



Addressing social needs through contact tracing technology:

Enabling a sustainable recovery post-COVID-19

The point of connection between contact tracers and infected or exposed individuals presents an opportunity to address social needs. Doing so can help decrease the spread of COVID-19 and enable a sustainable, resilient recovery.

Since COVID-19 reached US shores, the country has been racing to respond to the virus's immediate effects—minimizing widespread infection, sourcing personal protective equipment (PPE) and ventilators, and deploying frontline health care and other essential workers. Now, as states start to reopen, many plan to use widespread testing, contact tracing, and monitoring to keep the virus in check.

Estimates vary, but the country will likely need between 100,000 and 300,000 contact tracers, who will end up communicating with millions of Americans over the next year and beyond.^{1,2} Contact tracers will identify new positive cases, locate close contacts of each identified case, and help both the infected person and those who were exposed isolate themselves.

Since COVID-19 has disproportionately affected low-income and minority populations, contact tracers will likely interact with many people who are vulnerable socially, economically, and medically.³ To increase the likelihood that infected or exposed individuals are able to comply with isolation protocols, the contact tracing process should

address unmet social needs, along with medical needs. People who cannot meet their basic needs—they don't have enough food, for example, or are doubling up with relatives in a cramped apartment—may have a hard time remaining isolated.

When contact tracers connect with infected or exposed individuals, it is important to ask about food, housing, and employment. Assessing needs is generally a critical first step; however, it can be equally important to connect individuals with resources to fill any gaps identified through the process. Addressing social needs in the contact tracing process is an important step that will likely provide a significant return in the speed and success of recovery.

The intersection of contact tracing and social needs

Contact tracers identify individuals who have been clinically confirmed as having COVID-19, make a list of people who might have been exposed through contact with each individual, and then reach out to the people on that list. Tracers advise those individuals to self-isolate and monitor themselves for disease symptoms. They then continue to monitor those cases, collect information, and follow up as needed.⁴

When contact tracers communicate with infected or exposed individuals, they can also inquire about social needs such as food, housing, employment, transportation, and childcare, asking how those variables affect plans or ability to self-isolate. In Massachusetts, for example, contact tracers who asked such questions found that about 20 percent of people needed support in order to self-isolate.⁵ A contact tracer who discovers obstacles can connect the individual with government and community resources, using an integrated resource referral platform. As the contact tracer continues to follow the individual's medical progression, they can also monitor that person's social needs, ability to self-isolate, and assist as needed.

During this process, the contact tracer may be able to close the loop on needs or may have the ability to make a referral to other services to ensure that the individual has the support they need. A team-based approach inclusive of trainers, contact tracers, epidemiologists, community health workers, resource coordinators, and other support teams will often be necessary, although the specifics of each case will depend on the process the state or locality has implemented and the situation at hand. Utilizing collaborative approaches to address instability around social needs could increase the success of the whole contact tracing enterprise by enabling infected or exposed individuals to self-isolate without putting their livelihoods and families at further risk.

Technology platforms to enable connection

Contact tracers would need access to a user-friendly referral platform that integrates resources and social services available in the geographic location where they serve. This tool should enable the tracer to immediately refer an individual to resources funded by the state, local government, or community.⁶

States should consider integrating resource referral platforms into their contact tracing process. As a marketplace of resources from government and community partners, resource referral platforms offer solutions tailored to each resident's personal situation. Driven by data and outcomes analysis, the system can suggest packages of related and complementary resources in areas such as food, housing, and employment. It can also track social determinants of health and includes tools for community partners to manage referrals for their services, for government caseworkers to collaborate and coordinate care, and for residents to share feedback and report outcomes.⁷

Recruitment and training

While recruitment strategies differ by location, there may be an opportunity to leverage and expand the community health workforce in these recruitment efforts. Community health workers have developed knowledge of local communities and earned their trust, working with local health departments and municipalities to develop strategies best suited for specific populations.⁸

Several organizations have released comprehensive contact tracing education and training plans, which focus on the epidemiological and public health aspects of contact tracing.^{9,10} Many training plans include instructions to inquire about social and economic concerns that could affect a person's ability to isolate. But they generally lack robust suggestions on the next step—how to address those concerns if an individual expresses them.

There is opportunity for contact tracing training plans to emphasize the role that social and economic circumstances may

Testing and contact tracing in Germany

Germany has developed a robust testing, contact tracing, and support system, which is considered to have contributed in part to the country's low COVID-19 death rate.¹¹ Every person who has come into contact with an infected patient in the past two weeks is tracked down and tested. This is enabled by their robust testing system, in which tests are free and results are returned in generally under eight hours (with "fast testers" getting results back in two hours).¹²

Various contact tracing teams have been set up for outreach and follow-up, supporting individuals with food, medication delivery, and hotel stays as needed so that isolation guidelines can be followed. In addition, support teams call those in quarantine on a daily basis to check in on both physical and mental health concerns that may arise in isolation.¹³

play in the ability to self-isolate and explain how to connect individuals with resources to meet their needs. Training should include a brief tutorial on how to use resource referral platforms and connect with other team members as necessary. These relatively minor additions should fit naturally into existing training programs for contact tracers.

Funding for state, local, and community-based social service organizations

When an individual has concerns about staying isolated due social or economic circumstances, state and local governments can work with community partners to meet that need. Investments in resources for social needs can pay off in the long term by helping to decrease the spread of COVID-19, increase the speed of recovery, and create a more resilient community for future challenges. Unfortunately, the pandemic has thrown many state and local budgets

into unprecedented deficits, which will likely hamper their ability to provide social services.¹⁴ Governments will need to make decisions that balance their financial health with the health of residents.

The federal government has passed legislation to help state and local governments fund social services. For example, the CARES ACT allocated \$4 billion in homeless assistance through the Emergency Solutions Grants program and \$5 billion for Community Development Block Grants, which help preserve affordable housing and can be used for emergency rental assistance.¹⁵

The path forward will require collaboration between federal, state, and local governments, as well as with community-based organizations. These stakeholders should explore creative partnership models for funding and managing programs that make self-isolation feasible by supporting social needs. In addition, it is important that current, accurate data on the contact tracing process and resources available are shared in a secure manner.

Important considerations

There is opportunity for contact tracing to be more than an epidemiological and data collection exercise, given that activities taken now could have downstream implications. It is important to address these implications proactively as states and localities recover from this pandemic and better prepare for future outbreaks.

- **Contact tracing methodology:** The standard method of contact tracing was developed by public health experts primarily in response to the HIV/AIDS pandemic. As such, it was designed to trace a virus that spread through a small number of memorable interactions, not one that spreads through the air across gaps as small as six feet or may linger on surfaces. Due to the nature of COVID-19 transmission and the necessity of immediate self-isolation, contact tracing methodology should be updated to address social needs as a key factor in reducing the spread of this highly contagious pathogen.

- **Helping those at risk:** Contact tracers will interact with infected individuals throughout their recovery, and potentially beyond. Through frequent phone calls and/or house visits, tracers may learn about individuals and families who may be at risk and in need of child welfare, health care, unemployment benefits, and more. Tracers' ability to connect individuals with resources can provide a new channel to support those in need.

- **Providing support after health recovery:** After recovering from the virus, individuals may need support returning to "normal" life. For example, contracting the virus may cause economic hardship due to missed or lost work, inability to resume manual work, or increased expenses. There may also be mental health concerns related to trauma during or after recovery, such as the psychological effects of being on a ventilator.¹⁶ To address these concerns, states could do a "close-out" assessment after the 14-day recovery period and connect individuals with resources as needed.

Looking ahead

Addressing the medical and social needs of infected and exposed individuals can help curb the spread of disease, allow citizens to return safely to work and school, and help prevent future outbreaks. When contact tracers address those needs, individuals are generally better positioned to adhere to the recommended protective measures, such as isolation. People can only self-isolate to the extent their social and economic circumstances allow them to do so. If isolation threatens basic needs, such as food, housing, and employment, people are less likely to stick to the guidelines. Empowering contact tracers to connect individuals with available social and economic resources is a relatively simple step that will have outsized benefits for a speedy and successful recovery. Beyond recovery, addressing unmet social needs can enable individuals to lead healthier lives and communities to emerge stronger in a post-COVID-19 world.

Innovative partnerships to address housing instability during COVID-19

The city of Chicago has helped support collaboration between local nonprofit medical providers and several downtown hotels to repurpose empty rooms for patients and high-risk individuals. Many of the rooms will serve as housing for those who do not require hospitalization, but need a place to isolate or quarantine safely, including first responders, the homeless, and victims of domestic violence and human trafficking.

According to Lydia Murray, interim executive director of the homeless services nonprofit Lincoln Park Community Services (LPCS), "The crisis has created new levels of collaboration in the city's homeless service network. It has also accelerated the focus and attention on the affordable housing problem in the city." Take the story of Estevan, a shelter guest of LPCS, who had been living on and off the streets for more than 25 years. When medical professionals visited LPCS to identify high-risk individuals, Estevan was given the option of leaving LPCS to relocate to a downtown hotel as a preventive measure, due to his risk factors for contracting COVID-19.¹⁷



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