

## LETTER

## Important role of emergency department doctors after the outbreak of COVID-19 in China

Dear Editor,

Up to 20:40 14 April 2020, there have been 50 008 diagnosed COVID-19 cases in Wuhan. Among them, 2579 patients died. The number of COVID-19 cases in Wuhan increased from 4100 to 49 122 during February and became stable in March, and about 20% of them required intensive care unit (ICU) admission. More than 10 hospitals were newly built after February 2020 for admission of all the patients. Unfortunately, there was a shortage of ICU beds and medical staff in Wuhan, due to the large number of patients to be covered for ICU care. Accordingly, many of the general wards were quickly transformed to ICUs. Over 30 000 medical staff including about 3000 physicians and nurses of ED from different cities in China have come to Wuhan to take care of the patients infected by COVID-19.

The medical team from Second Affiliated Hospital, Zhejiang University School of Medicine (Zhejiang province, 600 miles away from Wuhan), consisting of 120 nurses and 42 doctors, took over one makeshift ICU in Wuhan on 14 February 2020. Among them were four physicians and five nurses from the ED who performed the day-to-day management of patients with COVID-19, including managing ventilators. The ED of teaching hospital in China usually contains an

emergency ICU and thus ED physicians have the core skills of emergency and critical care medicine as managing ventilator, continuous renal replacement therapy (CRRT), ECMO (extracorporeal membrane oxygenation), ultrasound assessment and tracheotomy, which are important for critical patients with COVID-19. This allowed the ED physicians to fill the role as intensivists without the need for additional training. As of 15 March 2020, 72 patients had been treated in this makeshift ICU, and 15 patients of them had mechanical ventilation.

Thus, ED personnel in our hospital had four different roles after the outbreak of COVID-19: (1) Identifying patients with COVID-19 in fever clinics by screening and administering the test for suspected patients with COVID-19; (2) Assigning patients with COVID-19 to inpatient wards and providing care for mild and severe patients with COVID-19 in hospital; (3) Joining the medical team to support Wuhan, and acting as the leaders in this team to care for the critically ill patients with COVID-19 and (4) Continue standard emergency work like trauma, acute poisoning and so forth. It has been a big challenge for ED physicians and nurses to handle so many jobs in such an environment. Unfortunately, there have been over 1000 doctors infected in hospital since the epidemic in China.

In the pandemic of COVID-19, a large number of patients will need critical care, but patients without COVID-19 will require the treatment in ED at the same time. ED physicians will play different roles to complete different tasks. The experience in China shows that ED

physicians are the most appropriate doctors in any medical team caring for the severe patients with COVID-19 as they are able to deliver critical care in a high-pressure environment.

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