



Perspective

Disease Control, Civil Liberties, and Mass Testing — Calibrating Restrictions during the Covid-19 Pandemic

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Urgent responses to the Covid-19 pandemic have halted movement and work and dramatically changed daily routines for much of the world's population. In the United States,

many states and localities have ordered or urged residents to stay home when able and to practice physical distancing when not. Meanwhile, unemployment is surging, schools are closed, and businesses have been shuttered.

Resistance to drastic disease-control measures is already evident. Rising infection rates and mortality, coupled with scientific uncertainty about Covid-19, should keep resentment at bay — for a while. But the status quo isn't sustainable for months on end; public unrest will eventually become too great.

When and how will restrictions be unwound? Should they remain in place until the “all clear” signal, or until some intermediate milestone is reached (e.g., once infections or transmission risks have

peaked or hospitals have regained capacity)? Will restrictions be lifted completely or merely loosened, and for how long? The relatively clear criteria for ending conventional quarantine and isolation don't apply to social restrictions related to Covid-19. The rudimentary understanding of the disease and the unprecedented breadth of restrictions feed uncertainty about next steps. A showdown between public health imperatives and civil liberties appears inevitable.

Law and public policy have a long history of deference to intrusive action by public health authorities, especially during deadly infectious disease outbreaks. There are limits, however.¹ To respect civil liberties, courts have insisted that coercive restrictions must be necessary; must be crafted as nar-

rowly as possible — in their intrusiveness, duration, and scope — to achieve the protective goal; and must not be used to target ostracized groups.² Although these broad principles are useful touchstones, historical experience with quarantine provides little practical guidance because of several distinctive features of Covid-19 and the public health response it provokes.

First, deprivations of basic liberties in response to epidemics have chiefly focused on infected or exposed people or defined groups (think “returning cruise passengers”). By contrast, current stay-at-home orders are less intrusive in some respects (they are lightly enforced, and “essential” outings are permitted) and more intrusive in others (most people subjected to them are neither infected nor exposed). This combination of moderation and breadth makes the principles of individualized “due process” developed for traditional quarantine orders less appli-

Structural Features of Traditional and Graduated Approaches to Infectious Disease Control.		
Feature	Under Traditional Coercive Measures	Under Covid-19 Graduated Controls (in Order of Increasing Severity)
Target group	Infected or exposed people	Infected or exposed people Population-wide (national, states, regions, or cities)
Primary restrictive measures	Involuntary isolation of infected people and quarantine of exposed people	Physical distancing Stay-at-home orders Self-isolation if infection or exposure is known or suspected
Force of restriction	Mandatory	Voluntary Required but not rigidly enforced
Enforcer	Government	None or voluntary Peer pressure and social compact Civil-society organizations (e.g., school districts, professional groups, and employers) Government
Form of sanction	Coercive state action	None Social stigma Private enforcement (e.g., refusal of service, industry sanctions) Warnings, fines Coercive state action
Lifting of restriction	When risk of infection is gone or very low	When rate of new infections peaks or health care capacity becomes manageable When additional milestones are reached When risk of infection is gone or very low

cable. Because restrictions related to Covid-19 are motivated by community-wide risk and apply to entire populations, legal protections focused on how much risk one person poses to others have little relevance. Moreover, because many restrictions apply to the government's own institutions (e.g., parks and schools) or are imposed by private actors (e.g., employers), they avoid standard constitutional scrutiny.

Second, the transmission dynamics of SARS-CoV-2 make it difficult to identify and target risk groups. The virus is highly infectious and has a long but still uncertain transmission window, possibly spanning 10 to 14 days. "Stealth" transmission may occur during asymptomatic incubation or while illness is imperceptible or nondistinct. These factors create control problems that differ from those associated with the diseases, such as smallpox and

tuberculosis, that shaped much of the law and policy precedents we have for restrictive public health actions.

Third, stay-at-home restrictions are unlikely to be a one-shot deal. Disease prevalence will spike and abate. There is emerging consensus that a graduated approach to restrictive measures will be needed³ — one that permits a return to some social and economic activity while avoiding undue stress on medical resources and allowing population immunity to build gradually (see table). Such an approach is a far cry from quarantine law's more binary paradigm of lockdown followed by an all clear signal.²

What laws would govern a graduated approach? More relevant than quarantine-based precedents are legal challenges to emergency curfews during natural disasters or civil unrest.⁴ Courts have upheld these orders when

they are supported by facts demonstrating that the curfew is needed to restore peace and security.⁵ Some courts have reviewed the hours, geographic scope, and duration of curfews and considered whether they are indexed appropriately to the threat level.⁴ But above all, curfew law highlights the substantial leeway that courts give the government in exigent circumstances. As one appeals court put it, whether the harsh restrictions in question "were absolutely necessary in order to prevent a serious civil disorder is clearly an important question for political debate, but not, we think, a question for judicial resolution."⁵

Viewing Covid-19–related restrictions as more of a public policy issue than a legal one, then, how can a graduated model chart a course that appropriately balances disease control and civil liberties? We believe that decisions to continue, modify, or lift severe

restrictions — particularly bans on movement and gathering — should be tailored using credible person-level information. The key source of such information would be a population-wide program of disease testing and surveillance. By identifying people most likely to transmit infection in the near term, individualized risk assessment would respond to Covid-19's distinctively dangerous risk profile. At the same time, it would avoid sharp trade-offs between discriminatory or unduly broad restrictions and the perils associated with wholesale loosening of restrictions.

To be sure, testing itself is an intrusion. But considering this pandemic's magnitude, effective testing can reduce or prevent the need for much greater intrusions. Moreover, a degree of voluntariness is maintained by eschewing forced testing and instead conditioning social privileges on cooperation.

Consider, for example, a policy in which people seeking to return to work, school, or social activities are asked to undergo baseline testing for infection and antibodies. Positive tests for infection would trigger self-isolation. Negative tests would certify freedom of movement for a defined period — say, 2 or 3 weeks — after which additional negative tests would renew the certification. If antibodies are determined to provide long-term protection against both reinfection and transmission — which is plausible but not yet established — a positive serologic test would warrant longer-term certification.

Aggregating test results at community and state levels would support a reliable disease-surveillance system. A testing regimen's stringency could then be dialed up or down, depending on community

prevalence of Covid-19. China is following a version of this approach by grading community risk on a four-tier, color-coded scale.

Titrating restrictive measures in this way would require a testing regimen on a scale unparalleled in U.S. history. Federal, state, and local governments would play a role in financing and oversight but would need to rely heavily on hospitals, clinics, nursing homes, retail pharmacies, mobile health services, and private laboratories for implementation. Civil-society organizations (e.g., employers, schools, and retailers) would also have financial and reputational incentives to foster compliance with government directives.

Would individualized risk assessment of this kind be lawful? Provided the approach was based on verifiable risk of contagion, used reliable methods, and was applied evenhandedly, there are no obvious obstacles in quarantine- or curfew-law precedents. The insidiousness of Covid-19 transmission coupled with the (presumed) low rate of acquired immunity mean that most people are at appreciable risk for contracting or spreading the virus, so mass testing has a legitimate public health purpose. Most important, tying testing to easing of restrictions makes it an integral component of a strategy for restoring civil liberties.

Limitations in this approach are clear. Vast quantities of tests and personal protective equipment would be needed, neither of which currently exists, although supplies will increase. Acquiring and transmitting infection within certification periods would still be possible; people could also test negative in the early stage of infection. A policy of extending privileges to people with acquired immunity

must guard against incentives for them to deliberately become infected. In addition, civil-society organizations charged with enforcement could game the system to gain a competitive advantage or to discriminate. Policing such behavior would be the role of government and the legal system; proactive cultivation of social norms using exemplars and shaming would also help.

These and other imperfections in test-centered approaches to graduated unwinding and reimposing of restrictions reflect the inevitable compromise to be made between disease control and protection of civil liberties. In ordinary times, a comprehensive program of testing, certification, and retesting would be beyond the pale. Today, it seems like a fair price to pay for safely and fairly resuming a semblance of normal life.

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