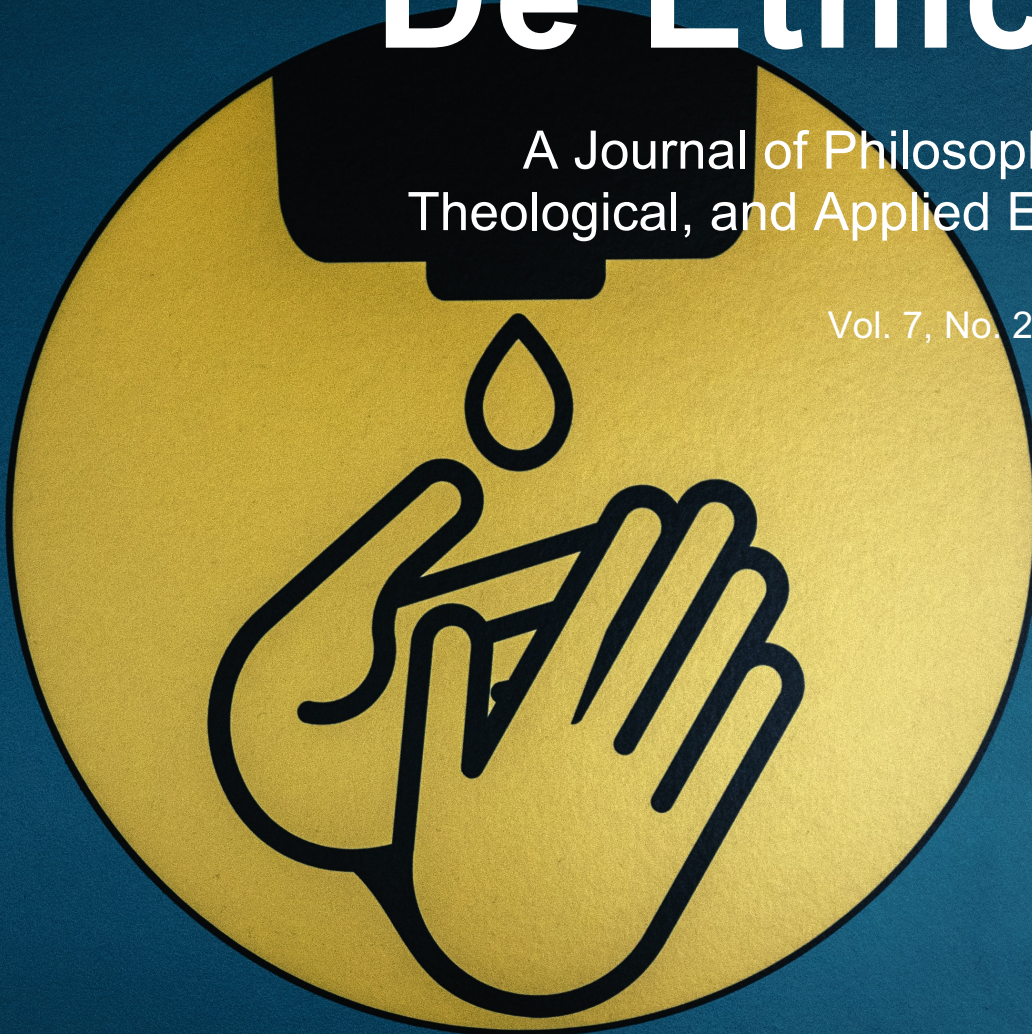


# De Ethica

A Journal of Philosophical,  
Theological, and Applied Ethics

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## Special Issue: Health Care Priority Setting – Lessons Learned from COVID-19

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# DE ETHICA

## A JOURNAL OF PHILOSOPHICAL, THEOLOGICAL, AND APPLIED ETHICS

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## From the Editors

“It is easier now,” our colleague says. He refers to doing thought experiments in teaching or, more specifically, getting students to accept imagined cases that involve moral tradeoffs. That seems easier after experiencing a pandemic. Other colleagues around the table are starting to agree; however, not only is this true for students taking ethics courses, but attitudes seem to have changed among people on several levels in health care and various academic environments.

The pandemic uncovered the preconditions for healthcare priority setting in a viciously transparent way. In situations with limited ventilators, beds in the intensive care unit, or vaccines, it is difficult for people to deny the moral importance of choices that can be made. Decision-makers on different levels need to decide who should get the resource and, by implication, who should not. In the context of COVID-19, many such decisions were made in the clinical context putting pressure on healthcare professionals. In this issue, **Nowak et al.** explore moral distress and medical decision-making in such situations. They argue that the pandemic has brought a problematic social atmosphere detrimental to ethical decision-making in a clinical context. This, in turn, leads to intensified moral stress among clinicians. Based on an empirical study of moral stress conducted in Poland and Lithuania, Nowak et al. propose strengthening the conditions for resilient medical decision-making.

Irrespective of the extent to which the speculating professors around the table are right, ethical reflection and discussion about priority setting have, over the last two years, found their way from seminar rooms to various levels in health care systems as well as the public debate. Ethicists worldwide were now formulating ethical standpoints in guidelines that would make a real difference for the people affected by them rather than formulating these standpoints in journal papers. Furthermore, some questions that primarily attracted the interest of scholarly discussion are now contentious topics in public debate. One such pressing question in Scandinavia has been whether healthcare professionals should be prioritized for COVID-19 vaccines. In this issue, **Jølstad & Solberg** discuss this question with a particular focus on the notion of reciprocity. They argue that reciprocity-centered arguments in the context of healthcare priority setting may be problematic, especially concerning vaccines. According to their analysis, a plausible argument from reciprocity may be that since healthcare professionals incur risks, they should have priority to vaccines. However, many other essential workers may be justified in making the same claim. Therefore, it would be difficult to devise an argument from reciprocity to the effect that healthcare professionals are unique in this sense and, therefore, should get such a priority. Moreover, they point to reasons for utility maximization, the situation of the worst off, and equality that may have more normative weight than reciprocity reasons.

The question about the distribution of vaccines for COVID-19 also has a pressing dimension of global justice. The contribution by **Hicks & Gürtler** focuses on this question and discusses the obligations that higher-income countries may have toward lower and middle-income countries during a global pandemic. They find that the global inequality concerning medical resources during the pandemic cannot be justified. They argue that

such resources should be distributed according to a global needs-based sufficiency principle. Higher-income countries have reason to accept this principle based on a duty to rectify historical injustice and a duty to refrain from upholding present unjust institutions, according to Hicks & Gürtler. In practice, this would mean that excess medical resources in higher-income countries should be redistributed to lower-income countries rather than being left to waste, that patents could be suspended during a pandemic, and that there should be an investment in global medical infrastructure.

Finally, **Hol & Solberg** invite us to consider pandemic priority setting from a different perspective: that of the ancient philosophy of Epicureanism. This school of philosophy holds that death cannot be bad or good for the person who dies. There may, however, be other-regarding effects on, *e.g.*, friends and family that make death bad. Taking Epicureanism as a starting point, Hol & Solberg take justifications of the response to the pandemic as having been overly preoccupied with the number of deaths while overlooking other sufferings that occur in lives as well as other societal effects. The badness of such effects may well outweigh the badness of death. An epicurean change of perspective on pandemic strategy may not support a different set of policies and practices. Still, it would give us a more sophisticated philosophical approach to this pressing issue of public concern.

The motivation behind this special issue has been that the specific characteristics of COVID-19 put pressure on questions previously discussed in the literature on distributive justice in general and that of health care priority setting in particular. Furthermore, issues that were not previously the focus of the discussion in priority-setting ethics are now on that agenda. For example, how the regional and global perspectives cannot reasonably be discussed in isolation from each other. Whereas the papers published in this issue draw on experiences from working on ethical questions in relation to COVID-19, each paper approaches the complexities of the pandemic from its own unique perspective. Which are the lessons learned?

Erik Gustavsson, guest editor, and Lars Lindblom, executive editor

## Another Pandemic. How Moral Distress Affected Polish and Lithuanian Clinicians

Ewa Nowak, Anna-Maria Barciszewska, Roma Kriauciūniene, Agnė Jakavonytė-Akstinienė, Marina A. Klimenko, Clara Owen, Karolina Napiwodzka, Paweł Mazur & Kay Hammerling

*The COVID-19 pandemic has transgressed biomedical categories. According to Horton, a “syndemic” infected virtually all societal relations and practices. In particular, the pandemic has created sociomoral ecologies challenging clinical decision-makers. Constraints and pressures related to micro-, meso-, exo-, and macro-ecologies framing physicians, nurses, and medical students in training were identified. These factors exacerbated moral distress among clinicians. In a joint Polish-Lithuanian project, we examined predictors of moral distress in pandemic clinical contexts. A questionnaire-based, real-time, correlational, and comparative study was conducted in Poland and Lithuania after the first pandemic year with N=227 participants. The two national samples found unexpected differences in regular and pandemic-type moral distress levels. Polish participants showed significantly higher moral distress levels than their Lithuanian counterparts. The following article discusses these findings and recommends reinforcing resilient medical decision-making.*

### 1. Introduction

The outbreak of the COVID-19 pandemic challenged health policies and the healthcare workforce in an unprecedented way. Horton (2020) rebaptized it into a “syndemic,” for it has affected the overall societal life, including health provision and health education. Moral distress (moral injury) is one of the factors that is reported to seriously impair the quality of clinical decision-making in the regular routine of physicians and nurses. Let alone in respect of a barely known, highly contagious disease that causes a pandemic across the globe: then decisions – even difficult and risky – cannot be avoided or postponed to a later date. Framed by an unfavorable sociomoral atmosphere or environment (e.g., Colby et al. 1987; Rousseau 1988; Lind, Hartmann and Wakenhut 2000; Weber et al. 2008) in which questioning the legitimacy of clinical decisions by patients, relatives, media, health policymakers, public opinion, etc., has become omnipresent, the pandemic can be regarded as a sociomoral, not only medical challenge. In contrast, a sociomoral atmosphere favorable to decision-makers is created by a constellation of the following factors: “the interplay of norms and value orientations as components of such an atmosphere, especially appraisal

of the community, care for one another, integration, open communication, trust, participation, collective responsibility, respect of human dignity, procedural fairness, order” (Weber et al. 2008, 172).

In the following, we report on our Polish-Lithuanian study to examine levels of moral distress in health workers after the 1<sup>st</sup> year of the pandemic. Predictors for moral distress related to micro-, meso-, exo-, and macro-environments (ecologies, respectively) (e.g., Bronfenbrenner 1977; Eriksson et al. 2018) surrounding clinical decision-makers were identified. We will dedicate the ‘Theoretical Background’ Section to the theorization of these ecologies and the concepts mentioned above. Data were collected from physicians, nurses, and medical students using a questionnaire-based procedure. The method and results obtained will be presented and discussed in the subsequent sections. Unexpectedly, significant differences were found between Polish and Lithuanian participants, as well as within each national sample. We adopted the following hypotheses: (1) There is a correlation between moral distress level and nationality; (2) Moral distress levels significantly correlate with career stage (2a for Poland and 2b for Lithuania); (3) There can be correlations of age, work in intensive care units, and involvement in clinical decision making with moral distress level in participants; (4) There is a significant correlation between regular moral distress and pandemic-related moral distress.

Regarding the choice of countries in which we conducted the study, we justify it as follows: In Poland and Lithuania, the pandemic was declared at the same time (March 2020). The countries are neighbors and close in terms of cultural and historical experience (socialist past, democratic turn in 1989, EU accession in 2004, parallel modernization process, and institutional changes in the public health sector). As researchers, we were curious to know whether this affinity also translates into the preparedness of public health systems to deal with a pandemic. We were particularly interested in examining how healthcare providers deal with the moral distress generated by pandemic ecologies in both neighboring countries. For healthcare providers in both countries, the COVID-19 pandemic was the first and most common such dramatic challenge in decades, unlike for those from regions exposed to regular, epidemic, or endemic, highly contagious diseases, although “all countries remain dangerously unprepared for future epidemics and pandemic threats, including threats potentially more devastating than COVID-19”, as GHS Index demonstrates (<https://www.ghsindex.org>). Using this opportunity, since the level of regular (pandemic emergency unrelated) moral distress has not been examined in either country so far, we set out to score this type of distress as well.

After World War II, in the Central and Eastern European region, where Poland and Lithuania are located, an emergency condition was rarely associated with an epidemic. Rather, it was associated with a military or terrorist attack, accidents, or radioactive contamination. This is evidenced by the range of emergency topics (e.g., Borkowska et al. 2017). Except for the so-called Russian influenza in 1977, bio-assurance and epidemiological prevention were here more prominent in veterinary medicine than in human medicine (e.g., Gliński & Żmuda 2020; Janik 2016; Smreczak & Żmudziński 2016). The concept of creating a modern and integrated medical rescue system in Poland dates back to the last decade of the 20<sup>th</sup> century. In 1999, the health policy “Integrated Medical Rescue” was introduced, the aim of which was to prepare medical personnel and infrastructure and create clinical procedures (Romańczuk 2018, 31). In Lithuania, we can observe a parallel development. These developments correlated over time with the decline in mortality and improved population health after the collapse of the communist regime (Safaei 2012 and 2006; Vaitkaitis 2008; Karanikolos 2017). But did the health workers in

both countries deal similarly well with the most recent pandemic – namely, in terms of their own resilience to moral distress triggers? Responding to this question required pioneering research in both countries. The results of this research are presented below.

## **2. Theoretical Background**

### **2.1 Theorising Moral Distress**

Moral distress is defined as “knowing the right thing to do but being unable to do so due to various constraints” (Jameton 1984; O’Byrne et al. 2021; Garrett 2020; Dzau et al. 2020; Lin 2020; Morley 2019; Wiggins & Wilbanks 2019; Bursztajn 1998). Although studies on this issue also use terms such as ‘moral injury’ (e.g., Borges et al. 2020; Williamson et al. 2020), ‘moral suffering,’ ‘moral anguish’ (Godshall 2021), and ‘moral harm’ equivalently here, the scope of the latter experiences goes beyond professional (particularly medical and judicial) and even human contexts (e.g., Puryear 2017). In this article, we ponder moral distress, and it is precisely what we have been investigating. However, at a conceptual level, it is not moral distress but well-justified, correct, and valid judgments and opinions that are an integral component of medical decisions. Moral distress is, to put it adequately, an ‘alien body’ for decision-making processes. Even if it chronically accompanies such processes, it cannot be integrated into them as it brings crisis and disintegration to them (e.g., Silverman et al. 2022; Benoit et al. 2018). Instead, “this pressure to act unethically is the defining concept of this phenomenon that can threaten moral integrity and differs from situations that are emotionally distressing or morally troubling” (Silverman et al. 2022, 2).

The emergency contexts produce specific constraints whose causation on medical decision-makers is well known. The sociomoral climate surrounding medical decision-makers in these contexts may also show an additional causative effect on the quality of decision-making processes as such and the consistency of a subject’s performance. It may interfere with decision-making processes. A society confronted with an outbreak of an epidemic, a natural disaster, or a war can exert severe and multiple pressures on those making decisions critical to the life and health of society. Such “environmental influences,” micro- and macro-causalities, and their impact on “the interaction between thought, affect and action” in the affected decision-makers (Bandura 1989, 3) have been examined and described mainly – but not exclusively – in social psychology, discourse psychology, organizational and professional psychology (e.g., de Araújo et al. 2014; Castro de Araujo 2014; Berrios 2009; Philips et al. 2004; Susser 1991; Mackie 1965; Mackie 1980; Cartwright 1979), in particular for clinical decision making contexts (e.g., Cioffi 2021; Borges et al. 2020; Borkowska et al. 2019; Patel et al. 2018; Grady et al. 2018; Milliken 2018; Epstein & Delgado 2010; Hamric et al. 2006; O’Donnell et al. 2008; Campbell et al. 2018; Austin et al. 2017; Wöhlke & Wiesemann 2016; Walston & Walston, 1982; Terris 1987).

### **2.2 Identifying Regular versus Pandemic Moral Stressors in Social and Sociomedical Contexts**

Our study addresses moral distress in the context of medical decision-making in public healthcare. However, the scope of the term ‘moral distress’ is broader and can include decision-making in other public-priority contexts, particularly those of emergency (e.g., Taylor, 2022). Albeit speaking up and critical opinion is an integral part of public

deliberation or discourse, the latter, notably in the face of an emergency, include not only the “unforced force of the better argument” (Habermas 1999, 332) but also the force of the worse argument and the argument of force as well: for instance, verbal threat, pressure, accusation, etc., intended to undermine the legitimacy of decisions and the credibility of decision makers, here representing the public health institutions. From the discourse perspective, moral distress can be seen as a normative, however voiceless – reaction to arguments devoid of rightness, which address a professional representing a legitimate public institution, that is, public health care. These arguments are imbued with unjustified claims to validity, pressure, or persuasion towards the subjects who, in their professional and, at the same time, socially critical situation, are responsible for making the rightest decisions possible. Extraordinary circumstances, such as a permanent pandemic emergency, put healthcare providers on the front line and expose them to multiplied and omnipresent pressures (e.g., Froessler & Abdeen, 2021).

The concept of socioecology, developed by Bronfenbrenner, will be helpful in localizing the sources of these pressures. Bronfenbrenner’s (1977) original division into micro, meso, exo, macro and chrono-level factors is useful for our research study as they all make up the global sociomoral ecology surrounding a medical decision maker. The macro-system level includes, inter alia, legislation, the organizational and structural set-up of the health system, as well as unprinted but widely held social norms and values (Eriksson et al. 2018, 419). Facing the 1<sup>st</sup> lockdown (March 2020), Polish and Lithuanian medical staff were already systemically overloaded. Poland had, on average, 2.4 physicians and 5.3 nurses per 1.000 citizens, while Lithuania had 4.85 physicians and 7.7 nurses (OECD 2020). The same report estimated Polish healthcare staff capacities as “doctors low/nurses low,” whereas the Lithuanian ones as “doctors high/nurses low.” Further, the Polish medical workforce confronted pandemic protocols, often questioning pre-existing standards (Grochal 2020; Klinger & Otto 2020). As a result, the Polish medical workforce frequently reported sociomoral confusion and pressures. Unlike in Poland, the Lithuanian health department adopted the pre-existing emergency protocols (Resolutions 207, 1226, V-2127, V-1504) and was able to mitigate confusion among clinical decision-makers from the very beginning of the first lockdown.

*The exosystem level* “embraces social structures – major institutions of the society – such as the world of work, the mass media, and public agencies” (Eriksson et al. 2018, cf.). At this level, public opinion, media, and patient agencies generated pressure, particularly during the 1<sup>st</sup> lockdown. Both in Poland and Lithuania, medical decision-makers were publicly blamed, also for ‘spreading the virus’ due to dealing with infected patients; from this and other sources, it appears that patients have accused medical staff of poor procedures and decisions to work without proper uniforms; of coming into contact with non-infected patients just after contact with infected patients; of coming to work when a medical worker him/herself was infected – which may have occurred involuntarily until COVID-19 testing was available. As a result of the “crescendo effect” associated with chronic exposure to demanding sociomoral contexts (Borkowska et al. 2019, 102) when, after a certain time, the threshold of resistance and resilience to an unfavorable sociomoral atmosphere is broken, 43% of medical staff in Lithuania (in Poland 6%) were determined to give up their position (e.g., Buchelt & Kowalska-Bobko 2020; Piščalkaitė et al. 2021; Civinskas et al. 2021). An unrealistic view of medicine as omnipotent can also induce inadequate expectations in patients and inadequate feelings of guilt in physicians (Hong 2017; Bell et al. 2002). On the other hand, in numerous countries, pre-pandemic and

pandemic negligence and deficits in healthcare make patients' expectations be taken seriously (MHE 2021).

The *micro-level* is synonymous with an immediate surrounding, that is, a setting, emergency room, hospital ward, or doctor's office, with which medical workers interact daily and in which they make their decisions. The *Meso-level* "comprises interrelations between major settings containing an individual" (Eriksson et al. 2018, 419). Both micro- and Meso-level cover the professional role of nurses, who, according to research, face moral distress more often than doctors, precisely as a result of constant exposure to the manifold pressures arising from complex patient care (cf. Salari et al. 2022; Borkowska et al. 2019; Rice et al. 2008; Elpern et al. 2005). To this classic set of ecologies, we would add social media (digital ecologies), especially in the context of the hostile atmosphere created around clinicians on social media during the pandemic. Such ecologies may affect analogous human and social environments (e.g., Ruotsalainen and Heinonen 2015).

During the pandemic, the key pressures generated at these levels referred to shortages of emergency equipment and hospital beds, the expectations and complaints of patients and their families about the alleged favoring of infected patients over regular ones, and tensions between medical workers. Due to these pressures, doctors and nurses perceived their workplace as 'pathological' (Otto-Duszczuk & Klinger 2020).

Factors exemplified above were identified as predicting moral distress in clinical decision-makers. Subsequently, they were investigated in our study. It is worth mentioning that susceptibility to such factors also depends on the cognitive and competence training of the medical decision-maker in question. Lacking expertise on new diseases or logistic skills (Löwy 2020; Rosenbaum 2020) or low self-control of one's own anxiety makes subjects more exposed to interference. As a result, limited ability to act in accordance with internal norms, limited courage to pass and justify decisions autonomously as a professional, low self-confidence, forced consent to perform or not to perform certain activities, professional ethos and habits' erosion, moral disintegration, moral trauma (Crane et al. 2013; Rice et al. 2008; Elpern et al. 2005; Kalvemarm et al. 2004; Baldwin et al. 1997; Gallery et al. 1992); even suicidal tendencies may follow (e.g., Siedlecka 2020). Monitoring the level of moral distress is thus critical to prevent it and promote resilience in medical decision-makers.

### 3. Methods

#### 3.1 Research Design

A questionnaire was designed in Polish and Lithuanian composed of 1) a demographic item; 2) a 27-item Measure of Moral Distress for Health Care Professionals (MMD-HP) designed and revised by Epstein et al. (2019). On a five-point Likert scale, participants are asked to rate the items by frequency (0 = never to 4 = very frequently) and magnitude (0 = none to 4 = very strong); 3) a self-constructed 6-item pandemic moral distress scale. Finally, the construct 'regular moral distress' is based on 27 items, each item connoting one factor that interferes with clinical decision-making in the clinician's daily practice apart from emergencies. In turn, the construct 'pandemic moral distress' includes 6 items connoting additional specific factors that emerged with the announcement of the pandemic and interfered with clinical decision-making during the first pandemic year. Based on more than 40 sources and, in addition, 60 micro-interviews, we identified a variety of factors responsible for specific moral distress during the pandemic and grouped them into six core

categories. These factors could be located within the global organizational, social, political, etc. ecology outlined in Section II, which surrounded the physician's or nurse's workplace during the first year of the pandemic. Finally, each of the six items in the second, self-constructed questionnaire was preceded by the phrase 'In making decisions that are right and consistent with the core values of the health professions, during the pandemic, health care providers'... 1) are exposed to pressure, complaints, and accusations from patients and their relatives; 2) are exposed to pressure, complaints, and accusations from their superiors and management; 3) are exposed to accusations from the media, social media, and public opinion; 4) are pushed to comply with new and separate clinical procedures and orders; 5) are threatened with persecution and legal criminal sanctions; 6) are accused of acting contrary to Christian values.

The factors responsible for regular moral distress occur in any period of health care providers' daily professional practice, i.e., in pre-, post-, and also pandemic contexts. In contrast, the factors responsible for pandemic moral distress are specific to the epidemiological emergency. Regular moral distress and pandemic moral distress are, therefore, two distinct psycho-moral response patterns and two distinct but related constructs (see Hypothesis 4, Section IV). They have common nature: an emotional state or tendency to experience moral distress across a variety of situations. This emotional state can be measured by a variety of questionnaires. Participants of our study confront the relevant situations in a given questionnaire and rate how frequently and in what intensity they experienced these situations during the past pandemic year. In terms of an operational definition, the self-reported measures contribute to the final *regular moral distress* and *pandemic moral distress* score.

### 3.2 Procedure

The study design allowed the integration of measures into a reliable and manageable platform. Approaching participants in real-time, when medical settings and universities were out of reach due to pandemic restrictions, was possible. The resulting study is a real-time, correlational, comparative, and cross-sectional one.

Respondents were invited through mailing managed by public medical universities and associations. Due to pandemic restrictions, the optimal way to access respondents was through online platforms. The questionnaire was accompanied by informed opt-out consent. Informed consent was an integral initial part of the questionnaire.

### 3.3 Participants

Participation was voluntary, random, and anonymized. Involvement in clinical experience collected during the 1<sup>st</sup> year of the pandemic was essential to participate. Data were collected from a total of  $N = 227$ , only adult subjects, male and female, of them from Poland  $N = 97$ , from Lithuania  $N = 130$ , representing 14 in-patient medical facilities and medical universities.

## 4. Results

### 4.1 Sample characteristics

In terms of total sample characteristics, of the  $N = 227$  participants, 87.77% were female, and 12.33% were male participants. The Lithuanian subsample comprised 96.2% females and 3.8% males. Of the 88.5% represented cities of over 700,000 inhabitants. All participants were Lithuanian speakers. 48.5% were under 25 years of age, and 51.5% were over 25 years of age. As of the career stage, the subsample covered 16.9% of doctors, 41.5% of nurses, 40.8% of students, and 0.8% of others. 88.7% of students represented year 1, 7.5% years 4 and 5, and 3.8% year 6. 100% of participants declared involvement in collegial clinical decision-making during the 1<sup>st</sup> year of the pandemic. Regarding intensive care involvement, no data were available.

There were 76.3% female and 23.7% male participants in the Polish subsample. 77.3% represented cities with a population of over 700,000. All were Polish speakers. 52.6% were under 25 years of age, and 47.4% were over 25. As for the career stage, there were 21.6% doctors, 14.4% nurses, 60.8% students, and 3.1% others. 28.8% of the students represented years 2 and 3, 35.6% years 5 and 6, and 35.6% year 6. 49.5% of Polish participants were not involved in clinical decision-making; 16.5% made clinical decisions individually; 34% participated in collegial decision-making during the first year of the pandemic. 62.9% had no experience with intensive care units; 37.1% had such experience. Relevant to our research, the clinical experience of the participants that indicates contact with healthcare facilities during the pandemic is depicted in Fig. 1:

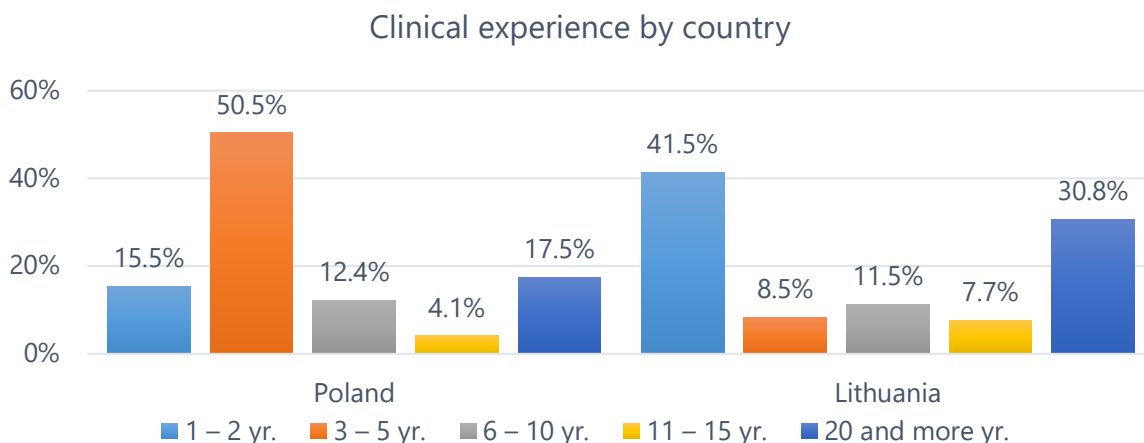


Fig. 1. Clinical experience in years by country.

Scale	Country	<i>N</i>	<i>M</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>	<i>Me</i>	<i>W</i>	<i>p</i>
MD	Poland	97	93.16	62.21	0.00	316.00	88.00	0.93	<0.001 ***
	Lithuania	130	57.45	55.37	0.00	246.00	39.50	0.88	<0.001 ***
PMD	Poland	97	44.46	21.98	0.00	89.00	42.00	0.98	0.086
	Lithuania	120	23.55	21.66	0.00	80.00	17.00	0.90	<0.001 ***

Tab. 1. Descriptive statistics with the focus on normality of distribution test. *N* – number of participants; *M* – mean; *SD* – standard deviation; *Min* – minimum; *Max* – maximum; *Me* – median; MD – regular moral distress; PMD – pandemic moral distress.

In the tab. 1 above, for  $N = 97$  participants from Poland and  $N = 130$  from Lithuania, descriptive statistics, including mean, minimum and maximum, and median values of the variables *regular moral distress* and *pandemic moral distress*, are displayed. It was also shown that pandemic moral distress in the Polish subsample did not have a distribution significantly deviating from normal,  $W = 0.98$ ;  $p = 0.086$ . The variables will be presented in the subsequent section.

## 4.2 Findings

### **Hypothesis 1: There is a correlation between moral distress level and country.**

In the current study, the Cronbach Alpha Coefficient was 0.94 (usually = 0.93). When it comes to regular moral distress, half of the Polish participants had a score of no lower than  $Me = 88.00$ . The lowest score among this group was  $Min = 0.00$ , and the highest was  $Max = 316.00$ . Half of the Lithuanian participants had a score of no higher than  $Me = 39.50$ . The lowest score was  $Min = 0.00$ , and the highest was  $Max = 246.00$ . A significantly higher regular moral distress was found in the Polish participants ( $U = 3907.50$ ;  $p < 0.001$ ;  $U$  for non-parametric Mann-Whitney test/test statistics, respectively).

As for pandemic moral distress: The originally self-developed scale appeared to have a very good internal consistency reliability with this sample, with a reported Cronbach Alpha Coefficient of 0.85. Half of the Polish participants scored no lower than  $Me = 42.00$ . The lowest score among this group was  $Min = 0.00$ , and the highest was  $Max = 89.00$ . Half of the Lithuanian participants scored no higher than  $Me = 17.00$ . The lowest score was  $Min = 0.00$ , and the highest was  $Max = 80.00$ . Polish participants were characterized by significantly stronger pandemic moral distress than their Lithuanian counterparts ( $U = 2878.50$ ;  $p < 0.001$ ).

Hypothesis 1 was confirmed: there was a significant correlation between regular moral distress or pandemic-type moral distress and country.

### **Hypothesis 2a: Regular moral distress and pandemic moral distress significantly correlate with career stage in the Polish sample.**

For the purpose of the study, the extremely small occupation category other was eliminated. This was necessary for a reliable study of the correlation. It was rational to use the non-parametric Kruskal-Wallis test comparing the medians of the dependent variable in individual groups. The results are shown in Tab. 2:

Scale	Career Stage	$\chi^2$	<i>df</i>	<i>p</i>	<i>Min</i>	<i>Max</i>	<i>Me</i>
MD	Physician	4.91	2	0.049 *	24.00	316.00	91.00
	Nurse				23.00	229.00	60.50
	Student				0.00	205.00	91.00
PMD	Physician	11.56	2	0.003 **	0.00	76.00	30.00
	Nurse				6.00	80.00	31.00
	Student				5.00	89.00	49.00

Tab. 2. Correlation between regular and pandemic moral distress, and career stage in the Polish sample.  $\chi^2$  – test statistics; *df* – degrees of freedom; *p* – statistical significance; *Min* – minimum; *Max* – maximum; *Me* – median; MD – regular moral distress; PMD – pandemic moral distress.

Concerning regular and pandemic moral distress, groups defined in terms of career stage differed statistically significantly. To precisely determine between which groups the differences are significant, the Bonferroni post hoc test (pairwise comparison) was carried out to examine the regular and pandemic moral distress levels (medians) in relation to career stage between the three professional groups. The results of this test are presented in Tab. 3:

Scale	Career Stage		<i>P</i>
MD	Physician	Nurse	0.039 *
	Physician	Student	0.081
	Nurse	Student	0.941
PMD	Physician	Nurse	0.989
	Physician	Student	0.016 *
	Nurse	Student	0.030 *

Tab. 3. Correlations between regular moral distress or pandemic moral distress and career stage in the Polish sample: a pairwise comparison; *p* – statistical significance.

Significant statistical differences between Polish physicians and nurses were stated,  $\chi^2(2, N = 94) = 4.91$ ;  $p = 0.049$ . Half of the physicians had regular moral distress no lower than  $Me = 91.00$ , while half of the nurses had regular moral distress no higher than  $Me = 60.50$ . Polish physicians showed a significantly higher regular moral distress level than nurses. As of pandemic moral distress, statistically significant differences were found between Polish students and physicians and nurses,  $\chi^2(2, N = 94) = 11.56$ ;  $p = 0.003$ . In half of the students, pandemic moral distress was no lower than  $Me = 49.00$ . In half of the physicians, pandemic moral distress was no higher than  $Me = 30.00$ , and in half of the nurses, pandemic moral distress was no higher than  $Me = 31.00$ . The study showed that Polish medical students faced significantly higher pandemic moral distress levels than physicians or nurses. Hypothesis 2 was partially confirmed: there is a significant correlation between regular and pandemic moral distress and career stage among the Polish respondents.

Hypothesis 2b: Regular and pandemic moral distress significantly correlate with career stage in the Lithuanian sample.

Scale	Career Stage	$\chi^2$	Df	P	Min	Max	Me
MD	Physician	5.10	2	0.078	0.00	187.00	68.50
	Nurse				0.00	246.00	38.00
	Student				0.00	218.00	24.00
PMD	Physician	10.26	2	0.006 **	0.00	16.00	5.00
	Nurse				0.00	78.00	21.00
	Student				0.00	80.00	24.00

Tab. 4. Correlations between regular moral distress, pandemic moral distress and career stage in the Lithuanian sample.  $\chi^2$  – test statistics; df – degrees of freedom; p – statistical significance; Min – minimum; Max – maximum; Me – medians.

Hypothesis H2b was entirely confirmed, a significant effect of occupation on regular-type moral distress and pandemic-type moral distress was observed.

As of pandemic moral distress, significant statistical differences were found between physicians, nurses and students in Lithuania,  $\chi^2(2, N = 129) = 10.26$ ;  $p = 0.006$ . In half of the physicians, pandemic moral distress was no higher than  $Me = 5.00$ . In half of the nurses, pandemic moral distress was no higher than  $Me = 21.00$ , and among half of the students, it was no lower than  $Me = 24.00$ . It was found that Lithuanian physicians had statistically significantly lower pandemic moral distress levels than nurses and students (in contrast, of the Lithuanian physicians, half reported regular moral distress no lower than  $Me = 68.50$ ; half of the nurses no higher than  $Me = 38.00$ ; and half of the students no higher than  $Me = 24.00$ ). However, a detailed analysis using a multiple regression model identified a significant effect of working as a physician on the level of regular moral distress. The coefficient  $\beta = 0.52$ ;  $p = 0.045$  indicates a strong positive correlation of regular moral distress with working as a physician. In Lithuania, physicians were thus more likely to suffer from regular moral distress than nurses and students. At the same time, a strong negative correlation between physicians' work and pandemic moral distress level was found,  $\beta = -0.94$ ;  $p = 0.001$ . Thus, Lithuanian physicians were far less affected by pandemic-type moral stressors than nurses and students, as displayed in Tab. 5:

Dependent variable	Model				Regression values			
	$R^2$	F	df	p	Predictor	B	T	P
MD	0.02	1.69	125	0.173		96.00	3.74	<0.001 ***
					Career of a physician: physician – nurse or student	0.52	2.03	0.045 *
PMD	0.11	7.94	115	< *** 0.001		31.61	9.53	<0.001 ***
					Career of a physician: physician – nurse or student	-0.94	-3.39	<0.001 ***

Tab. 5. Effect of statistically significant predictors on regular and pandemic moral distress levels in the Lithuanian group – a multiple regression model.  $R^2$  – the proportion of the variance for a dependent variable that's explained by an independent variable; F – test statistic for the overall regression model; df – degrees of freedom;  $\beta$  – standardized beta value; t – test statistics for distinguished predictors; p – statistical significance.

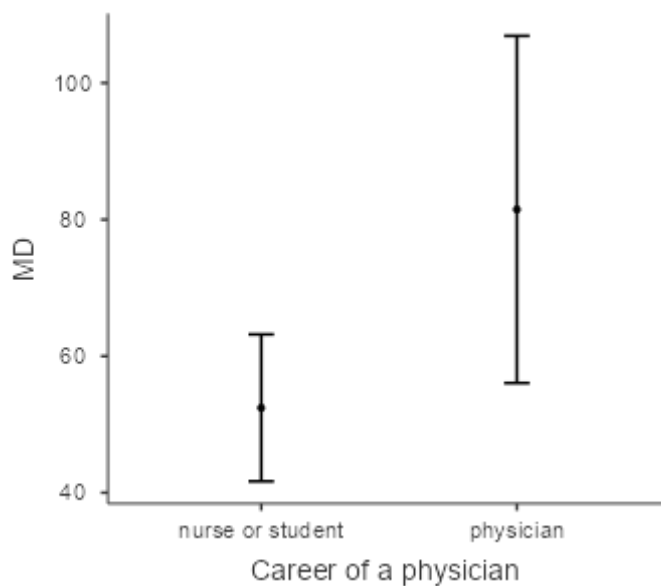


Fig. 2. Correlation between regular moral distress and different career stages in the Lithuanian sample.

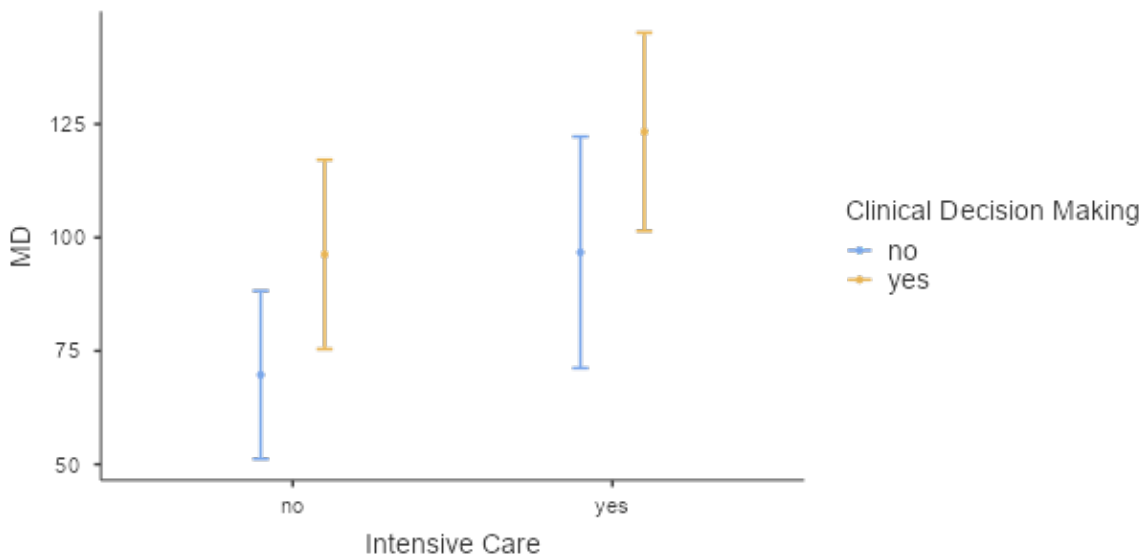
Furthermore, Hypothesis 2a was partially confirmed: there was a significant correlation between regular moral distress and career stage amongst Lithuanian respondents. Fig. 2 displays differences in the level of regular moral distress in nurses and students compared to physicians. During the first pandemic year, Lithuanian physicians experienced higher regular moral distress than nurses and students.

Finally, correlations of (1) age, (2) work in intensive care units, (3) involvement in clinical decision-making (as reported by participants in the demographic section) with levels of regular moral distress and pandemic-type moral distress were examined for the Polish sample (data of «2» and «3» were not available for the Lithuanian sample), as depicted in Tab. 6:

Dependent variable	Model				Predictor	Regression value		
	$R^2$	$F$	$df$	$p$		$B$	$T$	$p$
MD	0.08	3.05	92	0.021 *		103.48	4.76	<0.001 ***
					Intensive care: Yes-No	0.43	2.07	0.041 *
					Clinical decision making: Yes-No	0.43	2.14	0.035 *
PMD	0.16	19.48	95	< *** 0.001		69.29	11.58	<0.001 ***
					Age	-0.41	-4.41	<0.001 ***

Tab. 6. Effect of statistically significant predictors on regular MD levels among the Polish participants – a multiple regression model.  $R^2$  – the proportion of the variance for a dependent variable that’s explained by an independent variable;  $F$  – test statistics for the overall regression model;  $df$  – degrees of freedom;  $\beta$  – standardized beta value;  $t$  – test statistics for distinguished predictors;  $p$  – statistical significance.

Limited to the Polish sample, this analysis found a significant effect of work in intensive care units on the level of regular moral distress;  $\beta = 0.43$ ;  $p = 0.041$  indicates a moderately strong positive correlation of regular moral distress with work in intensive care units, as the value of the variable describing this type of medical work changes from 'No' to 'Yes,' the level of regular moral distress increases. In other words, working in intensive care units is associated with high levels of regular moral distress. A positive, moderately strong correlation of regular moral distress with involvement in clinical decision-making was also observed,  $\beta = 0.43$ ;  $p = 0.035$ . The study also found a significant, moderately strong, negative effect of age on levels of pandemic moral distress,  $\beta = -0.41$ ;  $p = 0.001$ : the older a participant, the lower the pandemic moral distress level. As a result, Hypothesis 3 was partially supported: that working in intensive care units and involvement in clinical decision-making are significant predictors of regular moral distress in Polish participants. Subjects not involved in clinical decision-making showed lower levels of regular moral distress accordingly (Fig. 3). Again, age was a significant predictor of pandemic moral distress measured in the Polish study participants (Fig. 4):



*Fig. 3. Polish sample: correlation between regular moral distress level and involvement in the clinical decision and between regular moral distress level and working in intensive care units.*

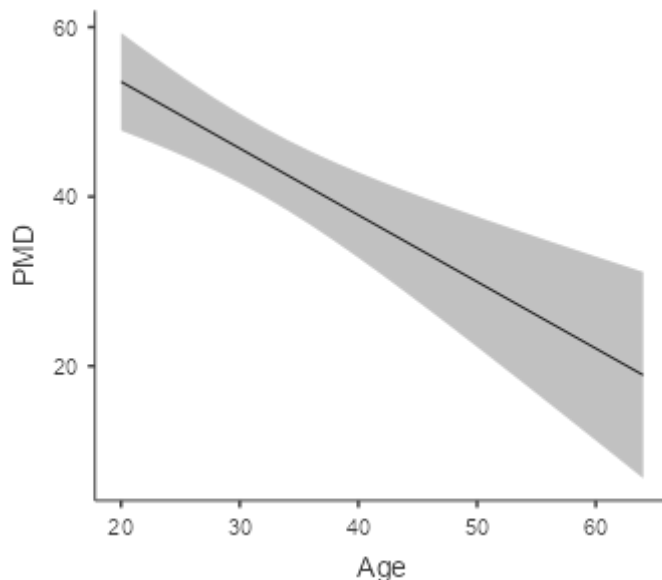


Fig. 4. Correlation between age and pandemic moral distress in the Polish sample.

**Hypothesis 4: There is a significant correlation between regular moral distress and pandemic-related moral distress.**

The analyzed variables were quantitative variables. Therefore, a correlation coefficient has been used. The type of coefficient used was determined by the nature of the distribution of the variables, which was verified using the Shapiro-Wilk test.

		PMD	
Poland	MD	<i>rho</i>	0.319 **
		<i>p</i>	0.001
Lithuania	MD	<i>rho</i>	0.273 **
		<i>p</i>	0.003
Total	MD	<i>rho</i>	0.365 ***
		<i>p</i>	< 0.001

Tab. 7. Correlation between regular moral distress and pandemic moral distress; *rho* – Spearman’s correlation coefficient; *p* – statistical significance.

The Polish sample had a statistically significant correlation,  $rho = 0.32$ ;  $p = 0.001$ , between regular moral distress and pandemic-related moral distress. The correlation was weak, as evidenced by the *rho* coefficient value  $\leq 0.3$ . It was a positive correlation, meaning that when regular moral distress increases, the pandemic-related distress also increases (see Fig.5). In the Lithuanian sample, there was also a statistically significant correlation  $rho = 0.27$ ;  $p = 0.003$  between regular moral distress and pandemic-related moral distress. The correlation was moderately strong (as evidenced by a coefficient of  $0.3 < rho \leq 0.5$ ) and positive. This means that as regular moral distress increases, pandemic-related distress also increases (as demonstrated in Fig. 6):

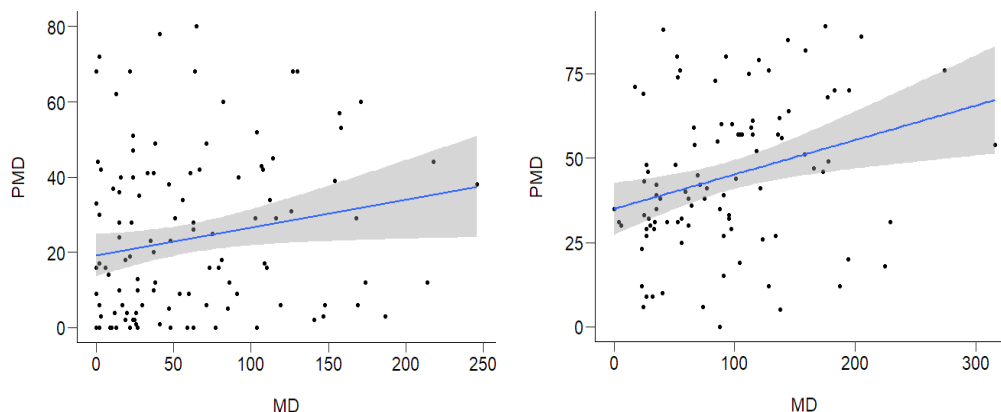


Figure 5 and Figure 6. A weak positive correlation between regular and pandemic moral distress in the Polish sample and a moderately strong positive correlation between regular and pandemic moral distress in the Lithuanian sample.

In the total study sample, there was likewise a statistically significant correlation  $\rho = 0.37$ ;  $p < 0.001$  between regular moral distress and pandemic-related moral distress. The correlation was moderately strong and positive (as demonstrated in Fig. 7):

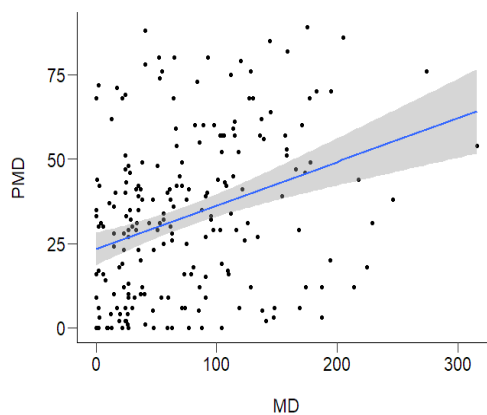


Fig. 7. A moderately strong positive correlation between regular and pandemic moral distress in the total sample.

On the basis of the above results, the hypothesis was accepted: there was a statistically significant correlation between moral distress regularly accompanying the work of a doctor or nurse and pandemic-related moral distress in Polish and Lithuanian subsamples, as well as in the total sample. This means that the two types of moral distress are separate but significantly correlated constructs. This also indicates that the authors' 6-item measuring tool to score pandemic moral distress can be a useful supplement to existing tests.

## 5. Discussion

To sum up, a total of  $N = 227$  participated in the study, of them from Poland,  $N = 97$ , from Lithuania, and  $N = 130$ . The levels of regular and pandemic moral distress were twice as

high in Polish respondents compared to Lithuanian counterparts; Hypothesis 1 was confirmed.

Statistically significant correlations were found between the level of moral distress and career stage; Hypotheses 2a and 2b were confirmed. Polish physicians experienced the highest level of regular moral distress; meanwhile, pandemic-type moral distress affected Polish students the most. It was found that Lithuanian physicians had statistically significantly lower pandemic moral distress levels than nurses and students. However, they were more likely to suffer from regular moral distress than nurses and students.

Hypothesis 3, according to which working in intensive care units and involvement in clinical decision-making were significant predictors of high regular moral distress in the Polish sample, was confirmed. The study also found a significant, negative, and moderately strong effect of age on levels of pandemic moral distress. Older participants better dealt with pandemic-type moral stressors; Hypothesis 3 was tested only for the Polish sample.

Hypothesis 4, that the two types of moral distress are distinct but positively and moderately strongly correlated constructs, was confirmed.

The findings also showed that after a year of dealing with the pandemic in the unfavorable sociomoral climate, Polish and Lithuanian health workers experienced very unequal levels of moral distress. The differences may be due to the distinct organizational cultures of Lithuanian healthcare and Polish healthcare systems and different type of clinical training. In the Lithuanian context, policies and procedures were implemented preemptively so that "Lithuania was one of the first countries to take steps against the virus, way before the pandemics were announced" (Savickas 2020; on the meaning of moral distress research for healthcare planning see Wöhlke & Wiesemann 2016). Meanwhile, in Poland, "health care providers themselves evaluate the anti-COVID procedures as good, but their implementation as inadequate and ineffective (...). The public administration's stance in a nutshell: we shall see what will happen. Safety procedures could have been implemented much earlier" (Kaczmarczyk 2020). As for medical facilities in Poland, "the audit found that they were not prepared to manage an epidemic" (source: Dziennik. pl 2020). Also, treatment of patients with other diseases was assessed in the same audit as "overly limited" (NIK/Supreme Audit Office 2022).

Nonetheless, similarities were observed. In both countries, physicians responsible for critical clinical decisions reported the highest level of regular moral distress, which chronically accompanies clinicians, but lower levels of pandemic moral distress. Participants not exhausted by demanding ICU work and decision-making generally better dealt with pandemic moral distress. In contrast, high levels of pandemic moral distress were observed in Polish students. Unlike their Lithuanian counterparts, they had limited insight into new and frequently changing procedures due to remote education.

In the northeastern European region, pre-pandemic levels of moral distress were previously rarely investigated. Borkowska et al. (2019) used the screening method based on Moral Distress Thermometer (MDT) with Polish nurses in anesthesia and ICU, particularly in the context of extra workload hours (mean score 4.43). Laurs et al. (2020) identified that 32.3% of Lithuanian nurses experienced a low level of moral distress (mean score of 1.09), 33.9% a moderate level of distress (mean score of 2.53), and 33.8% a high level of distress. However, due to the discrepancy in research tools and methods, these results cannot be related to ours. Nor can the widespread hypothesis be followed according to which nurses experience stronger regular-type moral distress than doctors. The results

for the Lithuanian sample do not fully confirm this, while the results for the Polish sample found that doctors had higher levels of pandemic moral distress than nurses.

## **6. Strategies to Deal with Moral Distress**

As for resilience, usually associated with remedies against moral distress, in demanding professions and contexts, it is usually defined as “the ability to operate stably” (Omrane et al. 2020; Delikat & Smereka 2021) under unfavorable or critical circumstances, so it refers to robustness or immunity to them (cf. Lind 2021). In their “mutual dependencies” (Elwyn et al. 2012: 1361), the health provider and the patient are autonomous and, at the same time, open to each other. Resilience is needed when external pressures, including interpersonal ones, challenge professional expertise, evidence, and ethical standards. It thus refers to “an individual’s capacity to overcome fear and stand up for his/her core values” (Lachman 2007a; 2007b), be they epistemic or moral. Resilience and moral courage are related (Thomas & McCullough 2015; Reyes et al. 2015; Lachman 2010; Murray 2010). Oser and Reichenbach (2005) defined resilience as an individual resistance to both external and internal pressures “for morality’s sake” and emphasized that “real biographical or historical moral decision making and action always requires something like moral courage, or the will to stand up against unjustified expectations and pressure. There is no relevant moral decision making without stress” (Oser & Reichenbach 2005, 204), isolated or alienated from social context and one’s moral self, they argue. “Situating judgments are influenced by the specific contexts and their constraints, by the feelings of the actors, by expectancy patterns, by the moral indignation of persons concerned or involved, and, of course, by other factors” (cf. Oser & Reichenbach 2005, 218). Thus, resilience is proved when a subject is able to resist to and neutralize “pressure or constraints regarding resources” (cf. Oser & Reichenbach 2005, 218; Habermas 1981; Zajonc 1989) while making a justified decision in challenging contexts. The strategies of pandemic frontline emergency healthcare professionals to deal with moral distress have so far been addressed by few qualitative studies. For instance, “coping strategies included limiting exposure to negative media, drawing upon religious beliefs, and taking strength from their motivation to serve their patients and country,” “fostering positive emotions and mental wellbeing (...) by implementing flexible workplace policies and by ensuring physical protection from the virus (...) social networks, peer support, and a focus on self-care” (Brown et al. 2021, 2; see also Hossain & Clatty 2021 and Romero-García et al. 2022) were identified as fostering resilience in medical workers. For instance, according to Brown and colleagues, sources of resilience can be 1) personal (self-care and mindset based), 2) relational (teamwork, altruism, and social support, family and friendship), and 3) organizational (“design and implementation of policies and procedures”). This means that support can be drawn from these sources in situations where an unfavorable sociomoral atmosphere thickens around the decision-maker. As to personal and professional sources, Kristjánsson (2016, 708) would complement them with personal and professional virtue or phronesis, which can be understood as the well-developed competence to make the right and just judgments and decisions regardless of unfavorable contexts.

## **7. Limitations of the Study**

Regarding the limitations of the study, one major limitation of the study was the male participants’ disparity in Polish and Lithuanian samples. Such a disparity was confirmed

by related studies (e.g., Basevičiūtė et al. 2022). This can also be attributed to the increasing feminization of health professions in the EU. Second, participants' survey fatigue, related to the pandemic research boom, was identified. Pandemic response rates are generally lower than pre-pandemic ones (cf. De Koning et al. 2021; Rothbaum & Bee 2021). We have carried out a real-time study, and such a study in the case of moral distress can, by itself, increase discomfort in respondents, already sufficiently distressed in their professional contexts. Third, data on ICU work and clinical decision-making involvement in Lithuania were not available. Further, due to the difference in teaching modes, Lithuanian nursing students were only able to participate in a pen-and-paper survey. An additional limitation is the relatively small number of participants in the study. In this part of Europe, not least in times of pandemic, it is very difficult to get medical professionals and medical students to participate in any study. One obstacle is the fear of the consequences for the health workers of revealing their names and answering the authorities. Our team encountered this concern and is aware of the strong hierarchization of the medical community.

## 8. Conclusion

In conclusion, the most important finding is that, after the first year of the pandemic, Polish participants demonstrated significantly higher levels of regular and pandemic moral distress than their Lithuanian counterparts. The policies, healthcare organization, and, finally, the sociomoral ecology in which Lithuanian healthcare providers were on duty during the pandemic emergency allowed them to experience lower moral distress levels compared to their Polish counterparts. According to sources documenting the condition of the Polish healthcare providers due to constant health sector reforms and the overly critical opinion of the organizational structure and culture of this sector, both in the eyes of medical professionals and patients (e.g., Nowak, Barciszewska, and Napiwodzka 2023), it can be assumed that the pandemic amplified the regular moral distress and generated a novel, pandemic-type moral distress. We have defined and explored this new type of moral distress as distinct from regular moral distress. The scale we constructed to measure pandemic moral distress proved to be a reliable research tool. Despite some difficulties in conducting this pioneering study in real-time, under the demanding lockdown conditions, we investigated and compared for the first time the levels of regular and pandemic moral distress in two neighboring countries in north-eastern Europe after the first year of the COVID-19 pandemic. At this time, when confronted with a little investigating but a highly virulent microbe, populations reacted with strong emotions such as fear for their lives, suspicion, and hostility towards those responsible for saving lives. Little is still known about the developmental dynamics of the Polish and Lithuanian public health systems in the post-pandemic era (although it is said in medical circles that COVID-19 is gone, has the pandemic ended?). Here, we have used all sources of information available on the subject at this time. At the same time, we realize that further research is needed, including research explaining, for example, the relatively high mortality rate during the pandemic in Poland and the relationship of this factor to increased public criticism of the administration and healthcare workers.

From a broader, international perspective, closer examination with follow-up studies could explain how to improve or maintain favorable ecologies as well as safe and successful clinical decision-making exactly when health provision is of critical importance for society (cf. Nielsen & Abildgaard 2013; Abbasi et al. 2019). Ecologies of healthcare, including the organizational and the communal, need to be systematically improved to

protect the medical workforce against ecologies that escalate moral distress and lead to the disintegration of decision-making processes.

Let us conclude with Margaret Atwood: in the face of “an emergency crisis,” “when there’s an epidemic of panic, people long for something to blame, because if you can find the thing to blame, you can eliminate the threat” (Atwood 2020).

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## Reciprocity as an Argument for Prioritizing Healthcare Workers for the COVID-19 Vaccine

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*During the recent debates on whether to prioritize healthcare workers for COVID-19 vaccines, two lines of argument were prevalent, namely arguments centered on maximizing health, either with or without a special emphasis on the worse off, and arguments centered on reciprocity. In this article, we scrutinize the arguments of reciprocity. The notions of fittingness and proportionality are fundamental for the act of reciprocating, and we consider the importance of these notions for various arguments from reciprocity, showing that the arguments are problematic. If there is a plausible argument for reciprocity during the COVID-19 pandemic, this is most likely one that centers on the risk that healthcare workers take on as part of their jobs. Furthermore, we argue that the scope of this argument should not be extended only to healthcare workers, other essential workers at risk are in a position to make the same arguments. We also consider whether reciprocating with vaccines, rather than by other means, is necessary. Allocating vaccines based on reciprocity will arguably conflict with utility-maximizing, concerns for the worse off, and equity concerns. Given the weak state of the reciprocity arguments, we conclude that overriding these concerns seem unreasonable.*

### Introduction

During the recent debates on whether healthcare workers should be given priority for COVID-19 vaccines, two lines of arguments were prevalent, namely arguments for maximizing utility<sup>1</sup>, either with or without a special concern for the worse off, and arguments from reciprocity<sup>2</sup>. For instance, the WHO SAGE guidelines explicitly

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<sup>1</sup> As will become clear, while we will talk of “maximizing utility” in the paper, we do not mean to imply that arguments from utility are necessarily strictly utilitarian. Those arguing from utility might endorse more complex consequentialist theories such as prioritarianism.

<sup>2</sup> A third line of argument centers on the importance of fair chances, essentially following the argument against distributing based on numbers made by John Taurek (1977). According to Taurek, giving people equal chances is important. See, for instance, Peterson, M. (2008) for an argument for giving everyone a (weighted) chance for a vaccine. If working in the healthcare sector involves a higher risk of being exposed to the virus, this would mean prioritizing healthcare workers in some way (perhaps by giving them more tickets in a vaccine lottery). There are two reasons why we do not consider this line of argument in the article. The first reason is that this argument does not seem to have been prevalent during the pandemic. The second reason is that our concern in this paper is with arguments from reciprocity, and arguments from utility seem sufficient as a contrary line of argument.

recommend *reciprocity* as a crucial value for distributing vaccines<sup>3</sup>. Arguments from utility and reciprocity are often conflated when framed by healthcare workers themselves. While an argument for reciprocity may have an intuitive appeal – especially during a pandemic – it remains unclear precisely how it should operate. Furthermore, the ethical roots of utility maximization and reciprocity are different; while utility maximization can be explained on purely consequentialist grounds, an argument for reciprocity needs support from non-consequentialist theories.

This article explores the potential strengths and weaknesses of arguments for reciprocity regarding prioritizing healthcare workers for the COVID-19 vaccine and explores the twin issues of how and whom to reciprocate. We begin by summarizing how reciprocity has been used and defined in central policy documents for vaccine priority-setting. We then proceed to explore the philosophical grounds for reciprocity. This stage-setting allows us to explore how reciprocity may relate to the priority-setting of COVID-19 vaccines for healthcare workers. We then consider whether arguments from reciprocity suggest prioritizing healthcare workers solely or whether other essential workers at risk have a similar claim. Finally, we conclude that arguments from reciprocity do not necessarily suggest singling out healthcare workers for priority for COVID-19 vaccines. While our normative arguments have a broad scope of relevance, we largely make use of the Norwegian setting as a case study.

### **Reciprocity in pandemic policy**

Precisely how has *reciprocity* been argued for during the COVID-19 pandemic? One of the most prominent examples is to be found in the WHO SAGE recommendations. The WHO SAGE states four central values – well-being, equal respect, equity, and reciprocity – and recommends that reciprocity could be considered towards groups that have been placed at a *disproportionate* risk while attempting to mitigate the adverse effects of the pandemic. Reciprocity is further explained as an attempt “to protect those who bear significant additional risks and burdens of COVID-19 to safeguard the welfare of others, including health and other essential services.” (p.11). The WHO SAGE selects frontline healthcare workers as one such group and further recommends reciprocating healthcare workers with a high to very high risk of infection and transmission of SARS-CoV-2 because they play essential roles, work under intense conditions, and put themselves and their households at higher risk for the sake of others.<sup>4</sup>

By contrast, the Norwegian expert panel for the priority-setting of COVID-19 vaccines deliberately decided *not* to include reciprocity as a value affecting the priority order of vaccines.<sup>5</sup> They furthermore recommended two main groups for receiving priority for COVID-19 vaccines in the initial scarcity phase – the at-risk group<sup>6</sup> and healthcare workers. The Norwegian expert panel argued that the at-risk group should be ranked first

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<sup>3</sup> World Health Organization, ‘WHO SAGE Roadmap For Prioritizing Uses Of COVID-19 Vaccines In The Context Of Limited Supply’.

<sup>4</sup> World Health Organization, ‘WHO SAGE Roadmap For Prioritizing Uses Of COVID-19 Vaccines In The Context Of Limited Supply’.

<sup>5</sup> Eli Feiring and others, ‘Advice on Priority Groups for Coronavirus Vaccination in Norway’, 27.

<sup>6</sup> With the term “at-risk group”, we refer to those who are more likely to become severely ill as a result of COVID-19-infection, such as the elderly and those with pre-existing conditions. Prioritizing this group can be understood both as maximizing utility and as a concern for the worse off.

while transmission rates remained low and that health workers should rank first during periods of higher transmission rates. This ranking was argued to be necessary to preserve the integrity of the healthcare system and was thus clearly an argument from utility. In the discussions that followed in Norway, critical voices emerged. Groups of Norwegian practicing physicians, and particularly a group of prominent anesthesiologists, argued that healthcare workers should get first priority for COVID-19 vaccines under any circumstance. In these discussions, a reciprocity-like argument seemed to play a role. For instance, the anesthesiologists highlighted that healthcare workers have a right to protection when asked to do work that may imply a risk for their own life and health, which along with utility arguments led them to conclude that healthcare workers should receive first priority to pandemic vaccines under any circumstance.<sup>7</sup>

The Nordic countries are particularly relevant comparisons for the Norwegian setting. Reciprocity also comes into play in a review from these countries of arguments for prioritizing COVID-19 vaccines for healthcare workers. The authors state that “healthcare workers deserve reciprocity for putting their lives on the line for the lives of others” (p. 6). They also argued that a social contract needs to include reciprocity because this will raise trust among healthcare workers who take the risk.<sup>8</sup>

The Danish Council on Ethics did not mention the value of reciprocity directly. However, in a July 2020 report they discuss reciprocity-relevant concerns. To elaborate, the Council illuminates that healthcare workers have been at risk of harm due to their work. This potential harm may include direct morbidity because of SARS-CoV-2 infection as well the risk of transmitting the disease to others and to vulnerable patients (with potentially lethal consequences), potential transmission to family members and friends, and the necessity of frequent quarantine and isolation for the healthcare workers themselves. One could also add that daily work with personal protective equipment (PPE) and extra work because of sick colleagues and colleagues in quarantine may add to the totality of individual risk. On this basis, the Danish Council argues that the state may have a special duty towards its healthcare workers during a pandemic like COVID-19.<sup>9</sup> It is also important to note that a set of central articles and policy documents concerned with the priority setting of COVID-19 do not mention reciprocity directly nor include indirect reciprocity-like discussions.<sup>10, 11</sup>

To sum up, there are predominantly two trends concerning reciprocity for healthcare workers in the current COVID-19 pandemic. The first is that one is mainly concerned with risk (rather than harms and benefits), and the second is that it seems to be taken for granted that priority for COVID-19 vaccines is the best way to reciprocate healthcare workers at risk. Clearly, an under-theorized concept of reciprocity has emerged

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<sup>7</sup> Jon Henrik Laake and others, ‘Etikkespørter på villspor’, *Tidsskrift for Den norske legeforening*, 2020.

<sup>8</sup> Björg Thorsteinsdóttir and Bo Enemark Madsen, ‘Prioritizing Health Care Workers and First Responders for Access to the COVID-19 Vaccine Is Not Unethical, but Both Fair and Effective – an Ethical Analysis’, *Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine*, 29.1 (2021), 77.

<sup>9</sup> Det Ethiske Råd, ‘Ethiske Hensyn Ved Visitation Og Prioritering Af Patienter På “Den Røde Kurve”’.

<sup>10</sup> Joint Committee on Vaccination and Immunisation, ‘Joint Committee on Vaccination and Immunisation: Advice on Priority Groups for COVID-19 Vaccination, 30 December 2020’, GOV.UK.

<sup>11</sup> A Hogan and others, Report 33: Modelling the Allocation and Impact of a COVID-19 Vaccine (Imperial College London, 25 September 2020).

in the literature on the priority-setting of COVID-19 vaccines. Given the emergent nature of the COVID-19 pandemic, this lack of theory is understandable. Pragmatism is crucial when coping with a pandemic. However, in the aftermath it will be valuable to consider more thoroughly the philosophical discourse of reciprocity and how conceptualizations of reciprocity may or may not relate to reciprocity as a value for prioritizing healthcare workers for the COVID-19 vaccine.

### What is reciprocity?

Reciprocity is a ubiquitous part of everyday morality and social norms. We reciprocate in close relationships, in business dealings, and with strangers. Moreover, reciprocity is closely connected to gratitude.<sup>12</sup> Arguments from reciprocity are featured in ethical theory that envisages ethics either as an expression of desert-based claims<sup>13</sup>, a social contract<sup>14</sup>, a cooperative endeavor<sup>15</sup>, or as a virtue<sup>16</sup>. Furthermore, reciprocity is extensively studied in game theory<sup>17,18</sup>, psychology<sup>19</sup>, biology<sup>20</sup>, and other related fields and can be studied as grounds for a theory of justice.

In this article, we restrict ourselves to studying reciprocity as a reason-giving factor in the fair distribution of benefits (such as a vaccine). According to Thomas Becker, “reciprocity is a matter of making a fitting and proportional return for the good or ill we receive.”<sup>21</sup> Concern for such fittingness and proportionality is fundamental to the notion of reciprocity that we will be exploring in this article. Our primary focus will be on the reciprocity warranted when there is *significant harm or benefit*. This focus also seems to align with other lines of inquiry into the nature of reciprocity, for instance, Armin and Fischbacher’s theory focuses on the relationship between kindness, unkindness, and reciprocal action.<sup>22</sup>

Reciprocity is often a prerequisite for cooperation, which again relates to bargaining. If *A* wants to secure the cooperation of *B*, then *B*’s acceptance might be conditional on the relationship being reciprocally useful for them. If *B* has something to offer that is of great value, they are better positioned to dictate terms for the cooperative relationship. Whether a bargaining position can be a genuinely moral argument – or simply a reflection of power dynamics – depends on how one envisages morality. We will briefly

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<sup>12</sup> Tony Manela, ‘Gratitude’, in *The Stanford Encyclopedia of Philosophy*, ed. by Edward N. Zalta, Fall 2019.

<sup>13</sup> Govind Persad, Alan Wertheimer, and Ezekiel J Emanuel, ‘Principles for Allocation of Scarce Medical Interventions’, *The Lancet*, 373.9661 (2009), 423–31 [https://doi.org/10.1016/S0140-6736\(09\)60137-9](https://doi.org/10.1016/S0140-6736(09)60137-9).

<sup>14</sup> John Rawls, *A Theory of Justice: Revised Edition* (Cambridge, Massachusetts: The Belknap Press of Harvard University, 1999).

<sup>15</sup> David Gauthier, *Morals by Agreement* (Clarendon Press, 1986).

<sup>16</sup> Lawrence C. Becker, *Reciprocity* (London: Routledge, 2014) <https://doi.org/10.4324/9781315780719>.

<sup>17</sup> Armin Falk and Urs Fischbacher, ‘A Theory of Reciprocity’, *Games and Economic Behavior*, 54.2 (2006), 293–315.

<sup>18</sup> Cristina Bicchieri and Giacomo Sillari, ‘Game Theory and Decision Theory’, 2016, 23.

<sup>19</sup> Linda D. Molm, ‘The Structure of Reciprocity’, *Social Psychology Quarterly*, 73.2 (2010), 119–31.

<sup>20</sup> Robert L. Trivers, ‘The Evolution of Reciprocal Altruism’, *The Quarterly Review of Biology*, 46.1 (1971), 35–57.

<sup>21</sup> Lawrence C. Becker, ‘Reciprocity, Justice, and Disability’, *Ethics*, 116.1 (2005), 9–39.

<sup>22</sup> Falk and Fischbacher.

consider whether this notion of bargaining position is relevant when discussing reciprocity as an argument in the priority-setting of vaccines.

An argument from reciprocity can also be understood deontologically. We here follow Shelly Kagan in defining a deontological argument as one that, in some sense, *limits* our duty to promote the good.<sup>23</sup> If person *A* requires reciprocation for a benefit to person *B*, this request is not meaningfully understood as an assertion that reciprocation will promote the general good, but rather that something is *owed* to person *A* or that person *B* has a duty to reciprocate. Such reciprocation can be understood as following from a special obligation, a right, a duty, or a virtue. Reciprocity, in this sense, can conflict with promoting the good. Person *C* might derive a greater *benefit* from whatever person *A* requires from person *B*. Maximizing utility will then, all else equal, require that person *C* gets this resource rather than *B*. The norm of reciprocity dictates otherwise. In setting priorities for COVID-19 vaccines, such a conflict between utility and reciprocity is apparent. Maximizing utility might dictate giving the vaccines to those who will gain the most health benefit from them or to those who will be most instrumentally helpful, while reciprocity dictates giving it to those who have provided a significant benefit or who have experienced significant harm or risk. We posit that a genuine argument from reciprocity in some sense limits our endeavors to promote the good. To be precise, any argument that holds, for instance, that healthcare workers should be prioritized to maximize health (or well-being) is thus not a genuine argument for reciprocity.

The issue of reciprocity is part of a larger debate on limitations on utilitarian strategies in healthcare priority-setting. In this sense, arguments from reciprocity are like arguments from need or illness severity as well as arguments on the merits of sufficientarian, egalitarian, and prioritarian theories of justice for healthcare priority-setting.<sup>24, 25, 26, 27</sup> In an extension of this, it is also the case that giving weight to concerns for reciprocity will potentially conflict with the concerns of these various distributive theories. Promoting reciprocal concerns can conflict with concerns for total or average utility, concerns for the worse off, or equity concerns. Prioritizing healthcare workers as a reciprocal action might, for example, mean prioritizing those likely to become severely ill (the worse off) to a lesser degree. An important difference between the above-mentioned theories of distribution and concerns for reciprocity is that these theories all focus on the beneficiaries of resources. Concerns for reciprocity are centered on providers rather than on beneficiaries, and concerns for reciprocity are, in this sense, similar to concerns for desert.

It might be possible to account for reciprocity purely within the realms of consequentialism, analogous to how some have argued for desert-sensitive consequentialist theories.<sup>28</sup> Reciprocation would then be understood as a specific good to be promoted in line with other goods, such as health or well-being. This possibility will not

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<sup>23</sup> Shelly Kagan, *The Limits of Morality* (Oxford University Press, 1989).

<sup>24</sup> Erik Gustavsson and Niklas Juth, 'Principles of Need and the Aggregation Thesis', *Health Care Analysis*, 27.2 (2019), 77–92.

<sup>25</sup> Mathias Barra and others, 'Severity as a Priority Setting Criterion: Setting a Challenging Research Agenda', *Health Care Analysis*, 28.1 (2020), 25–44.

<sup>26</sup> Derek Parfit, *Equality or Priority* (University of Kansas, Department of Philosophy, 1991).

<sup>27</sup> Greg Bognar and Iwao Hirose, *The Ethics of Health Care Rationing: An Introduction* (London: Routledge, 2014).

<sup>28</sup> See, e.g., Shelly Kagan, *The Geometry of Desert* (Oxford University Press, 2014).

be explored in this article. In either case, the structure of reciprocation needs to be made explicit and its application explored in the context of priority-setting for COVID-19 vaccines.

### How to reciprocate

Assuming that reciprocation is called for, the question of how exactly one should reciprocate remains. Following Becker, we consider two issues particularly salient, namely *proportionality* and *fittingness*.<sup>29</sup>

First, what does it mean for an instance of reciprocity to be proportional? If *A* buys *B* dinner at a moderately fancy restaurant, and *B*, in return, buys *A* a chocolate croissant from the university cafeteria, this return is hardly a case of a *proportional benefit*. A proportional benefit would entail that *B* gives as much as they receive. However, it might be a case of a *proportional sacrifice*, where *B* sacrifices as much as *A* sacrificed. Perhaps *A* is very wealthy, whereas *B* has recently come into massive debt and therefore does not have the money to be buying anything fancier than a croissant. It might even be the case that *B*'s sacrifice is greater than *A*'s sacrifice.<sup>30</sup> Regarding proportionality, at least two factors seem to be in play, namely the nature of the *relationship* (most prominently whether the relationship is symmetrical or asymmetrical) and the *resources* available to the partners in the reciprocal exchange.

Whether to reciprocate based on benefit or sacrifice is an important question because power dynamics are likely to be substantially different depending on what is chosen. Reciprocity based on a benefit is likely to be advantageous to the rich, talented, and powerful, whereas reciprocity based on sacrifice is likely to be an equalizing force.<sup>31</sup> A critical point is that an argument from reciprocity is primarily built on a retrospective judgment. Whether to reciprocate is not a question of whether it is useful to continue receiving the benefits offered but whether something is owed to the person from whom one has already benefited (or made to suffer harm).<sup>32</sup> The normative status of reciprocating for a benefit, or harm, is thus not dependent on whether one can expect to receive the benefits again. If the notion of a bargaining position is relevant when considering how to reciprocate, we can potentially be led to the converse conclusion. If person *A* is more important to a cooperative relationship than person *B*, then it might be the case that person *B* has to offer more to make the relationship worth it to person *A*. In the case of healthcare workers during a pandemic, we need their services desperately. Perhaps this asymmetry should be acknowledged by reciprocating with a larger benefit or sacrifice. This seems to be Aristotle's position.<sup>33</sup> Given that we do not wish to exacerbate existing disparities in power, wealth, and influence, asymmetrical reciprocal relationships should be based on sacrifice.

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<sup>29</sup> Becker. Reciprocity, Justice, and Disability.

<sup>30</sup> A similar asymmetry is also illustrated in the parable of the Widows Offering, where Jesus focuses on the great sacrifice of the poor rather than the great benefits from the rich. Mark 12:41-44.

<sup>31</sup> See Becker (2005) for an illustration of how different forms of reciprocity will generate different power dynamics.

<sup>32</sup> Becker. Reciprocity.

<sup>33</sup> Aristotle, Aristotle's Nicomachean Ethics, trans. by Robert C. Bartlett and Susan D. Collins, Reprint edition (Chicago: University of Chicago Press, 2012).

The issue of fittingness concerns what types of reciprocation are suitable in response to a given benefit or harm. How should *A* reciprocate if *B*, a dear friend, gives *A* a rare book *A* have wanted for a long time? Giving *B* the exact same book in return, which seems maximally equal, would be inappropriate and strange. In such situations, we have a wide range of options for reciprocating, which do not seem to require similarity. As the above example shows, some forms of similarity might even be inappropriate. The situation is seemingly more complicated when it comes to reciprocating for harm. If *A* incurs serious harm because of *B*'s actions, options for reciprocity are more restricted. *B* giving *A* an expensive gift might be fitting, but it might also be considered inappropriate depending on their relationship and *A*'s interpretation of *B*'s actions. Perhaps only a similar sacrifice or harm will restore this relationship to what it was before the harm. Becker argues that fittingness for harm is aimed at restoring reciprocal relationships.<sup>34</sup> In this case, perhaps the standard of fittingness in the situation is an action or sacrifice that shows *A* that the relationship really is a reciprocal one; that *B* would be willing to do the same for *A* as *A* was willing to do for *B*. It thus seems that reciprocating for harm is more complex than reciprocating for benefits. The former potentially demands a higher or stricter standard of fittingness. This standard might have to do with harms often being reciprocated with benefits, making commensurability difficult. Risk of harm, which we consider as a subspecies of harm, might, however, be commensurable with specific benefits that mitigate this risk, making the question of fittingness less difficult.<sup>35</sup> Alternatively, perhaps the deontological connotations of harms make it a more complex issue than benefits, the latter of which often have consequentialist connotations. No matter what the explanation is, the standard of fittingness when reciprocating for harms seems more demanding than when reciprocating for benefits.

To summarize, there seems to be a set of relevant questions and criteria that should be thought through regarding reciprocity for healthcare workers. Reciprocation can be based on benefits, harms, risks, or all of these. Also, reciprocation implies that something is owed to a specific person or group of individuals, which again may conflict with concerns for maximizing utility, prioritizing the worse off, or with equity concerns. Moreover, some proportionality and fittingness between the benefits, harms, and risks, and the reciprocation in return, should be expected – which again depends on the relationship between the two parties.

### **Reciprocity and priority-setting of COVID-19 vaccines**

To date, the most frequent argument for reciprocating COVID-19 vaccines for healthcare workers seems to be that healthcare workers are at increased *risk* for COVID-19 and, therefore, should be reciprocated for this risk.<sup>36</sup> Here, we understand *risk* as situations that involve exposure to potential harm. We will, in this article, consider risk of harm as a subspecies of harm, in the sense that a person can be harmed by being put at considerable risk. The risk of harm from exposure to SARS-CoV-2 is thus here understood as the harm

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<sup>34</sup> Becker. Reciprocity.

<sup>35</sup> A higher risk of contracting COVID-19 – i.e., suffering a harm – while performing a vital service, could, for example, be mitigated by being prioritized for a vaccine.

<sup>36</sup> See, e.g., Kirk R Daffner, 'Point: Healthcare Providers Should Receive Treatment Priority During a Pandemic', *Journal of Hospital Medicine*, 16.3 (2021).

that needs to be reciprocated. Considering the risk of harm as a species of harm is important given the retrospective nature of reciprocity. This consideration will be explored later in the article. Following Becker<sup>37</sup>, one could argue that reciprocity for risk is necessary to maintain or mend the reciprocal relationship between healthcare workers and the rest of society. What the “rest of society” means will be considered below.

An interesting argument can be made regarding the relationship between healthcare workers’ duty to treat and societies’ duty to provide safe working conditions for healthcare workers. Some have argued that the duty to treat is conditional on satisfactory PPE measures such as masks.<sup>38</sup> Perhaps a similar argument can be made regarding the priority setting of scarce vaccine doses. This would be a case of complementary duties and obligations such that the strength of a duty to treat would be conditional on the strength of societies’ efforts to provide safe working conditions for healthcare workers.

Alternatively, one could understand the argument from reciprocity as positing that society receives a substantial *benefit* from healthcare workers during a pandemic and that this benefit needs to be reciprocated. In a sense, we owe the healthcare workers something for their contribution. Given that healthcare workers are already compensated for the benefits they provide, this contribution would probably need to be larger than what can be expected under normal circumstances for the argument to be persuasive. The benefit obtained from healthcare workers is clearly substantial during a pandemic. However, this benefit is not obviously different from the benefits provided during non-pandemic times during which healthcare workers – like all professional workers – are compensated monetarily for their provided benefits. It is therefore not evident that reciprocating with vaccines is fitting or proportional.

### **Are healthcare workers more at risk than other workers?**

Have healthcare workers been more at risk of SARS-CoV-2 infection than others? This question of risk is empirical, and the risk profile naturally differs between countries. When this article was written (December 2021), the WHO estimated that between 80,000 and 180,000 healthcare workers had lost their lives due to COVID-19 globally.<sup>39</sup> These numbers indicate that globally healthcare workers have been at a significantly higher risk than the general population. We will, nevertheless, primarily consider empirical data from the Norwegian setting because this gives us a reasonably clear setting for our arguments. Even though the empirical setting is country-specific, we believe that our normative discussion will be of generic value. Compared with these international numbers, the morbidity and mortality rates among Norwegian healthcare workers have been fairly low. Different occupational groups within the Norwegian healthcare sector were surveyed between early and mid-2020, and this large-scale study found that the people at the most significant risk of SARS-CoV-2 infection were not frontline physicians or nurses – as many would expect

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<sup>37</sup> Becker. Reciprocity.

<sup>38</sup> Espen Gamlund and others, ‘Heroes in White?’, *Tidsskrift for Den Norske Legeforening*, 2020.

<sup>39</sup> World Health Organization, ‘Health and Care Worker Deaths during COVID-19’

<https://www.who.int/news/item/20-10-2021-health-and-care-worker-deaths-during-covid-19> [accessed 14 December 2021].

– but rather sanitation workers and emergency medical technicians.<sup>40</sup> Some Norwegian healthcare workers, specifically clinical psychologists and physiotherapists, were even less likely to be infected with SARS-CoV-2 than the general population. Data from infection rates among different professions in Norway have shown that workers in other industries, such as bus and taxi drivers, bartenders, and waiters, are at a similar risk of SARS-CoV-2 infection as healthcare workers.<sup>41</sup> Thus, it seems that Norwegian healthcare workers, in general, are more at risk than the general public, but this needs to be qualified in two ways – not all healthcare workers are at risk, and some non-healthcare workers are at a similar risk as healthcare workers. Note that we have only argued that this is the case in the Norwegian setting. If data from other countries show a clear tendency for healthcare workers to be at a significantly higher risk than the general population, then the argument for some form of reciprocity is plausibly stronger in these countries.

### Who is the reciprocating partner?

The examples used so far to illustrate aspects of reciprocity have primarily involved personal relations where it is obvious who is responsible for reciprocating. However, it is not as clear *who* the reciprocating partner is when it comes to reciprocating with vaccines. At least four candidate views present themselves –the hospitals or the healthcare system, the state, society in general, or the individual patient. Patients seem relatively easy to rule out because it is not only those patients who are treated by healthcare workers for COVID-19 who receive a benefit. Having a functioning healthcare system is necessary to avoid complete lockdowns and other restrictions that negatively affect most citizens' quality of life and economy. Thus, patients might have a duty to reciprocate, but if reciprocation is called for, it is not solely the patients who are responsible. It also seems plausible to argue that patients reciprocate indirectly via the state or by complying with infection-control regulations and recommendations.

Whether or not hospitals or the healthcare system in general are responsible for reciprocation will likely depend on how the healthcare system is organized. It seems plausible to argue that employers (i.e., hospitals) are responsible for reciprocation when healthcare workers are working in the private sector. When the state is responsible for the healthcare sector and for the priority-setting of vaccines, such as in most European countries, the state is probably a more suitable partner in the reciprocal relationship for pragmatic reasons. Thus, the state and society in general remain potential reciprocators. Society seems to have some responsibility, and concerns for this responsibility have been part of the general discourse during the pandemic, highlighting the sacrifices of the healthcare workers and the responsibility of the general public to follow infection-control regulations. An example of highlighting sacrifices was the widespread cheering by the public of healthcare workers from balconies during the early stages of the pandemic. When

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<sup>40</sup> Mari Molvik\* and others, 'SARS-CoV-2 blant ansatte i helse- og omsorgstjenesten', *Tidsskrift for Den norske legeforening*, 2021.

<sup>41</sup> Karin Magnusson and others, 'Occupational Risk of COVID-19 in the First versus Second Epidemic Wave in Norway, 2020', *Eurosurveillance*, 26.40 (2021). Folkehelseinstituttet, 'Mer covid-19 i noen yrkesgrupper', Folkehelseinstituttet <https://www.fhi.no/nyheter/2020/mer-covid-19-i-noen-yrkesgrupper/> [accessed 10 November 2021]. Folkehelseinstituttet, 'Mer covid-19 i noen yrkesgrupper enn i andre', Folkehelseinstituttet <https://www.fhi.no/nyheter/2021/mer-covid-19-i-noen-yrkesgrupper-enn-i-andre/> [accessed 15 December 2021].

it comes to more direct reciprocity, either in the form of monetary compensation or vaccines, the most plausible way for society to reciprocate is via the state. This is particularly clear in countries like Norway, Denmark, Sweden, and the Netherlands, where the state is the principal organizer of the healthcare systems (in a broad sense, including regions and local authorities). In countries with a large public health sector, where most healthcare workers are effectively government employees, it thus seems that the state is the most suitable candidate for being responsible for direct reciprocity. Such state responsibility does not rule out the possibility that society in general, the healthcare sector, or patients have a duty to reciprocate in some manner (probably by compliance with regulations), but rather highlights that the state, in addition to being a suitable reciprocator, is also the most effective way of reciprocating on behalf of others.

### **Whom and how to reciprocate**

Building on our discussion of the structure of reciprocity, we now see that several questions are salient when prioritizing healthcare workers. (1) Should one reciprocate for harm, benefits, or both? (2) What constitutes a fitting instance of reciprocity? These questions are intertwined in that fittingness plausibly depends on whether we are reciprocating for a benefit or a harm. How we answer these questions influences two further practical questions regarding priority-setting (3) Are healthcare workers special? (4) Does reciprocity require harm-mitigation, or are other forms of reciprocity fitting? Lastly, there is also the issue of proportionality: (5) If we are to reciprocate healthcare workers, should this reciprocation be proportional to their sacrifice or to the benefits they provide?

Let us first consider the issue from the perspective of benefits. Healthcare workers confer an enormous benefit during a pandemic. It seems plausible to argue that the benefits received from healthcare workers during a pandemic are special in some way, in the sense that they confer a benefit that is more important than the benefits provided by other workers that take on similar risks. If this argument is sound, it might make sense to single out healthcare workers for reciprocity. Prioritizing healthcare workers can then be argued to be proportional reciprocity for the benefits we receive as a society. However, there are two problems with this argument. First and foremost, it is not clear that the benefits provided by healthcare workers during a pandemic are qualitatively different from benefits provided during normal times. Compensating in similar ways as during non-pandemic times thus seems appropriate, most likely by providing an economic incentive. Second, reciprocity for benefits is typically not required to be very similar to the benefits received. Thus, while focusing on benefits makes singling out healthcare workers somewhat plausible, it also makes it plausible that reciprocating by other means than a priority for a vaccine is fitting.

What then of reciprocating for harm? Healthcare workers take on a substantial risk while working. Following our discussion of fittingness when reciprocating for harms, and risk in particular, it might seem plausible to require reciprocation that may causally reduce the risk in question whenever possible. Thus, the argument for reciprocating with vaccines is potentially stronger if we focus on the risk of harm. However, the difficulty then becomes that other workers take on similar risks during pandemic times. Non-healthcare workers in hospitals, such as janitors and cleaning staff, as well as bus drivers, cashiers, teachers,

and many workers in service industries, face a similar risk. The argument from harm thus makes it more plausible to prioritize certain workers for vaccines but does not single out healthcare workers in a meaningful way. This argument can thus perhaps rather be seen as singling out all at-risk essential workers.

One could argue that we should consider *both* harms and benefits and that healthcare workers are special because they provide an essential benefit during a pandemic – different from benefits provided by other essential workers – and at considerable personal risk. Combining concerns for both harms and benefits could constitute an argument for singling out healthcare workers who provide pandemic-essential benefits while taking on a substantial risk of infection. Framing the argument this way seems to strengthen the argument but limits the scope. Many healthcare workers would not be in a position to argue for reciprocity in this manner. Additionally, this argument relies on the contribution of healthcare workers being more essential than the contribution of other essential workers. This pattern is not in any way obvious. Even being very restrictive, bus drivers are needed to transport healthcare workers, daycare workers are needed to take care of the children of healthcare workers, and so forth. The argument probably limits the scope of relevant reciprocity to all workers necessary to maintain a functional healthcare system while taking on considerable risk. This essential group is likely to be large. A different argument that might lead to the same conclusion is based on the duty of hypothetical patients to reciprocate. Consider person *A*, who lives in a society where COVID-19 is widespread. If person *A* needs treatment due to COVID-19, several people cannot help without interacting with *A*, and, thus, *A* is going to bring professional helpers in close contact with the virus. This necessity of physical contact obviously includes healthcare workers and staff who transport patients to the hospital. One could make the case that person *A*, anticipating being in the position of exposing these people to risk, should be willing to step back in line to allow these people to move forward.<sup>42</sup> One could make the case that this would be a case of the (hypothetical) patient reciprocating essential workers in the healthcare sector for their supplied benefits, and this would be a case of (hypothetical) patients being the reciprocating partner. Still, managing this in any other matter than via the state seems hopelessly tricky. The state could then shift its allocation of vaccine doses to reflect the duty of its individual citizens. The main problem with this argument is that it seems to conflict heavily with utility-maximizing and concern for the worse off. By the logic of the argument, patients who are likely to need treatment have a stronger duty to step back in line than less vulnerable patients. Shifting vaccines from vulnerable patients to healthcare workers rather than from less vulnerable patients departs from the goal of minimizing the damages of the pandemic and, inversely, maximizing the benefits of the vaccine. The fact that it is vulnerable patients who are singled out by this argument clearly illustrates how concerns for reciprocity might, in addition to conflicting with maximizing utility, conflict with concerns for the worse off or with equity concerns.<sup>43</sup> Allocating vaccines away from vulnerable patients involves de-emphasizing the concerns of those who are likely to become severely ill, thus prioritizing the worse off to a lesser extent.

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<sup>42</sup> We would like to thank Mathias Barra for suggesting this argument.

<sup>43</sup> We would like to thank an anonymous reviewer for pointing out that reciprocity here also conflicts with concerns for the worse off.

Healthcare workers might be in a stronger bargaining position than other essential workers, and they are thus in a stronger position to dictate terms in the cooperative relationship. The question is whether this is an ethical argument in the relevant sense. However, a bargaining position argument might be made more palatable by focusing on restoring reciprocal relationships. Recall that Becker claims that reciprocity for harm should aim at restoring reciprocal relationships.<sup>44</sup> Given this aim, the status of this question of reciprocity depends on the attitudes and bargaining position of healthcare workers. Further, whether fittingness demands reciprocity of vaccines will depend on whether the public can be said to harm the reciprocal relationship. Recall that reciprocation for harms is different from reciprocation for benefits. If the public does not comply with infection-control regulations or recommendations, thus increasing the risk to healthcare workers, perhaps the relationship is strained to a level that demands reciprocation aimed at the harm inflicted. In other words, perhaps there is a threshold above which harms need to be mitigated if possible and not just reciprocated by other means. Some form of argument like this, if it is acknowledged as a relevant moral argument, could support reciprocating in any manner that is required to secure the cooperation of healthcare workers. We believe that this is not considered a moral argument by most. Thus, it seems more plausible to restrict the notion of reciprocity to the proportional and fitting reciprocation for benefits and harms. Let us consider a further argument along the same lines. Recapping, if we conceptualize reciprocity retrospectively, arguments from a bargaining position are clearly not arguments from reciprocity. An alternative is to argue that bargaining becomes relevant when reciprocal relations are non-existent or have broken down.<sup>45</sup> Consider, for instance, the case where the general population is not complying with infection-control regulations and recommendations, thereby increasing the strain on the healthcare system and putting healthcare workers at risk. One could argue that this is a case where the public neglects its responsibility in a reciprocal relationship with healthcare workers. In this new situation, where the reciprocal relationship has broken down, what is to stop the healthcare workers from leveraging their bargaining position? Considered like this, an argument from a bargaining position is relevant when reciprocal relationships break down or are otherwise non-existent.

Regarding proportionality, the relationship between the state and healthcare workers is likely to be asymmetrical, meaning that reciprocation proportional to sacrifice is less likely to magnify existing imbalances. Public debates on vaccine priority-setting seem to focus on how much healthcare workers are giving up or enduring in fighting the pandemic. If we decide to reciprocate, it thus seems most plausible to argue that reciprocation should be for sacrifice. When it comes to reciprocating with vaccines or other forms of compensation, proportionality does not seem to have much to say, except that prioritization for a vaccine, given that it at a point in time was a scarce resource, was a valuable form of compensation. Therefore, a sacrifice would have to be proportional to the value of this scarce resource for vaccine prioritization to be a suitable form of reciprocity.

To sum up, the argument for reciprocating with vaccines seems most plausible when viewing it as reciprocation for harms rather than benefits. However, singling out healthcare workers seems more straightforward when viewing reciprocity as following from benefit. Therefore, it is not a simple task to construct an argument from reciprocity

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<sup>44</sup> Becker. Reciprocity.

<sup>45</sup> We would like to thank Mathias Barra for suggesting this argument.

that both singles out healthcare workers and requires reciprocity in the form of vaccines without drawing on the notion of bargaining position. Given that bargaining position is not plausibly a moral factor, constructing an argument from reciprocity that singles out healthcare workers for a vaccine seems difficult. Alternatively, one could argue that bargaining position becomes relevant when reciprocal relations break down. Lastly, one could argue that hypothetical patients have a duty to step back in line to reciprocate healthcare workers for putting them in harm's way. This argument suffers from singling out vulnerable people as reciprocating partners, thus conflicting radically with utility-maximizing efforts, concerns for the worse off, and equity concerns.

### **Conclusion**

If the goal is to argue for the prioritization of COVID-19 vaccines based on reciprocity, the most persuasive argument is that harms (or risks of harm) should be reciprocated. However, as we have seen, the risk of SARS-CoV-2 infection and the harms thereof are not limited to healthcare workers. Other workers in non-healthcare lines of industry would have the same claim to reciprocity based on harm. Furthermore, even if we argue from a combined harm and benefit perspective, the scope of the argument should reasonably include all who take on a substantial risk while helping to maintain a functioning healthcare system (or even a functioning society at large). It is not clear that this entails either limiting the scope to healthcare workers or prioritizing all workers who supply the healthcare system. A possibility is to argue that the bargaining position of healthcare workers is relatively stronger, but this is likely to strike many as a non-moral argument. If we decide that people supplying an essential service at considerable risk are entitled to reciprocity, it is not a given that this should be in the form of a vaccine. If reciprocity is to play a significant role in the priority setting of pandemic vaccines, this will arguably be at the expense of total utility, the worse off, or concerns for equity. Given that the arguments from reciprocity seem to be anything but straightforward, it is not clear that this sacrifice is reasonable.

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BJ and CTS made a disposition together. BJ then wrote the first draft of the article, which CTS then revised. BJ and CTS made several revisions. BJ had the main responsibility for the article as the first author, while CTS made revisions and overall comments as the last author. Both authors approved the final manuscript.

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CTS was a member of the secretariat for the expert panel that made the first overall ranking of priority groups for COVID-19 vaccines in Norway. BJ declares no competing interests.

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## Ethical Obligations of Global Justice in the Midst of Global Pandemics – A case for radical redistribution and extensive reforms of global health care order

Sarah Frances Hicks & Paula Gürtler

*This paper considers the ethical obligation high income countries (HIC) have to lower and middle income countries (LMIC) during a global pandemic. The COVID-19 pandemic revealed the shortcomings of distributing scarce medical resources according to economic bargaining power and of responding to the global health crisis with national isolation. This paper will present a pragmatic argument against vaccine nationalism and arguments for a more cosmopolitan approach. We argue that vaccines and medical equipment should have been distributed according to Brock's needs-based minimum floor principles, thus defending positions of vaccine Sufficiency. HIC ought to adopt such a strategy based on, 1. the duty to rectify past injustices from colonisation, and 2. a negative duty not to uphold unjust institutions and to contribute to radical inequalities. Finally, three practical steps to improve the vaccine rollout are advocated for: HIC should redistribute the excess vaccine doses to LMIC rather than letting doses go to waste; necessary infrastructure to mobilise medical supplies and healthcare staff to administer vaccine doses; and patents should be suspended to prioritise saving lives.*

### Introduction

The COVID-19 pandemic presented the world with an opportunity to rebalance the disparity in global healthcare equity. Over the course of two years the death toll exceeded 6.5 million and hospitals were forced to triage limited medical resources.<sup>1</sup> The priority became vaccinating enough of the world's population in order to reach herd immunity, which is expected to be between 60-70%. With only 23.7% of low income countries vaccinated and over 80% in many high income countries (HIC), the glaring inequality points to poor priority setting from the beginning of the pandemic. In May 2022, the COVAX initiative and its partner organisations—including WHO—called for countries to set ambitious goals in order to close the gap in vaccine

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<sup>1</sup> WHO. *Coronavirus (COVID-19) Dashboard*. (October 2022). Online at [covid19.who.int/](https://covid19.who.int/).

distribution.<sup>2</sup> As of October 27, the US—the largest donor to COVAX—had donated more than 640 million doses to over 120 countries around the world.<sup>3</sup> In total, the COVAX initiative delivered over 1.4 billion doses worldwide. While many HIC have contributed to efforts to ensure vaccine equity, those efforts were undertaken only after international organisations such as WHO and World Bank proposed those obligations. But have the HIC fulfilled their moral obligations towards LMIC with these donations?

After the Coronavirus pandemic began in late 2019, the global community was forced to make decisions about distribution of health care supplies and the resulting disparities primarily fell along income lines. Lower and Middle Income Countries (LMIC) suffered the brunt of resource shortages, which resulted in a prolonged recovery. This shortfall is due, in part, to poor pandemic preparedness and missteps in national strategy decisions across various countries. But the proceeding global health crisis also revealed already latently existing issues of distributive justice and brought to light historic, yet persistent unjust global distribution. In the beginning of 2020, as countries faced shortages of COVID-19 testing kits, mechanical ventilators, and personal protective equipment (PPE) like face masks, supplies went to the highest bidders, which tended to be HIC. When India struggled to contain COVID-19 cases during the outbreak in April of 2021, they had to turn away patients as their hospitals became overwhelmed.<sup>4</sup> Leading many to wonder if better foresight and planning could have reduced the toll the pandemic took on these countries. Or if HIC had an obligation to share some of the scarce resources they had claimed in financial bargaining.

In this paper, we will look at various countries' strategies to address the pandemic, and analyse where they failed. We recognize that the overwhelming strategy in the pandemic response was a nationalist approach and argue that even from a merely practical standpoint this was destined to fail, because of the interconnectedness of our world. Nonetheless, arguments from liberal nationalism are reviewed. But when they are contrasted with basic premises of luck egalitarianism, the arguments for vaccine nationalism quickly lose their force. We further consider a more ethical approach to pandemic response. The proposed ethical approach to pandemic response centres around global obligation, which requires that HIC take the welfare of LMIC into account from the onset. Siding with a cosmopolitan position that endorses a needs-based minimum floor principle, we argue for vaccine Sufficientarianism.<sup>5</sup> We will argue that governments of HIC have an obligation to reform global institutions in such a way that wealth disparities will not determine whether a person has access to life-saving medical care in a global pandemic or not. This obligation is rooted, on the one hand, in the duty to rectify the harms colonial powers have inflicted on former colonies. On the other hand, the obligation arises from a negative duty to not uphold a global institutional order that is unnecessarily unjust because it can be reformed by adopting a model of vaccine

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<sup>2</sup> CEPI. *COVAX calls for urgent action to close vaccine equity gap*. (May 2022). Online at [cepi.net](https://cepi.net).

<sup>3</sup> U.S. Embassy & Consulates in Indonesia. *With Over 40 Million Doses Delivered, United States Supports Indonesia's COVID-19 Vaccination Drive*. (October 2020) Online at [id.usembassy.gov](https://id.usembassy.gov).

<sup>4</sup> Miglani, Sanjeev & Kumar, Manoj. *Indian hospitals turn away patients in COVID-19 'tsunami'*. (April 2021). Online at [reuters.com](https://reuters.com)

<sup>5</sup> Göran Collste, "‘Where You Live Should Not Determine Whether You Live’. Global Justice and the Distribution of COVID-19 Vaccines," *Ethics & Global Politics* 15, no. 2 (April 3, 2022): 43–54, <https://doi.org/10.1080/16544951.2022.2075137>.

Sufficientarianism, for example. The COVID-19 pandemic caught many countries unprepared and required a rapid response by its governments. As a result, millions of people died and countless millions more suffered. Hindsight allows for a critical evaluation of more effective strategies to address global health crises.

### **Pandemic Response**

Before we are able to consider how to best address health care disparities, we must determine the missteps taken along the way during the COVID pandemic that led to unequal distribution in the first place. Pandemic planning can be broken down into three stages: first, pre-pandemic preparedness for public health crises; this can be understood as private national funds and medical supply reserves or as global preparedness planning as established by international organisations such as WHO; the second stage encompasses the mid-pandemic strategies countries adopted to respond to a pandemic (ranging from lockdowns to mask mandates and finally vaccination campaigns); and the third stage is post-pandemic, the efforts to recover and to rebuild medical reserves to prepare for the next public health crisis. At all stages, we can see points where global cooperation succeeded and failed. Our paper will focus on the second step: responses to the pandemic.

Throughout the pandemic, a country's ability to manage outbreaks and suppress the death toll in many cases was proportional to the pandemic response strategy it implemented. In the case of the COVID pandemic, countries' response strategies can be categorised into three main groupings: first, the "Zero-COVID" policy to enforce extreme measures with the goal of ensuring not a single citizen died of COVID, which was adopted by countries such as China, Australia, and New Zealand with varying degrees of success; second, a "flatten the curve" strategy of periodic lockdowns and restrictions to spread out infections, but still allow for minimum constraints, this strategy was adopted by much of the US and Germany; and third, the "exposure" strategy to allow everyone to be exposed to gain immunity quickly with little or no restrictions from the government, such as we saw in Brazil.

What all these strategies have in common is that they prioritise national interests, though to varying degrees. Countries varied in regards to prioritising the physical health of their citizens, like in the zero-COVID strategies, or the economic and social productivity of the nation like in Brazil. Others tried to strike a balance between these interests by flattening the curve. But there was not one country that prioritised global obligations. Efforts were made by organisations like WHO, UN, and World Bank on global prioritising, but countries were reluctant to follow suit. While there have been calls by several countries<sup>6</sup> to waive patent rights so that vaccine production could be ramped up to meet the global demand, the general mechanism for vaccine distribution and other essential healthcare equipment was left to the devices of the free market. In our paper we will engage with this phenomenon of nationalism and free market distribution critically. We will first provide a pragmatic argument for prioritising a global pandemic response strategy by analysing the impracticality of national zero-COVID strategies. The second step of our paper will be to engage with moral arguments to prioritise national interests despite the impracticality of it. Once these nationalist arguments

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<sup>6</sup> Crutzen, C.J. & Kucking, M. 'Mayer Brown'. *The Waiver of Patent Protection for COVID-19 Vaccines—On Practicability and Purpose of Such Measure*. (July 2021). Online at [mayerbrown.com](http://mayerbrown.com)

have been dismantled, we will present and argue for an ethical approach of cosmopolitan priorities and provide a motivation for them.

### **The Failure of Nationalism and Free Market Bargaining**

After the Coronavirus was first detected in China, it was only a matter of weeks before cases began to appear in the US and European countries.<sup>7</sup> Given the highly contagious nature of the virus, it quickly spread from one host to another through airborne transmission or direct contact. The rapid spread of the virus has powerfully illustrated how much all of our lives are intertwined. UN Secretary-General António Guterres clarified in May 2020 already: “In an interconnected world, none of us is safe until all of us are safe.”<sup>8</sup> Nonetheless, we saw countries attempt to disconnect. Strict lockdowns were set to eradicate the virus and strict travel restrictions imposed to prevent its return. Australia is an especially illustrative example of the short-termism of this strategy.

Through strict lockdowns and successful contact tracing, Australia had managed to keep a strict—and relatively successful—“zero-COVID” strategy. Australia’s “aggressive lockdowns quashed COVID-19 cases and allowed for the return to near-normal life from around December 2020 to May 2021.”<sup>9</sup> Yet, one unvaccinated airport limousine driver ended up responsible for an infection cluster of over 80 people.<sup>10</sup> It took only this single person, interacting with a few international airline crew members being infected, to start another COVID-19 outbreak on the zero-COVID-island. Since the Delta variant was first detected, Australia had to recognize that it is not sustainable to keep everybody in strict lockdowns for nearly a year, thus abandoning the zero-COVID strategy. Our lives are too interconnected today to fight a virus like COVID-19 on a national level. That is true for lockdowns, but also for our vaccine strategies: Scientific research has shown that low vaccination rates can be a favourable environment for the emergence of new variants, and even that slow rates of vaccination increase the probability of the emergence of a virus strain that is resistant to the current vaccines.<sup>11</sup> Despite the knowledge that the COVID-19 pandemic will not be truly over until it has been brought to tolerable levels of infection and severity of pathogenesis *everywhere* through high vaccination rates, we see a tragic lack of international cooperation when it comes to actually distributing scarce resources. The COVID-19 pandemic demands more globally coordinated efforts than we have previously undertaken.<sup>12</sup>

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<sup>7</sup> Centers for Disease Control and Prevention. Basics of COVID-19. (November 2021) Online at [cdc.gov](https://www.cdc.gov)

<sup>8</sup> UN news. None of us is safe until we all are, says UN chief at EU push to end COVID-19 pandemic. (May 2020). Online at [news.un.org](https://news.un.org)

<sup>9</sup> Cliff, Edward & Fernandes, Brian. ‘COVID Zero Is No Longer Working for Australia’. *The New York Times*. Opinion (September 2021). Online at [nytimes.com](https://www.nytimes.com)

<sup>10</sup> abc news. Limousine driver at the centre of Bondi cluster won't be charged, Police Commissioner says. (June 2021). Online at [abc.net](https://www.abc.net.au)

<sup>11</sup> Simon A. Rella et al., “Rates of SARS-CoV-2 Transmission and Vaccination Impact the Fate of Vaccine-Resistant Strains,” *Scientific Reports* 11, no. 1 (July 30, 2021): 15729, <https://doi.org/10.1038/s41598-021-95025-3>.

<sup>12</sup> Slavoj Žižek, *Pandemic!: COVID-19 Shakes the World* (OR Books, 2020), <https://doi.org/10.2307/j.ctv16t6n4q>. p. 68

When it came to scarce resources, nationalist priority setting was the common response and the affluent nations were happy to use their financial bargaining power to their own advantage. For example, in March 2020, the WHO recognized a global shortage of surgical face masks.<sup>13</sup> At the same time, it had become obvious that there were also not enough ventilators available globally to meet the demand.<sup>14</sup> While production ramped up, the market was still under a lot of pressure, and prices increased exponentially.<sup>15</sup> Financial powers decided who got the scarce medical equipment. We could see the same pattern in vaccine distribution. This obvious injustice gave rise to the initiative 'COVAX' for "global equitable access to COVID-19 vaccines."<sup>16</sup> COVAX and its partner organisations set a goal of providing vaccine doses to at least 20% of countries' populations. The third wave of the pandemic in European countries proves, though, that not even vaccination rates of 60% to 70% are sufficient to stop the spread of COVID-19.<sup>17</sup> The 20% goal will not curb the spreading of COVID. It is merely a performance—not a sustained act of political solidarity.

With this we have shown that the response of nations to the COVID-19 pandemic had been up to national means, not global cooperation to facilitate fair distribution of needed healthcare equipment. On the one hand, there might be a pragmatic and scientific argument against such vaccine nationalism—"none of us are safe until all of us are safe"—but on the other hand, there are good ethical reasons for such vaccine nationalism. We will present this position and critically engage with the arguments liberal nationalists make for prioritising obligations towards citizens over cosmopolitan obligations.

### Arguments for Prioritising National Interests

The unique moral obligations between state and citizens has been provided, among others, by David Miller in multiple works.<sup>18</sup> He argues that the state has a set of obligations towards those subjects under its jurisdiction that are "quasi-contractual."<sup>19</sup> Citizens are granted social rights of citizenship, but expected to assume corresponding obligations.<sup>20</sup> Such social rights of citizenship include, for example, a right to equal opportunities in education or employment, which the state has to ensure to make true on the democratic ideal of treating each citizen as equal. However, this right to equal opportunity is tied to contributing to the public good according to one's opportunities because the relationship of the state with individuals is

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<sup>13</sup> WHO. *Shortage of personal protective equipment endangering health workers worldwide*. (March 2020). Online at who.int.

<sup>14</sup> Sarah Kliff, Adam Satariano, Jessica Silver-Greenberg & Nicholas Kulish. *There Aren't Enough Ventilators to Cope With the Coronavirus* (March 2020). Online at nytimes.com.

<sup>15</sup> Adrian O'Dowd, "COVID-19: Government Was Too Slow to Respond to Ventilator Shortages, Say MPs," *BMJ*, November 25, 2020, m4594, <https://doi.org/10.1136/bmj.m4594>. P.1

<sup>16</sup> WHO. *COVAX—Working for global equitable access to COVID-19 vaccines*. Online at who.int.

<sup>17</sup> Sara Berg. *AMA. What doctors wish patients knew about COVID-19 herd immunity*. (August 2021). Online at ama-assn.org/.

<sup>18</sup> David Miller, "Immigrants, Nations, and Citizenship\*," *Journal of Political Philosophy* 16, no. 4 (December 2008): 371–90, <https://doi.org/10.1111/j.1467-9760.2007.00295.x>; David Miller, "Justice in Immigration," *European Journal of Political Theory* 14, no. 4 (October 2015): 391–408, <https://doi.org/10.1177/1474885115584833>.

<sup>19</sup> Miller, "Justice in Immigration." p. 393

<sup>20</sup> Miller, "Immigrants, Nations, and Citizenship\*." p. 375

founded on a rule of give and take.<sup>21</sup> Thus, the kind of pandemic assistance we discuss in this paper—HIC supporting LMIC with vaccine doses or healthcare equipment—cannot be claimed by individuals from a state that is not theirs. They have not contributed to these nations to earn such opportunities and rights in return. Against this position, though, we will hold that the vastly different ability of states to provide beneficial social contracts with good healthcare benefits, traces back to colonialism and current unjust global institutions. It is a matter of deeply entrenched injustice, and not one of a quid-pro-quo social contract.

Another argument supporting the claim that states have special obligations towards its constituents are often referred to as “liberal nationalism.”<sup>22</sup> Proponents of this theory argue that “It is only within nation-states that there is any realistic hope for implementing liberal-democratic principles.”<sup>23</sup> Such principles include social justice, deliberative democracy, and individual freedom.<sup>24</sup> To exemplify how this line of argumentation works, let us review the first principle: Usually, social justice is realised in modern nation states through welfare programs, which require individuals to make sacrifices for anonymous others. In a liberal democracy, welfare systems “survive only if the majority of citizens continue to vote for them.”<sup>25</sup> Kymlicka and Straehle argue that while history suggests we show more willingness to make such sacrifices for kin and co-religionists, we are also willing to make such sacrifices if there is a) a sense of common identity or b) a sense of reciprocity.<sup>26</sup> Liberal nationalists argue that these two criteria can only be met within a nation state. This line of argumentation ties in with Miller’s argument above: individuals in a nation state enter into a quasi-contractual agreement that builds on an idea of give and take. Collste<sup>27</sup> refers to this as “a modern Hobbesian notion of a legitimate state.” On this view the state needs citizens to consent to its actions, thus it needs to appeal to the citizen’s self-interest in order to gain legitimacy. This position is also supported by Miller: “on democratic grounds, it appears wrong for someone whose interests are chiefly impacted by the policies of a particular state to have no say in determining those policies.”<sup>28</sup>

While this is valid, it leaves one to wonder about all those people, who cannot claim anything ‘on democratic grounds’ before their government. Against the liberal nationalist argument, one can hold once again the unjust starting position of individuals in different nation states: Do people in LMIC or countries without democratic governments not have a right to survive the COVID-19 virus, then? We posit that they do.

Under normal circumstances, the arguments of liberal nationalists might claim certain moral validity. In this paper we do not analyse the behaviour nation states should show under “normal circumstances.” Our scope is more limited. We are interested in the behaviour of

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<sup>21</sup> Ibid.

<sup>22</sup> Will Kymlicka and Christine Straehle, “Cosmopolitanism, Nation-States, and Minority Nationalism: A Critical Review of Recent Literature,” *European Journal of Philosophy* 7, no. 1 (April 1999): 65–88, <https://doi.org/10.1111/1468-0378.00074>.

<sup>23</sup> Ibid. p. 66

<sup>24</sup> Ibid. p. 68

<sup>25</sup> Ibid. p. 69.

<sup>26</sup> Ibid.

<sup>27</sup> Collste, “‘Where You Live Should Not Determine Whether You Live’. Global Justice and the Distribution of COVID-19 Vaccines.” p. 49

<sup>28</sup> Miller, “Immigrants, Nations, and Citizenship\*.” p. 377

states during a global pandemic, where a virus as contagious as the COVID virus challenges nationalist approaches. Because even if one agrees that states have a special obligation towards its citizens, the global interconnectedness makes it necessary to keep citizens of other nations safe as well. The example of Australia illustrated this rather well: They might have lived up to their obligation to keep their citizens safe through strict lockdowns, but it was not possible to sustain this state, because COVID-19 had not been stopped everywhere. If Australia and the other HIC had contributed more towards global vaccine equity, easing the zero-COVID-strategy could have been more successful. Vaccines had already been available at this point.<sup>29</sup> With this, the point has been reached of shifting the focus to the ethical approach that we propose in this paper. The next section will sketch the approach we foresee, before we will provide the ethical arguments to truly motivate the necessary action of HIC.

### The Ethical Approach to Pandemic Response

One of the main faults moral philosophers have found with nationalism is that the morally arbitrary fact of where you were born determines the quality of life—or for the case of a pandemic it might even determine whether you live. This notion evokes moral dissonance. It is a question of mere luck that one person is born in Sweden, and another person in Malawi. A person's moral worth is not determined by their place of birth. This principle is encompassed in the theory of luck egalitarianism.<sup>30</sup> Another moral principle can be the basis for the position that vaccine nationalism is not defensible: that of human dignity.<sup>31</sup> Collste has argued in his recent paper "Where you live should not determine whether you live..." that these principles of luck egalitarianism and human dignity are more fundamental than those of vaccine nationalism, therefore he argues for *global vaccine Sufficiencyarianism*. This "implies that when the global population has achieved a certain level, a threshold, of vaccine distribution, political leaders in high-income countries could prioritise their own population."<sup>32</sup> This position combines the view that nations have a global obligation to ensure the protection of human dignity—when not necessarily being obligated to balance out all implications of luck egalitarianism. Where a person is born may affect the outcome of their life, but it should not become an indication of their moral worth.

The position of global vaccine Sufficiencyarianism of Collste converges with Gillian Brock's needs-based minimum floor principles.<sup>33</sup> Based on a Rawlsian thought experiment, Brock argues that people would endorse a "needs-based minimum floor principle for matters of distributive justice."<sup>34</sup> In her construction of the original position, delegates join a conference. While they have relevant information on how the world functions, they know nothing about which nation they belong to or how likely it is that they belong to one and not

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<sup>29</sup> European Medicines Agency (EMA) has conditionally permitted the first COVID-19 vaccine, Comirnaty, developed by BioNTech and Pfizer, in December 2020. (EMA. *EMA recommends first COVID-19 vaccine for authorisation in the EU*. News (December 2020). Online at [ema.europa.eu](http://ema.europa.eu).)

<sup>30</sup> Collste, "Where You Live Should Not Determine Whether You Live". *Global Justice and the Distribution of COVID-19 Vaccines*.

<sup>31</sup> Ibid.

<sup>32</sup> Ibid. p. 51

<sup>33</sup> Gillian Brock, *Global Justice: A Cosmopolitan Account* (Oxford ; New York: Oxford University Press, 2009).

<sup>34</sup> Ibid. p. 47

the other. Brock argues: "I submit we would centre the terms of agreement around two primary guidelines of roughly equal importance—namely, that everyone should enjoy some equal basic liberties and that everyone should be protected from certain real (or highly probable) risks of serious harm."<sup>35</sup> Since we live in a world where people live below this minimum floor, the main challenge to this position becomes determining how to prioritise people below the minimum floor.

Since we are interested here in the threat of infectious disease on a pandemic scale, let us consider more closely what such protection from real risks of serious harms would entail. Brock argues that: "being unable to meet our basic needs must be one of the greatest harms that we can face."<sup>36</sup> Therefore she emphasises that all delegates in her thought experiment would be "vigilant" to build a global order, in which all meeting basic needs are within every country's reach. In the instance of healthcare, to meet this minimum floor requirement, countries would need an adequate supply of basic medical equipment, trained medical professionals, and enough doses to vaccinate their population. Following Brock's argument, this would mean that HIC have an obligation to provide this level of minimum protection as a question of basic justice. In terms of distribution of face masks, ventilators and vaccines during the COVID-19 pandemic, these should have been distributed according to need, not according to financial means.

While HIC faced shortages at times creating legitimate needs, HIC were also in a position to order prolonged lock-downs by issuing work-from-home initiatives for many workers to prevent a total cessation of economic productivity and soften the blow to the economy. At this point if a person in a HIC is unvaccinated it is often for one of these reasons: 1. They are unable to receive the vaccine due to an allergy or other health issue; 2. They are hesitant and want to ensure there aren't reports of adverse reactions, but plan to be vaccinated eventually; or 3. They refuse the vaccine out of belief in the many conspiracy theories circulating around vaccination. The continuous efforts of the WHO to overcome obstacles in reaching higher vaccination rates in African countries and the Americas illustrate that some groups remain difficult to reach.<sup>37</sup> It also suggests low vaccination rates in many LMIC are still owing to the fact that many people have not yet been offered a chance to get vaccinated.

Thus, we argue that an ethical approach to global pandemic response requires HIC to contribute to international pandemic preparedness storehouses of medical supplies, such as the ones set up by the World Bank and WHO. This ensures the basic obligations of the needs-based minimum floor principle. In addition, HIC are free to have pandemic preparedness funds on a national level, as they already had, or were able to make available in the course of their response to COVID-19, as long as they have discharged their global obligations. During the course of a pandemic, an ethical approach to distribution of scarce medical resources entails transparency in the distribution process. This was one main problem during the initial bidding process for the vaccine. Pharmaceutical companies, at the time bids were placed for the first batch of vaccines, were not transparent with countries regarding how many doses would be available, how many doses countries purchased, and how many doses were going to waste.

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<sup>35</sup> Ibid. p. 50

<sup>36</sup> Ibid. p. 51

<sup>37</sup> WHO. *Donors making a difference: Knocking down obstacles to COVID-19 vaccination*. (March 2022). Online at [who.int](http://who.int)

Due to this lack of transparency, the large majority of doses went to HIC. The justification for this, in part, was that these countries—US, the UK, China—were responsible for developing the vaccines, therefore, there was a sense that they were entitled to receive the largest portion of the doses. This view is supported by the ethicists Muralidharan et. al, who credit this level of entitlement to the investments the countries' government put into the development of the vaccines.<sup>38</sup> They claim the funder countries have a special claim to an extent over the resulting product, when two nations have a similar standing “based on need, equity, and other considerations.”<sup>39</sup> While other countries may have an entitlement to purchasing a portion of the dose, the funder country is entitled to determining the allotment and prioritising their own national needs. Based on the constraint they introduce for consideration of needs and equity among others, we will show that arguments like these overlook greater structural injustices in the global order. It is these greater structural injustices, as they stem from the shared colonial past and institutional structures in the present, that provide the main arguments for motivating redistribution and reform.

### Arguments for Prioritising Global Redistribution

We will provide two arguments that establish that higher income countries *ought to* adopt the ethical approach outlined above. The first one relies on Collste's argument on rectificatory justice.<sup>40</sup> His approach builds on the *historical* roots of current inequalities stemming from colonialism. Collste argues that former colonisers have a moral duty to rectify their past wrongs, as far as they left morally relevant traces in the present. The second line of argumentation builds on Thomas W. Pogge's analysis of the global institutions.<sup>41</sup> Thus he looks at current inequalities reiterated by *present* institutions and shows that by upholding these institutions, HIC continually make themselves guilty of trapping other countries in poverty. We argue in accordance with Pogge and Collste that affluent governments are actively involved in a global injustice, when they deny initiatives to redistribute health care resources for a more equitable distribution across the globe. It is imperative to recognize the affluent nations' role in bringing about states of unpreparedness in crisis response in LMIC and, subsequently, for the HIC to take responsibility. We must take the pandemic as a warning sign to radically rethink our global order. Both Collste and Pogge's theories are grounds for drastic change.

#### 1) Collste

Building on Aristotle and Locke, Collste starts from the basic provision that “Someone who is injured has a right to seek reparation from the injurer.”<sup>42</sup> Collste argues that the present

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<sup>38</sup> Anantharaman Muralidharan et al., “Funder Priority for Vaccines: Implications of a Weak Lockean Claim,” *Bioethics* 36, no. 9 (November 2022): 978–88, <https://doi.org/10.1111/bioe.13075>.

<sup>39</sup> Ibid. p.1

<sup>40</sup> Göran Collste, “... Restoring the Dignity of the Victims'. Is Global Rectificatory Justice Feasible?,” *Ethics & Global Politics* 3, no. 2 (January 2010): 85–99, <https://doi.org/10.3402/egp.v3i2.1996>.

<sup>41</sup> Thomas W. Pogge, “Eradicating Systemic Poverty: Brief for a Global Resources Dividend,” *Journal of Human Development* 2, no. 1 (January 2001): 59–77, <https://doi.org/10.1080/14649880120050246>.

<sup>42</sup> Collste, “... Restoring the Dignity of the Victims'. Is Global Rectificatory Justice Feasible?” p. 86

concentration of property and wealth in the rich part of the world is at least partly the result of unjust historical acquisitions that “beg for rectifying actions.”<sup>43</sup> He shows that colonialism was overall harmful for the colonised, and thus, there is a need for some form of reparation. A proponent of ethical presentism would hold against this claim, that only living individuals should be considered in questions of justice. And people who actively participated in colonialism, or who suffered the immediate wounds inflicted by colonising powers, are no longer among us. Against this ethical presentism Collste holds: “What makes the historical injustices of colonialism relevant for the present discussion on justice is precisely the fact that, ‘it has left morally relevant traces in the present’: prosperity in the former colonial powers and poverty in the former colonies.”<sup>44</sup>

Rectificatory justice is necessary when one country or party’s actions in the past have morally relevant consequences in the present. However, this does not solve the problem of identifying the relevant parties. Collste argues that the recipients should be descendants of the victims of colonialism, while nation states that were benefitting from the colonial structure should pay the reparations: former colonial powers have primary duties, while those countries in Europe and North America that did not have their own colonies, but nonetheless benefited economically from colonialism have secondary duties, because they were also “part of the colonial structure.”<sup>45</sup> The insistence that there is a moral duty to rectify injustices inflicted on others during colonialism based on the morally relevant traces in the present, also suggests that the means of rectification also depend on the kind of morally present traces: these can be economic–cyclical poverty–cultural, or political.<sup>46</sup>

For the case of the COVID pandemic, the lack of infrastructure in many LMIC has been a major obstacle to providing vaccine equity. The COVID-19 vaccines, for example, require constant cooling. This is a challenge, in places where electricity is not reliable, and when roads are in such a bad state that the last mile of the supply chain loses valuable time. Research shows that, “Supply chain inefficiencies can lead to immediate life-threatening consequences and continue to negatively impact life expectancy.”<sup>47</sup> This is especially true during a pandemic. In most places, colonial powers did not have intentions to build sustainable infrastructure, but to extract resources, which leads to poorer infrastructure in former colonies to this day.<sup>48</sup> Considering the role former colonial powers have played in establishing inadequate institutions and infrastructure, we could argue based on Collste, that those states that had benefited from the colonial structure, have a duty to rectify these past wrongs by providing infrastructure improvements to LMIC, to remove a major obstacle to vaccine delivery.

This outlines one motivation for HIC to contribute to the ethical approach to global pandemic response, that includes a needs-based minimum floor principle. Based on Pogge’s

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<sup>43</sup> Ibid. p. 92

<sup>44</sup> Ibid. p. 89

<sup>45</sup> Ibid. p. 95

<sup>46</sup> Ibid. p. 90

<sup>47</sup> Sonak D. Pastakia et al., “Building Reliable Supply Chains for Noncommunicable Disease Commodities: Lessons Learned from HIV and Evidence Needs,” *AIDS* 32, no. Supplement 1 (July 1, 2018): S55–61, <https://doi.org/10.1097/QAD.0000000000001878>. p. S57

<sup>48</sup> Daron Acemoglu, Simon Johnson, and James A Robinson, “The Colonial Origins of Comparative Development: An Empirical Investigation,” *American Economic Review* 91, no. 5 (December 1, 2001): 1369–1401, <https://doi.org/10.1257/aer.91.5.1369>. p. 1375

work, we will provide a second argument for HIC to contribute to a more ethical approach, that is potentially even further reaching.

## 2) Pogge

Pogge argues that global poverty can be conceived as a moral challenge to HIC in two ways: either we are failing a positive duty to help persons in acute distress, or we may be failing our negative duty “not to uphold injustice, not to contribute to or profit from the unjust impoverishment of the others.”<sup>49</sup> The current response and the voluntary contribution to global solidarity programs like COVAX shows that we take global solidarity mostly as a positive duty. Pogge suggests, too, that the positive formulation is easier to substantiate and its implications are less far reaching.<sup>50</sup> The positive duty to help can be discharged easily, while the negative duty not to uphold injustices requires institutional reform, and thus requires bigger sacrifices. For the more radical approach we advocate for in our paper, it is necessary that higher income countries understand that they have a more stringent negative duty to reform global institutions, just as Pogge argues. The negative duty emerges from a state in which one party contributes to the perpetuation of the misery of the other party. Pogge provides three different grounds which show that HIC contributes to the misery in such an active way, that it constitutes grounds for a negative duty. One of these grounds are “the effects of a common and violent history.”<sup>51</sup> We have reviewed this link above, relying on Collste’s argument. In connection to the COVID pandemic, most interesting is the first ground of injustice: the effects of shared institutions. Thus, this will be the focus here.<sup>52</sup>

According to Pogge,<sup>53</sup> if we want to show that the effects of shared institutions are grounds for injustice, because they violate the negative duty of HIC to not contribute to the impoverishment of others, these three conditions must be met: 1. There ought to be a shared institutional order in the first place, which the better-off shape and impose on the worse-off; 2. This institutional order is implicated in reproducing radical inequality, because there would be an alternative under which such radical inequalities would not persist; and 3. The radical inequality is caused by this shared institutional order. Pogge substantiates the claim that these three conditions apply to the current global order as follows:<sup>54</sup> 1. The sharing of global institutions between HIC and the “global poor” is difficult to deny, when one considers how dramatically consumption and investment choices, export and import patterns, and political and military decisions reached in HIC affect the lives of the global poor. Considering the concentration of economic and military power in the HIC, they control the rules of the institutions governing the global interactions. 2) Pogge shows that the second condition is met, by proposing the Global Resource Dividend (GRD) as an alternative system which would establish a global order that does not perpetuate the same radical inequality. 3) The cyclical

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<sup>49</sup> Pogge, “Eradicating Systemic Poverty.” p. 60

<sup>50</sup> Ibid. p. 60

<sup>51</sup> Ibid. 61

<sup>52</sup> For the purpose of completeness: the third ground that Pogge identifies on which affluent nations violate their negative duty is through “the uncompensated exclusion from the use of natural resources.” (Pogge. p. 61)

<sup>53</sup> Ibid. p. 61

<sup>54</sup> Ibid. pp. 61-61

nature of poverty suggests strongly that the conditions of such an “abysmal social starting position” determines your chances of building a better life rather than your abilities or ambition. Pogge thus concludes that affluent countries indeed neglect their negative duty not to uphold, contribute, or profit from the impoverishment of others, by using their power to maintain the same global institutions that benefit them.

This directly impacts the validity of the argument on funder priority, which Muralidharan et al.<sup>55</sup> have brought forth and which has been reviewed above. They argue that it is fair, if those countries who invested in the vaccine development take a certain-balanced with need and equity-principles- priority in vaccine distribution. However, they overlook that the ability of some countries to make such investments stems from an unjust global institutional order, which leaves many other countries entirely unable to do the same. But vaccine development and pandemic response is not only a matter of economic resources. It is also a matter of healthcare institutions. A broad body of literature draws attention to the problem of brain drain in the healthcare sector. Among them, for example, Sager<sup>56</sup> argues that primary attention in ethical accounts should not scrutinise individual decisions of skilled workers to migrate, but that it must be examined if these decisions are based on just structural conditions. He shows that, “capitalist expansion has structured migration networks so that developing countries and their migrants have mostly had to adapt to imposed conditions rather than to negotiate fair terms.”<sup>57</sup> And he is clear about the responsibility higher income countries have in this context:

In some cases, the exodus of skilled workers, particularly from small countries with relatively little educational infrastructure, exacerbates wider development problems. When this occurs, there is an obligation to structure global institutions so they do not predictably harm the worst off members of the human population by making it unlikely that the people best placed to help are most likely to leave. Since migration and development policies influence each other, the goal is to promote positive feedback loops.<sup>58</sup>

Thus the lack of skilled workers in the healthcare sector among many LMIC constitute an injustice, as they result from an unjust global order.

To return to Pogge’s argument that rich countries have a negative duty to reform this global institutional order hinges on the condition that, “the status quo can be reformed.”<sup>59</sup> Pogge proposes for this the Global Resources Dividend (GRD). In the more particular case of the COVID vaccines, we have sided with vaccine Sufficientarianism as a feasible alternative. Pogge’s argument for a negative duty to reform global institutions, and Collste’s argument for the responsibility to rectify the wrongs of colonialism, provide substantial grounds for higher income countries to recognize that they ought to follow a more ethical approach, like the one outlined in the previous section.

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<sup>55</sup> Muralidharan et al., “Funder Priority for Vaccines.”

<sup>56</sup> Alex Sager, “Reframing the Brain Drain,” *Critical Review of International Social and Political Philosophy* 17, no. 5 (September 3, 2014): 560–79, <https://doi.org/10.1080/13698230.2014.919061>.

<sup>57</sup> Ibid. p. 573

<sup>58</sup> Ibid. p. 573

<sup>59</sup> Pogge, “Eradicating Systemic Poverty.” p. 66

Let us move back from the theory to the particular case at hand: the appropriate response to the COVID-19 pandemic in light of these institutional injustices. In the last section we will use the example of vaccine distribution, to illustrate further, how the global mismanagement of the pandemic started much earlier than late 2019.

### **Current Vaccine Rollout: Three Areas for Reform**

A prime example of disparity in distribution has been the inequality in vaccine distribution. In applying Brock's minimum floor principle, which aligns with the vaccine Sufficientarianism proposed by Collste,<sup>60</sup> to the vaccine distribution would prioritise ensuring certain thresholds are met globally, and may look along the lines of the following example. Moving forward, the kind of radical reform of medical supply chains that our argument implies will require improvements in three areas: first, more equal distribution of existing vaccine doses and other necessary medical supplies; second, stable infrastructure to mobilise and healthcare staff to administer vaccine doses efficiently; and third, suspension of patent protections and sharing of vaccine formulas between pharmaceutical companies. All these suggested improvements require a lasting transformation of our global institutions.

The market for COVID-19 vaccination has disproportionately disadvantaged developing countries. Nearly two years after the first vaccine was given, the continent of Africa has managed to fully vaccinate only 22.7% of its population.<sup>61</sup> The African Union set a goal to vaccinate 60% of the continent's population by June 2022 in order to achieve herd immunity—a goal they failed to meet due to a lack of access to doses and a lack of medical professionals able to administer doses. Africa's disadvantage in vaccine distribution was not only a result of a lack of money to buy the doses, but a lack of bargaining power during the initial distribution due to national priority setting in global institutions. Given the fact that Moderna and Pfizer are both American companies, the US was able to ensure they secured more than enough doses for their citizens first.

As we have noted earlier, COVAX aims to provide only enough vaccine doses for 20% of countries' populations. We argue that this is an insufficient goal. The Sufficientarian would say the COVAX level should have been at least 60%. In addition, they would set more ambitious goals for distribution of vaccines that would include donating all surplus doses, waiting to vaccinate kids and lowering age limits for vaccinations only once elderly, immunocompromised, and essential workers world-wide are vaccinated. Vaccinating the nation's population is the most important step in recovery because it prevents spread and reduces the chance of death. Thus it is a crucial measure to respect one of the basic principles of human dignity and luck egalitarianism.<sup>62</sup>

The current distribution of the vaccine has been a result of free market Capitalism as each country bid for an allotment of the vaccine doses as they became available. Out of the 11 billion vaccine doses to be created by the end of 2021, over 9.9 billion were purchased by HIC-

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<sup>60</sup> Collste, "Where You Live Should Not Determine Whether You Live". *Global Justice and the Distribution of COVID-19 Vaccines*."

<sup>61</sup> AfricaCDC. 'Africa CDC COVID-19 Vaccine Dashboard'. *African Union CDC*. [africacdc.org](http://africacdc.org).

<sup>62</sup> Collste, "Where You Live Should Not Determine Whether You Live". *Global Justice and the Distribution of COVID-19 Vaccines*."

i.e. with the majority going to the U.S., Canada, the UK—and the remaining 1.1 billion were divided up among developing countries.<sup>63</sup> Without consideration of global justice and oversight in the allocation process, distribution inequity is bound to occur.

The main problem with distribution as it stands is the glaring inequality in which countries are able to recover from the pandemic. Countries able to attain herd immunity and reduce the numbers of reported cases are able to save lives and start repairing their economy. Many countries struggling to vaccinate their population will only be left further behind, exacerbating already existing inequalities. Vaccine distribution is an issue of global distributive justice, but also an issue of institutional reform and rectificatory justice. Pharmaceutical companies plan to create enough vaccine doses to vaccinate the world's population before the end of 2022. However, that vaccination goal is unlikely to be reached, not because of a lack of doses, but because of poor distribution planning and rollout. Every month the U.S. throws out millions of doses either because patients have missed their scheduled appointments to receive their vaccine or because vaccination sites over prepared and ordered more doses than they needed.<sup>64</sup> These wasted doses could have otherwise been administered in countries that have desperate needs.

Therefore, we argue that HIC should redistribute the excess vaccine doses to LMIC rather than letting doses go to waste. Redistribution would not only uphold every human's right to life and right not to suffer from a serious illness, but also be more efficient. Poor planning on health officials' part and a lack of transparency of excess supply has contributed to an inefficient distribution. While many doses have been donated, there has been a lack of transparency on the exact surplus of doses HIC possesses. With the global death toll of the COVID-19 pandemic topping over 6.5 million deaths, the world can't afford to waste doses.<sup>65</sup>

Second, we argue there is a need for improvement in the area of necessary infrastructure to mobilise medical supplies and healthcare staff to administer vaccine doses. Here, the WHO estimated in December 2021 "a US \$1.3 billion shortfall in operational costs, including cold-chain logistics and travel costs and payment for vaccinators and supervisors, as well as a looming shortage of syringes and other crucial commodities."<sup>66</sup> It is not enough to ensure countries receive a supply of doses. Careful planning and development of a strategy to bring the vaccine to the people is as important. One key lesson from the roll-out in Africa was that those countries which had a cohesive plan on how to mobilise and utilise the vaccine, fared much better.<sup>67</sup> Another benefit was that many African countries already have experience with mass vaccinations, therefore having some warehouse infrastructure in the rural areas already. Yet, it is not always possible to ensure trained professionals are available to administer doses and people in rural areas often lack access to distribution sites. Lack of medical staff is often the result of other injustice like limitations in higher education and brain drain, as our

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<sup>63</sup> World Bank Group. 'Absolutely Unacceptable' COVID-19 Vaccination Rates in Developing Countries | The Development Podcast. Podcast (August 2021). Online at [worldbank.org](http://worldbank.org)

<sup>64</sup> Ibid.

<sup>65</sup> Elflein, John. *Number of novel coronavirus (COVID-19) deaths worldwide as of December 16, 2021, by country*. (December, 2021). Online at [statista.com](http://statista.com).

<sup>66</sup> *ibid.*

<sup>67</sup> WHO. Key lessons from Africa's COVID-19 vaccine rollout. Press Release (December 2021). Online at [afro.who.int](http://afro.who.int).

brief discussion on Sager<sup>68</sup> illustrated. This shortfall in organizational execution is a testament to the argument we have made above and throughout this paper: In order to enable effective pandemic response all over the globe, we need to address the systemic injustices that keep LMIC in a state of poverty.

Lastly, it is important to reconsider the protections governments have in place for patents. In times of peace, patents are meant to protect a company's intellectual property and ensure a company is able to profit off of their inventions. However, in times of a pandemic when there are mass casualties, pharmaceutical companies ought to suspend their right to profit for the sake of saving lives. In the US in May 2021, the Biden administration expressed support for an initiative to waive intellectual property protection.<sup>69</sup> A measure to suspend intellectual property for the vaccine that was proposed by India and South Africa, but was eventually blocked by the European Union. The strongest argument in contention was that suspending the patents would prevent innovation in health crises. It is time to shift our understanding of the pharmaceutical industry away from a pursuit of exponential profits. A radical notion, we're sure. But the task of the pharmaceutical industry, first and foremost, should be to save lives by inventing life saving medicine—a task that only they can perform.

Perhaps it is naive to assume a massive corporation like the pharmaceutical industry will act benevolently on behalf of developing countries and put considerations of profits second. However, it is not unreasonable to expect countries to act out of self-interest. It is in HIC's best interest to reach an end to the pandemic and in order to do so, developing countries will need to be able to contain the virus. However, bringing the pandemic to an end is an insurmountable task without global collaboration.

## Conclusion

In concluding this paper, we have looked at how national priority setting and free market bargaining are insufficient in times of global health crises. We have considered how radical redistribution and institutional restructuring is necessary to respond to this pandemic ethically. And further, how investment in infrastructure will be required to better prepare LMIC for the next pandemic. We have shown that high income countries have an obligation to aid the developing world in achieving their goals. And how advancement of LMIC healthcare systems is in the global best interest. We argue that vaccines and medical equipment should have been distributed according to Brock's needs-based minimum floor principles, thus defending positions of vaccine Sufficiency. HIC ought to adopt such a strategy based on, 1. Their duty to rectify past injustices from colonisation, as Collste presents it, and 2. a negative duty not to uphold unjust institutions and to contribute to radical inequalities, as Pogge's work establishes. We advocate that for the future a drastic institutional reform of the global health system order is needed. Three practical steps in the vaccine rollout are outlined to start: HIC should redistribute the excess vaccine doses to LMIC rather than letting doses go to waste; necessary infrastructure to mobilise medical supplies and healthcare staff to

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<sup>68</sup> Sager, "Reframing the Brain Drain."

<sup>69</sup> Kaplan, Thomas, et al. "Taking 'Extraordinary Measures', Biden Backs Suspending Patents on Vaccines". *The New York Times*. (May 2021). Available at nytimes.com.

administer vaccine doses is necessary; and patents should be suspended to prioritise saving lives.

Throughout this paper we have shown the contributing factors that have inculcated wealth disparity and inequity of healthcare distribution. Further, we have shown this inequality has resulted in challenges for developing countries to survive a pandemic—an unacceptable violation of the basic principles of human dignity and luck egalitarian principles. High income countries have a moral duty to assist LMIC in the time of a pandemic in order to prevent mass casualties. At the forefront of decision making, we argue, should be the acknowledgement of the rectificatory obligations former colonial powers have and their negative duty not to uphold unjust institutions that contribute to the impoverishment of the global poor. Wealth disparity between countries and their origins must be taken into account when HIC are strategizing and building infrastructure.

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