

# Active Monitoring of Persons Exposed to Patients with Confirmed COVID-19 in South of Iran

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## Abstract

*Background:* Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) can be transmitted through direct, indirect, or close contact with infected people by contaminated respiratory droplets or saliva. This study aimed to investigate the epidemiology of coronavirus disease 2019 (COVID-19) and the secondary attack rate (SAR) in the cases' close contact. *Methods:* A total of 431 confirmed COVID-19 patients were randomly selected using systematic random sampling from 15 May to 13 June 2020. The required data were extracted from the CORONALAB database of the Center for Disease Control and Prevention (CDC) at Shiraz University of Medical Sciences. Detection of COVID-19 was performed using Real-Time Polymerase Chain Reaction (RT-PCR) and nasopharyngeal swabs. SAR was also calculated for different groups. *Results:* Among the index cases, 64.27% were male, 24.80% were public sector employees, and 4.87% were admitted to the intensive care unit. In addition, most of them aged 30-39 years. The SAR was 11.56% (95% CI: 9.86% to 13.25%) in the close contacts. Accordingly, the highest SAR was observed among the friends, 19.05% (95% CI: 7.17% to 30.92%), followed by the spouses of COVID-19 cases, 16.67% (95% CI: 10.81% to 22.51%). Furthermore, diabetes (6.03%) and cardiovascular disease (5.1%) were the most common comorbidities among the index cases. *Conclusion:* The findings suggested that the SAR was relatively lower among the close contacts. Considering the familial and non-familial relationships between the index cases and their close contacts were the major causes of disease transmission. Therefore, it is crucial to conduct tracing for COVID-19 contacts in all cases with whom patients have had close contact.

**Keywords:** Close contact, Contact tracing, COVID-19, Secondary attack rate, Transmission