



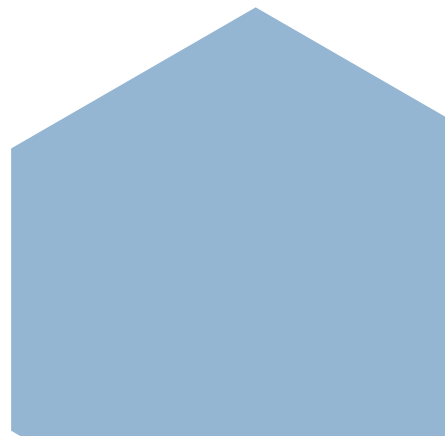
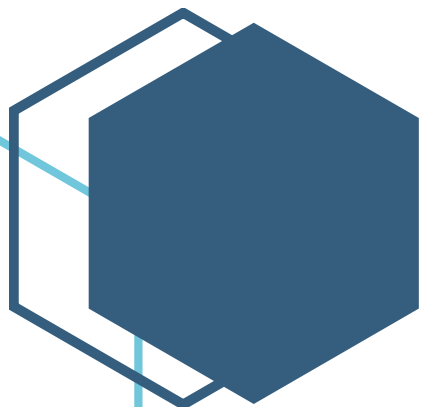
Central Iowa COVID19 Update

Monday, March 8, 2021



Statistical Consulting

Dr. Meg Schaeffer





Quick Stats¹

	Polk County	Iowa
Percent of population with 1 dose	7.7%	10.4%
Percent of population with 2 doses	11.8%	9.0%
7d Lab Test Positivity	5.6%	4.4%
14d Lab Test Positivity	5.4%	4.2%
Total cases per 100,000 the last 7d	132	108
Total cases per 100,000 the last 14d	284	227
Average daily cases the last 7d	92	486
Average 7-day new cases per 100,000	19	15

¹All data are sourced from <https://coronavirus.iowa.gov/pages/case-counts> with previous days refreshed daily. When recent data are unavailable, data from <https://github.com/nytimes/covid-19-data> may be used. Population of Polk County used is 490,161. Population of Iowa used is 3.155 million. Averages and percent positivity are subject to change with retrospectively refreshed data.

Critical Points, Media, and Research

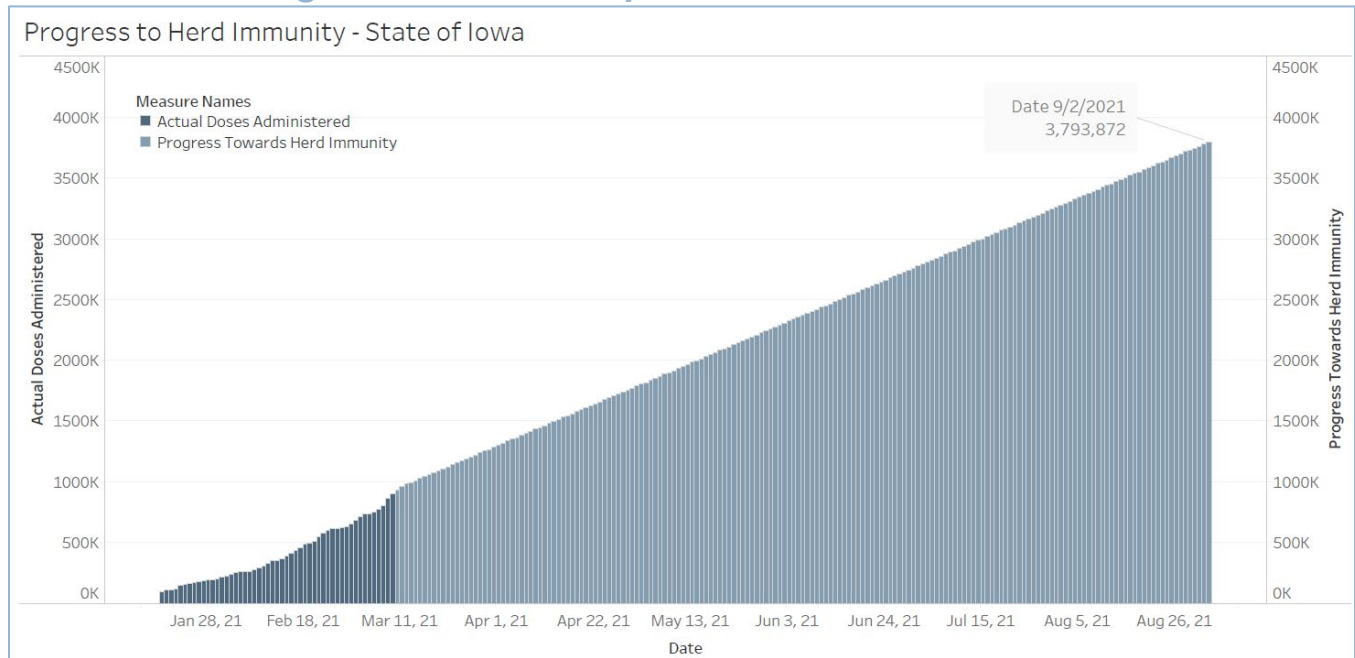
- Polk County and Iowa new cases are still dropping very slowly. Rates are still higher than previous peaks.
- [When You've Been Fully Vaccinated | CDC](#)
If you've been fully vaccinated (two weeks after the second dose of Moderna or Pfizer, OR two weeks after a single dose of Janssen):
 - You can gather indoors with fully vaccinated people without wearing a mask.
 - You can gather indoors with unvaccinated people from one other household (for example, visiting with relatives who all live together) without masks, unless any of those people or anyone they live with has an [increased risk for severe illness from COVID-19](#).
 - If you've been around someone who has COVID-19, you do not need to stay away from others or get tested unless you have symptoms.
 - However, if you live in a group setting (like a correctional or detention facility or group home) and are around someone who has COVID-19, you should still stay away from others for 14 days and get tested, even if you don't have symptoms.
 - You should still take steps to [protect yourself and others](#) in many situations, like wearing a mask, staying at least 6 feet apart from others, and avoiding crowds and poorly ventilated spaces. Take these precautions whenever you are in public or gathering with unvaccinated people from more than one other household.
 - You should still avoid medium or large-sized gatherings.
 - You should still delay domestic and international travel.
 - You should still watch out for [symptoms of COVID-19](#), especially if you've been around someone who is sick. If you have symptoms of COVID-19, you should get tested and stay home and away from others.
 - You will still need to follow guidance at your workplace.
- [US health agency will invest \\$1 billion to investigate 'long COVID' \(nature.com\)](#)
- [Russian disinformation campaign working to undermine confidence in Covid-19 vaccines used in US](#)
- [Covid: U.S. vaccinations hit record officials warn against easing restrictions](#)
- [Ultra-rapid detection of SARS-CoV-2 in public workspace environments \(plos.org\)](#)
A rapid test for entry into schools and workspaces based on a displaceable probe loop amplification architecture is described. This test trades sensitivity, that may not be necessary for screening, for speed, requires minimal sample manipulation, can be performed by a layperson person and is inexpensive.
- [Early Release - Risk for Fomite-Mediated Transmission of SARS-CoV-2 in Child Daycares, Schools, Nursing Homes, and Offices - Volume 27, Number 4—April 2021 - Emerging Infectious Diseases journal - CDC](#)
SARS-CoV-2 virus can persist on surfaces and fomites might be a substantial source of transmission risk – especially in schools and in daycare settings.



Vaccine

- [Prior COVID-19 Infection and Antibody Response to Single Versus Double Dose mRNA SARS-CoV-2 Vaccination](#)
- [Reduced neutralization of SARS-CoV-2 B.1.1.7 variant by convalescent and vaccine sera](#)
- [Evidence of escape of SARS-CoV-2 variant B.1.351 from natural and vaccine induced sera](#)
 In [Zhou et al.](#), neutralizing activity of antibodies were lower against SARS-CoV-2 B.1.351 than wild-type SARS-CoV-2 viruses suggesting monoclonal antibody therapy and vaccine effectiveness will be impacted. In [Supasa et al.](#), the B.1.1.7 variant did not evade treatment with existing monoclonal antibodies and there was no evidence of vaccine escape, indicating protection from the B.1.1.7 variant by existing vaccines. [Wu et al.](#) also found evidence that the Moderna vaccine-induced antibody response neutralized the B.1.1.7 variant *in vitro* but less so the B.1.351 variant.
- [Covid-19 Vaccine: Answers to Key Questions](#)
- [Iowa Vaccination Progress](#)
- [Vaccination progress in the US](#)

Vaccination Progress – Polk County



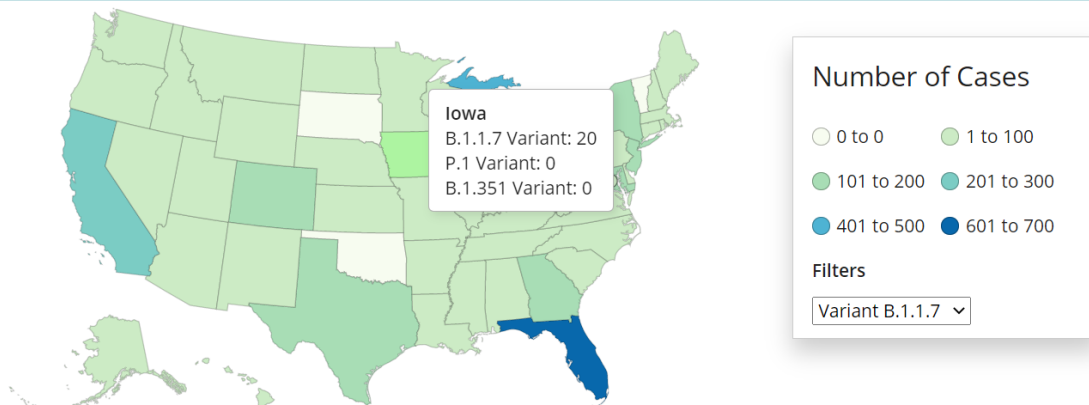
Assumptions: 10% of the population or higher will have acquired immunity; 60% immune through vaccination for a total of 70% of the population immune, two vaccines available – Moderna and Pfizer, two doses required, similar distribution and administration pace



Vaccination Prevalence

Variant	Reported Cases in US	Number of Jurisdictions Reporting
B.1.1.7	3037	49
B.1.351	81	20
P.1	15	9

Emerging Variant Cases in the United States**



- Increased hazard of mortality in cases compatible with SARS-CoV-2 variant of concern 202012/1 - a matched cohort study

The SARS-CoV-2 lineage B.1.1.7 (identified by Public Health England as VOC-202012/1) is associated with a higher risk of mortality (hazard ratio 1.7 [95% CI 1.3-2.2]) compared to the wild-type lineage.

- Densely sampled viral trajectories suggest longer duration of acute infection with B.1.1.7 variant relative to non-B.1.1.7 SARS-CoV-2
- Reduced neutralization of SARS-CoV-2 B.1.1.7 variant by convalescent and vaccine sera
- Evidence of escape of SARS-CoV-2 variant B.1.351 from natural and vaccine induced sera

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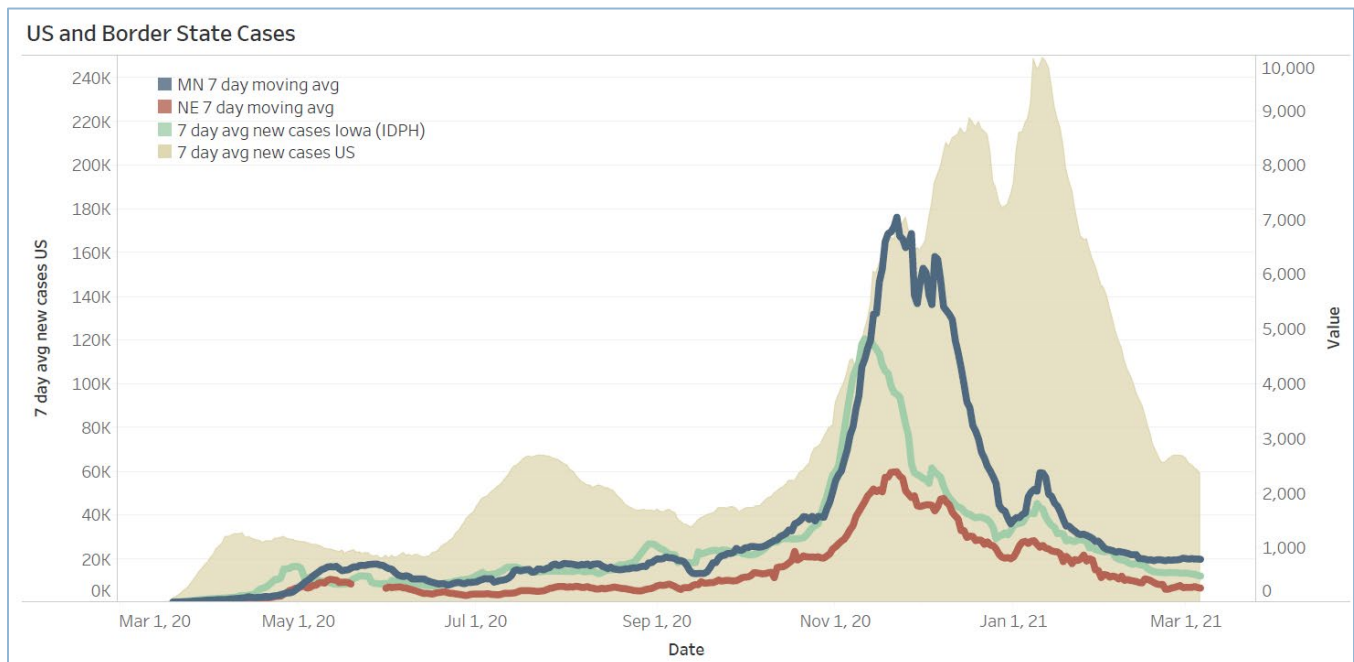
Variant	Identification Location	Transmission	Hospitalization & Deaths	Treatment Susceptibility	US Prevalence	Vaccine Efficacy
B.1.1.7	UK	30-50% +	35% more deadly	None	Widespread	Unaffected
B.1.351	South Africa	30-50% +	Potentially more serious	Likely reduced	Minimal	Reduced
P.1	Brazil	30-50% +	Potentially more serious	Likely reduced	Minimal	Potentially reduced



School Statistics – Polk County (Updated per week on Mondays)

Rate of Student/Staff Cases Per 1,000																	
Week Ending	1-Nov	8-Nov	15-Nov	22-Nov	29-Nov	13-Dec	20-Dec	27-Dec	10-Jan	17-Jan	24-Jan	31-Jan	7-Feb	14-Feb	22-Feb	1-Mar	7-Mar
DMPs	0.2	4.0	0.5	0.5	0.2	0.7	0.7	0.4	4.0	1.9	2.6	0.2	2.5	0.8	1.3	0.6	0.7
Ankeny	3.8	3.8	4.3	4.3	4.5	3.3	1.9	1.8	5.9	3.8	3.1	2.8	2.3	1.6	2.0	1.0	0.7
Waukee	5.8	10.3	9.4	6.5	4.6	3.5	1.7	1.7	4.5	5.0	2.4	3.3	3.0	3.0	3.0	2.3	1.7
WDM	2.8	5.7	11.0	4.7	1.1	2.7	1.9	0.6	4.0	4.2	1.6	2.2	1.6	2.4	1.1	1.3	1.1
Johnston	6.3	8.3	10.4	7.1	5.4	2.3	1.7	0.3	4.6	3.4	2.1	3.3	2.3	1.6	3.3	3.7	1.6
SE Polk	4.7	5.0	8.3	7.9	7.7	3.0	4.6	2.7	3.4	5.0	3.9	2.9	3.4	3.0	2.1	2.4	2.1
Urbandale	1.8	2.0	10.8	8.5	5.8	3.5	3.5	2.0	6.0	3.0	2.5	2.8	3.3	4.0	2.3	2.5	2.8
DCG		6.0	10.4	9.5	13.3	4.7	0.9	2.8	2.2	2.2	2.5	1.3	1.3	1.9	2.5	1.9	1.3
Bondurant		8.3	7.9	13.4	13.4	3.7	2.8	7.4	0.0		0.9	12.5	19.0	11.6	11.6	0.9	13.4
North Polk		4.5	5.6	5.6	4.5	1.1	1.7	2.3	3.9	1.1	7.9	5.6	10.1	1.7	3.9	11.3	1.1
Ballard		0.0	0.0	8.2	0.6	1.2	1.2	0.0	0.0	4.1	1.2	1.2	6.4	6.4	5.8	2.3	1.2
Saydel		7.5	12.7	3.0	0.0	2.2	3.0	2.2	3.7	3.7	3.7	0.7	1.5	3.0	2.2	3.7	0.7

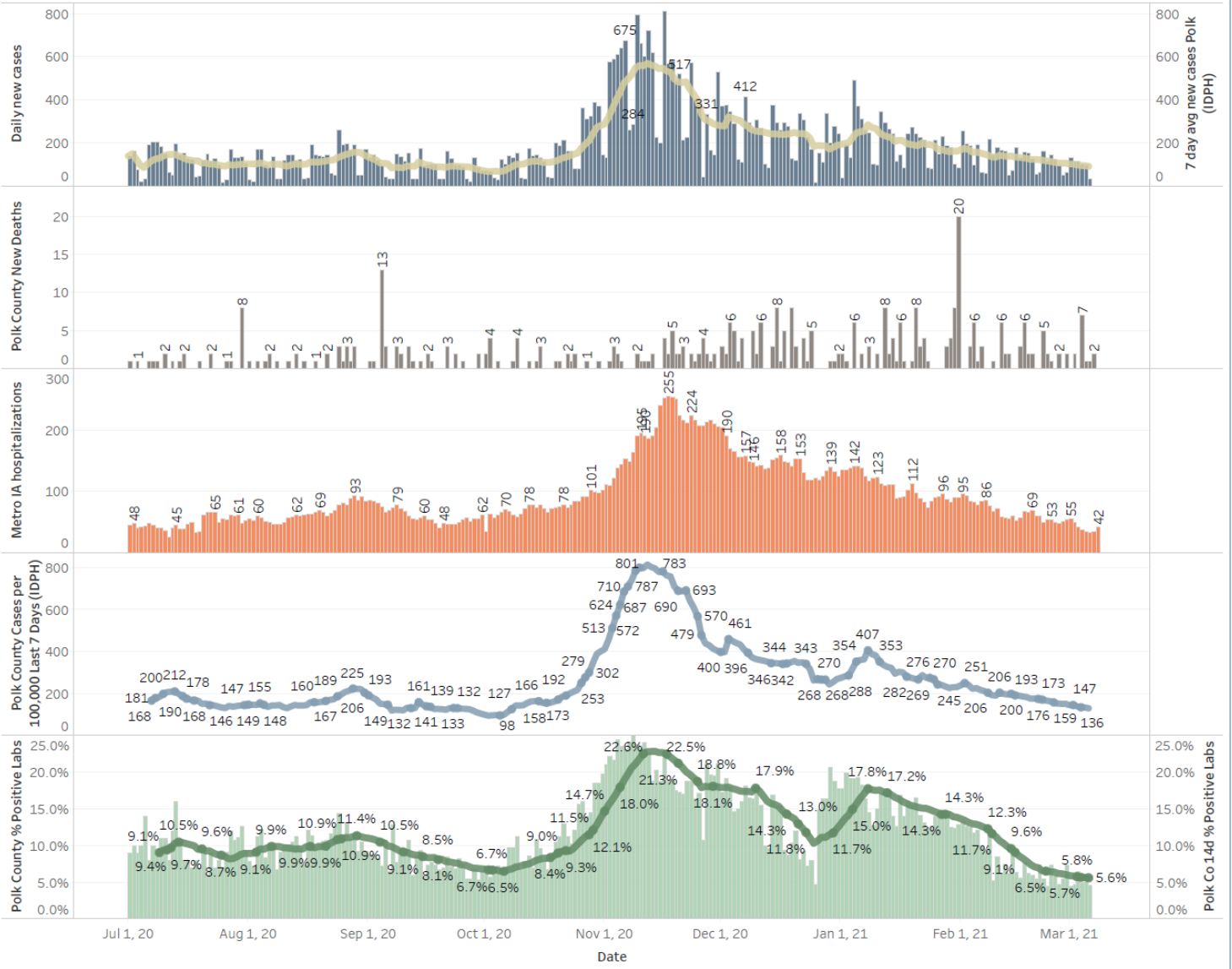
Students/Staff in Quarantine																		
Week Ending	1-Nov	8-Nov	15-Nov	22-Nov	29-Nov	13-Dec	20-Dec	27-Dec	10-Jan	17-Jan	24-Jan	31-Jan	7-Feb	14-Feb	22-Feb	1-Mar	7-Mar	
DMPs	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	220	198	235	223	193
Ankeny	225	225	370	370	273	172	107	87	132	116	125	138	178	106	88	75	45	
Waukee	332	500	575	384	160	76	113	136	156	195	95	108	127	128	94	102	65	
WDM	146	204	239	70	12	38	19	14	114	55	54	83	69	39	46	22	25	
Johnston	586	667	527	318	286	73	78	73	116	147	126	109	100	106	150	137	84	
SE Polk	186	211	307	380	401	126	121	129	89	125	129	96	84	86	92	105	93	
Urbandale	39	97	180	223	179	49	32	34	43	71	78	50	67	77	59	54	51	
DCG		80	159	216	82	69	46	41	33	43	42	44	45	59	79	44	37	
Bondurant		148	160	167	138	97	55	62	<6	N/A	28	68	86	69	69	11	18	
North Polk		103	101	90	61	55	51	46	30	19	35	57	52	50	39	39	34	
Ballard				77	40	34	16		28	12	25	20	18	40	30	9	16	
Saydel		109	88	65	46	30	33	24	39	26	27	26	33	19	23	18	18	
Total	1514	2344	2706	2360	1678	819	671	646	780	809	764	799	1079	977	1004	839	679	



Central Iowa COVID19 Update



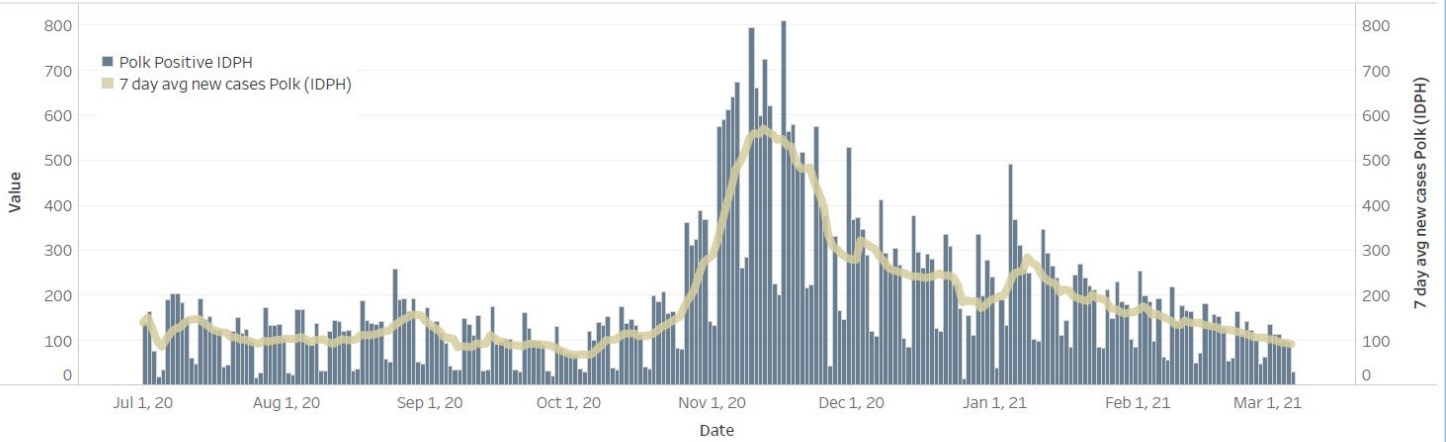
Polk County Activity View



Central Iowa COVID19 Update



Polk County Cases by Day and 7d Moving Average



Iowa Cases by Day and 7d Moving Average

