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Practice points

Strategies for qualified triage stations and fever clinics during the outbreak of COVID-2019 in the county hospitals of Western Chongqing

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The outbreak of SARS-CoV-2 infection in China is highly transmissible by airborne droplets and close contact with infected secretions. Essential control of this disease relies on the prompt identification, appropriate risk evaluation, isolation of possible cases and prevention measures for the spread of the virus. The hospital is a high-risk area for nosocomial transmission with inappropriate room setup for triaging and diagnosing febrile patients. Chongqing municipality is adjacent to Hubei (the most affected province), with 576 confirmed cases and 22,700 people with close contact history of the disease in Chongqing. Until now, there has been zero transmission of the infection to any medical staff here. The most vital strategy of minimizing the risk of nosocomial infection starts from the triage stations and fever clinics. Here we report the

strategies for makeshift qualified triage stations and fever clinics during the outbreak of COVID-2019 in the 37 county hospitals of Western Chongqing [1–4].

Setup of a triage station

The triage station was required to be located outside the entrance of the outpatient hall with highlighted signs. This location was chosen for better ventilation and more space, mitigating close contact among people by setting one-metre interval lines for queueing. The security guard and the nurse measured the temperature of the people in line using a mobile infrared thermometer. Tents were pitched for further investigation of suspected patients. One tent was for non-febrile persons and the other was for febrile patients to enter. All people with mobile phones were required to register their identification and other basic information by scanning the QR code next to the queueing line before entry, reducing the time for collecting information, minimizing the risk of potential contamination by touching the pen and paper and also shortening the waiting time. Manual filling-in of the information was available, with the help of nurses, for people who could not complete the task electronically. In the tent, a second temperature measurement using a more precise infrared thermometer was taken, to further assess suspected patients and to minimize the risk of contact transmission to medical staff. Routine hand sanitizers were ready to be used at any time. Trained physicians and nurses wearing personal protective equipment worked together for initial assessment and the differential diagnosis of the fever. A simple, but crucial, questionnaire was designed to assist in diagnosing patients (Figure 1 and Supplementary Figure S1) [3,6].

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Figure 1. The triage station area. One-metre interval line with QR code.

General fever clinic and specific fever clinic for the suspected

After assessment, patients with fever or cold-like symptoms with epidemiological history or suspected epidemiological history were referred to the 'COVID-2019 fever clinic'; other fever patients without epidemiological history were referred to the 'general fever clinic'. At the clinics the suspected febrile patient underwent detailed history taking, physical examination, blood and other specimen collection and imaging. Usually, nasopharyngeal specimens were tested for all of the febrile patients, regardless of epidemiological links, to ensure that cases were not mis-assigned at triage. Only trained staff were engaged in specimen collection to guarantee the quality of specimens. An extra backup room was kept to accommodate any overflow of febrile patients. In addition, routine use of disinfectant wipes, disinfectant spray, ultraviolet light and air disinfecting machines ensured timely cleaning and sterilization. Hospitals were either redesigned and remodelled old buildings or quickly set-up temporary tents or barrack-like rooms at an open area, clearly dividing as two passages (one is for medical staff and the other is for patients) and the three regions (cleaning, contaminated and buffer area) of standard fever clinic, dramatically reducing the risks of hospital cross-infection.

Measures to limit contact between patients included limit-lines for access to the fever clinic. Also, specific patient routes within the hospital, and a specific computed tomography scanner, were identified for suspected patients. An emergency call was made to the radiology department to ensure that it was prepared to receive the patient, and to notify the technician to wear personal protective equipment.

After imaging was completed, 1000 mg/L chloride-containing disinfectant with 30 min ventilation time, was used prior to the next patient being seen. If an independent laboratory, pharmacy and cashier were not available in the fever clinic, a team of trained staff was designated to deliver the specimen and medication, and to obtain mobile self-service payment. However, all fees were paid by the government once SARS-CoV-2 polymerase chain reaction testing was positive [3,5,6].

The importance of a triage station and fever clinic can not be overemphasized during the contagious disease outbreak in terms of timely patient management and minimizing the risk of nosocomial transmission. Thus, thanks to qualified triage stations and fever clinics together with community isolation, quarantine, medical support, COVID-2019 has been rapidly and well controlled in all of the counties in Western Chongqing [7].

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Conflict of interest statement

None.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.jhin.2020.03.021>.

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