

## RACE TO TRACE: TRADITIONAL METHODS NOT ENOUGH TO STOP COVID-19

Operation T.R.A.C.E is dedicated to making the world a safer place to live and work. Our team helps private industry and government agencies work with COVID-19 positive patients and identify those suspected of exposure to enable virus containment. Our team of health information technologists, epidemiologists, and clinicians focuses on breaking the chain of COVID-19 transmission.

Recommendations in this paper are based on infectious disease and clinical expertise coupled with the application of an existing technology solution. This solution surpasses the traditional “army of manpower” approach to contact tracing and can speed the arrest of the COVID-19 virus. It can build confidence as we reopen America by implementing flexible and customizable strategies and systems to address the virus and serve the public.

- *The tempo and methods used around the world to combat the COVID-19 pandemic vary and range from no action (Sweden) to varying degrees of quarantine and social distancing restrictions; voluntary and mandatory.*
- *While debates about methods are ongoing, the World Health Organization (WHO) and experts agree that, with COVID-19 raging around the globe and evidence-based predictions of new outbreaks due to businesses reopening, it is **imperative to use a combination of massive testing and contact tracing**.*
- *Many have predicted the need for “armies” of contact tracers. Public health departments around the country have updated their plans to dramatically increase the number of contact tracers on staff. Some experts say that in the U.S. alone, we need between 100,000 and 300,000 contact tracers.*
- *We believe that simply throwing more people at the problem is not the answer and not the American way, which historically has applied innovation and invention to solve seemingly impossible problems.*
- *In order to regain time lost through less than optimal testing and get ahead of COVID-19, we must quickly embark on a nationwide two-pronged strategy of massively increased testing coupled with an accelerated contact tracing process that breaks the chain of the virus in hours, not days or weeks.*

“Andy Slavitt, former director of Medicare and Medicaid in the Obama administration, and Scott Gottlieb, a former Food and Drug Administration chief for President Trump, say that Congress needs to devote funding to help states track down people who have been exposed to the coronavirus, and to offer resources to infected and exposed individuals who wish to self-isolate.” They predict that the U.S. needs as many as 180,000 contact tracers.

NPR Shots (May 7, 2020)

## TIME IS OF THE ESSENCE: LESSONS LEARNED FROM ABROAD

- *As part of the White House “Opening Up America Again”, rapid testing and meticulous contact tracing is essential to mitigate the transmission of COVID-19, safely re-open our country, and protect our most vulnerable populations.*
- *The goal is to reduce the reproductive number ( $R_0$ ) with contact tracing to less than one. Currently, the Centers for Disease Control and Prevention (CDC) estimate the median  $R_0$  of COVID-19 is 5.7 (95% CI 3.8–8.9). This means for every COVID-19 infected person, they will expose an average of 6 additional people (Sanche, Lin, Xu, & Romero-Severson, 2020). This replication will continue if we do not implement measures. An  $R_0$  of 5.7, indicates at least 82 percent of the population must be COVID-19 immune to stop its transmission through vaccination and herd immunity.*
- *Mathematical models demonstrate that asymptomatic transmission of COVID-19 meaningfully contribute to ongoing community spread. In fact, an Icelandic population study demonstrates that 43% of participants that tested positive for COVID-19 had no symptoms, with most developing symptoms later (Gudbjartsson, Helgason, & Jonsson, 2020). With this reality, there is a need to scale up the capacity of widespread testing and thorough contact tracing to detect asymptomatic infections, interrupt undetected transmissions chains, and further bend the curve downwards (Furukawa, Brooks, & Sobel, 2020).*
- *Traditional contact tracing methods rely on an immense labor force, manual processes for calls and research, and in-person tracing. This approach is labor intensive, takes an average of 3 days per transmission and most importantly, risks further virus spread.*
- *A solution that reduces the amount of time to trace contacts is invaluable, vital and required to minimize deaths.*

## VIROCHECK™: EXISTING, ADAPTIVE TECHNOLOGY ACCELERATES CONTRACT TRACING TO SAVE MORE LIVES

- *ViroCheck is winning the race to stop Coronavirus transmission because we trace faster than traditional contact tracing methods. Faster traces save lives.*
- *Through accessing a mobile directory of over 350 million active records, we have the ability to find the cell phone number of an exposed individual in seconds. “We are rapidly connecting to the exposed individuals utilizing a one of a kind mobile phone directory that has 350 million listings.”*
- *Originally designed to assist over 1500 law enforcement agencies quickly locate offenders, we adapted our system specifically to perform rapid contact for COVID-19 pandemic tracing.*
- *Built upon open source technologies, ViroCheck is interoperable and easily integrated into existing platforms.*
- *ViroCheck offers “Registration & Testing” capabilities to enable an end-to-end solution.*
- *Extensive case management system embedded that tracks contact relationships and captures symptoms.*
- *Integrates with contact center, phone, text, and email features.*
- *Social Services connectivity – Bridges contacts to local, needed social services and support resources for quarantining, food, transportation, behavioral health services, childcare, etc.*

## COMPREHENSIVE, COMPASSIONATE, CLINICAL CONTACT TRACING

ViroCheck is a component of a total end to end anti-coronavirus solution. The following complement this cutting-edge technology:

**Touchless Clinical Contact Center** – Key to effective contact tracing is accurate and rapid data collection. Our clinicians bring formal medical training, knowledge of medical terminology, and COVID-19 symptom understanding. They efficiently capture information about recent contacts and capture clinical data. They provide compassionate CDC-based technical assistance and referrals to community resources via phone, text, email, and social media 7 days a week.

**Data Analytics and Visualization** - Epidemiologists, health data analysts, and statisticians work collaboratively to provide data analytics and visualizations. Using local and national data sets such as county health department data, Johns Hopkins CSSE, predictive modeling, and demographics provides an easy to read and customizable dashboard to meet client specific needs. We can incorporate our turnkey solution using SAS, SAS/STAT, Microsoft Power BI, and Tableau's analytical and reporting tools. We can build these dashboards into existing reporting software to provide safety monitoring, inventory supplies, and keep infection out.

**Business Continuity Assessment Services** - Restarting our economy means businesses must make radical operational adjustments to comply with CDC guidelines and protect both employees and customers. Our multidisciplinary consulting team of industry experts will help you reimagine your business and develop strategies to catalyze workforce realignment and reengineer your processes and facilities demonstrate a plan of action is in place.

**Training and Strategic Communications** - Restarting your business requires smart, well timed outreach and education targeting internal and external audiences. American employees and consumers yearn to feel safe again in public places. Those businesses who want a competitive advantage in their industry can take steps to show their commitment to creating a safer environment. You can entice your customer base to return by offering a full spectrum of services ranging from public relations to skills-based training and education (including online and virtual). It is essential to build public confidence and trust to resume the “new normal”.