



COVID -19 PANDEMIC AND ITS IMPACT

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ABSTRACT

Novel corona virus was identified in Wuhan, a city of China at the end of 2019. Followed to rapid spread in China resulting in epidemic, increased number of cases was identified in other countries throughout the world. Measures taken to prevent the spread of infection of SARS CoV-2 virus have a significant impact on the health systems, economies and society as well all over the world. Health care workers are at significant risk for adverse psychological impact during the pandemic. The crisis of the pandemic has profound effect on children and chronic ill patients. Children are affected due to risk of infection, immediate socio economic impact and long term impacts of pandemic on the development. In addition to ensuring availability of essential medicines, chronic diseases which rely heavily on adherence to medical facility for need to be emphasised during outbreak. As for the health sector, restoring general medical services to full strength should be a primary goal, so that co morbid conditions can be checked to decrease future casualties due to COVID-19.

KEYWORDS: COVID-19, pandemic, impact.

Corona viruses are human and animal pathogens. Novel corona virus was identified in Wuhan, a city of China at the end of 2019. Followed to rapid spread in China resulting in epidemic, increased number of cases was identified in other countries throughout the world.

In February 2020, the world Health Organisation designated the disease COVID19 which stands for corona virus disease. The virus that causes COVID-19 is designated as Severe Acute Respiratory Syndrome corona virus 2 (SARS-CoV-2).^[1]

COVID virus family is a class of enveloped, positive sense single stranded RNA viruses having an extensive range of natural roots. These viruses cause respiratory, hepatic, enteric and neurological diseases. Human COVID infections are caused by α and β -CoV among four subtypes. (α β γ and δ CoV).^[2]

The virus particle has a diameter of 60-100nm. SARS-CoV-2 can be inactivated by Ultraviolet rays or heated 56 degree celsius and sensitive to disinfectants such as diethyl ether, 75% ethanol, chlorine, paracetic acid and chloroform.^[2]

According to reports of European Centre for Disease Prevention and control, from 31st December 2019 to 6th May 2020, 3,623,803 cases of COVID 19 have been reported including 256880 deaths globally. Total number

of reported cases of COVID 19 is 49,391 including 1694 deaths in India.^[3]

On 11 March 2020, WHO declared COVID 19 outbreak as a pandemic and reiterated the call for all the affected countries to take immediate actions to treat, detect and prevent the transmission.^[4]

Measures taken to prevent the spread of infection of SARS CoV-2 virus have a significant impact on the health systems, economies and society as well all over the world. No treatment for COVID-19 has been reported so far. Other strategies such as social distancing, cough etiquettes, frequent hand hygiene and improved environmental sanitation can only help to reduce the disease spread.^[5]

Due to the severe impact of the pandemic many areas of the health care are affected. Mental health for which awareness is found to be less in developing countries is such an area of concern. Also other diseases which require periodic medical attention in different spheres of medical segment has been effected as more resources have to be allocated to fight Covid-19. In countries where medical resources are scanty, there may be a concern, where a large sections of people may go untreated for diseases with minor symptoms yet major repercussions, and there may be a bigger vulnerable population in target if a second wave of Covid-19 is to

arrive, as it has been expected by various experts.

Impact on mental health and quality of life

Since there is an exponential growth in number of cases of COVID-19 worldwide, there is possibility that this pandemic will cause excessive panic and anxiety among the population.^[6]

It may be due to the fear of uncertainty of the spread of the disease, the strategies for prevention of the transmission such as lockdown and quarantine, social isolation and fear of contracting the infection. Widespread outbreak of COVID-19 is associated with psychological impact.^[7]

According to a study by Wong et al 2020 on immediate psychological response of general population of China, it was found that 16.5% have moderate to severe depression 28.8% have moderate to severe anxiety symptoms and 8.1% have moderate to severe stress. It also negatively affected sleep quality, social support and self efficiency.^[8]

Health care workers are at significant risk for adverse psychological impact during the pandemic. It may be due to long working hours, risk for infection, shortage of PPE, physical fatigue and family separation.^[9] Various strategies can be designed like provision of rest area, periodic counselling, availability of telephonic helpline can be applied to minimise the impact. Kang et al found that telephonic helpline has positive impact on psychological effect of health care workers.^[9]

Quarantine has been used for prevention of spread of COVID-19 infection.^[10] Quarantine is an unpleasant experience for those who undergo. It may be due to separation from loved ones, loss of freedom, uncertainty over status of disease, boredom etc. In a study it was found that the effect of being quarantined was a predictor of post traumatic stress symptoms in hospital employees even after three years later.^[11] In a study of hospital staffs coming in contact with SARS found that after the quarantine period, being in quarantine was the factor more predictive of acute stress disorder. Quarantined staffs are more likely to report exhaustion, detachment from others, irritability, insomnia, deteriorating work performance and reluctance to work.^[12]

For successful use of quarantine as a health measure the potential negative effects associated with it should be reduced.

There is an urgent need for advancement of mental care due to COVID-19 including crucial mental health assessment, support, treatment and services for the general population. A multidisciplinary team should be established by the health authorities at various levels for setting up services for psychological counselling, bridging the gap of social isolation by telephone or internet, regular clinical screening of the infected,

suspected patients for COVID-19 and health care workers.

Impact on vulnerable population

The vulnerable population identified by various authors are more affected by the impact of COVID-19. These include older adults, homeless, migrant workers, mentally ill and Pregnant women.^[13]

According to Zhu et al 2020, single outbreak of COVID - 19, affecting 50 patients and 30 staffs have been reported in psychiatric hospital. It may be due to overcrowding, lack of general medical facility in psychiatric hospital, lack of knowledge, uncooperative behaviour of patients for preventive measures especially with psychotic disorder.^[14]

The strategies recommended to control the spread of COVID-19 like social distancing and hand hygiene are not easy for people living in highly dense or over crowded community and with poor sanitation facility. People categorised as such face malnutrition and other co morbidities like tuberculosis, HIV and have increased risk for COVID-19. Due to low awareness among such populace most of those co morbid conditions are left untreated or in most cases unreported, which will increase the number of vulnerable people to COVID-19 attacks. The increased focus on COVID-19 might miss the aspect of considering the vulnerability of other diseases and these may be left untreated.^[15]

The impact of policy against COVID-19 on children is also a major concern. The most vulnerable children are part of family where parents have informal jobs. It concerns most to the developing countries like India, where 80% of its workforce is in informal sector. It has been reported that lockdown in India has disproportionately affected marginalised communities due to loss of income, lack of food, shelter, health and other basic necessities.^[16]

The crisis of the pandemic has profound effect on their well being. Children are affected due to risk of infection, immediate socio economic impact and long term impacts of pandemic on the development. Due to reduced income in poor families amidst lockdown period, they are forced to cut back on essential health and food expenses. In addition to global recession on child health, there are many other ways in which child health services are disrupted due to this pandemic. This includes reduced access to reproductive and child health services, pneumonia, suspension of vaccine campaigns etc.^[17]

The long term effects of pandemic on migrant workers are critical. Migrant workers have poor access to health care services and large portion of them do not have access to clean water facility.

In addition to responding to COVID-19, it is of utmost importance to consider the risk of health care

inequalities. Vulnerable groups must be properly identified and their health and other needs should be addressed, otherwise the consequences of this pandemic will worsen deeply.

Impact on medication management and adherence

The current scenario of COVID-19 pandemic is placing huge strain on the health care. Due to the preventive strategies of social distancing and lockdown, people with chronic diseases are adversely affected. They are having difficulty in availing medical facility for their routine check-up and medication management. Hospitals in many affected countries are burdened. In Italy, it was reported that approximately 80% of ICU beds was occupied by COVID-19 positive patients before April 2020.^[18]

Due to the pandemic, health care facilities in low and middle income countries (LMIC) are severely challenged as the health system is already underdeveloped in these countries. In these countries the inequitable health access may be further widened due to COVID-19 pandemic. LMIC had burden of chronic and infectious disease like HIV, TB, Hepatitis, diabetes mellitus, cardiovascular diseases prior to COVID-19 pandemic.^[19]

The negative impact of COVID-19 outbreak may affect the clinical outcomes of patients with chronic conditions like mental illness and CVS whose development is linked to stress and anxiety.^[19]

In addition to ensuring availability of essential medicines, chronic diseases which rely heavily on adherence to medical facility for therapeutic outcome, need to be emphasised during outbreak.

As the whole world is focussing on containing the spread of COVID-19, the health care system may miss out the patients with chronic diseases. It may worsen the situation and challenge the already strained health care.

As this pandemic has a possibility of turning into an endemic we need to brace ourselves for more self awareness measures. As for the health sector, restoring general medical services to full strength should be a primary goal, so that co morbid conditions can be checked to decrease future casualties due to COVID-19. For that medical infrastructure as well as more medical professionals will be required, as existing medical facilities and workforce are already under stress. Secondly segregation of COVID-19 hospitals from other medical facilities should be arranged, so as to reduce exposure to non-COVID patients. Thirdly awareness should be spread about diseases like TB, HIV, diabetes, mental illness and other respiratory illnesses which have contributed to fatalities due to COVID-19.

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