COVID-19 Ventilator Crisis: Comparative Ethical Analysis of Jewish and Secular Approaches to Scarce Resource Allocation

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Dedicated to my Uncle, Rabbi Dr. Brian Galbut, Z''L,
whose 47 years of life continuously inspire me to live long days.

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I. Introduction

The novel coronavirus disease (COVID-19), an infectious disease which targets the respiratory system, originated in city of Wuhan, China in December 2019 and has now spread to more than 170 countries. Although most infected people recover from COVID-19 with mild symptoms and no special treatment, the World Health Organization[1] estimated that around one in six people develop a serious respiratory issue that may require them to be put on a ventilator, an invasive treatment that pumps oxygen into the patient's lungs while filtering out carbon dioxide. In the United States, individual states have issued varying degrees of stay-at-home orders and economic shutdowns, amidst the estimated 70,903 coronavirus-related deaths in the US that constitute more than a quarter of the 255,411 total global deaths.[2]

The severity and wide-spread impact of the coronavirus pandemic has overwhelmed the world's health care systems. Although the United States has the most coronavirus cases out of any other country, it has fewer hospital beds per 100,000 people (2.8) than both China (4.1) or Italy (3.2), the two other global hotbeds of the pandemic. This parallels the United

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[1] World Health Organization, "Q&A on COVID-19". March 9, 2020. https://www.who.int/docs/default-source/searo/bangladesh/2019-ncov/q-a-en.pdf
Note that this was published on March 9, 2020 and estimates may change depending with developing medical knowledge.

[2] As of May 05, 2020, according to the New York Times coronavirus database: https://www.nytimes.com/interactive/2020/world/coronavirus-maps.html

States' inadequately low number of practicing physicians per capita (2.6), compared to other developed countries that are similar in size and wealth, such as Italy (4.0) and Spain (3.9).[3] In addition to shortages of hospital beds and medical staff, personal protective equipment is so scarce that the Center for Disease Control (CDC) has published guidelines on how medical professionals should re-use scarce N-95 masks,[4] which are only made for single use.

In addition, hospitals all over the United States and the world are facing potential ventilator shortages because of the rapid spike in COVID-19 cases. Due to their increased susceptibility to infection,[5] there is also a concurrent shortage of medical personnel who are needed to monitor patients on ventilators, which only compounds the issue. Some estimates indicate that the number of patients that need ventilators could be up to thirty times the number available, although these approximations vary.[6] This has forced hospitals to turn to non-conventional options, such as repurposing sleep apnea machines or using nasal cannulas and older-technology ventilators, to treat patients with severe respiratory symptoms.[7]

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[3] Kaiser Family Foundation, Health System Tracker. "How prepared is the US to respond to COVID-19 relative to other countries?" Posted March 27, 2020. https://www.healthsystemtracker.org/chart-collection/how-prepared-is-the-us-to-respond-to-covid-19-relative-to-other-countries/#item-percent-of-total-population-covered-by-private-and-or-public-health-insurance-2018-or-nearest-year

[4] Atlanta: Centers for Disease Control and Prevention, "Strategies for optimizing the supply of N95 respirators". Updated April 2, 2020. https://www.cdc.gov/coronavirus/2019-ncov/hcp/respirators-strategy/index.html

[5] Emanuel E.J., Persad G., Upshur R., *et al*. Fair allocation of scarce medical resources in the time of Covid-19. *New England Journal of Medicine.* Published March 23, 2020 on NEJM.org.

[6] Truog RD, Mitchell C, Daley GQ. The toughest triage- Allocating ventilators in a pandemic. *New England Journal of Medicine*. Published on March 23, 2020 on NEJM.org.

[7] Bartosch, James. "UChicago Medicine doctors see "truly remarkable" success using ventilator alternatives to treat COVID-19". UChicago Medicine.org. Published April 22, 2020. https://www.uchicagomedicine.org/forefront/coronavirus-disease-covid-19/uchicago-medicine-doctors-see-truly-remarkable-success-using-ventilator-alternatives-to-treat-covid19

In response to a growing demand that far surpasses current supplies, physicians and hospitals are forced to make triage decisions and quickly decide how to ethically and consistently prioritize patients who need ventilators. It is clear that in this time of scarce resources, ventilator allocation protocols must be developed. Yet because there is no unified nation-wide policy, physicians and hospitals in the United States need to make their own triage guidelines and decide who will receive this life-saving treatment amidst limited resource. Yet, the question is, which principles should they use to decide?

This paper will explore the different perspectives of Jewish and Secular ethics regarding triage decisions, specifically comparing and contrasting the two perspectives as it is relevant to the COVID-19 ventilator shortage. Firstly, I will present an overview of the four foundational principles that underpin secular triage ethics and how they are incorporated into existing hospital and institution-based resource allocation guidelines. I will then comprehensively examine the Jewish perspective of triage, which is based on a wide array of sources from the Talmud, Rishonim, early Acharonim and contemporary *poskim.* An understanding of two *halakhic* principles, *pikuach nefesh* and *ain dochen nefesh mipnei nefesh*, is necessary to appreciate the delicate balance between the individual and community that the Talmud and *poskim* try to make when considering triage dilemmas. This paper will highlight the various streams of thought within the *halakhic* literature, many of which closely parallel the aforementioned secular principles. Although each system is grounded in a different set of core values, the practical solution to ventilator allocation dilemmas is quite similar according to Jewish and secular principles.

II. Secular Triage Principles and Proposed Guidelines

Allocation of scarce resources is a classic subject of ethical debate and has emerged in many contexts, ranging from Penicillin distribution in the 1940s, allocation of scarce dialysis machines in the 1960s, and the continuous debate regarding the UNOS organ distribution criteria. Furthermore, the prospect of ventilator shortages in particular is not unique to the COVID-19 pandemic: the 2002 SARS outbreak and the more recent 2009 H1N1 swine flu epidemics have necessitated the development of allocation guidelines.

Several hospitals and institutions have published triage guidelines for ventilator allocation during COVID-19, although many have still developing their criteria.[8] These guidelines are *not* mandated by law, but are rather recommendations that individual hospitals and physicians can utilize in their triage decision-making. There is "substantial heterogeneity"[9] among the guidelines, since the ethical principles they employ vary considerably.

In their 2009 Lancet article, Persad *et al.*[10] investigated the varying ethical criteria that is implemented in these different institutional triage guidelines. They identify four overarching ethical principles that form the basis of secular triage ethics: treating everyone equally, favoring the worst off, maximizing total benefits, and considering social usefulness.

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[8] Antommaria, Armand et. al. Ventilator Triage Policies During the COVID-19 Pandemic at U.S. Hospitals Associated With Members of the Association of Bioethics Program Directors. *Annals of Internal Medicine*. Published April 24, 2020. https://annals.org/aim/fullarticle/2765364/ventilator-triage-policies-during-covid-19-pandemic-u-s-hospitals

[9] Antommaria, Armand et. al. Ibid.

[10] Persad G, Wertheimer A, Emanuel EJ. Principles for allocation of scarce medical interventions. *Lancet*. 2009.

The following analysis will examine the varying benefits and drawbacks of including each ethical principle in institutional recommendations for ventilator allocation.

II.1. Treating People Equally

For divisible resources, treating people equally would mandate an equal distribution of the resource to everyone in need. However, for goods that cannot be divided, such as organs, vaccines or ventilators,[11] the only way to treat people equally would be to give everyone an *equal opportunity* to acquire the resource. There are two possible ways to achieve this goal: by lottery or by the "first-come, first-serve" principle.

II.1a. Lottery

Due to the equal opportunity it provides, random lottery is employed in several non-medical areas in which treating people equally is paramount, such as with the US military draft by birthdays and admission to certain public schools in many US school districts.[12] Since it requires little qualitative information about recipients, lottery systems are a simplistic and efficient method of ensuring everyone an equal opportunity to the resource, regardless of

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[11] Traditionally, only one patient is connected to a ventilator, in which case ventilators are an indivisible resource. Although some studies investigated the possibility of using one ventilator to treat multiple patient, several medical societies issued a statement on March 26, 2020 that strongly opposed the idea, which asserted that "sharing mechanical ventilators should not be attempted because it cannot be done safely with current equipment."

"Joint Statement on Multiple Patients Per Ventilator". Published on March 26, 2020: https://www.asahq.org/about-asa/newsroom/news-releases/2020/03/joint-statement-on-multiple-patients-per-ventilator

[12] Silverman WA, Chalmers I. Casting and drawing lots: a time honored way of dealing with uncertainty and ensuring fairness. *BMJ* 2001; 323: 1467–68.

minor discrepancies.[13] Its inherent randomness prevents for the potential for discrimination or corruption, as long as the lottery admission criteria is also just. However, the disadvantage of a lottery system is the same as its advantages: it neglects certain relevant factors and background information, such as prognosis and preexisting conditions, that may confer a greater medical need for the scarce resource to certain patients. Thus, other values must be combined with a lottery system.

II.1b. First-Come, First-Serve

The principle of distributing resources according to who arrives first is considered by some a "natural lottery",[14] as it too ignores relevant discrepancies between potential recipients. However, although its goal it to achieve fairness, the general consensus among ethicists is that a "first-come, first-serve" policy rarely does so. Since people who have more power, wealth, and social capital live in closer proximity to hospitals and generally have greater access to rare resources, they will likely attain the resource first if it was allocated according to this policy. Thus unlike a fair lottery, this principle is much more likely to incorporate irrelevant factors, such as power and wealth, and is therefore susceptible to corruption. As a result, Persad *et. al.* deem this principle flawed and argue that is should *not* be included in any potential multi-principle allocation system.

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[13] Broome J. Selecting people randomly. *Ethics* 1984; 95: 38–55.

[14] American Thoracic Society Bioethics Task Force. Fair allocation of intensive care unit resources. *Am J Respir Crit Care Med* 1997;156: 1282–1301.

II.2. Favoring the Worst off

Preferring those in society who are worst off is known as prioritarianism. In this view, "worst off" can be defined in two ways: as the sickest people, who *currently* lack the valuable resource of health, or the youngest people, who lack the valued "resource" of life-years by virtue of the fact that they have yet to live through most of their expected lifespan.

II.2a. Sickest First

Treating the sickest first, defined as those who have the least likelihood for survival, is already employed in other areas of medicine, such as liver transplantation and emergency care.[15] Its proponents argue that scarce medical resources and care should be allocated towards the sickest people, because their healthy counterparts will likely recover with little to no intervention, or can be treated at a later time.

However, there is an intuitive flaw in this argument: when it comes to potentially life-threatening predicaments, the relative sickness of individuals changes rapidly. Therefore, if one were to compare an acutely ill person with chronic liver disease with someone who has progressive liver disease, although the former person starts off as being the "worst off", the second patient's prognosis will soon progress to liver failure, which can result in death. Therefore, treating the sickest first is only ethical when resources will soon be available to the healthier people, or if those people can survive without treatment. For this reason, Persad *et. al.* claim that *current* health status is an irrelevant factor when determining scarce

[15] Stein M.S. The distribution of life-saving medical resources: equality, life expectancy, and choice behind the veil. *Soc Philos Policy* 2002; 19: 212–45.

resource allocation, and therefore favoring the sickest should be excluded from any allocation guidelines.

II.2b. Youngest First

Preferential treatment based on age is a common idea in triage ethics. The CDC's 2018 "Guidance on Allocating and Targeting Pandemic Influenza Vaccine" states that "pregnant women, infants, and toddlers" must be given the vaccine first in all levels of pandemic severity.[16] Even when it comes to life-saving resources, some ethicists, argue that there should be age-based exclusions,[17] while others believe it should be determined on a case to case basis, accounting for other circumstances such as pre-existing comorbidities. In fact, the COVID-19 resource allocation guidelines proposed by the Italian Society of Anesthesia, Analgesia, Resuscitation and Intensive Care (SIAARTI) stated that "an age limited for admission to the ICU may ultimately need to be set".[18]

The underlying rationale for an age limit based on the prioritizing the "worst off" is that a young person has less life-years than an elderly person; thus the younger person technically has fewer of that resource. Although many argue that this principle discriminates

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[16] Center for Disease Control. Interim Updated Planning Guidance on Allocating and Targeting Pandemic Influenza Vaccine. 2018. https://www.cdc.gov/flu/pandemic-resources/pdf/2018-Influenza-Guidance.pdf

[17] Callahan DD. Setting limits: medical goals in an aging society. Washington, DC: Georgetown University Press; 1995.

[18] Vergano M, Bertolini G, Giannini A, et al. Clinical Ethics Recommendations for the Allocation of Intensive Care Treatments, in Exceptional, Resource-Limited Circumstances. Italian Society of Anesthesia, Analgesia, Resuscitation, and Intensive Care (SIAARTI). March 16, 2020: http://www.siaarti.it/SiteAssets/News/COVID19%20-%20documenti%20SIAARTI/SIAARTI%20-%20Covid-19%20-%20Clinical%20Ethics%20Reccomendations.pdf

against elderly people, “youngest first” proponents maintain that the elderly people had an equal chance of obtaining the resource when they were younger. However, Persad *et. al.* deem this principle insufficient, because it ignores other relevant factors, such as severity of prognosis, and it allows for too much ambiguity as to the exact cut-off age. Furthermore, a strict age-based order of allocation can be seen as counter-intuitive, as many would consider a teenager’s death intuitively worse than that of an infant.[19] As the philosopher Ronald Dworkin posits, “It is terrible when an infant dies, but worse, most people think, when a three-year-old child dies and worse still when an adolescent does”.[20]

II.3. Maximizing Total Benefits

The doctrine of utilitarianism classically aims to utilize the available resources so that it achieves the most good for the most people. There are two criteria that are used to measure the total benefit of resources: the total lives saved and the total remaining life-years preserved.

II.3a. Saving the Most Lives

Much like a lottery, focusing on saving the most lives avoids qualitative discrepancies between individual. This is demonstrated by an extreme permutation of the classic trolley dilemma, in which turning a switch means saving the lives of many people compared to

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[19] McKie J, Richardson J. Neglected equity issues in cost-effectiveness analysis, Part 1: severity of pre-treatment condition, realisation of potential for health, concentration and dispersion of health benefits, and age-related social preferences. Melbourne: Centre for Health Program Evaluation, 2005. https://pdfs.semanticscholar.org/3d0a/490cd7dfeab33f7f98b9e44f6a789b5acca8.pdf?_ga=2.71973267.1273939163.1588739719-96293981.1543187748

[20] Dworkin RM. Life’s dominion. Knopf, 1993.

one.[21] A pure utilitarian concerned with saving the most lives would turn the switch even if the lone person was a cancer researcher on the brink of discovery and the five other people were criminals. However, this approach does not account for long-term survival of the patient or other potentially relevant factors, and therefore Persad *et. al.* assert that pure utilitarianism should not be the sole basis of distribution.

II.3b. Saving the Most Life-Years

The moral distinction between saving the most lives and saving the most life-years is best illustrated with another extreme variation of the trolley dilemma. If, for instance the single person was a healthy twenty year old and the five people were terminally-ill ninety year olds, utilitarians who are solely concerned with saving the most *lives* would save the five terminally-ill people. However, utilitarians who are concerned with saving the most *life-years* would arrive at the opposite conclusion: they would save the healthy twenty-year old, who arguably has six or more decades to live, compared to the five elderly people whose total prognoses amount to a single decade. Thus, such a utilitarian would be in favor of saving sixty life-years instead of ten.[22]

Compared to the "youngest first" approach, which accounted for the relatively few life-years that a young person has lived compared to an elderly counterpart, this second utilitarian principle accounts for the remaining life-years that a person has yet to live. Although "saving the most life-years" often correlates to saving the youngest first, the

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[21] Hope, Tony. Medical Ethics: A Very Short Introduction. Oxford University Press, 2004. 21-23.

[22] Glover J. Causing death and saving lives. New York: Penguin, 1977.

determination is not necessarily defined by age but rather by prognosis: after treatment, how many more years is the person expected to live?

Saving the most life-years can justify an age-based and disability-based exclusion criteria. This is not because young or primarily healthy people have an intrinsic value, but rather due to a statistical determination: younger people are statistically healthier than older people or people with disabilities or chronic health issues, and are therefore are likelier to have a longer prognosis post-treatment.[23] Such age-base and disability-based exclusion criteria appeared in some states' original ventilator guidelines, such as Washington, although most were redacted upon opposition from disability-rights activists.[24]

However, generalizations that include age-based and disability-based exclusions are often false, because at any given time, a certain, albeit small, percentage of sixty year-olds will live longer than twenty year-olds. Furthermore, such exclusions are morally tenuous on the basis of quality-of-life arguments. Disability-rights activists criticize many of the proposed COVID-19 ventilator guidelines for setting exclusion criteria based on pre-existing conditions, because they believe that every life-year is sacred, regardless of how few a person has left or how low-quality those years seem to be. This is encapsulated by a statement made by Ari Ne'eman, a leading disability-rights activist, in his influential *New York Times* op-ed: "At its core, these debates are about value — the value we place on disabled life and the value we place on disability nondiscrimination… People with disabilities have an equal right

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[23] Hope, Tony. Medical Ethics: A Very Short Introduction. Oxford University Press, 2004. 30-36.

[24] Washington State Department of Health. "Scarce Resource Management and Crisis Standards." https://nwhrn.org/wp-content/uploads/2020/03/Scarce_Resource_Management_and_Crisis_Standards_of_Care_Overview_and_Materials-2020-3-16.pdf

to society's scarce resources, even in a time of crisis."[25] For this reason, disability advocates, such as Collin Killick and Ne'eman, propose that the most ethical prognosis-based criteria are those that are short-term.[26] Indeed, many guidelines have proposed short-term prognosis criteria, such as the New York State Task Force 2015 Ventilator Allocation Guidelines, which clearly states: "The Guidelines' definition of survival is based on the short-term likelihood of survival of the acute medical episode and is not focused on whether a patient may survive a given illness or disease in the long-term (e.g., years after the pandemic)."[27]

II.4. Social Usefulness

Allocating resources to individuals who have social value can be achieved in two ways: promoting social usefulness by prioritizing those who are currently benefiting society, and rewarding social usefulness by prioritizing those who served society in the past.

II.4a. Promoting Social Value

Distributing resources to specific individuals, such as medical personal or vaccine researchers, prioritizes the care of a certain subset of the population who contribute to the overall well-being of the society. The aforementioned CDC influenza vaccine guidelines also assert that "public health and front-line healthcare providers, emergency services personnel,

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[25] Ne'eman, Ari. "I Will Not Apologize for my Needs". *New York Times*. Published March 23, 2020. https://www.nytimes.com/2020/03/23/opinion/coronavirus-ventilators-triage-disability.html

[26] Bebinger, Martha. "After Uproar, Mass. Revises Guidelines On Who Gets An ICU Bed Or Ventilator Amid COVID-19 Surge." Updated on April 22, 2020. https://www.wbur.org/commonhealth/2020/04/20/mass-guidelines-ventilator-covid-coronavirus

[27] New York State Task Force on Life and the Law New York State Department of Health. Ventilator Allocation Guidelines. November 2015; 34. https://www.health.ny.gov/regulations/task_force/reports_publications/docs/ventilator_guidelines.pdf

deployed and mission essential personnel, [and] manufacturers of pandemic vaccine and antivirals" should be among the first to be vaccinated.[28] However, other guidelines, such as the Emanuel *et. al.* COVID-19 recommendations, limit the prioritization to just front-line healthcare workers who come into direct contact, "particularly workers who face a high risk of infection and whose training makes them difficult to replace."[29] The rationale is *not* based on some intrinsic value of healthcare workers, but rather because of their *instrumental* value to the pandemic response. Prioritizing medical personnel based on social value prevents absenteeism by reassuring workers that they will be given first-priority care in the likely event that they will be infected.[30]

However, this principle has the potential to be corrupted due to its ambiguity: if healthcare workers are considered essential, what about hospital administrators or influential legislators? Thus this principle should be used with discretion, although it can be used when all other factors are equal.

II.4b. Rewarding Social Value

In contrast, rewarding social value, known as reciprocity, calls for the distribution of resources to individuals, such as organ donors and scientific research participants, who *in the past* has instrumental value to the overall health of the society. This is also subject to some

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[28] Center for Disease Control. Interim Updated Planning Guidance on Allocating and Targeting Pandemic Influenza Vaccine. 2018. https://www.cdc.gov/flu/pandemic-resources/pdf/2018-Influenza-Guidance.pdf

[29] Emanuel E.J., Persad G., Upshur R., *et al*. Fair allocation of scarce medical resources in the time of Covid-19. *New England Journal of Medicine.* Published March 23, 2020 on NEJM.org.

[30] Irvin CB, Cindrich L, Patterson W, Southall A. Survey of hospital healthcare personnel response during a potential avian influenza pandemic: Will they come to work? Prehosp Disaster Med 2008; 23:328-35.

debate, as it is not clear whether it should include individuals who made notable societal contributions in non-medical areas, such as military veterans or past United States presidents. The main argument for rewarding past social usefulness is that it has the potential of encouraging future service. Thus, Ezekiel *et. al.* assert that participants in research studies related to COVID-19 interventions should receive priority treatment, yet they qualify it by concluding that "research participation, however, should serve only as a tiebreaker among patients with similar prognoses."[31]

III. Foundational *Halakhic* Principles in Allocation of Life-Saving Resources

Triage is a perennial issue in Jewish thought and *halakha*, and there are several primary sources in Talmudic and Rabbinic literature that specifically deal with prioritization dilemmas regarding life-saving resources. In Judaism, a discussion of the allocation of life-saving measures must be framed by two *halakhic* principles: the Biblical commandment of "*lo ta'amod al dam re'echa*", which creates a legal duty to rescue and condemns inaction, and the doctrine of "*ain dochen nefesh mipnei nefesh*", which prohibits killing one innocent person to save another innocent person. Given the obligation to do everything possible to save an endangered life and the prohibition against sacrificing one life to save another, how do *halakhic* authorities resolve resource scarcity quandaries?

[31] Emanuel E.J., Persad G., Upshur R., *et al*. Ibid.

III.1. Sanctity of Every Life and Duty of Rescue

Many Talmudic and Rabbinic writings assert that life itself is of supreme and infinite value. The Gemara Sanhedrin[32] states that killing *one* Jew is akin to destroying an entire world; conversely, anyone who sustains one Jewish life is credited with saving the entire world." The sanctity of human life as a supreme value is grounded in Jewish Law in the form of two parallel duties: the duty not to harm a human life, and the duty to rescue an endangered one. The duty not to harm a human life, specifically to the point of causing someone else's death, is mandated in the negative commandment of "*lo tirtzach*- do not murder".[33] The duty to rescue is based on the moral imperative, "*lo ta'amod al dam re'echa* — do not stand idly by the blood of your friend."[34] Although framed as a negative commandment, "*lo ta'amod*" is transgressed by *inaction*: if faced with the opportunity to save a person's life and one chooses *not* to do so, it is a violation of the Biblical commandment, except for cases where the person himself is in grave physical danger or is forced to choose between life-saving and violating one of the three cardinal sins.

It is important to address whether there is a *halakhic* obligation to save the life of a *non*-Jew as well: although "*lo tirtzach*" also extends to killing non-Jews, since it is one of the seven Noahide laws, is this also the case with "*lo ta'amod*"? Based on the aforementioned Gemara Sanhedrin, which specifies saving a "*Jewish* life", as well the Mishna in Yoma (8:7),[35] which implies that one *cannot* transgress Shabbos to save the life of a non-Jew, it

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[32] Gemara Sanhedrin 37a

[33] Exodus 20:13

[34] Leviticus 19:16

[35] This Mishna is discussed in detail below.

seems that the *halakhic* duty of rescue does *not* apply to saving gentiles. In fact, based on the Gemara in Avodah Zara,[36] which discusses giving medical treatment to a non-Jewish woman in labor during the week and on Shabbos, the Mishna Brurah[37] codifies this and even condemns physicians who would treat non-Jewish patients on Shabbos. However, most modern *poskim* hold that this prohibition does not apply today.[38] The Ramban maintains that it is in fact a mitzvah to save the life of a "*ger v'toshav*", even on Shabbos, much like it is a mitzvah to save the life of a fellow Jew.[39] Thus based on the Ramban, Rabbi Nachum Rabinovich[40] argues that since, according to his opinion, contemporary non-Jews have the status of "*ger toshav*",[41] Jewish physicians are obligated to violate Shabbos to save both their Jewish and non-Jewish patients. Thus, Ramban's principle of "*ger v'toshav v'chai i-mach*" is generally accepted as the non-Jewish corollary to the duty of "*lo ta'amod*".[42]

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[36] Avodah Zara 26a

[37] Mishna Brurah, 330:8

[38] There are two categories of reasons that explain why we do not follow the Mishna Brurah [a more extensive explanation of the following reasons is beyond the scope of this thesis]. Firstly, contemporary non-Jews are considered "*gerei v'toshav*", and therefore are in a different category than the non-Jewish idolaters that the Gemara and Mishna Brurah were referring to. The second argument is practical: Jewish physicians should treat non-Jews on Shabbos because they may face retribution from the non-Jews for refusing to treat them. However, only the first principle is based on a *de'orayta* commandment to save non-Jewish lives.

[39] Ramban, *Hasagot HaRamban L' Sefer Ha-Mitzvot*. *Mitzvot Asei* Ommited by the Rambam, no. 16.

[40] Rabbi Nachum Rabinovich, *Melumedei Milchama*. Responsum 43; 144-146.

[41] There is a great breadth of literature about the contemporary status of a "*ger v'toshav*" and the complex arguments of Rabbi Rabinovich and Rav Soloveichik on the topic. However, it is beyond the scope of this thesis. See Rabbi Dov Karoll's paper, "Laws of Medical Treatment on Shabbat", published in "*Verapo Yerapei*", Volume I. 2009. 217-219

[42] From henceforth, this thesis will refer to the obligation of saving the lives of both Jews and non-Jews.

The *halakhic* imperative of "*lo ta'mod*", or the parallel "*ger v'toshav*", is akin to Duty to Rescue laws, which have been enacted in relatively few states, such as Minnesota,[43] Wisconsin,[44] and Rhode Island.[45] In most states and countries, unlike in Jewish law, there is no such law that obligates an individual to act to save another person's life. In contrast to common law which normally does not impose a duty to help or rescue another person, the Israeli Knesset enacted the "Lo Ta'amod 'al Dam Re'ekha Law, in June 1998, which created a *legal* obligation to save someone else life.[46] The law stipulates that anyone who *breaches* the law is subject to a fine, unless he himself was endangered.

Thus, saving of a life takes precedence over *all other* ethical and moral considerations, excluding the three cardinal sins, as the Gemara Yoma states: "*sh-ain lach davar she-omed b'pnei pikuach nefesh chutz m'avoda zara, v'gilui arayot v'shfichut damim* - there is no [*halakha*] that stands in the way of saving a life, except for [the prohibitions against] idol worship, forbidden sexual relationships, and bloodshed"[47]. Based on this rule, the Gemara Yoma instructs an ill or pregnant person to eat on Yom Kippur, if their life depended on it, *even* if only non-kosher food is available.[48]

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[43] Minnesota Legislature. 2019 Minnesota Statutes. 604A.01 Good Samaritan Law. See Subdivision 1.Duty to assist. https://www.revisor.mn.gov/statutes/cite/604a.01

[44] Wisconsin State Legislature. 940.45: Duty to aid victim or report crime. https://docs.legis.wisconsin.gov/statutes/statutes/940/II/34. Updated through May 19, 2020.

[45] 2012 Rhode Island General Laws. Chapter 11-56-1 - Duty to assist. https://law.justia.com/codes/rhode-island/2012/title-11/chapter-11-56/chapter-11-56-1

[46] "Lo Ta'amod 'al Dam Re'ekha Law". *Assia* Volume IV, Number 1. February 2001. http://www.daat.ac.il/daat/kitveyet/assia_english/porat-1.htm

[47] Gemara Yoma 82a

[48] Gemara Yoma 82a

Similarly, *Pikuach nefesh* is so important that one must even transgress Shabbos to save a life. This principle applies not only when the person's life is certainly endangered (*vadai pikuach nefesh*), but *also* in a case of doubt, when it is unclear if the person needs a life-saving intervention (*safek pikuach nefesh*). The Mishna in Yoma[49] illustrates this concept by citing a case of someone who is trapped under the rubble of building, which just collapsed on Shabbos:

> מִי שֶׁנָּפְלָה עָלָיו מַפֹּלֶת, סָפֵק הוּא שָׁם סָפֵק אֵינוֹ שָׁם, סָפֵק חַי סָפֵק מֵת, סָפֵק נָכְרִי סָפֵק יִשְׂרָאֵל, מְפַקְּחִין עָלָיו אֶת הַגַּל. מְצָאוּהוּ חַי, מְפַקְּחִין עָלָיו. וְאִם מֵת, יַנִּיחוּהוּ.
>
> If an avalanche fell on someone, and it is doubtful whether or not he is there, or whether he is alive or dead, or whether he is an Israelite or a non-Jew, they remove the debris from above him [even on Shabbat]. If they find him alive they remove the debris, but if dead they should leave him there [until Shabbat is over].

Thus, according to the Mishna, even if there are *three* degrees of doubt (whether the person is under the rubble, whether he is alive, and whether he is a Jew), one is still obligated to dig for the person to save his life, even if it means violating a *mi'de'orayta* Shabbos law.[50] Furthermore, Rav Yochanan reports in the name of Shmuel[51] that if a woman dies in labor on Shabbos, one must cut her open to try to save the unborn fetus, even though this action would undoubtedly violate the transgression of *hotza'ah*, carrying more than four *amot* within a public domain, and would not necessarily save the fetus's life (*safek*).

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[49] Mishnah Yoma 8:7

[50] The transgression of digging through rubble on Shabbos likely violates the *av malacha* of *choresh*, plowing. This prohibits any action that either prepares the ground for planting or moves the ground in any way. Furthermore, the action would violate two rabbinical prohibitions: *muktzah*, since the rocks are not meant to be used on Shabbos, as well as *tirchah ye-teira*, doing extra work on Shabbos. This is the opinion of Rabbi Yisrael Janowski (Miami, Florida), obtained through personal communication with my grandfather, Dr. Robert Galbut.

[51] Gemara Eiruchin 7a

Nevertheless, Shmuel maintains that even *safek pikuach nefesh* generates a legal duty strong enough to warrant the transgression of Shabbos.

In addition, the duty of *pikuach nefesh* applies when the endangered person is only expected to live a little while longer. The Gemara in Yoma explains that the Mishna Yoma's seemingly superfluous statement, "If they find him alive, they remove the debris" (8:7), is there to teach the concept that *even* if a person will live a short while after the life-saving intervention, *pikuach nefesh* must still be performed.[52] This reinforces the Jewish concept that every moment of life has infinite value.

The principle of *pikuach nefesh* forms the basis of medical care, where the duty to preserve life, regardless of its perceived quality and even if it is for a short time, is paramount.[53] The moral reasoning behind this, based on the aforementioned Talmudic cases and a rich Rabbinic tradition based on them, is that we, as human beings, have a limited understanding of the world and therefore cannot know the true value of even a second of life. As Rabbi David Bleich writes, "Whether or not man finds value in the life he is commanded to preserve is, in this fundamental sense, irrelevant; man's obligations vis-a-vis sustaining life are not predicated upon his aptitude for fathoming divine secrets."[54] Furthermore, according to normative Jewish thought, humans beings also do not have the capacity to make qualitative judgement calls about who has the *right* to live; we cannot conceptualize the

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[52] Yoma 85a

[53] Tendler, Moshe D. "Quality and Sanctity of Life: a Torah View". *Tradition*. Fall 1993, Issue 28.1

[54] Bleich, David. "Life as an intrinsic rather than instrumental good: the 'spiritual' case against euthanasia." *Issues in Law & Medicine.* Fall 1993, Volume 9, Issue 2.

limitless value of life and the idea that "sheer human existence is endowed with moral value"[55].

III.2. Killing One Person to Save Another

The other important doctrine that informs the Biblical duty to rescue appears in Mishna Ohalot: "*ein dochin nefesh mipnei nefesh*."[56] This teaching explicitly forbids a person from killing one individual to save another innocent person, based on the Mishna's ruling that if the fetus is endangering the pregnant woman's life, the pregnancy can be terminated, even amidst labor.[57] However, once the head of the baby has emerged from her birth canal, thus achieving the status of personhood, the baby cannot be touched or killed in order to save the mother's life. Rambam further elaborates in Hilchot Rotseach U'Shmirat Hanefesh that although this inaction may kill the mother, the mother's life may not take precedence over that of the newborn baby.[58] Based on this principle, the Gemara Sanhedrin relates Rabba's teaching that if one were given the choice to either kill someone or be killed, the *halakha* is, "*yeihareig ve-al ya'avor*— he must be killed and not transgress [the prohibition of bloodshed."[59] The Gemara goes on to explain the underlying logic, which is encapsulated in the rhetorical question, "*Mai chazit de-dama didach sumak tefei*— What makes you think

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[55] Bleich Ibid.

[56] Mishna Ohalot 7:6

[57] Ohalot Ibid.

[58] Rambam, *Mishnah Torah, Hilchot Rotseach U'Shmirat Hanefesh*, 1:9

[59] Sanhedrin 74a; this teaching also appears in Pesachim 25b and Yoma 82b.

that your blood is redder than the blood of another human being?"[60] The logic of *mai chazit* is that we are *unable* to accurately compare the true value of one person's life against another, so if a life will be lost no matter what, one cannot commit murder to change the outcome, unless it is murdering a pursuer (*rodef*) in self-defense or even to save the person being pursued.[61] As the Rambam clearly states in *Hilchot Rotzeach:* "When a person (*rodef*) is pursuing his colleague with the intention of killing him, even if the pursuer is a minor, *every* Jew is commanded (מצוין) to save the person being pursued (the *nirdaf*), even if it necessitates killing the pursuer (*bn'fasho shel rodef*)."[62]

"*Ein dochin nefesh*" and *mai chazit* would also forbid the killing of one person to save many, with some notable exceptions. The Talmud Yerushalmi in Terumot[63] brings a *beraita* regarding a hostage situation where the captors demand that one person's life is sacrificed in order for the rest of the group to remain alive. The Gemara rules that normally, it is *forbidden* for the group to comply with the captors' request, and it is better to let themselves be killed rather than surrender a single Jewish person. However, the Gemara *does* allow the group to surrender someone like Shimon ben Bichri, the man who rebelled against King David and sought refuge in a city which was subsequently besieged by Yoav's army.[64] The Talmud Yerushalmi brings differing opinions as to *why* the city's inhabitants were permitted to hand over Shimon ben Bichri to Yoav, the city's captor. While Rabbi Shimon

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[60] Ibid.

[61] However, in self-defense or saving another from a pursuer, one should try to just injure the *rodef*, instead of killing him or her. See opinion of Rav Yonatan ben Shaul in Gemara Sanhedrin 74b.

[62] Rambam, *Mishnah Torah, Hilchot Rotzeach U'Shmirat Hanefesh*. 1:6

[63] Talmud Yerushalmi Terumot 47a

[64] Shmuel II, 20:20-22

ben Lakish maintains that it was *only* permissible because Shimon ben Bichri was liable for the death penalty, because he rebelled against the King, Rabbi Yochanan disagrees, asserting that it would still be permissible *even* if he was not liable for such a penalty, since he was specifically named and singled out by the captors. The Chazon Ish[65] explains that the difference between the opinions of Rabbi Shimon ben Lakish and Rabbi Yochanan was whether they defined Shimon ben Bichri as a *rodef*: while Rabbi Yochanan maintains that Shimon ben Bichri was a *rodef*, since his life posed a direct threat to the rest of the townspeople, Rabbi Shimon ben Lakish was hesitant to consider him a *rodef* unless there was a *specific*, non-random reason to single him out. While it seems that Shimon ben Lakish's opinion is in keeping with *mai chazit*, Rabbi Yochanan has the most extreme position, which may allow for an exception to "*ain dochin nefesh*" in certain scenarios, specifically when the person is considered a *rodef*. The corresponding Tosefta in Terumot[66] brings a third opinion of Rabbi Yehuda, who contends that the permissibility to hand one person over to be killed is contingent on whether the person would have died anyways if the captors decided to kill the entire group. Thus, since Shimon ben Bichri was within the walls of the city with the rest of the inhabitants, he would have also died in an attack, so it is permissible to hand him over. However, if he was in a location where he would *not* have been killed in an attack, then the townspeople *cannot* hand him. In effect, Rabbi Yehuda is rejecting the idea that one person's life can be sacrificed *instead* of someone else's life, which reaffirms the concept of *mai chazit*. Furthermore, in codifying this *halakha*, the Rambam says, "*v'ain morin la-hem kein*

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[65] Chazon Ish. Choshen Mishpat Sanhedrin, no. 25. s.v. *yerushalmi terumot*.

[66] Tosefta Terumot, 7:23

l'chatchila"— it is not commendable to advise the townspeople to surrender one person, even if he is specifically singled out.[67] The Rambam maintains that if the specified person did *not* commit a capital crime, then "*lo yi'masro la-hem nefesh achat mi'yisrael*— they *may not* surrender him to save their own lives," which is in accordance with the more stringent opinions of Shimon ben Lakish and Rabbi Yehuda. Thus, even regarding the difficult decision of sacrificing one life to save many, which according to strict secular utilitarian ethics necessitates little thought, the Talmudic and Rabbinic literature are very sensitive to the principle of "*ain dochin nefesh*" and limit the circumstances in which a group can surrender one person to be killed to save the lives of everyone else: if no one is singled out by the captors or no one is deserving of the death penalty, then the group *cannot* single out one person to die. This marks a divergence in thought from pure utilitarian ethics, which mandates that the correct action is the one that saves the *most* lives whenever possible, even if it means sacrificing an innocent person who was not specifically "singled out".

III.3. Saving One Life over Tentatively Extending Two Lives: Bava Metzia

However, despite the overwhelming moral and legal duty of rescue and preservation of life in virtually all circumstances, what happens in the case of resource scarcity, when it is *not* possible to save *all* endangered people's lives? What principles do *halakhic* authorities invoke to guide such a prioritization?

Triage decisions can broadly be defined as deciding which of two lives to save when life-saving capacity is limited, due to either a shortage of medical personal or resource

[67] Rambam, *Mishnah Torah, Hilchot Yesodei Hatorah*, 5:5

scarcity. There are two Talmudic sources that deal with such decisions: a *beraita* in Bava Metzia 62a and a *mishna* in Horiyot 13a.

The case discussed in the *beraita* in Bava Metzia involves two stranded travelers who are on the verge of dehydration. One of the travelers owns a water jug, but the dehydration is so severe that if the two travelers share the water, neither would survive; however, if one of them drank it, that traveler would have the strength to survive long enough to reach a settled area and receive help:

> דרש בן פטורא מוטב שישתו שניהם וימותו ואל יראה אחד מהם במיתתו של חבירו עד שבא ר' עקיבא ולימד וחי אחיך עמך חייך קודמים לחיי חבירך
>
> Ben Petura taught: It is preferable that both of them drink and die, and let neither one of them see the death of the other. This was the accepted opinion until Rabbi Akiva came and taught that the verse states: "And your brother shall live with you," indicating that your life takes precedence over the life of the other.[68]

The general understanding of the Gemara is that Rabbi Akiva's opinion is accepted over Ben Petura's: the owner of the water jug should drink the water, saving himself and allowing his fellow traveler to die.[69] However, there is a disagreement as to whether the final ruling is that one is *obligated* to keep the water for himself,[70] or that this is merely permissible.[71] The Netziv,[72] and later the Chazon Ish,[73] interprets Rabbi Akiva and Ben

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[68] Bava Metzia 62a

[69] Rabbi Jacob ben Asher in the name of his father, Rabbeinu Asher ben Yechiel, the Rosh. *Kitzur Piskei Ha-Rosh,* Bava Metzia 62a. (Constantinople 1575); Rabbi Isser Yehudah Unterman. *Shevet mi-Yehudah,* 1:8. (1952)

[70] Rav Avraham Yitzchak Kook. Responsa *Mishpat Kohen,* Siman 144. (Jerusalem 1996)

[71] Rabbi Isser Yehudah Unterman. *Shevet mi-Yehudah,* 1:8. (1952)

[72] Rabbi Naftali Tzvi Yehuda Berlin (Netziv). *Ha'emek She'ela, Sh'ilta* 147:3.

[73] Chazon Ish. *Choshen Mishpat, Bava Metzia, Likkutim* 20; 62a.

Petura's debate as surrounding the question of whether it is better to extend two lives temporarily (Ben Petura), or save one life for a longer term (Rabbi Akiva). Thus, in accordance with this principle, physicians should *not* divide a ventilator between two patients, either by connecting them both at the same time or connecting them in alternate intervals; rather, the ventilator should be appropriated to a single patient, because increasing the chance of saving one person's life is better than significantly diminishing the chances that *either* would survive. However, the *beraita* does not offer guidance as to *which* patient to appropriate the ventilator to. According to Rabbi Waldenberg,[74] the debate between Rabbi Akiva and Ben Petura surrounded the ownership of the water jug: Rabbi Akiva ruled that the water should go to the person who *owned* the jug, while Ben Petura did not deem ownership a relevant factor. However, in the case of *hospital-owned* ventilators, it is unclear, according to the *beraita* in Bava Metzia, who to give the ventilator to if it cannot be divided.[75] Thus, the Mishna in Horiyot further elucidates *halakhic* principles involved in triage decisions.

III.4. Prioritization Guidelines Based on Mishna Horiyot

The Mishna in Horiyot (3:7-8) deals specifically with the question of who to save first when presented with two people who are in danger of dying, which is akin to two critical care patients who enter the emergency room but only one can be cared for first. According to the Beit Yosef,[76] the Mishna is specifically referring to a case where two people are drowning

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[74] Rabbi Eliezer Waldenberg. *Responsa Tzitz Eliezer,* 9:28.

[75] Although in theory ventilators can be a divisible resource, it is not divided between two patients according to common medical practice. See Footnote 11 above.

[76] Beit Yosef, Yoreh De'ah 251, s.v. *mah she-katav.*

in a rive, and the rescuer can only swim fast enough to save one of the people. Thus, the Mishna's prioritization hierarchy, which guides the rescuer in his or her choice of who to save, is as follows:

> האיש קודם לאשה להחיות ולהשיב אבדה. והאשה קודמת לאיש לכסות, ולהוציאה מבית השבי. בזמן ששניהם עומדים לקלקלה, האיש קודם לאשה.
>
> The man precedes the woman with regards to which of them to rescue or to return a lost item to first and a woman precedes a man for clothing, and for rescue from captivity. When they are both [in danger of] sexual abuse, a man takes precedence [in terms of rescue] over a woman.[77]
>
> כהן קודם ללוי לוי לישראל ישראל לממזר וממזר לנתין ונתין לגרוגר לעבד משוחרר. אימתי בזמן שכולן שוין. אבל אם היה ממזר תלמיד חכם וכהן גדול עם הארץ ממזר תלמיד חכם קודם לכהן גדול עם הארץ:
>
> A priest precedes a Levite. A Levite precedes an Israelite. An Israelite precedes a son born from an incestuous or adulterous relationship [*mamzer*], and a *mamzer* precedes a Gibeonite, and a Gibeonite precedes a convert, and a convert precedes an emancipated slave. When do these halakhot of precedence take effect? In circumstances when they are all equal. But if there were a *mamzer* who is a Torah scholar and a High Priest who is an ignoramus, a *mamzer* who is a Torah scholar precedes a High Priest who is an ignoramus, as Torah wisdom surpasses all else.[78]

The Mishna prioritizes life-saving intervention based on three non-medical principles: gender, *kedusha* [holiness], and *chachmah* [wisdom]. The Gemara does not provide an explanation as to the basis of its ruling that a "man precedes a woman" with regards to life-saving measures. However, the Rambam in his commentary on Mishna Horayot provides an explanation:

> **האיש קודם לאשה וכו':** כבר ידעת שהמצות כולם חייבין בהן הזכרים והנקבות בקצתם כמו שנתבאר בקידושין והוא מקודש ממנה ולפיכך קודם להחיות:
>
> As is known, men are responsible to fulfill all the commandments and women are responsible for some of them, as explained previously in Kiddushin. He is more holy and therefore takes precedence in life and death matters.[79]

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[77] Mishna Horiyot 3:7

[78] Mishna Horiyot 3:8

[79] Rambam. *Perush Ha'Mishna.* Horayot 3:7. s.v. "Ha'ish kodem l'isha"

The Rambam explains that the more mitzvot one is *obligated* in, the more holy that person is: since men are obligated in *more* mitzvot than women, as women are exempt from time-bound commandments, men are more holy (והוא מקודש ממנה) and therefore should be saved first. The Taz in his commentary to the Shulkhan Aruch concurs, writing that a drowning man is saved before his female counterpart because "*she'ish chayav tapei b'mitzvot* — a man is obligated in more mitzvot."[80] As Alan Jotkowitz notes, this reasoning seems to be consistent with the next Mishna: it prioritizes a Kohen over a Levi, Levi over a Yisrael, and a Yisrael over a *mamzer* [bastard] and so forth, based on "stratifying the holiness of a person".[81] However, the Mishna ultimately rules that a person's relative status as a *talmud chacham* trumps their *kedusha* status: the Mishna's prioritization principle based on someone's holiness status *only* applies when "*b'zman she'kulan shavin*— in a case where all else [Torah wisdom] is equal." Otherwise, a person who is a *talmud chacham*, irrespective of his *kedushah* status, is prioritized over an *am ha'aretz*, someone who is lacking in *chachmah*.

Although there are a couple Acharonim, namely Rabbi Waldenberg[82] and Rabbi Emanuel Rackman,[83] who interpret the Mishna as a guideline of who to give charity to in times of financial troubles instead of as a life-saving hierarchy, most rabbinic figures interpret the Mishna literally and maintain that saving people from death should follow the

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[80] Turei Zahav on the Shulkhan Aruch. *Yoreh De'ah*, 252:6. s.v. "*v'im shnaihem rotzim li'tvoah.*"

[81] Jotkowitz, Alan. "A Man Takes Precedence Over a Woman when it Comes to Saving a Life": The Modern Perspective of Triage from a Halakhic and Ethical Perspective." *Tradition.* Vol. 47, No. 1 (Spring 2014), pg. 55.

[82] Waldenberg, Eliezer. Responsa *Tzitz Eliezer*, Part 11 #1

[83] Emanuel Rackman, "Priorities in the Right to Life", in *Tradition and Transition Essays Presented to Chief Rabbi Sir Rabbi Immanuel Jakobovits to celebrate twenty years in office*, Jonathan Sacks, 235-244. (London: Jews College Publication, 1986).

Mishna's prescribed order. The Rema, Schach, and Taz[84] all codify the Mishna's prescribed hierarchy, and more recent Acharonim, such as Rabbi Shmuel Wosner[85] and Rabbi Chaim Rapoport,[86] concur. Furthermore, Rabbi Moshe Feinstein[87] rules that the Mishna's criteria is used with regards to modern-day triage situations, but specifies that it only applies when patients request medical help simultaneously and when they present with the same degree of medical need, which is further discussed below. As Rabbi Moshe Tendler writes, in translating Rav Feinstein's *psak* on the matter: "If several patients are all equidistant from him and he is the only physician available, he should choose his priorities in accord with the Mishnah in tractate Horiot 13a."[88]

IV. *Halakhic Psak* Regarding Scarce Ventilator Allocation

If, during a time of a wide-spread ventilator shortage, *two* people in need of ventilation arrive at an ICU in which there is *only one* ventilator available, how should physicians decide who gets the ventilator? According to *halakha*, should allocation be chiefly determined by the criteria delineated in Mishna Horiyot, or by some other ethical principle? There are two permutations of this micro-triage decision: if two people arrive who have differing chances of survival, and if the two people have the same chances of survival.

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[84] In *Yoreh Deah*, see Rama (252:8), the Schach (251:11), and the Taz (252:6).

[85] Rabbi Shmuel Wosner. Responsa Responsa *Shevet Halevi*, 10:167. (Bnei Brak 1976)

[86] Rapoport, Chaim. "The Halachic Hierarchy For Triage: Rebuttal of a Contemporary Review." *Le'ela*. June 2001. 27-38.

[87] Feinstein, Rav Moshe. *Iggrot Moshe*, Choshen Mishpat II:74a; 75a.

[88] Rav Moshe Tendler, "*Responsa of Rav Moshe Feinstein*, Care of the Critically Ill: Volume I". Ktav Publishing House, 1996; pg. 63.

The *halakha* differs depending on whether the two people came simultaneously or one after the other. Under normal, non-pandemic circumstances, it is accepted that if one person came first to the emergency room, then the one who came first is treated first, which is intuitive.[89] However, during times of a pandemic, *poskim* agree that regardless of the technical order of arrival, all patients are considered as if they arrived at the hospital at the same time.[90] Thus the practical ramification of such a distinction is that during a pandemic, physicians can *withhold* placing patients who arrived earlier on a ventilator, in order to await the arrival of patients who will have a higher chance of benefiting from the treatment.[91] This is very similar to the aforementioned secular ventilator guidelines, who also condone this practice.[92]

IV.1. Differing Chances of Survival

When two patients who need to life-saving treatment arrive simultaneously, the primary triage criterion according to the overwhelming majority of contemporary *poskim*[93] is *not* those that are listed in the Mishna but rather a single principle: the patient who has the

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[89] Abraham, Dr. Abraham S. *Nishmat Avraham*, Part 4, *Yoreh Deah* 251:1

[90] Schachter, Ibid; R' Eliezer Waldenberg, Responsa *Tzitz Eliezer* Part 17, 72:20 and 10:14; R' S.Z. Aurbach, Responsa *Minchat Shlomo* Part 2, 82:2.

[91] Schachter Ibid; R' Eliezer Waldenberg, Responsa *Tzitz Eliezer* Part 17, 72:20 and 10:14

[92] Emanuel E.J., Persad G., Upshur R., *et al*. Fair allocation of scarce medical resources in the time of Covid-19. *New England Journal of Medicine.* Published March 23, 2020 on NEJM.org.

[93] Rav Moshe Feinstein, Responsa *Iggrot Moshe* Choshen Mishpat II:73b;
Rav S.Z Aurbach, Responsa *Minchat Shlomo* Choshen Mishpat II:73;
Rav Eliezer Waldenberg, Responsa *Tzitz Eliezer* Part 9 28:3 & 17:72;
Rav Shmuel Wosner, Responsa *Shevet Halevi* 10:167;
Rav Moshe Sternbach, Responsa *Teshuvot Ve'Hanhagot* 1:858;
Rav Asher Weiss, Responsa *Minchat Asher* 1:115 & 2:126.

greatest chance of benefiting from the given resource is given that resource, as noted by Rabbi Dr. Avraham Steinberg.[94] Rabbi Moshe Tendler refers to this concept as "medical suitability".[95] Notably, Rabbi Yosef Elyashiv specifies that someone who is in greater medical need of the ventilator comes even before a Torah scholar, which clearly contradicts the Mishna Horiyot's priority list.[96]

This criteria of medical suitability is akin to the prognosis-based criteria that appears as the first step of ventilator allocation in most hospital triage guidelines.[97] However, unlike the aforementioned secular triage ethics debate, in which ethicists either argue for a long-term or short-term prognosis criteria, the timeline of medical survivability is limited to a relatively very short-term criterium: the patient's status as a *chayei olam* or *chayei sha'ah*. Although Rabbi Steinberg notes that there is "no clear definition of a *chayei sha'ah* in Talmudic literature",[98] most Acharonim equate it to a *tereifah*, who is a person who is expected to live for no more than twelve months.[99] Despite Rav Kook's minority opinion[100]

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[94] Rabbi Dr. Avraham Steinberg, "The Coronavirus Pandemic 2019-20: Historical, Medical and Halakhic Perspectives." April 2020; page 36. http://web.colby.edu/coronaguidance/files/2020/04/Steinberg-Coronavirus-pandemic-historical-medical-and-halakhic-perspectives.pdf

[95] Rav Moshe D. Tendler,"*Responsa of Rav Moshe Feinstein*, Care of the Critically Ill: Volume I"; 42.

[96] Rabbi Yosef Shalom Elyashiv. Responsa *Kovetz Teshuvot* 3:159 (1980s)

[97] According to the Antommaria *et. al.* meta-analyses, for the 96.2% of the guidelines examined, "the first step in allocation of ventilators is determining who is least likely to benefit from being mechanically ventilated, and this group is excluded from consideration".
Antommaria, Armand et. al. Ventilator Triage Policies During the COVID-19 Pandemic at U.S. Hospitals Associated With Members of the Association of Bioethics Program Directors. *Annals of Internal Medicine*. Published April 24, 2020. https://annals.org/aim/fullarticle/2765364/ventilator-triage-policies-during-covid-19-pandemic-u-s-hospitals

[98] Avraham Steinberg, MD. *Encyclopedia of Jewish Medical Ethics.* Feldheim Publishers, 2003. Volume III; 1054.

[99] Rav Shlomo Luria. *Chachmat Shlomo,* Yoreh Deah 155:1 (1582); Rabbi Moshe Feinstein, Responsa *Iggrot Moshe*, Choshen Mishpat, II:75b.

[100] Rabbi Abraham Isaac Kook. Responsa *Mishpat Kohen* 144:3.

that a *chayei sha'ah* is defined as a patient that has a terminal illness that will *eventually* lead to the death of that patient, the accepted *halakhic* approach is the twelve-month criterium. In contrast to a *chayei sha'ah*, a *chayei olam* is defined as someone who is expected to live *more* than a year post-treatment. Thus, the "medical suitability" criteria is best defined by Rav Schachter's conclusion: "*chayei olam adifei m'chayei sha'ah*— a *chayei olam* is chosen over a *chayei sha'ah* [in the case of only one ventilator]."[101]

This *halakhic* principle is strikingly similar to the short-term prognosis criteria used in the aforementioned New York State Task Force's ventilator allocation guidelines. However, the difference between the *halakhic* and secular criteria lie in the case of two people who are classified as *chayei olam*, in that their prognosis extends past one year, yet their expected lifespans are still very different. Although the NYS ventilator guidelines would use age-based categories or disability-based exclusion criteria to distinguish between the two patients, Rabbi Feinstein, according to Rav Tendler's translation and interpretation of *Iggros Moshe*, suggests that such a distinction would *not* be able to be made according to *halakha*: "Statistics concerning [patients suffering from] a specific illness, which indicate that the survival rate for the illness is limited to two or three years, whereas another patient, suffering from another illness, would, according to statistics, live ten years, have little halachic

[101] Schachter, Herschel. "Piskei Corona #15: Triage in Medical Decisions (Updated)". Published on April 6, 2020 on YUTorah.org: https://www.yutorah.org/lectures/lecture.cfm/951531/rabbi-hershel-schachter/piskei-corona-15-triage-in-medical-decisions-updated-/

import."[102] Notably, there are some disability-rights advocates, such as Collin Killick, even argue for as little as a one-year criteria, akin to the one-year *chayei sha'ah* cut-off.[103]

IV.2. Same Chances of Survival

In the second triage scenario, in which there are two patients who have the *same* medical suitability, different ethics-based triage principles must be employed.

IV.2a. Use Mishna Horiyot Criteria

If medical suitability cannot be used to distinguish between to patients, the criteria from Mishna Horiyot can be used. Among the aforementioned Acharonim who interpret the Mishna Horiyot literally, there are still varying opinions on how the Mishna's criteria should be employed. For instance, Rav Yaakov Emden discusses whether prioritization according to *kedusha* status extends to wives of Kohanim and Leviim.[104] Along the same lines, there is a question of whether a *wife* of a Torah scholar should precede an *am ha'aretz* (unlearned man); this could be logical because she would have priority access to charitable distribution of clothing and money.[105] However, Rabbi Moshe Margolies holds that saving her life would

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[102] *Iggrot* Moshe, Choshen Mishpat II:75, as translated by Rav Moshe D. Tendler, "*Responsa of Rav Moshe Feinstein*, Care of the Critically Ill: Volume I". (1996); p63.

[103] Bebinger, Martha. "After Uproar, Mass. Revises Guidelines On Who Gets An ICU Bed Or Ventilator Amid COVID-19 Surge." Updated on April 22, 2020. https://www.wbur.org/commonhealth/2020/04/20/mass-guidelines-ventilator-covid-coronavirus

[104] Emden, Rav Yaakov. *Migdal Oz, Even Bochen* 1:89

[105] Yerushalmi Horayot 3:4; *Beit Yosef, Yoreh Deah* 251*; Rama, Yoreh Deah* 251:9.

not take priority in this case,[106] in deference to the Mishna's statement that men are prioritized over women.

Yet, despite the above *poskim*, it is the common medical practice to abstain from using the Mishna's prioritization hierarchy. Dr. Abraham S. Abraham points out that nowadays, we do not know whether the average man has greater Torah knowledge and *mitzvah* observance than his female counterpart, and therefore we do not necessarily act according to the Mishna's prescribed gender prioritization.[107] The *Nishmat Avraham* also applies the same uncertainty to a decision between saving a *talmud chacham* over an *am ha'aretz*, positing that nowadays, we cannot make a triage decision solely based on ostensible Torah knowledge. Furthermore, along the same line of reasoning, since the genealogy of Kohanim and Leviim nowadays are uncertain, it would not make sense to base a prioritization scheme on this assumption.[108]

IV.2b. Lottery

If medical suitability is not distinguishable, and the Mishna in Horiyot is not followed, then there is a difference of opinion as to how to proceed with a triage decision. Some *poskim* maintain that in this case, a lottery is the fairest method of distribution when there is no other clear approach.[109] A lottery seems to be consistent with the previously-

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[106] R' Moshe Margolies, *Mareh HaPanim*, Yerushalmi Horayot 3:4.

[107] Abraham, Dr. Abraham S. *Nishmat Avraham*, Part 4, *Yoreh Deah*, 251:1.

[108] *Nishmat Avraham*, Ibid.

[109] Responsa *Be'Mareh Habazak* p. 96, in the name of Rabbi S. Yisraeli; cited by Rabbi Avraham Steinberg in *Encyclopedia of Jewish Medical Ethics*, 853.

mentioned Jewish tenet that *all* life is of infinitesimal value; therefore it would seem very difficult to make a value-based judgement and "play God". This perspective is also maintained by certain secular ethicists, such as Paul Ramsey, who was equally reluctant to "play God", stating, "men should stand aside as far as possible from the choice of who shall live and who shall die… we have no way of knowing how really and truly to estimate a man's societal worth."[110] This clearly parallel's Rabbi Bleich's aforementioned remarks about the sanctity of human life. However, Rabbi Walter Wurzberger did *not* agree that a lottery should determine triage decisions, asserting that "random choice can hardly qualify as a more humane method to resolve our dilemmas".[111]

Thus, if neither the Mishna Horiyot or a lottery is used to determine who gets the resource in the case of two medically-equivalent patients, then consisterations based on age-based criteria or social need may be used to decide.

IV.2c. Age-Based Criteria

R' Yaakov Emden[112] notably writes that a younger person takes precedence over an elderly person, which is very similar to the age-based criteria used by the aforementioned SIAARTI triage guidelines and the NYS guidelines who differentiate patients who have the same medical need according to age categories. However, according to Rabbi Dr. Avraham

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[110] Ramsey, Paul. *The Patient as Person.* New Haven, Conn.: Yale University Press. 1970; 256.

[111] Wurzberger, Rabbi Walter. *Ethics of Responsibility: Pluralistic Approaches to Covenantal Ethics.* Philadelphia, Penn.: Jewish Publication Society. 1994; 91

[112] Rav Yaakov Emden, *Migdal Oz, Even Bochen* 1:89

Steinberg, this seems to be a minority opinion among contemporary *poskim*.[113] Other *poskim*, such as Rav Feinstein and Rav Aurbach[114], argue that age in it of itself *cannot* be a halakhic factor; it can only be considered insofar as it naturally affects a patient's medical suitability. To this point, Rabbi Feinstein, according to Rabbi Tendler's translation and interpretation of the *Iggrot Moshe*, maintains, "Preference must *not* be given to a younger patient over an older patient… Although it is obvious that a twenty-year-old patient can live longer than a ninety-year-old patient, both must be treated exactly the same when they are presented for treatment."[115]

IV.2d. Social Value

The Jewish concept of social usefulness arises from the principle of "*tzibur tzrichim lo"*- being needed by the community. This is based on Rashi's commentary on the Gemara in Horiyot, where he rules that if two people's lives are endangered during a time of war, the person who is most essential for conducting the war should be saved first, because "*tzibur tzrichim lo*"— the nation needs him to win the war.[116] Although Rashi's statement was referring to an anointed kohen during a time of war, the concept of "*tzibur tzrichim lo*" can be extended to a pandemic, in which certain subsets of people are needed to protect the

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[113] Rabbi Dr. Avraham Steinberg, "The Coronavirus Pandemic 2019-20: Historical, Medical and Halakhic Perspectives." April 2020; page 36. http://web.colby.edu/coronaguidance/files/2020/04/Steinberg-Coronavirus-pandemic-historical-medical-and-halakhic-perspectives.pdf

[114] Rav Feinstein, Responsa *Iggrot Moshe* Choshen Mishpat II.75.7; R. S.Z. Auerbach, Responsa *Minchat Shlomo* II 82:2.

[115] Rav Feinstein, *Iggrot* Moshe, Choshen Mishpat II:75, as translated by Rav Moshe D. Tendler, "*Responsa of Rav Moshe Feinstein*, Care of the Critically Ill: Volume I" (1996); 66-67.

[116] Rashi, Horiyot 13a, on the *dibur hamatchil*, "Lehachyoto"

overall health of the population, such as healthcare workers, law enforcers, and essential public service personnel.

Rabbi Steinberg notes that according to Rabbi Yitzchak Zilberstein,[117] if one of the patients who needs a ventilator is a healthcare worker who is "providing care to coronavirus patients, [they] get preference to respiratory support",[118] granted that the medical suitability of all patients are the same. This is equivalent to Emanuel *et. al.*'s aforementioned recommendations regarding ventilator allocation based on social usefulness.

V. Conclusion

Upon a holistic analysis of the Jewish perspective on triage ethics, with a specific emphasis on the the ventilator allocation dilemmas, several parallels between Jewish and Secular triage ethics emerge. Although neither system maintains a singular homogenous approach, individual streams of thought within each system complement one another. Persad *et. al.*'s first principle of "treating people equally" is akin to the *halakhic* principle of *ain dochin nefesh mipnei nefesh*. However, as discussed, there are individual opinions within each system that either argue for or against the use of a lottery for allocating ventilators. Similarly, the third ethical principle of maximizing benefits, specifically by considering the patient's prognosis, is encapsulated in the preeminent Jewish triage criteria of medical suitability; although, the definition of short-term prognosis differs between the two systems.

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[117] Rav Yitzchak Zilberstein, in a number of places: Responsa *Nes Le'hitnoses*, 67; Essay of Rav Zilberstein, *Techumin* 37, 5777, pg. 85; *Shiurei Torah Le'rofim* 3:161.

[118] Cited by Rabbi Dr. Avraham Steinberg, "The Coronavirus Pandemic 2019-20: Historical, Medical and Halakhic Perspectives." April 2020; page 36. http://web.colby.edu/coronaguidance/files/2020/04/Steinberg-Coronavirus-pandemic-historical-medical-and-halakhic-perspectives.pdf

The second principle of favoring the worst off, which is only adopted by a relatively small amount of secular ethicists, does not seem to have a basis in Jewish thought. Lastly, Persad *et. al.*'s fourth principle of social usefulness is used as a secondary criteria for resource allocation in both Jewish and secular ethics. Thus, upon a concurrent analysis of contemporary triage *psak halakha* and various existing institutional triage guidelines, it remains evident that, during a pandemic such as COVID-19, the preeminent *halakhic* response to scarce ventilator allocation is almost identical to the overall trends in proposed secular guidelines.

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