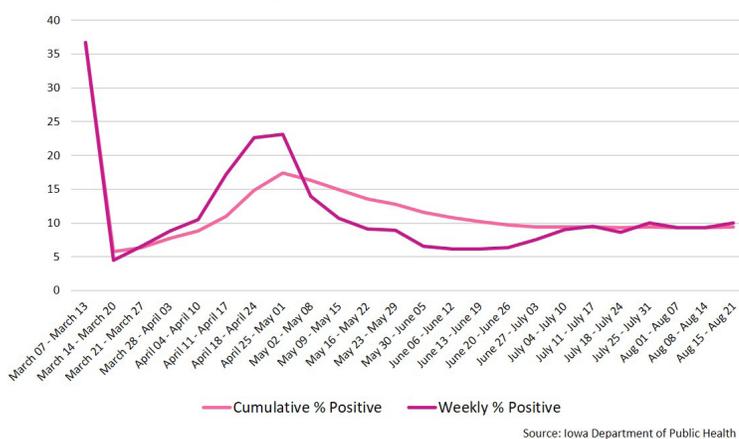


Figure 3. Cumulative and Weekly Percent of Covid-19 Tests Positive, Iowa, 2020



Covid-19¹ cases have been reported in Iowa since early March, 2020. This report reviews week-by-week² changes in reported cases, testing, and positive case rates. The source for the Covid-19 data reviewed here is the Iowa Department of Public Health (IDPH).³

Through August 21st, Iowa had reported nearly 55,500 Covid-19 cases in the state. Weekly new cases were above 3,100 since early July (Figure 1, Table 1). IDPH has also been reporting the number of tests for Covid-19 that have been done. Through August 21st, more than 591,000 tests have been reported. In the early weeks of the outbreak in Iowa, very few tests were done. Testing has increased significantly such that at least 30,000 tests have been done weekly since early June. For some of these weeks, 40,000 or more tests have been carried out (Figure 2, Table 1).

The percentage of cases that have been positive for Covid-19 has varied across this time frame. The percentage of positive cases can be calculated on a cumulative basis using all cases and testing across the entire time period. A week-by-week, shorter-term calculation of the percent positive can also be done.

After the first week when very few tests (<50) were done, Iowa had its highest cumulative percentage positive rate (17.4%) during the week of April 25th. That week coincided with the first weekly peak of cases higher than 3,000. The cumulative positive rate declined steadily as cases decreased and testing increased to the 9.3% - 9.4% cumulative rates reported in July and August (Figure 3, Table 1).

It is also important to examine week-by-week trends to better understand what is happening on a shorter time frame. The cumulative rate, since it is calculated over a much longer time frame, may mask shorter-term increases. Weekly, statewide percent positive rates reached 23% in the week of April 25th, the same week when cumulative rates were highest (Figure 3, Table 1). The weekly rates declined to 6.2% in June only to increase again as case levels rose. The rate for the week of August 15th was 10% (Figure 3, Table 1).

Another standard for examining cases is to not only look at the positivity rate but also to compare the

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number of cumulative cases to the population at risk. For Covid-19, this is calculated as the cases per 100,000 population based on a population estimate for Iowa of 3,155,070.⁴ The case rate/100,000 statewide for Iowa was 1,759 for the week ending August 21st (Table 1). Iowa is among the highest 17 states. The nationwide case rates/100,000 have recently ranged above 3,000 for Louisiana and above 2,000 for 12 other states. Fourteen states are below 1,000.⁵

Testing is a key factor in detection and mitigation of Covid-19. A useful measure is the rate of testing, again comparing the number of tests to the population using the testing rate/100,000. For Iowa, in the week ending August 21st, the cumulative rate of testing was 18,732/100,000 population (Table 1). Some national studies suggest that most states, including Iowa, are still below the testing rate that is needed in order to control Covid-19. It is suggested that testing should be high enough that the positivity rate is at or below 5%.⁶

Table 1. Cumulative and Weekly Covid-19 Cases, Tests, Percent Positive, and Testing Rate, Iowa, 2020.¹

Week	Cumulative			Weekly			Cumulative	
	Cases	Tests	Percent Positive	Cases	Tests	Percent Positive	Rate/100,000 Cases	Tests
March 07 - March 13	18	49	36.7	18	49	36.7	0.6	1.6
March 14 - March 20	68	1171	5.8	50	1122	4.5	2	37
March 21 - March 27	298	4673	6.4	230	3502	6.6	9	148
March 28 - April 03	786	10240	7.7	488	5567	8.8	25	325
April 04 - April 10	1510	17132	8.8	724	6892	10.5	48	543
April 11 - April 17	2513	22947	11.0	1003	5815	17.2	80	727
April 18 - April 24	5092	34350	14.8	2579	11403	22.6	161	1089
April 25 - May 01	8641	49727	17.4	3549	15377	23.1	274	1576
May 02 - May 08	11671	71476	16.3	3030	21749	13.9	370	2265
May 09 - May 15	14328	96300	14.9	2657	24824	10.7	454	3052
May 16 - May 22	16795	123653	13.6	2467	27353	9.1	532	3914
May 23 - May 29	19142	150108	12.8	2347	26455	8.9	607	4745
May 30 - June 05	21438	184554	11.6	2296	34446	6.6	679	5849
June 06 - June 12	23555	218964	10.8	2117	34410	6.2	747	6940
June 13 - June 19	25424	249207	10.2	1869	30243	6.2	806	7899
June 20 - June 26	27933	288212	9.7	2509	39005	6.4	885	9135
June 27 - July 03	30923	327936	9.4	2990	39724	7.5	980	10394
July 04 - July 10	34528	368104	9.4	3605	40168	9.0	1094	11667
July 11 - July 17	37904	403726	9.4	3376	35622	9.5	1201	12796
July 18 - July 24	41628	447251	9.3	3724	43525	8.6	1319	14176
July 25 - July 31	44936	480423	9.4	3308	33172	10.0	1424	15227
August 01 - August 07	48112	514451	9.3	3176	34028	9.3	1525	16306
August 08 - August 14	51640	552389	9.3	3528	37938	9.3	1637	17508
August 15 - August 21*	55496	591016	9.4	3856	38627	10.0	1759	18732

¹Source: Iowa Department of Public Health; *During the week of August 15 - 21, the Iowa Department of Public Health made revisions to the cumulative counts of cases and tests to adjust for previous reporting errors. The numbers reported here reflect the counts *after* the adjustments were made and reflect the revised totals.

Notes

¹Coronavirus 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>

²Although cases and testing 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.

³Through 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>

⁴U.S. Census Bureau, Population Estimates, <https://www.census.gov/programs-surveys/popest/data/tables.html>

⁵cited August 25, 2020 at <https://www.cnn.com/interactive/2020/health/coronavirus-us-maps-and-cases/> source: <https://coronavirus.jhu.edu/map.html>
 cited August 25, 2020 at <https://www.nytimes.com/interactive/2020/us/coronavirus-us-cases.html> source: <https://github.com/nytimes/covid-19-data>

⁶cited August 25, 2020 at <https://www.nytimes.com/interactive/2020/us/coronavirus-testing.html>
 sources: <https://globalepidemics.org/july-6-2020-state-testing-targets/> and <https://covidtracking.com/>

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