Strengthening Contact Tracing Using Witness Interviewing Techniques

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A single person infected with COVID-19 can unknowingly set off an outbreak simply by going about their normal day-to-day activities. Efficient contact tracing is one of the few weapons against the spread of the virus, along with social distancing and mask-wearing, at least until a higher percentage of the population is vaccinated.

In a recent article in *Perspectives on Psychological Science*, APS Board member Maryanne Garry (University of Waikato, New Zealand) and colleagues explored the impact of human memory on the efficacy of contact tracing and the challenges of making it more efficient.

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> Maryanne Garry (University of Waikato, New Zealand) and colleagues

Contact tracing is a process by which public health officials identify people (contacts) who have been exposed to a person infected with a pathogen or other hazard. By ensuring that people at risk for

infection don’t come into contact with others and targeting treatment toward those most likely to be infected, contact tracing can interrupt transmission among people and slow the spread of an infection, Garry and colleagues explained, citing Eames and Keeling (2003).

However, “contact tracing’s ability to prevent further transmission is only as effective as the quality of the information that people provide,” the researchers noted. That’s where the human-memory element enters into the equation. An infected person must provide contact tracers with complete and accurate information about their contacts and activities both before and after they realized they were sick. Because of contact tracing’s reliance on memory, contact tracers face the same five challenges as people who interview witnesses, Garry and colleagues explained. Witnesses are known to:

- unwittingly omit information (e.g., common daily activities that do not stand out in memory),
- be imprecise (e.g., because it is difficult to recall distance and time with precision),
- make mistakes (because recalling information is a reconstructive process prone to errors—e.g., false memories),
- have vulnerabilities (e.g., the infectious patients identified by health authorities are often sick), and
- sometimes be reluctant to report what they recall (e.g., because they fear punitive consequences).

One way to improve the effectiveness of contact tracing is to treat infected people like important witnesses to the spread of a virus and use an approach informed by research on memory and witness interviewing, Garry and colleagues noted. “[Interviewing] protocols typically provide a structured yet flexible combination of psychologically informed techniques and, broadly speaking, significantly increase the amount of information elicited with little meaningful cost to accuracy.”

Conducting an effective interview, they noted, includes:

- developing a good rapport with the witness;
- managing the witness’s expectations about their role in the interview to help overcome reluctance to report information;

- asking questions and providing instructions that promote detail and accuracy—for example, using a questioning strategy that does not steer witnesses toward any particular response but helps them mentally place themselves in past encounters with contacts; and
- using retrieval-support techniques (e.g., incorporating a timeline or an event history calendar).
- Using these research-based principles, along with technological solutions such as contact-tracing apps, can help reduce the spread of COVID-19. However, “tackling COVID-19 requires an understanding about not only memory but also human behavior itself,” Garry and colleagues wrote. This includes an understanding of how people understand risk, make decisions under uncertainty, and come to believe and spread claims that are not true. Psychological science can help by providing rigorous scientific research into these areas and improving the way science is communicated.

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References

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