

# Track, Trace, and Quarantine: The Role of Mobile Data in Managing the COVID-19 Pandemic

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*Privacy in Focus*®

As the shock wears off in the West over the initial lock downs and stay-at-home orders used to combat the novel coronavirus (COVID-19) pandemic, people are starting to focus on the next question: How does this end? With a vaccine 12-18 months away, at the earliest, it is not feasible to hold the economy in stasis until one is ready for public use. But simply removing the restrictions on movement and lifting requirements for “social distancing” is likely not workable, either.

Policymakers and scientists seem to generally agree that the return to normal life must include leveraging technology to help test, track, and trace hotspots and infections, and imposing targeted quarantines on those who are (or may be) infected. Countries like China and South Korea, among others, are offering a glimpse into a post-pandemic future by deploying these technologies.

The common elements in all of the strategies deployed to date—which appear universally to leverage the near ubiquity of smartphones — include identifying individuals and collecting, storing, tracking, and analyzing data about their health status, movements, and relationships. Implementing some or all of these methods in the United States will raise significant policy questions related to federalism, privacy, and access to telecommunications services, among others.

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## Practice Areas

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## **Tracking Technology Is Already Being Deployed Around the World to Control COVID-19 Spread**

Countries that are further along the curve in terms of COVID-19 infection have deployed a number of solutions to track outbreaks and suppress the spread of the virus, many of which involve leveraging data collected from wireless devices. For instance:

In South Korea, the government is tracking individual people using cell phone location data and using that information to compile public maps of infection zones.

In Israel, the government is taking a similar approach, using cell phone location data both to track the movements of COVID-positive citizens and to identify other individuals who should be placed in quarantine.

In Iran, where the virus appears to be particularly widespread and deadly, millions of individuals have reportedly downloaded an app offered by the government to help combat the virus. Although the app purports to provide users with information about their likelihood of contraction based on their symptoms, the app also shares location data and personal information about the users with the government, ostensibly for tracking purposes.

In China, individuals must use a smartphone app to go outside. The app indicates whether the user is at risk for spreading the virus or is supposed to be in quarantine.

In Taiwan, the government is using cell phone location data to create an “electronic fence” which notifies the government if an infected individual leaves his or her quarantine zone. South Korea is reportedly doing something similar.

So far, we haven’t seen tracking on the individual level or any of these types of systems popping up in the United States. Pandemic-related use of cell phone data has instead occurred only on an aggregate basis, such as to help determine whether people are observing social distancing by measuring the extent to which people are continuing to travel – though even this does not give insight into whether people are maintaining sufficient distance from others while outside, as recommended by the Centers for Disease Control and Prevention (CDC) and World Health Organization (WHO)). The European Union, in which the General Data Protection Regulation limits how data may be used, is similarly looking into whether aggregate location data obtained from cell phone carriers could be used to measure whether movement decreases in areas under quarantine orders and thus verify that such orders are being followed. In addition, a group of European researchers are planning to launch a voluntary contact-tracing app that would trace individual connections between smartphones based on Bluetooth links, rather than GPS location data; in theory, this would allow determining that two individuals had connected with one another, without tracking where that connection occurred.

## **Track and Trace Solutions Raise Important Questions for U.S. Policymakers**

It seems increasingly clear that policymakers may find it desirable to implement some type of tracking solution in the United States, as well, to suppress the spread of the virus. Tracking and tracing individuals for public health purposes raises a wide range of issues, though, from how to adhere to (or whether to waive) medical privacy laws, to Fourth Amendment concerns, to the application of general privacy laws (which can vary from state-to-state). And once such a system identifies the appropriate individuals or zones to be quarantined, whether states or the President have the requisite authority to enforce a mandatory quarantine raises constitutional questions that are already playing out in New York, Texas, and elsewhere.

The key role of wireless networks in each of the solutions deployed to date raises a number of interesting legal and policy issues. These include who manages the system, whether and how existing legal frameworks can be leveraged to ensure its success, and what policy changes will be necessary to help ensure the comprehensive access to broadband services that these solutions require.

The solution will need to be federally managed, raising issues of preemption and potentially requiring new privacy legislation.

Each of the 50 states plus the District of Columbia and other territories are playing a substantial role so far in responding to the pandemic. Due to the sheer size of the country, individual outbreaks are likely to happen in different timescales in different places, so some local variation in policies and responses makes sense. But a track and trace solution is unlikely to work on a state-by-state basis. Interstate commerce demands interstate movement, states lack extraterritorial jurisdiction, and imposing different obligations in one state versus another risks undermining the effectiveness of the entire system.

Because radio transmission and interstate communication are areas where the need for a national policy has long been recognized, the federal government already plays a leading role in the areas of wireless communications and broadband, which are instrumentalities of commerce that are inherently interstate. In the wireless space, Section 301 of the Communications Act gives the Federal Communications Commission (FCC) exclusive authority to manage access to the airwaves, and courts have generally interpreted that section as giving the agency robust power to issue and manage radio licenses and the use of the nation's airwaves. Given this and other recognitions of the uniquely interstate nature of the use of the airwaves, policymakers could conclude that a pandemic management system that leverages the nation's wireless networks may rest comfortably in the hands of federal regulators (although which federal regulators should be involved and how they might work together, given the relevant expertise of numerous agencies including the FCC, DHS, FTC, CDC, and Department of Justice, among others, is a question for another day).

At the same time, such a system could require new regulations in order for it to operate as intended—and may even require new legislation. For instance, implementing track and trace programs may call for a clear and specific assertion of federal primacy to ensure that state and local authorities do not act in ways that are at odds with the federal system. (Indeed, at the state level, overlapping state and local authorities over COVID-related restrictions on business operations already have created confusion.) But it remains to be seen how these programs will be implemented, and what additional action from Congress or the FCC might be necessary.

In addition, a federally-managed track and trace system that relies on data collection from citizens' smart phones may require federal legislation to address privacy issues and potential liabilities. Privacy has largely been a matter of state law concern, with some notable, specific exceptions (such as HIPAA, in the health care space). With the significant data collection that already occurs in an increasingly connected internet-based society, the privacy debate was top of mind in Europe, California, and elsewhere even before the coronavirus outbreak, and data privacy remains a hot topic on Capitol Hill. The perceived value of collection and use of data for track and trace, coupled with the practical need for consistent rules governing data collection and use in these contexts may spur federal action that has otherwise remained elusive.

The government will need to ensure access to broadband, which requires both ubiquitous infrastructure and sufficiently affordable services.

A track and trace system to manage a pandemic demands widespread participation; otherwise, infected individuals could continue to infect others undetected. A system that uses smartphone location data or requires citizens to download an app thus requires that everyone have access to smartphones and mobile broadband services—something that had not been the case before the pandemic arrived. Answering this challenge requires renewed focus on both the infrastructure used to provide wireless services and in programs designed to help everyone access broadband.

With respect to infrastructure, U.S. wireless carriers are always working to improve their networks, services, and coverage, and were already racing to deploy next-generation (5G) wireless networks before the virus hit. But despite the general federal authority over wireless communications, the deployment of infrastructure is an area where state and local governments retain zoning authority subject to the (considerable) limitations found in Sections 253 and 332 of the Communications Act and Section 6409 of the Spectrum Act. This can lead to lengthy delays in building and upgrading wireless facilities. With 5G at the forefront of policy discussions before COVID-19 hit, the FCC has already taken significant steps to clarify and expand the preemptive scope of federal law to facilitate deployment. These include an order that streamlines access to utility poles and declares local moratoria to be unlawful prohibitions, an order that limits the fees and aesthetic regulations that local governments can apply to small cell installations (both of which are under appeal in the Ninth Circuit), and an ongoing proceeding involving minor modifications to and collocations with existing wireless facilities.

The coronavirus outbreak may cast the need for these and similar reforms into sharp relief, given the demands placed on wireless networks as people spend more time at home working, learning, and streaming content, and because of the increased need for connectivity as people both turn to telehealth to communicate with doctors and increasingly rely on first responders. Any track and trace strategy that relies on wireless networks will further underscore the need for ubiquitous coverage and higher capacity next generation networks.

And despite the pervasive wireless networks across the country and the existence of federal programs to improve access to communications services, millions of Americans still struggle to afford or obtain access to broadband services. Moreover, the economic shutdowns to quell the pandemic have resulted in massive

drops in wages and sudden unemployment for millions of Americans, which may exacerbate obstacles to accessing communications services.

The FCC has recognized that the pandemic makes consistent communications access more important than ever, even without track and trace mitigation technology. Accordingly, the agency responded quickly, taking actions including promoting a voluntary pledge (now signed by hundreds of providers) in which carriers vowed not to terminate service or impose late fees because of customers' COVID-related lapses in payment, and temporarily waiving the annual customer recertification requirements for the Lifeline program, which enables low-cost telecommunications services for qualifying low-income consumers. These are just a few examples of FCC action to maintain and expand access to service in the COVID-19 response.

While these measures will help to ensure continuity of service for existing customers, the Commission has not expanded the required offerings or eligibility criteria for the Lifeline program, though there have been calls from some advocacy groups and members of Congress to do so. And before the pandemic struck, the Commission made a number of policy decisions in the interest of reducing program waste, fraud, and abuse that observers and regulated entities claimed had the effect of reducing service offerings and available providers.

Moreover, although the Commission's 2017 Restoring Internet Freedom Order reclassifying broadband internet access service as a Title I (information) service rather than a Title II (telecommunications) service was upheld by the D.C. Circuit last year, the court remanded to the Commission the issue of how Lifeline subsidies can be used to subsidize broadband services given its current legal status as a Title I service. The Commission currently is seeking comment on that issue. How the Commission resolves that proceeding will likely bear on the availability of broadband services in an era of track and trace pandemic control systems, as the wireless communications necessary for such systems will have to include broadband data.

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