Whose life to save? Scarce resources allocation in the COVID-19 outbreak

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ABSTRACT

After initially emerging in China, the coronavirus (COVID-19) outbreak has advanced rapidly. The World Health Organization (WHO) has recently declared it a pandemic, with Europe becoming its new epicentre. Italy has so far been the most severely hit European country and demand for critical care in the northern region currently exceeds its supply. This raises significant ethical concerns, among which is the allocation of scarce resources. Professionals are considering the prioritisation of patients most likely to survive over those with remote chances, and this news has triggered an intense debate about the right of every individual to access healthcare. The proposed analysis suggests that the national emergency framework in which prioritisation criteria are currently enforced should not lead us to perceive scarce resources allocation as something new. From an ethical perspective, the novelty of the current emergency is not grounded in the devastating effects of scarce resources allocation, which is rife in recent and present clinical practice. Rather, it has to do with the extraordinarily high number of people who find themselves personally affected by the implications of scarce resources allocation and who suddenly realise that the principle of 'equals should be treated equally' may no longer be applicable. Along with the need to allocate appropriate additional financial resources to support the healthcare system, and thus to mitigate the scarcity of resources, the analysis insists on the relevance of a medical ethics perspective that does not place the burden of care and choice solely on physicians.

INTRODUCTION

The current coronavirus (COVID-19) outbreak is spreading rapidly. First reported in China in December 2019, the virus has indiscriminately infected people all over the country, with many dying from the infection. The Chinese attempt to limit the spread by locking down the entire city of Wuhan was initially perceived by the rest of the world as simply a 'Chinese' emergency to read about in the news. However, such a perception could not have been more wrong. Never before have connections and movements of people between countries been so frequent. The idea that this emergency would remain within the boundaries of a Chinese drama was a mere fantasy.

As of 11 March, the virus has spread to more than 100 countries,[1] resulting in thousands of deaths. Although rigorous restrictions in Wuhan contained the spread, on 11 March the WHO declared the COVID-19 outbreak to be a pandemic and that Europe had become its new epicentre. Italy, especially the northern region of the country, has been severely affected, and is currently reporting the largest outbreak in Europe. As of March 15, the Protezione Civile has confirmed 24 747 total cases since the beginning of the outbreak, with 1809 deaths, of which 1218 have been in Lombardy.[2]

Despite the containment measures enforced by the Italian government since March 8 to minimise the risk of infected people transmitting the virus to healthy ones, limiting the spread is a significant challenge, as symptoms associated with the new coronavirus are extremely nuanced and thus hard to identify promptly. Some people are infectious and contagious without showing any symptoms; others may show symptoms similar to—and thus misleadingly overlapping with—seasonal influenza, whose peak is concomitant; while the most severe cases develop acute respiratory conditions that require intensive care unit (ICU) admission. Although only a few of those infected require ICU, the burden on the Italian national healthcare system is unprecedented. Of approximately 5200 existing ICU beds in Italy, 1028 are already dedicated to patients with COVID-19 (as of 11 March), and the need for more ICU beds is likely to further increase rapidly, as recent research in the *Lancet* claims.[3] In this scenario, demand for critical care in the northern region of Italy currently exceeds its supply, raising significant ethical concerns in the process.

COVID-19: ALLOCATION OF SCARCE RESOURCES IN ITALY

Advances in the medical field have progressively shifted the limits of the 'possible' by providing our society with extremely sophisticated treatments. Yet, this high level of healthcare is expensive, and it comes with the unfortunate side effect of scarcity. When resources are scarce in relation to potential demand, they have to be allocated by following strict prioritisation criteria—that is, someone will be left without. There are many kinds of scarce resources, some of which are life-saving, which means those who do not access them will not survive.

This is exactly the current Italian situation. The rampant spread of COVID-19 in Italy requires, in severe cases, massive admission of patients with acute respiratory infection to ICUs. ICU beds are extremely expensive and thus limited: they are scarce resources. The more patients require ICU assistance, the fewer beds are available. And some will have no chance of ICU admission—that is, with no chance of survival. In the northern area of Italy, where the healthcare system is currently under unprecedented strain, intensive care specialists are facing overwhelming decisions about who should be provided with ventilation—decisions that have to be taken in the knowledge that those not

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admitted to ICUs will very likely die. In allocating resources in these scenarios, professionals are considering prioritising those most likely to survive over those with remote chances of survival.

The news that prioritisation criteria were being applied in Italian hospitals in relation to the current outbreak sparked widespread controversy, aroused great resentment, and triggered a debate, at both public and institutional levels, about the right of every individual to access healthcare.

ORDINARY ISSUES FOR AN EXTRAORDINARY EMERGENCY

The emergency that Italy is currently facing amounts to an unprecedented clinical, humanitarian, ethical and financial crisis. Yet, ethical concerns related to scarce resources allocation are far from extraordinary, which does not make them any less challenging in the current pandemic. The recent history of medicine is rife with similar quandaries: our society has indeed been confronted with such issues several times in the past, including in the very recent past.

In 1960, Belding Scribner, a physician at the Seattle Artificial Kidney Centre, assisted by the engineer Wayne Quentin, invented the shunt to make chronic dialysis feasible.[4] This changed the lives of many patients. Yet the success of this operation rapidly showed its negative side: the treatment was extremely expensive and had limited funding. The nine-bed capacity of Seattle Center was not able to meet the demands of the numerous patients waiting for dialysis. In order to allocate this kind of life-saving scarce resource, the board of trustees of the King County Medical Society envisioned two different committees to select candidates. The first committee, comprising physicians, would select patients by focusing on their medical and psychiatric condition. On this basis, the second committee, composed of various people (including a lawyer, a businessman, a homemaker, among others) would make the final selection based on a case-by-case evaluation of economic, psychological and social factors. They evaluated age, background, education 'past performance and future potential'[5] in order to decide who shall live and who shall die.

Such prioritisation for scarce resources allocation is not confined to the past. Although different in many aspects, organs are examples of life-saving scarce resources: every day, patients on waiting lists for transplants experience the unfortunate effects of prioritisation criteria for allocation. In Italy, organs are assigned according to an algorithm that reflects several parameters: the state of severity of the pathology for which the transplant is needed, compatibility, blood type, age and waiting time on the list.[6] Against this backdrop of scarce resources, younger patients in need might be prioritised over the elderly. Healthcare professionals have to make a case-by-case evaluation in order to establish whether a patient is more urgently in need of treatment than another one, even if the latter patient arrived first. Waiting patients die because the need for organs does not meet the supply, so resources cannot be provided to all those in need. And when the demand exceeds the supply, imposition of prioritisation criteria inevitably means that some are left without.

The coronavirus outbreak constitutes a major emergency. The implications of scarce resources allocation are devastating to cope with, yet it should be kept in mind that their application is not unprecedented. The unfamiliarity of the outbreak that Europe is currently experiencing should not disorient our historical perspective, and the new framework by which prioritisation criteria for scarce resources allocation are currently being enforced should not lead us to perceive them as something new. Rather, prioritisation reflects established practices that have long regulated the distribution of finite resources when demand happens to exceed supply. The uniqueness of this outbreak lies in the extraordinarily high number of individuals likely to be impacted by allocation criteria: the effects of prioritisation are now being experienced by an entire nation rather than by a finite group of people, such as in the case of patients, and their families, awaiting organ transplants.

What is extraordinary is that high-income countries are not prepared to experience such an intense rationing of resources when it comes to life-saving assistance. Yet we all logically understand that when resources are not enough for everybody—cruel though this is—not everyone can be saved. This is something we already know—we just try to forget about it.

SHOULD EQUALS BE TREATED EQUALLY?

When there is a shortage of resources, the formal principle of justice, which states that 'equals should be treated equally and that unequals should be treated unequally' is frequently invoked.[7] This principle raises significant concerns, however. It seems fair that equals deserve equal treatments, but each of us has very different characteristics, and these cannot be ignored. Which traits define equality and which traits do not? In other words, how far does the meaning of 'equal' extend? In Italy, everyone is equally entitled to the right to access healthcare services. This means that, on informed consent, everyone is offered the best available care. Yet even in normal practice, protocols differ according to different conditions, and the different clinical and physiological profiles of patients. When patients present the same medical condition, factors such as age, comorbidity, gender and severity of the disease have an impact on the specific protocols that physicians follow. Since equals should be treated equally, it is unequal to treat unequals equally. Therefore, although there is a right for everyone to be treated, it is not feasible to ignore contingent medical and biological characteristics that, inevitably, make one patient different from the other, and which have a significant impact on the outcome of care. If these differences are relevant in standard clinical practice, they acquire an even greater impact in an emergency characterised by a scarcity of resources, such as that created by COVID-19.

Prioritisation does not mean that one life is more valuable than another, as all lives are equally valuable. But when resources are not enough to save all those in need, prioritisation involves allocating resources such that they are more likely to save the most lives. This method allows priority treatment of those who are more likely to benefit from the scarce resource—admission to an ICU in this case—and to recover quickly with a positive outcome, which in turn allows the next in line to benefit from the treatment in question.

A key concept in healthcare pertains to preventing suffering and harm. In such an emergency situation, as in other circumstances in which there is a scarcity of resources, it is unfortunately not possible to avoid harm at all. The effort is to reduce it.

CONCLUSION

The ethical implications of scarce resources allocation are in the spotlight in the current COVID-19 pandemic. Italy is currently facing severe challenges with demand for ICU admission far exceeding the capacity of the healthcare system, and as the virus spreads globally many other countries are likely to face the same emergency. Prioritisation criteria enforced by healthcare professionals in Italy have exacerbated tensions and triggered intense debates about the principle that everyone has the right to access

healthcare. Yet, the reality is that, along with reduced availability of resources, physicians may be forced to choose whose life to save by deciding who to admit to an ICU.

The novelty of this emergency is not grounded in the devastating effects of scarce resources allocation, which is rife in past and present clinical practice. Rather, it has to do with the extraordinary numbers of people—currently, an entire nation—who find themselves personally affected by such implications and who suddenly realise that the principle of 'equals should be treated equally' is rife with controversy. But this aspect is not new. It is simply something that people have tried to ignore.

There is an undeniable and urgent need for a more competent distribution of financial resources within the country in order to adequately sustain and support the healthcare system. Emergencies like that created by COVID-19 underline, more than ever, the pressing need to increase substantially the resources dedicated to the healthcare system, so that, as far as possible, physicians do not have to make the difficult decision of whose lives to save. Yet, a realistic analysis suggests that, for all that necessary funds can be earmarked, there will continue to be situations in which extremely difficult choices pertaining scarce resources allocation will have to be made. For instance, organs are resources whose availability cannot be increased by any additional funding.

Within this scenario, an ethical approach to healthcare choices assumes high importance. The intersection between ethics and medicine is indisputable and the contribution of an ethical perspective is both relevant and essential. Healthcare professionals forced to make decisions about resources allocation should not rely solely on their medical background. Their undergraduate and graduate education should be rigorously implemented with a grounding in medical ethics. This implementation should be flanked by the solid presence of medical ethics consultants in healthcare structures to support the evaluations and decisions of healthcare professionals. The burden of choice—the implications of which concern us all—can no longer be put on healthcare professionals' shoulders. Now more than ever, there has to be a rigorous and adequate implementation of medical ethics in healthcare.

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