Ann Mil Health Sci Res. 2020 March; 18(1):e104270. doi: 10.5812/amh.104270.

Published online 2020 May 4. **Letter**

Association Between Age, Sex, and Pre-Existing Health Conditions and Death of COVID-19 Patients

Faisal Muhammad [1, 2, *]

[1]Department of Public Health, Faculty of Allied Health Sciences, Daffodil International University, Dhaka, Bangladesh
[2]Department of Social Work, School of Liberal Arts and Social Sciences, University of Information Technology and Sciences, Dhaka, Bangladesh

[*]*Corresponding author*: Department of Public Health, Daffodil International University, Mirpur Road Dhanmondi, Dhaka, Bangladesh. Email: fokkanya@yahoo.com

Received 2020 April 27; **Accepted** 2020 April 28.

Keywords: COVID-19, Pandemic, Global Health, Pre-Existing Health Conditions

Dear Editor,

The early report of China's National Health Commission (NHC) revealed that about four-fifths (80.0%) of COVID-19 patients who died were above 60 years of age, and three-fourths (75.0%) of them had pre-existing health conditions. The World Health Organization (WHO) also reported that 71.0% of the cases outside China were male (1). A study of hospitalized COVID-19 patients found that the median age was 56 years, and more than half (54.3%) of patients were men (2). Several recent studies reported that older people and people with pre-existing medical conditions such as diabetes, asthma, and heart diseases (CHD, CAD, heart failure, etc.) were found to be more vulnerable and at high risk of getting seriously ill. However, people of all ages can be infected. To protect vulnerable populations, the Centers for Disease Control and Prevention (CDC) acknowledged being at risk due to pre-existing health conditions (3).

It is essential to understand that having a risk factor(s) for COVID-19 does not mean that a person may become seriously ill. However, the absence of a risk factor(s) does not mean that a person is automatically safe. According to the CDC, eight of every 10 COVID-19 deaths in the United States occurred in adults aged 65 or older. According to a study among hospitalized COVID-19 patients (n = 187), nearly three-tenths (28.0%) experienced a coronary event while in hospital, those who did were nearly twice as likely to die compared to those with no heart event (4). Another study conducted in China among COVID-19 patients revealed that diabetes was associated with a three-fold increase in the risk of death compared to people without diabetes (5). Other researchers opined that higher rates of obesity might be the reason for the increased mortality rate in Italy (6). As a new disease, COVID-19 is complicated even for scientists. However, social distancing and personal hygiene are the best ways to reduce the risk of being infected with coronavirus diseases.

Footnotes

Authors' Contribution: The whole work was done by Faisal Muhammad.

Conflict of Interests: The author has no conflict of interest.

Funding/Support: None.

References

1. World Health Organization. *Coronavirus: Window of opportunity to act: BBC-Feb 4, 2020*. 2020, [cited 2020 Apr 21]. Available from: https://www.bbc.com/news/world-asia-china-51368873.
2. Wang D, Hu B, Hu C, Zhu F, Liu X, Zhang J, et al. Clinical characteristics of 138 hospitalized patients with 2019 novel coronavirus-infected pneumonia in Wuhan, China. *JAMA*. 2020. doi: 10.1001/jama.2020.1585. [PubMed: 32031570]. [PubMed Central: PMC7042881].
3. Holshue ML, DeBolt C, Lindquist S, Lofy KH, Wiesman J, Bruce H, et al. First case of 2019 novel coronavirus in the United States. *N Engl J Med*. 2020;**382**(10):929-36. doi: 10.1056/NEJMoa2001191. [PubMed: 32004427]. [PubMed Central: PMC7092802].
4. Guo T, Fan Y, Chen M, Wu X, Zhang L, He T, et al. Cardiovascular implications of fatal outcomes of patients with coronavirus disease 2019 (COVID-19). *JAMA Cardiol*. 2020. doi: 10.1001/jamacardio.2020.1017. [PubMed: 32219356]. [PubMed Central: PMC7101506].
5. Wu Z, McGoogan JM. Characteristics of and important lessons from the coronavirus disease 2019 (COVID-19) outbreak in China: Summary of a report of 72314 cases from the Chinese Center for Disease Control and Prevention. *JAMA*. 2020. doi: 10.1001/jama.2020.2648. [PubMed: 32091533].
6. Dietz W, Santos-Burgoa C. Obesity and its implications for COVID-19 MOrtality. *Obesity (Silver Spring)*. 2020. doi: 10.1002/oby.22818. [PubMed: 32237206].