

Contact Tracing, Intrastate and Interstate Quarantine, and Isolation

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SUMMARY. While contact tracing, quarantine, and isolation are foundational infection control methods supported by state law, systemic and sociocultural challenges arising during the COVID-19 pandemic have revealed limitations to their usefulness in state and local response efforts. These challenges include: the swift, pre-symptomatic and asymptomatic spread of the various virus strains; the lack of ubiquitous access to rapid virus testing; the lack of equitable access to resources and supports to aid low-income, minority, and unhoused community members with successful, voluntary isolation and quarantine; implementation challenges posed by the resource-intensive and highly-localized nature of contact tracing; and the complications faced by state and local health programs in their attempts to foster a level of trust needed to promote voluntary participation in the contact tracing process. Federal courts continued to rebuff legal challenges to interstate quarantine policies. Equity is promoted as a core feature of public health services and the new administration's COVID-19 response efforts, offering promise for expanded and sustained support aimed at addressing disparities in COVID-19 outcomes and services.

Introduction

Contact tracing, quarantine, and isolation are core communicable disease control measures used by public health departments as part of a comprehensive strategy of case ascertainment and reduction of community infection spread. State public health and emergency response laws authorize contact tracing as part of infection control efforts. However, during this pandemic, some states have proposed or passed policies reinforcing the voluntary nature of participation in contact tracing and limiting the collection and use of health information derived from the contact tracing process. Legal challenges to interstate quarantine rules have been unsuccessful. Public participation in contact tracing, quarantine, and isolation efforts as part of U.S. response efforts at the national, state, and local levels has largely been voluntary (save a handful of jurisdictions' vigorous enforcement of traveler's quarantines). A lack of ubiquitous access to rapid, accurate testing, coupled with the high share of cases attributable to pre-symptomatic and asymptomatic spread of COVID-19, have combined to overwhelm contact tracing efforts and the monitoring of quarantine and isolation cases. These efforts also have been degraded by 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. For more information on contact tracing, quarantine, and isolation, please see Chapter 3 in *Assessing Legal Responses to COVID-19: Volume I*.

As exponential spread of the virus during the winter of 2020 has overwhelmed state and local tracing and quarantine monitoring capacity, some health departments have turned to encouraging those testing positive to undertake do-it-yourself close contact tracing and notification efforts, or redeployed contact tracers to other pressing pandemic response duties. The influx of new, more infectious viral strains raise further concerns about whether contact tracing and quarantine will be effective as an infection control measure outside focused use in closed settings with vulnerable populations, such as hospitals, prisons, dormitories, and long-term care facilities. The approval and deployment of multiple effective vaccines promise, over time, a reduction in severe COVID-19-related morbidity and mortality. Adoption of a national pandemic strategy grounded in equity, and the allocation of significant additional federal funds toward state and local pandemic-related efforts, also should, eventually, improve the availability and accessibility of rapid testing and, potentially, for supported and protected isolation of those who test positive. They also offer

promise for greater response coordination, adoption of data-driven best practices, improved public health messaging and community engagement, and a decrease in racially and socioeconomically driven COVID-19-related health disparities.

Factors Impeding U.S. Contact Tracing, Isolation, and Quarantine

The “test-trace-isolate” strategy is frequently employed by public health authorities as a set of non-pharmaceutical interventions (NPIs) to attempt to contain the spread of an infectious disease. In addition to rapid outreach to those receiving positive tests, encouraging them to isolate themselves from others, and monitoring their adherence with the isolation request, public health departments also attempt to break up infection chains by rapidly identifying who the newly-diagnosed individual may have potentially infected prior to their diagnosis, communicating with those “close contacts,” encouraging both groups to get tested and to quarantine until their diagnosis is returned, and monitoring those individuals.

Over the course of the pandemic, we have found that the factors contributing to the effectiveness of these interventions are numerous, varied, difficult to distinguish from one another and, after a year of largely fragmented, often inconsistent federal, state, and local efforts, even more difficult to ensure they work well. As stated by Dr. Alondra Nelson, “What looks like a single problem is actually all things, all at once. So what we’re actually studying is literally everything in society, at every scale, from supply chains to individual relationships” (Yong, 2020). The first set of factors concern the nature of the virus itself: A virus that can spread via aerosol, can be transmitted when the infected individual is pre-symptomatic or asymptomatic, or can be transmitted during a short time of exposure (or set of exposures), will be much more readily spread and harder to trace and contain than infections that lack these characteristics. Between March 2020 and September 2020, studies have revealed that about 40% of coronavirus infections are transmitted pre-symptomatically or asymptotically (Chen, 2020), and that multiple short exposures over the course of 24 hours can result in infection (as opposed to requiring one 15-minute close encounter)(CDC, 2020).

A second set of factors concern the availability and accessibility of test services that rapidly return results. The less available, accessible, and/or timely testing is, the lower the chance that pre-symptomatic and asymptomatic individuals will isolate, the greater the opportunity for undetected spread of the virus, and the harder it becomes to determine who might be close contacts of those individuals. The U.S. testing system continues to be plagued by inaccessibility and slow testing response rates (Chen, 2020). Availability and accessibility disparities also are disproportionately borne by communities of color and of lower socioeconomic status (National Strategy, 2021).

A third set of factors affect the ability of infected individuals to isolate and/or quarantine for the duration of their infectious period. Due to income, food insecurity, job insecurity, lack of employee benefits, crowded and/or unstable living conditions, lack of access to affordable child care, and other factors, including laws and

policies that offer scant supports and protections in these areas to those being asked to isolate, individuals may be unable to safely isolate for the scientifically recommended duration of time. Fear of being isolated or suffering the economic or social consequences of a positive diagnosis may also lead those who are asymptomatic or pre-symptomatic to not be willing to get tested, increasing the potential for the silent spread of the virus through a community. Studies have shown that Black, Hispanic, and Tribal communities and those of lower socioeconomic status have proportionately lower access to these social supports.

A fourth set of factors pertain to the capacity and capabilities of the contact tracing systems in place. The contact tracing process, when done thoroughly, is resource intensive. When a community faces high positive case rates, contact tracing efforts can rapidly be overwhelmed. This results in delays in outreach to those newly diagnosed (ideally new case investigations begin less than 24 hours after a new diagnosis is reported), reduced data collection during the case investigation process, abbreviated or postponed close contact identification and outreach, and decrease in follow-up with those asked to isolate or quarantine. Numerous swamped health departments around the country reportedly suspended contact tracing efforts, encouraging the newly-diagnosed to conduct do-it-yourself contact outreach (Dahlberg, 2020). The effectiveness of contact tracing outreach also is impacted by the connection of those conducting the case investigations to the communities they are serving. In an effort both to protect the health of public health workers and to improve efficiency, many state and local contact tracing efforts have been undertaken via phone or email, using pools of decentralized remote workers to conduct the case investigations, rather than employing people from within the affected communities (Silverman, 2020).

Finally, the success of contact tracing efforts relies upon trust as it manifests in many different forms. Ideally, new cases and close contacts should be permitted to participate in the contact tracing, isolation, and quarantine processes voluntarily. Communities should be engaged early in the planning process and in public education campaigns concerning the importance of these efforts. “Contact tracing begins with engaging communities about the disease, how to protect individuals and their communities, and how to suppress transmission. ... Special consideration should be given to planning contact tracing for at-risk and vulnerable groups, including, but not limited to, minority groups, homeless persons, migrant workers, refugees, and others. Communication about contact tracing should emphasize solidarity, reciprocity, and the common good.” (WHO, 2020). Fear of, or the lack of trust in, government or the contact tracing process, or a prioritization of individual liberty over the values of solidarity, reciprocity, or the common good, can result in decreased willingness to participate in all aspects of the contact tracing process. Reports of new cases and contacts refusing to share information with contact tracers continue to be widespread (Lewis, 2020).

Updates on Interstate Quarantines

In the latter half of 2020, many states and cities implemented policies imposing quarantine requirements on interstate travelers, and some cities, including San Francisco, have also imposed

regional intrastate quarantine restrictions on travelers to their area from other parts of their own state. A number of other states recommend, but do not require, travelers to quarantine for up to 14 days upon entry into their state (Brown & Marples, 2021). The availability of more ready access to testing services has led many of these jurisdictions to include exemptions or “test out” policies for those who present health affidavits and/or negative COVID-19 tests. Depending upon the jurisdiction, these may be required to be taken before or after arrival in the destination location.

As noted in Volume I, challenges were filed against both the Maine and Hawaii traveler quarantine policies, and in both cases, the Federal District Courts found the policies to be constitutional. In January 2021, the First Circuit Court of Appeals, hearing the appeal of the Maine case, affirmed Maine’s authority to issue an executive order requiring travelers to the state to quarantine for 14 days before being permitted to go out in public (*Bayley’s Campground v. Mills*, 2021). In upholding the district court ruling, the First Circuit Court of Appeals agreed with the district court’s finding that the *Jacobson* standard of deference should not apply. The court agreed that the travel restriction did burden the constitutional right to interstate travel and that, as a result, the policy should be subject to strict scrutiny. However, the court also felt that the state was able to meet its burden. It found Maine’s governor had stated compelling interests in protecting both the state’s inhabitants from further spread of the virus and the state’s health care system from being overwhelmed by cases generated by infectious out-of-state travelers. The state also was able to demonstrate that, at the time the restrictions were put in place, “there were no other effective less-restrictive alternative” means available to serve the state’s compelling interests (including recommending rather than requiring quarantine, as the court felt a recommendation would be less likely to successfully slow the virus’ spread). Because testing services are more readily available today, it is likely that an order put in place now could be required to include a provision that allows exemptions from the quarantine requirement for those able to demonstrate they are not a risk to infect others (*Bayley’s Campground v. Mills*, 2021).

While both Maine and Hawaii have moderated their policies to accommodate access to testing services, Hawaii has remained extremely strict in enforcing their traveler quarantine restrictions, and Hawaiian public health authorities have arrested hundreds of people in the past year for violating state quarantine rules (O’Connor, 2020).

Equity, Stimulus, and the National Response Plan

In November 2020, the de Beaumont Foundation published their updated version of the 10 Essential Public Health Services framework. At the heart of their framework is equity, which they recommend infuse all public health services, and they define as

“a fair and just opportunity for all to achieve good health and well-being. This requires removing obstacles to health such as poverty and discrimination and their consequences, including powerlessness and lack of access to good jobs with fair pay, quality education and housing, safe environments, and health care. It also requires attention to health inequities, which are

differences in population health status and mortality rates that are systemic, patterned, unjust, and actionable, as opposed to random or caused by those who become ill.” (de Beaumont, 2020).

Contact tracing, quarantine, and isolation efforts, and the laws supporting such public health measures, fit squarely into their framework of essential public health services. As noted in the Section above, as applied, the delivery of these services has not always been equitable.

Recent actions taken by Congress and the Biden White House represent steps toward a more equitable COVID-19 response. In late December 2020, Congress passed a \$900 billion coronavirus relief plan. The plan contained several provisions to bolster contact tracing efforts. This included more funding for testing and contact tracing, such as \$2.5 billion to develop, identify, and improve such efforts among racial and ethnic minority populations, rural communities, and other high-risk and underserved populations. The bill also requires that states accepting such funds regularly report to the Department of Health and Human Services on their contact tracing plans and efforts (Consolidated Appropriations Act, 2021).

Within 24 hours of President Biden’s inauguration, the White House released the National Strategy for the COVID-19 Response and Pandemic Preparedness (National Strategy, 2021). Like the de Beaumont Foundation framework, this strategy is grounded in the goal of strengthening and advancing a U.S. pandemic response effort “driven by science and equity.” Numerous provisions focus on building trust in public health response efforts within minority communities. Others offer plans for improving the accessibility and availability of testing, contact tracing, and providing the social supports necessary to undertake quarantine and isolation. The administration proposes providing paid leave to workers going into quarantine and isolation, and expanding child care support and rental assistance to advance these goals. Recognizing that “there must be sufficient workforce to serve the communities in greatest need,” the administration also proposes to expand the public health workforce, creating a new United States Public Health Workforce Program of at least 100,000 new, community-based workers to “conduct culturally-responsive outreach and engagement, testing, contact tracing, and other critical functions” (National Strategy, 2021). Such initiatives, if funded, implemented, and executed in coordination with state and local response efforts, could help improve communication and trust with vulnerable communities, facilitate employment opportunities for local residents as part of the public health workforce, and bolster low-income workers’ job stability and ability to adhere to public health guidance concerning testing, isolation, and/or quarantine efforts. 🌟

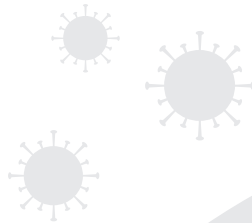
Recommendations for Action

Federal government:

- Fully fund and implement the United States Public Health Workforce Program.
- Expand funding for childcare support and rental assistance in low-income communities to improve adherence with quarantine and isolation recommendations.
- Expand federal funding for state and local public health agencies to ensure resilience in the face of massive state and local budget cuts in the wake of the pandemic.

State and local governments:

- Expand job protection and child care benefits to low-income workers to make it easier to adhere to quarantine and isolation efforts.
- Ensure that vaccination-related community outreach efforts are community-engaged efforts, structured to reflect the communities they plan to serve; also include in these initiatives outreach related to contact tracing, quarantine and isolation.



About the Author

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