

Why everything is closing for coronavirus: It's called "flattening the curve"

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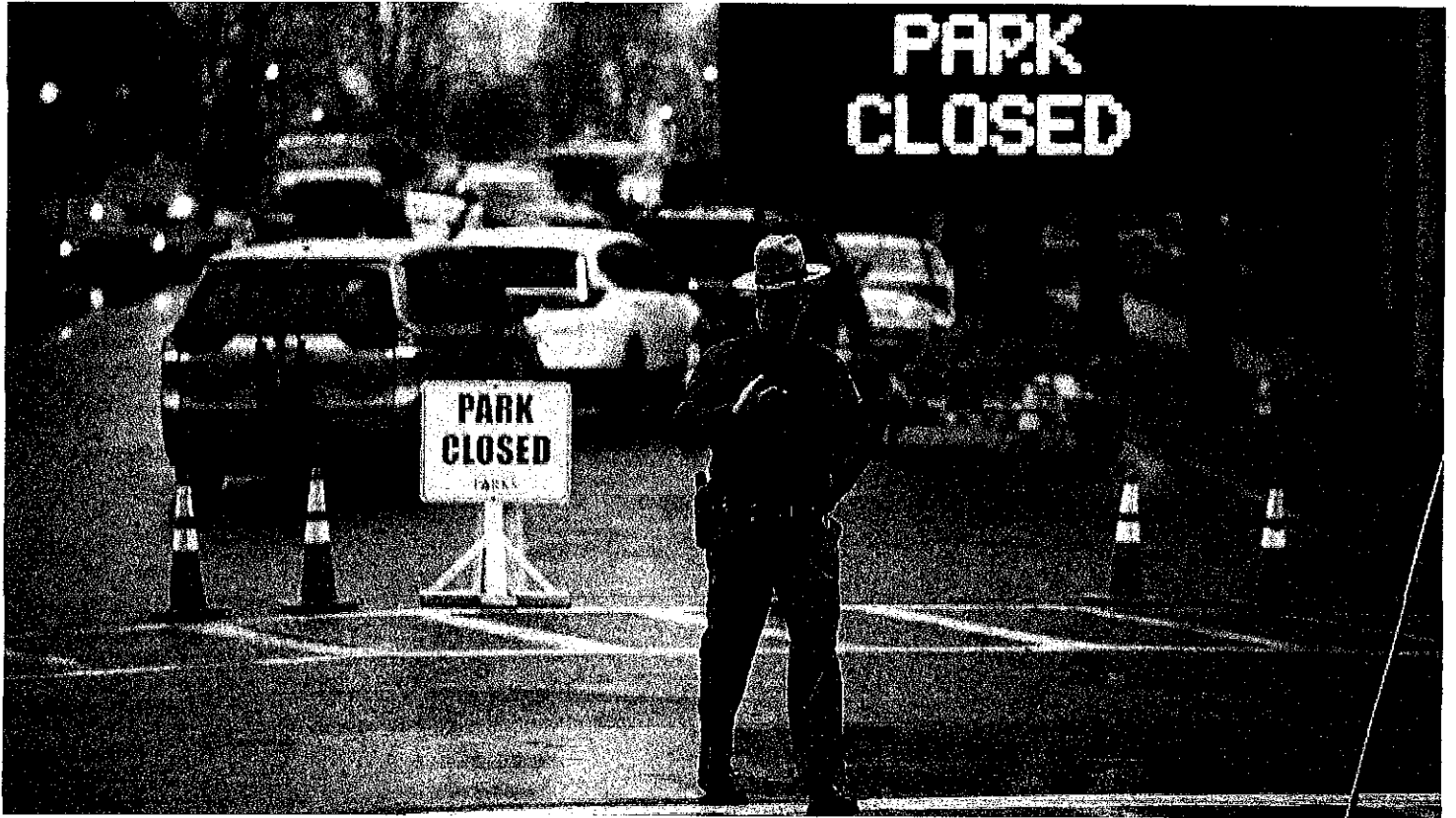


Image 1. Authorities control a line of motorists waiting to be tested for coronavirus at Glen Island Park in New Rochelle, New York, March 13, 2020. Closing areas such as parks is an essential part of the social distancing needed to slow the COVID-19 outbreak. Photo: John Minchillo/AP Photo

South by Southwest (SXSW) is a huge music/film/tech/education festival that brings hundreds of thousands of visitors to Austin, Texas, every March. When organizers canceled the festival it was only a matter of time before the other dominoes began falling.

As of March 13, many sports leagues have suspended their seasons. The National Basketball Association (NBA), National Hockey League (NHL) and Major League Soccer have suspended play. Major League Baseball (MLB) has pushed back the season start. The National Collegiate Athletic Association (NCAA) canceled March Madness. Several universities have canceled spring football games, the Professional Golfers' Association (PGA) Tour canceled the Players Championship and the future of the 2020 Summer Olympics is in doubt. And that's just sports.

From Schools And Festivals To Trade Shows And Broadway

School districts from Seattle, Washington, to Baltimore, Maryland —including the entire states of Maryland, Michigan and Ohio — have closed schools. And more than 100 colleges and universities have canceled all in-person classes and moved online. The huge music festival Coachella has been postponed, along with a long list of concerts and music tours, the video game industry's largest trade show and all Broadway shows through April 12. Movie theaters may be next.

Even Walt Disney World and Disneyland — in fact, all Disney parks — have closed their gates. For Disneyland, it's only the park's third closure in its history, following U.S. President John F. Kennedy's assassination and 9/11. Terrorist attacks on September 11, 2001, hit the Twin Towers in New York and the Pentagon in Washington, D.C.

Economic Implications

The economic implications of all these closures are incalculably high. SXSW getting canceled means a loss of more than \$350 million, including thousands of low-income workers' lost tips and wages. And that won't hold a candle to the losses from professional sports and theme park cancellations. So the decision to suspend seasons, cancel events and close up shop are not being made lightly.

And yet ... there have only been about 1,660 cases of COVID-19 (short for coronavirus disease 2019) diagnosed, and fewer than 50 deaths in the United States. The coronavirus is a flu-like illness that began in China and has been spreading across the globe since December 2019.

As you've probably heard too many times by now, every year the flu sickens millions — nearly 50 million this year — and kills tens of thousands, perhaps as many as 52,000 this season alone.

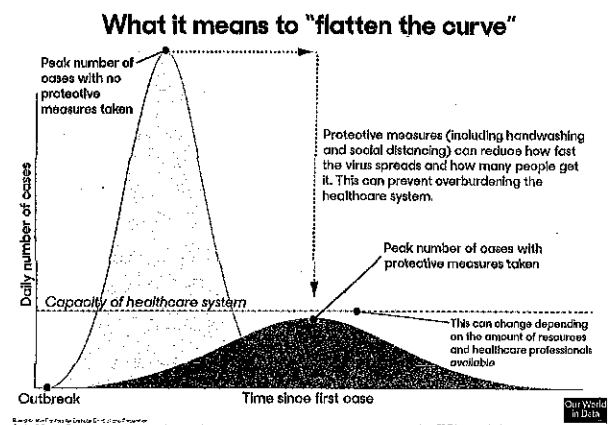
What gives? Why so many extraordinary cancellations for the coronavirus, whose costs will tally into the billions, for so few cases?

Preventing A Surge Through Mass Closings

There's a good reason to "cancel everything." All these decisions by public officials and businesses are aimed at one goal: slowing down the spread of the virus to avoid overburdening a health care system that doesn't have the infrastructure to handle a sudden surge of tens of thousands of cases at once. Without mass closings, that surge is exactly what will happen, just as it has in Italy.

It's called "flattening the curve." And that's exactly what it is when you see it visually.

Epidemiologists study diseases and how they spread. They can somewhat predict how many cases of a disease are going to occur based on how the disease is behaving. Continuing business-as-usual allows cases to escalate rapidly in just a few weeks, spiking so high at once that they completely overwhelm hospitals. In such a scenario — such as Italy is facing now — more deaths are likely because there simply aren't enough hospital beds, enough face masks, enough IV bags, even enough healthy doctors and nurses to care for everyone at once.



Avoid Exceeding Capacity Of Health Care System

However, if that same number of cases can be stretched out over months, never quite exceeding the health care system's capacity, then people will get the care they need, more health care providers can avoid illness and burnout, and fewer people are likely to die — as South Korea has shown.

But are we really headed for that many cases?

Yes.

As former Food and Drug Administration (FDA) commissioner Scott Gottlieb explained in a recent interview, the novel coronavirus — just declared a pandemic by the World Health Organization — is beyond containment. If it's not already in your community, it's coming soon. The only reason total U.S. cases aren't already skyrocketing is that coronavirus testing has been such a mess that too few people — just 77 by the Centers for Disease Control and Prevention (CDC) in the whole week of March 8 — are being tested. You can't count cases you haven't identified yet.

But every indication is that the United States is on track to see the same exponential increase other countries are seeing, as scientist Mark Handley has been tracking on Twitter.

Meanwhile, as Aaron Carroll pointed out in the *New York Times* on March 12, the United States has only about 2.8 hospital beds per 1,000 people — less than the 3.2 in Italy and 4.3 in China. South Korea outperforms everyone with 12.3 hospital beds per 1,000 people. And that's total hospital beds, not the ones reserved for the sickest patients.

"It's estimated that we have about 45,000 intensive care unit beds in the United States," Carroll writes. "In a moderate outbreak, about 200,000 Americans would need one."

So what do we do to avert disaster? We have to flatten the curve. Fortunately, people are listening and the idea has caught on so well among armchair epidemiologists that the #flatteningthecurve and #FlattenTheCurve hashtags have trended several times on Twitter in recent days.

Clearly, public officials and businesses are heeding the warnings of public health officials, as evidenced by all the closings and cancellations. But to be effective, ordinary people need to do their part by avoiding as much as possible any crowds and places where large numbers of people congregate, such as movie theaters, malls and events that haven't been canceled.

Quiz

1 Read the following paragraph from the section "Avoid Exceeding Capacity Of Health Care System."

"It's estimated that we have about 45,000 intensive care unit beds in the United States," Carroll writes. "In a moderate outbreak, about 200,000 Americans would need one."

Which of the following can be inferred from this paragraph?

- (A) The majority of Americans personally know someone who has contracted COVID-19.
- (B) The U.S. health care system would be overwhelmed by even a moderate COVID-19 outbreak.
- (C) The majority of Americans do not personally know someone who has contracted COVID-19.
- (D) The U.S. health care system is prepared for a moderate to severe COVID-19 outbreak.

2 Is the author of the article suggesting that people should restrict their everyday activities and social plans? Which selection from the article BEST supports your answer?

- (A) No; "As you've probably heard too many times by now, every year the flu sickens millions — nearly 50 million this year — and kills tens of thousands, perhaps as many as 52,000 this season alone."
- (B) No; "As of March 13, many sports leagues have suspended their seasons. The National Basketball Association (NBA), National Hockey League (NHL) and Major League Soccer have suspended play. Major League Baseball (MLB) has pushed back the season start."
- (C) Yes; "The economic implications of all these closures are incalculably high. SXSW getting canceled means a loss of more than \$350 million, including thousands of low-income workers' lost tips and wages."
- (D) Yes; "But to be effective, ordinary people need to do their part by avoiding as much as possible any crowds and places where large numbers of people congregate, such as movie theaters, malls and events that haven't been canceled."

3 Why did the author begin the article by describing the South by Southwest festival?

- (A) It is likely responsible for much of the current COVID-19 outbreak in the United States.
- (B) It is the first major national event to be canceled due to the coronavirus.
- (C) It is one of the few major national events that has not been canceled due to the coronavirus.
- (D) It is offering half of all its proceeds to COVID-19 relief and prevention efforts.

4 Which of the following statements BEST represents epidemiologists' approach toward the coronavirus outbreak in the article?

- (A) They think that the coronavirus is beyond containment, but that measures can help to reduce the number of people who need treatment at any given time.
- (B) They think that the coronavirus is beyond containment, and that the U.S. health care system will soon be overwhelmed by the number of people who require treatment.
- (C) They think that it is possible to contain the coronavirus, but only if the government and health care providers rapidly expand testing and quarantines.
- (D) They think that it is possible to contain the coronavirus, but that it is unlikely that individuals, organizations and governments will be able to coordinate well enough to do it.