

Commentary...

Intricately interwoven: Deschutes County's COVID-19 analysis

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Columnist

Out of the turbulent 1970s, came this saying: "Think globally. Act locally."

In early 2020, very few people in the world had heard of China's Wuhan City, a population of over 11 million people. There, the first recorded COVID-19 case was in December 2019. Scientific evidence indicates COVID-19 has a natural animal origin, likely contracted from bats. According to a July 29 British Broadcasting Corporation (BBC) article, "Research suggests one of the closest known ancestors of the virus that causes COVID-19 emerged in bats more than 40 years ago."

Since then, infected people include the most powerful, rich, and "medically protected" people in the world. We, however, fight this virus mostly on an individual and/or familial basis.

This paints the bigger picture — events occurring decades ago, as well as in a place thousands of miles away from our Central Oregon communities. Also, we can see the impact of COVID-19 on each continent throughout 2020.

Behaviors and actions — taken and/or untaken — have immediate, as well as long-term, catastrophic consequences. Moreover, these four simple words "think globally — act locally" have an immense, potential impact on reducing the number of COVID-19 cases.

In my *Nugget* article on September 29, I described two important statistical measures, mean (average) and standard deviation. Using those statistical values, we create meaningful charts. These charts and rules help us visualize and understand future process behavior.

This table shows statistically proven guidelines to interpret COVID-19 process behavior.

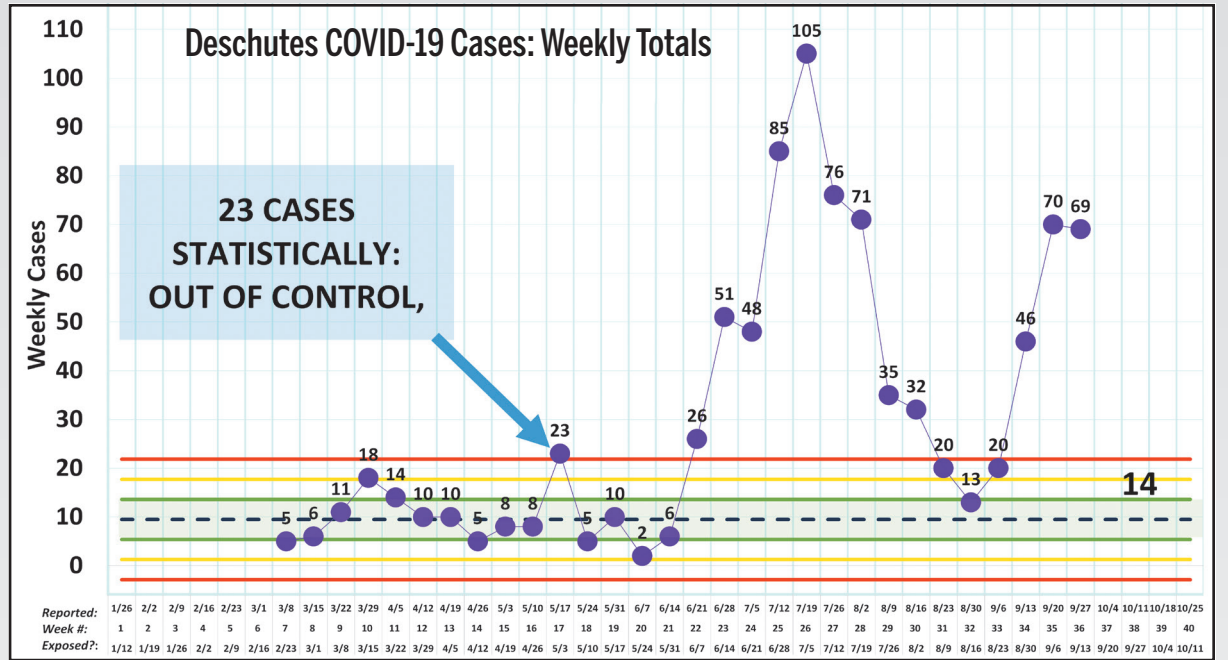
Where Data Points (Dots) Fall In Zones

| Zone | Possibility that Process is Unstable, Unpredictable | Needed # of Points to Determine Unstable, Unpredictable | Mean (Average) + Standard Deviation |
|--------|---|---|-------------------------------------|
| Green | Very low | Not Applicable | ±1 |
| Yellow | Likely/Possible | 2 Consecutive Points | ±2 |
| Red | Definitely | 1 Point | ±3 |

With these above rules, we can better analyze the number of reported COVID-19 cases in Deschutes County. <https://www.deschutes.org/health/page/covid-19-novel-coronavirus>

Data listed in the left-hand column is by week, Sunday through Saturday, with the corresponding number of cases. Deschutes' first cases (5) were reported during the week of March 3-14. Through October 3, 906 countywide cases — with 25 reported in Sisters.

Establishing process-behavior information in



a relatively stable "Stay At Home" period, March 8-May 16, the weekly case average was 9.5 per week. This is true even when using the 18 reported cases for the March 29-April 4 week.

Twenty-three cases on May 17-23 exceeded the statistically established red zone. This harbinger indicated process inconsistency and unpredictability. (While the specific cause is unclear, perhaps the influx of tourists was a factor?) Of course, this heralded dramatic increases and fluctuations starting the week of June 21-27.

Importantly, the analysis shows that if the weekly cases reach 14 cases per week, then "this turns the tide." That is using the "Stay At Home" cases per week average (9.5) with one standard deviation (4.1). The past six weeks averaged 40 cases per week.

Governor Brown reopened 31 of 36 counties on June 5. About two weeks subsequent started the marked Deschutes County rise. Also, the delayed decline in cases per Oregon's stringent mask/enhanced safety measures implemented on July 1.

(It is noted that populous Multnomah County, about 150 miles away, has a humongous impact on the overall Oregon number of cases.)

The September 29 Oregon COVID-19 article established a "turning the corner" cases per week

at 437 throughout Oregon. Again, Deschutes County seems to be 14.

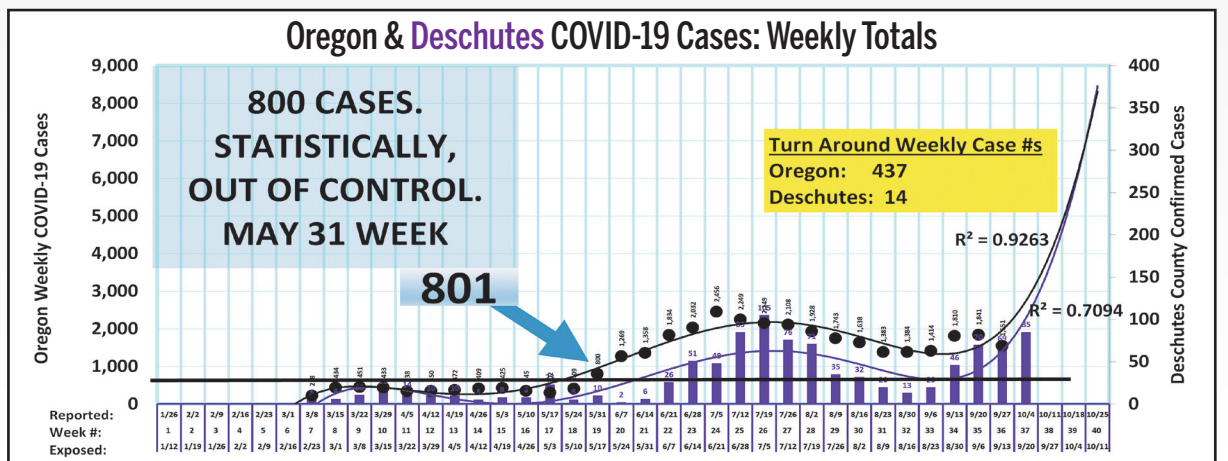
Importantly, the "bendy" lines in the chart below are computer-generated regression lines. In this case, each line correlates the number of cases over time. Then, determines a numeric value, the R-Squared (R²). Regression values range from 0 to 1 ("perfect"); the higher number, the stronger correlation. In business applications, .5 is considered "good." Oregon's correlation is extremely high (.94) with Deschutes strong (.71).

Of high concern is the dramatic, upward tail of each line after the last recorded weeks (far right). This indicates more reported COVID-19 cases in the near future. Recent news agencies throughout the world, the United States, and Oregon are communicating this now.

Modifying John Donne's 1624 poem, "No person is an Island, entire of itself; every is a piece of the Continent, a part of the main." We are intricately interwoven.

Activities throughout the globe impact our lives now and in the future — sometimes tragically. With process understanding, prudent actions/policies, and personal adherence, we hope to reduce COVID-19 cases everywhere.

Send comments to DataDaveOR@gmail.com.



Sheriff's office launches 'health of the force' initiative

In 2019, 228 law enforcement officers in the United States took their own lives. The profession of law enforcement is one of the most potentially dangerous and traumatizing careers in the country.

Deputies are exposed daily to events and incidents of tragedy. They work 12-hour shifts, both days and nights, which often involve overtime. They are expected to function at a high level of awareness and self-control regardless of the crisis and trauma they are called to respond to to ensure public safety. These and other factors generate stressors that can, in time, become detrimental to an officer's physical and mental health.

"Wellness programs for law enforcement personnel are showing up all over the country, guided by the expertise of psychologists, researchers, physicians, fitness trainers, and spiritual leaders of all stripes," said Dr. Kris Falco, psychologist, Police Services.

"These programs are showing significant promise in the reduction of officer-reported stress, improved job performance and satisfaction, and more effective

decision making abilities under stress."

For a few years now, the Deschutes County Sheriff's Office has been doing research in the field of law enforcement officer wellness for retention of personnel and expansion of services.

"Given recent events, we acknowledge the necessity and urgency to launch the new Health of the Force Initiative (HOFI)," said Sergeant Jayson Janes in a press release announcing the initiative. "This 21st Century program, supported in part by grants, will not only enrich our current peer support program, but enhance the current partnership we have in place with the Central Oregon Public Safety Chaplaincy (COPC)."

The Health of the Force Initiative institutes a voucher system for "no questions asked" behavioral health counseling. Ten local providers have been established so that deputy sheriffs will have timely opportunities to seek help for themselves and their immediate families.

The program is also scheduled to have cardiac

scans for those who want to participate in individual sleep studies to determine their quality of sleep.

"We are providing yoga and chair massage to on-duty deputies and promoting mindfulness training. These are holistic practices shown to successfully relieve and reduce stress," Sgt. Janes reported. "In developing the Initiative we partnered closely with the Bend Police Department whose officer wellness program received high marks in the 2019 U.S. Department of Justice Law Enforcement Mental Health and Wellness study

The program will also eventually provide gym and training space.

The Sheriff's Office received a grant of over \$111,000 to be used for the DCSO peer support program. The peer-support program provides public-safety employees an opportunity to receive physical, psychological, and emotional support through times of personal or professional crisis. This money will be used to provide training and technology to members of the peer support team as well as therapy referrals.