

U.S. | THE NUMBERS

Why Doesn't Flu Tank Economy Like Covid-19?

Comparisons between two diseases--based on infections and deaths--missed range of differences



State National Guard soldiers loaded meals in Irving, Texas, on Thursday.

PHOTO: TONY GUTIERREZ/AP



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As one state after another issued economy-wrecking stay-at-home orders to counter the spread of the new coronavirus, skeptics asked a confounding question: Millions of Americans get the flu each year, and tens of thousands die from it. Why doesn't the flu cause a shutdown?

According to the Centers for Disease Control and Prevention, up to 55 million Americans got the flu this season, and as many as 63,000 died.

In comparison, more than 450,000 have been diagnosed with Covid-19, according to Johns Hopkins University, and more than 16,000 have died.

But the numbers don't tell the whole story.

For starters, the flu tallies are estimates of total flu burden, while the Covid-19 figures are confirmed cases only. Eventually, the CDC will estimate the total Covid-19 burden, but for now, the numbers are not an apples-to-apples comparison.

"We always know confirmed cases are an underestimate," said Lynnette Brammer, who leads the CDC's domestic influenza-surveillance team.

In addition, Covid-19 differs from the flu in how quickly it spreads, the length and severity of the illness, and the unusual demands a contagion with no cure places on

medical staff and facilities.

Instead of gentle waves of cases cascading across the country over a span of six months, like the flu, a tidal wave of Covid-19 cases has swept over a handful of cities in half the time. The concentration of quickly amassing serious infections overwhelmed the affected areas, and the fear is that without social distancing—for now the only effective intervention—other places will have a similar experience.

A snapshot of the 2009 H1N1 influenza pandemic shows the difference in the speed of transmission between a raging flu and the new coronavirus. Comparing only laboratory-confirmed cases, in the first 102 days of the H1N1 flu pandemic, the CDC reported 43,677 illnesses and 302 deaths. In 22 fewer days, Covid-19 infected nine times more people and killed 42 times as many.

“The flu season is spread out,” said William Schaffner, an infectious-disease specialist at Vanderbilt University Medical Center in Nashville. “This is being jammed up in a short time frame.”

Covid-19 outbreaks have also been highly localized.

“You’ve got a hot-spot pattern instead of an even pattern,” said Emily Martin, an epidemiologist at the University of Michigan School of Public Health. “All the pressure is concentrated in small areas.”



First responders carry a patient in New York, a coronavirus hot spot, on April 7.

PHOTO: KENA BETANCUR/GETTY IMAGES

New York, the state that has been hardest hit, surpassed 160,000 confirmed cases on Thursday, according to Johns Hopkins, accounting for about 37% of U.S. illnesses and 44% of deaths.

With too few beds and not enough staff to respond to the influx, the state resorted to converting hotels, a convention center and a tennis arena into temporary hospitals and called on retired doctors and nurses to return to work. This kind of onslaught doesn’t happen with the flu.

Other regions of the country are bracing for a similar deluge.

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Last week, the University of Michigan Medical Center saw its number of Covid-19 inpatients climb to 166. In the coming week, it expects to have 300 to 350 coronavirus-positive patients in the hospital. The center, which has a total of 550 adult beds, typically admits 250 to 300 flu patients over the entire season.

“Usually, a hospital is a bunch of medical patients, surgery patients and cancer patients—it’s a mix,” said Adam Lauring, an associate professor of microbiology and immunology at the university. “We anticipate the hospital will be taken over by Covid-19 and medical patients.”

Not only are more Covid-19 patients coming into hospitals, they require longer care.

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The median length of stay for adults hospitalized with seasonal flu is 3.6 days, according to research published in the journal *Clinical Infectious Diseases*.

In nine Seattle-area hospitals,

where 12 of 24 Covid-19 patients died through March 23, the median stay was 12 days in the hospital, 9 days in ICU and 10 days on mechanical ventilators. (The median for survivors was 17 days in the hospital, 14 in ICU and 11 on a ventilator.)

“Approximately 20% of Covid-19 patients have needed supplemental oxygen,” said Frederick G. Hayden, an infectious-disease expert at the University of Virginia. “Of those, about one-quarter go on to require intensive-care support for critical illness. Once they are on mechanical ventilation in the ICU, it’s often a protracted stay.”

Having a hospital full of highly contagious patients leads to diminished stores of equipment intended to protect staff members who are also at risk of infection.

The University of Michigan Medical Center now requires everyone to wear a mask. Additionally, anyone caring for patients who have or are suspected of having Covid-19 must wear a gown and eye protection.

During flu season, the center uses “droplet protection” only in some rooms, and there is no universal masking requirement.

“It’s a different world,” Dr. Lauring said.

SHARE YOUR THOUGHTS

How are you being affected by Covid-19 and social distancing aimed at curbing its spread? Join the conversation below.

Most people have some immunity to the flu, either from vaccines or previous exposure, and nearly all health-care workers are protected by the flu shot.

“It’s not unusual to have compliance rates above 95%,” Vanderbilt’s Dr. Schaffner said, referring to vaccinations of hospital employees. “That’s everybody—doctors, nurses, dietitians, people who clean at night—everybody.”

Currently, there is no vaccine or specific treatment for Covid-19, so slowing or stopping its spread has required social distancing.

But there is one quality that might make Covid-19 less problematic than flu.

“It’s not changing and mutating at the rate the flu can do,” said Allison Weinmann, an infectious-disease physician at Henry Ford Health System in Detroit.

That could make it easier for pharmaceutical companies to develop an effective vaccine—and render Covid-19 no more remarkable than the seasonal flu.

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