Editorial:

Combating COVID-19: A Coordinated Efforts of Healthcare Providers and Policy Makers with Global Participation Are Needed to Achieve the Desired Goals.

Mainul Haque

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The pandemic of Coronavirus disease 2019 (COVID-19) has already appeared the highest deadly human misery with death toll after the second world war[1]. The total global death toll till June 12, 2020, is 416,430 (Figure 1)[2]. It has disrupted millions of people's lives with significant financial loss, in the meantime, the pandemic may continue for the next few years[3-5]. COVID-19 is a respiratory viral infectious disease with previously unknown etiology. It often causes a severe acute respiratory syndrome that first outbreak appeared in the city of Wuhan in Hubei Province, China, in December 2019[6, 7]. Bronchoalveolar lavage fluid of COVID-19 patients, analyzed through metagenomic RNA next-generation sequencing[8], identified a new RNA virus strain belongs to the family *Coronaviridae*, which is labeled as 'WH-Human 1' coronavirus[9]. The phylogenetic analysis assesses the sequence of a typical gene consist of the evolutionary relationship of species. The whole viral genome sequencing revealed that COVID-19 possesses 29,903 nucleotides and most closely correlated (89.1% nucleotide similarity) with Severe Acute Respiratory Syndrome (SARS) like coronaviruses[10].

The droplet infections remain as the primary mode of transmission for almost all respiratory infectious diseases. The droplet units with >5-10 µm, and <5µm diameter is considered as respiratory droplets and droplet nuclei, respectively[11, 12]. Thereby, the current research shreds of evidence revealed that COVID-19 predominantly transmitted through respiratory droplets and physical contact routes[13, 14]. The first and foremost way of transmission COVID-19 virus primarily through respiratory salivary droplets or nasal discharge from infected individuals

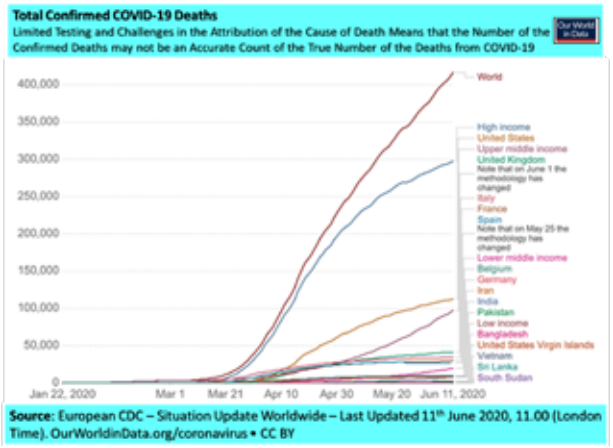

Figure 1: Illustrating the death rate around the globe with selected countries.

during coughing or sneezing[15]. Consequently, good respiratory etiquette practice is an essential issue for the prevention of the global pandemic of COVID-19[16, 17]. Subsequently, the World Health Organization (WHO) promotes social distancing, frequent hand-wash, regular use of face mask for the prevention of the global pandemic[18-20]. To date, no specific vaccines or pharmacological interventions for COVID-19 are available[21], and "the COVID-19 pandemic represents the greatest global public health crisis of this generation and, potentially, since the pandemic influenza outbreak of 1918"[21].

Several studies have reported that the incubation time of COVID-19 from infection to appearance of symptoms and signs takes five to six days [5.2 days (95% confidence interval [CI], 4.1 to 7.0)][22], and the average range of one-two weeks[22-25]. The number of days from the earliest symptom to passing away was 14.0 (range 6-41) days, and it leans towards to be

Correspondence to: Mainul Haque, Professor of the Unit of Pharmacology, Faculty of Medicine and Defence Health, Universiti Pertahanan Nasional Malaysia (National Defence University of Malaysia), Kem Sungai Besi, 57000 Kuala Lumpur, Malaysia.
Email: runurono@gmail.com Orcid ID : http://orcid.org/0000-0002-6124-7993

petite amid COVID-19 patients' 70 years and above [11.5 (range 6-19) days] than those were below 70 years [20 (range 10-41) days; *P*=0.033]. [26] The most typical symptoms of COVID-19 include fever (98%), cough (76%), myalgia, or fatigue (44%), followed by sputum production (28%), headache (8%), hemoptysis (5%), and diarrhea (3%). Around 55% of patients develop dyspnea 8·0 days [IQR 5·0-13·0]), and 63% had lymphopenia[27]. Another study revealed that 58% and 39.9% of patients develop prolonged prothrombin time [13.0 seconds (Interquartile Range (IQR), 12.3-13.70)], and elevated lactate dehydrogenase [261 U/L (IQR, 182-403)], respectively[28]. Chest computed tomographic (CT) scans revealed abnormal features such as serum SARS-CoV-2 nucleic acid (RNAemia), acute respiratory distress syndrome, severe cardiac damage, and two-sided patchy shadows or ground-glass opacities in the lungs that led to death[28, 29]. Noticeable RNAemia in COVID-19 patients were correlated with high-level Interleukin 6 (IL-6) and poor clinical outcomes. As high-level IL-6 often involved in a more massive cytokine storm that could deteriorate clinical outcomes. Thereby, IL-6 denotes excessive inflammatory responses, and therapeutic intervention to address this area may possess potential benefits among COVID-19 patients[30-32].

The WHO demarcated primary health care (PHC) "is a whole-of-society approach to health and wellbeing centered on the needs and preferences of individuals, families, and communities. It addresses the broader determinants of health and focuses on the comprehensive and interrelated aspects of physical, mental, and social health and wellbeing"[33]. Additionally, PHC delivers whole-person health care needs during the lifespan, not to treat some particular diseases. PHC makes certain people obtain comprehensive healthcare – extending from promotion and prevention to treatment, rehabilitation, and palliative care - as close as practicable to the ordinary public's run-of-the-mill environment[33, 34]. Covid-19 – the global pandemic has toppled the current social order and intensely transformed everyday lifestyle around the globe. PHC Performance Initiative think-tank believes "strong PHC delivers a critical first line of defense and response to keep people safe and healthy. PHC systems can help diagnose, track, and stop the spread of local outbreaks while providing essential health services to communities" [35]. The PHC can serve and provide over 80% of people's health needs of any age and stage of life. Consequently, those countries heavily invested in PHC are much better equipped to handle the current global pandemic. It is for instance, Taiwan, after the 2003 SARS outbreak, heavily devoted and financed in its PHC and for development of PHC health professionals, which have faith in community care systems as first-line combatants to fight against unexpected healthcare disasters[35, 36]. After that, multiple research studies again emphasized on strengthening the PHC program all over the globe, as an urgent issue to deal with such pandemic as COVID-19[37-39]. Earlier studies from the USA reported that around 14.2-24.7 million the Americans developed influenza during 2001-2003. Thereby, there were nearly 31.4 million patients taken to outpatient hospital service for influenza-related complications, and 334,185 needed hospitalization and 41,008 patients passed away[40-43]. Two British studies have reported that there had been more than 1500 extra patients with outpatient visits to primary care services per 100,000 Britishers in the course of the peak week of the influenza-pandemic[44, 45]. PHC system extend the healthcare service irrespective of race, ethnicity, major or minority community, financial status, living in an urban or rural area, uninsured, and underprivileged equally, and promote equity[46-49].

The current global pandemic COVID-19 is exposing the limitation of the existing healthcare system around the planet, despite enormous scientific progress in medical science in the last 100 years[50]. Covid-19 goes beyond routine medical care and needs the participation of all the stakeholders of the healthcare system further than medical care professionals of clinical importance[51-52]. A befitting need-based health policy planning according to the context of a country, and consequently, implementation of such strategies remain as an essential step to follow[50]. PHC is a comprehensive program that involves all the stakeholders, along with community participation [34, 53-55]. At this point development of healthcare policy planning should be based on PHC probably the best available approach for combatting against the current pandemic and to face any future health disaster.

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