An Exploration of the Fair Innings Argument and its Relevance to Addressing Inequalities in Health Care

“Mirror, Mirror on the wall, who’s the fairest of them all?”

Imagine you are a staff pharmacist working in a hospital with a level-one trauma center. The emergency department pharmacy specialist is on vacation and you are filling in for her one Wednesday evening. As you are finishing up your dinner, about to go back out on the floor, you get the word that there has been a very serious automobile accident involving a 21-year-old college student that was driving home to visit his parents for the evening. Upon the young man’s arrival to the ER you learn that he has severe internal bleeding. The ER physicians try using aminocaproic acid and desmopressin to control the patient’s bleeding. None of their efforts seem to be working. Finally, it is decided that the patient should be put on Factor-VII, a very expensive hemostatic agent. As a staff pharmacist you know that the pharmacy does not carry very much of this product. You go ahead and verify the order and call the pharmacy to find out if they even have any of the product in stock.

While you are speaking with one of your colleagues they inform you that they only have enough Factor VII to provide two doses based on your patient’s height, weight, and other dosing parameters. Given the severity of the young man’s situation you know that he will definitely need more than one dose and possibly more than two doses. They tell you that they have tried calling other hospitals in the area and the soonest they would be able to get more of the medication would be in 5 or 6 hours. Given that the medication must be started immediately and each dose given every 2 hours, you figure that this is going to have to be good enough and hope that they can get additional medication as soon as possible. However, the other pharmacist also tells you that they just received another order for this same medication for an 82-year-old patient that had surgery earlier that day and is now experiencing severe bleeding complications that cannot be controlled with other medications. The pharmacy technicians have not prepared the Factor VII for this patient, so you realize there is an opportunity to potentially still use what is available for your 21-year-old patient instead of the 82-year-old patient.

You decide to call the surgical ICU attending physician to discuss the situation about which patient should get the medication. It is clear that whoever does not get it immediately will likely die, and if both patients are underdosed, they both run a high risk of dying. In talking with SICU physician you learn that the 82-year-old patient lives with his wife and has led a relatively healthy lifestyle. He has several grandchildren that he sees often and is actively involved in each of their lives. His bleeding complication following surgery was completely unexpected, but it is strongly believed that if he receives the Factor VII, he has a good prognosis for fully recovering and living several years longer. Likewise, you inform the physician that your patient is an otherwise healthy 21-year-old college student that has his whole life ahead of him, and that he also has a very good prognosis of a full recovery if he receives this urgently needed treatment.
In this type of situation, which patient should get treated? Both patients are otherwise healthy and have good prognoses for survival if treated. The only difference between them is their age. Do you not treat the older patient because he has already lived what many would consider to be a full life, even though he still has the potential for living several more years? Or, do you not treat the young man, who has not even come close to living what would be considered a full life, because the ER physician did not produce an order for the Factor VII therapy before the SICU physician? What other unforeseen health issues are the old man likely to incur in the near future relative to the young man, and how much will it cost to maintain the health of these respective patients both presently and in the future?

In an age where people are living longer and the population is continuously growing, the propensity for disease and other medical complications increases. This however, is combated by improvements in medical technology and breakthroughs in new drug therapies. The societal stigma surrounding death and dying and the desire to provide equitable healthcare at minimum costs is counterintuitive to the rising overall costs of healthcare associated with increased longevity and advancements in technology. The solution to addressing these issues inherently involves making morally and ethically challenging decisions. Some form of rationing seems inevitable and the use of biological age has been advocated as a criterion for such rationing. The basis for age-based rationing, as well as the proposed solutions for employing these measures, such as the Fair Innings Argument, are complex. Under certain circumstances, rationing by age seems both morally permissible and justified while at other times would seem morally reprehensible. Given the pervasive use of pharmacologic therapy and the continuous development and rising costs of new medications, it is reasonable to question how the practice of age-based rationing could affect the practice of pharmacy.

The general issue of equity is central to the analysis of resource allocation in health care and specifically the desire to reduce inequalities in health.\(^1\) A great deal of debate exists that focuses on philosophical and policy questions about what makes some people more deserving of care than others, and whether or not society should adopt a forgiving stance towards those who have compromised their health status in some way, and offer access to treatment.\(^2\) Additionally, there exists a need to distinguish between the goals of raising the overall level of health for the worse-off versus reducing inequality across society as a whole.\(^3\) It is, therefore, necessary to clarify what it is that is to be made more equal within the realm of health care provision. These are tough decisions and are based on value judgments and trading off one priority against another.\(^2\)

In evaluating multiple options for improving health, the overall question that is normally asked is “which of the alternatives is likely to improve the health of the at-risk population the most?”\(^1\) In the study of health economics the issue of cost enters the evaluation of these options in order to determine what will have to be sacrificed in order to achieve the claimed benefits when resources are constrained. If the costs are ignored, then the sacrifices that others will have to bear are also ignored. This is undesirable, especially if the costs are so great that the overall health of the population may be diminished if large amounts of resources are poured into activities that do a relatively small amount of good.\(^2\) The achievement of equity in health care, in particular the desire to reduce inequalities in health, is a difficult issue to tackle because there is no agreement
on a fundamental level as to which equity principle should be pursued, how it is to be formulated in a precise enough manner to enable success or failure to be measured, and what would need to be done to make the system more equitable without sacrificing so many other objectives that it would not make it worthwhile.1, 2, 4

In order to begin thinking about which equity principle to pursue, it is necessary to establish what is meant by health in this context. There are many different ways of conceptualizing health. In a clinical context the focus is usually on diseases or conditions whose identification dictates the recommendation of treatments that are available and appropriate. From this viewpoint, then, a healthy individual is someone who does not have any identifiable disease, and the health of populations is measured in terms of the prevalence and distribution of diseases.5 When evaluating a disease it is common to examine the severity in terms of the probability that it will lead to impending or premature death. Consequently, age-at-death and cause-of-death become the focus of information used for estimating the health of populations, and of different subgroups within populations.5

This view then sets the stage for using life expectancy and age as indicators of health and potential determinants for rationing health care. Although age alone is not a statistically significant independent risk factor for predicting mortality, it is used as an indicator for the probability that treatment of a disease will be successful.6 The use of age as a selection criterion is appealing because it is seemingly objective and precise. Unlike selection criteria that discriminate against or are directed towards different races, religions, or genders, the use of age would appear to apply equally to everyone at some point across their lifespan since everyone actually ages.6

Additionally, it seems natural to regard death as an evil, even though it is not easy to determine what this evil consists of or when it occurs.7 Likewise, there is a sense that the death of a young person is a worse evil than the death of an old person. However, there is also the feeling that one person’s life is worth exactly the same as another person’s, which suggests that the evil of death is the same for everyone.7 Obviously, there exists some tension between these two views, which in turn leads to dilemmas that are especially evident in the areas of medicine and health care, such as those presented with the Fair Innings Argument. In the first case, it is reasonable to identify the evil of death with the loss of life the person would have had if he or she had not died at the time that they did, even though it usually cannot be determined just how long that would be. However, it is generally understood that a younger person is likely to live longer than an older person. Therefore, identifying the evil of death with a loss of expectation of life accounts for the judgment that an early death is a greater evil than a late death because it involves a greater loss.7

Moral concerns about inequalities in health stem, in part, from notions of distributive justice.4, 5 A general idea that is held towards the concept of distributive justice as it pertains to health is that there is some normal life span to which people are vaguely entitled. This principle provides the foundation of what is known as the Fair Innings Argument.

One of the first philosophers to describe the concept of the Fair Innings Argument was John Harris. According to Harris, “the Fair Innings Argument takes the view that
there is some span of years that we consider a reasonable life, a fair innings. Let’s say
that a fair share of life is the traditional three score years and ten, seventy years. Anyone
who does not reach 70 suffers, on this view, the injustice of being cut off in their prime.
They have missed out on a reasonable share of life: they have been short-changed.
Those, however, who do make 70 suffer no such injustice, they have not lost out but
rather must consider any additional years a sort of bonus beyond that which could
reasonably be hoped for. The Fair Innings Argument requires that everyone be given an
equal chance to have a fair innings, to reach the appropriate threshold but, having reached
it, they have received their entitlement.”8,9

The crux behind the application of this principle as it pertains to providing health
care occurs when there exists finite resources and the health care provider is presented
with two patients that require these resources. The ethical dilemma arises when a
decision has to be made as to which patient will receive the life saving care. According
to the Fair Innings Argument, if one of these patients has achieved their fair innings
worth of life while the other patient is young and has not reached this point in their life,
then the care should be provided to the younger patient. The injustice done to someone
who has not reached their fair innings when they lose out to someone who has is far
greater than when the circumstances are reversed. Consequently, when circumstances
arise where it is necessary to choose between candidates who differ only in age, the effort
should be made to give as many people as possible the chance for fair innings.8,9 If this
view were applied the scenario described earlier, it would be clear that the 82-year-old
man would be allowed to pass on, and the Factor VII treatment would be used instead to
save the 21-year-old college student.

It is proposed that perhaps this general age-at-death view of the Fair Innings
Argument is not the best way to formulate the equity criterion as it pertains to
determining who is entitled to receive limited health care resources. This is because it
implies that only the length of life matters, whereas most people believe that quality-of-
life also matters. The social science view of health examines the individual as the focus
of interest instead of the disease. This view attempts to determine what health-related
attributes contribute to a reduction in a person’s ability to flourish.4,5 Clearly, reducing
the length of a person’s life is one such example, but other important health-related
attributes would also include pain and suffering, anxiety, depression, loss of mobility, and
the inability to go about one’s activities independently of others. Unlike the clinical view
of health, which determines a person’s level of health based on the presence or absence of
disease, this would measure a person’s health based on their health-related quality of life.
A person’s life expectancy, in this sense then, would differ from the general concept of
life expectancy in that it would not be based simply on whether they were dead or alive,
but rather whether they are dead or living with a good or bad health-related quality of
life.2,4,5

Alan Williams, a strong proponent of the Fair Innings Argument, seeks to embody
this social science view of health in a broader, more generalized view of the Fair Innings
Argument. According to Williams, in order to grasp the full concept of the Fair Innings
Argument, the idea of fair innings needs to be extended beyond simple life expectancy,
and the fundamental unit on which equity policy should concentrate is people’s whole
lifetime experience of health, which has two components.2 The first component is the
quality-adjusted life years (QALYs) that a person has enjoyed so far. If a person has been fairly healthy, this will be close to the number of years of life they have already lived. On the other hand, people who have been severely disabled all their lives will have a much lower score in QALY terms than in terms of actual life years. The second component is the person’s quality-adjusted life expectancy (QALE), which is a combination of “the estimate of a person’s remaining life expectancy at each age with the estimate of their expected health-related quality-of-life at each year of age in the future. A person’s expected lifetime experience of health is then the sum of their past accumulation of health and their expected accumulation of health.” This value is then compared to a reference point, which is established as a fair innings QALE, and used to determine if the person is a member of the advantaged or the disadvantaged members of their community in health terms.

The dominant measure currently used in health care evaluation is health maximization, which might include determinants such as maximization of the number of QALYs, maximization of prevented strokes, or some other potential measure of health maximization. The equity principle that lies behind this particular method is that all health improvements have exactly the same social value, and are independent of the characteristics of the recipients of the benefits. Priority setting by this type of simple health maximization, however, has been criticized for failing to take distributive equity into account, in that health maximization may lead to uneven distributions of health. It is asserted that it is not good enough to weight every QALY as counting for one, no matter who gets it based on the proposition that it is right that physicians and other health care policy makers do not discriminate between people with respect to how much their health can be improved.

Williams suggests that the alternative is to devise some sort of equity weight by which a QALY will carry a different weight according to who gets it. In this context, the fair innings level of QALE defines the reference point at which the equity weight for a QALY is still 1. Consequently, for patients with a QALE less than the fair innings level, the equity weight will be larger than 1, and for those achieving, or expected to achieve, a level greater than the fair innings, the equity weight will be less than 1.

Application of this idea to the Fair Innings Argument allows, on the grounds of equity, to give some extra weight to the claims of those who are unlikely to achieve a fair innings, and a lower weight to those who have already achieved it or who are likely to achieve it. Furthermore, it is desired that these differential weights, whether they are positive or negative, are larger the greater the discrepancy between a person’s likely attainments and the fair innings. Williams believes that the easiest way to apply these differential weights would be to adopt a policy where once the limits are determined as to what is worth spending to improve the health of different subgroups within a community, it has the effect of preparing the community to spend more to achieve a given level of improvement for the worse off, and less to achieve that same level for the better off. In this model, the chosen weight is what would dictate how much more or less to spend in each case. Consequently, it does not imply that once someone has achieved the fair innings that nothing more would be done for them. Instead, there may be many other worthwhile things that can be done to improve their health further while still maintaining the goal of improving the health of the whole community. The differential weights,
however, embody the key trade-off between the desire to reduce inequalities in health and the desire to improve everybody’s health, which in turn reflects the community’s degree of aversion to inequality.4, 5, 11

Williams attempts to circumvent the problems associated with distributing health care resources based on the direct age-at-death view of the original Fair Innings Argument with a more comprehensive quality adjusted lifetime experience of health view. However, both of these approaches reflect the undesirable implication of the Fair Innings Argument that in order to reduce inequalities in health care in an equitable manner, there exists the necessity to discriminate against the old.4, 5 It follows from the fact that the older a person is, the more likely it is that they will already have achieved a fair innings, or will have a high probability of doing so. The older population will therefore be called upon to make sacrifices to improve the chances of predominantly younger people, with poorer prospects for getting there given that it would be inequitable to deprive the young of what the old have already had or are very likely to get.12 While the idea of age-based rationing of health care resources seems at times a reasonable idea, it is the inability of concepts such as the Fair Innings Argument to remove these types of inequalities that have led to other arguments that counter this form of health care distribution.

An anti-age rationing argument that is often presented is that life at any age is worth living and that it is life itself that has intrinsic value.6 For example, the murder of an 85-year-old person would be considered just as wrong as the murder of a 25-year-old person, and the perpetrator equally culpable. An individual’s projects and life plans and the achievement of these are central to the overall quality of life as a whole and must be taken into account when measuring the benefits of providing care. It cannot be assumed that older people do not have important life goals or plans that they still wish to carry out.7

In general, older candidates will tend to have less life expectancy than the young and less opportunity to benefit from treatment, but this is not always the case. For example, what if the young man described in the scenario earlier had recently been diagnosed with an underlying incurable disease and, even if he survives the life-threatening event, only has a probable life expectancy of 2 years. The 82-year-old man has previously been fit and well and, providing he survives after receiving the treatment, has a probable life expectancy of 10-15 years. Therefore, the old man has, in terms of life expectancy, longer to gain benefit from the treatment. This however, assumes that the determining factor in measuring benefit is the length of life years to be gained. The 2 years left to the younger patient might be valued as much as the 10-15 years of the older patient. For example, the older patient might be about to lapse into 10 years of dementia. One additional confounding aspect of this type of distribution would occur if the young man were actually 55-years-old and the old man were 60-years-old. Here the differences in age between the two patients that are competing for resources is less extreme and distribution based on the Fair Innings Argument is less decisive and less convincing. These examples demonstrate the futility of trying to put a measurable value on future anticipated life.6, 11

Inherent in the Fair Innings Argument is the notion that it is unfair if an older patient is provided treatment over a younger patient when the two are in competition for
the use of the same scarce resource, given that the older patient has already spent more time alive than the younger patient. According to Michael Rivlin, a philosopher who opposes the Fair Innings Argument, a major problem with this concept is that any discussion of fairness is generally limited to length of life. Rivlin argues that it is not possible for two patients to have an identical condition considering that each patient will necessarily be different in some way, from both medical and social standpoints, that might have a significant effect on the health and prognosis of each individual. Therefore, there are other markers of fairness that exist besides age.9 Again, referring back to the introductory scenario, what if the young man involved in the accident had been a drunk driver that had now injured himself through reckless behavior versus the elderly man who is not to blame for his illness. Or, what if the young man was an I.V. drug abuser and pusher without health insurance that had been admitted to the hospital on several other occasions for various drug-related complications, one of which included a serious bout of infective endocarditis in which he spent 10 days in an ICU. In this situation the young man has already used considerably more health care resources over time, bearing a larger burden on society compared to the old man. By way of the Fair Innings Argument it would still be the young man that should receive treatment over the 82-year-old man. Rivlin maintains that in these types of situations it is not that older people are being treated unfairly, but rather that younger people are being preferred unfairly.9

Furthermore, it is often suggested that the Fair Innings Argument is supported by a general idea that it is considered unfortunate when an older person dies, but tragic if a person dies young. If both the young I.V. drug pusher and the beloved grandfather were to die though, it is unlikely that society would consider the death of the young criminal as being the more tragic of the two. As a result, the tragic versus unfortunate argument collapses into a social debate about which of two people deserves treatment based on society’s appraisal of their lifestyles. As Rivlin points out, it is not necessarily true that society sees the death of a young person as being more tragic than that of an older person. Instead, it is apparent that the views of what is tragic may change as further facts become known. The same holds true for fairness, in that the views of whether something is fair may change as additional information about a particular situation or person becomes known.9

Even if the general consensus were that the death of a young person is regarded as a greater tragedy than the death of an elderly person, this idea is still limited by the notion that the death of the young person was premature. If an elderly patient were to die as a consequence of being denied treatment, then that person’s death should also be considered premature and therefore tragic.9 It might be understood that the death of elderly people over the age of 70 or 80 from unpreventable natural causes is considered to be an appropriately acceptable event. However, it does not follow that it is acceptable to withhold life-extending medical care from people over 70 or 80-years-old. Nor does it follow that it is inappropriate for people that are over 70 or 80-years old to want and seek life-extending care that would allow them to continue to pursue their interests.9

In the field of healthcare, it is apparent that there are a multitude of situations that could arise where the concept of age-based rationing of resources could be employed. Whether two or more patients are competing for the only remaining ventilator, intensive care bed, artificial lung machine, access to the coronary care or stroke rehabilitation units,
or even some expensive medication, it should be obvious that age-based rationing could have quite pervasive effects, even within the profession of pharmacy. Given the widespread use of pharmacologic therapy and the role of the pharmaceutical industry in new drug development, it is conceivable that age-based rationing could even influence the direction of research. For example, programs aimed at discovering new drug therapies targeting more of the elderly population, such as new medications to treat Alzheimer’s disease, might be subject to more intense scrutiny and potential discontinuation.

Clearly, the ethical issues surrounding the employment of age-based rationing and concepts such as the Fair Innings Argument, as they pertain to addressing the inequalities associated with health care, are multidimensional and complex. However, health equity cannot be concerned only with health. Rather it must come to terms with the larger issues of fairness and justice in social arrangements. The factors that contribute to health achievements and failures go well beyond health care. They include many influences of very different kinds, ranging from genetic propensities, individual incomes, food habits, and lifestyles on the one hand, to the epidemiological environment and work condition on the other. It is apparent that it is necessary to go beyond the delivery and distribution of health care in order to get an adequate understanding of health achievement and capability and their relationship to health inequalities.

References