

CURRENT UPDATES

Contact Tracing and Quarantine for COVID-19: Challenges in community surveillance

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Citation

Gowda G, Holla R, Ramraj B, Gudegowda KS. Contact Tracing and Quarantine for COVID-19: Challenges in community surveillance. Indian J Comm Health. 2020;32(2-Special Issue):306-308.

Source of Funding: Nil **Conflict of Interest:** None declared

Article Cycle

Received: 07/04/2020; **Revision:** 12/04/2020; **Accepted:** 15/04/2028; **Published:** 20/04/2020

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COVID-19 caused by SARS-coV-2 is a novel corona virus. This began in Wuhan city, China at the end of December 2019 and had spread to the rest of the world. World Health Organization (WHO) declared COVID-19 as Public Health Emergency of International Concern (PHEIC) on 30th Jan 2020 and later declared as pandemic on 11th march 2020. (1) The disease is mainly spread from human to human through small droplets from nose or mouth when a person with COVID-19 coughs or exhales and through the surface contact. Community surveillance plays significant role in prevention of spread of disease. It includes isolation of the positive case, quarantine of the high risk and low risk contacts and community disinfection.(1, 2)

The period of communicability is estimated with the current data to be from 2 days before the onset of symptoms and up to 2 weeks after onset. Hence the initial few asymptomatic days turns out to be crucial period in containing the spread of infection. By the time a COVID-19 patient is diagnosed and isolated, there are quite a number of primary and secondary contacts. Government of India focus has been on Community Surveillance activities which mainly comprises of Contact Tracing and Quarantine.(3, 4)

This article focuses on the various measures taken to trace the contacts, quarantine measures and on the challenges faced.

Contact Tracing and Quarantine operational definitions used in COVID-19 :

Contact tracing is the process of identifying, assessing, and managing people who have been exposed to COVID-19 patient to prevent onward transmission. A COVID-19 contact is a person who is : (3)

- Providing direct care without proper personal protective equipment (PPE) for Covid19 patients;
- Staying in the same close environment of a COVID-19 patient (including workplace, classroom, household, gatherings);
- Traveling together in close proximity (within 1 meter) with a COVID-19 patient in any kind of conveyance within a 14-day period after the onset of symptoms in the case under consideration.
- Contacts can be divided into high risk and low risk contacts (3)

High risk contacts are those who:

- Touched body fluids of the patient (Respiratory tract secretions, blood, vomit, saliva, urine, faeces)
- Had direct physical contact with the body of the patient including physical examination without PPE.
- Touched or cleaned the linens, clothes, or dishes of the patient.
- Lives in the same household as the patient.
- Anyone in close proximity (within 3ft) of the confirmed case without precautions.
- Passenger in close proximity (within 3ft) of a conveyance for more than 6 hours with asymptomatic person who later tested positive for COVID-19.

Low risk contacts are those who:

- Shared the same space of COVID-19 (Same class for school/worked in same room/similar) and not having a high risk exposure
- Travelled in same environment of COVID-19 (bus/train/flight/any mode of transit) but not having a high-risk exposure.

Quarantine is the separation and restriction of movement or activities of persons who are not ill but who are believed to have been exposed to COVID19 cases, for the purpose of preventing transmission of diseases. (4)The duration of the quarantine for COVID19 is 28 days. The contacts have to be quarantined for 14 days either at home/government facility / hotel depending on high risk /low risk and followed up for another 14 days. The purpose of quarantine during the current outbreak is to reduce transmission by:

- Separating contacts of COVID-19 patients from community
- Monitoring contacts for development of sign and symptoms of COVID-19, and
- Segregation of COVID-19 suspects, as early as possible from among other quarantined persons (4)

In contact tracing, the confirmed COVID-19 household is identified and high risk/household contacts traced within 24-48 hours. The contact tracing is usually done by the medical officer and his team of the nearest health care provider. In certain circumstances or for follow-up, phone calls may be made too, as per the rules. Detailed history of the

social networks of the COVID-19 case and travel history during the 14 days preceding the onset of illness is taken. Contacts are monitored for at least 28 days after the last exposure to the case. Case-wise line listing of all exposed contacts will be maintained. They must remain at the prescribed quarantine facility for at least 14 days after the last exposure with the case and followed up for another 14 days at home. The contacts should start monitoring their health and watch for symptoms of fever, cough, and difficulty in breathing within 28 days of the last exposure to the patient, and maintain a list of people they are in contact with, on a daily basis. The asymptomatic high risk contacts are to be tested between 5 to 14 days of exposure to confirmed case. If he or she develops symptoms, as defined, the contact must wear a mask, self-isolate at home, and inform the local health authority.

Challenges:

1. The positive cases are in a state of anxiety and apprehension about the course of the disease and may not be able recall all contacts in last 14 days.
2. Tracing the contacts who have travelled by flight/train/bus is difficult.
3. If the case had visited large gatherings and public places like marriage, market, mall, festival, rally, religious gatherings and others, it is difficult to get list of all people who came in the contact of the case.
4. Rumours spreading misinformation about the Community Surveillance activity for COVID-19 has lead to non-cooperation from community.
5. Fear among health care staff – some instances of attack on health care staff who are involved community surveillance activities instils fear and demotivates from them being involved.
6. Fear of being infected – some of the health care staff are not involved in contact tracing thinking that they may get the disease. This fear is increased by lack of personal protective equipment.
7. Manpower shortage, fatigue are the other factors which are hindering contact tracing.
8. The known contacts may not always reveal their identity because of fear of quarantine, negligence and other factors.

9. There will be psychological fear and panic among the quarantined people which needs to be addressed.
10. The quarantined contacts are not adhering to guidelines to be followed – The attitude of the people towards being quarantined is poor.
11. People being quarantined in the facility are misbehaving with the medical staffs such as verbal abuse and non-cooperation for testing.

Suggested Solutions:

1. Counselling of the confirmed case to ease from the anxiety related to COVID-19.
2. Repeated efforts are needed to identify maximum contacts like tracking the passengers who travelled by flight/train/bus through public announcements print and electronic media.
3. Periodic training of health staff on the changes of technical guidelines related to disease, providing adequate personal protective equipment (PPE), providing security at work place and regular motivation to work are need of the hour.
4. There should be effective coordination between the inter district and inter state officials for effective contact tracing
5. Effective community participation can be achieved, if we involve community leaders, local NGO and religious leaders at the community level for surveillance activities.
6. Use of digital technology like Arogya Sethu can be utilised for contact tracing in community surveillance.
7. Health department Identity Card should be provided to all the people who are involved in the community surveillance activities as it helps to gain the confidence of the community.
8. It is advisable to establish Fever clinic in order to facilitate the screening of suspects at the community level and if required to do Rapid Diagnostic Kit test for COVID-19. Provision of proper facilities to quarantined people to instil positive attitude and confidence.
9. Quarantine people need to be explained on Universal infection control measures, personal protective measures, Do's and

- Don'ts. If needed, referral to be made to psychiatrist /psychologist team.
10. Extensive BCC (behaviour change communication) activities regarding the disease, preventive measures to the public, timely action on the rumours, fake news has to be done for the smooth running of surveillance activities.
11. Regular updates on the disease through available print, electronic and social media.

Summary

COVID-19 caused by SARS-coV-2 is a novel corona virus. World Health Organization (WHO) declared COVID-19 as Public Health Emergency of International Concern (PHEIC) on 30th January 2020 and later declared as pandemic on 11th march 2020. Community surveillance which includes isolation of the positive case, quarantine of the high risk and low risk contacts and community disinfection plays significant role in prevention of spread of disease. The challenges in contact tracing and quarantine by the experts who worked at field and suggested solutions were discussed.

Authors Contribution

All authors have contributed equally.

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