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Impact of COVID-19 on Community Health

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Abstract

Health is a prerequisite for the prosperity of people and community health has to be a priority for the policymakers of any nation. Pandemics cripple the health sector and are considered global disasters. Coronavirus disease 2019 (COVID-19) is the latest pandemic that had serious repercussions for global economy and caused chaos in the healthcare sector. It was first identified in Wuhan City of China in December 2019, after which, the disease spread throughout Hubei Province and other parts of China. After causing significant morbidity and mortality in China, by February 2020, COVID-19 had spread to numerous other countries, including the USA, Italy, Spain, Germany, France, and Iran . As of April 18, 2020, the pandemic had caused widespread panic in 198 countries, infecting 2.4 million people and causing 0.15 million deaths across the world. This paper tends to take a fresh look at some of the key features of this calamity which is expected to improve the mitigation strategy for future occurrences of such disasters.

Introduction:

Pandemics are not new to human civilization and are known to have been occurring since ancient times. The biblical descriptions of plague in Egypt are found in the book of Exodus and are amongst the earliest reports of a pandemic. However, the first scientifically backed historical evidence of plague is suggested by a recent study (Spyrou et al, 2018) on *Yersinia pestis* genomes from Late Bronze Age (3800 BP). There have been several waves of Covid-19 resulting in very high mortality across the globe. Every new wave of the pandemic resulted

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from the emergence of a novel mutant and wreaked havoc in many countries. With each new wave of coronavirus disease 2019 (COVID-19), efforts to mitigate the impact of the pandemic on communities were reassessed and reviewed but there have been varying outcomes in different parts of the world. Previous studies have shown that the pandemic has contributed to increases in symptoms of depression and anxiety and substance use, and a reduction in subjective well-being - with some groups more impacted than others (Chen et al, 2020; Huang et al, 2020). Furthermore, longitudinal tracking of these symptoms has shown that these changes have remained relatively stable over time, with some rebound in well-being. One way to track recovery from the mental health and well-being consequences of the pandemic is through existing Community Health Needs Assessment (CHNA) infrastructure.

Methodology Used & Key Observations:

The review was conducted and reported according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) Statement. We searched for the keywords 'COVID-19' AND 'community health' in electronic databases, i.e., PubMed, MEDLINE and EMBASE. All research articles published in English during the period between January 1, to May 10, 2021, describing quarantine, hand hygiene, and community health of COVID-19 were included. We have initially screened the titles of all the studies yielded in the systematic search and of out these relevant articles were selected to review the abstracts and full texts. The included studies were either based on nationally representative data or single or multi-centre studies.

The search generated 3,554 articles; of which 3,102 duplicates and review articles were excluded; relevant titles and/or abstracts underwent a detailed evaluation, and further 441 articles were eliminated from the analysis leaving finally 11 original studies that met the inclusion criteria

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Of the included studies, 10 were modelling studies based on data from China, South Korea, UK (United Kingdom), and a cruise ship.21-30 There are no observational studies on quarantine of COVID-19. Median study duration was with IQR (0.5-1.5). The modelling studies from China, UK, and the cruise ship have stressed the isolation of confirmed COVID-19 cases and highlighted the effectiveness of quarantine of individuals who were in close contact with the positive case. The outcome measures included: quarantine; case isolation; voluntary quarantine; social distancing; physical personal protection measures (such as handwashing with soap, water, ash, soil gel); towels soaked in chemicals; personal masks (N95, medical or homemade masks), community engagement; dealing with misinformation (fake news); and strategic planning.

To the best of our knowledge, the evidence based on the impact of COVID-19 on community health in this systematic review is limited because of the paucity of relevant studies. Very low-level evidence suggest that early implementation of the quarantine measures results in lesser disease transmission and mortality and greater cost savings as it reduces the need to quarantine travellers from abroad. Generally, it is difficult to identify and isolate all infected cases as some remains unidentified due to asymptomatic infections, so early tracing of contacts of cases under quarantine may considerably reduce the disease transmission. Earlier pooled case-control studies on SARS infection have demonstrated that low-cost preventive measures for transmission such as isolation, face mask and general hygiene are effective to contain respiratory virus epidemics (Maunders et al, 2006). Similarly, there is lesser evidence of the superiority and effectiveness of the N95 respirator in comparison to simple surgical masks to prevent infection. The incubation period of COVID19 ranges from 2-14 days, and asymptomatic infected individuals can transmit the virus during this period. Therefore, community awareness for infection prevention, especially for vulnerable population is of prime

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concern. People at risk should avoid public transport, crowded places, contact with sick individuals, and should maintain appropriate social distancing and high personal hygiene standards.

Notably, urban populations had increased risk of COVID-19 outbreak due to high population density, which possesses a challenge to maintain social distancing. In addition, disparities in health-care services have negative consequences on the well-being of those living mainly in rural areas with generally poorer hygiene practices and lower literacy. There is a growing urgency for reliable information when the number of positive cases is increasing, and the implementation of a national lock-down makes the situation vulnerable for 'infodemic' of misinformation and rumours (so-called 'fake news') amongst the population. The spread of fake news has been a major concern for nations as well as for WHO and other international agencies (Cinelli et al, 2020).

Community participation in pandemic response, as identified in several international health guidelines, should incorporate insights from diverse communities as the central part of the co-production of health (Chen et al, 2020; Cascella et al, 2020). Therefore, health professionals should work along with communities to develop plans for evaluation of appropriate health promotion and health-care services (Cavallo et al, 2020). Unfortunately, pandemic responses are general instructions from the governments towards individuals to follow, which involves minimal community inputs. Previous experiences of HIV (Human Immunodeficiency Virus) suggest that better uptake of HIV testing and counselling, advocating for cheaper drugs, access to treatment, and minimizing social stigma are effective strategies for responding to an epidemic.

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Simple and low-cost structured public health intervention programmes, which include instruction and education delivered together, always have a major role to play in minimizing the epidemic of respiratory infection. It was found that vaccination or use of antiviral drugs might be inadequate to limit the disease spread. Cluster-randomized trials of high quality indicate that hygienic measures were most effective in the prevention of the disease in younger children. Notably, younger children are less likely to maintain proper hygiene, more socially active, and are more susceptible to communicable diseases which can be easily transmitted to the household.

Recently, several studies have been published on public health measures to control COVID-19, focusing quarantine alone or together with other measures can reduce mortality, incident cases, and transmission. Although, limited evidence is available regarding quarantine to prevent COVID-19, most studies considered quarantine as an essential public health measure to minimize rate of infection and mortality.

nether concern is wearing face masks by healthy individuals in the community to prevent COVID-19 infection. The US Centres for Disease Control and Prevention (CDC) and countries like Canada and South Korea recommend the wearing of cloth masks in public. However, the major concern is the shortage of face masks.

Our findings suggest HCWs are susceptible to various health consequences due to the COVID-19 pandemic. For those with COVID-19 infections, the most common symptoms were fever and cough, which were similar to those seen in the community. Several risk factors were identified; long duty hours, working in the high-risk department, lack of PPE, diagnosed family member, unqualified hand-washing, and improper infection control. Furthermore, prolonged PPE usage led to skin damage, with the nasal bridge being the most common site. Battling

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COVID-19 on the frontline makes HCWs vulnerable to psychological distress. Finding shows high levels of depression, stress, anxiety, distress, anger, fear, insomnia, and post-traumatic stress disorder in the HCWs.

During outbreaks, the HCWs experience considerable stress. In a Chinese study during the Ebola outbreak, HCWs reported extreme somatization, depression, anxiety, and obsession-compulsion (Xiau et al, 2020). During the MERS outbreak, a Saudi study reported almost two-third of HCWs felt at risk of getting infected with MERS CoV and felt unsafe at work. These findings are consistent with previous SARS situations in which HCWs reported high levels of fear of contagion and infecting family members, emotional disturbance, uncertainty, and stigmatization. Risk factors for mental health include overwhelming situations, social disruption of daily life, feeling vulnerable, at risk of getting infected, fear of transmitting the disease to families, and loved ones. Previous outbreaks showed that HCWs suffer significant stress, and a similar outcome is expected in COVID-19.

Pandemics exert significant psychological impacts on HCWs, highlighting the need for appropriate psychological support, interventions, and staff support measures. COVID-19-specific psychological interventions for medical staff in China included psychological intervention support teams, psychological counselling, availability of helpline, establishment of shift systems in hospitals, online platforms for medical assistance, incentives, providing adequate breaks and time offs, providing a place to rest and sleep, leisure activities such as yoga, meditation and exercise, and motivational sessions (Rothan & Byrareddy, 2020). Protecting the well-being of HCWs, through appropriate measures is a crucial tool in national emergency public health response to fighting the outbreaks (Lancet, 2020; Zhou et al, 2020).

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Personals working to address COVID-19 in the health and social care sectors should identify the existing community groups and networks to build co-production. Policymakers should ensure to focus on income guarantees for the self-employed, implement road closures for safer walking, and use of abortion medication at home. Community participation may reduce immediate damage from the COVID-19 pandemic, so institutional cultures that support co-production must be implemented in health and political systems.

Limitations & Strengths

To date, there is paucity of high quality studies on COVID-19 and community health, which make it impractical to conduct a meta-analysis. Moreover, quarantine brings many negative health and socio-economic impacts that has not been assessed in this review such as compromise of quality of life, domestic violence and unemployment. However, despite these limitations, this is one of the early and systematic reviews on the impact of COVID-19 on community health which will be the basis for conducting evidence-based research on this topic in future.

Conclusion:

Quarantine, hand hygiene, and face masks can potentially minimize the infection rate and mortality in the community. Moreover, community participation is essential for a collective and socially acceptable response to prevent COVID-19. Engagement of local communities is essential to ensure compliance of lockdown until necessary measures are in place to ease the restrictions. In addition, there is a need for tailored national, regional, and community-based solutions for infection prevention taken into consideration the need of our diverse population.

References:

1. Cascella M, Rajnik M, Cuomo A, Dulebohn SC, di Napoli R. Features, evaluation and treatment of coronavirus (COVID-19). StatPearls Publishing. 2020;20.

Received: 16.08.2020 **Accepted:** 30.08.2020 **Published**: 30.08.2020

2. Cavallo JJ, Donoho DA, Forman HP. Hospital capacity and operations in the coronavirus disease 2019 (COVID-19) pandemic—planning for the nth patient. JAMA Health Forum. 2020;1(3):–e200345.
3. Chen Q, Liang M, Li Y, Guo J, Fei D, Wang L, et al. Mental health care for medical staff in China during the COVID-19 outbreak. Lancet Psychiatry. 2020;7(4):e15–6.
4. Cinelli, M., Quattrociocchi, W., Galeazzi, A. *et al.* The COVID-19 social media infodemic. *Sci Rep* **10,** 16598 (2020). https://doi.org/10.1038/s41598-020-73510-5
5. Huang JZ, Han MF, Luo TD, Ren AK, Zhou XP. Mental health survey of 230 medical staff in a tertiary infectious disease hospital for COVID-19. Chin J Ind Hyg Occup Dis. 2020;38(0):E001.
6. Lancet T. COVID-19: protecting health-care workers. Lancet. 2020;395(10228):922.
7. Liu M, He P, Liu HG, Wang XJ, Li FJ, Chen S, et al. Clinical characteristics of 30 medical workers infected with new coronavirus pneumonia. Chin J Tuberc Respir Dis. 2020;43(3):209–14.
8. Maunder RG, Lancee WJ, Balderson KE, Bennett JP, Borgundvaag B, Evans S, et al. Long-term psychological and occupational effects of providing hospital healthcare during SARS outbreak. Emerg Infect Dis. 2006;12(12):1924–32.
9. Rothan HA, Byrareddy SN. The epidemiology and pathogenesis of coronavirus disease (COVID-19) outbreak. Journal of Autoimmun. Academic Press; 2020. p. 102433.
10. Spyrou MA, Tukhbatova RI, Wang CC, Valtueña AA, Lankapalli AK, Kondrashin VV, Tsybin VA, Khokhlov A, Kühnert D, Herbig A, Bos KI, Krause J. Analysis of 3800-year-old Yersinia pestis genomes suggests Bronze Age origin for bubonic plague. Nat Commun. 2018 Jun 8;9(1):2234. doi: 10.1038/s41467-018-04550-9. PMID: 29884871; PMCID: PMC5993720.
11. Xiao H, Zhang Y, Kong D, Li S, Yang N. The effects of social support on sleep quality of medical staff treating patients with coronavirus disease 2019 (COVID-19) in January and February 2020 in China. Med Sci Monit. 2020;26:e923549.
12. Zhou P, Huang Z, Xiao Y, Huang X, Fan X-G. Protecting Chinese healthcare workers while combating the 2019 novel coronavirus. Infect Control Hosp Epidemiol. 2020;5:1–4.

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