**Ethical issues in providing care to Hematology**

**in the Time of Covid-19**

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**patients in the Time of Covid-19**

**Abstract**

The COVID 19 crisis and lockdown has hampered care of sick and chronic patients due to interruptions in travel and diversion of healthcare staff and resources for COVID19 care in India. India faces unique ethical challenges related to rationing of care.The inability to access and help patients, in conjunction to rapidly evolving information and changing protocols of how COVID-19 is tested and managedpose threats and interruption to both acute and chronic care of hematology patients. Guidelines for essential and non-essential services are lacking. While a few international guidelines have been created, these are being transposed in the Indian scenario without contextual adaptation. Just and fair rationing of care requires cultural and social acceptance. We aim to elucidate our experience in Hematological care, andreflect uponethical guiding principles to provide care in India during such strained settings.

**Introduction**

Daily, the majority of government healthcare facilities in India experience significant overcrowding, straining the ability to provide adequate, and appropriate care. Hematology and hemato-oncology (blood cancers) patients require the most hospital resources for treatment such as blood components, staff, medicines indeed they routinely require resources used in most intensive care settings. The system is perpetually resource and staff constrained, and out of pocket expenses of patients are very high[1]. The crises we now face, is unprecedented and has forced us to change how we manage patients. It is in stark contrast to the usual spirit and ethos,of how we worked in advocating for the best we could for each of our patients, and has dramatically altered our day to day functioning and goals of care. Daily decisions and information overload further add to stress andself-doubt.

Our patient, Mr. AX, a 56 year old male, daily wage laborer, came to us during the lockdown, after an arduous journey, it was his first encounter with us. He had been suffering from a chronic autoimmune disease and presented with severe anemia with a Hemoglobin of 2g/dL, despite multiple blood transfusions at outside hospitals. He had developed alloimmunization, with pan-reactive antibodies to most blood groups (reactions to the minor blood group antigens). The patient needed antibody negative blood, which usually requires testing of many units of packed red blood cells. However, the lockdown meant that regular volunteers blood donors, and patients’ families could not travel, and blood products were critically short. This contributed to his early demise in the 4th week of the lockdown, despite various attempts to access blood resources.

We have had to unwillingly and painfully adapt our protocol driven Hematology-oncology management. Tragically relapsed and refractory cases, are being sent home on palliation, given systems and resource constraints.

How do we decide how to distribute a unit of scarce platelet apheresis product? How can we choose scarce packed red blood cell (PRBC) products between two patients at risk for intra-cranial hemorrhage- one an elderly patient with myelodysplastic syndrome who has been our regular follow- up patient, or a young patient with newly diagnosed aplastic anemia?

Even at the best of times, health systems in public hospitals in India are resource stretched, and with only just adequate supplies, medications, and chronic staff shortages. However, with the help of teams of compassionate and motivated social workers, a supportive administration, an efficient and hardworking blood bank, and occasionally NGOs; these potpourri of support are able tofill gaps, we are able to provide the required care for hematology patients.

The lockdown however, further disrupted this already fragile patchwork of a system, interrupting our routine care severely, and has us individually making tragic choices daily.

We will lay out some of the problems and, look at how they have been addressed byethical frame works by others during times of distress or shortages.

1. **What are the duties of a doctor?**

A physician has a “duty of care” to patients, and above all to do no harm (*primum non nocere).* There is aunique relationship between doctors and patients, which isentered voluntarily and by mutual agreement in the legal sense[2]. The doctor must provide the best medical treatment possible to their individual patient within their capacity.

Under a crisis situation like this pandemic, this may mean communicating systems level limitations in protocols and treatment as well, the limitations are due to vastly changed workflows and challengedresources of both staff and supplies.

**2.What are the obligations of a doctor during a pandemic?**

Does the duty to an individual patient decrease now there is responsibility and solidarity to society and populations as a whole?

Currently, there is much debate on the obligations of a doctor during a pandemic. On one front, in life threatening epidemics, or disasters the duty of doctors is to put themselves in the frontline, even if it involves putting themselves at risk[2, 3]. An analogy is during a fire- where the general public may try to help, but a firefighter has a duty to do so.

However, in light of limited safety, and personal protective equipment (PPE) for providers with themselves, as a limited resource has led to debate against the war analogy, and discussion on ’lack of moral obligation to serve’[4]. Who protects doctors? A blog piece in BMJ debated the ethics of not providing protection to physicians and questions the need for them to sacrifice themselves [4]. The Supreme court of India took cognizance of a PIL submitted on April 1, 2020 and stated - "The need of the hour, therefore is to ensure that the respective State Governments take immediate actions to provide adequate protective gear to the medical professionals, not only in the Metro Cities, but also in Tier 2 and Tier 3 cities”[5].

THE DISASTER MANAGEMENT ACT, 2005[6]which was enforced by the government March 24,2020, recommends that national and state associations should frame guidelines for*minimum healthcare*.

One necessary need is todefine essential and minimum care.This is further important for hematological conditions, and surgery, which require blood component support. While this essential and non-essential medical care is difficult to define, and in the context of a pandemicto be resolved. This will vary over timewith waxing and waning available situation and resources.

Patientsdeserve alleviation of their suffering. However, the disaster act fails to elucidate, what must be done acutely, and what maybe postponed. It is important to ration resources so that those needing emergency care,can receive it, and preventable deaths may be mitigated. This has led to much discourse leaving both patients and doctors without clear answers.

Perhaps the disaster act did not envisage a situation of an international pandemic with shortages of personal protective equipment (PPE), reduced patient mobility, shortage of blood donationsetc. Doctors are to risk their lives, emotional stress, and burn out by the ethical decisions they must make[7,8]. More than 90% of doctors in our department confessed to burn out and feelings of inadequacy and helplessness.

1. **Logistical challenges of care adaptation**

In a country the size of India, many patients travel across state borders, to facilitate transport we had government granted railway concession schemes, and many NGOs provided free transport to and from home-hospital, or provide free /nominal costing accommodation to patients. Now, with the COVID-19 lockdown, travel to major hospitalsin larger cities,across state lines is not feasible.

Hematology-Oncology patients are suffering globally, especially, our patients more vulnerable patients; given the structural vulnerabilities they face, battling the combined barriers of poverty, literacy, ostracization and marginalization. In India specialty care is usually found in larger tertiary care hospitals, mostly in the big metropolitan cities. Patients travel across many states to receive care for chronic and life-threatening illnesses regularly. The lockdown has laid bare problems with this model of care.Acutely ill patients, will still need hospital-based care.

Fortunately, with the new government guidelines essential services, like the blood bank and daycares ( place for short admission for blood transfusion or chemotherapy/ injections over a short period of time ) are getting back on track.

As new systems of care are evolving, regulations around telephonic and telemedicine guidance and email prescriptions have been improved, these permit remote follow-up and care of stable patients. Patients are utilizing novel means to contact to us – such as WhatsApp, and other media. Further refinements of telemedicine and even certification of telemedicine to make it more accessible, and effective, with patient-provider centric guidelines to harmonize practices is necessary [8]. Additionally, not everyone can currently access, utilize and manage a teleconsultation, a significant proportion of our population, and vulnerable patients at the last mile patients remain left behind. Also, the medico-legal ramifications of any mistakes or errors in telemedicine are yet to be evaluated.

**4.Ethics of rationing of care**

The General Medical Council (UK) states[9] under the heading ‘Leadership and management for all doctors, subheading Duties of a doctor in the workplace, point 2g’ states that we must use resources efficiently for the benefit of patients and the public’. So, when there are reduced resources, we must seek ways that are fair and ensure the limited resources are used effectively. In low and-middle income country (LMICs) contexts, often these decisions are routinely made implicitly[1], however, with the current scale of events, there is an explicit need to define them exists. In the USA rationing of ICU resources have been discussed, though focused predominantly on possible approaches of rationing of care, and equipment (e.g. ventilators in times of scarcity)[10–12]. In LMICs, further resources and systems are strained as well. The present COVID-19 pandemic has managed to look at the long-term possibility of continued lockdown and continuing waves of new cases for many months, and likely continued global strain on health systems[11,13].

Rationing of rare and precious solid organs for transplant is an example of how even affluent societies deal with scarcity[14]. National lists are prepared to prevent rich patients from jumping the queue and getting favored access. The process of rationing must be driven by principles of distributive justice and equality, to lead prioritizing scarce resource to fewer patients with better probability of survival, based on pre-defined criterion.

Ethical frameworks are designed to reason through these difficult situations. A few of the ethical values underpinning rational rationing, include maximizing benefits (save the most lives/ save the most life years), treat people equally, prioritize the sickest/youngest, a person’sbenefit to others(the most controversial)[14]. Ethical debates based on different ethical principles ensure fairness and justify rationing- egalitarianism, utilitarianism, prioritarianism, rule of rescue[14].

**Table 1**

**Principles used to guide decision making for difficult ethical dilemmas.**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Ethical issue | Description | Value |
| 1. | Egalitarianism | Equal moral right of each individual for goods. E.g. a lottery to decide or first come first serve for an ICU bed | Less helpful, as those with better outcomes who may present later not receive treatment |
| 2. | Utilitarianism | Maximize benefit at the level of society e.g., governments looking at quality adjusted life years to decide on care, and cost of QALYs to decide on approval of therapy | Maximizes benefit for the many, may be based on varied criterion, such as outcome/lives saved based as well. Useful in scare resources. |
| 3. | Prioritarianism | Priority given to the worst off- give a chance to young over old as they have not had a chance to live life. | May be less useful under current circumstances, with limited resources, and poorer outcomes in those that are worse off |
| 4. | Rule of rescue | Save those most likely to die | Similar downsides to prioritarianism |

A detailed discussion by Scheunemann and White(14) describes the ‘debate about distributive justice is how to navigate the conﬂicting impulses to maximize efﬁciency (making decisions so as to produce the most good with the least expenditure), equity (treating individuals equally), and prioritarian conceptions of justice (favoring the worst off).’

The promotion of benefit in a pandemic situation, may utilize a utilitarian framework, where priority of limited resources may be desirable for varied societal values or outcomes,eg health care providers or vaccine trial volunteers, or outcome based strategies. However, these are often challenging to operationalize. Such difficult decisions are being made around the world, such as in Italy and United States, where due to their poor chances and shortages of beds and ventilators older patients are sent home[10-13]. Creative ideas like sharing a single ventilator between several critically ill patients are discussed[11-13], previously such ideas would be deemed un-ethical, and debate on the efficacy vs. equality ensue[13].

Such ideas may conflict with individual and collective cultural and social sentiments. How will an Indian family react to not providing a ventilator to their 75 year old parent with blood cancer and COVID 19? Even in pre-pandemic times the acceptance of palliative care culturally is limited in India. How rationing occurs is important; it reflects the values of the society. In a time of crisis, ethics, law, and societal values may evolve.

A major crisis is for patients on chronic transfusion support,who routinely require regular blood transfusions of 2 to 4 units of PRBC per month. Our hospital policy has provisions for free blood transfusions, without replacement donations for chronic transfusion dependent patients. However, with blood shortage we have had a paucity of blood and, on a few days had no blood units for one or more blood types. This is unprecedented. We requested patients to return, and contact us with symptoms as we work on replenishing stores and rationing use. Patients too admit that healthy donors are fearful of coming to hospitals to donate blood.

What is the right manner to ration? In a choice between a patient with multi- relapsed and refractory acute promyelocytic (failed treatment and resistant to treatment) leukemia (blood cancer) presenting at time of a pandemic and country wide lockdown (15), vs. a young patient with disseminated intravascular coagulation (DIC) and shock due to an infection,and requiring large quantities of all blood components red blood (PRBC), platelets and plasma. When blood components are short a few patients may use all the resources than may be used for many patients. Choosing patients with a better chance to survive or looking to the best chance for each individual patient?

**5. How to effectively use resources?**

Lack of effective triage, and resource allocation strategies, will have serious consequences and result in increased lives lost, as essential resources may not be available for those who can benefit the most, if used in a status quo, access based, first-come, first-serve approach [14,16,17]*.* Disaster triage use tagging systems (a) those who will probably die, even if treated, (b) those who will probably live even if not treated and (c) those who will probably live if treated but die if they are not [2]. These ethical arguments [14, 16-17] are being used globally.The well described ethical principles and different scenarios are logical and well-reasoned, however implementation and consensus, should be driven by context, and values of stakeholders a community(with representation from all societal levels).

There is an imperative need to allocate our scarce resources, and for doctors to shift our lens of care from an individual patient level, to a public health level [18]. This is not a comfortable, nor an easy transition.

This shift from focus on every patient to a system of triage favoring those with better survival chances, has additional moral burden and results in stress that most the public may not understand. Stakeholder communication in development of such approaches is imperative.

**6. How can this process be made fair?**

John Barry in ‘The Great Influenza’, a book about the 1918 pandemic,discussed how doctors do not make the decisions of who lives and dies, it is the virus[19].While, these choices are often made individually, and implicitly in resource-constrained settings, with further strain, and for society to normalize (and avoid violence against physicians), there is a strong need to lift the burden and blame of these choices off the individual doctors, by developing and disseminating institutional/state recommendations[20].

Mechanisms have been advocated for to ensure the fairest possible process, the principles include i) procedural oversight by a legitimate body, ii) transparent decision making iii) reasoning according to information and ethical principles, iv) system for appeal and revision[20–22]. Additionally, public engagement, and acceptance is important [23].

Hospital administration should convene ethics boards, and provide clear protocols based on their context, and resource availability, with clear, and actionable decision-making guidelines[20]. Decisions about giving lifesaving support or withdrawal should be made at an administrative level, not by treating doctors at the bedside, to reduce moral injury upon doctors [21,22] .

Several clear and outcome-based guidelines for oncology patients have been developed in the Global North. A radiotherapy guideline from MD Anderson Cancer Center proposes a tier system for care- Tier 1 requires urgent treatment for patients with cancer emergencies. Tier 2 where not providing timely care will affect future outcome, and Tier 3 where therapy can be deferred safely[24].

At present a only a few Indian guidelines have been developed, where international society guidelines have been transposed, for hematology and transplant patients in India[25,26]. However, it is important to note that International guidelines are only opinion pieces, and developed for different contexts[27-30]. Our patient populations, and systems supports vary grossly, for the recommendations to be applied without adaptation. It is important to note that guidelines from American or European societies reflect the ethics and values accepted by their society. Reducing treatment for patients with hemato-oncology (e.g. omitting steroids from adult acute lymphoblastic leukemia protocols) [25] or hematological diseases or, deferral of therapeutic procedures such as life saving allogeneic transplants [26]will most likely lead to unfavourable outcomes downstream. Patients and doctors do not know the consequences of these changes to standard therapy and only “obtaining an additional consent for alternation in the treatment protocol” may be enough to protect doctors from legal action[25], but is ethically debatable. Patients abroad have access to investigational agents and their therapy is being paid by their insurance providers or national insurance. For our out of pocket paying Indian patients, their chances of cure are dependent on the one time effective therapy they receive. Many procedures listed are for convenience of hospitals, such as guidelines to refer patients to a non-COVID hospital for treatment, at present with community spread of COVID-19 this is an impractical option and will lead to increased patient harassment.

The testing procedures for asymptomatic patients for COVID-19 by RT PCR prior to transplant have been taken from international guidelines[26], however these are in conflict with national ICMR guidelines for testing, and this discrepancy needs to addressed to prevent problems for doctors and hospitals. Non -compliance with government norms is possible for doctors in non-government hospitals.

It is urgently essential that national/state associations frame guidelines for rationing of care and treatment strategies in different scenarios, with invited inputs from legal, ethics societies and the lay public. This process requires consultation with a wider body of care givers and patients and patient advocates and these recommendations will need government approval with transparent information.

**7. What do the communities, and non-clinicians think of “ethical rationing**”

Is such a process acceptable to society at large?

In a mixed methods study by Biddison *et al* [31]*,* in Maryland, USA, a democratic discussion style qualitative study , was conducted with community members, on possible ethical scenarios if such a situation were to arise where scarce ventilators would require allocation. Several differences in perspectives were highlighted between withdrawing and withholding life-saving resources between health care providers and the public[31]. However, one highlight was that the communities in the study, preferred clear and direct communication, about the reasons for withholding or withdrawal of support, and wished to know the ‘rules of the game’, even if harsh, and what to expect[31]*.*

However, these may possibly lead to increased tensions between families and physicians in an already frayed culture as ours, and those who may try to manipulate the system. It emphasized the differences in perceived values, between different stakeholders. Different societies may have different values, these may even be different from state to state in India, especially if they are minority groups with different religious or cultural values. It is important for doctors to be aware and, to understand these sensitivities, and such a system must be open to appeal mechanisms and iterative adaptation. We are having dialogues with various patient support groups such as the hemophilia federation of India, and thalassemia societies to address the problems made by these shortages to bridge the gap.

**8.Moral injury-the Mental Healthsequelae**

COVID-19 has resulted in mental health issues due to fear and panic in both the public and the health care fraternity. Due to shortages and rationing as doctors, we too feel helpless, and inadequate, setting our care back to how patients were managed twenty years ago.

High infection rates among doctorsand nurses [32,33],decision fatigue with constant difficult clinical decision making,time-pressures in trying to keep up with the literature,also increasesthe stress they have to endure. Everyday battles at the front line, on health resource allocation further, lack of safety (PPE, risk of infection, and violence from communities), compound these problems, without clear guidelines to offload the burden from individual providers. Doctors and their families need to feel safe too.

Our moral compass as providers is spinning uncontrollably. How may we resolve these moral dilemmas? What evidence is there to guide doctors during this difficult time? How do these relate to our professional obligations, and duties?

Time that could be allotted to patients with better prognoses may not happen as practitioners are caring for other sicker patients, who may not have favorable survival[ 34]. Health systems that are adequate in normal times are not geared for the extra loads imposed by this situation.

There is a high risk of developing moral distress, which refers to the betrayal of what is considered right, by ones value system, especially in high stakes situations[34,35]. In needing to make constant tragic choices, like deferral of chemotherapy due to reduced supportive care, puts a moral burden on the doctor. We are working through a time, when we must recognize our inability to provide the best possible care. For clinicians, at thebedside, having to make these choices individually, the weight of repercussions are further immense, leading to moral injury from moral distress[34,35], as faced by our colleagues in Italy, the United States[10,15], as forthose who work in humanitarian settings [7,18]

There have been suicides amongst COVID positive patients in the hospital or in quarantine [36–38]. Community awareness and paranoia must be tackled to reassure all stakeholders.

Unfortunately, in switching to a public health, vs. individual health frame of reference under a pandemic, patients of other serious diseases may receive less than ideal care or die, during these trying times, as witnessed in other countries during this as well[10-13]. Families file lawsuits against doctors or hospitals, for their perceived lapses, though the problems are larger more systemic and biologic. Dr. Edward Trudeau, in the 1800s, for tuberculosis care, stated ‘To cure sometimes, to relieve often, to comfort always,” while we may not always have the resources, palliative care, with psycho-social and comfort along the process may always be provided, and community and healthcare workers at all levels must be taught principles of palliative care communication, and amelioration of distress and pain.

**Conclusion:**

Having clear and transparent triage and allocation strategies is essential and will benefit both healthcare providers and patients.Hospital administration committees need to shoulder this, and be the ones who communicate with families.This may be dynamic, and must be adaptive at different time points in the pandemic, as the resources may fluctuate on a day to day basis.

We must work and aim to the highest moral options available[13,14, 39]and do the best we can with what we have. Indian health care has been suffering Sysiphus curse, as the burden of infections decreased the non communicable burden increased, now we have COVID 19.This is a great accelerator and weak systems are liable to break under this new strain. A district care model of medicine has been proposed several years ago, it exists in some States. This model is essential and needs to be strongly implemented in the future to ensure that chronic care patients do not face further interruptions of treatment because of any future lockdowns or catastrophes.

In national emergencies the principles of distributive justice; may not always mean ideal quality care for all, but just care under strained circumstances. In acute disaster situations, often utilitarian approaches are applied, as there may be little opportunity to do anything else in situations, where needs vastly exceed resources[39]. The necessity of treatment, what treatment to be provided, minimum standards of care need be tailored to the disease, stage, and seen in the context of the facility-based resource availability[20,31]. Some academic societies have made such guidelines with decisions on what is elective and what is essential, these should be revised based on data from the last few months. India too must develop and communicate these guidelines in co-operation with stake-holders and the public. This is a new world, with new problems that demands our attention and a new approach.

# References

1. Kastor A, Mohanty SK. Disease-specific out-of-pocket and catastrophic health expenditure on hospitalization in India: Do Indian households face distress health financing? PLoS ONE.
2. Orentlicher D. The Physician’s Duty to Treat During Pandemics. Am J Public Health. 2018;108:1459–1461.
3. Clark CC. In harm’s way: AMA physicians and the duty to treat. J Med Philos. 2005;30:65–87.
4. Zohny H. Health Care Professionals Are Under No Ethical Obligation to Treat COVID-19 Patients [Internet]. Journal of Medical Ethics blog. 2020 [cited 2020 May 27]. Available from: https://blogs.bmj.com/medical-ethics/2020/04/01/health-care-professionals-are-under-no-ethical-obligation-to-treat-covid-19-patients/.
5. Mahajan S. Coronavirus: Supreme Court seeks Centre’s response in PIL seeking availability of WHO-graded protective gear for medical professionals [Internet]. Bar and Bench - Indian Legal news. [cited 2020 May 27]. Available from: https://www.barandbench.com/news/litigation/supreme-court-seeks-centres-response-on-pil-seeking-availability-of-who-graded-protective-gear-for-medical-professionals-and-workers.
6. Legislative department, Disaster Management act, 2005, Ministry of Law & Justice [Internet]. [cited 2020 May 27]. Available from: https://ndma.gov.in/images/ndma-pdf/DM\_act2005.pdf.
7. West-Oram PGN, Buyx A. Global Health Solidarity. Public Health Ethics. 2017;10:212–224.
8. NITI Aayog, 2020, Telemedicine practice guidelines, MoHFW [Internet]. [cited 2020 May 27]. Available from: https://www.mohfw.gov.in/pdf/Telemedicine.pdf.
9. Leadership and management for all doctors [Internet]. [cited 2020 May 27]. Available from: https://www.gmc-uk.org/ethical-guidance/ethical-guidance-for-doctors/leadership-and-management-for-all-doctors.
10. Rosenbaum L. Facing Covid-19 in Italy - Ethics, Logistics, and Therapeutics on the Epidemic’s Front Line. N Engl J Med. 2020;382:1873–1875.
11. Neyman G, Irvin CB. A single ventilator for multiple simulated patients to meet disaster surge. AcadEmerg Med. 2006;13:1246–1249.
12. SCCM | Consensus Statement on Multiple Patients Per Ventilator [Internet]. Society of Critical Care Medicine (SCCM). [cited 2020 May 27]. Available from: https://sccm.org/Disaster/COVID19/Advocacy/Joint-Statement-on-Multiple-Patients-Per-Ventilato.
13. Coronavirus and ethics: “Act so that most people survive” | DW | 24.03.2020 [Internet]. DW.COM. [cited 2020 May 27]. Available from: https://www.dw.com/en/coronavirus-and-ethics-act-so-that-most-people-survive/a-52895179.
14. Scheunemann LP, White DB. The Ethics and Reality of Rationing in Medicine. Chest. 2011;140:1625–1632.
15. Favre G, Fopp M, Gmu¨r J, Tichelli A, Fey MF, Tobler A et al (1993) Factors associated with transfusion requirements during treatment for acute myelogenous leukemia. Ann Hematol 67(4):153–160
16. Kipnis K. Triage and Ethics. AMA Journal of Ethics [Internet]. 2002 [cited 2020 May 27];4. Available from: https://journalofethics.ama-assn.org/article/triage-and-ethics/2002-01.
17. Robertson ‐Steel I. Evolution of triage systems. Emerg Med J. 2006;23:154–155.
18. Kittleson MM. The Invisible Hand — Medical Care during the Pandemic. New England Journal of Medicine. 2020;382:1586–1587.
19. Palese P. The great influenza The epic story of the deadliest plague in history. J Clin Invest. 2004;114:146.
20. A Model Hospital Policy for Allocating Scarce Critical Care Resources. UnivPittsburgh\_ModelHospitalResourcePolicy\_2020\_04\_15.pdf [Internet]. [cited 2020 May 27]. Available from: https://ccm.pitt.edu/sites/default/files/UnivPittsburgh\_ModelHospitalResourcePolicy\_2020\_04\_15.pdf.
21. COVID-19 Is Making Moral Injury to Physicians Much Worse [Internet]. Medscape. [cited 2020 May Available from: http://www.medscape.com/viewarticle/927859.
22. Daniels N. Accountability for reasonableness. BMJ. 2000;321:1300–1301.
23. Baum NM, Jacobson PD, Goold SD. “Listen to the people”: public deliberation about social distancing measures in a pandemic. Am J Bioeth. 2009;9:4–14.
24. Yerramilli D, Xu AJ, Gillespie EF, et al. Palliative Radiotherapy for Oncologic Emergencies in the setting of COVID-19: Approaches to Balancing Risks and Benefits. Adv Radiat Oncol [Internet]. 2020 [cited 2020 May 27]; Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7194647/.
25. Jain, A., Singh, C., Dhawan, R. *et al.* How to Use a Prioritised Approach for Treating Hematological Disorders During the COVID-19 Pandemic in India?. *Indian J Hematol Blood Transfus* (2020). <https://doi.org/10.1007/s12288-020-01300-0>
26. Sharat Damodar ,Vivek S Radhakrishnan,, Joseph John M, Pankaj Malhotra, Reetu Jain, Sameer Melinkeri,Jose Easow, Alok Srivastava. HSCT GUIDELINES FOR TRANSPLANT PRACTICES DURING COVID-19 PANDEMIC IN INDIA ISBMT DOCUMENT https://doi.org/ 10.31547/bct-2020-003
27. Coronavirus disease COVID-19: EBMT recommendations (Update 23 Mar 2020) | EBMT. https://www.ebmt.org/ebmt/news/ coronavirus-disease-covid-19-ebmt-recommendations-updatemarch-23-2020 13.
28. Cancer patient management during the COVID-19 pandemic | ESMO. https://www.esmo.org/guidelines/cancer-patient-manage ment-during-the-covid-19-pandemic. Accessed on 14 Apr 2020
29. COVID-19 and ALL - Hematology.org. https://www.hematology. org/covid-19/covid-19-and-all. Accessed on 14 Apr 2020
30. BSBMTCT recommendations for COVID adult BMT - 27 Mar 2020 - British society of blood and marrow transplantation. <https://bsbmtct.org/bsbmtct-recommendations-for-covid-adultbmt-16th-march-2020/>

<http://www.bsbmtct.org/wp-content/uploads/2020/03/BSBMTCT-recommendations-for-COVID-Adult-BMT-27th-March-2020.pdf>

1. Daugherty Biddison EL, Gwon H, Schoch-Spana M, et al. The Community Speaks: Understanding Ethical Values in Allocation of Scarce Lifesaving Resources during Disasters. Annals ATS. 2014;11:777–783.
2. Radhakrishnan V, Sen S, Singaravelu N. Data | How many doctors and nurses have tested positive for coronavirus in India? The Hindu [Internet]. 2020 Apr 23 [cited 2020 May 27]; Available from: https://www.thehindu.com/data/how-many-doctors-and-nurses-have-tested-positive-for-coronavirus-in-india/article31410464.ece.
3. 548 doctors, nurses, paramedics infected with Covid-19 across India: Report [Internet]. Hindustan Times. 2020 [cited 2020 May 27]. Available from: https://www.hindustantimes.com/india-news/548-docs-nurses-paramedics-infected-with-covid-19-across-india-report/story-o2pM3w2adM4g3PXI6TBlkN.html.
4. Shay J. Moral injury. Psychoanalytic Psychology. 2014;31:182–191.
5. Campbell SM, Ulrich CM, Grady C. A Broader Understanding of Moral Distress. Am J Bioeth. 2016;16:2–9.
6. Covid-19 positive woman commits suicide in Mumbai [Internet]. India Today. [cited 2020 May 27]. Available from: https://www.indiatoday.in/india/story/covid-19-positive-woman-commits-suicide-in-mumbai-1667178-2020-04-15.
7. Tablighi Jamaat member commits suicide at Maharashtra hospital after testing positive for Covid-19 [Internet]. India Today. [cited 2020 May 27]. Available from: https://www.indiatoday.in/india/story/tablighi-jamaat-member-commits-suicide-at-maharashtra-hospital-after-testing-positive-for-covid-19-1665822-2020-04-11.
8. COVID-19: Man under home isolation commits suicide in Chhattisgrah [Internet]. [cited 2020 May 27]. Available from: https://news.webindia123.com/news/Articles/India/20200331/3531154.html.
9. Hunt MR. Establishing moral bearings: ethics and expatriate health care professionals in humanitarian work. Disasters. 2011;35:606–622.