Report #99a: Covid-19 in Ohio

Saturday 18-Dec-2021 Ernest Lippert

| Goal is 70% | % Vac | ccinated 18- | Dec-21 | | Ohio Con Cases per 10 | | |
|--------------------------|-------|-----------------|--------|--------|--------------------------|-------------|------------|
| | Ohio | Lucas | Wood | | 02-Dec-2 | 1 through 1 | 5-Dec-21 |
| Started | 59.11 | 57.70 | 61.51 | | Ohio | Lucas | Wood |
| Completed | 54.47 | 53.18 | 57.73 | СТ | 783.2 | 623.8 | 668.9 |
| My Prediction for 70% | 10-/ | aug-22± 1 month | | Status | ↑ DANGER | ↓ Worse | ↓ Worse |

[↑] means that the data shown is worse than last week's prediction.

 $[\]downarrow$ or \Rightarrow means that the date shown is better or the same as last week's prediction. These are favorable.

| | % Va | ccinated 1 | 1-Dec-21 | | Ohio Community Transmission | | | |
|---------------|-------|------------------|----------|----|-----------------------------|--------------------------|-------------|--|
| | Ohio | Lucas | Wood | | 25-Nov | 25-Nov through 08-Dec-21 | | |
| Started | 58.68 | 57.27 | 61.17 | | Ohio | Lucas | Wood | |
| Completed | 53.97 | 52.63 | 57.10 | СТ | 718.5 647.6 | | 775.9 | |
| My Prediction | 07- | -Jun-22 ± 1 个 | . month | | 个 Worse | 个 Worse | 个 DANGER | |

| My Descriptions of Community Transmission (CT): Cases/100,000 | | | | | | | | |
|---|--|--|--|--|--|--|--|--|
| CT Range 0-50 51-100 101-250 250-500 501-750 751-100 | | | | | | | | |
| Descriptions Good Caution Poor Bad Worse DANGER | | | | | | | | |

▶ I define Ohio Community Transmission as the number of Cases per 100,000 Residents over 2 Weeks as referenced in Footnote 1 and with the Descriptions designated in the table above.

Ohio Community Transmission, as defined here, is specific to Ohio.

Please mask when outside your immediate group and follow the 7 Rules.

Promote vaccination.

The cases are again on the rise and the vaccinations must be increased.

Note the new format denoted by an a in the number. Some of the narrative is omitted.

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The bad news:

Look at Figure 8. This is probably the most important Figure for Ohio. It shows that the number of Ohio cases is again increasing and clearly shows the important of vaccination.

I still predict that periodic re-vaccinations will be required for our protection against the variants waiting to appear. Vaccinations impede the mutation of the virus because our enhanced immune system is able to fight off the attacking virus before it has a chance to multiply.

The new Omicron variant is here. It is not yet fully understood. Because of its large number (50 has been reported) of mutations, it has caused a heightened degree of concern among public health officials and governments. Natural anti-bodies and those created by the vaccines seem to be effective towards the Omicron variant. It is apparently more transmissible but seems to be less virulent than its earlier variants.

In my opinion, we relaxed the necessary precautions too quickly. The observation is: vaccinations have slowed, public health restrictions have been relaxed, and the number of cases has gone up. I'll leave it to the reader to figure out how we could decrease the number of cases, minimize the adverse economic and social impact, and mitigate any unintended consequences. Let me know if you have a viable solution.

BENEFITS OF VACCINATION OUTWEIGH THE RISKS

- ► The SARS-CoV-2 virus is not something to take lightly and much about it is yet to learned. Remember, even if vaccinated, you could be an asymptomatic carrier of the virus as the result of a Breakthrough infection. Wearing a mask protects others. A mask effectively prevents egress, i.e., your spume from being distributed. Unless you are wearing a specially fitted N-95 (or equivalent) mask, it is not particularly effective in preventing ingress. The bottom line is WEAR A MASK (EVEN IF VACCINATED!), ESPECIALLY WHEN AROUND PEOPLE NOT IN YOUR IMMEDIATE GROUP Protect others and hope they the courtesy to protect you.
- ► Masking, distancing, and vaccination are <u>not</u> political statements; they are public health advisories in line with good citizenship. Why is this distinction not appreciated, especially among the anti-vaxxers? Their judicious use will slow transmission of the virus and will impede the mutation to a new, and perhaps more dangerous variants.

Judy and I have had the Pfizer booster shot – and the flu. We still wear masks around others not in our immediate circle out of respect for them. Once Lucas and Wood counties reach 70% + we will reconsider our position but, for now, we remain overly cautions.

Data Sources

Basic data for this report: https://coronavirus.ohio.gov/wps/portal/gov/covid-19/dashboards

V Project: <u>Home | The V Project - Victory over COVID-19 in Northwest Ohio</u>

Our World in Data: https://ourworldindata.org/

Our World in Data (Figure 7): Coronavirus (COVID-19) Cases - Statistics and Research - Our World in Data

Lucas County: https://lucascountyhealth.com/coronavirusupdates/

Wood County: https://woodcountyhealth.org/

CDC: https://cdc.gov

Mayo Clinic: https://www.mayoclinic.org/coronavirus-covid-19/map

Johns Hopkins University: https://coronavirus.jhu.edu/

Long term effects: COVID-19 (coronavirus): Long-term effects - Mayo Clinic

Vaccine Tracker: Coronavirus United States - live map tracker from Microsoft Bing This an

interesting site

Herd Immunity: https://mayoclinic.org and search for Herd Immunity to find: Herd immunity and COVID-19 (coronavirus): What you need to know. A general search for Herd Immunity will lead you to some U tube videos. Be careful, evaluate them based on your knowledge of the virus. Don't fall prey to mis-information.

► <u>Coronavirus (washingtonpost.com)</u> is an excellent source for data.

Figure 1 - "Dangerous" Prediction for Herd Immunity

Dangerous Prediction: Cubic B-Spline fit of Ohio vaccination data.

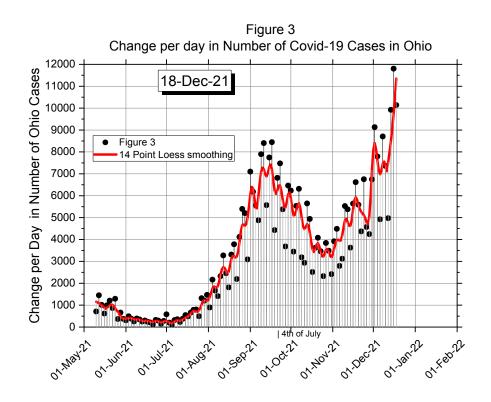
Herd immunity begins when extrapolated line intersects 70% line.

Ellipse shows ± 1 month error range



Note the slight upturn near the end of the black line. This is encouraging. The prediction for herd immunity has been fairly steady, mid-year 2022. We must improve the vaccination rate to prevent more variants from evolving. The next one may be highly transmissible, highly virulent, and not susceptible to the current vaccines. Omicron has been a benevolent warning. Figure 2, an intermediate calculation, is not shown

Figure 3 - Change per Day, Number of Cases in Ohio



80% or so of the hospitalized cases are unvaccinated.

It is true that even if vaccinated, you can catch a breakthrough infection. Although it usually does not require hospitalization.

It is known that primary Covid-19 can cause Long Covid with various problems which linger after recovery. We have not had enough experience to know how much of a problem Long Covid will cause among those who suffered a breakthrough infection.

Figure 5 – Lucas County Average Change in New Cases

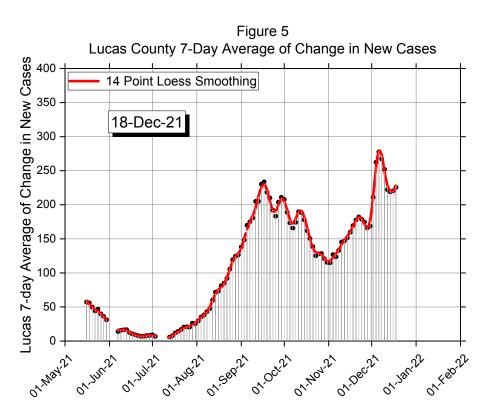


Figure 6 - Wood County Average Change in New Cases

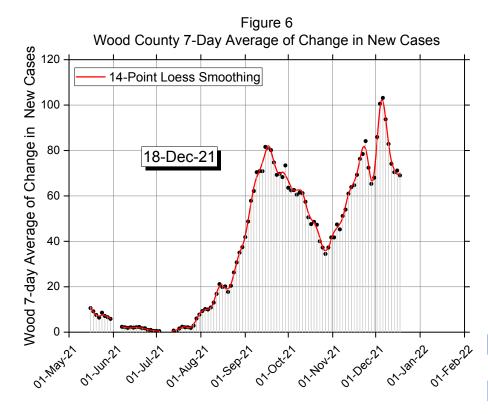


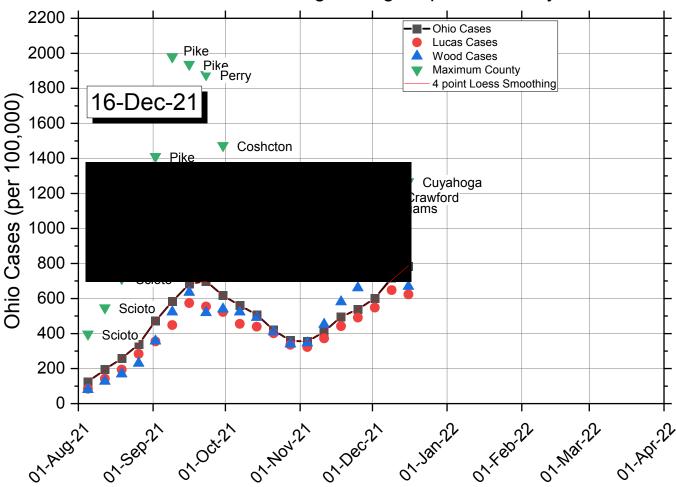
Figure 8 – Cases per 100,000 -

Selected Ohio Counties

Figure 8 is perhaps the most important of all the Figures. It shown the number of Covid-19 cases per 100,000 population for Ohio as well as for Lucas and Wood Counties. Also shown are the counties that have/had the highest number of cases per 100,000. Williams county has been replaced this week by Crawford County, now in first place. The top grey line is based on the bi-weekly high-score counties shown. These numbers do not change with the reporting period. For instance, Pike County was near 2,000 cases per 100K in Early September. It is now at 554.5 but this value is not plotted; Crawford County currently has the highest score at 1,183.3. Compared with previous weeks, the curve is beginning to flatten out because of the recent high cases for Williams, Crawford, and Cuyahoga Counties. Note that this data is reported weekly and displays a 2-week running average. Cases are again on the increase since the beginning of November. Ohio, Lucas, and Wood cases have surpassed their peak values of mid-September, not a welcome sign.

It is instructive to point out that the counties with a high number of cases per 100,000 also have low vaccination percentages. The exception is Cuyahoga County with 1,267.3 cases/100K and 59.22% fully vaccinated. Table 1 shows the percent fully vaccinated by County and State.

Figure 8
Covid-19 Cases per 100,000
2-week running average reported weekly



The relationship shown in Table 1 between the high metrics and the % Fully Vaccinated is obvious. Masking and vaccination **ARE** important tools to fight the SARS-CoV-2 virus. Don't believe contrary information you may hear on radio, TV, or social media sites.

You know how a respiratory virus is spread, how it attacks your cells, and how best to protect against it. An important consideration is how do we ensure protection and, at the same time, maintain a robust economy?

Table 1

| | % Fully Vaccinated | | | | | | |
|--|------------------------------|--------------------------------|------------------|--|--|--|--|
| County | 09-Dec-21 | 16-Dec-21 | Change | | | | |
| Van Wert | 39.92 | 40.15 | 0.23 | | | | |
| Guernsey | 41.14 | 41.39 | 0.25 | | | | |
| Coshocton | 36.60 | 36.85 | 0.25 | | | | |
| Scioto | 44.25 | 44.59 | 0.24 | | | | |
| Highland | 34.75 | 35.03 | 0.28 | | | | |
| Pike | 40.64 | 40.93 | 0.29 | | | | |
| Perry | 38.07 | 38.43 | 0.36 | | | | |
| Defiance | 45.47 | 45.88 | 0.41 | | | | |
| Williams | 41.14 | 41.43 | 0.29 | | | | |
| Crawford | 42.10 | 42.40 | 0.30 | | | | |
| Cuyahoga | - | 59.22* | - | | | | |
| Lucas | 52.45 | 53.06 | 0.61 | | | | |
| Wood | 56.91 | 57.64 | 0.73 | | | | |
| Ohio | 53.77 | 54.64 | 0.87 | | | | |
| | | *Highest: 1,267.3/100K | | | | | |
| Note that in | Figure 8, Lucas County h | as the lowest number of ca | ases per 100,000 | | | | |
| | Data | a for Table 1 | | | | | |
| COVID-19 Vaccination Dashboard COVID-19 (ohio.gov) | | | | | | | |
| | Data | for Figure 8 | | | | | |
| Archived St | catewide and County Case Rat | es per 100,000 Residents COV | ID-19 (ohio.gov) | | | | |

Figure 9 - Covid-19 Confirmed Daily Cases in the World

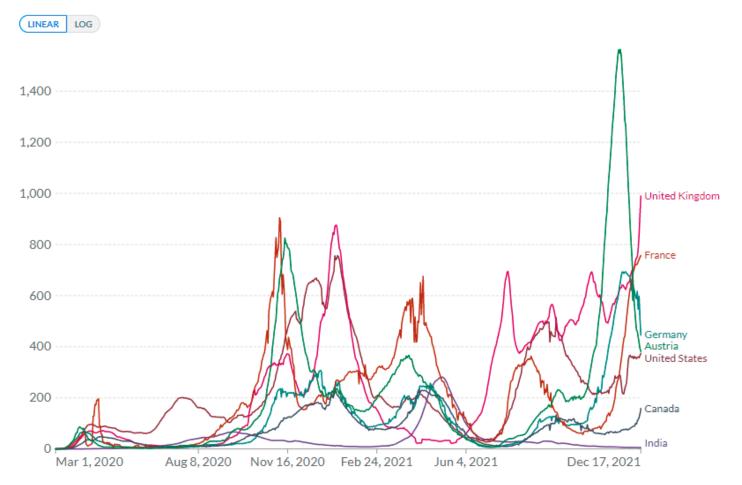
Austria hit a peak in cases on November 24th. A strict lockdown was enforced with amazing results. The sharp increase for the United Kingdom is worrisome. The United States is edging up.

(Coronavirus (COVID-19) Cases - Statistics and Research - Our World in Data).

Daily new confirmed COVID-19 cases per million people

7-day rolling average. Due to limited testing, the number of confirmed cases is lower than the true number of infections.





Distribution of Variants

This Table show the approximate distribution of the SARS-CoV-2 sequences by variant, 13-Dec-21 found in Covid-19 illnesses. The share of analyzed sequences in the preceding two weeks that correspond to each variant group is expressed as a percentage. This share may not reflect the complete breakdown of cases since only a fraction of all cases are sequenced.

% by Variant Name

| | Delta | Alpha | Eta | lota | Beta | Epsilon | Gamma | Карра | Unnamed | Lambda | Mu | Omicron |
|---------------|-------|-------|-----|------|------|---------|-------|-------|---------|--------|-----|---------|
| United States | 98.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 1.0 |
| UK | 97.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.4 |
| Canada | 89.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.6 | 0.0 | 0.0 | 9.6 |

Comments

7-Rules of Preservation

Remember, we must all respect one another¹. Hopefully, businesses will realize the seriousness of the situation and will require, or very strongly request, that their employees and customers wear masks. In many places the 6-foot markers are on the floors. Nationwide, businesses should strongly support the wearing of masks – to their credit, many are.

Has the appearance of the Omicron variant shaken people up a bit? I hope so! Vaccinations are up a bit but not like it was initially. See Figure 1. Remember, this is a new virus and is poorly understood. It mutates easily and may outrun the protection afforded by the current vaccine technology. The best strategy is immediate widespread vaccination, thus slowing the transmission and the chance of further mutation. Otherwise, we may face a second pandemic for which we are not prepared, financially nor emotionally.

Like so many of the adversities of life, prevention should be the first choice to avoid them. There are many examples of the fact that remediation through the courts often will have many unintended consequences.

Our current society makes "require" or alternatively, mandates, potentially dangerous. We must change this attitude. In my opinion, mandating was an unfortunate choice made for political expediency without an adequate understanding of the consequences. You can lead a horse to water, but you can't make it drink. I suggest the current impasse is an example of how important "love thy neighbor" really is to society. As a world, we need to develop respect.

Read or listen carefully to the news media and be very wary of social media. This is a good time to critically question what you hear and read. Evaluate the source. Consider the facts. If it doesn't strike you as reasonable based your knowledge and experience, it probably isn't. Outlandish claims usually are.

7 Rules of Preservation

- 1. ©Properly wear a mask to protect others from the spume emitted from your mouth and nose while talking, singing, shouting, coughing, or sneezing^{2, 2}. Wearing a mask provides you with some protection against other peoples' spume. Please wear your mask, especially if you are around strangers or friends and family not in your immediate circle.
- 2. ©Practice social distancing (a minimum of 6 feet).
- 3. ©Practice personal and environmental hygiene.
- 4.

 Avoid congregate and crowded places.
- 5. ©Outdoors is better than indoors. If you are inclined to inside dining, restaurants with high ceilings, good ventilation, and few people (possibly midafternoon) are preferred.
- 6. ©Support those businesses/establishments that support/require masks and follow best practices.
- 7.

 Get your vaccinations including any necessary boosters and encourage others to do so.

Disturbing Data from Denmark

This just arrived from the Washington Post. I examine it in more depth for next week's report.

As world grapples with omicron variant, highly vaccinated Denmark offers chilling data on soaring cases

Denmark keeps very close tabs on the coronavirus with a government institute devoted to testing, surveillance and modeling. Vaccine rates also are high and boosters are available. Yet nothing is stopping the omicron variant, according to experts, in a cautionary tale for similar countries. Omicron positives are doubling nearly every two days.

Just couldn't let this one pass!

This millipede has leg up on other creatures

² Whether a person wears a mask or not depends upon their feeling of responsibility towards others. Masks impede the distribution of one's spume that possibly contains the virus. By wearing a mask, you are protecting others.

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Scientists have identified a new species of millipede and at least one specimen sports more legs than any other species on Earth. Eumilipes persephone, which was found in a mine in Australia, has more than 1,300 appendages on its long, thin eyeless body, according to findings detailed in Scientific Reports.

Full Story: Gizmodo (12/16)