Contact Tracing: Issues and Shortcomings in Global Efforts
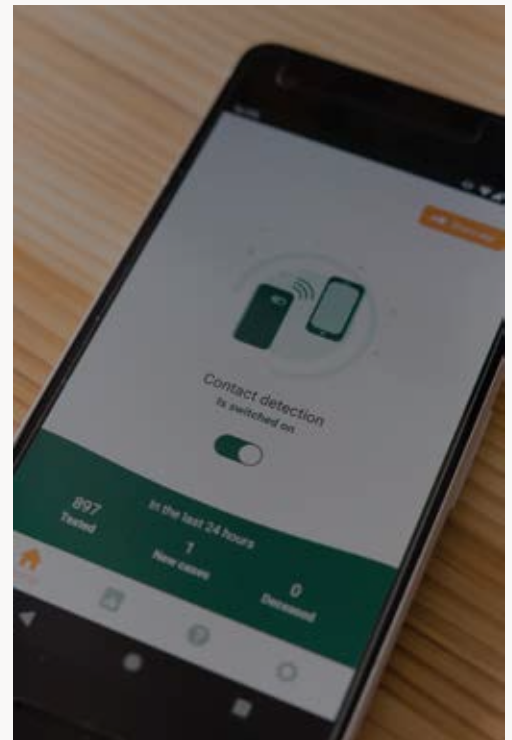
This paper summarises key findings by Social & Economic Research Initiative, on June 2021.

Summary

Contact tracing has become a key feature of effectively combating the COVID-19 pandemic, a tactic virtually present in all countries. Despite its importance and centrality to the relief effort, many countries have struggled with a basic technique to track and trace the virus. In public health, contact tracing is the process of identifying persons who have come into contact with an infected person, and the subsequent collection of information about these contacts (places visited, additional contacts).

Key Issues

- Accurate contact tracing has suffered from underfunded healthcare systems with antiquated technology.

- Public distrust of governments and technologies that have been employed.

- Measures that theoretically work include tracing multiple layers of contacts, investigating outbreak clusters and providing people who are advised to quarantine with safe places to do so and with financial compensation.

- In reality, failures occur at every stage of the process. People get COVID-19 and are unaware, or delay getting tested. Positive results can take days to be confirmed.

- Not everyone who tests positive isolates when instructed to do so; one survey in May found that in the UK, 61% of people who were self-isolating said they'd left their house in the past day.

- People are not always contactable or don't provide details of their close contacts.

Data Surveillance Techniques

- Data surveillance techniques have been used, such as in South Korea to get around the problem of those unwilling to share information (or those who cannot recall).

- Authorities were allowed to use data from credit cards, mobile phones and CCTV to identify movement.

- De-identified case information is made available online.

- In Vietnam, Facebook and Instagram posts along with phone location data was used, but its success was attributed to a "boots on the ground" approach.

- Close contacts were sent to quarantine facilities once identified.

Time Sensitivity

- WHO benchmark for successful tracing is to trace and quarantine 80% of close contacts within 3 days of a confirmed case - but according to some experts, this may not be quick enough.

- One way to succeed is to cast a wider net - to trace the contacts of contacts.

- Another is to trace a new case's contacts as far back as a fortnight before they caught the virus - which has proven to be very effective in Japan. Any new case is more likely to have emerged from a cluster of infections than from one individual, so there's value in going backwards to find out who else was linked to that cluster.

Track and Trace

- The above methods are resource intensive and require "an army of contact tracers", something that many developed countries have struggled with especially during lockdowns.

- This has led to some outsourcing - but there have been struggles between contractors and health authorities.

- In Vietnam, by contrast, less than 1% of cases during the latest outbreak had an unknown source. These cases prompted a swift response, such as a localised lockdown to contain the outbreak.

Trust Deficit

- A survey of attitudes to contact-tracing across 19 countries in August found that nearly three-quarters of respondents would be willing to provide contact information, but rates varied.

- Concerns around data privacy and tracking are partly to blame, while public trust in all sorts of institutions is declining, especially in large urban areas where social cohesion has also declined.

- Some communities hardest hit by COVID-19 have had a long standing distrust of public health authorities, in the US for example.

- Fear of deportation also plays a role in undocumented communities.

- Systems are often hampered by a lack of support for people who fall ill or need to quarantine, too. Providing adequate financial compensation for personal hardship as a result of quarantine could shift people's reluctance to comply.

Technological Assistance

- Smart data-management systems are able to ease the workload of contact-tracers and help countries continue their work with fewer physical personnel.

- In Vietnam, contacts log their health status through a symptom-tracking app, freeing up contact-tracers to interview newly infected individuals. People can also report the movements or symptoms of relatives who might not own a smart device.

- In Australia and the UK, by contrast, health departments are often notified of new cases by fax or phone.

- Contact-tracing apps have met with concerns over privacy, and although they are becoming common — at least 46 countries have developed some form of app — uptake rates remain low.

Data obtained from various sources. References available upon request.