

Contact Tracing, Intrastate and Interstate Quarantine, and Isolation

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Summary

Contact tracing, quarantine and isolation are core communicable disease control measures used by public health departments as part of a comprehensive case ascertainment and management strategy. These are practices with historic roots enabled by state laws and policies, and have been used by other countries to slow and stop the spread of COVID-19. To date, their implementation as part of U.S. response efforts at the national, state, and local levels has been confounded by the scale of the COVID-19 outbreak; lack of a systemic infectious disease response; insufficient and fragmented funding streams; low levels of public accountability; and concerns about the impact of such efforts on individual privacy, liberty, and travel rights, as well as the financial and personal costs that may arise out of a positive diagnosis. Recommendations have been offered by expert groups on both the scaling up of contact tracing and ensuring ethical implementation of such measures. One state has passed legislation establishing an oversight framework for state contact tracing and associated data collection and use. Legal challenges to interstate quarantine rules have, thus far, been unsuccessful. Recommendations include: appropriating federal funding adequate to mount and sustain rapid, comprehensive, culturally-appropriate state and local testing, treatment, contact tracing, and supported quarantine and isolation service efforts; building contact tracing systems that cover social as well as health care supports for those affected; and, to bolster trust and participation in public health efforts, implement contact tracing-related health communication efforts targeted to reach the diverse array of communities affected by the epidemic.

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Introduction

Testing, contact tracing, quarantine of those deemed to have come in close contact with infected people, and isolation of those who test positive, comprise a systemic response to slow the transmission of an infectious disease like COVID-19, for which there are neither effective, widely-available treatments nor a vaccine. The history of effective use of state and local contact tracing and quarantine and isolation measures to address infectious disease outbreaks date back to before the establishment of the United States. While grounded in fundamental police power authority, such efforts are subject to judicial scrutiny, as they infringe upon fundamental, constitutionally-protected rights including privacy, freedom of travel, equal protection, and due process. These measures have been used in past, more-limited infectious disease outbreaks with some success; however, the nature and spread of COVID-19, and the costs of creating, implementing, and sustaining a disease control and social support infrastructure that is effective, just, and grounded in equity are daunting.

Contact Tracing

Case investigation and contact tracing are “fundamental activities that involve working with a patient (symptomatic and asymptomatic) who has been diagnosed with an infectious disease to identify and provide support to people (contacts) who may have been infected through exposure to the patient.” (CDC, 2020) This process has been used successfully in numerous infection control programs, including tuberculosis, HIV and other sexually transmitted infections, measles, SARS, and Ebola. This type of “shoe-leather epidemiology” by “disease detectives” is key to surveillance efforts aimed at understanding the spread of the infectious disease. The authority to conduct such contact tracing efforts is rooted in the state’s core public health power to prevent and respond to infectious disease outbreaks.

Contact tracing helps slow the spread of an infectious disease in a community through the following process:

- a. A trained member of a contact tracing program (“contact tracer”) gets in touch with individuals newly diagnosed with a SARS-CoV-2 infection and/or COVID-19, educates them

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about the disease, and requests that they stop interacting with others during their period of infectiousness;

- b. Through interviewing the infected person, the contact tracer seeks to identify recent circumstances where the infected person likely came in close contact with others and potentially exposed those people to infection;
- c. The contact tracer then communicates with these “close contacts,” informs them that they likely have been exposed to the infection, encourages them to seek out testing and to stop interacting with others until either they receive test results indicating they are not infected, or until the period of infectiousness has ended. Current CDC recommendations for most cases with mild to moderate COVID-19 symptoms are to maintain isolation and precautions until 10 days after symptom onset and 24 hours after fever has subsided without the aid of medications.

In addition, contact tracers work to connect those they contact with health care, social services and other resources that may help the contacted person to overcome obstacles to testing, treatment, and completion of their period of quarantine or isolation.

Contact tracing is a labor- and time-intensive process demanding both technical training and interpersonal skill. Like most public health interventions, agencies conducting contact tracing generally seek voluntary participation from those with new diagnoses and close contacts (“self-quarantine”), as such an approach represents the “least intrusive” means to gather personal information and maintains trust in the public health effort. As with other surveillance-related information gathered by public health departments, the identity of the person with the positive diagnosis is protected as confidential, as is information gathered during the contact tracing process.

When case counts in a particular geographic area are low, contact tracing efforts can help suppress the spread of the disease. Contact tracing also serves as a part of mitigation strategies. By identifying contacts of those identified as carrying the virus, and helping those identified contacts to get tested and to quarantine, the contact tracing process can help reduce community transmission and spread, Final version published at:

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keeping symptomatic case counts down to a level within local health care capacity. Furthermore, such efforts do not need perfect execution (identifying every symptomatic patient and every contact of every patient) to have a significant impact. Nor should contact tracing be abandoned during times of widespread virus transmission. Under such circumstances, contact tracing can be highly effective if such efforts are focused on “cluster breaking,” identifying circumstances where virus transmission occurred *en masse*, such as in large gatherings, nursing homes, processing plants, dormitories, cruise ships, and jails and prisons.

The effectiveness and efficiency of contact tracing will be affected by the characteristics of the infection, the availability of timely testing, as well as the contact tracing agency’s capacity to handle the area case volume. Each positive diagnosis may result in numerous close contacts that may then require rapid follow up. (CDC, 2020) Because SARS-CoV-2 spreads easily and asymptotically, COVID-19-related contact tracing must occur extremely rapidly, or risk becoming ineffective. This presents significant implementation challenges for most state and local health departments, which have suffered devastating budget and personnel cuts over the past 15 years, including the elimination of 50,000 public health positions in the 2008 recession alone. (Watson et al., 2020) The Johns Hopkins Center for Health Security estimates that an effective response to the national spread of COVID-19 will require adding approximately 100,000 contact tracers to the existing public health workforce. (Watson et al., 2020) Because of the lack of effective treatments and vaccines, if contact tracing efforts are ineffective or overwhelmed, communities nationwide risk nearly unchecked spread of COVID-19, and disease control will require the implementation of broader, more blunt public health measures, such as the introduction of community stay-at-home measures and business and school closures.

Contact tracing is more than a surveillance and infectious disease control mechanism. The scale up of the contract tracing workforce can result in the hiring of many workers who may have lost other means of support during the pandemic. When contact tracing programs are rooted in values such as human rights and dignity, due process, and community engagement, those hired as contact tracers

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will be drawn from, reflect the cultures within, and speak the languages of, the local communities they will serve.

To build public health literacy and trust in the public health response efforts, when implementing contact tracing initiatives, public officials and public health agencies should supplement the front-line disease management efforts with targeted public education campaigns about the processes that will be used in local contact tracing efforts, the need for public cooperation with such efforts, and how this collaboration will aid Covid-19 response.

As the CDC notes, contact tracing also is “part of the process of supporting patients with suspected or confirmed infection.” Such efforts, ideally, will provide those with new diagnoses and their close contacts with information about available local social and health services, facilitating rapid access to care and easing burdens related to quarantine and isolation. This may include basics, such as food, laundry, housing assistance (or hotel-based services for those without stable housing); childcare or dependent care services; connection with health insurance and/or treatment services; and income supports, ways to get protected time off, or unemployment assistance. (CDC, 2020) Tracing efforts also should include follow up and check in with cases and contacts periodically during their time in self-quarantine, assessing how well the contact is coping, and reminding the service recipients to continue to self-monitor while staying at home. These steps not only advance justice, equity, and health literacy, but will also help build and maintain public trust in public health efforts, improve adherence with public health directives, and ensure that social and health services are provided in a community- and culturally-appropriate manner.

Legal Issues with Contact Tracing Implementation by State and Local Health Departments

There are few legal barriers to local implementation of COVID-19 contact tracing efforts. State legislatures long ago delegated to public health agencies the authority and responsibility for infectious disease surveillance, investigation, and control. Furthermore, contact tracing is viewed by the public health community as a sound public health practice. Finally, state emergency powers laws have given state executives and their associated agencies broader authority to purchase resources and services to respond to the epidemic.

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Both implementation and legal issues have arisen related to contact tracing during the COVID-19 epidemic. The nation's slow response and lack of testing meant that COVID-19 rapidly became widespread. This led state and local health departments to redeploy their scant supply of extant contact tracers from other surveillance duties to COVID-19-related efforts. That capacity was then overwhelmed, leading the federal government, state, and local health departments to begin hiring, training, and deploying additional contact tracers, or contracting with outside companies and agencies to provide area contact tracing services.

Many states and communities also have chosen to rely on engaging with close contacts via telephone call centers, rather than through face-to-face interviews. While this may reduce outreach-related time and travel costs, and increase the safety of contact tracers, such an approach could adversely affect public trust and participation in contact tracing efforts, as contact tracers will be more anonymous (and may be mistaken for telemarketers). Best practice standards recommend that, to maximize trust, those hired as contact tracers come from the communities they will serve. This may not always occur with tracing operations that are centralized (as opposed to run by the local public health department) or that use a national pool of employees.. Furthermore, the size and scale of the outbreak have led to recommendations that human contact tracing efforts be supplemented with digital contact tracing applications.

The lack of adequate federal funding to support a massive scale up in contact tracing capacity means that most jurisdictions struggle to use contact tracing as a means to suppress the outbreak. Furthermore, at this time, few jurisdictions share information publicly about the effectiveness of their contact tracing efforts, raising questions of accountability and, for those contracting with external vendors, the transparency of the use of public funds.

Both the use of contractors to conduct contact tracing efforts and potential digital contact tracing applications have raised significant privacy and data use questions [see chapter 6]. In June 2020, Kansas passed the COVID-19 Contact Tracing Privacy Act during an emergency session of the legislature. (Kansas Legislature, 2020) Several provisions make explicit best practices for contact tracing. Final version published at:

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tracing, including establishing expectations for hiring qualified contact tracers, as well as privacy protections over information collected and handled during the contact tracing process. Other provisions significantly favor individual privacy over benefits the use of that private information might offer to public health efforts. The law prohibits the use of cellphone location data for contact tracing purposes. It also establishes that third parties may not “be required to collect or maintain data regarding infected persons or contacts for the purpose of contact tracing,” thereby prohibiting public health agencies from requiring that places such as businesses and schools track the COVID-19 status of their employees or students, respectively. (Kansas Legislature, 2020) Finally, the law also establishes that participation in contact tracing is voluntary, and that neither contacts nor those with new diagnoses may be compelled to participate in the contact tracing process. It is unclear whether these provisions will foster greater public trust and participation in contact tracing efforts or reduce any stigma that may be associated with a positive COVID-19 diagnosis. Alternatively, it is also unclear whether, by raising these as concerns, the Kansas law may foment increased skepticism and reluctance to collaborate with public health.

Most public health experts and ethical guidance recommend that participation in contact tracing efforts remain voluntary. (CDC, 2020) However, in June 2020, officials in Rockland County, NY, in an effort to compel the participation in contact tracing efforts of several people suspected of having come in contact with the virus during gatherings held in violation of local social distancing rules, issued subpoenas against eight people believed to have attended one of the gatherings, threatening the individuals with \$2000/day fines for noncompliance. (Shanahan, 2020) While the measure succeeded in garnering contact participation, establishing such an approach as a widespread policy is not recommended, as it not only raises significant implementation questions, including concerns about inequitable application, but it also risks public trust in and acceptance of current and future infectious disease control efforts.

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Quarantine and Isolation

When medical treatment and prevention measures are inadequate or unavailable, public health efforts may need to more heavily rely upon older forms of public health intervention to stem the spread of dangerous infectious diseases. Quarantine is the restriction of movement of an individual suspected of having been exposed to an infectious disease. Isolation is the restriction of movement of an individual who has a confirmed case of an infectious disease. (Other restrictions on mass movement such as stay-at-home orders, are addressed in Chapter 5.) The history of laws and cases supporting the state and community exercise of what came to be known as their “police power authority” to protect the public from communicable diseases via quarantine and isolation trace back to the earliest days of the United States (Parmet, 2020). As stated by Justice Harlan in the 1905 Supreme Court case of *Jacobson v. Massachusetts*, the Court “has distinctly recognized the authority of a state to enact quarantine laws.” (Jacobson, 1905)

However, this power is neither unbounded nor exempt from judicial review, even in times of emergency. The use of these response strategies continue to “raise vital social, political and constitutional questions because they interfere with basic human freedoms: association, travel, and liberty.” (Gostin & Wiley, 2016)

As noted in the Contact Tracing section above, ethical best practices for public health recommend that the “least restrictive” approach be used to bring about the desired public health outcome. Quarantine and isolation are meant, first and foremost, as preventive, not punitive measures. (Gostin & Wiley, 2016) The state or community should be prepared to demonstrate that quarantine and/or isolation is necessary, and not merely “erring on the side of caution” or a tactic to assuage public fear. Ethical quarantine and isolation practices also means:

- Use of such measures should be based on the best available science concerning the risk and communicability of the disease;
- Science should also inform the targeting of the intervention, as well as the effectiveness of the proposed control measure;

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- Whenever possible, voluntary self-quarantine and home-based efforts should be pursued and determined to have failed to achieve the public health goal prior to enacting compulsory measures;
- Such interventions should be as narrowly applied as possible and implemented with consideration for due process rights;
- These measures should be conducted safely and humanely; and
- Ideally, those who must be quarantined and isolated will be supported during their period of restriction, not only with basic needs such as health care, food, and sanitary conditions (Parmet & Sinha, 2020), but also housing (if homeless), eviction protection, other social resources, and employment protection. (Harvard, 2020)

Isolation and quarantine decisions are generally reviewable in court, under a writ of habeas corpus. While courts often defer to state disease control decisions, courts have overturned quarantine measures for being ineffective under the circumstances, improperly implemented under a local emergency powers ordinance, and/or motivated by discriminatory intent (Parmet & Sinha, 2020).

Novel legal questions have not been raised about health departments applying “traditional” quarantine and/or isolation measures to individuals during the COVID-19 epidemic (e.g., contacts discovered through tracing efforts or newly diagnosed cases). In fact, the scale of the COVID-19 epidemic, coupled with public health workforce shortages, has made challenging, if not unfeasible, the close monitoring of those advised to quarantine.

One type of quarantine – travelers’ quarantine – has been the focus of significant legislative activity, commentator scrutiny, and judicial review during the COVID-19 epidemic. From early March until early July, 2020, at least 28 states, the city of Chicago, and Puerto Rico have passed rules imposing quarantine on travelers into their jurisdictions from other places where disease is more widespread (Tolbert et al., 2020). Judicial review of challenges to the structure and enforcement of state laws imposing traveler quarantines has occurred in at least two federal district courts.

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From a public health perspective, interstate traveler quarantines are, at best, a blunt instrument for controlling the spread of COVID-19, especially in light of the lack of effective, timely, widespread testing, the amount of asymptomatic and low-symptom transmission, and the logistics of tracking interstate travel. If anything, such rules may be as much a health communication strategy to encourage out of state people to stay home as a measure to control local disease transmission.

However, in actions brought before federal district courts in Maine and Hawai'i, judges declined to disturb state rules requiring 14-day quarantines for visitors and local residents traveling into their jurisdiction from out of state. (Bayley's Campground, 2020; Carmichael, 2020) In *Bayley's Campground*, the judge acknowledged the freedom to travel's roots in several core constitutional sources, including the Privileges and Immunities, Commerce, Due Process, and Equal Protection Clauses, and felt the quarantine measure should be subject to strict scrutiny, rather than the *Jacobson* case's more contextual "rule of reasonableness" (see Parmet, 2020). Nevertheless, the judge found the state had a compelling interest in protecting the public from many infectious people coming into the state and potentially overwhelming their local health system capacity, and that current limits on testing, and our limited knowledge of COVID-19 virus immunity, meant there were no more feasible, less restrictive approaches the government could take under the circumstances. (Bayley's Campground, 2020)

In *Carmichael*, instead of selecting either the *Jacobson*-style review or the more modern strict scrutiny review to assess Hawai'i's rule requiring visitors and returning residents undergo 14-day quarantines upon return, the judge ran the case through both approaches, and found that the state's rationale and approach would pass muster under either standard.

Absent building strong, equitable, trustworthy, and reliable local testing and communicable disease case ascertainment and management systems across the United States, the country risks devastating, uncontrolled COVID-19-fueled morbidity, mortality, and economic disruptions until safe, effective, and widely-accessible treatments and vaccines become available. With improvement of our testing and tracing capacity and understanding of COVID-19, it will be more feasible for states and

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communities to implement more targeted control measures. At that time, courts scrutinizing state actions would be justified in raising its expectations for narrower, individually-tailored, rather than population-focused, interventions.

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Recommendations for Action

Federal

- Congress should appropriate significant, expanded, ongoing funding (until the abatement of the epidemic or widespread uptake of a safe, effective COVID-19 vaccine) for state and local testing and contact tracing efforts; appropriations should require the employment of a culturally-sensitive, linguistically-competent workforce reflecting the make-up of the community.
- Congress should strengthen, extend for a longer period of time, and minimize employer exemptions from the protected time-off benefits available under the Family and Medical Leave Act and Families First Coronavirus Response Act to facilitate the needs of employees who are quarantined or isolated due to COVID-19 or have caregiver duties for those who have been quarantined/isolated;

State

- State legislatures should fund, and state health departments should implement and/or contract for robust, ongoing contact tracing systems that are closely connected to the communities they serve, including employment of a culturally-diverse and -sensitive workforce;
- State health departments should implement and/or contract for contact tracing services that, whenever possible, engage existing community-based organizations to facilitate connection with diverse local communities and service needs;
- State health departments, in their implementation of contact tracing training and programs, should seek to identify and address unique barriers and concerns that may arise with outreach and service provision efforts to immigrant and migrant populations, including issues associated with immigration and public charge rules;
- State legislatures should fund, and state health and social services agencies should implement systems that ensure those testing positive and identified as close contacts have access to health care, mental health, social services, and employment and housing protections needed for effective SARS-CoV-2 treatment and quarantine;
- Governors and/or executive branch agencies overseeing state-led contact tracing programs should regularly report data to the public related to their contact tracing outreach and case ascertainment efforts; if necessary, legislatures should mandate these data disclosures;
- Governors, through Executive Orders, and/or legislatures, through amending extant housing, utilities, and employment laws, should extend protections against eviction, mortgage foreclosure, utility shut off, discrimination, and employment loss due to quarantine and/or isolation;
- State health departments should develop and implement expanded, multi-lingual health communication efforts to boost public trust and participation in, and awareness of, contact tracing initiatives.

Local

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- Local government should fund, and local health departments should implement, ongoing contact tracing systems that are closely connected to the communities they serve, including employment of a culturally-diverse and -sensitive workforce;
- Local health departments should implement and/or contract for contact tracing services that, whenever possible, engage existing community-based organizations to facilitate connection with diverse local communities and service needs;
- Local health departments, in their implementation of contact tracing training and programs, should seek to identify and address unique barriers and concerns that may arise with outreach and service provision efforts to local immigrant and migrant populations, including issues associated with immigration and public charge rules;
- Local health departments overseeing state-led contact tracing programs should regularly report data related to their contact tracing outreach and case ascertainment efforts;
- Local government, through Emergency Orders and/or amending extant housing, utilities, and employment ordinances, should extend protections against eviction, mortgage foreclosure, and utility shut off connected with quarantine and/or isolation;
- Local government and health departments should develop and implement expanded, multi-lingual health communication efforts to boost public trust and participation in, and awareness of, contact tracing initiatives.

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