

## **The Current Pandemic has brought to Light a Multitude of Bio-Medical Ethics Issues with regard to handling a Pandemic**

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COVID-19 is an infectious disease pandemic that is spreading more rapidly than our healthcare resources can handle. The ethical issues of the pandemic, therefore, represent an intersection of the ethical problems of a contagious and highly morbid disease with the ethical concepts widely used in directing allocation of scarce resources. If I use the HIV/AIDS pandemic (which is a well-studied pandemic for which an ethical consensus gradually formed by the 1990s ) and the ethical reasoning for organ allocation in solid organ transplantation (which is also readily accepted and well considered) as the reference points for my ethical exploration I will try to summarize the accepted standard in the relevant comparisons using the above model; examine the similarities or differences with the COVID-19 with these points of reference; and present possible solutions which are ethically correct.

First let us look at the professional responsibility of health care workers in the light of this pandemic.

Surely, we all agree that there is some degree of inherent risk when providing care to any patient. There was little ethical support for refusing to treat HIV patients during that pandemic solely based on the diagnosis. By comparison, doctors do have reliable ways to protect themselves from contracting this disease as they care for COVID-19-positive patients. Proper personal protective gear does an acceptable job of preventing exposure and limiting spread. However, reports are flooding the media documenting that many institutions do not have enough personal protective gear to appropriately protect their staff and healthcare professionals, which changes the ethical dynamic. We must keep in mind that certain populations (such as those over 60 years of age), providers with underlying chronic conditions, and pregnant caregivers are more vulnerable to the effects of COVID-19. These health care providers represent vulnerable groups among the health care workers who are risking more by caring for patients when they lack appropriate protective gear.

It is thus mandatory that when appropriate protective gear is available, it should be a medical professional's ethical duty to provide care for COVID-19 positive patients. As our social distancing eventually diminishes, our ability to honor individual patient preferences should inversely expand.

### **Is patient confidentiality being challenged by the COVID -19 pandemic?**

We are aware that unlike in the case of the HIV/AIDS pandemic, no prejudicial stigma is associated with a positive COVID-19 test and, therefore, breaking the seal of confidentiality is not as problematic as it was in the early days of HIV/AIDS. This difference should make decisions to inform the public of COVID-19 positive patients less ethically challenging in most countries.

The Health Department and other such regulatory bodies must encourage hospitals to warn its providers of the COVID-19 positive status of patients in order to protect the already challenged staff. Furthermore COVID-19 positive patients have a duty to disclose their condition to those contacts they may have put at risk and should be given the opportunity to inform these contacts.

Ultimately, given the high morbidity and mortality rates and the degree of contagiousness of COVID-19, confidentiality must be limited by public health interests. It is also crucial that physicians and hospital systems report positive cases to public agencies so that data can be accurately tabulated and analyzed in order to inform treatment decisions and resource allocation. Although physicians have an ethical duty to protect patient confidentiality, this responsibility can be superseded by a duty to protect other members of society known to be at risk.

### **Which members of the population, ethically should be tested first?**

Testing represents an ethical dilemma as long as the number of tests is limited, and the sensitivity and specificity of the tests are suboptimal. Who should be tested and, of those tested, who should be first? Initially, high-risk populations were tested first; there was no medical justification to test everyone. As HIV became more normalized and early detection offered survival benefits, testing became more prevalent. While HIV testing practices can be extrapolated to the COVID-19 pandemic to some extent, there are clear differences. We do not fully understand how COVID-19 spreads, leaving us without a good sense of who will most benefit from testing. Additionally, the number of available tests initially was limited. To obtain more reliable results, each person may need to be tested multiple times.

It is now clear that patients with symptoms should be tested first because early diagnosis and supportive treatment are in their best interest and because most of the spread is thought to result from actively symptomatic patients. As more tests and tests with better detection rates become available, it is also important to test asymptomatic healthcare workers in order to avoid inadvertent infection of the already high-risk patients with whom they interact. Finally, as tests evolve and become widely available, universal testing to limit exposure by quarantining potentially infected individuals should be mandatory in order to control the spread of the infection.

### **How does one tackle the problem of scarce resources such as Ventilators, ICU beds and important medicines?**

Much attention is being given to the allocation of scarce resources during the present pandemic. Numerous approaches and guidelines are now available to hospitals and providers. It is helpful to divide decisions about the allocation of scarce resources into 2 distinct categories: allocation of clearly finite resources and allocation of nonfinite resources which may have to be reassigned. This will present discrete ethical challenges. A particular feature of the current pandemic is society's collective support for conserving scarce resources. Although in very good intent, the attempt to conserve may become misguided. Those who have well intentioned ideas to save resources, often overlook the practice guidelines that normally inform on all medical decisions hence we see that medical personnel may prefer, conservation of resources rather than beneficence as their reason for adopting a certain practice.

It is therefore necessary that COVID-19 and non-COVID-19 patients be evaluated first on medical merit before considering matters of resources. The adopted protocol for allocating nonfinite scarce resources should be followed systematically, with full transparency and with creative efforts to mitigate the loss experienced by patients to whom limited resources are not directed. Lastly protocols should be regularly reviewed in order to accommodate the needed changes in response to our growing knowledge of COVID-19.

### **What ethical concerns are created by relaxing FDA rules associated with research and by relaxing criteria for certification especially in the use of medicines and vaccines?**

As the COVID-19 pandemic unfolds, researchers are working fervently to identify potential treatments and vaccines against the disease under relaxed regulations and at times with permission to forego established steps in the process. Similarly, state and local requirements for credentialing healthcare providers have been curtailed to increase the number of providers entering the workforce. Not surprising, unusual alternate remedies have claimed the lives of patients based on information disseminated through nonscientific sources.

No therapy or prevention should be promoted that has not been approved by the FDA. Although the process of such approval may be expedited based on critical need, a process grounded in solid

science must be maintained. Similarly, although credentialing guidelines may shift with growing need, we recommend that the process must maintain public trust. Transparency is paramount

### **How should the medical professionals address end of life issues and goals of care of Covid -19 patients?**

The concept of shared decision making is particularly relevant to goals of care discussion. In order to abide by the ethical obligation of non-maleficence, medically non-beneficial treatments should not be offered to patients, whether we are in the midst of a pandemic or not.

A stepwise approach to the question of end-of life issues in COVID-19 patients should be considered. First, in line with standard of care, the likely medical benefit of resuscitation is informed to the patient and offer CPR only if there is a medically defined benefit. Second, providers should be required to perform CPR only if adequate protective equipment is available to them; however, if protective gear is available, then the duty to perform CPR should strictly be dictated by its likely medical benefit. Finally, the question of allocation of resources should be considered separately from the CPR question and should follow the algorithms outlined for allocation of scarce nonfinite resources in general. When CPR is deemed to be medically non-beneficial, this decision must be promptly communicated to the patient and the patient's family. Palliative measures should be offered without delay.

### **What has been the impact of the lockdown with regard to mental health issues?**

Due to the lockdown imposed by governments all over the world record-high numbers of people have turned to social media to maintain personal connections due to restrictions on physical movement. Social media usage increased exponentially due heightened reliance on platforms to replace face-to-face communication. This may have impacted the mental health of vulnerable populations which in turn could result in increase in mental health problems.

In the throes and aftermath of the COVID-19 pandemic, researchers, medical professionals, and tech company workers need to commit to working together, sharing resources, and possessing a genuine, moral desire to help social media platforms' increasingly vulnerable global user base. Having discussed all the relevant issues around the treatment of Covid-19, let us now look at how the inappropriate focus on experimental treatments for individuals has diverted the attention away from necessary steps to control the infection as well as issues relating to medical-conditions of non-Covid-19 patients and the use of measures that would be of greater benefit to all.

According to Prof. David Shaw, there has been an overwhelming focus on one predominant ethical issue, specifically the constraints imposed upon intensive care resources given the anticipated number of infected patients. To take just one example, in the month preceding June 19, 2020, the *Journal of Medical Ethics* published 19 papers on COVID-19, nine of which concerned either triage or the ethics of vaccine development. If they are asked to make a contribution to the response to a public health emergency, ethicists also have a duty to take a wider view, and question not only whether the medical response is the right one, but also whether their contribution might be focused on the wrong target. Ethicists have great expertise in identifying ethical issues that may go unperceived by others, and failure to use this expertise is regrettable. Just as doctors and public health experts may have over focused on the potential costs of COVID-19 at the expense of non-Covid patients, ethicists have instead followed that rush towards what was perceived as the most pressing ethical issue, even though other more important ethical issues exist—perhaps because those issues are more morally distant.

Much of the early discussion of how to deal with the pandemic neglected several important features which included the excess deaths from other causes than COVID-19 because of suspension of some medical services such as screening, and increased mortality and morbidity from the effects of lockdown. The cumulative mortality from these 'missed' patients and potential patients may well outweigh the already massive cost of COVID-19 in terms of years of life lost. As compared to pre-Covid days the number of people dying every day would increase because of the pandemic. The impact of emptying ICU in anticipation of a surge of COVID-19 patients that never

materialized will take years to quantify fully—and that is without even considering patients who will die sooner because of suspended cancer screening, and other treatment programs. Another neglected issue was the sheer number not just of lives lost, but of years of life lost by each corona virus fatality and the early deaths of non-Covid patients.

According to Dr Karthik Madivanan, transplant surgeon, in Tamil Nadu, some recipient families could not find ways to travel or stay during the pandemic and hence preferred to continue with dialysis instead of risking the infection of the corona virus. This situation caused a loss of good healthy donor organs as the shelf life of a kidney is only 24 hours if preserved properly. Due to the delay in transporting the organs or accepting transplant patients for surgery many organs became unviable for use and had to be discarded, ending up as medical waste. Lack of awareness that transplant is safe during the pandemic resulted in many patients not showing up for their regular checkups.

Although measures had to be taken to stop COVID-19 or the death toll could have been much higher; it is obviously bad if non-Covid patients have suffered, but they might well have become Covid patients were it not for the focus on controlling the spread of the infection. This claim is true to some extent in terms of the public health and medical response, but it does not work as a defense for ethicists. It is their job to question the priorities of the healthcare system, and that job could be done better the next time.

The increased mortality among those waiting for an organ due to transplantation coming almost entirely to a halt, the focus could instead be on the potential consequences of the rush to empty the ICU to ensure capacity for Covid patients, including missed opportunities for organ donation and the increased mortality and morbidity among non-Covid patients denied access to the ICU. (Indeed, the focus on extreme ICU situations by some ethicists and doctors may even have contributed to the drive to empty ICUs to avoid such scenarios. This mistake was not repeated during the second wave of the pandemic.) Other important neglected topics include the cost of lockdown in terms of domestic violence and psychological harm, and issues affecting various neglected patient populations, particularly those from socioeconomically disadvantaged backgrounds, who were particularly affected by the pandemic.

Another important factor I feel to avoid stigmatization is the appropriate naming of a new virus. According to Michael Ryan, head of the WHO's Health Emergencies Program, "It is the responsibility of us all to ensure that there is no stigma associated with this disease, and the unnecessary and unhelpful profiling of individuals based on ethnicity is utterly and completely unacceptable." Names such as Mexican Flu, Spanish Flu provoked a backlash against members of these communities and creates barriers to travel, commerce and trade. Names such as Swine flu, Bird flu and Mad Cow disease have caused untold adverse effects on the entire worldwide food industry. Rightly it was recommended that any new name include the causative pathogen if known, be easy to pronounce and be as neutral as possible.

In conclusion I refer to Dennis Snower's opening address at the Digital Global solutions summit 2020 where he speaks about the uncertainty of human existence and the true vulnerability of human life and how we humans believe that we are supreme masters of the world around us. He poses certain questions that we are now brought face to face with.

What are we here for? What have we done with our lives? What do we yet wish to do if given the opportunity? Who is truly important in our lives? What is it that we truly cherish? The pandemic leads us to some painful insights: If we know who is truly important to us and what we truly cherish, then why have we spent so little of our lives pursuing these things?

The Corona virus shows us how terrible it really is to waste our lives, embroiled in endless battles for wealth and status and power. How terrible it really is not to recognize the value in the people

around us – not just our family and friends, not just colleagues and fellow citizens, but also complete strangers. How terrible it is not to give our lives meaning – every hour of every day – by honoring the sacredness of life and according to all living things the respect, sensitivity, and care that they deserve. The pandemic demonstrates to us the value of freedom; the freedom to move, to be with those we love, to live in dignity and security not only for ourselves but for those around us, from our loved ones to the refugees and the downtrodden.

The pandemic has taught us the true purpose of each one of us is to serve human needs and purposes not just of individuals, but of societies and of the natural world in pursuit of all our overarching communitarian goals that are articulated in our religious and cultural aspirations. The Covid-19 pandemic highlights the danger of ignoring our interdependence and the importance of global cooperation. The religious insight that all people are created in the image of God calls us to recognize that everyone on earth is worthy of our respect and care.

The COVID-19 pandemic is still filled with uncertainty and uncharted territory. The obligations of transparency, advocacy, and response to change define our stepwise recommendations. In rich countries citizens expect that all should be first vaccinated before sending vaccines to other poorer countries. Isn't that cause for concern! Rich countries are spending 20% of their GDP on research which the poor countries cannot. Extreme poverty has increased due to the pandemic. The world must understand that developing countries are important for exports and trade. It is imperative that they must first recover so that the rich countries can still retain their work. Human beings must recognize their collective obligation. It is therefore in the interest of rich countries that poor countries have good health systems. One needs to look at interests more collectively. There is the need to invest more in each other.

Hence, we must be aware that No one is safe till everyone is safe and it is in each one's best interest to ensure that everyone on this planet is protected.

The pandemic, since it started, has brought changes to every sphere of life. Medical education has also been affected by it whereby the processes of teaching and learning medicine are being carried out through the online platform in place of the conventional classroom atmosphere. However, a majority of the teachers in our study have been able to adapt to and remained unaffected by this change with more than 72% of them responding of being comfortable with online teaching. For those who encounter problems during online teaching, regular training programs on E-learning may help overcome this issue. The finding was also reported by a previous study in which only 10.19% of faculty were uncomfortable with online teaching.

Regarding the familiarity of the teachers with the technology involved in taking online classes, many of them were accustomed to the devices and features of the software used for this purpose; a finding similarly observed by other studies. This positive response by the teachers could be due to the participants being more from the younger age group who are more aware of the advancement in modern technology. Internet connectivity is not a problem for many of the teachers in this study even though it has been cited earlier as one of the many barriers to carrying out effective online teaching. This may be attributed to the fact that the classes were taken from designated areas overseen by the staff under the Telemedicine department of the Institute.

Factors like student attentiveness and student monitoring have received unfavourable responses where the majority of the teachers found it difficult to monitor the students during online classes. This is a concern also shared by the previous study. Some of the teachers in our study also reported being distracted while taking online classes, for example students making annotations on screen, a finding also noted by 45.2% of the participants in a study by Vishwanathan K et al [12]. This distraction can be minimized through a proper and thorough understanding of the online platform used where the host (teacher) exercises control such as muting all the students and disabling specific applications during the class. The students should also be advised to log in for the class on time as lack of punctuality is also another important factor that may lead to the teacher being distracted during online classes. Another factor that received an unfavourable response from the teachers in our study was the interaction with the students where a majority of them preferred

physical classes to online classes; a finding similar to Motte-Signoret E et al [13]. However, Joshi KP et al found that 44% of faculty were satisfied with the student-faculty interaction during online classes.

In this study, an effort was also made to compare the effectiveness of disseminating theoretical and practical knowledge between online and physical classes. As far as imparting theoretical knowledge and psychomotor domains are concerned, the teachers felt that online classes are as good as physical classes for disseminating theoretical knowledge but almost all of them thought that physical classes are much better than online classes for teaching psychomotor domain. Similarly, previous studies have supported this finding where the teachers found it difficult to teach skill domains during online classes.

### **Conclusion**

The teachers were comfortable with teaching via an online platform and were accustomed to the technology to conduct online classes. However, they thought that the students were not attentive and found it difficult to monitor them during the classes. As far as teaching the psychomotor domain and interaction with the students were concerned, it was felt that physical or face-to-face classes were better in comparison to online classes. The pandemic has taught an important lesson that it is necessary for medical teachers of today to equip themselves with e-learning skills and knowledge to tide over the challenging waves that cross their path in their quest for educational excellence.

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