



## Letter to Editor

## Asian Pacific Journal of Tropical Medicine

journal homepage: [www.apjtm.org](http://www.apjtm.org)

doi: 10.4103/1995–7645.281615

Impact Factor: 1.77

## Coronavirus disease 2019 (COVID–19) outbreak: Strengthening the treatment component in health care establishments to minimize case fatality

Saurabh RamBihariLal Shrivastava<sup>1✉</sup>, Prateek Saurabh Shrivastava<sup>2</sup><sup>1</sup>Member of the Medical Education Unit and Institute Research Council, Department of Community Medicine, Shri Sathya Sai Medical College & Research Institute, Sri Balaji Vidyapeeth (SBV)–Deemed to be University, Ammapettai, Nellikuppam, Chengalpet District, Tamil Nadu–603108<sup>2</sup>Department of Community Medicine, Shri Sathya Sai Medical College & Research Institute, Sri Balaji Vidyapeeth (SBV)–Deemed to be University, Ammapettai, Nellikuppam, Chengalpet District, Tamil Nadu–603108

The coronavirus disease-2019 (COVID-19) outbreak has been declared as a pandemic by the World Health Organization (WHO) owing to its caseload and the pace with which it has spread to different nations[1]. In fact, the available global estimates depict that till 16 March 2020, a total of 167 511 cases of the disease have been detected, of which 48.4% cases are from China alone[2]. The remaining 86 434 cases have been reported from 151 different nations and territories[2].

However, the most alarming figure has been the 6 606 deaths, including 3 388 deaths outside the Chinese mainland, which have been attributed to the infections and it clearly signifies the need to improve our preparedness level in terms of surveillance, laboratory detection, infection control, treatment and prevention[2,3]. Till 11 February 2020, the analysis of the caseload and reported deaths in the Chinese mainland has indicated an overall case fatality rate of 2.3%, which is higher among people older than 80 years (14.8%), in males (2.8%) and retired persons (5.1%)[4]. Among health care personnel, a case fatality rate of 0.3% has been reported[4].

Furthermore, the highest case fatality rate has been reported in Hubei province (2.9%), among those who have pre-existing cardiovascular morbidities (10.5%) and among those who became symptomatic in the period of 1-10 January 2020 (15.6%)[4].

Given the fact is that the causative virus is a novel virus, the epidemiological attributes, modes of transmission, prevention and treatment of COVID-19 still remain to be fully defined[1]. As the research in all these domains is at full-pace, we cannot allow the detected cases to succumb to the infection and have to provide them with the best possible clinical management based on the guidelines recommended for severe acute respiratory infections[3,5]. The WHO has released interim guidelines to enable the provision of safe, effective and timely management of patients presenting with the disease or with severe forms of acute respiratory illness[5].

The case definition for a suspect of COVID-19 infection includes

a patient with acute respiratory illness (ARI) and with no other etiology to explain the clinical presentation and a history of travel to or residence in a country/area or territory reporting local transmission or a patient with ARI and who is in contact with a confirmed or probable COVID-19 case in the last 14 days prior to onset of symptoms or a patient with severe ARI and who essentially requires hospitalization, with no other etiology which can justify the clinical presentation[2,5].

Upon identification of the probable cases, the next most important step is to implement standard infection prevention and control measures right from the entry of the patient in the hospital[3]. These measures essentially include hand hygiene, use of personal protective equipment to avoid any contact with patient blood or body fluids, disposal of the contaminated substances, disinfection and clean environment. The ultimate aim is to avoid any droplet or contact exposure/transmission to the other personnel and patients should be given a mask for the same[3]. The prevention strategies should go hand in hand with administering supportive therapy (*viz.* oxygen to patients in distress, anti-microbials, *etc.*) and monitoring for clinical progression[5]. This therapy should be decided based on the other comorbid illnesses and as far as possible systemic steroids should not be prescribed, unless indicated[5].

For confirmation of the diagnosis, all the probable cases should be

✉To whom correspondence may be addressed. E-mail: [drshrishri2008@gmail.com](mailto:drshrishri2008@gmail.com)

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-Non Commercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

**For reprints contact:** [reprints@medknow.com](mailto:reprints@medknow.com)

©2020 Asian Pacific Journal of Tropical Medicine Produced by Wolters Kluwer-Medknow. All rights reserved.

**How to cite this article:** Shrivastava SR, Shrivastava PS. Corona virus disease 2019 outbreak: Strengthening the treatment component in health care establishments to minimize case fatality. Asian Pac J Trop Med 2020; 13(5): 237-238.

**Article history:** Received 18 February 2020 Revision 19 February 2020

Accepted 26 February 2020 Update 17 March 2020

Available online 31 March 2020

subjected to blood culture (for identification of bacteria responsible for pneumonia and sepsis) and specimens from both upper and lower respiratory tracts for detection of virus by reverse transcriptase-polymerase chain reaction[5]. The specimens from upper and lower respiratory tracts should be collected every 2–4 d till 2 consecutive negative results are obtained 24 h apart in clinically recovered patients. The admitted patients have to be managed for the potential complications (*viz.* respiratory failure, septic shock, acute respiratory distress syndrome, *etc.*), which are life-threatening. In addition, it is vital to minimize the duration of invasive mechanical ventilation and also reduce the occurrence of ventilator-attributed pneumonia, venous thromboembolism, pressure or stress ulcers, catheter-related blood infections, *etc*[5]. All these measures have to be taken to minimize the case fatality rate and also to prevent the transmission of infection to the health care personnel.

In conclusion, prevention of the acquisition of the COVID-19 is the mainstay to contain the spread of the outbreak, but at the same time providing appropriate, safe and effective treatment is required to reduce case fatality rates and minimize the fear among the community and thus it needs to be strengthened and strictly followed in all health care establishments.

### Conflict of interest statement

The authors declare that there are no conflicts of interest.

### Authors' contributions

SRS contributed in the conception or design of the work, drafting

of the work, approval of the final version of the manuscript, and agreed for all aspects of the work. PSS contributed in the literature review, revision of the manuscript for important intellectual content, approval of the final version of the manuscript, and agreed for all aspects of the work.

### References

- [1] World Health Organization. *Statement on the second meeting of the International Health Regulations (2005) Emergency Committee regarding the outbreak of novel coronavirus (2019-nCoV)*. 2020. [Online]. Available from: [https://www.who.int/news-room/detail/30-01-2020-statement-on-the-second-meeting-of-the-international-health-regulations-\(2005\)-emergency-committee-regarding-the-outbreak-of-novel-coronavirus-\(2019-ncov\)](https://www.who.int/news-room/detail/30-01-2020-statement-on-the-second-meeting-of-the-international-health-regulations-(2005)-emergency-committee-regarding-the-outbreak-of-novel-coronavirus-(2019-ncov)) [Accessed on 18 Feb 2020].
- [2] World Health Organization. *Coronavirus disease 2019 (COVID-19) situation report-56*. 2020. [Online]. Available from: [https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200316-sitrep-56-covid-19.pdf?sfvrsn=9fda7db2\\_2](https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200316-sitrep-56-covid-19.pdf?sfvrsn=9fda7db2_2) [Accessed on 17 Mar 2020].
- [3] World Health Organization. *2019 novel coronavirus (2019-nCoV): Strategic preparedness and response plan*. Geneva: WHO press; 2020, p. 1-8.
- [4] The Novel Coronavirus Pneumonia Emergency Response Epidemiology Team. The epidemiological characteristics of an outbreak of 2019 novel coronavirus diseases (COVID-19)-China, 2020. *Zhonghua Liu Xing Bing Xue Za Zhi* 2020; **41**: 145-151.
- [5] World Health Organization. *Clinical management of severe acute respiratory infection when novel coronavirus (2019-nCoV) infection is suspected-Interim guidance*. Geneva: WHO press; 2020, p. 1-8.