

# Should healthcare workers be prioritised during the COVID-19 pandemic? A view from Madrid and New York

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## ABSTRACT

While COVID-19 has generated a massive burden of illness worldwide, healthcare workers (HCWs) have been disproportionately exposed to SARS-CoV-2 coronavirus infection. During the so-called 'first wave', infection rates among this population group have ranged between 10% and 20%, raising as high as one in every four COVID-19 patients in Spain at the peak of the crisis. Now that many countries are already dealing with new waves of COVID-19 cases, a potential competition between HCW and non-HCW patients for scarce resources can still be a likely clinical scenario. In this paper, we address the question of whether HCW who become ill with COVID-19 should be prioritised in diagnostic, treatment or resource allocation protocols. We will evaluate some of the proposed arguments both in favour and against the prioritisation of HCW and also consider which clinical circumstances might warrant prioritising HCW and why could it be ethically appropriate to do so. We conclude that prioritising HCW's access to protective equipment, diagnostic tests or even prophylactic or therapeutic drug regimes and vaccines might be ethically defensible. However, prioritising HCWs to receive intensive care unit (ICU) beds or ventilators is a much more nuanced decision, in which arguments such as instrumental value or reciprocity might not be enough, and economic and systemic values will need to be considered.

## INTRODUCTION

COVID-19 has generated a massive burden of illness, overwhelming most healthcare systems throughout the world in a very short period of time. Healthcare workers (HCWs) have been one of the most exposed population groups to SARS-CoV-2 coronavirus, with infection rates estimated approximately around 10%–20% during the so-called 'first wave' of the pandemic.<sup>1–4</sup> The infection rate of this population group has been particularly high in some Southern European countries like Spain and in the USA. Indeed, Madrid and New York have been two of the most heavily affected cities during the first wave of the COVID-19 pandemic and the former currently faces a significant resurgence of cases in a second wave.<sup>5</sup> As physician-ethicists of two large, teaching tertiary care institutions in these cities, we would like to address the question of whether HCW who become ill with COVID-19 should be prioritised in diagnostic, treatment or resource allocation protocols.

Some authors argue in favour of their prioritisation due to the (higher) instrumental value of these frontline workers before, during and after the pandemic.<sup>6</sup> Variations to this argument have found

support in several European countries. In Spain, for instance, both the National Bioethics Committee (Comité de Bioética de España) and the Spanish Society of Critical Care Medicine defend prioritising HCW in triage protocols allocating scarce resources such as mechanical ventilation, if other factors like clinical severity or maximising benefits are equal. These institutions also support HCW's prioritisation on grounds of reciprocity and their (higher or, at least, different) social value.<sup>7,8</sup>

Our goal in this paper is to clarify the ethical arguments that should guide the allocation of resources to HCW who become patients during the current COVID-19 pandemic. We have learnt from our colleagues that anyone who has thought long enough about this question has confessed a certain degree of ambivalence.<sup>9</sup> Admittedly, we have suffered with the anguish of seeing colleagues fall prey to the virus, while we struggled with generating ethically sound allocation protocols to distribute scarce medical resources that addressed the needs of healthcare professionals and the general public. Hence, it is our goal to critically evaluate some of the proposed arguments both in favour and against the prioritisation of HCW. We will also consider which clinical circumstances might warrant prioritising HCW and why it could be ethically appropriate to do so.

## THE MAGNITUDE OF THE PROBLEM

COVID-19 quickly evolved into a global pandemic, reaching over 120 countries in the first trimester of 2020. Although it appears that the widest proportion of infected cases are either asymptomatic or with mild symptoms, most estimates agree that 'in the absence of interventions, COVID-19 would have resulted in 7.0 billion infections and 40 million deaths globally this year', highlighting its deadly potential.<sup>10</sup> Containment measures to decrease viral transmission have been issued both at the population level and oriented to vulnerable, at-risk groups, such as elderly patients or HCW.<sup>5,11,12</sup> Lack of adequate protective equipment, crowding of key hospital areas, like emergency departments, insufficient training and delayed recognition of COVID-19 symptoms among HCW are some of the most relevant factors that might explain their excess risk.<sup>13</sup> Although these factors present significant organisational, clinical and ethical challenges of their own, most have been thoroughly addressed in the recommendations and guidelines issued so far, which have



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focused on how to train, protect and mitigate the exposure risk of HCW during the pandemic.<sup>14</sup>

HCWs have been at the front line of the pandemic since its inception. Scarcely 3 weeks since the initial cases started to sprout in Wuhan, China, a—late—ophthalmologist was among the first to alert fellow physicians to this new disease.<sup>15</sup> In the first 6 weeks of the epidemic in China, at least 1716 cases among healthcare workers were confirmed.<sup>16</sup> Infection rates among HCW in Europe have been significantly higher, ranging from close to 10% of all infected patients in early Italian reports to almost 20% according to the Spanish National Epidemiological Surveillance Network's reports.<sup>2,3</sup> Worse still, during the first week of April 2020 one in every four COVID-19 infected patients in Spain was an HCW. Not only are these numbers extremely worrisome, but most European countries are already dealing with recurring waves of COVID-19 cases.<sup>17</sup>

In a seminal paper offering guiding principles for resource allocation strategies during the first wave of the COVID-19 pandemic, Emanuel *et al* argued that,

critical COVID-19 interventions—testing, PPE, ICU beds, ventilators, therapeutics, and vaccines—should go first to front-line health care workers and others who care for ill patients and who keep critical infrastructure operating, particularly workers who face a high risk of infection and whose training makes them difficult to replace.<sup>6</sup>

The cornerstone of this argument is that because HCW provide significant instrumental value to an effective pandemic response, that is, they make (or have made) relevant contributions in benefit of others, they should be given earlier access to scarce treatment or support resources if other factors, such as clinical severity, are tied. HCWs are granted a particular moral standing through their instrumental value. Indeed, in our experience, many clinician colleagues share the moral intuition that HCW should be granted priority in cases of a competition with non-HCW patients (all other factors being equal). If infection rates remain this high this scenario will still be quite likely in the future, hence the need to systematically consider the arguments around prioritisation.

## A CRITIQUE OF THE ARGUMENTS

Not all COVID-19 interventions are equally scarce, have equal clinical impact or similar consequential relevance. Prioritisation, especially when the impact of different interventions and therapies on both the individual and population level are so varied, should thus be guided by different principles. Instrumental value should not be used as the main umbrella principle to justify the particular moral standing of HCWs. We contend that while instrumental value for the present pandemic (present instrumental value) might be a reason to prioritise HCW's access to diagnostic tests or drugs, its utility to prioritise HCW's access to ICU beds or ventilators is less clear. We believe there are other, equally compelling arguments to prioritise HCWs in some these situations. In this section, we will first discuss the prioritisation of non-life-sustaining interventions (such as access to diagnostic testing, appropriate protective equipment, potential drug treatments or even vaccines) and then move on to life-sustaining treatments (such as ventilators or, inextricably linked to these, admission to intensive care units (ICUs)/access to an ICU bed).

Diagnostic testing is a critical COVID-19 intervention for which HCWs should clearly be prioritised, though not on grounds of their instrumental value. Prioritising HCW's access to

diagnostic testing is an essential requirement to preserve public health. HCWs are not only at increased risk for developing COVID-19, but also for spreading it both in the community and nosocomial settings.<sup>18</sup> Given that the rate of asymptomatic COVID-19 patients has proved to be substantially higher than initially thought,<sup>19</sup> HCW cannot be allowed to be asymptomatic carriers of disease.

Furthermore, if an effective drug regimen against COVID-19 were to be found, HCW's early diagnosis and treatment could shorten quarantine times. By boosting HCW's return to the work place, these strategies might indeed maximise HCW present instrumental value during the pandemic while minimising loss of healthcare manpower. Temporal loss of manpower has already affected the availability of healthcare workforce, forcing private and public institutions to encourage the recruitment of medical and nursing students and/or retired professionals, who were, in turn, at greater risk of infection from COVID-19. Therefore, prioritising active HCW's access to adequate personal protective equipments (PPE), testing or drugs could be ethically acceptable not only on grounds of their instrumental value. It serves a valuable public health goal, since these are essential requirements to effectively halt viral transmission, and it avoids placing high risk personnel, such as retired professionals, in danger, further protecting their instrumental value too. In fact, HCWs' early access to vaccines has already been defended on these grounds.<sup>20</sup>

Though the initial recommendation to prioritise HCW was directed to all 'critical COVID-19 interventions', ICU beds and mechanical ventilators differ from PPEs, diagnostic tests or drugs in availability and clinical relevance. Because most COVID-19 patients will likely die due to respiratory failure and because the number of available ventilators is significantly more constrained than those for PPE, testing materials or vaccines, the allocation of ventilators therefore bears substantially more consequential weight. At the clinical level, access to ventilators has proved to be a life-or-death matter. For these reasons, the aforementioned arguments cannot be seamlessly applied to decisions about prioritising access to these resources.

As Emanuel *et al* acknowledge, any HCW who becomes ill enough with COVID-19 to require ICU admission would probably need weeks to months before they would be able to be part of the fight against COVID-19 again. This clinical reality weakens the argument for present instrumental value. However, it has been counter-argued that HCW's instrumental value lies not only in their ability to provide care but also on the difficulty in training and replacing these professionals. Even if they were benched in the first wave, HCW could probably play a key role in the second wave or in future pandemics. Indeed, our current knowledge of pandemic dynamics points not only to new waves of infection but, potentially, to a seasonal recurrence of the virus. Hence, HCW who are current COVID-19 patients could have significant prospective instrumental value.

A still unaddressed question concerning the instrumental value argument is who determines which professionals protect public health the most. Although front-line HCW appear to fall naturally into this category, what about other healthcare professionals in key central departments such as microbiology or radiology? Or about engineers who work to provide institutions with respirators, those who transport and restock the much needed PPEs (or goods in supermarkets for that matter), management directors, researchers, security forces or the army, who ensure the compliance with confinement measures and build massive field hospitals, to name but a few? What about those who are forced to face a high risk of infection, such as these professionals' family members? Should they be prioritised over other patients too?

This list highlights a significant flaw of the instrumental value argument: its lack of specificity. Although, in principle, the argument seems theoretically sound, it was not proposed to draw a clear line in the sand. In fact, trying to adhere to this principle, existing vaccine prioritisation protocols and directives have been muddled with unclear efforts to defend how and why to prioritise some HCWs over others.<sup>20</sup> These attempts have rendered vaccination protocols inapplicable, which have been abandoned in practice.<sup>21</sup>

Another limitation of the instrumental value argument lies in the lack of social consensus surrounding the question of prioritisation by professional category. Indeed, as the prior list barely reflects, many other professionals have contributed significantly, at least not less than HCWs, to the benefit of others during the pandemic. Though reasonable, the instrumental value argument has not been fully discussed or agreed on in our societies. Until a wider debate takes place as to who should go first, these professionals should be at least equally prioritised in their access to ventilators or ICU beds, according to the argument.

In a weak attempt to counter argue this problem, it has been also suggested that the lack of HCW—which would result from not prioritising this group over other patients—would have a negative impact on the overall health of the population.<sup>7</sup> However, though HCW may have particularly suffered from COVID-19, how these temporal losses will impact negatively the overall health of the population is unclear. For one, most of the burden of illness and disease depends not on the healthcare system, but rather on social determinants of health.<sup>22 23</sup> The connection between bad health and a lack of HCWs is true, but frail. Even if the lack of HCW were sufficient enough to have a negative impact on the care of COVID-19 and non-COVID patients in the near future, it is unclear whether their loss would have a greater impact on overall population health than the lack of teachers, police officers, social workers or many other collectives. For these reasons, the instrumental value criterion's lack of specificity makes it difficult to apply in clinical practice.

However, this is not to say that, at a certain point, a line might need to be drawn.<sup>24</sup> Some authors have proposed prioritising not all HCWs but only those who were part of the COVID-19 response, extending this treatment to those other professionals that willingly took higher risks during the pandemic in order to serve society. By this account, which departs from instrumental value and is rather grounded on reciprocity, some limited degree of prioritisation could be justified as a gesture for HCW's altruism in assuming a high-risk work, that is, applying a sort of compensatory ethics.<sup>9</sup>

Those against the reciprocity argument contend that HCW have freely chosen their profession, just as fire-fighters who risk their lives daily or mountain rescue squads. Though society might owe them a debt, it is unclear whether this debt should take the form of priority in access to ventilators or ICU beds in dire cases. Altruism is valuable and should be promoted, but when its promotion may compromise the quality, efficiency or equitable delivery of a scarce resource or service, it should not trump every other value. If reciprocity arguments can ground a right for HCWs to be prioritised for ventilators, there must be greater discussion about how far this right extends. Having said this, we believe that the reciprocal obligation to HCWs should be proportionate to the degree of deprivation of resources which might have protected them from contracting illness. This calculation of proportionality may be dynamic and could change during the course of the pandemic, as resources ebb and flow.<sup>25</sup>

Regardless of the limits of reciprocity obligations, COVID-19 has wretchedly exposed how thin the line between altruism and

heroism is and how professionalism should not be dependent on acts of heroism.<sup>26</sup> In this vein, Cox has argued that the magnitude of burden imposed on HCWs during the pandemic is beyond that which they have reasonably 'signed-up to'.<sup>27</sup> Implicit in expectations of professionalism when PPE is inadequate is the unrecognised obligation of healthcare institutions and governmental bodies to assume their responsibility to protect the healthcare workforce. When institutions and governments abdicate this responsibility, the response is not to call for professional heroism but rather institutional accountability. In the absence of these basic provisions, a compensatory response is called for.<sup>28</sup>

By this, we do not endorse an unlimited prioritisation for HCWs. Rather, we suggest prioritisation limited to tie breakers in case all other factors were equal between a HCW and another patient. Prioritisation would only occur within categories of patients equally eligible for this scarce resource.<sup>9</sup>

In contrast to instrumental value or reciprocity arguments, which might be useful to argue for prioritisation, 'social worth' arguments are flawed. As an example, in their guideline 'Ethical recommendations for clinical decision-making in the ICU during the COVID-19 pandemic', the Spanish Society of Critical Care Medicine defended prioritising HCW based on social value criteria. Among their general recommendations for resource allocation, they proposed considering factors such as whether the patient had any progeny or dependents, or if they were HCW, because these aspects impacted on 'the social worth of the patient'.<sup>8</sup> In interviews to national press, some of the members of this committee explained how 'a parent of four children or a nurse, should be prioritised over a single patient'.<sup>29</sup>

These statements have been heavily criticised, and we agree with this critique.<sup>8 18</sup> Social value criteria judge human life by standards that are very difficult to agree on. They depend on a myriad of factors, many of which are impossible to measure. They may easily lead to random decisions and significant discrimination against various collectives. Even if social value could be measured, healthcare professionals are not trained to make this assessment. In fact, if the purpose of triage is to promote as objective criteria as possible, the 'social worth' argument fails heavily on this account. Furthermore, establishing such a value, subjective and self-serving, as a potential criterion in a list drawn up by healthcare professionals could significantly undermine social trust in the profession and constitute a severe conflict of interests.

## CONCLUSIONS

HCWs have been essential to provide an effective response to the COVID-19 pandemic and to save innumerable lives. They have equally become a particularly vulnerable collective during the pandemic, suffering significantly higher rates of infection than the general population. We have analysed which arguments, and under which clinical circumstances their prioritisation might be ethically acceptable. Prioritising HCW's access to protective equipment, diagnostic tests or even, if ever proven effective, prophylactic or therapeutic drug regimens and vaccines might be ethically defensible. These strategies might effectively halt nosocomial viral transmission and avoid placing high-risk personnel, such as retired professionals, in danger, while maximising HCW's instrumental value during the pandemic. However, prioritising HCWs to receive ICU beds or ventilators based on their instrumentality is far more problematic. Reciprocity arguments would argue for a limited discreet prioritisation of HCWs in these circumstances. Social worth arguments are simply unfair and flawed.

Finally, because we write from different contexts, Madrid and New York<sup>30–33</sup> we appreciate the pandemic is occurring in a transnational setting, with different degree of resource capabilities. The ability of each healthcare system to respond to the surge will surely influence the type and degree of prioritisation that might be offered to HCWs. It is our hope that our analysis will shed light for others who stand in this 'troubled middle' as we seek to foster better institutional policies that promote social equity and respect for the contributions of HCWs.

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