

## Editorial

### COVID 19 Pandemic: What is it Teaching?

Pradeep T S

When a disease occurring in unusually very large number with extensive geographic spread affecting an exceptionally high fraction of the population and also crossing the ocean barrier then it's called as Pandemic. World has witnessed many such hard ships in form of Plague, Spanish Flu, Polio and Influenza. At such times it has substantiated that health of the people of the nation is of paramount importance and human life is the most valuable asset of the country. From December 2019 there has been a buzz word, most searched word on internet and most prated word on various media platforms which is CORONA Virus so called COVID -19. Towards the end of 2019, World Health Organization (WHO) declared this newly mooted zoonotic viral pathogen as Public Health Emergency of International concern as it had created a worldwide outbreak. The term Public Health Emergency of International Concern is "an extraordinary event which constitute a public health risk to other States through the international spread of disease and potentially require a coordinated international response.<sup>1</sup> The outbreak has showed no signs of slowing down despite much appreciated global containment and quarantine efforts by various nations.<sup>2</sup> Spanish Flu so called Mother of all pandemics had killed 50 million people all over the world in 1918-19 had scorned public health preparedness. Even after so many researches happening all over world, many unanswered queries have been repudiated regarding Spanish Flu. First being why there was two peaks of this flu pandemic, second why there was simultaneous infection of humans and swine during the outbreak and more important viral genome and its pathogenicity.<sup>3</sup> Have we learnt anything from this ponderous drill remains unanswered till date.

COVID-19 is an RNA virus having an inherent feature of a high mutation rate because of its genome-encoded exo-nuclease providing the possibility to adapt itself and efficiently transmit from person to person and possibly become more virulent. Through various accessible evidences say COVID-19 is transmitted through droplets among which 81% of cases are mild and self limiting. The

case fatality rate (CFR) which is killing power of the disease ranges at around 3%–5% however it has showed through various pronouncements of Corona pandemic amidst the world that it increases exponentially in the elderly possibly due to comorbidities and a weaker immune system. As for today 2.4 is the Basic reproduction number ( $R_0$ ) which is a measure of average number of new infections generated from a single infected person.<sup>4</sup> These numbers are expected to change as the pandemic progresses through different stages and according to the country's level of preparedness which has accentuated the significance of public health measures more on preventive dimensions than curative.<sup>5</sup> Speculated Carrier Transmission of COVID-19 when someone is asymptomatic is being discussed, as there are instances of transmission from asymptomatic carriers at various countries of the world making this pandemic a bigger juggernaut.

No effective antiviral treatment or any kind of vaccine for COVID-19 has been discovered or available as of now pitching only the preventive measures can actually save the world. Effortless measures like *hand hygiene* which is washing hands with antimicrobial soap and water, alcohol-based hand rub, or antiseptic hand wash, *respiratory etiquette* like shielding mouth and nose with a tissue paper when coughing or sneezing and disposing the used tissue paper safely, masks for symptomatic individuals help to prevent spread of the virus. Droplet Precautions for healthcare professionals need to be observed for wearing a surgical or procedure mask like N95 or Filtering Face Piece (FFP) for close contact and much spoken *social distancing* means keeping space between oneself and other people outside along with banning of mass gatherings, school and university closure, workplace closure with an option for work from home. Public quarantine measure has been undertaken being very effective in checking the spread of disease but most of these measures needs sustainability and has a special prize to be paid especially perturbing economic affairs of the country. Additionally, it discusses the challenges and containment measures adopted by India to restrict the spread of COVID-19 virus

like 'Janta Curfew'. Social and physical distancing measures aim to decelerate the spread of disease by stopping string of transmission of COVID-19 and thwarting new ones from appearing. These measures secure physical distance of at least one metre between people, and minimizing contact with contaminated surfaces, while encouraging and sustaining virtual social connection within families and communities <sup>6,7</sup>

Even with the best research papers published regarding COVID-19 till date, on-going researches are throwing many new pain-points as the COVID-19 is showing no evidence of tapering and possible second wave not to be overlooked at this stage as recent study has showed reactivation of virus in those who had COVID-19 swab status initially . The current novel outbreak of COVID-19 has affirmed us that health systems are gratuitously strained, sustaining the health system will be an uphill task during this pandemic and also vulnerable public health infrastructure. Country like United States of America (U.S.A.) could show the unprecedented pace of the public health reaction to COVID-19 only because of prior investments in public health preparedness. <sup>8</sup> Country like India need to escalate pace and unravel the challenges of current and future health threats by expanding competence of public health laboratory capacity and alertness to virological threats, investing more on public health professionals, sustaining our capacity to rapidly respond to outbreaks at their source of origin by ongoing surveillance like Integrated Disease Surveillance project (IDSP) and assure a strong global and domestic preparedness capacity with proper protocols accompanied by proper intervention tools to break the chain of transmission. The Corona pandemic has showed us that planet does need more corroboration of various sectors like health, social, economic, environmental, and also problems that arise when we fail to invest adequately in global health security.<sup>9</sup> It is vital for all countries to appropriately invest in their health sector. The current pandemic has showed importance of health of the community as a biggest possession to the national economy even though proportion of GDP (Gross Domestic Product) assigned for health infrastructure being very meagre in many countries including India. <sup>10</sup> India had set an ambitious goal of raising public health standards by disbursing 2.5 per cent of GDP by 2025. With peaking incidence of this Corona epidemic, it is hardly comforting as India's track record of consistently missing the goals set previously in this regard especially Millennium Development goals where India had only crossed the half way mark in spite of every effort. <sup>11</sup>

World today has witnessed Political will to control this wild fire spread of virus among various countries. The demand of the hour is strengthening global networks against emergence of pandemic by an unbiased, honest, prompt reporting agency as many questions have been raised on specialized agency of the United Nations accountable for multinational public health which has performed extremely well all these years. There are various challenges even after this pandemic leaves the world for good. The first challenge is how we can intervene even before pathogen reaches general public hence preventing the community spread. Second being substantial and sustained investments on researches for vaccines and drugs effective on various other zoonotic virus which have received least interest.<sup>12</sup> The greatest challenge of all is not to have any such pandemics in future and the approach needs to be standardized after various countries come into common understanding with common protocols to be followed at local platforms, national platforms and also international platforms with separate funding for pandemic preparedness.

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### **\*Corresponding Author**

#### **Dr. Pradeep T S**

Assistant Professor,  
Department of Community Medicine,  
Sri Devaraj Urs Medical Collage,  
Sri Devaraj Urs Academy of Higher Education and  
Research,  
Tamaka, Kolar -563101, Karnataka, India.  
Mobile No : 9538075331  
E-mail: dr.pradeep.ts@gmail.com