

Rationing During a Pandemic Flu

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In 1918, the “Spanish Flu” infected a third of the world’s population, killing ten percent of those people.¹ Many experts fear we may be at the inception of such a pandemic.² The recent spread of swine flu has reminded the world that viruses can easily spread throughout the world in a pandemic manner. While the swine flu pandemic has been relatively mild,³ there is still the possibility that swine flu may turn into a dangerous crisis. Additionally, there is also the concern that another dangerous strain of influenza might develop into a pandemic.

In particular, scientists are fearful that an avian flu, a flu that originates from birds, could create such a crisis.⁴ The strain of avian flu that scientists are most fearful of is com-

1 John M. Barry, *The Great Influenza* p4 (Penguin Group, 2004). Barry calls the 1918 influenza epidemic the deadliest plague in history.

2 Leslie Loebel, Frontal lecture, *Ben Gurion University of the Negev*, 2006; Maurine Friedman, Frontal Lecture Frontal lecture, *Ben Gurion University of the Negev*, 2006.

3 Betsy McKay, As Flu Retreats Scientists Brace for its Return, *Wall Street Journal*, May 28, 2009, available at <http://online.wsj.com/article/SB124346642019860251.html>

4 Leslie Loebel, ad loc., Freedman Maurine, ad loc.

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monly called H5N1.⁵ Nancy Cox, head of the influenza branch of the Center for Disease Control, stated that further mutation of the avian flu in Asia could precipitate the worst pandemic in human history.⁶ Dr. Jai P. Narain, Director of the World Health Organization's communicable diseases department, declared in September 2005, "We may be at almost the last stage before the pandemic virus may emerge."⁷ Furthermore, Dr. Marc Lipsitch of the Harvard School of Public Health noted that "We are unprepared for a new pandemic... current response plans won't do much to slow a pandemic once it is under way."⁸ While this is the opinion of many experts, there are many other experts who feel this peril will never come to fruition.⁹

The prospect of a severe influenza pandemic poses a daunting public health threat to hospitals and the public. A severe influenza pandemic will put hospitals under extreme stress, as only so many beds, ventilators, nurses, and physicians will be available, and it is likely that more patients will require medical attention than can be treated. How will hospitals sort patients to determine priority for treat-

5 Leslie Loebel, ad loc.

6 Given at a meeting of the American Association for the Advancement of Science (February 2005). Printed with Permission from Dr. Cox (June 2009).

7 Lester Haines, Bird flu pandemic inevitable, says WHO, *The Register*, Science, 8 Sept. 2005. Available at http://www.theregister.co.uk/2005/09/08/bird_flu_pandemic/print.html As well as http://osd.gov.com/osd/200509_september/DHS_Daily_Report_2005-09-09.pdf.

8 Marc Lipsitch, Pandemic Flu: we are not prepared, *Medscape General Medicine*. 2005;7(2):56. Available at <http://www.medscape.com/viewarticle/502709>.

9 Doherty, Editorial, *Medical Journal of Australia*; Maurine Friedman, Frontal Lecture Frontal lecture, *Ben Gurion University of the Negev*, 2006; Ezekiel J. Emanuel & Allan Wertheimer, Who Should Get Influenza Vaccine When Not all Can, *Science* p854-855 vol 312, 2006.

ment? What criteria will be used to triage¹⁰ patients? Who will develop these criteria?^{11,12}

This paper is meant to launch discussion on the topic of dividing resources during a pandemic, through the lens of Jewish Law. Hopefully, such discussion will influence policy regarding such a pandemic, if God forbid, it becomes relevant.

I. Talmudic Background

There are a few passages in the Talmud, which are particularly relevant to this discussion.¹³

The Talmud states there is a prioritization hierarchy when it comes to saving lives, if all lives cannot be saved. The Talmud in Horayot states:

10 Triage is the process of sorting patients in a time of crisis to determine who receives what level of medical attention.

11 Tabery J, Mackett CW 3rd, Ethics of triage in the event of an influenza pandemic *Disaster Med Public Health Prep.* 114-8 Jun;2(2): 2008.

12 In an article in the New York Times magazine written by Sheri Fink published on August 25, 2009 discussing the triage done at Memorial hospital in New Orleans during Hurricane Katrina. According to the article, the doctors were forced to do on the spot triage of their medical capabilities, which had been inhibited by the hurricane. Doctors were under a lot of stress and were forced to make triage decisions under the most difficult of circumstances with very little food or sleep after being strained for hours of work. In the end the triage done by the doctors turned into a slippery slope, where the doctors performed euthanasia on many of the patients (according to the article). This case illustrates the need for a triage protocol for dire circumstances, such as a disaster or a pandemic. Triage is necessary in all cases where there are not enough resources to benefit those that need them. However, with a written protocol a clear-headed approach to the triage could be formulated. Furthermore, a protocol would prevent doctors from falling down a slippery slope and committing acts which society has deemed unethical and possibly even criminal.

13 David Etengoff, Triage in Halacha: The Threat of an Avian Flu Pandemic, *Journal of Halacha and Contemporary Society*, p75-81 (RJJ, 2008); Avraham Steinberg, Priorities in Medicine, *Encyclopedia of Jewish Medical Ethics* 849-850 (Feldheim 2003); Avraham Steinberg, Allocation of Scarce Resources, *Encyclopedia of Jewish Medical Ethics* 45-46 (Feldheim 2003).

“A man takes precedence over a woman in matters of saving life and the restoration of lost property, and a woman takes precedence over a man in respect to clothing and ransoming from captivity ... a priest takes precedence over an Israelite, an Israelite over a bastard ... this order applies only when all other attributes are equal. But if the bastard is a Torah scholar¹⁴ and the High Priest is unlearned, the scholarly bastard takes precedence over the ignorant High Priest.”¹⁵

It seems clear that religious scholarship and genealogy are important criteria in determining priorities.¹⁶ However, why these criteria are used to determine priorities in life saving matters remains unclear. Maimonides explains that although the Talmud states a Torah Scholar comes before a king, in practice a king is still saved first because the people need him.¹⁷ This is supported by the Talmud itself who states, “if a Torah scholar dies no one can replace him, however, anyone can become a king,”¹⁸ the Torah scholar is not saved because of his inherent holiness, rather he is saved because he is irreplaceable, which is a practical reason. In a similar vein as the Rambam, it is hard to imagine the president of the United States, or any other head of state, not being among the first to receive a flu vaccine. Further-

14 Rabbi Yisrael Meir Kagan in his Mishnah Berurah (OC: 547:22) quotes the Magen Avraham who says there are no true Torah Scholars in our day.

15 Talmud *Horiyot* 13a, Translation by Avraham Steinberg, ad loc. p849

16 Avraham Steinberg, ad loc.

17 The order of the Talmud is to explain the importance of a Torah scholar. Maimonides, Commentary on the Mishneh, *Horiyot* 3:8

18 Talmud *Horiyot* 13a

ing this point, Rabbi Moshe Tendler has explained¹⁹ that human life is infinite and therefore cannot be prioritized objectively. Practically, however, society may need certain persons more than others and therefore prioritization can be used. On the other hand, Rabbi Chaim Rappaport takes a literal approach and explains that a person with a higher level of sanctity does take a greater precedence for salvation.^{20 21}

Another source is the Talmud Bava Metzia 62a, which concerns first party ownership and scarce resources²²:

“If two are traveling on a journey [far from civilization] and one has a pitcher of water; if both drink, they will both die, but if only one drinks he can reach civilization – Ben Peturah taught: “it is better that both should drink and die than one live and behold his companion’s death.” Until Rabbi Akiva came and taught: “that your brother may live with you,’ your life takes precedence over his life.”

Based upon the opinion of Rabbi Akiva, the principle emerged that one’s own life comes before someone else’s life. Therefore, a person can, should or must save his own life before he is obligated to save the life of another.

Finally, the Talmud in Nedarim 80b discusses the case of two towns with a single water supply. According to Rabbi Yossi, the closer town is allowed to use the water not only for

19 Presented at a symposium “Medical Ethics the Jewish Point of View” held at the Mount Sinai School of Medicine, New York, NY Nov. 17 1984; also given at a frontal lecture in Yeshiva University, winter 2004.

20 Chaim Rappaport, *The Halachik Hierarchy of Triage, Le’ala*, June 2001. Rabbi Rappaport lists many proofs for his position.

21 It is interesting that this list of priorities is not mentioned in Maimonidies’s *Yad Hachazaka* with regards to saving lives, even though it is mentioned in Rabbi Yossef Cairo’s code of laws (*Bet Yossef Yoreh Deah* ch. 151).

22 David Etengoff, ad loc.

drinking but also for washing laundry even if it thereby deprives the neighboring town of its drinking water supply.”²³ The medieval commentator Rabbeinu Nissim, commonly known as the Ran, states that the community may use the water to wash clothing because lack of clean clothing involves physical suffering. However, it is unclear if the Ran is referring to physical discomfort or to a threat to life.²⁴ Professor Steinberg²⁵ and Rabbi Moshe Tendler²⁶ understand that the wash is done to prevent disease. According to this interpretation the passage in the Talmud teaches that society must be concerned with the health of future generations.²⁷ It also demonstrates that the definition of danger is understood as broad enough to include the prevention of future danger.^{28 29}

II. Background to H5N1

Influenza is a negative-strand RNA virus from the Orthomyxoviridae family. Two types of spikes project from the surface: one composed of Hemagglutinin (H protein), and second Neuraminidase (N protein). Both the H and N proteins are integral membrane proteins.³⁰ Hemagglut-

23 Translation by Avraham Steinberg, Allocation of scarce resources, *Encyclopedia of Jewish Medical Ethics*, p46 (Feldheim, 2003)

24 Nedarim 80b on the page of the Talmud itself

25 Avraham Steinberg, ad loc.

26 Frontal lecture, Yeshiva University, Winter 2004

27 Fred Rosner, The Rationing of Medical Care: The Jewish View, *Journal of Halach and Contemporary Society* Vol 6 (1983), p31

28 Avraham Steinberg, ad loc.

29 There are various other opinions on this matter as well, for example the second town might only be subject to discomfort but not actual danger (Responsa *Iggrot Moshe, Yoreh Deah*, Part 1 # 145)

30 William Strohl, Harriet Rouse, Bruce Fisher, *Microbiology*, p385 (Lippincott Williams and Wilkins, 2001)

tinin attaches the virus to the cell membrane as it enters the cell and Neuraminidase cleaves the viral capsid from the cell membrane³¹ as the virus proliferates.³² Influenza is a lytic virus meaning that it causes damage through cell death as well as through the subsequent immune response. It generally kills by compromising the respiratory system. Influenza has an 18 to 72 hour incubation period. The incubation period is followed by an onset period typically characterized by chills, high fever, muscle aches and extreme drowsiness. The disease runs its course in four to five days. The most serious problems, such as pneumonia, occur in the very young, the elderly and people who are immunodeficient.³³

The classification of Influenza into subtypes is done via the outer viral proteins, H and N. There are 14 H and 9 N, which have been described in animals and humans. However, among humans only three H (H1, H2, and H3) and two N (N1 and N2) subtypes have been observed. Human influenza viruses are therefore described as H1N1, H2N2, H3N2, etc.³⁴

As opposed to many other viruses, influenza shows marked variation in its antigenic properties, making it harder for the immune system to identify. This variation is caused by two properties of the influenza virus, antigenic drift and antigenic shift. Antigenic drift refers to random mutations in the virus's genetic makeup, leading to new versions of the virus. This is the cause of the seasonal flu, and the reason why a single person can get influenza mul-

31 Therefore many antivirals are neuraminidase inhibitors

32 Leslie Lobel, ad loc., Strohl, William et. all, ad loc.

33 William Strohl, et al. ad loc. p386-387

34 William Strohl, et al. ad loc. p387

multiple times in his or her lifetime. Antigenic shift refers to genetic exchanges, generally between species, and leads to a much more dangerous influenza strain that has the potential to start epidemics or even pandemics³⁵. When antigenic shift occurs very often the new strain of virus does not resemble any virus the immune system has been exposed to in the past. When such a shift occurs, initially the immune system cannot produce any antibodies to combat such a virus. Antigenic shift was responsible for the 1918-1919 pandemic that was responsible for twenty million deaths worldwide.³⁶ The 1918 pandemic was so devastating that in the city of Pittsburgh alone there was one flu related case every 90 seconds and one flu related death every ten minutes.³⁷ The 1957 and 1968 pandemics were also caused by antigenic shift.³⁸

What is alarming about the new strain of flu is that it contains a hemagglutinin antigen to which humanity has never been exposed, although it is endemic to the bird population. Without prior exposure to this virus, humans have little or no immune protection against it, and an influenza pandemic could ensue.³⁹ What makes this epidemic possibly so imminent is that it will take only one more random mutation in the current virus strain, which is in the wild, to make

35 A worldwide epidemic

36 William Stohl, et al. ad loc. p388-389. The frozen remains of a victim from the 1918 flu were used to identify the strain (*Lancet* Newsdesk, vol. 5 Nov 2005 p678).

37 Tabery J, Mackett CW 3rd, Ethics of triage in the event of an influenza pandemic *Disaster Med Public Health Prep.* 114-8 Jun;2(2): 2008

38 William Stohl, et al. ad loc. p388-389

39 Laura A. Stokowski, Nurses and Pandemic Influenza: Are We Ready?, *Medscape Nurses*, 03/14/2007, available at <http://cme.medscape.com/view-article/553512>

it transmittable to humans on a large scale.⁴⁰ Additionally the new wild strain has many similarities to the H1N1 strain from the 1918 pandemic.⁴¹ Furthermore, influenza is more dangerous than SARS because it has a four day incubation period when the patient unknowingly may infect many other people. In essence, influenza is the only disease that can truly become a pandemic.⁴² Finally and possibly the scariest aspect of this flu, is that in more than half the cases where a human has been infected by H5N1 the victim has died.⁴³

There are a few emerging approaches to preventing such a pandemic. One approach, which has historically been used to combat the flu, is a vaccine. However, there are many problems with such a method. First of all, a truly appropriate vaccine can only be made once the epidemic starts.⁴⁴ Therefore vaccine supply will be most limited during the first wave of the pandemic, when demand will be the greatest. There is an available H5N1 vaccine on the market,⁴⁵ however, it is in limited supply and can at best knock avian flu down to a regular case of the flu. Additionally, some strains of H5N1

40 *Lancet* Newsdesk, vol. 5 Nov 2005 p678

41 *Lancet* Newsdesk, vol. 5 Nov 2005 p678

42 Leonard A Mermer, Pandemic Avian influenza, *Lancet*, vol 5 issue 11 p666-667 November, 2005

43 Laura A. Stokowski, Nurses and Pandemic Influenza: Are We Ready?, *Medscape Nurses*, March 14, 2007, available at <http://cme.medscape.com/viewarticle/553512>. These cases have not caused pandemics because H5N1 has not mutated to a point where effective human to human transmission is possible.

44 Sido D. Mylius, Thomas J. Hagenaarus, Anna K. Lugner, Jacco Wallinga, Optimal Allocation of Pandemic Influenza Vaccine Depends on Age Risk and Timing, *Vaccine*, vol. 26 issue 29-30, 4 July 2008, p3742-3749. The flu shot that is given annually is made on a year by year basis after seeing, which particular strains are infecting humans.

45 WHO Avian Influenza Guideline, available at http://www.who.int/csr/disease/avian_influenza/guidelines/H5N1virus10March/en/index.html

have shown resistance to the vaccine.⁴⁶

Another approach to combating a pandemic is antivirals.⁴⁷ Antivirals are medications that treat viral infections. Some antivirals are used to cure a viral illness, others are used to shorten the time of the illness and others are used prophylactically, to prevent a person from getting a viral illness in the first place.⁴⁸ Many antivirals work by blocking viral replication. The antivirals inhibit the protein mentioned above neuraminidase. This would be particularly useful for healthcare workers. The drawback to this strategy is the limited supply of antivirals.⁴⁹ Additionally, antivirals only take off one day from the course a flu infection.⁵⁰ Furthermore, it is unclear how effective antivirals will be against a deadly flu, they may change its course so that it is no longer deadly or they may be ineffective.⁵¹

Finally, isolation of sick and exposed patients can be used to control the spread of the pandemic.⁵² This strategy

46 Recombinomic commentary April 29, 2008 Available at http://www.recombinomics.com/News/04290803/H5N1_Egypt_Vaccine_More.html

47 Upshur, Ross, STAND ON GUARD FOR THEE, Ethical considerations in preparedness planning for pandemic influenza, *University of Toronto joint center for Bioethics*, November 2005, Available at http://www.jointcentrefor-bioethics.ca/people/documents/upshur_stand_guard.pdf

48 Laura Newman, As Novel H1N1 Influenza Reaches Pandemic Level, Public Health Preparedness Efforts Build: The Role of Antiviral Medications, *Medscape Public Health & Prevention* 2009 Medscape, LLC, available at http://www.medscape.com/viewarticle/704751_3

49 Ross Upshur, ad loc.

50 Mary Ellen Harrod, Sean Emery, Antivirals in the management of an influenza epidemic, *Medical Journal of Australia* Volume 185 Number 10 November 20, 2006, S58-S61 available at www.mja.com.au/public/issues/185_10.../har10868_fm.pdf; Freedman, Maurine, ad loc

51 Otto Kass, Minson O'Brien, Ethics and severe pandemic influenza, *biosecurity and bioterrorism: biodefense*, 2008 Sep; 6(3):234-36; Harrod, Emery, ad loc.

52 Upshur ad loc.

was used relatively effectively with SARS. The problem with isolation is it is hard to achieve compliance.⁵³ Additionally, quarantine causes an ethical problem of restricting individual rights.⁵⁴

III. Background in Secular Medical Ethics

The four concepts employed in organizing the moral interactions of the physician and patient are described as Autonomy (self-governing), Non-maleficence (not doing harm), Beneficence (doing the most good), and Justice.⁵⁵ These principles comprised the basis for medical moral practices as early as the 1970's. Prior to this period beneficence and non-maleficence seem to have comprised the bulk of medical-moral principles. Indeed, the Hippocratic Oath only expresses the duties of beneficence and non-maleficence but makes no mention of providing for patient autonomy in decision making.⁵⁶

Autonomy is a principle generally not relevant to a public health discussion. This is generally true for our discussion as well. However, one of the strategies to combat H5N1 is to isolate patients infected with the disease as well as their contacts. This mandated isolation would limit personal freedom of movement as well as other freedoms, thus impinging upon the autonomy of the patient.⁵⁷

53 Robin P. Silverstein, Comments on Who Should Get Influenza Vaccine When Not all Can, by Ezekiel J. Emanuel & Allan Wertheimer, *Science*, May 12, 2006 vol.312.

54 This will be discussed at length below

55 Beuachamp and Childress p61

56 JM Luce, DB White. A history of Ethics and Law in the Intensive Care Unit, *Critical Care Clinics* 25 (2009) p223;

57 Otto Kass, Minson O'Brien, ad loc.

In the case of an influenza pandemic there will also be a question of whether we value utilitarianism over egalitarianism or vice versa.⁵⁸ This is in essence a conflict between beneficence and justice. Both utilitarianism and beneficence dictate that one should save the most life possible. Additionally, utility must be judged between medical utility, which focuses on the patient and social utility, which focuses on society.⁵⁹ In a similar vein, Alison P. Gavilini, Jan Medlok, Gretchen P. Chapman claim the young should be vaccinated first because they serve as super-vectors spreading the disease at breakneck speeds. This in turn would save the most lives on a whole.⁶⁰ On the other hand, egalitarianism and justice demand all patients should be given a fair chance. Furthermore, even the definition of fair chance is debatable. “Fair” may mean that we give everyone the same amount of resources. Conversely, it may mean that we give people with unequal claims an unequal amount.⁶¹ The National Vaccine Advisory Commission (NVAC) & Advisory Committee on Immunization Policy (ACIP) say that the ill and the elderly

58 J Tabery, CW Mackett, Ethics of triage in the event of an influenza pandemic, *Disaster Med Public Health Prep* 2008 Jun; 2(2): p114-8.

59 For example Social utility demands saving those who are necessary to fight the epidemic (Tabery, Mackett, ad loc.). Kass, Otto, O’Brien and Minson claim propose must be extended to preserve a functioning society. This includes not only medical personal, but water, electrical, transportation, gas station personal, police, fire fighters, delivery services, etc. as well. They explain this is important because of the critical relationship between social infrastructure and health (Kass et al. ad loc.).

60 Gavilini, Medlok, Chapman, Comments on Who Should Get Influenza Vaccine When Not all Can, by Ezekiel J. Emanuel & Allan Wertheimer, *Science*, May 12, 2006 vol.312.

61 *Eleventh Futures Forum on the ethical governance of pandemic influenza preparedness*, held in Copenhagen, Denmark 28–29 June 2007 by WHO Europe, available at www.euro.who.int/Document/E91310.pdf

should get resources first because they are the most prone to infection, even though they require more resources than younger and healthier patients.⁶²

Ezekiel Emanuel and Allan Wertheimer propose two possible strategies to deal with an influenza pandemic. The first strategy, the “fair innings” philosophy, states that everyone has a right to a full life.⁶³ This would prioritize saving the lives of younger people over older people. The second strategy, which is their conclusion, is “investment refinement.” This philosophy gives priority to those who have been invested into but have not reaped the rewards of such an investment. This philosophy gives priority to people between the ages of 13 and 40, in whom society has invested but has not received any returns on its investment.⁶⁴ James Tabery and Charles Makett propose that a compromise must be made between these two extremes.⁶⁵ Similarly, Kathy Kinlaw and Robert Levine of the CDC

62 Ezekiel J. Emanuel, Wertheimer, Allen, Who Should Get Influenza Vaccine When Not all Can, *Science*, 2006, 312:854-855,

63 Harvey S. Frey comments on Emanuel and Wertheimer’s article, saying an algorithm should be used based on the odds of a person dying from the flu combined with how many years of life are being saved (Harvey S. Frey, Comments on Who Should Get Influenza Vaccine When Not all Can, by Ezekiel J. Emanuel & Allan Wertheimer, *Science*, May 12, 2006 vol.312.)

64 Emanuel, Wertheimer, ad loc. According to Emanuel and Wertheimer, vaccine production and distribution workers as well as front line case health care workers are given priority before the 13-40 year old algorithm is even calculated. In the 13-40 ages set, priority is given to key government leaders, military police and fire workers, utility and transportation workers, telecommunication workers and IT workers and funeral directors. Robin P. Silverstein wrote a response agreeing with the premise of Emanuel and Wertheimer, however, he feels children should be vaccinated first. First of all parents invest a tremendous amount into young children. Furthermore, children serve as super-vectors spreading the virus at incredible speeds and it is unrealistic to expect there to be compliance with isolation of children. (comments on the article by Emanuel and Wertheimer in *Science*)

65 Tabery, Makett, ad loc.

recommend using a utilitarian approach, but which still takes into account non-malefeasance and justice.⁶⁶

The principle of non-malefeasance may also need to be compromised in order to combat the epidemic. As an example, privacy may need to be compromised in order to create a database of people infected with the disease. Similarly, in the aftermath of Hurricane Katrina penalties were waived for failure to comply with aspects of federal privacy regulations. Non-malefeasance would dictate to minimize such infringements, possibly limiting permitted confidentially breaches to a need-to-know basis, minimizing the likelihood for harm.⁶⁷

IV. The Ethical Questions to be Answered

The following is a list of theoretical questions that come out from the ethical dilemmas listed above, as well as other questions raised by other ethicists and public health officials. These questions are intended as a springboard to find the rulings of various authorities of Jewish Law, and to apply these rulings to practical applications rather than simply theoretical ideas.

At the international association of bioethics, Daniel Wikler and Sarah Marchand proposed a number of questions that will arise in a flu pandemic.⁶⁸ The first question proposed by Wikler and Marchand is the previously men-

66 Kathy Kinlaw, Robert Levine, Ethical Guidelines in Pandemic Influenza, *Ethics Subcommittee of the Advisory Committee to the Director, Centers for Disease Control and Prevention*, February 15, 2007, available at www.pandemicflu.utah.gov/docs/20070515-PanFluEthicGuides.pdf

67 Kass et al, ad loc.

68 Sarah Marchand, Daniel Wikler, Harvard School of Public Health, *Bioethics World Congress, International Association of Bioethics*, August 7, 2006.

tioned dilemma of whether to save those at the highest risk of dying or to save the most lives.⁶⁹ The second question is how to deal with the conflict between saving the most lives initially vs. saving the most lives in the long run.⁷⁰ In other words saving fewer lives initially may save more lives in the long run. This is in essence a question of vectors that will be discussed later.

Another question that arises is do we attempt to vaccinate in order to receive indirect health care benefits. An example of indirect health care benefits is vaccinating doctors and other health care professionals.⁷¹ Do we vaccinate these individuals first? In the long run, doing so will save more lives by letting the medical system continue to operate. In answering this, one must also consider other ques-

69 “Pandemic PTO 1: Coincidence of Saving Those at Highest Risk and Saving the Most Lives You have 1,000 vaccines to allocate. Suppose you can vaccinate either (but not both) of these groups: A: 1,000 people at high risk of dying without the vaccine (50% case mortality rate) B: 1,000 people at low risk of dying without the vaccine (2% case mortality rate). Assume that without the vaccine 30% of the 1,000 people in both groups would become sick with the flu (out of 1,000 people, 300 people would get sick). Assume that every one in both groups is fully protected by the vaccine, and that no one transmits the flu to others. To which group would you give the vaccine?” Wikler and Marchand, ad loc.

70 76 Pandemic PTO 2: Conflict between Saving Those at Highest Risk vs. Saving the Most Lives. There are two different, available life-saving treatments for different groups of people.

A: Treatment for people who with no treatment have a 50% risk of dying.

B: Treatment for people who with no treatment have a 2% risk of dying.

There is sufficient money to treat 10 people in group A. How many people in group B would need to be treated in order for you to believe that both treatment programs had equal moral priority on our scarce resources? (i) <250? (ii) 250 or more? Wikler and Marchand, ad loc.

71 In an article in *BMJ*, Daniel K. Sokol writes that will be extremely difficult to choose the general practitioners who will be the flu doctors during a pandemic flu. (Daniel K Sokol, Who Wants to be the Flu Doctor?, *BMJ*, 25 July 2009, volume 339, p200). He leaves the question as an open one. However, a possible solution would be to vaccinate those who go to work and not those who don't. This would be fair being that those who go to work need the vaccinations and those who don't go to work don't need the vaccinations.

tions. How many lives do the health care workers have to save to justify this approach? Does it make a difference if these patients are dying from the flu or other diseases? If we do vaccinate health care workers first, who are the people in the category of health care workers? Does it make a difference whether the pandemic has already started or if we are vaccinating preemptively?⁷²

Another question we must ask ourselves is whether there is a value in preserving a functional society? Is there an obligation on businesses to stockpile vaccines? Do we preferentially give vaccines to the young who are necessary for society to function in the future? Similarly, do we vaccinate other necessary workers to allow society to function? Is it valid to assume that if society ceases to function more lives will be lost?

On a more philosophical plane, do we value utilitarianism, and thus desire to save the most lives, or egalitarianism and try to save those most in need? If we value utility do we value medical utility or social utility? Medical utility is the philosophy that one saves the most lives possible (irrelevant of how much a person is ‘worth’ to society), while social utility is the philosophy where one saves as many lives as possible where the lives one saves who are worth the most to society (the most good to the most amount of people possible, using this philosophy we would decide how much a benefits society when we decide whether to save them).⁷³ Within medical utility there is a question of whether we only take into account medical means to save

72 Mylius, Hagneurus, ad loc.

73 The Gemarah in *Horiyot*, according to one of the interpretations we mentioned, operates under the principle of social utility.

lives or we save the most lives using whatever means available, whether they be medical or non-medical.⁷⁴ Do we give some lives more value than others?

There are international questions as well. Does one country have an obligation to help off a lesser off country get vaccines at the expense of its own citizens? How should we deal with the concept of a coordinated approach by various countries together?⁷⁵

Finally, we must address whether it is right to limit public liberty in the interest of public health?

V. Answers Gleaned from the Poskim

Regarding the topic of triage, Rabbi Avraham Yishayah Krelitz in his work the *Chazon Ish* explains that if one who is not at risk for dying of thirst has two people in front of him who are dying of thirst, “one is obligated to give the water to one person whom he picks...”⁷⁶ In other words one must work to save complete life at all costs, even if other lives will be lost more quickly. However, if the people are both going to die in any event then their lives should be equally extended as long as possible.⁷⁷

Rabbi Ephraim Oshry takes this approach as well. During the Holocaust, a community leader asked Rabbi Oshry

74 Although it seems obvious we would save the most lives possible, using whatever means available to us. Very often only medical means are taken into account when dividing resources. For example the Obama health care bill uses only medical means in an approach to health care and not other means such as preventative measures that also save lives.

75 WHO policy based on that of Belgium; we will get strain information from Far East. (WHO Avian Influenza Guideline, ad loc.)

76 *Chazon Ish* Glosses on Bava Metzion Siman 2 62a. This also appears in *Chazon Ish Choshen Mishpat Siman 20*, p62.

77 This is stated explicitly in *Chazon Ish* gloss on Rabbi Chaim Soloveitchik, as well as implied by Rabbi Krelitz's statements here.

what he should do when he is asked to send a certain amount of people to be deported to a concentration camp. Rabbi Oshri ruled it was the duty of community leaders to take courage and operate in any way they saw fit to save as many people as possible. This meant the community leaders could in essence send some people to their deaths in order to save the whole town.⁷⁸ Similarly, Rabbi Shlomo Zalman Auerbach ruled⁷⁹ that age does not go into the equation of whom one saves first. What one should only look into is the level of danger and the chance to save the most people. According to these authorities, we are required to save the most lives possible regardless of other values, such as a “fair innings” approach as mentioned above.⁸⁰

The *Tzitz Eliezer* addresses another issue regarding triage. What if we have enough vaccines to vaccinate a hun-

78 *Shut Mimamakim* vol. 5 Siman 1. Interestingly, Rabbi Oshry allows a person to grab a white card that would save his own life, even though it would prevent another person from being saved. He also does not mention the order of priorities of the Gemarah in Horiyot, however, we will deal with this later in the article.

79 *Minchat Shlomo Tanina*, 86:1, in the same response he mentions that it would be extremely difficult follow the gemarah in Horiyot today.

80 There are further problems with the fair chances and similar approaches. Such scenarios assume everyone is equal and deserves an equal lifespan, however, Judaism doesn't necessarily believe one person is equal to another. (This point is made very vehemently in an article written by Chaim Rapoport in, *The Halachik Hierarchy for Triage: a Rebuttal of a Contemporary View, Le'ela*, June 2001. In this article Rabbi Rapoport argues that the Talmudic statement in Tractate Horiyot is the true way to divide medical resources in contrast to many other contemporary writers). Judaism believes, it is God's job to judge to make such decisions and adjudicate such judgments, not ours. (Rabbi Shlomo Daichovsky, *Priorities in public life saving, Torah Shebaal Peh*, 31, 1990 p44 (this is also echoed in an unpublished article by R' Daichovsky written in 2009). Weinberger, Moshe, *priorities in treating patients, Assia Eimek Halacha* 1, p109-117, (1985)). Rabbi Kook goes as far to say “the worth of a person is hidden beneath the eye, there are people worth more than 600,000 and if not maybe one of his descendants maybe worth that much.” (*Mishpat Cohen* 142. R' Kook uses this to argue that one person may never be sacrificed or even put in mortal danger to save a large amount of others, except in a case of war.).

dred elderly people, but the same amount of vaccines could be given to a thousand healthy people. In either case the same amount of people will be saved under the laws of probability. However, if an older person gets the disease they will definitely die and even if he gets the vaccine there is a chance he will die anyway. However, if the young person gets the vaccine he will definitely get saved – the vaccine is given to the younger person. In other words if, based on the laws of probability, the number of lives to be saved by our efforts would be equal, then we save people who will definitely be saved as opposed to the people who only have a chance of being saved. This is based on the Talmudic dictum that a “questionable claim cannot take something away from a definite claim.”⁸¹ The *Tzitz Eliezer* says this applies to medicine where he states, “we drop a *safek* and hold on to a *vadai*”.⁸² He bases this on the *Pri Megadim* who says, “A *safek* does not exist in the case of a *vadai* for Pikuach Nefesh.”^{83 84} This approach would also dictate that, all things being equal, we would give medicine to someone who is definitely in danger rather than someone who only might be in danger.⁸⁵

One of the questions raised above was regarding the differences in rationing before a pandemic starts and after the pandemic has started already. Rabbi Shabbtai Rappaport addresses this issue in an article in *Assia*. Rabbi Rap-

81 Bavli, *Pesachim* 9a; *Yevamot* 19b, 38a, 38b; *Avoda Zara* 41b; *Chulin* 10a; *Nida* 15b .

82 *Tzitz Eliezer* vol. 9 28:3

83 Beginning of Siman 328 in the *Mishbatzot Zahav*

84 Others echo this approach as well (*Minchas Shlomo, Tanina*, 86:1. Avraham Avraham, *Nishmat Avraham*, Yoreh De'ah 252:2; Rosner, Fred, Friedman, Alan, Allocation of Scarce Medical Resources and Jewish Law, *le'ela*, April 1995).

85 This is the actual case the *Tzitz Eliezer* is dealing with, however the others seem to give this principle broader applications.

paoport posits that before a pandemic, society should focus on preventative medicine,⁸⁶ while during a pandemic it is important to focus on the sick people who are in front of us.⁸⁷ Before the pandemic has started, a country with more resources that has not been hit by the pandemic may be obligated to give resources to a country that has been hit.^{88 89}

Many decisers give certain leniencies in how much Jewish law can be bent for the good of society, will only be given once the pandemic has actually started.⁹⁰ The *Tzitz Eliezer* rules that during says a physician should put himself in danger in order to stop an epidemic and save more lives, as opposed to the regular situation where a physician is prohibited from placing his life in danger to save others.⁹¹ Rabbi Kook states, “Different rules apply when one is saving an entire nation because that is a unique case.”⁹² Furthermore, based on the ruling of

86 *Tzitz Eliezer* 9:17 (in this case the *Tzitz Eliezer* is talking about saving one person in order to prevent a greater epidemic to occur); Rappaport, Shabttai, Priorities in Allocating Public Resources for Medicine, *Assia*, 49-50, Tamuz 1990, p17-5.

87 Shabttai Rappaport, ad loc.

88 Shabttai Rappaport, ad loc.; *Shevet Miyehudah* 1:8. This is based on the opinion of the *Kuzari* that all people are considered individual organs in the body, which is a nation. Therefore nations must give charity to other nations, like all other people.

89 An issue, although not discussed directly by the Halachik decisers and therefore not really relevant for our discussion, bears some mentioning. It seems based on the ruling of Rabbi Akiva in the Talmud Bava Metziah, which is basically universally accepted; where he states one’s own life takes precedence over another. A country with medication must first worry about its own citizens before attempting to aid another country.

90 *Chazon Ish Ohalot* 22:32

91 *Tzitz Eliezer* 9:17

92 Rabbi Kook in Mishpat Cohen Siman 143 p315-316, This is also said in context of a person putting himself in danger to save more lives.

Rabbi Oshri mentioned above, we can conclude, during a pandemic there is an obligation to save as many lives as possible at all costs.⁹³

On the other hand, in a private communication with Rabbi Daichovsky he told the author that there is a value in saving people whom society needs in order to preserve a functional society.⁹⁴ This is based on the principle of social utility.⁹⁵ For example it would be hard to imagine a world where the president of the United States, or any other head of state, did not receive preventative care in the case of an epidemic.

At the same time, Rabbi Daichovsky told the author, we must vaccinate the super-vectors, a.k.a. young children, because they are considered *Rodfim*, one who pursues another individual to kill him. If one is obligated to kill a person so that he does not kill others, how much more so is one obligated to save a person so that he does not kill others.⁹⁶

Rabbi Daichovsky also told the author, we vaccinate

93 Rabbi Oshri, a loc.,

94 Rabbi Daichovsky, personal communication. Rabbi Moshe Tendler as quoted in by Fred Rosner in an article in the *Journal of Halacha and Contemporary Society* No. VI, 1983, p29-31; additionally stated by Rabbi Tendler in a frontal lecture at Yeshiva University, Fall 2004. This is based on the Gemarah in Horiyot 13a, and the Rambam's elucidation on the Mishnah in that place.

95 The author surmises that Rabbi Daichovsky bases his opinion on the Mishna in *Horiyot*.

96 Rabbi Daichovsky, personal communication. Rabbi Kook also implies this when he says the larger community is more important than the individual in terms of saving lives. It should be noted that Rabbi Micha Ha'Levi, the Rosh Yeshiva of Yeshivah Gevoah of Nachalat Yitzchak argues on this and he states one saves the person who has the most risk of dying and does not look at the greater public health picture. He says the law of the pursuer only applies when a person is saved by the given action (personal communication). However, this does not seem to be the majority rule.

health care workers before anyone else. This is because health care workers are needed to fight the epidemic.⁹⁷ This can be implied from the *Tzitz Eliezer* as well; he rules that a doctor who has a medication that can save him from possible danger he should take the medication even if the medication could save a patient from definite danger. The *Tzitz Eliezer* bases this on the principle of one's own life comes before the life of someone else.⁹⁸ We can add a variety of reasons to support this position as well. First of all, health care professionals may not go to work if they are not immunized. Secondly, the health care workers are in danger's way and they may have the greatest need for the medications. Finally, the physicians have possession of the medications for a period of time; therefore, they have a special right to the medication.⁹⁹ This follows the general rule we have been speaking of until now; we use a calculus to figure out an algorithm to save the most lives. Furthermore, this answers the ethical question of whether Judaism favors egalitarians or utilitarianism when saving lives. Judaism definitely and clearly supports a utilitarian approach saving the most lives as possible.

Judaism in the practical sense does not value one life over another. The Chazon Ish says the order of priority listed in the Talmud Horiyut is what we follow when deciding

97 Rabbi Daichovsky (personal communication)

98 *Tzitz Eliezer* 9:28 part 3

99 It can be implied from the *Tzitz Eliezer* mentioned above that when a doctor receives medication to administer to a patient he is considered the possessor the medication for that period of time.

whom to save.¹⁰⁰ However, Rabbi Davis Etengoff in an article in the *Journal of Halacha and Contemporary Society* brings a large discussion among the modern authorities of Jewish law regarding whether the Talmud in Horiyot is an ideal way to divide resources in our times.¹⁰¹ Furthermore, Rabbi Auerbach states it is impossible to apply these rules in our times.¹⁰² Rabbi Feinstein seconds this approach.¹⁰³ It

100 This is the opinion of the Chazon Ish on *Bava Metziah* 62a, this is also echoed by his opinion in *Yoreh Deah*. The Chazon Ish lists a different order of priorities in his comments on the commentary of Rabbi Chaim of Brisk on the Rambam. There he states the order of who is to be saved is not applicable. Rabbi Vosner in his *Shevat Halevi* Siman 342 states we rule according to the opinion found in *Bava Metziah*.

This makes sense if we assume the *Chazon Ish* is stating his own opinion in *Bava Metziah* and on the *Shulchan Aruch* and in his glosses he is stating his interpretation of the Rambam. The Rambam is silent with regards to any limitations on the rule of one shall submit to death and not transgress. This implies that in contrast to other commentators the Rambam rules one must submit to death before killing somebody even passively. Therefore, when the Rambam comes to the exegesis of Rabbi Akiva he must use this to teach, if a person is going to die he doesn't have to kill himself to save someone else, because that person would only have to give the water right back. However, all other exegetes believe a person never has to be killed before killing someone else passively. Therefore, the exegesis of Rabbi Akiva is used to teach that a saving a full life is more important than saving a partial life. This all adds up to a conclusion that if there are resources to only save one life, or to temporarily elongate the life of two people. According to the Rambam, one should divide resources equally. This is because he does not except the exegesis of temporary life being more important than permanent life. However, the rest of the commentators believe that since permanent life is infinitely more important than temporary life we follow the rules of the Talmud Horiyot (based on Moshe Weinberger, *Priorities in Treatment of Patients When there is not Enough Medication, Assia, Emek Halacha*).

It is also possible that the Rambam, as indicated by his position in his commentary on the Mishnah, and the absence of the rules of the Talmud in Horiyot in his *Yad Ha'Chazakah*, sees the Talmud in Horiyot as an explanation of people the nation needs at that time, not as a binding list based on priorities of holiness.

101 David Etengoff, *Triage in Halacha: the Threat of an Avian Flu Epidemic, Journal of Halacha and Contemporary Society*, No. 55, Spring 2008, p84-90

102 *Minchat Shlomo*, 86:60

103 *Iggrot Moshe* Choshen Mishpat 2 73:2. Along these lines the *Mishnah Berurah* states that we have no Torah Scholars in our time and this cannot be used as a way to decide, which person should be saved first (547:12), the *Magen Avraham* states this as well.

seems based on this that we cannot follow the rules of the Talmud in Horiyot on a practical level and we will not say one person has more of a right to life than another.¹⁰⁴ However, we do save people the community needs such as medical professionals and military professionals.¹⁰⁵ One exception to this is the case of a person who has less than a year to live; in this case, we will not give medication to a patient who can live at most less than a year's time.^{106 107}

VI. Conclusion

In conclusion, the issues of a possible avian or swine flu epidemic, or even pandemic, are threats the world must take seriously. Their effects may be devastating. To minimize the damages of these possible scenarios, positive action must be taken now to prepare for such a scenario. These preparations include making ethical and public health decisions now, so that a plan may be in place if such a disaster will, God forbid, occur. The Torah is not silent

104 *Iggrot Moshe* Choshen Mishpat 2 75:2

105 Rabbi Daichovsky personal communication Shavuot 2009, Rabbi Moshe Tendler cited by Rosner F, *NY State J Med* 83:353, 1983 as well as a frontal lecture in Yeshiva University, Fall 2004.

106 *Minchat Shlomo* 86:60, *Iggrot Moshe* Choshen Mishpat 2 75:2.

107 Rabbi Moshe Sternbach has a very novel approach to procure resources in order that they be used for a patient who can be saved as opposed to a patient who can only be given temporary life. He rules, If a ventilator is being used by a patient who has only a year to live and can be used to save someone who will have many years to live, the resources should be given to the person who has the potential to live many more years. If the resources are being given on a discrete system they should be simply be given to the 'healthy' person. However, if the therapy is continuous, such as with a respirator, a timer should be employed to stop the therapy and then it should be given to the patient who can be given many years to live. However, this may pose a problem, or even be impossible, because of the patient's family. (*Teshuvos VeHanbagos* Siman 585. The use of a timer follows the law of the state of Israel regarding turning off a respirator on terminally ill patients who request their lives to be ended).

on these issues and offers many pearls of wisdom on how to operate during such a catastrophe. This wisdom is especially relevant in the State of Israel, whose legal system of Mishpat Ivri is based upon Torah Law. The goal of this paper has been to demonstrate how Torah law may impact these ethical and public health decisions and to continue discussion on what the definitive approach of Judaism is in such a scenario. Hopefully, as scholarship continues, we will reach Halachic decisions that can be followed immediately if the unfortunate event of a pandemic.