



# Central Iowa COVID19 Update

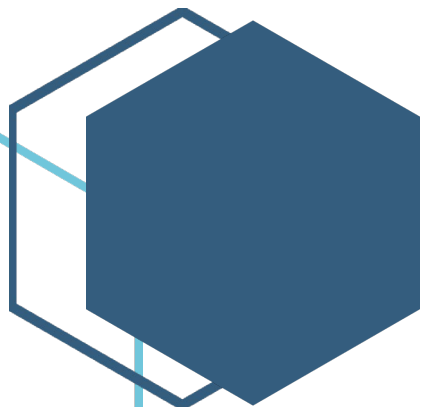
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Wednesday, December 22, 2021



Statistical Consulting

Dr. Meg Schaeffer



## Quick Stats<sup>1</sup>

	Polk County	Iowa
Percent of population with at least 1 dose*	70.4%	64.3%
Percent of population with fully vaccinated*	63.6%	58.5%
7d Lab Test Positivity	12%	10.8%
Total cases per 100,000 the last 7d	357	347
CDC County Transmission Level*	High	
Average daily cases the last 7d	250	1565

\*[Vaccine Information](#) | [Iowa COVID-19 Information](#)  
 All data are sourced from <https://coronavirus.iowa.gov/pages/case-counts> with previous days refreshed weekly. The 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

Cases remain steady, though a substantial surge is expected soon as Omicron is circulating in Iowa. Hospitalizations have spiked and dropped back to high levels averaging 150 inpatients per day with transmissible illness. Polk County continues to average 2-3 deaths per day from COVID.

### Omicron resources

- Data from the UK and South Africa show Omicron may cause more mild illness, though that may be attributed to the population's underlying vaccination rate. Optimal protection against Omicron is a combination of two doses plus a recent booster or previous covid illness and vaccination.
- Omicron spreads faster in households than Delta.

### Other news & research

- A BNT162b2 booster was associated with reduced risk of SARS-CoV-2 infection and death due to COVID-19 among adults ≥50 years of age. [BNT162b2 Vaccine Booster and Mortality Due to Covid-19 | NEJM](#)
- A BNT162b2 booster was associated with reduced risk of SARS-CoV-2 infection and death due to COVID-19 among adults ≥50 years of age. [Nursing Home Staff Vaccination and Covid-19 Outcomes | NEJM](#)
- Immunity from SARS CoV-2 infection appears to wane more slowly than immunity conferred from a 2-dose vaccination series, findings similar to [Kim et al.](#) A booster dose of vaccine appears to restore at least short-term protection in previously vaccinated people. [Protection and waning of natural and hybrid COVID-19 immunity | medRxiv](#)
- These findings indicate that face mask use among infectious and susceptible individuals significantly reduces SARS-CoV-2 infection risk compared with physical distancing alone; level of protection varies by type of mask worn and the fit by both the infectious and susceptible individual. [An upper bound on one-to-one exposure to infectious human respiratory particles | PNAS](#)
- Among 306,710 Israelis aged >40 years who received either 2 or 3 doses of the BNT162b2 vaccine and had no history of infection, those who received a booster (3<sup>rd</sup> dose) had 86% (95% CI 85%-87%) reduction in odds of testing positive for SARS-CoV-2 and 97% (95% CI 95%-98%) reduction in odds of COVID-19 hospitalization at 28–65 days post-booster compared with those who received only 2 doses. [Odds of Testing Positive for SARS-CoV-2 Following Receipt of 3 vs 2 Doses of the BNT162b2 mRNA Vaccine | Infectious Diseases | JAMA Internal Medicine](#)
- [SARS-CoV-2 variants of concern and variants under investigation](#)
- [Minimal cross-over between mutations associated with Omicron variant of SARS-CoV-2 and CD8+ T cell epitopes identified in COVID-19 convalescent individuals](#)
- [Delta breakthrough infections elicit potent, broad and durable neutralizing antibody responses](#)
- [Disparities in COVID-19-related stressful life events in the United States](#)
- [Pfizer Covid pill: FDA authorizes first oral antiviral to treat coronavirus infection](#)
- [Iowa health experts approve Biden's plans to deliver at-home COVID test kits](#)
- [Des Moines area doctors say resources are dwindling as COVID-19 infections continue to spread](#)
- [Airplane Passengers At Least Twice As Likely To Catch Covid-19 Because Of Omicron](#)
- [South Africa's omicron coronavirus outbreak subsides as fast as it grew](#)
- [COVID omicron variant: IHME models predict 140M infections this winter](#)
- [Covid-19 was the third leading cause of death in 2020, driving a record increase in death rate and nearly two-year drop in life expectancy](#)



## Vaccine Progress

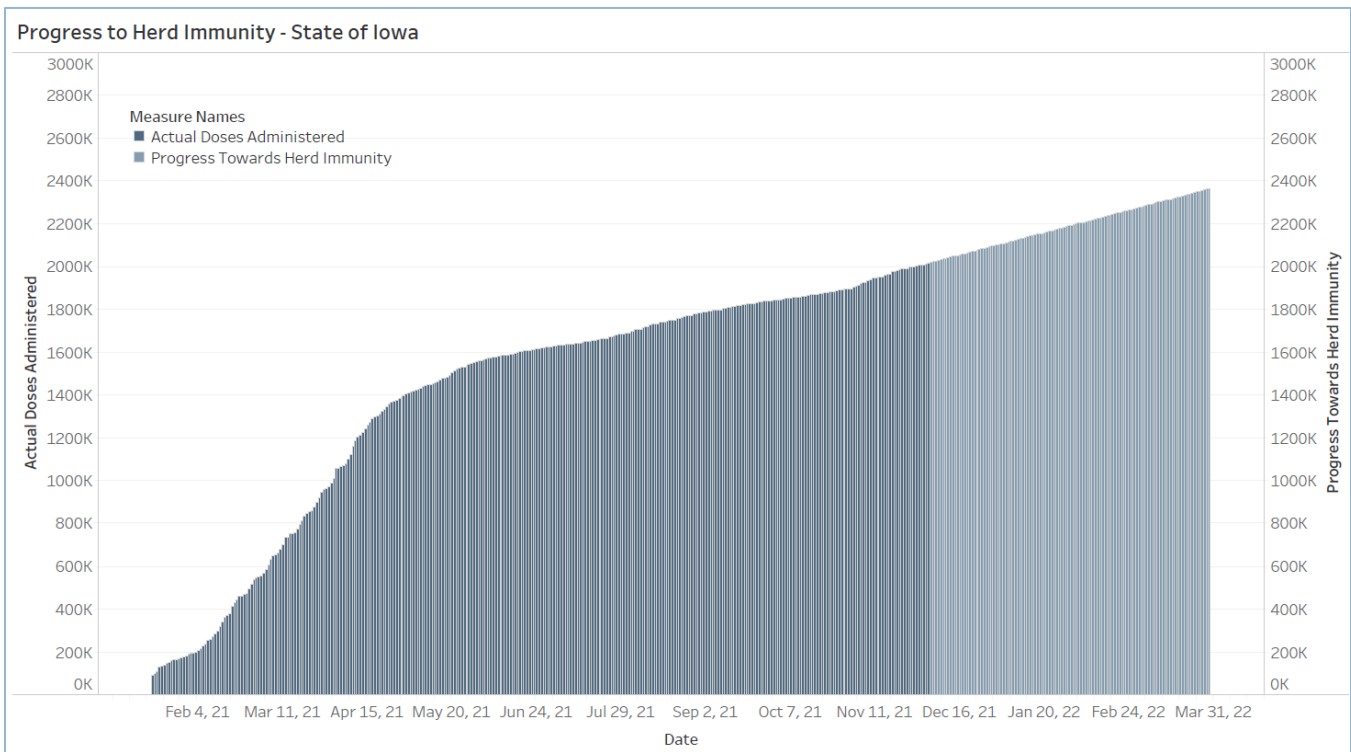
Polk Co Vaccination Rates CDC Covid Data Tracker Data (*)	At Least One Dose	Fully Vaccinated
Total	345,059	311,688
% of Total Population	70.40%	63.60%
Population ≥ 5 Years of Age	345,046	311,688
% of Population ≥ 5 Years of Age	75.70%	68.40%
Population ≥ 12 Years of Age	332,396	303,358
% of Population ≥ 12 Years of Age	81.30%	74.20%
Population ≥ 18 Years of Age	305,885	279,544
% of Population ≥ 18 Years of Age	82.90%	75.70%
Population ≥ 65 Years of Age	67,616	62,931
% of Population ≥ 65 Years of Age	95.00%	95.00%

(\*) CDC COVID Data Tracker Data: CDC data includes vaccine administration data from all sources, including IRIS\*, other state immunization registries, and federal entities (Bureau of Prisons, Veterans Health Administration, Department of Defense, and Federal Long-Term Care program). These doses may not have been reported to IRIS.

Data as of 12/22/21

Link to Zip Code-Level Vaccination

Rates - <https://arcg.is/1nTry4>



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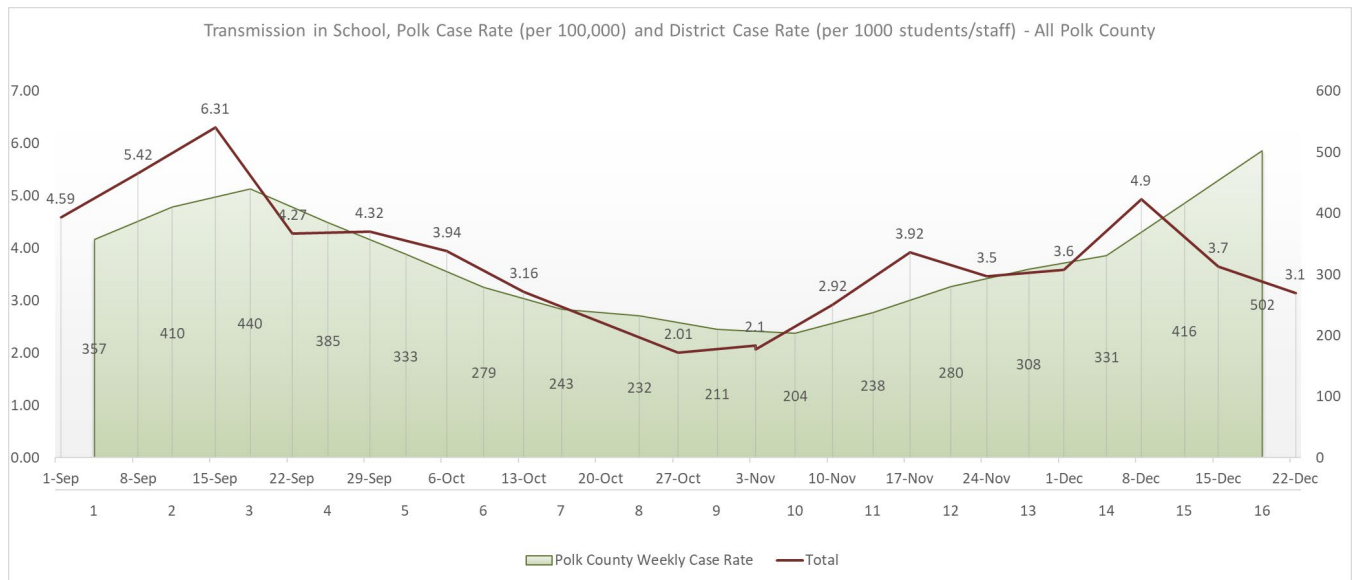


## School Data

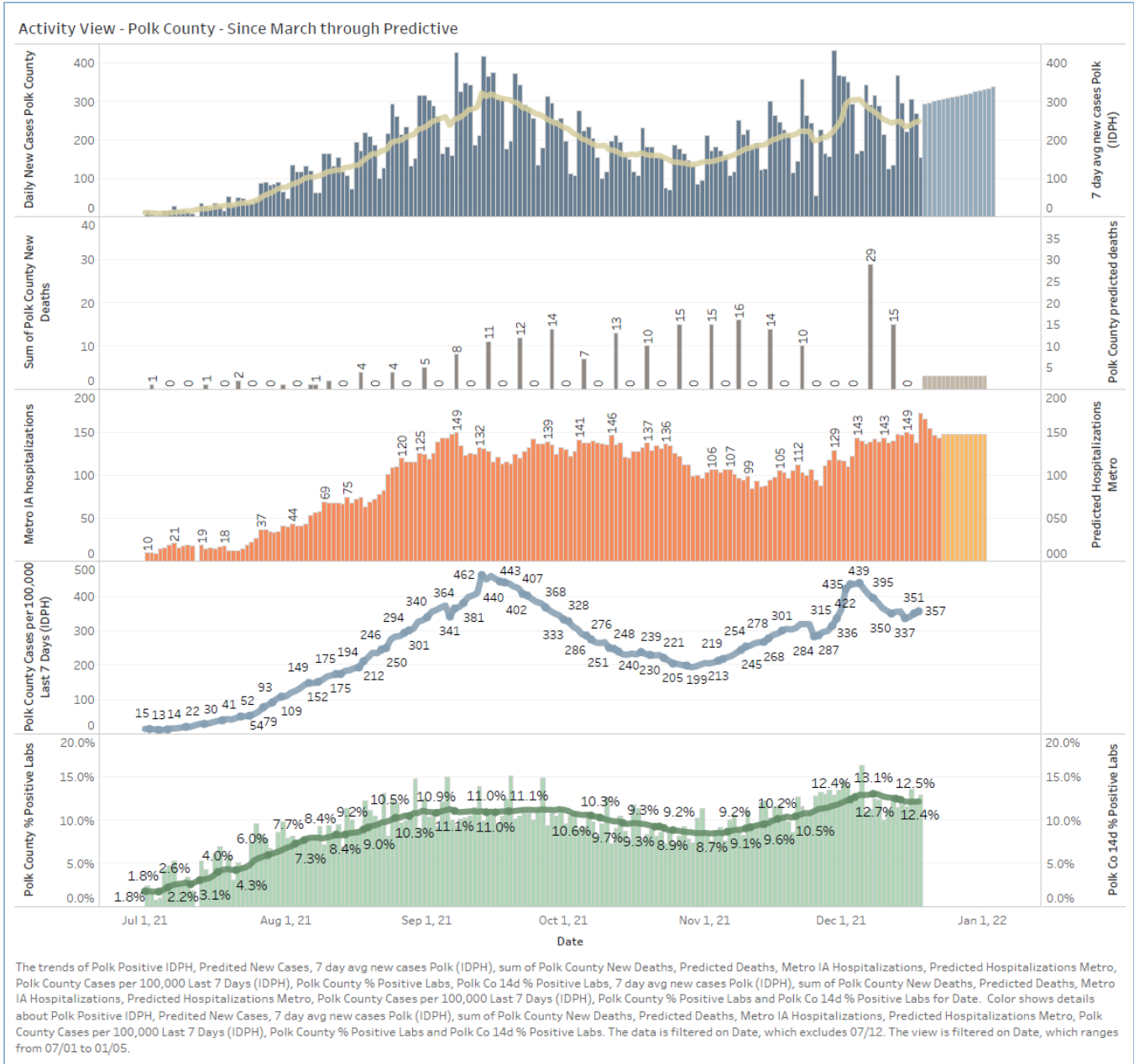
New Student/Staff Case Rates per 1000																	
Week Ending	1-Sep	8-Sep	15-Sep	22-Sep	29-Sep	6-Oct	13-Oct	3-Nov	27-Oct	3-Nov	10-Nov	17-Nov	24-Nov	1-Dec	8-Dec	15-Dec	22-Dec
DMPs*	3.39	6.18	5.76	6.21	6.52	4.42	3.27	2.30	2.1	0.9	2.48	2.12	2.24	3.58	5.06	3.79	3.03
Ankeny	0.00	0.00	8.50	5.42	5.42	3.92	4.83	3.75	2.8	2.1	2.75	4.00	3.33	3.25	5.83	5.00	4.67
Waukee	0.00	0.00	3.57	2.78	2.78	2.35	2.09	2.43	1.7	4.2	4.35	6.70	8.09	4.43	4.52	3.57	3.04
WDM	5.78	4.67	3.89	4.33	4.33	2.67	2.67	1.22	2.0	2.8	5.89	5.67	5.00	5.00	7.67	5.11	3.78
Johnston	0.00	0.00	2.57	4.71	4.71	3.57	2.29	2.29	2.4	2.1	2.71	3.43	0.86	2.00	3.43	2.86	3.43
SE Polk	0.00	0.00	16.14	4.71	4.71	5.43	4.00	1.71	1.9	1.1	1.29	2.29	3.14	4.14	5.29	2.86	1.71
Urbandale	0.00	0.00	3.75	1.75	1.75	5.25	3.00	1.25	1.3	1.3	1.00	3.25	4.25	3.00	3.75	1.75	2.75
Total	4.59	5.42	6.31	4.27	4.32	3.94	3.16	2.14	2.0	2.1	2.92	3.92	3.5	3.6	4.9	3.7	3.1

New Student/Staff Cases																	
Week Ending	1-Sep	8-Sep	15-Sep	22-Sep	29-Sep	6-Oct	13-Oct	20-Oct	27-Oct	3-Nov	10-Nov	17-Nov	24-Nov	1-Dec	8-Dec	15-Dec	22-Dec
DMPs*	112	204	190	205	215	146	108	76	68	31	82	70	74	118	167	125	100
Ankeny	0	0	102	65	65	47	58	45	34	25	33	48	40	39	70	60	56
Waukee	0	0	41	43	43	35	32	36	20	49	64	90	105	63	65	48	36
WDM	52	42	35	39	39	24	24	11	18	25	53	51	45	45	69	46	34
Johnston	0	0	18	33	33	25	16	16	17	15	19	24	6	14	24	20	24
SE Polk	0	0	113	33	33	38	28	12	13	8	9	16	22	29	37	20	12
Urbandale	0	0	15	8	8	21	12	5	5	5	4	13	17	12	15	7	11
Total	164	246	514	426	436	336	278	201	175	158	264	312	309	320	447	326	273
Polk Weekly Cases	1751	2009	2158	1885	1633	1368	1192	1137	1032	999	1164	1370	1511	1621	2039	2462	
Polk County Weekly Case Rate	357	410	440	385	333	279	243	232	211	204	238	280	308	331	416	502	



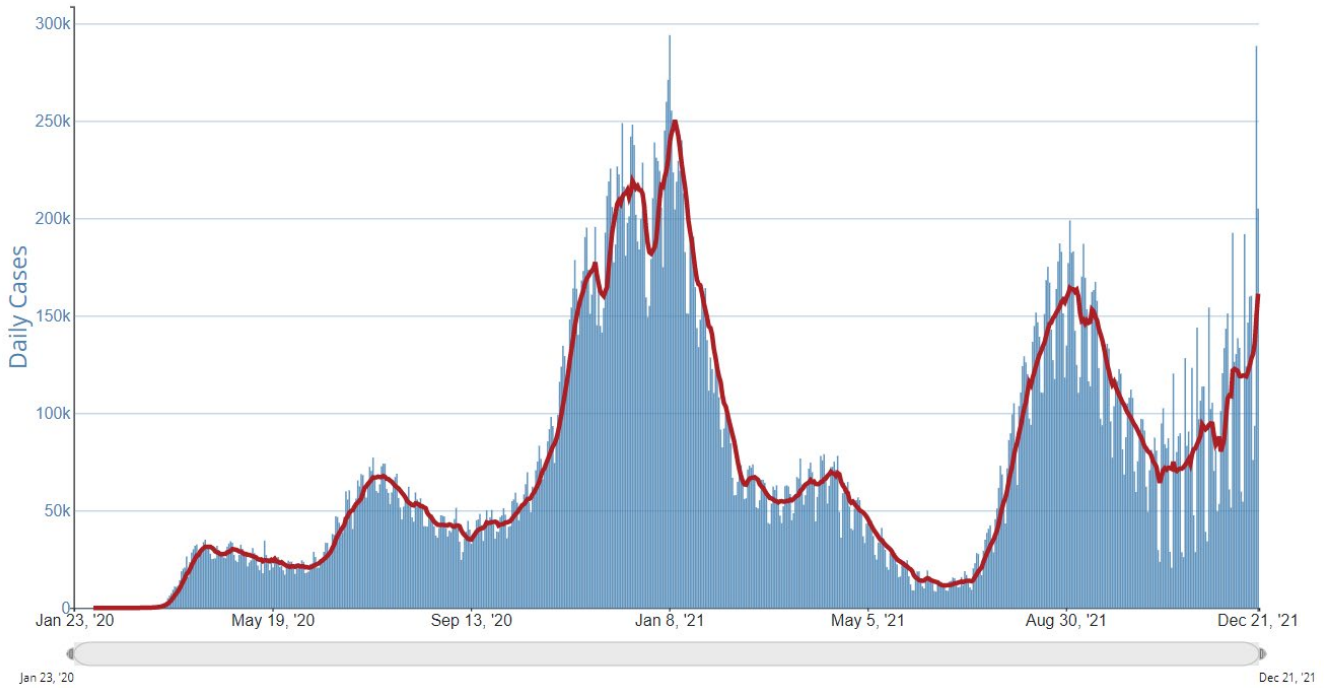
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Daily Trends in Number of COVID-19 Cases in The United States Reported to CDC



	CASES DAILY AVG.	PER 100,000	14-DAY CHANGE	HOSPITALIZED DAILY AVG.	PER 100,000	14-DAY CHANGE	DEATHS DAILY AVG.	PER 100,000	FULLY VACCINATED
United States	154,555	47	+27%	69,209	21	+13%	1,351.0	0.41	62%
Northern Mariana Islands ›	80	149	+57%	—	—	—	0.3	0.53	72%
Washington, D.C. ›	942	134	+440%	189	27	+66%	0.8	0.11	67%
Rhode Island ›	1,254	118	+40%	269	25	+49%	4.4	0.42	76%
New York ›	19,420	100	+102%	4,530	23	+23%	61.9	0.32	71%
New Hampshire ›	1,196	88	-5%	461	34	+9%	8.3	0.61	66%
Ohio ›	10,110	86	+32%	5,143	44	+15%	97.6	0.83	55%
Illinois ›	10,578	83	+45%	3,724	29	+35%	59.4	0.47	64%
Massachusetts ›	5,740	83	+22%	1,263	18	+32%	28.9	0.42	74%
New Jersey ›	7,170	81	+86%	1,981	22	+58%	21.3	0.24	70%
Delaware ›	739	76	+30%	381	39	+29%	3.4	0.35	64%