As scenes of how COVID-19 was overwhelming the Italian health-care system were shown on newscasts, they were juxtaposed with images of young people, seemingly oblivious to the pandemic, enjoying spring break in Florida. As they returned home, a pair of location surveillance companies quietly made the news for tracking those same revellers after the party had ended.

"They released this very compelling animation using cellphone data showing these people potentially spreading the coronavirus all over the U.S.,” remembered University of Alberta ethics professor Geoffrey Rockwell. "It was well done, but that would be at the unethical end of surveillance where there's no consent and no knowledge."

The CEO of one of the companies that conducted the surveillance invoked the Peter Parker principle—"with great power comes great responsibility"—when claiming the data would not be used beyond tracking the virus, but Rockwell said such a promise might not be possible.

"It seems pretty clear that certain governments, particularly democratic governments, use crises as a reason to escalate surveillance, and then they forget to turn it off," he said.

Rockwell said a good example came in the aftermath of the attacks on the World Trade Center.

"After 9-11, the U.S. government dramatically changed how it was spying on its own citizens," he said. "All of a sudden we're in a war on terror that will never end and, as long as it doesn't, we're going to have no-fly lists and the NSA spying on everything, and we won't have given consent and we won't know."

**Contact tracing by smartphone**

Now governments are moving ahead with surveillance measures to fight the pandemic. The Alberta government announced the launch of the cellphone contact-tracing app, ABTraceTogether, which Rockwell said is the most ethical option because it requires knowledge and consent of the users.

The problem with being completely ethical is that citizens have to turn it on.

"It's a little bit like vaccines: you won't get herd immunity unless you get a herd," he said.

A similar app has been credited with containing the virus in Singapore. Both apps use Bluetooth to make users aware of whether they have, at some point, come in contact with someone who has contracted COVID-19.

"If I get sick, essentially the software turns around and sends a message to everyone in the queue of data that I'm holding," explained Rockwell. "There is no central repository, so I would say this would probably be the system that would preserve the most privacy."
On the other end of the surveillance spectrum sits South Korea, which Rockwell said mobilized a multitude of data sources in its fight against COVID-19, including cellphones, credit card purchases and even closed-circuit televisions.

"They did contact tracing with a vengeance, which is one reason they flattened the curve so quickly," he said.

However, South Korea's surveillance tactics created a textbook ethical challenge when the warnings the government posted were specific enough that people could be identified.

"People's lives were saved by their aggressive contact tracing, but on the other hand, if I'm infected with a disease, yes, the doctors should know and the health authorities should know, but it shouldn't be something that all my neighbours know."

He added no matter how well intended, "it's almost impossible to anonymize information completely.

"It's one thing to give enough information that people can figure out if they were near someone with COVID-19, but it's quite another when you out people in a way where they can be identified."

**Discriminatory data**

Another looming ethical issue is the temptation for the government to deploy that data in a way that goes beyond the original stated purpose. Rockwell said most health ethicists would say that under certain circumstances it would be ethical to gather and act on information without consent, but only when the use is medically necessary and proportionate to need.

"You don't use this as an excuse to turn on the microphone and start recording every conversation, because that's got nothing to do with the pandemic," said Rockwell.

And while decisions around data usage should only be handled by health-care professionals, rather than politicians or intelligence services, he said even health officials need to be wary about "binning" or organizing data into specific demographics, often by vulnerability.

"It's very tempting when you have a bunch of data to ask, for instance, 'Are Indigenous people contracting the virus more than other populations?' he said. "The hallway that these analytics work in is all about discrimination, although it's discrimination in the positive sense."

While that data has the potential to be helpful, the literature suggests it can be misleading if not checked by subject experts, Rockwell noted.

"You hear all these success stories, but nine times out of 10, what you have is a whole mess of very crude correlations."

Ultimately, the only way to make any surveillance information of this type useful, according to Rockwell, is to start using it to create various forms of quarantine.

If that's the case, it's also important that officials are completely transparent about the endgame and that there is due process in place to hear grievances from those who have been wronged.

"If I get picked up on the street, there needs to be some due process whereby I can say, 'No, I actually have a reason to be on the street, and your information is wrong."

He added there are increments in surveillance data usage that are ethical if it becomes clear that simply knowing where the hotspots are isn't enough to quash the pandemic.

"You need to know before you go for a walk that you could be stopped and fined if you're, for instance, outside of your region," said Rockwell, who added fines are not out of the question.

"Fines are ethical. We use them all the time to manage people—that's what a speeding ticket is."

He added, "Here's the problem: all of sudden police forces have access to a lot of different types of information, and perhaps this is a piece of information the police should not have access to."