

Covid 19 Pandemic: Lessons to be learnt and Preventive Measures

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ABSTRACT

To overcome the challenges faced due to the pandemic, it is imperative to plan the future direction which should be adopted by the various countries, especially the developing ones. This paper makes an attempt in this direction by making some important recommendations to combat the challenges posed by the pandemic and mitigate its impact. These recommendations can be implemented practically as these are based on lessons learnt from the experiences of countries while combating Coronavirus. Some innovative ideas and tentative solutions are also given which can be further researched and may lead to a breakthrough in dealing with spread of the pandemic in future.

1. INTRODUCTION

The Covid-19 pandemic has led to great challenges and huge suffering all over the world. To overcome the challenges faced due to the pandemic, it is imperative to plan the future direction which should be adopted by the various countries, especially the developing ones.

1.1 Objectives of the paper

- Discuss the lessons to be learnt from experiences of various countries in combating the pandemic.
- Recommend measures to mitigate the impact of the pandemic
- List suggestions for future preparedness to prevent the pandemic.

2 RECOMMENDATIONS TO COMBAT THE PANDEMIC IN FUTURE

Some innovative suggestions and recommendations are given below to mitigate the effect of the pandemic. Some measures taken by various countries have been very successful in containing the spread of Coronavirus. These are also discussed below, followed by the lessons which can be learnt from their experience.

2.1 Mass immunization

Vaccination of all human beings of all age groups is recommended to eradicate the virus completely. Although present vaccines are effective against most variants of the Coronavirus, new, deadlier and more contagious variants of Coronavirus are emerging at a rapid pace. Therefore, for effective mass immunization, research should be conducted to make vaccines which are efficacious against all variants of the Coronavirus.

To overcome the shortage of vaccines, India and South Africa have recommended to the World Trade Organisation to temporarily suspend the rules on Intellectual Property Rights on vaccines so that they can reach the poorest of the poor nations at an affordable cost. Although more than a dozen vaccines have been approved for use at the global level, only some vaccines out of these have been produced by the developing countries. Efforts should be made by all countries to produce low-cost vaccines at local level which are effective for all age groups so that they do not have to be dependent on others. It is recommended that all pharmaceutical companies with the capacity to manufacture vaccines should be given permission to ramp up vaccine production. Government should ensure that vaccines are available even at remote places and make it mandatory for all people to get vaccinated.

2.2 Adopting proactive approach by taking preventive measures

Since the Coronavirus is highly contagious, it is very important to be proactive in dealing with this disease. Countries like Tonga, Palau and North Korea took pre-emptive action at the beginning of the pandemic to isolate themselves by closing their international borders and imposing travel restrictions. As a result, they were successful in preventing the disease from entering their country and have reported zero Covid cases in their areas till April 2021 (Hubbard, 2021). India also took proactive action and imposed a national lockdown from 24 March 2020 which was further extended till 31 May 2020 and it helped significantly slow down the Coronavirus spread at that time.

The lesson to be learnt from the experiences of these countries is that since Covid-19 is a highly communicable disease, it is important to be proactive and not wait till the Covid cases have increased. Not only the international borders should be sealed but also within the country, checkpoints should be set up at strategic positions and

mobility of only those people with Covid negative certificates should be allowed to restrict the spread of Coronavirus. Also, as soon as a single case is detected in any area, measures should be taken to isolate that case and quarantine the people he/she has come into contact with. These people should be tested immediately. That area should be converted into a containment zone with strict vigilance to prevent the spread of the disease. Early testing, tracing and quarantine measures are important to curb the spread of the disease.

Furthermore, preventive measures like wearing masks and maintaining social distance should be made mandatory for all the people. Monitoring is essential to ensure that people follow these norms. Stringent action like hefty fines is suggested against those people flouting the norms. If these norms are enforced strictly, half the battle is won.

2.3 Integrated efforts to combat the pandemic

Since more than 220 countries across the globe have been affected by the pandemic and the disease has spread no one irrespective of international borders, it is high time that all the nations come together to prevent the recurrence of Covid-19. All nations should join hands and make coordinated efforts in this direction by sharing the medical resources as well as best practices.

The leaders of the African countries have shown a strong will to work together in defeating the virus. The African Centres for Disease Control and Prevention launched its Partnership to Accelerate Covid-19 Testing (PACT) in April 2020 with the objectives of training and deputing health workers across the continent and increasing the testing capacity (Maru & Nsofor, 2020). African Medical Supplies Platform was also set up by the African Union for smooth supply of laboratory and medical equipment to its member states. Such platforms and Unions as those set up by the African countries, should be set up within every continent which would coordinate the supply of medical oxygen, equipment and other healthcare services so that no patient dies due to the lack of medical attention. Furthermore, it is recommended that International voluntary organisations should come forward to help the countries bearing the brunt of the pandemic and International pharmaceutical companies should provide medicines at reduced cost.

Integrated efforts and coordination are also required at the zonal, district, and state level within each country. It is recommended that a National Covid Management Committee composed of top medical experts, scientists, policy makers and administrators should be set up under the leadership of the Prime Minister/ Head of the nation. Similar Covid Management Committees should be constituted at the state, district and zonal level. All policies and decisions related to Covid should be taken by the National Covid management Committee and implemented by the state district and zonal level committees. This will ensure smooth coordination and effective implementation of all decisions without any contradictions due to different policies being implemented by different states. Also, it is high time that the politicians and the state governments put aside petty politics for personal gains and deal with the Coronavirus unitedly in future.

2.4 Creating a strong health infrastructure and ramping up Covid treatment facilities

The new waves of the Coronavirus have been more severe in many countries. Considering this scenario, developing countries should plan for the future and increase their investment in health infrastructure and training of healthcare workers to combat the disease. After the SARS outbreak in Vietnam in 2003, the Vietnamese Government had made a strong investment in health infrastructure and increased its public health expenditure. As a result, it was better prepared to fight the pandemic and had a much lower number of deaths compared to other countries. It is recommended that other developing countries also learn a lesson from Vietnam and be prepared for an unpredictable future as the virus mutates and changes into a more deadly form.

The Indian government had converted many five-star hotels and banquet halls into makeshift Covid Hospitals. Even some Gurudwaras in Delhi were converted their halls into Covid-19 Care Centres and were also providing medical oxygen to the needy at their premises. The DTC buses were being used (instead of ambulances) to transport the dead bodies to the mortuary so that adequate ambulance services were available to the Covid patients. These innovative ideas can be adopted by other developing countries for combating the virus in future.

Some other innovative suggestions to further combat the pandemic include setting up Community care facilities such as oxygen hubs, testing and vaccination centres with the involvement of Residents' Welfare Associations in various colonies and managed with community involvement. Independent Covid treatment units can be set up in big indoor stadiums and schools also on a temporary basis to tackle the spread of Covid in future.

Scarcity of oxygen has led to the death of many Covid patients in developing countries particularly India. Measures taken by Mumbai to ensure smooth availability of oxygen included installation of Oxygen storage tanks with huge capacities for storage of liquid medical oxygen and appointing officials to coordinate efficient supply of oxygen to all Covid Centres.

In many developing countries, there was a scarcity of other medical equipment like ventilators, beds and Covid medicines besides that of medical oxygen. Taking a cue from the 'Mumbai model', it is suggested that not only robust oxygen storage facilities should be built, but buffer stocks of other medical equipment, ventilators and medicines should also be there. Distribution network and supply chain management should function smoothly to ensure equity and smooth supply of medical oxygen, equipment and medicines in various areas. An oxygen

generation plant should be set up in each hospital. Control centres in each state should be set up to monitor existing supplies of medical equipment and resources and the district level teams should ensure and coordinate movement of supplies from distribution sites to the destination.

2.5 Raising funds and donations for dealing with the pandemic

Developing countries are facing a financial crunch and are in dire need of funds to deal with the crisis situation and help their needy citizens. Funds can be raised through innovative ways within the country. Costa Rica had temporarily reduced the salaries of their highest paid government officials to provide funds for dealing with the pandemic situation. Learning from the experience, other developing countries suffering from shortage of funds can generate resources by financial support from the elite class.

It is suggested that at community level, the service class people as well as businessmen can donate their one-day salary towards Covid fund every month. This can generate a mammoth amount of money. Some film stars in India had auctioned their clothes to raise money for the needy. Other famous personalities like sportspersons can also auction their sports equipment to raise funds. Online concerts, dance performances and musical shows by popular actors, dancers and musicians can be organised to generate funds to combat the pandemic. Billionaires and Industrialists should come forward and donate generously at this time of crisis. Even middle-class people can also donate food, clothes and other items as per their capacity. These can be distributed to the worst hit people at various designated centres in cities and rural areas.

At International level, The International Monetary Fund had been approached by more than 90 developing countries for financial support (El-Erian, 2020). It has not only provided emergency funding but also called upon official bilateral creditors to suspend debt payments by the economically weaker developing country. It is recommended that advanced economies should also contribute wholeheartedly in terms of increasing financial aid, providing debt relief and establishing a pandemic management fund to help the poorest of the poor nations. It is further suggested that international bodies like the World Bank should provide donations and loans to the needy countries to tide over the impact of the pandemic.

2.6 Use of technology to combat the disease

Technologies like artificial intelligence, machine learning, big data analytics and high-speed internet have played a vital role in combating the pandemic. Technology has been used to disseminate accurate information related to public health, motivate people to take precautions and monitor Coronavirus cases. Artificial intelligence has been used by medical researchers to find an effective treatment for Coronavirus as well as developing vaccines. Wireless thermometer guns and other infrared body temperature measuring devices have been effectively used at various checkpoints to determine the temperature of people and identify those who might be infected. The Indian government has developed the Arogya setu App which provides live updates on the status of the pandemic and accurate information regarding Corona cases in their vicinity. Also, online registration can be done for vaccination on Cowin App. Such apps are also providing information to people regarding the vaccination centres near their residence. In Delhi, the link for downloading the vaccination certificate is also being sent on mobiles of people. Such technologies should be adopted by other countries also to fight Coronavirus. China used Artificial Intelligence to screen large numbers of people on the move for Covid-19 symptoms by detecting a change in their body temperature. (Manjunath, 2020). Other developing nations should also implement such technologies to screen infected persons in crowded markets and other public places and isolate them before they transmit the disease to others.

Big data analytics can play a significant role in densely populated developing countries in tracing Covid patients and tracking who they have come in contact with. It is recommended that Big Data Analytics, Facial Recognition Technologies and CCTV cameras should be used to establish surveillance systems to identify and monitor the movement of Covid patients and also those who have been quarantined. Such a system can play a major role in curbing the transmission of the disease. Furthermore, it is suggested that drones should be used to disinfect market areas, public buildings and open places. Drones can also be used to distribute medicines, deliver food and identify infected people through thermal imaging. Sprinkler systems used for spraying water in the crops can be modified and used to spray disinfectants in large fields. Furthermore, it is suggested that technology infrastructure in all developing countries should be strengthened so that official work and education of children can be carried on virtually without any hindrance. In a pandemic situation, this is the best way to continue working while maintaining a social distance.

2.7 Research and innovation

Scientists all over the world should collaborate to develop inexpensive vaccines and provide improvised solutions to combat the disease. Scientists in Rwanda have developed an indigenous technique using which they can test a lot of samples together thus reducing cost, time and effort in getting test results. Some other innovative techniques used in Rwanda include use of mathematical models to predict the spread of the Coronavirus and use of robots to screen and monitor Covid-19 patients. (UNCTAD, 2020). Other developing countries can also use robots to not only screen Covid patients but also deliver food and groceries. Further an 'Enterprises Innovation facility' has

been established by the International Labour Organisation to provide innovative ideas and support to various enterprises impacted by the pandemic (UN Innovation Network, 2020). Taking a cue from the International Labour Organisation, developing countries can also develop such platforms at National level to provide support and innovative ideas to not only Enterprises but also entrepreneurs and other people who have lost their jobs so that they can become financially independent and support their families.

Besides organisations, individuals can also contribute innovative ideas. A senior school student from India has designed a 'virus killing mask' in May 2021 for the Challenge Covid-19 competition organised by the National Innovation Foundation. The mask has three chambers and when the filtered air enters the third chamber which contains a chemical solution containing a mixture of soap and water, the virus gets killed. Such ingenious solutions are required to control the virus in a cost-effective manner. It is suggested that more such competitions should be organised at national and international level with high incentives and awards to encourage more people to come forward with their innovative ideas to combat the Covid crisis. Furthermore, Engineering students, researchers and experts from pharmaceutical industry can contribute in modifying already available industrial equipment to produce low technology medical goods like sanitizers and personal protective equipment and other medical resources. Local manufacturing solutions can be of great assistance to developing countries in overcoming challenges due to scarcity of medical equipment like ventilators and oxygen cylinders.

2.8 Involving NGOs and volunteers

In case of the spread of Covid cases in future, there might be an acute shortage of the paramedical and medical staff. During the Ebola outbreak in Sierra Leone, a community involvement approach was adopted by training local people for doing contact tracing. Similar strategies can be adopted by developing countries to involve and train educated people, teachers, college students, unemployed youth and non-governmental organisations in fighting the disease. These enlightened community members can provide help in various ways ranging from creating mass awareness regarding precautions to be taken, contact tracing, helping Covid patients as attendants and acting as caretakers for the children of Covid-19 patients. This will provide great support to the medical personnel.

Furthermore, clean hygienic food can be provided to the poor Covid patients free of cost at community centres by the community members. It is further suggested that all community members who are healthy should come forward and contribute in whatever capacity they can, instead of blaming the administration for not doing the needful. All stakeholders will have to make efforts on a war footing and then only the battle against this formidable enemy can be won.

2.9 Measures by the government to provide relief to the worst hit marginalised sections

The marginalized sections of the society including migrant workers, daily wage workers, poor women and slum dwellers have been the worst hit due to the pandemic. Developing countries have taken some measures to provide succour to the marginalised sections. India announced Rs 20 trillion stimulus package for the migrant workers, MSMEs, farmers and street vendors. The package included a Rs 50 billion special credit facility for street vendors, Rs 3 trillion 'Emergency credit line guarantee scheme' for MSMEs and loan offerings for the marginalised sections (Kapil, 2021). Millions of poor people were granted 5 kg of wheat /rice and one kg of pulses free every month during the lockdown period in 2020. Wages were raised under the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) to provide financial support to rural workers. It is suggested that India should not only extend the existing relief measures (till the situation becomes normal) but also provide a fresh bigger stimulus package. This is imperative as the new waves has been more deadly and affected people very badly. It is recommended that other developing countries should also take such relief measures for their marginalised sections. The people who have been worst hit by Covid situation should be identified and provided free food through the government ration shops and some monthly allowance should be given to them till the next six months to cater to their basic needs.

Further, with reference to women, it is suggested that the developing countries should give equal representation to women in planning and decision making for fighting the pandemic. This will help in empowering women and reducing inequalities to some extent. Also, wholehearted efforts should be made to address the socio- economic impact of Covid-19 on women. In India, Rs 500 monthly for 3 months was transferred to the Jan Dhan accounts of 200 million women hit by the pandemic (Kapil, 2021). Furthermore, subsidized loans and stimulus funding for women owned businesses, providing child care services for essential women workers, social security payments for informal sector workers and allowing flexibility of timings for working women has been recommended by the United Nations (UN Women, 2020). Additionally, online access to legal system for women suffering due to domestic violence and other atrocities, virtual consultation with doctors for health care, dedicated police stations only for women, shelters for homeless women and availability of NGO volunteers on call in case of emergency are some other measures recommended to mitigate the impact of the pandemic on women.

In the context of slum areas, it is recommended that volunteers from NGOs and health care workers should create awareness in slum areas regarding the symptoms and preventive measures for the pandemic. Government should ensure fresh water supply and maintenance of basic sanitation as a precautionary measure to prevent the spread

of the disease. Camps should be set up within the slums to identify individuals with early symptoms of Covid-19 and measures should be taken to isolate them. Also, arrangements should be made for emergency transportation in and out of the slums. Additionally, in context of migrant workers (who have lost their jobs), it is suggested that a survey should be conducted and a database should be generated so that jobs and relief can be provided to them. Employment should be generated in agriculture and agro based industries for migrants returning to rural areas. Budgetary allocation should be made to provide livelihoods to these needy people. The International Labour Organisation has recommended some important measures for protecting workers including tax relief for small and medium sized enterprises, providing social protection, employment retention and subsidies for specific economic sectors.

3. CONCLUSIONS

The biggest challenge the pandemic poses before the world is that it mutates very fast and many new variants keep emerging which are deadlier and more contagious than the earlier ones. Some other major challenges faced by the developing countries due to the impact of Covid-19 include shortage of healthcare resources, vulnerability of densely populated areas, increasing poverty, unemployment and reverse migration. Considering the whole gamut of challenges faced by the developing countries, this pandemic may devastate the other developing countries also, if they do not prepare themselves for a more deadly attack by the virus in the future.

Other developing countries should learn a lesson from Indian scenario. India took a lot of precautionary measures and stringent action during the first wave of the pandemic including lockdowns, strict implementation of wearing of masks and social distancing norms, action against defaulters, early testing, tracing and Quarantine of Covid-19 patients and screening at airports. Due to these measures, India was able to control the pandemic to a great extent at the initial stage. But as the cases fell in January 2021, people let the guard down. The public places reopened, large gatherings occurred at election rallies and religious events and people started moving out without any restrictions. In India, the second wave which began in February 2021 has been catastrophic, with Covid cases spiralling out of control and the system crumbling under pressure. Therefore, an important learning here is that each one of us should not let the guard down and all precautionary measures should be followed strictly till the virus is totally eradicated. Furthermore, in May 2021, a triple mutant variant was found in India which has been labelled by the World Health Organisation as a Global Health threat (Berkeley, 2021). The pandemic resurged again causing more suffering. Therefore, adequate preparations should be made by all developing countries to be well equipped for dealing with an expected surge in cases in future.

The major recommendations of this paper to tackle this humanitarian crisis are that vaccines effective against all variants and applicable for all age groups should be developed on priority basis by a team of best scientists from all over the world. This should be followed by an action plan to immunize people of all age groups within the minimum possible time. It should be ensured that low cost-effective vaccines reach all the developing nations on priority basis, considering the various challenges they are facing. Other major recommendations include proactive action to prevent the disease, strengthening the health infrastructure and ramping up the Covid facilities, coordinated efforts by all the stakeholders to provide relief to the worst hit, use of technology, research and innovation to combat the pandemic.

An integrated, large-scale global effort needs to be made immediately, taking into consideration the experiences of various countries, innovative suggestions and the recommendations of experts and researchers. As the Coronavirus is engulfing humanity irrespective of national and international boundaries, the developing and the developed world need to coordinate their efforts, share their best practices and resources wholeheartedly to save humanity before it is too late.

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