EDITORIAL COMMENTARY

COVID-19 Pandemic: The Way Forward

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In less than 5 mo, more than 4 million confirmed cases and 300,000 deaths have been reported across the world due to the COVID-19 pandemic [1]. This is much more severe than the pandemic influenza that hit the world in 2009. High case fatality is being reported in high risk groups even from countries known to have the best healthcare facilities. It has overwhelmed the healthcare systems and resulted in severe crisis for hospital beds, particularly intensive care facilities (ventilators). There has been a shortage of essential consumables such as personal protective equipment (PPE), predisposing healthcare personnel to developing COVID-19 [2]. In the absence of definitive treatment (pharmacotherapy) and vaccines, the most effective measure is to prevent infection, particularly in those at high risk of severe disease/ adverse outcome. As COVID-19 infection is spread by droplets, social distancing, practicing adequate hand hygiene, and wearing face mask/ respirator have been considered to be most effective measures [3]. To achieve better control, a large number of countries/ regions remained under lockdown for variable period; in addition, countries used different testing strategies for controlling the spread. Because of unprecedented case fatalities in certain groups including healthcare personnel (HCP) even in industrialised countries, there is a panic amongst general population as well as HCP. As this is a new infection without effective vaccine or pharmacotherapy, there is uncertainty about the course of the pandemic.

World has not faced such a pandemic in the recent past, therefore, there are no ready to use tools to handle these emerging problems. A major positive highlight of the present crisis is proactive role played by the medical journals in helping clinicians/ scientists sharing experiences/ research/ perspectives/ opinions to help colleagues to gain confidence and manage their patients efficiently. Because of information technology, we are learning from healthcare professionals across the world to help us plan most suitable methods to deal with these challenges. At the same time, there is some concern about the quality of evidence being published and used to guide management and policy.

We are passing through an unprecedented crisis, but we need to move forward. First and foremost is to accept the fact that COVID-19 infection is quite unlike the other viral respiratory infections and in absence of effective drugs and vaccine, it is going to stay with us in the near future. However, we need to understand that more than 95% of patients recover (>80% without need for hospitalization, around 15% with supportive care in hospital). Intensive care may be required by approximately 5% of the cases (about 20–25% of those hospitalized). The overall case fatality among the hospitalized patients (including those needing intensive care) varies from 10 to 60% and is largely restricted to high risk groups (old age, diabetes, immunosuppression, etc) [3, 4]. Experience till now suggests that COVID-19 in children and adolescents is less common and less severe than older age group [4]. But a potential of spread to household members as well as healthcare workers cannot be ignored. With time, atypical presentations are now being reported in children as well [5].

Opening up of Services

It is expected that even if COVID-19 infection rate decreases over next few weeks/months, risk of infection will persist and second surge later this year cannot be ruled out. It is also equally important to understand that due to panic of COVID-19, we cannot afford to neglect non-COVID illnesses, particularly in countries such as India which have a high burden of various diseases- both communicable and noncommunicable.

There are certain challenges in opening up the services to non-COVID illnesses. The major issues include: how to maintain social distancing to prevent infections in crowded hospitals and how to protect HCPs. Public hospitals (secondary and tertiary

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care), in countries like India are very crowded and it is a big challenge to maintain social distancing. Overcrowded hospitals with inadequate infrastructure predispose to cross-infection in all, including high risk groups. This may have a potential risk of increasing the infection in the community.

To decrease overcrowding in hospitals, it is important to resume routine services in phases. In the beginning, we may start consulting patients by appointments only. We should use this opportunity to develop a system of giving appointments in secondary and tertiary care hospitals. Majority of people in our country have mobiles and can be encouraged to seek appointments at secondary and tertiary care hospitals. Staggered appointments may reduce crowding at a time in OPDs; this can be facilitated by information technology platforms. This will also reduce inconvenience to the patients. Before calling patients to the hospitals, a tele-consultation could be used as a filter. Only those who need physical examination may be called to the Outpatient department (OPD). Patients who need consultation along with some investigations, may be asked to get these investigations before coming to the hospital. This may reduce number of visits to the hospital.

Management of chronic illnesses can be supported by video-/tele-conferencing. Given the high burden of infectious illnesses in countries such as India, there is a need for access to health facilities for these patients also. We will continue to face the annual upsurges in vector borne diseases (dengue, malaria), typhoid fever, diarrheal illnesses, other respiratory illnesses; we need to prepare the health systems to provide care to those affected by these acute illnesses.

Tele-medicine has been in use for quite some time but it was underutilized. Recently, the Medical Council of India has approved it and has provided guidelines [6]. Clinicians need to learn the art of tele-medicine and using various electronic media and documenting consultations to avoid legal issues in future.

Improving Public Health Systems

As of now, there is no proper or structured referral mechanism for healthcare system in India. The Government is implementing "Ayushman Bharat" program for poor families and moving towards Universal Health Coverage [7]. This is a time that we move towards achieving Universal Health Coverage for whole country by developing robust and easily accessible healthcare infrastructure. This may help in developing a proper referral system and will reduce unnecessary travel and crowd in tertiary care hospital and improve the efficiencies of the facilities.

Most of the public health programs- childhood immunization, Revised National Tuberculosis Control Program (RNTCP), vector borne diseases control programs, among others also have been adversely affected by the current

situation. The public health system will have to ensure a rapid catch-up to prevent any significant set-back in the progress made so far.

Striving for Self-Sufficiency in Critical Area of Healthcare

The current crisis has also highlighted the excessive dependence of the country on other countries for supply of consumables, PPE, and medical devices and equipment such as mechanical ventilators. While India is a major player in the world for generic medicines, most of the raw material is sourced from other countries, mainly China. The policy makers should take a serious view of this and implement policies for attaining self-sufficiency in this vital area. Simultaneously, there have to be efforts for having highest quality products manufactured in India and also strict punitive action against those indulging in manufacture/ sale of sub-standard or fake goods.

Protection of Healthcare Personnel

Protection of HCP from infections requires strict adherence to standard precautions with emphasis on respiratory protection. To achieve this, there has to be adequate supply of good quality PPE as well as a rationale use. During the initial period of the pandemic, there was a great concern, almost a panic like state in HCPs. Therefore, all efforts should be made to provide highest levels of PPEs. Over a period of time, HCPs will develop confidence and acceptance of COVID-19 as another infectious disease which can be faced using proper precautions and appropriate safety gears. Initially, hospital administration has to work hard to make the appropriate PPEs available to resume the non-COVID healthcare services also. Use of N95 masks along with face shields may become a norm with all patient contacts. Providing optimal PPE to HCPs will also help prevent shortage of the staff in this critical period, by avoiding unprotected exposures to COVID patients and subsequent quarantine.

Changes in Functioning of Hospitals

Additionally, ensuring physical distancing of patients/ attendants and measures to prevent droplet infection will be a big challenge. Clinicians and administrators need to work together to assess the number of patients that can be managed in OPD depending on available manpower, physical space, etc. Depending on the number of children with influenza like illness, a separate Acute respiratory infection Treatment Unit (ATU) can be started.

The current strategy is to manage COVID patients in a separate hospital/ separate part of a hospital. As the numbers of COVID cases increase in the population, we are likely to face situations where patients without any respiratory symptoms will also test positive for COVID. There may be logistic issues in testing every patient; over a period of time, we will have to assume possibility of infection in every individual; in the same way we should practice standard precautions, and use appropriate PPE. Testing of patients prior to elective surgery is also likely to become a norm- for a couple of reasons: safety of HCPs and potential for higher complications in infected patients.

Academic Activities

At present, most of the healthcare facilities are trying to handle COVID related issues. The educational activities in medical schools are also suffering. Usual teaching activities have been suspended due to fear of transmission of infection and there is uncertainty about resumption of teaching/training of medical students and specialists. Routine admissions, elective procedures and surgeries have declined. Evaluation of students have been deferred for few weeks. There are challenges about resuming or continuing teaching and training of medical specialties. Many institutions have resumed educational activities using available technology [8]. Online teaching is one of the strong tools; this may be the way forward. All institutions need to develop facilities for online teaching. For training, case discussions can be conducted by tele-conferencing and that is going to replace some classroom/bedside teaching in future.

Practical training and imparting clinical skills will remain a challenge in the coming days. Training by using simulation techniques followed by training in small groups may be a useful alternative [9]. This will need trained teachers and simulation facilities to be developed.

Clinical rounds are the cornerstone of learning clinical medicine and acquiring art of bedside clinical skills. Examination/observation by experienced consultants is considered to be an important tool in identification of clinical problem and progress of sick children. This is likely to change with the current situation. Use of tele−/video conference with actual visuals of the patient by using technology may help in utilizing experience of specialists. These technologies are available but not universally. We need to develop these facilities in all the teaching institutions.

In current training and teaching of medical specialists, exit exam is an integral part. The exit exam consists of assessing knowledge and skills of a student by theory and practical examinations. Theoretical knowledge is assessed by written paper and viva-voce. Theory papers can be conducted with some social distancing. Viva voce can also be conducted by using electronic media. Conventionally, practical clinical examinations are conducted by formal clinical case work-ups and then by assessing student's ability to take proper history, skill of physical examination and then the analytical skill by discussing various clinical possibilities. There will be challenges in conducting clinical case examinations, and also getting examiners from outside of the city because of travel restrictions. Now with changed scenario, there may be some challenges in keeping social distancing or wearing PPEs by each examinee. Use of simulation and electronic/multimedia for assessment of students may be the solution.

In India, the academic schedule is variable across the country; start of new session and exit examination dates are variable. There is a need to harmonize the dates for entrance test, academic calendars, and exit examinations to ensure equal opportunity to all the students across India who plan to take entrance test for various courses.

Opportunity to Improve Healthcare in India

COVID-19 pandemic has given us an opportunity to identify our limitations in healthcare and improve it by innovation. In India, almost 80% of outpatient care and 60% of inpatient care is provided by private sector [10]. However, due to various restrictions and concerns, the main responsibility to deal with the pandemic situation falls upon the already overburdened public health system. This is the time to strengthen our public health systems to provide healthcare to all without financially challenging the population.

World has faced a disastrous situation. Many countries have very well developed disaster management plans. Establishing departments of disaster management in medical colleges may help in adequately dealing with healthcare disasters/ outbreaks as well producing human resources for future to handle similar situations. It may be a virtual department under leadership of a senior person and members from various specialities that play important roles in management.

Compliance with Ethical Standards

Conflict of Interest   None.

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