

COVID-19: Home Quarantine is not Recommended for Confirmed and Suspected Patients

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Abstract

The outbreak of the 2019 novel coronavirus (COVID-19) cause huge pressure on health care infrastructure. We recommend that those diagnosed, suspected and in close contact with diagnosed patients should be separately collected and treated in a centralized manner. According to the progress of the disease in the course of treatment, the patients will be further shunted. With standardized procedures in test and treatment, treatment capacity can be improved rapidly with the lowest social costs. We hope that the recommendations we delineate can provide guidance for the future global anti-epidemic.

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Original Manuscript

COVID-19: Home Quarantine is not Recommended for Confirmed and Suspected Patients

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Key words : COVID-19; pandemic; quarantine

Abstract

The outbreak of the 2019 novel coronavirus (COVID-19) cause huge pressure on health care infrastructure. We recommend that those diagnosed, suspected and in close contact with diagnosed patients should be separately collected and treated in a centralized manner. According to the progress of the disease in the course of treatment, the patients will be further shunted. With standardized procedures in test and treatment, treatment capacity can be improved rapidly with the lowest social costs. We hope that the recommendations we delineate can provide guidance for the future global anti-epidemic.

COVID-19 has become a global pandemic, which cause a shortage of hospital beds, health workers, and ventilators ¹. Although it has been reported that many public figures quarantined themselves at home upon a positive test result, Wuhan experience suggests that it should not be recommended. The main reasons are as follows:

(1) COVID-19 is strongly infectious, and home quarantine is not able to completely stop the transmission ². Many family members who take care of the patients have been infected through droplets or indirect contact.

(2) Home quarantine does not fully stop social activities. Suspected and mild patients could still engage in many outdoor activities, including walking, shopping, and chatting. Moreover, patients have strong inclination to seek medical treatments and queue for care at hospitals or clinics, putting many other people's health at risk.

(3) Early treatment and intervention can significantly reduce the rate of severe cases after infection ³.

(4) Home quarantine also relies on the support of community workers, who deliver supplies, conduct medical tests, and provide other door-to-door assistance to patients. This large demand of logistics is difficult to be met. Moreover, due to the lack of protective equipment such masks and gloves, these workers are at risk of being infected.

In order to slow down the spread of the virus, the most urgent task is to effectively quarantine patients, including the suspected one. In addition to implementing social distancing measures ⁴, we advocate the centralized treatment and the quarantine based on the following categories:

a. Confirmed cases of COVID-19 shall be treated centrally. Patients with severe symptoms shall be treated in designated hospitals. For mild patients who do not have access to designated hospitals, temporary facilities such as mobile cabin hospitals

shall be established for uses. Mild patients are defined as those who have self-care ability, those aged between 18 and 65 without underlying medical conditions, and those whose influenza virus nucleic acid test is negative.

b. Suspected cases shall be quarantined centrally. Severe patients shall be admitted to the hospital for treatment. Mild cases shall be quarantined centrally in hotels or other temporary facilities. For patients whose test result is "double negative" but the clinical symptoms are consistent with COVID-19, they shall be managed as suspected patients.

c. Patients with fever who cannot definitively rule out the possibility of COVID-19 shall also be treated as suspected patients, but shall separate them from suspected patients to prevent cross-infection.

d. Some virus carriers are asymptomatic but still infectious. Others are already infectious during the incubation period of asymptomatic. Therefore, those who have had close contacts with confirmed patients should also be centrally quarantined and closely monitored.

Only through central and strict quarantine can it effectively prevent family or community transmission. According to the progress of the disease in the course of treatment, when the disease aggravates to severe and critical stages, patients must be sent to the designated hospital for treatment; the cured can be tested on the spot and can be discharged. With standardized procedures in test and treatment for each category of patient, treatment capacity can be largely improved with the lowest social costs. For a populous country like China, strict and extreme quarantine measures may be the key to control the epidemic. Notably, China has made great progress in fighting the epidemic, and many western countries are approaching an inflection point with the upgraded prevention and treatment methods. However, due to their dense population, poor living environment and shortage of medical resources, Africa and India may face more severe challenges in the global fight against the epidemic^{5,6}. We hope that our recommendations can provide guidance for the future global anti-epidemic.

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Declaration of conflicting interests

The authors declare no competing financial interest.

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