Finding a balance

Health economics and social determinants of health

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Abstract
There is a puzzling disconnection between health economics and socio-economic determinants of health. This is quite interesting because there is a general agreement that socio-economic status has great effect on health status. Modern health economics can be said to be one of the most salient and a powerful tool for health policies around the western world. However, health economics have been seen not to be taken active part in these discussions. One likely reason why this is happening is the tendency for health economics to see the health system as a virtual entity surrounded by scientific and economic mirage of cost and benefits. Health efficiency has become a banner under which health economics are defending economic evaluations of health against claims for equity in the distribution of health.

This thesis begins with the task of reminding health economics of the impact of socio-economic status and health. It outlines the evidence and studies around the world about the systematic way in which the status of the individual on the social ladder affects mortality levels. The argument is that, this difference is found even in countries with universal access to health. This becomes a matter of concern since there is the tendency for policy makers to equate access to health to equitable distribution of health. I have proposed that, if access to health fails to explain this variation, we should rather look at the needs of the individuals as way of understanding the situation.

The thesis also outlines the theoretical underpinnings of economic evaluation as a tool for priority settings. Welfare and Extra welfare economics provide the nominal foundation for ranking individual utility and needs based on the maximum capacity to benefit. Here, it is argued that, when health assessment is based on the individual utility, it ignores the basic inherent difference among individuals to utilize goods. The implications of these are examined in the fourth chapter where the limitation of using QALYs in decision making in health is explored.

It is clear now that, the health equality is the objective of most countries, and yet the drive for efficiency has overshadowed this objective. There is the need for an alternative approach. It is obvious that there is no simple way to achieving this. I conclude that, we should not only concentrate on the outcome of distribution; but also we should direct our attention to the process of setting priorities if we hope to find any balance in our quest for efficiency and equity.
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I am grateful to my family and friends who have supported me throughout my studies.
Chapter one

The drive for efficiency in health care

Introduction
It is quite interesting to note that, with the increasing use of economic evaluations in health care policies, it has been not forthcoming with debates on the social determinants of health and the equity implications of the methods used. Social determinants of health according to the World Health Organization (WHO) are the conditions in which people are born, grow, live, work, and age including the health system. These conditions are shaped by the distribution of money at the global, national and local levels which themselves are influenced by policy choices.

These social determinants are mostly responsible for health inequities and yet there is the strong tendency to see the social aspect of health as separated from the economic aspects as two separate influences on health systems. In this sense, the social determinants of health are seen as just complementing or even conflicting interest in health outcomes. But what they fail to see is that health systems are important elements in economies and societies. It is interlinked in all aspects of the economy such that one has a great impact on the other; thus health system characteristics are important aspects of the social determinants of health as well as having direct effect on health outcome (Mackintosh, 2011).

The demand for economic evaluation and health care reforms has emerged in many countries with the aim of providing health care which is effective, efficient, equitable and affordable. The concerns for economic evaluation is justified because of the increasing growth and advancement in health technology, there is higher expectation in health outcomes and demand for health especially in the west where there is aging population and finally there are now mechanisms to measure effects and cost in health interventions (Coast, 2004).

The decision to fund an intervention and programme has been informed by the cost per Quality Adjusted Life Years (QALYs) of the different interventions. However, it has been noted that although the number of QALYs gained from an intervention only represents an unweighted sum of individual preference, it is taken to mean the social value, whereby they are taken as the social preference for the different outcomes (Dolan, 1998). He also argued that while this approach aims to maximize
health needs; the capacity to benefit as a measure fails to take accounts the
distributional implications that are relevant in the context of health care.

In this research, I have chosen to examine the concepts of equity and social
determinants of health in the design of economic evaluations for health care. In doing
so, the research will examine the relationship between equity and efficiency in
economic evaluations as most policy makers find it impossible to find a balance
between the two concepts when designing or delivering health care. The underlying
presumption of the choice of theories brings to focus the fact that, by focusing on
achieving efficiencies in health care reforms, most countries have overlooked
achieving equity in health care delivery. As health care funding are increasingly being
based on results of economic evaluation, the methods fail to achieve all of society’s
objective and the methods themselves are also complex for policy makers to
understand. In this research; I do not intend to criticize the whole concept of economic
evaluation in health, but rather explore the implication of inequities that are present
and the impact on the population as whole.

Research Questions
1. What are the equity implications of economic evaluations in health care?
2. What are the possible ways towards equitable health care distribution

The first question pertains to the objective of the research; and the second question
seeks to answer the subjective element of how policies can be geared towards
achieving this objective. In analyzing the equity issues in the health care system, my
argument is that, reducing the level of inequities in the health care system improves
the health of the general population. I will make extensive use of information from
literature and research reports to explore the differences in the health distribution
across the region as well as policies towards mitigating this concern. I intend to make
use of theoretical data and reports from the various health policies.

Background of Study
In our pursuit to achieve efficiency and cost-effectiveness in health, we have tended to
overlook equity and distributional concerns or more often we have equated efficiency
to equity. While equity may enhance social efficiency it can lead to greater
inefficiencies as well¹. In our ambitions to reform health care in most European
countries, the difference and the relation between equity and efficiency is often
inappropriately interpreted. According to (Light, 1992) and(Wagstaff and Doorslaer,

¹ [www.globalhealth.foreignpolicy.com](http://www.globalhealth.foreignpolicy.com)
1992) the main developments in health care since the mid-1980s has been market reforms to make the health sector more efficient and competitive. This belief stems from the theories and assumptions about just distributions of goods dating back to Adam Smith who believed that markets were the means of reducing or abolishing inequalities in societies and privileges given to others by their social status. There is the tendency that, in our current drive to achieve efficiency in health care, we may however overlook or compromise inequities that exist in the health delivery system.

The demand for health reforms imply that one ideology is being replaced by the other. The tendencies of market failures are becoming a common norm in health care where there are many buyers and many sellers, fierce competition where the stronger survives, rapid innovations and rapid value for money(Light, 1992). Health care market is a different story. Often the product to be bought is not easy to define because it is emergent and contingent on treatment process and outcome. There is high level of uncertainties in medical decision making and information asymmetries and therefore by simply concentrating on identification and measurement of cost and benefit many aspects of the decision making such as justice and fairness will not be identified.

Despite the general interest in health care reforms in most countries, few cross countries comparison has shown that they focused mainly on expenditure; the percentage of Gross Domestic Product(GDP) spent on health care. Health care cost have tripled since 1950 from 5% to 15% across the Organization for Economic Co-operation and Development(OECD) with the United States spending close to 15%, Norway 10%, Sweden 9%, the United Kingdom 7% and Switzerland 13%\(^2\). The impact is that, very little is known about the equity implications of the alternative health care financing and delivery system and its implications on the general population. This is despite the equity objective attached to most of these reforms(Wagstaff and Doorslaer, 1992).

To understand the need for equity and to appreciate its impact on the health care system, it is important for us to understand how extensive these differentials in health are found in Europe, America and Africa. According to(Whitehead, 1991:218)

> In every part of the Region, and in every type of political and social system, differences in health have been noted between different social groups in the population and between different geographical areas in the same country.

Current best practices for economic evaluation include cost –effectiveness analysis, cost-utility analysis, cost-benefit analysis, cost-effectiveness acceptability curves and

\(^2\) [http://www.visualeconomics.com/healthcare-costs-around-the-world_2010-03-01](http://www.visualeconomics.com/healthcare-costs-around-the-world_2010-03-01)
probabilistic modelling and many more. These techniques are very important considering the increasing pressure on resources for health and other sectors of the economy. Nonetheless, given the strategic placement of economic evaluations in current health policy designs, it should have made great advancement towards making health care designs and delivery more equitable. However, by generating this scientific and quantitative mirage around economic evaluation and thus overlooking or in other words placing less emphasis on other aspects of health such as equity, need and socio-economic status and health; it makes the whole concept quite incomplete with severe limitation.

These aspects of health makes it necessary for us to move beyond health care as being a professional response to demand but rather a need that is not identified(Whitehead, 1991). Our focus towards managed care has led to many changes in the way we distribute health depending on the policy objectives of the country or state undertaking such reforms. The question of inequalities and inequities in general has risen in many aspects of economies such as income distribution, education, employment opportunities and also in health care. It is a general concern; yet we have failed to find ways of reducing it between and within countries.

The concerns for equity in health care is highlighted by(Anand et al., 2005), where they argue that we should be more concerned with inequalities in health care than in income. Global inequalities in health are a major problem in the distribution of health both in the advanced countries and less developed countries and economic evaluation should always take into consideration the implications relation to equity issues. Individuals with lower incomes generally spend a greater proportion of their income on basic necessities such as health care than individuals with high income. The rationale for economic evaluations should go beyond just identifications, measurement and comparisons of cost and consequences of different interventions but rather should also take into consideration the distributions and valuations of these costs and benefits(Cam et al., 2002).

(Olsen, 2009) has noted that productivity change and ‘Willingness to Pay’ vary with income and it is a concern only in health policy settings that are guided by equal access for equal needs, independent of income. He further argues that, since this objective is the standard one in most publicly funded health system then this becomes a real issue for concern when designing economic evaluation programmes. His concern is that, this income bias towards WTP wouldn’t have been a major concern if there were no systematic income-related difference in disease pattern. Many authors
notably (Daniels) in his book; *Just Health: Meeting health needs fairly, have a strong theoretical argument supporting the fact that there is quite a strong socio-economic variations in health; in that individuals socio-economic status play a part in the promotion of health and causation of disease.*

In all these discussions, sometimes it becomes vague and multidimensional as we try to identify where to argue from. From the onset, the thinking of health equity becomes difficult since the concept of health itself is not easy to grasp (Anand et al., 2005). Is it from the medical point of view or societal point of view? Decisions about health care also involve value judgement. Although various arguments, theories and general observations can be made with respect to the context which health is being referred, they cannot be treated separately from each other. Black et al (1993) argue that the social context of health should be incorporated in the medical context in order to highlight the social and socio-economic factors that have influence on health outcomes. There is thus the danger of losing sight of these matters when economic evaluations are being designed.

It is apparent that equity is the policy objective of many health care reforms. But the questions we ask ourselves are what equity is? In what context should we define it and how can it be measured? Researchers and policy makers agree less on what is equity than efficiency. Others also believe that equity ‘like beauty is in the eyes of the beholder’ (Wagstaff and Doorslaer, 1992). Equity and equality have become a synonymous term in numerous articles as the terms are used interchangeably. A leading health economist, Tony Culyer, believes that there is no universal theory of equity , but it is widely agreed that equity implies equality (Olsen, 2009). Another author makes a distinction between a direct approach and indirect approach to equity.

A direct approach sees equity as an end in itself. That is to achieve justice with respect to the distribution of health outcomes independently of but in line with other spheres such as education or income. According to these proponents, what characterise these direct approach is that, a situation is considered inequitable if the health status of the population differs significantly from what is considered ideal. An indirect approach perceives inequity as being embedded in and interlinked with the pursuit of social justice; in that inequity is the direct results of unjust in social arrangements (Anand et al., 2005).

The famous definition of health equity was given by (Whitehead, 1991) where she refers to inequities in health as differences which are unnecessary and avoidable and also considered as unfair and unjust. Others have also defined health inequity as those
inequalities in health that are deemed to be unfair or stemming from some form of injustice (Kawachi I et al., 2002). It can be seen from the onset that the concept of equity is not a straightforward and it is subjective depending on the context we want to use. It also has some ethical and moral dimensions attached to it. But all these have a common goal to reach; to achieve fairness and justice in delivery of health care for the general population.

Outline of Thesis
There is a widely known relationship between socio-economic status and health. However, economic evaluations have been quiet about them. This is quite puzzling because economic evaluations have become a powerful tool in priority setting in health. Despite this silent tone on Socio-Economic Status (SES) and health, this paper will go ahead and highlight some of the main arguments concerning SES and health. I will further suggest an alternative view to this concern by looking at the health needs of the people. It stems from the thought that, SES also define some disease patterns and will call for different need and intervention. Chapter three outlines the theoretical underpinnings of economic evaluations in general and how they guide in the use the various methods used in economic evaluations. Welfare economics and extra welfare economics will be reviewed from which a list of economic evaluation methods will be discussed. Next I will also examine why we need a second assessment of the health economic evaluation methods most notably using the QALY approach to inform resource allocation and its implication on the population in the fourth chapter. I will also examine some of the alternative approaches put forward for resource allocation in health in the fifth chapter. Priority settings have been going on in many countries and I will provide an overview of the various commissions’ recommendations. Health economics have not been around for so long and as such we cannot put all the blame on it for their failure to address the difference in socio-economic status and health. Rather I will go ahead and give a new possibility, to priority settings. The final chapter will draw insights from the preceding chapters in analyzing the content and concepts used. This chapter will try to answer the questions posed at the beginning of the thesis.
Chapter two

Socioeconomic status and health needs

Many studies have shown a positive correlation between income and health status. In the 21st century, social inequalities in health continue to be a major problem in the advanced economies including Europe (Siegrist and Marmot, 2004). Health is seen as basically a social good. The level and the distribution of health is determined to a large extent by the basic institutions in the society (Norheim and Asada, 2009). There has been improvement in the provision of health care in many countries including the poor. Life expectancy has increased over the past years. This improvement is made possible by the growth in economies, reduced inequalities, investments in public health and to a greater extent universal access to health in many countries. However, it has been noted by (Daniels 2008:79) that ‘health is produced not just by having access to medical prevention and treatment but also to measurably great extent, by the cumulative experience of social conditions across the life course’.

Studies and experience have thought us that, individual’s position on the social hierarchy have a greater influence on their mortality and morbidity patterns. The more affluent and better educated they are the longer and healthier their lives are (Daniels, 2008). We are sometimes tempted to conclude that, the observed inequalities, poverty and deprivation in developing countries are the cause of the differences in health and mortality patterns. It is argued however that, these effect of socio economic status and health are present everywhere; in rich and poor countries and in egalitarian or health maximization oriented economies.

Variations in life expectancy between and within countries that have accumulated over the past decades continue to persist until now. In the study by Gertler and Var de Gaag (1990), cross sectional analysis of the links between per capita gross national product (GNP) and health status for a sample of 34 countries indicates that, the highest per capita, enjoyed by the United States is 20 times higher than the lowest Malawi. The difference in life expectancy between these countries also varies between 44 and 79 percent at birth (Jack, 1999). WHO also reports that, life expectancy at birth ranges from 77 (for males) and 82 (females) in Norway to 41 (for both male and female) in Malawi. (Norheim and Asada, 2009) explains that, natural differences will probably play a very minor role in these differences; however the health of people in a nation is
not something given naturally but shaped fundamentally by how societies are organized and how benefits of corporation are shared.

Within countries,(Siegrist and Marmot, 2004) notes that, the variation in life expectancy between the top of the society and those at the bottom defined by income, education and employment status is between 4 to 10 years. Many of these have been reported at the country level, and in Finland, life expectancy at age 35 for men in white collar job is 6.9 years higher than those employed in manual labour. Similar findings have been found in Norway where the life expectancy of a male lecturer at the university is higher than that of a male chef (Helsedirektoratet). There is also a consistence evidence that, disadvantaged people have poorer survival chances dying at a younger age than the least disadvantaged group(Whitehead, 1991).

The structural relationship between income and health has shifted over time. While there continues to be a positive correlation between health and income, there is still the need to undertake more scientific studies into these trends. As (Daniels, 2008) notes, we cannot infer causation from correlation and correlation alone is not enough reason to explain for these trends. The shift in this relationship can be explained by two factors. The first is that, it has become cheaper and easier to maintain given levels of health due to advancement in medical technology and investment in public infrastructures. There is major improvement in this area even in poor countries. Secondly, individual preferences have changed over time and that for a given level of income individuals have become more concerned about their health. People are now investing in healthy lifestyles and have become more health conscious(Jack, 1999).

Again,(Daniels, 2008) believes that, more work should be done to clarify the exact mechanisms that underlie the social inequalities in health. When the social determinants are socially controllable, then we face questions of distributive justice. Socio economic inequalities that seem just become unjust if it contributes to health inequalities. Evidence to support this was found in the Whitehall studies in Britain. Results show that, at younger age workers in lower job positions have four time mortality rates than those in higher administration positions. This shows the social gradient of morbidity and mortality. As one moves every step up the social ladder, there is a major improvement and better health is achieved(Siegrist and Marmot, 2004). Access to health does not explain the differences because there has been a remarkable improvement in access to health in many European countries. Studies over the years have shown that access to health care have had only a minor effect on health gradient(Cutler D et al., 2006)
Gradient is used to emphasise that, there is a ‘graded’ differences in health running across countries; not just between the rich and poor countries but also within the rich countries as well (Hauck et al., 2004).

In recent years the emphasis on health care efficiency and competitiveness has taken centre stage in most health care policies and this have led to the endorsement of policies that downplay the role of any deliberate public action in health equality. Cost-efficiency and cost-effectiveness in health care delivery has become the banner under which health economist defend the economic liberalization of health care against the claims by the public for more equity in health. The difference in mortality across countries and difference in mortality across groups within countries are serious phenomena worthy of serious attention by health economics and others.

Social inequalities in health continue to be an unresolved problem in many Europeans and more studies are needed to explain these inequalities. It is unlikely that there is a single explanation to these inequalities. One reason will be that, inequalities are the result of acceptable trade-offs in our broader economic system in our attempt to achieve efficiency. The elimination or at least the reduction of differences in health by income, race or geography has become the major focus of health policy in many countries including Norway. There has been a government white paper detailing how the government plans to eliminate these inequalities.

**The Norwegian experience**

Despite rapid economic growth and higher standards of living, Norway still exhibits some level of inequality in health. The magnitude of such inequalities are of great importance and it implications affects the health of the general population.\(^3\) The general level of health in Norway is high by international standards. However, the socioeconomic distribution of health still poses serious challenges for Norwegian public health policies. Whereas the issue of accessibility to health may not be a major problem in Norway because of universal access to health care, there are still however notable differences in mortality rates depending on the geographical area and the socio-economic status. Level of education has been the most notable SES indicator that has a strong correlation with mortality rates.

To lay people, people from Asia and Africa, Norway has little or no socio-economic difference in health because of greater accessibility to health care and information about health system to everyone which is basically non-existence in some countries.

\(^3\) [http://www.helsedirektoratet.no/vp/multimedia/archive/00232/Norway_and_Health___232259a.pdf](http://www.helsedirektoratet.no/vp/multimedia/archive/00232/Norway_and_Health___232259a.pdf)
Because of this misconception (Kroskstad et al., 2002), has noted that the importance of making efforts to mitigate the social-economic difference that has a major implication on health has not been given such priority. However, an international comparison between the Scandinavia and other European countries has shown that there exists some form of inequality in the general population in terms of health. These findings call for research and population analysis to get more knowledge about the magnitude of these differences. There have been efforts on part of the Norwegian Health directorate to reduce this problem.

4 **Strategy to reduce social inequalities in health**

A 2006 public health white paper, National strategy to reduce social inequalities in health, made the reduction of such health inequalities the central concern of Norwegian public health policy for ten years to come. The strategy was built on the principle that the way to change the social distribution of health is to change the social distribution of health determinants, which are ultimately to be found “upstream”, in the social distribution of resources. More specifically, the strategy operates with four priority areas:

1. Reduce social inequalities that contribute to inequalities in health – including factors such as income, childhood conditions, education, employment and working environment;

2. Reduce social inequalities in health-related behaviour – such as nutrition, physical activity, smoking and substance abuse – and in the utilisation of health services;

3. Targeted initiatives to promote social inclusion; and

4. Develop knowledge and cross-sectoral tools. No less important, however, are the factors outside the traditional limits of the health sector, such as income, education and employment.

The successes of these strategies are yet to be known given the complexity of the issue.

When access to health do not explain the difference in mortality levels, various explanations come up such as the individual’s resources, educational level and most recently psychosocial stress related to being at the bottom of the social hierarchy. All this factors have their relative merits; however, for the purpose of this thesis, I will

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want to focus on the needs of the persons involved. How do the differences in need affect their health status? When we want to deliver equity in health care, as (Sen, 1992) argues, we have to define the space in which we want to base our analysis and conclusion. The practical application of equity in health care programmes is not straightforward or as easy as we may think. It will depend on the policy objective of the particular health system. Most equity considerations fall within two categories. Equity as need and equity related to access to service. It is argued that, policy makers can share the health care resources according to the needs of the person. The difference in socio-economic status relates to different disease pattern and therefore there is the need for different kind of health care.

**Needs and Priority settings in Health care**

Need indexes have been used in national fund allocations in most countries. It is a way of avoiding unmet needs in a particular geographical area with different socio-economic characteristic (Smith, 2007, Gravelle et al., 2003). The concept of need is as complex as the concept of equity itself. It requires us to define it in order to be able to know the context we are applying it. The concept can be formulated in two broad categories: horizontal equity and vertical equity. Horizontal equity means people in equal need should be treated the same and vertical equity on the other hand also imply that, people with greater need should be treated more favourably than those with lesser need (Hauck et al., 2004).

According to (Olsen, 2009), need is often taken to mean the degree of urgency for health care. Need is categorized into two; firstly, need as ill health in terms of the status of the person if no treatment is given (severity of the patients illness). Secondly, need is also referred to as the degree of potential benefits from treatment; ‘need as capacity to benefit’. If the same person who has the most severe illness or the greatest need is the same person who has the capacity to benefit, then the aim of health care to maximize health gain is in line with both equity and efficiency objective. Besides this, all other considerations of equity will conflict with the objectives of equity and efficiency.

**Need as Severity of Illness**

When we focus on the severity of illness or the consequences to patient without treatment, then our understanding of need relates to ill health rather than the capacity to benefit. In other words, we care about the magnitude of the consequences if the patient does not receive treatment. (Olsen, 2009) has outlined the ways of setting priorities given the severity of the patient illness. He argues that, there are two
principal parameters that matters in priority setting context: caring and equality. Caring he explains means that the worse the health prospect without the intervention, the stronger our feeling and compassion towards the person and the urgency in our duty to provide intervention. This idea has something to do with the ‘Maximin Principle’; where it is argues that, the resources should be directed towards the worst off in the society.

**Maximin Theory of Justice**

This is the application of the ‘difference principle’ where every arrangement is evaluated in terms of the least advantaged. The principle states that inequality in a lifetime prospects are allowed if the inequality works to the make those who are worst off as well of compared to alternative arrangements(Daniels, 2008). The pioneer of this theory is John Rawls (1971) who at the offset is egalitarian but accepts inequality as long as it is not possible to further improve the situation of the worst off(Olsen, 1997, Olsen, 2009, Dolan and Olsen, 2002). Rawls defined the individual well-being in terms of an index of primary goods consisting of basic liberties such as freedom of thought, freedom of choice of occupation, income and wealth and the social basis for self respect(Daniels, 2008). He did not have a well defined interest in health but concentrated much on primary good(Dolan and Olsen, 2002). Although he did not discuss the distribution of health and health care, his view of health as a natural good persist until now(Norheim and Asada, 2009).

The difference principle now referred to as the maximin is a *lexicographic* principle in the sense that alternative arrangements are compared first in the interest of the least advantaged only. If these arrangements are equally bad, then we focus on the second least advantaged and then it follows like that(Dolan and Olsen, 2002). When we apply the maximin principle to health care, the principle will mean that resources will be directed towards maximizing the health of the severely ill persons in the society or the one with the lowest life expectancy(Olsen, 2009).

The maximin approach has an underlying problem of ignoring the gains for the better off group in the society from the improvement of the worst off. The authors further notes that, the decision rule only applies only when the expected benefit to the worst off is positive and will also apply irrespective of the benefits forgone by others even the second worst off individual(Olsen, 2009, Dolan and Olsen, 2002). However,(Daniels, 2008) notes that, the difference principle reduces, if not eliminate totally the effect of arbitrary natural and socio-economic differences in the society. It produces a very strong tendency to equality.
Even though most decisions in the context of equity are directed at the population level rather than the individual level, at the individual level, one principle applies; ‘the rule of rescue’ (Hauck et al., 2004). Societies and individuals feel that they have an ethical duty to help those in life threatening situations.

The worst here can be seen as the one with the most serious illness who without intervention will suffer serious consequences. But sometimes in health care, we can also see that, the person with severe illness do not always mean that they are the worst off. Some patient will have severe illness (chronic) but they can equally live their lives without treatment. Others may have illness which will not be considered so severe, but at emergencies, without immediate treatment they may suffer serious consequences including death. Severity of illness was one of the main principles of the Norwegian health system until it was revised later in 1997 to take a broader perspective such as cost efficiency. The other important matter is equality in prospective health. When two people with different health status without treatment, but equal potentials to benefit from an intervention, priority is given to the one with the shortest health prospects (Olsen, 2009). This is not necessarily in line with the health maximization objectives of health care policies. In clinical sense, physicians will go to great extent to help patients in great suffering even if the expected prospects is low (Hauck et al., 2004).

**Need as Capacity to Benefit**

The most obvious benefit from health care is the improved outcome and even though sometimes with no greater prospects of benefitting health care is given as it is explained in the ‘rule of rescue’ principle. Other definition of need sees it only in relation to specific objective. X must be effective to achieve Y and secondly, and Y must be considered as worthwhile. Some also may argue that, X may not only be effective but also cost efficient as well (Hauck et al., 2004). Without these conditions met, needs can be translated as mere wants (Cuyler and Wagstaff, 1993). This second meaning of need may be what triggered the revision of some priority setting policies which was only based on the severity of illness (Norwegian health system). It assumes that treatments will eventually meet their medical limit. Beyond this limit, there will not be any more need for health care.

According to this definition of need, it allows for the quantification of the amount of health care resources a person needs in order to achieve improved health. If resources are too limited to exhaust the demands of each person’s need, then this approach becomes appropriate. This criterion is consistent with the health maximization
objective. The other based on the severity of illness is clear departure from efficiency objective in health policies (Hauck et al., 2004). It reflects the desire to do something for people in distress. With this at the background, priority settings principles should in practice affect a shift towards programmes that favour disadvantaged population; in this sense people with lower socio-economic status.

**Concluding Remarks**

It is widely seen that, the very least in the provision of health care should correspond to fair distribution of benefits and burdens in the society. People who suffer the greatest burdens of disease and death are also the people with lower social and economic status. The link between socio-economic status and health is quite clear. It is an undeniable fact that there is correlation between the position of a person in the social hierarchy and mortality levels. Different arguments have been put forward for this correlation but what is interesting is that this graded difference is found between rich and poor countries and even in countries where there is universal access to health. What sense then do we make of these phenomena which is rather increasing every day. Do we accept it as part of our efforts to improve efficiencies in health care or we make conscious efforts to reduce it. The problem is however that, health economist has been silent on it, or have assumed that when efficiency is achieved it will automatically lead to equitable distribution. I believe more attention should be given to this issue. When the difference in access to health fails to explain these phenomena, we should look elsewhere such as the needs of the persons involved. This is justified on the grounds that, socio-economic differences leads to different disease patterns and thus different needs for health care.

There is the increasing popularity of health economics as a guide in priority settings in most European countries. Its applicability is still quite limited; however, with the increase focus on efficiencies in health care, it will soon become one important criterion for resource allocation in health. The next chapter will therefore introduce health economics and their approach to health care distribution. It is a quite broad area to be covered in this thesis so therefore, I will discuss briefly three of the methods used in economic evaluation.
Chapter Three

Equity and Efficiency: From Theory to Practice

Introduction: Utilitarianism and Health Distribution

According to the Utilitarian to be able to identify resource distribution procedures, it is important that we identify the utility functions; the relationship between units consumed and the satisfaction derived from consumption. Individuals get satisfaction from consuming a good but at a diminishing rate. This is based on the assumption that individuals do things either to gain pleasure and to avoid pain. This level of pain or pleasure according to this concept could be measured in a cardinal scale called \textit{utils} which could then be used to make interpersonal comparisons (Dolan and Olsen, 2002). The way this utility is measured is through their willingness to pay. The more a person is willingness to pay for a good the higher it is their utility.

A fully informed individual is considered to be the best judge of their own welfare. Recently individual preferences is being ascertained in various ways to correct for mistaken beliefs and anti-social preferences (Olsen, 2009). The application of the utilitarian model implies that the individuals subjective assessment of their own utility determine how distribution is undertaken in the society. What is important is how much \textit{utils} one can have from consuming an additional unit compared with the \textit{utils} one has from consuming the same goods. Utilitarian assumes that, there is an accurate measure of utility which require a method of correlating scales of different person in order to know when a gain outweighs a loss (Daniels, 2008). This allows us to assess the total amount of utility generated by each individual. By aggregating the utilities, the utilitarian are able to sum-rank the total utilities justified by ‘the greatest happiness principle’ (Dolan and Olsen, 2002). A tiny gain in utility for one person is considered greater than the loses of the mass of the population.

In terms of health distribution, health maximization has become the most common principle in most public funded health care systems such as Norway and the United Kingdom.

The health policy statements of many governments (including those in Norway and the UK) suggest that generating health is one of the most important objectives of the health care system and economic evaluation techniques such as cost-effectiveness analysis, are designed to provide information so that resources can be allocated to maximize health (Dolan and Olsen 2002:68)
Utilitarian is much more easy to understand and incorporate into health care. Instead of considering the utility for other primary goods such as wealth, food, liberty etc, here, health is maximand and the ‘greatest happiness principle’ is translated into the ‘greatest health principle’ (Olsen, 2009). As such, health maximization becomes a much simpler policy approach to implement in reality than the utility maximization.

**Welfare Economics and their Approach to Health Distribution**

Societies have their desires on alternative resource allocations in terms of equity and efficiency. Welfare economics has been the basic theoretical concept behind economic evaluations and also provides the basis for making judgement on health specific issues. In this section, I intend to explore and examine the concept of welfare economics and thus taking a closer look at their views on equity and efficiency. (Jack, 1999) argues that the inclusion of both equity and efficiency in welfare economics allows us to move beyond the political debate which sees policy design as a matter of making choices between two alternative programme without any considerations to the trade-offs that are made in the process. Welfare economics according to (Drummond et al., 2005) is a branch of economics that addresses normative issues in economics because it embodies issues about value judgement.

To be able to say or judge whether health policies are desirable, or are in line with society’s interest; we need a criteria to rank them. This is where the concept of value judgement comes in as a decision criteria and a tool for ranking social states given the available resources. When we have a choice for something, it also means less of other things. Due to our limited resources, we cannot always get everything we desire. This implies that we have to make judgement and trade-offs about which to choose. In much the same way, when we make such choices, there are certain people who gain and those who lose. What we are interested in is the desirability of the proposed change, the judgement underlying it and the consequences. Thus welfare economics provides us with the criteria according to which public policies are ranked. Our judgement concerning which programme is superior to the other also presupposes the ethical and distributional concern that underlies it (Johansson, 1991).

Value judgement differs in strength and depends on one individual to the other. They are more or less controversial and depend on the individual perception of equity or fairness (Johansson, 1991). It is important that we are clear enough about the value judgement we apply. Some questions we may ask is that does the policy proposal bring an improvement? Is it worth doing the project and what are the consequences?
What is the best size for this project, how many people should benefit from the programme?

The basic value judgement underlying welfare economics is the Pareto-Principle. It states that a change is good if it makes some individuals better off without making the other worst off (Johansson, 1991). The underlying premise is that how do we judge whether a society as a whole is better off from a particular programme or policy? It works on these assumptions:

1. Social welfare is made up from the welfare (utilities) of each individual member of society.
2. Individuals are the best judges of their own welfare (consumer sovereignty) (Drummond et al., 2005).
3. Social welfare increases with individual utility levels. This means that the indifference curves are negatively sloped; If one individual is made worst off, one should be made better off at the same level in order to maintain the same level of social welfare (Johansson, 1991). The extent of this trade off depends on the degree of inequality in the society. It holds some assumptions that, it does not matter who gets better off or worst off.

From the figure below, a shift from point A to point B indicates an increase in social welfare. Even though individual in point A loses because no actual compensation is made, the point B is still preferred to state A.

![Utility function](image)

The Pareto-principle according to (Johansson, 1991) is considered to be the core of welfare economics but it is a weak one. This is so in the sense that we cannot evaluate
the changes that improve or deteriorate welfare of individuals or households. However nothing can be said about policies that make some better off and other worst off. The reason the author argues is that, valuing such a change will require comparing the increased satisfaction of the gainers with the lost satisfaction of the losers which will be impossible and thus the Pareto rankings of these is incomplete. In another sense, the compensation principle could be applied as a decision criterion. It is an undeniable fact that the public projects do create winners and losers and this problem is not taken care off in the Pareto-criterion model. The suggestion is that, a project can be desirable if only we can hypothetically redistribute income so that everyone is made better off than without the programme-the compensation principle.

Since this principle do not require actual redistribution or compensation, the author notes that, by considering hypothetical compensation, one is directed towards efficiency aspects of policy change. Here a policy change is considered desirable if the gains or the benefits exceed the cost(Johansson, 1991).The welfare theory is best suited for Cost-Benefit Analysis and the implications for public health policies. Before a decision is made to allocate resources to an intervention or health care programme, its anticipated benefits must be compared carefully with its cost, including the opportunity cost of the resources that could have otherwise being used somewhere. In this statement, it can be said that they are intended as a justification for a potentially open and an efficient way to allocate resources. But with it comes its great weakness when it comes to the distribution of public goods.

**The Extra-Welfare Approach**

Economic evaluations can have either the classical welfare approach or the extra-welfare approach as the normative basis. The welfare approach states that the worth of any intervention should be based solely on the welfare (Utility) achieved by those affected by the situation. Extra welfare was however developed to counter the limitations of the welfare approach in economic evaluations. It concentrates on health outcome rather than utility as the most important outcome in evaluating alternative policies in health care.

The Extra-Welfare argues that, not the individual preference but the needs of the person should guide us in decision making about health interventions(Hauck et al., 2004). This requires us to define what needs are. However, since the classical welfare approaches do not operate on the basis of needs, the extra welfare advocates the decision makers approach to priority settings. The decision maker role is to identify the objective of the health policy and the researcher’s role is to find efficient ways of
achieving it. To this school of thought, the leading priority criterion is to direct resources to where health is maximized and health gains are greatest.

This criterion is criticized because by focusing on health maximization, the focus of the health system shifts only towards efficiency rather than equity. One cannot determine how the needs of one person compared to the other just by simply assessing how one can maximize the benefit. We should also look into individual difference since it can alter the individual satisfaction level. The extra welfare approach with health maximization as their aim continues to be the basic normative foundation of economic evaluation. I will from the next section give an overview of health economic evaluation.

**Overview of Economic Evaluation**

Having good health is always important for the individual and the society as a whole. Therefore healthcare is important to us. Research has shown that many factors affect our health and there are always several ways to improve our health rather than health care itself. Perhaps we could channel our resources to provide cleaner environment or make individuals responsible for their own health. There are several good causes competing for the available resources because the society produce and distribute more than health (Fried, 2010).

There are always the general concerns about how to distribute the available resources, who should do what to whom and with what relation to other services. Decisions about how to go about these issues are usually not a straight forward approach (Drummond et al., 2005). The most common approach will be to estimate the relative merits and values of the alternative options. Health economics based on traditional economic theories try to solve these problems in health care when resources are scarce. Although it can be applied to a number of levels in health care such as planning and budgeting, monitoring and evaluations, it is its application to treatment alternatives for a particular illness or disease that is most important to health care policy makers (Kernick, 1998). With the increasing demand on limited health resources, economic evaluation becomes the tool for decision makers by considering the outcome of competing interventions in relation to resources they consume.

To address these issues, some important measurements should be made. These include the cost of intervention and the outcome measure such as the number of cancers detected, blood pressure reduced, life years gained, disease free survival and overall survival. It is not easy to identify all the benefit and adverse effects of an intervention. Measurement of mortality is the simplest approach (Kernick, 1998). In addition,
economic evaluation presents us with choices either implicitly or explicitly. There are always a comparator including doing nothing. A study usually compares an existing treatment with a new treatment and assumes that the existing treatment has been proven effective. Incremental cost and benefits of these competing interventions are then calculated. Depending on the society’s willingness to pay, the most cost-effective intervention is chosen. Scarce health care resources and our inability to satisfy all our health needs make it imperative for us to make a preference between some health states or interventions. This characteristics of economic evaluation makes (Drummond et al., 2005) to define economic evaluation as the ‘comparative analysis of alternative courses of action in terms of both their cost and consequences’.

The choice of perspective is also important when health economic evaluation is being undertaken. There is always a choice between a clinical perspective and a wider societal perspective. It is measured from the opportunity cost and other treatments forgone(Drummond et al., 2008). But most of the time, the cost and benefit from an intervention involves more than the cost of treatment and the immediate health benefit. In such circumstances the full social cost such as the cost to families and employers should also be considered. Some interventions have benefits beyond the health sector, such as the individual returning to work or being able to provide for the family. In effect, economic data can be analysed from any perspective; be it the pharmaceutical company, the individual patient, the general practice, the health authority or the society. Nevertheless it is advisable that economic evaluation takes the perspective of the society(Kernick, 1998).

In the UK, the National Institute for Health and Clinical Excellence(NICE) and the National Health Service(NHS) offers the role of economic evaluation in need assessment and technology assessment. Similar situations are seen in Australia where the government has a guideline which requires an economic evaluation to be undertaken in the submission for funding for the government Medicare programme. Various economic evaluations have also being done in the Norwegian health services for interventions for cancer treatments and formulary for pharmaceutical products for reimbursement(Briggs et al., 1994).

There are usually guidelines for the conduction of these studies, but there are disagreements over the methodologies used, the valuations of human life and well being and also concerns about uncertainties surrounding the data and the results of the analysis. If economic evaluations are constantly used to inform decision making in
health service, it is important that the methodologies are widely understood and continuously refined (Briggs et al., 1994).

There are mainly four types of economic analysis in health but three of these are usually used. Three techniques or methodologies have been used over the past year in the comparison and valuation of health intervention. These are Cost-Effectiveness Analysis (CEA), Cost-Utility Analysis (CUA) and Cost-Benefit Analysis (CBA). The choice of which method to use is dependent on how one wants to undertake the valuations of the cost and benefits; whether in commensurate units or not. Some authors have argued that to avoid the distribution problem related to CBA, they have advocated for the use of CEA and CUA which do not measure benefits and cost in monetary values.

Extra-Welfarist, and many decision-maker in the real world of health care are willing to accept an approach that considers the outcomes equitably (as CEA using QALYs), rather than to accept approach in which choices are heavily influenced by ‘ability to pay’ (Cam et al., 2002:56)

**Cost-Effectiveness Analysis (CEA)**
The decision rule in CEA is to maximize effectiveness for a given budget. For instance the number of life years gained (Johannesson and Jonssen, 1991). CEA is best suited for comparison of treatment that has the same goal (treating breast cancer) even though they may have differential success in achieving this outcome as well as differential cost (Drummond et al., 2005). CEA has been the most common approach to economic evaluation in health and this may be because it avoids the problem of cost-benefit analysis with regards of converting health benefits into monetary values (Kernick, 1998). It should be noted that CEA can be performed in comparison with any other alternative provided they have a common effect (hip replacement surgery or wearing helmet campaign). However, (Johannesson and Jonssen, 1991) has argued that, it does not really escape the valuation problem. In whichever way a decision has to be made either implicitly or explicitly and the value of that is the amount the society is willing to pay for a particular health benefit.

Due to the nature of CEA, where cost and effectiveness are taken into consideration when undertaking the analysis, the type of cost to include in the analysis is also relevant and can have influence on the results. Two types of cost are usually considered, and the researcher decides which perspective to embark, whether medical or societal perspective. (Johannesson and Jonssen, 1991) has further suggested that, the medical cost can also be divided into direct and indirect cost. The direct medical costs relevant for CEA according to these authors are the treatment cost (cost of medication,
cost of treating side effect, cost of screening etc) and reduced health care cost in the future due to prevention or treatment. The indirect costs include the cost related to morbidity and cost due to mortality.

However, there could be a problem with double counting, when the cost due to mortality is included because already the effect of life years gained has already being included in the analysis. From the societal perspective all medical cost are included, in addition to the indirect cost relating to morbidity and mortality. But what costs to include in the CEA differ from study to study and depends on what the researcher wants to achieve and the availability of information on these costs. In principle the underlying concept of CEA is that the number of life years must be maximised within a given budget.

Another controversial area is the discounting factor in CEA. The controversy in economic evaluation is whether cost and benefit should be discounted; at what rate and should cost and benefit be discounted at the same rate( Drummond et al., 2008). It is normal to discount cost associated with an intervention, however discounting a life year gain becomes problematic(Johannesson and Jonsen, 1991). They argue that, one of the reasons for discounting is that, inconsistencies may arise in the analysis. But the problems do exist in the methods of discounting, whether ex-ante or ex-post. Depending on the chosen method will give a different result. The choice of discount rate is particularly important when dealing with interventions whose outcome is realized in the future.

Nevertheless, CEA provides us with the answers we need in deciding on which treatment to fund, and what not to fund only if the treatment has the lowest cost-effective ratio with regards to the available budget or the willingness to pay. In Norway, the willingness to pay is around 500000 Norwegian Kroner and in the UK it is between 30000 to 40000 thousand pounds.

In effect, when we are confronted with different and multiple treatment objectives and consequences, trade-offs has to be made and a programme is chosen. But the problem associated with this is that the trade offs are not explicit enough and becomes impossible to judge the basis on which these decisions are made. In addition, the lack of consensus on which cost to include and the theoretical basis for the method has led to the advocacy of Cost-Utility Analysis. This analysis takes into consideration that, most health treatment and programmes impact upon both the length and quality of life and should be taken into account when doing health economic evaluation( Drummond et al., 2005).
Cost-Utility Analysis (CUA)

Cost-Utility Analysis is a special form of CEA. They are similar if not identical on the cost side but differ greatly on the outcome side (Drummond et al., 2005). However, as noted earlier, they are most preferred when the intervention under consideration affects both mortality and morbidity and also when the quality of life is a concern. It takes into account the principle laid by WHO; the goals of healthcare are to add years to life and to add life to years (Dernovsek et al., 2007).

The relative efficiency of the intervention in cost-utility analysis is expressed by cost-utility ratio. As such years gained are adjusted for quality and quantity of life (Johannesson and Jonssen, 1991). Effectiveness is measured in QALY (Quality Adjusted Life Years) and allocate the value of life from 0 (death) to 1 (perfect health). QALY indicates the average number of years of quality life which a person with a defined health status will be able to live in a case that a certain intervention is carried out (Dernovsek et al., 2007). This indicator therefore shows the cost of intervention with regard to a specific outcome, life in quality and quantity. The decision rule is to maximize the number of QALY gained for a given budget. Although CUA has the advantage that different interventions can be compared across a broad range of choices in resource allocation, the same methodological problems that have been identified with CEA can also be found in CUA (Kernick, 1998). It faces the problems of measurement of quality of life and the formulation of the quality indexes.

Both CEA and CUA require an effectiveness data either from literature, own studies or from, expert opinions. However, in the case of CUA, only the final outcome will be considered in the analysis (Life saved or disability averted) (Drummond et al., 2005). By incorporating the effectiveness data into a common unit of measurement (QALYs), the authors conclude that, CUA is able to incorporate simultaneously both the changes in the quality of life (morbidity) and the quantity of life (mortality). The cost-utility ratios will thus be expressed in monetary units (NOK) per QALY. An example is illustrated below.
<table>
<thead>
<tr>
<th>Treatment Costs (NOK)</th>
<th>Life years gained</th>
<th>Quality weight</th>
<th>QALYs</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>15,000</td>
<td>0.90</td>
<td>3.60</td>
</tr>
<tr>
<td>B</td>
<td>30,000</td>
<td>0.85</td>
<td>4.25</td>
</tr>
<tr>
<td>C</td>
<td>35,000</td>
<td>0.85</td>
<td>4.51</td>
</tr>
</tbody>
</table>

QALYs in the table are the product of life years gained and quality weight for each treatment. Marginal cost-utility ratios give incremental costs (NOK) for each quality adjusted life year gained, they adjust life years gained for quality weight. The most expensive alternative C produces QALY at a lower marginal cost than does the less expensive treatment, B.

Marginal cost-utility ratios:

A to B: \((30,000 - 15,000)/(4.25 - 3.60) = 23,077\) per QALY gained

A to C: \((35,000 - 15,000)/(4.51 - 3.60) = 21,978\) per QALY gained

The average costs per QALY are higher for C than for B treatment, but average costs are not the one to be looked at in economic analyses. The benefits gained from health care expenditures will be maximized by basing decisions on gains at the margin. Cost-utility ratios have a meaning therefore only when compared to other ratios.

Table 3.1 Source(Dernovsek et al., 2007).

Various methods have been developed to measure preferences. Preferences can be generated by investigating various populations like members of general population such as patients, caregivers or physicians using different methods like visual analogue scale (VAS), standard gamble method (SG), person trade-off (PTO) or time trade-off method (TTO). Depending on whether the condition of uncertainty is fulfilled in the method, the preferences elicited are called values or utilities(Drummond et al., 2005). These methods however will not be discussed here.

To make judgment about efficiency, economic evaluation has to compare health outcomes, however measured, with costs. Measures of quality of life which go beyond both clinical and mortality endpoints are becoming more common. Quality of life measures that are based on preferences tend to use general population to obtain them. There are different methods through which preferences can be obtained and it is still not clear, which method represents the gold standard and most suitable for the purpose. Until this issue is resolved, all of them are used, which adds some confusion, non-transparency and non-comparability in the calculation of cost-utility ratios. It is precisely the question of the measurement of benefit which lies at the heart of any evaluation (Dernovsek et al., 2007). This is where a new method is proposed which
will take into consideration the abstractness of the benefits in CUA. CBA is able to translate the benefits into a monetary unit which makes it quite easy to comprehend.

**Cost- Benefit Analysis (CBA)**

Cost-Benefit Analysis is the most comprehensive and theoretically justified form of economic evaluation and it has been used over the past 50 years to aid economic and social decision making in the public sector. Its applicability in the health sector is quite recent and has limited use compared to CEA and CUA (Robinson, 1993). In cost-benefit analysis both cost and benefit are measured in monetary value or commensurable unit (Olsen, 2009). Since cost and benefit are measured in the same unit, it is possible to judge whether an intervention should be funded or not (Johannesson and Jonssen, 1991). In a layman’s view, the goal of the analysis is to examine whether the benefits of a programme exceed the cost and that the programme is worth funding. CBA is a full form of economic evaluation and sometimes have advantages over CEA and CUA when we do not have complete and comparable data on all the alternatives for evaluation (Drummond et al., 2005).

In a situation where the new programme produces a better outcome at an additional cost, CEA and CUA can give us the price at achieving that particular goal either by the incremental cost per life saved or the QALYs gained. What these methods cannot tell, especially in cases of incomplete data is whether the programme is worth pursuing given the opportunity cost on all the resources consumed. CEA and CUA avoids the use of monetary values for the valuation of health outcomes, however, to make a decision with regards to resource evaluation has to implicitly or explicitly put a monetary value on the outcomes and the programme benefits using specific budget constraints or published threshold values. For instance the social opportunity cost of life years saved or the cost per QALY saved (Drummond et al., 2005). In addition, the valuation of outcomes in CUA and CEA uses measurements such as QALYs that are not directly determined by the level of income. However, this does not in itself mean that those measures are unaffected by the distribution of income because life expectancy is systematically related income within population (Cam et al., 2002).

The underlying concept underlying CBA is that, the individual is considered the best judge of their health outcomes and how much they deem the importance of monetary value of a desired health outcome (Drummond et al., 2005). CBA is instituted in the welfare economic theory and the concept of consumer surplus (Drummond et al., 2005, Johannesson and Jonssen, 1991). The fundamental notion embedded in Welfare economist is that consumers who benefit or may benefit from a programme are willing
to sacrifice to have the benefits of the programme. It is the collective willingness to pay that is important for CBA. Owing to the fact that not everyone will benefit from the new programme and some lose and may require compensation is the basis for the Willingness to Accept (Drummond et al., 2005, Kenkel et al., 1994) Willingness to Pay (WTP) and Willingness to Accept (WTA) is the theoretical measure of the CBA analysis. WTP states the amount an individual is willing to give up for a particular project or health outcome and WTA is the compensation an individual require in case the proposed project is not undertaken. In relation to health outcome, it is the amount of money that an individual who is ill will take for his or her life to deteriorate (Johannesson and Jonssen, 1991).

CBA has a broader scope than CEA and CUA. It has a long history in transport and environment sectors. Whereas CEA and CUA addresses issues in production efficiency, CBA is able to inform questions about allocative efficiency. CEA and CUA are restricted to comparisons with similar outcomes. CBA on the other hand is able to incorporate both health and non-health outcomes to determine which one is worth doing, given the alternative uses of resources and the available resources (Johannesson and Jonssen, 1991). In addition, CBA captures the effects of a health outcome not only for the individual but also the spill over and the externalities that comes with an improvement or a deterioration of health (Drummond et al., 2005).

Very few CBA analyses have been done in the health sector compared with CEA or CUA. This is due to the difficulty in assigning monetary values to health benefits (Robinson, 1993). Others have also noted that most of the studies which actually stated that it was a Cost Benefit Analysis was in fact comparing cost rather than the benefit (Johannesson and Jonssen, 1991). There are generally two approaches to valuing health outcomes in CBA. They are the human capital approach and revealed preferences or stated preference approach.

**Human Capital Approach**

In the human capital approach, health care is seen as an investment in a person’s human capital (Drummond et al., 2005). Humans are seen as capital investment in the sense that, they are expected to yield a flow of productivity in the future (Robinson, 1993). Measuring the value of this investment over a healthy time can be quantified to be a person’s renewed or increased production in the market. This is estimated to be equivalent to the person’s rate of pay. The benefit of healthcare is calculated to be the income that would have otherwise being forgone due to illness. Hence the human capital approach places monetary weights on healthy time using market wages and the
value of the programme is assessed in the present value of future earnings (Drummond et al., 2005).

There are however criticism to this viewpoint. According to (Robinson, 1993) using wage rate as a measure of individual’s productivity will be an inaccurate measure due to the imperfections in the labour market. He argues that economic theory suggest the use of rates of pay as a measure of productivity when certain conditions in the labour market are met. In addition valuing health benefits only from the wages or rates of pay ignores those who are unemployed, the unpaid family member and the retired people.

**Stated Preferences Approach**

This is a method where individuals are asked to state their preferences among specified choices in monetary terms. This is known as the ‘willingness to pay’ approach. WTP approach uses survey methods to present respondent with hypothetical scenarios about the programme or the problem under consideration. Respondents are required to think about the contingency of an actual market existing for a programme or health benefit and to reveal the maximum they would be willing to pay for such a benefit (Drummond et al., 2005). In actual fact, there is no actual payment or compensation made, however interviews or questionnaire are usually used to ask either discrete or hypothetical questions about the amount one will be willing to sacrifice for the good in question (Robinson, 1993). The maximum WTP indicate the value one attaches to such benefits. (Drummond et al., 2005) further notes that;

> In many ways, therefore, CBA studies based on contingent valuation and statement of WTP can be thought of as an attempts to replace missing markets, albeit hypothetically, in an attempt to measure underlying consumer demand and valuation for non-marketed social goods such as health care programmes (Drummond et al., 2005:220).

Application of WTP in healthcare is quite recent, but there has been publications based on this approach (Drummond et al., 2005, Robinson, 1993). In an example by (Robinson, 1993), Acton investigated the WTP for mobile coronary care units that would reduce the risk of death after heart attack. In this study respondents were asked their personal WTP for the programme given their probabilities of having heart attack and death compared with a community programme. The results show greater WTP for personal benefits than that of community benefit. (Tolley et al., 1994) has observed this and argued that, there is still deep conceptual problems associated with WTP in measuring the difference between individual and societal perspectives of health benefit and this seems to have received very little attention. On the other hand (Drummond et al., 2005) notes that, most of the WTP studies are experimental in nature, in an attempt to explore the feasibility issues rather than a full economic
evaluation technology; and therefore these issues may not be a great matter of concern.

WTP approach is usually undertaken to get the estimated or sometimes the precise amount one is willing to pay for a health care benefit. But there is the tendency for inherent bias in eliciting the WTP. There is the problem as the starting price bias where the respondent response is influenced by the first numbers presented in the bidding game (Drummond et al., 2005, Robinson, 1993). The bias can be reduced by asking discrete/close ended question where the respondent is presented with a series of questions with a yes or no answer. Another problem is whether to ask WTP from hypothetical patient or the real patients. One of the difficulties associated with WTP is making the scenario realistic enough for the respondent. Most studies use the hypothetical approach, but there is the tendency that, a healthy person will value his or her health higher than the patient who is in the real situation. Therefore there is the tendency for validity and reliability concerns for the results.

Nevertheless the most important and also relevant to this thesis is the income distribution that is related to the WTP. WTP estimates depends on existing income distribution (Tolley et al., 1994). Valuing health care interventions according to WTP raises concerns about the amount of money one is willing to sacrifice and its relation to income (Robinson, 1993). The fact that one is willing to pay 1000NOKs and other pay 100NOKs reflects the value one attaches to the money being paid and associated health benefit. A person who earns 30000NOKs can sacrifice 1000NOKs for a programme of interest, whereas the person earning 5000NOK will find it difficult to sacrifice such an amount. (Robinson, 1993) has noted that, this problem is inherent in surveys in or outside the health sector when WTP surveys are used.

This may raise concerns about the kind of treatment that are likely to be implemented or funded by the public health system. Attempts have been made to overcome this problem by attaching weights to the benefits according to the income group of the recipient. Others have also advocated for taking WTP figure at their face values if the programme under consideration do not demand so much expenses in relation to income. My argument is that when income status becomes the basis for distribution of health care then sensitive issues such as socio-economic status, equity and fair distribution should be taken into consideration and various attempts should be made to include them explicitly in the design and implementation of any programme.
Concluding Remarks

This chapter started by discussing what welfare economics are and their argument for how resources are allocated. This was followed by an overview economic evaluation. Various methodologies have been described, their strength and weakness also highlighted. The argument for economic evaluations is that, different interventions or sectors are competing for the available resources. Unless the whole of national resources is directed towards health care, there should always in one way or the other be priority setting and rationing. We have to make trade-offs between efficiency and equity in health and also trade off between health and other things that society is willing to pursue.

This brings to focus the actions of policy makers, how they distribute and are accountable for the decisions they make on behalf of the whole society. Economic evaluations can assist decision makers in priority settings and classical welfare economics and Extra welfare economics have provided the normative foundation. Basing priority settings on this school of thought means a justification for separating wealth and health (Hauck et al., 2004). With this at the background, economist concentrates on issues of efficiency and concerns of just distribution are left to the political process.

The process of redistribution generates cost in the society which cannot be ignored if the society has any interest in reducing inequalities. The use of economic evaluation techniques such as CEA, CUA or CBA has their own relative merits and limitations. Even though CEA and CUA are commonly used, CBA is gaining popularity among health economics. It is the most direct way of assessing whether the benefit of an intervention exceeds its cost and if it is worth pursuing. However, there are concerns about the use of ‘Willingness to Pay’ approach as a measure of individual preferences. When there is a systematic difference between socio-economic status and health, using this approach will imply that, the interventions that favour the rich will be implemented and the poor will be denied. When this is implemented comes with it great implications for the population as a whole. The next chapter will give a description of the possible implications of using economic evaluations as a tool for priority settings.
Chapter Four

The Place of Equity in Economic Evaluations

Introduction
Considerable debates about equity in health policy objectives around the world have been made. Many countries do make explicit statement about their equity goals in their health policy statement (Mooney, 2009a). Policy statement in most publicly funded system such as the UK and Norway has twin objectives; to maximize population health and give equal access to health care for the purpose of reduced inequality in health (Olsen, 2009). This definition appears to underlie many policy statements in the recent health care reforms around Europe. There is the concern that there should be a fair and equitable deployment of available resources for the benefit of the whole population (Whitehead, 1991).

Equality and Egalitarianism
Egalitarians hold that persons should have equal shares of goods such as resources or welfare. In other words should have the equal opportunity or access to obtain these goods. Equality of welfare implies how well people fare relative to other and to them it is plausible that the relevant distributive unit should be whatever that matters with respect to how people fare. The welfare view according to (Daniels, 2008) is concerned with any deficit in welfare or advantages even if those emerged from natural distribution of talents and skills. Equality to resources are important so far as it leads to welfare (Holtug and Lippert-Rasmussen, 2007). According to (Olsen, 2009), the term general egalitarianism is often used when the distribuendum is income and wealth, while specific egalitarian emphasise the distribution of particular goods. He further distinguished between strong egalitarian as the one which the preferred solution is the one with the most equal distribution and the egalitarian towards maximin that allows for inequality only when it benefits the worst off.

On their view on health care, when we demand equal shares of everything (Olsen, 2009) believes it is absurd, when they will make two people be in a bad health condition than to have one better than the other. Others have also noted that, strict equality for all is not attractive and unrealistically expensive (Norheim and Asada, 2009). Olsen suggests that, the maximin is a better option in terms of health distribution. But in (Daniels, 2008), he notes that, the egalitarian view pushes us towards any intervention, including any use of health care technology, that eliminates
disadvantages in opportunity produced inequalities in capabilities. The ‘prioritarian’; another view of egalitarian proposes that, individuals should be held responsible for their lifestyle choices. They argue that we have claim for medical assistance only if we are sick through no fault or choice of our own.

Equality of health definition of equity also provides a clear definition of what constitute an equitable distribution of health(Wagstaff, 1991). What have been discussed in most literature concerning equities in health and also the current distribution in health has to do with the capacity to benefit from the programme and the costs associated with the treatment. Equity in health care is achieved when equal health status has been achieved. The goal of an equitable health service would be to make the level of health same for all individuals, same in all regions or social class or at least narrow the health gap significantly(Whitehead, 1991). In practice, this will be difficult to achieve because health care is just one of the many factors that contributes to the difference in health in countries. Due to the unrealistic nature of health equity in most countries, there is the need for a common a ground, to determine how to distribute the available resources fairly.

The theoretical justification for any equity criterion should be consistent with the conceptual framework of modern economic theory(Pazner and Schmeideler, 1978). There are two main theoretical backgrounds that has usually invoked as the background to the exercise of equity evaluation in human society. The first one is using inequality evaluation for analysing social justice and specifically the choice of the basic structure of the society in the general framework of political and social ethics (for instance Rawls 1971’justice as fairness’). The second theory mostly used in welfare economics is that of assessing inequality in the context of social welfare analysis assuming that the aggregation of individual utility determines their level of social welfare(Sen, 1992). I will not be able to say here which theory will be most appropriate. We can link health to either egalitarianism, maximin or the utilitarian theories of justice. But it is suggested by(Norheim and Asada, 2009) that it is acceptable to see health as intrinsically linked in any general conception to general theories of justice.

It is increasingly believed that, economic evaluations have become the basis on which scarce resources are allocated based on the merits of a programme’s benefits and cost. Although it may be clearly important, such a definition could also lead to a health service that is ineffective, inequitable, inefficient and inadequate to meet the health needs of the general population(Carr-Hill, 1994). When health becomes a critical
concern, making health equity central to the making of health care policies is very important.

To achieve health equity is immense. But there are certain connections with health and the broader social arrangement that we must pay attention to. Health equity should not be seen in isolation but rather as a continuum with larger issues of fairness and justice, including economic evaluations and the role of health in human life and freedom (Sen, 1992). While there may be greater implications of equity in many cases in economic evaluations, it might be too early to make any concrete analysis. An approach will be to do an analysis of equity and efficiency in the context of health care policies in countries and discuss the implications on equity and efficiency. Health is incorporated in the arena of social justice in several distinct ways and according to (Sen, 2002) they do not yield the same implications for different social arrangements.

Due to the interconnectedness of health equity and other forms of social arrangement (Sen, 2002, Sen, 1992) proposes that we identify the space to examine the context of inequality we are interested in. To him, inequality is an abstract idea, and does not present us with the real picture of what we mean. Rather when we are able to specify what is to be equalized, in what context and, identify the equitable accounting rules that may be followed in arriving at our goals such as distributive theories. ‘Equality of what’ and ‘equity in what’ is what should guide us in our concerns and discussion of equity in health. The measurement of health inequities should reflect our views on how we want to conceptualize it. In other words we should be clear and expansive enough to be able to create the foundation on which various health equities can be developed and explained (Norheim and Asada, 2009).

It is also important that, the relative importance of the spaces chosen to evaluate inequality and the appropriateness of the context chosen should be in line with the motivation underlying inequality evaluation. Inequality is measured for a purpose; and the choice of context would have to be made in relation to the purpose and what we want to achieve (Sen, 1992). For instance we may be interested in knowing what effect socio-economic status has on mortality and morbidity rates among a group of people. In the same light, we might also be interested in knowing the policy objectives of a country and whether it is in line with ensuring that the distribution of health is fair and equitable in relation to available resources. In whatever context we choose, the purpose for the need of health equity should be made to guide in the discussions on equity implications of health care designs.
Health is among the most basic considerations of human well being and a critical part of human capabilities. Our conception of social justice should invoke in us the need for a fair distribution as well as efficient formation of individual capabilities. What is serious and particularly unacceptable is that some may have the lack of opportunity to achieve good health due to particular social arrangements as opposed to individual’s choice of risky and irresponsible lifestyle. It is important to make a distinction between achievement and capabilities on one side and the resources socially offered to help achieve (health care) on the other hand. To argue for health equity is not just a matter of how health care should be distributed. The factors that contributes to health achievement and failures goes far beyond health care provision and includes many factors of different kinds such as genetic pre-disposition, individual socio-economic status, age, sex, food habits and individual lifestyle (Sen, 2002).

Measuring just the individual utility and summing it up to assess the level of social welfare therefore becomes a matter of concern when economic evaluations in health care are based on this theoretical background. The differences in the individual’s capacity and their capabilities at their disposal have a major role to play in health care equity debates. There is an advocacy for a new paradigm, a new approach to health economics that, health equity is not just about equal distribution of health but should take into consideration the multifaceted nature of the issue of concern. The argument is that, the demand for equality has to be weighed against the force of competing demands when present. Equity has to be assessed in light of other considerations. The demand for equity cannot also be clearly interpreted or understood without taking note of adequate efficiency considerations as well as the underlying social and economic structures (Sen, 1992).

This is where Amatyr Sen criticizes Rawls theory of ‘Justice as fairness’ because of differences in individual capabilities when one is concerned with ‘primary goods’. This stems from the fact that individuals inhibits some difficulties either naturally or socially to convert the primary goods into actual freedom. He argues that, a person less able or gifted in using primary goods due to physical or mental disability, varying prone to illness, or biological or gender differences is disadvantaged compared with another favourably placed in that respect even if both have the same quantity of the primary goods. In this respect, when health care is the concern, this issue becomes illuminating. It has been seen that, access to health care is not usually the problem or a major issue in most advanced European countries. It is the
differences that individuals exhibit in terms of age, gender, chronic illness or disability and their socio-economic status in the society that matters.

In dealing with responsible adults, it is more useful to see the claims of individuals on the society in terms of equity in the context of freedom to achieve rather than actual achievements (Sen, 1992). If two people are presented with the same opportunity to achieve but one wastes this opportunity (risky behaviour and bad lifestyle such as smoking and drug use) and ends up worst off, then it is possible to argue that, no inequality is involved (Olsen, 2009).

**Individual Responsibility or Capability for Health?**

The individual responsibility argument has entered the debate when one is concerned about inequalities in health. Theoretically there has been a shift from an ideal freedom of opportunity as proposed by Amatyr Sen to a new set of ideas in inequality where the individual’s lifestyle is taken into account when assessing inequities in health care (Feiring, 2008). The predicaments of a person due to factors beyond his or her control can be dismissed or compensated for. However, when a person takes the risk and end up in a worst situation, then there will be reason to invoke the person’s own responsibility (Sen, 1992). If there is equity of choice, then those inequalities that may arise from differences in preferences are not regarded as inequitable. If it is considered as not inequitable then by logic they are equitable (Olsen, 2009) because we will not worry about inequalities that are caused by differences in lifestyle.

Even then, this argument has its limitations. Recognizing the importance of lifestyle decisions and other factors outside of the health care system, a more comprehensive argument is that constraints should not determine whether one receives treatment or not (Tolley et al., 1994). Also whether risk is associated with lifestyle choices or is the natural effect, it affects well being, opportunities and freedom in the same degree and therefore should not be given any less priority (Norheim and Asada, 2009).

The questions we ask are how much of an observed related lifestyle can be attributed to individual preference and how much is social conditioning (Olsen, 2009). It has been observed in studies that, anti-smoking campaigns have been unevenly distributed across society. Also smoking prevalence has declined five times faster among the more educated compared to the less educated. The individual responsibility argument will be more acceptable when the person is presented with adequate information about his or her behaviour. The case of concentrating on individual responsibility depends
quite heavily on the knowledge and the ability of the person to understand and intelligently choose from the alternative they do have (Sen, 1992).

In much the same way, choices may be thought of as simultaneously autonomous and socialised (Feiring, 2008). Choices we make have something to do with the society we find ourselves in. If social conditions make a person lack the courage to choose rightly or even to desire then it will be unfair to undertake an assessment assuming that the person has an effective choice (Sen, 1992). The strong correlation between social deprivation and unhealthy lifestyles could suggest that there may be recursive effect between the two variables (Olsen, 2009). The limitations in this view is that, it does not recognize people as individuals who are distributed diversely in society both with respect to preferences and constraints (Tolley et al., 1994).

Sen (1992) proposes the capability approach as a way of evaluating well being and the assessment of freedom. This approach is quite different from the traditional approaches to social evaluations such as real income and consumption levels. It moves the focus from spaces of means to individual functionality which is seen as a constitutive element of well being. He argues that, a person’s well being can be seen in terms of the quality of the person’s being. Living may be said to be consisting of a set of interrelated functioning, consisting of beings and doing.

The capability approach makes it possible for the person to know the set of alternative functioning vectors available to choose from. In effect it is seen as the overall freedom a person enjoys in pursuing his or her well being. Related to the individual functioning is that of capability to function (beings and doing). Thus, just as the income of a person determines how much she can buy, the capability set provides the freedom to choose from possible opportunities. In policy making, information about the capability set gives us information about the various functioning vectors that are within reach of a person (Sen, 1992).

Our interest in health equity can therefore be seen to be related to different evaluative foundations. In the above discussions, I have not particularly focused on the relative merits of the various approaches. It can be seen that health equity involves complex issues and cannot be dealt with in isolation. The need to admit to the incompleteness of equality evaluation in economic evaluations therefore becomes inescapable and there is the need for research to address the issue. (Sen 1992) argues that, the incompleteness may be due to the nature of the concept itself (ambiguity) or because of lack of information or due to need to respect residual disagreements among parties involved. No matter the space taken to assess inequality, a conflict usually arises.
between aggregative concerns (maximizing individual benefit, no matter how it is distributed) and the distributed ones (reducing disparities in the distribution of benefits). Health economics has usually reflected the common element of aggregative concerns. The crucial question is what role does economic evaluations play in our quest for health equity and what are the implications of the results in society.

**Health Aggregation and Distribution**

The distinction between aggregative considerations and distributional concerns is usually discussed in the context of the results (Sen, 1992). For instance, maximizing health benefits and at the same time reducing the interpersonal differences in health. There may be some different instances where we may be interested in promoting some health benefits (preventive health) and at the same time with the aim of reducing the disparities. There is the problem of trade-offs between improving equity in health and increasing the overall health of the general population. Programmes to prevent cardiovascular diseases among minority groups in a city will be difficult than people with higher income and education. At the same time, questions also arises whether to improve the health of the well off which will be more effective than the poor a better policy option? (Norheim and Asada, 2009). The aggregative–distributive concerns has become one of the pervasive issues in economic evaluation. Equality no matter how broadly defined cannot be the only concern for equity in health. Aggregative issues, including the demand for efficiency tends to have a greater role to play in the demand for equity in health.

Aggregative considerations can make us move in a different direction from equality in general. It includes efficiency and also value judgement. The pursuit of equality can be properly understood or evaluated only within the broader context of other demands in the society such as efficiency, capabilities, freedom, fairness and justice. When we concentrate on the programmes such as economic evaluations, we must not over look the ethical concerns that take us beyond equality in general. In addition when we carry out aggregations, there are always questions of what to include and what weight to attach to these utilities; whether they should count the same or differently. It is the idea of giving equal weights on the utilities to each person that the utilitarian approach takes the same stand as the egalitarian approach (Example Fig 5.1). They are similar in the choice of particular space and other same time the requirements that should take place in that space (giving equal weights to all in the aggregative objective rather than promoting equality of utility levels) (Sen, 1992). To be able to design health policies,
researchers and policy makers should be able to combine distributive and aggregative concerns (Norheim and Asada, 2009).

**Efficiency in Health**

The demand for efficiency usually takes the form of Pareto-efficiency. It is almost certainly the most widely accepted and mostly used criterion in modern welfare economics and its acceptability is taken to be non-controversial. Achieving efficiency is about comparing cost and benefits of competing health interventions and ensuring that resources are allocated in such a way to maximize health gains in the society (Carr-Hill, 1994). In principle, social efficiency is an underlying objective of many public health care system. In the simplest form, given that an intervention is worth pursuing, it will involve selection between the costs of alternative programme and comparing the health gains produced by the different programmes to assess which programme is less costly or more effective. This explanation of efficiency is what is termed as operational efficiency. Allocative efficiency is about whether an intervention is worth doing at all. We assume that an activity will be carried out so as to ensure that resources are used at the optimum level. Allocative efficiency incorporates societal perspective by taking account of all cost and benefits of intervention whether they fall within or outside the health care sector.

Most often we think of policies that represents actual-improvement in the sense that policy makes some people feel better off without making any one else feel worst off. However, (Hammer et al., 2003) argues that, such an improvement is rare. Commonly, public policies make some people feel better off at the expense of others. This usually happens when we want to move from one Pareto distribution to another. The dispute surrounding Pareto-efficiency as a condition for social optimality relates to the status of utility space itself. The Pareto-efficiency does not ask questions concerning what context does the dominant improvements be accepted as the relevant improvement. The dispute relates to whether utilities are appropriate measuring criteria.

The difference in the utility measure between individuals forms the basis for partial rankings health evaluations. However, according to (Sen, 1992:98) ‘one of the consequences of adopting such a partial ranking view of interpersonal comparison and the of the assessment of equality is to admit the possibility that in many situations no clear judgement can be made as to whether there is more equality in one situation than another’. The reliance on individual utility is one of the limitations of the utilitarian ethics, which is particularly neglectful of the differences in individual conditions or the claims of those who are in the bottom of the social ladder, that do not
have the courage or the capacity to prefer more. When proposed policy makes one better off at the expense of another, then it becomes the duty of policy makers to make explicit value judgement on the social desirability of the proposed policy (Hammer et al., 2003).

Up until now, there is still a long debate among economics about how such evaluation should be undertaken. In health care, it could be suggested that, it could be left to the invisible hands of a competitive market after social policies have set the ethically preferred distribution of purchasing power (Hammer et al., 2003). But how well does the heath market work? Is it not prone just as any market to failures? There is general agreement that the market for health fail as well. Yet we have not been able to find an appropriate method to mitigate it. (Mooney, 2009a) has argued that health economics have been reluctant to accept the problems with willingness to pay approach; rather they have turned to welfarism as way to keep the health market alive and to disguise the problem. QALYs have been invented within the welfare economics to ease the analytical task of health economics.

(Mooney, 2009a) has argued again that evaluation based on individual satisfaction (utility) is inadequate because the ultimate satisfactions from an intervention of members in the society are not known in advance. Secondly, patients are not expected to maximise utility in conventional sense as they are not adequately informed to do so, and their assessment of benefits are informed by the process of illness and health care consumption and as such not stable. In much the same way, patients are not well informed about their conditions with or without the intervention being considered. Because of this lack of information, patients largely rely on the expertise and knowledge of physician who are now their agents who are assumed to be better informed. Depending on who makes the decision and the objective function of the decision maker (health maximization), patients can be better placed in position so as to maximise their utility in health care.

Thus the question still remains how one to is to evaluate the relative social merits of health intervention or social policies that redistribute economic privilege among members in a society. Will there ever be any objective analytic method of accomplishing such a subjective social valuation? How should we evaluate any reallocation of human happiness that leaves one person feeling better off and another person feeling worst off? (Mooney, 2009a) Obviously, there still need to be pragmatic resolution into these relevant issues.
In this approach, there is a deeper malaise in the existing paradigms in welfare economics and they seem inadequate for the tasks they seek to address. The value base of health economics continues to focus on the individualistic and the consequentialist, despite the call for greater attention to be paid to health care and public health as social institutions (Mooney, 2009a). Today, the distance between where we are and where we want to get in terms of equity are much more than the distance between current health evaluations and efficiency. This may be due to the ambiguity regarding the concept itself as already mentioned. Whereas the debate around efficiency has been resolved or perhaps been defined more accurately, there seems still a debate of what constitute equity.

A concern for value as health budgets increase and wide variations in practices decisions among providers are fuelling a major effort to measure the comparative effectiveness of different procedures (Light, 1992). Procedures are ranked so that activities that generate more gains to health for every NOK of resources takes priority over those that generate less so that health of the community will also be higher (Wagstaff, 1991).

**QALYs as a tool for priority setting in health**

The assessment of efficiency seems quite an easy procedure and maximizing health is argued to be a natural objective to want to pursue. However, the real difficulties arise when we compare interventions for different conditions or patient combination. With a breakthrough in QALYs, health economics have been able to combine quality of life and length of life into a single index. It is based on individual health (utility) before intervention and after intervention. All QALY’s count the same and it does not take into consideration difference in the patient conditions. More so, some estimates are required in order for a systematic decision be made. It also involves value judgement and personal opinions of experts. But should a tool which overlooks known inter-individual variation in the basis for valuation and which still require an appeal to professional judgement of the conditions of different patient in order to derive a valuation be regarded as fairer or equitable enough? (Wagstaff, 1991).

Professionalism embodies expert assessment of the problems and their possible treatment, impartial treatment of patients and the informed use of resources in order to maximize effectiveness. The problem is however that, it is the expertise of these professionals that decisions about equity and efficiency is made. The professional judgement or the credibility of these professional has come under scrutiny. The choice of doctor has become an independent variable that affects the chances that one gets to
be admitted in a hospital or be sent home. They favour patient with medically interesting disorders while making other wait and prejudice against those who are older or have chronic problems (Light, 1992). However we know that, those who are greatly deprived in the society are also those with the greatest medical needs such as chronic illness.

One of the important decisions in life is health care decision. It should be made by fair minded people. However, (Carr-Hill, 1994) argues that, the presumption that, rational decision making is required for everything except the most routine decision such as health care is beyond all common sense. Thus economic evaluation in health operates within a regulatory framework of rule; what is included and what is not. However, it is not the mechanism of these rules that needs to be criticized but the factors that influence the adoption of one set of rules rather than the other.

Behind the drive for cost-effectiveness are the potentially efficient but inequitable tendencies. The use QALY’s as a tool for priority settings imply that, resources in the health sector will have to be redeployed towards procedures such as the insertion of pace makers for heart blocks, hip replacement, the replacement of valves for aortic stenosis in the UK and snoring surgeries in Norway and away from procedures such as kidney transplants and coronary artery bypass grafting for severe angina with one vessel disease (Wagstaff, 1991). These decisions are attributed to consumer choices and preferences based on willingness to pay. Individual preferences are part of the larger focus of health economics evaluation to decentralise decisions, to increase responsiveness and efficiency in the health care sector. However, when greater emphasis is placed on consumer choices and preferences, it can easily lead to inequities depending on the values and goals of that individual.

Responding to consumers presumably means responding to demand, and within a limited budget, that means that those in need who are not able or skilled at demanding will be made to wait instead. In addition, social class correlates strongly with skilful use of social services (Light 1992:466)

Others such as Cuyler (1989,1990) sees QALYs approach as a departure from the Paretian welfare economics. His argument is that, social welfare is derived from individual utility rather than personal characteristics. However the claim that QALY is a measure of individual utility is not really the case in welfare sense because it focuses on the characteristics of the people rather than the utility derived from health care. This becomes obvious when we observe that the quality of life scores used are common to all people. In resource allocation two people cannot be in similar health states and yet experience different utility (Wagstaff, 1991).
This is not to say that, QALYs do not have distributional concerns. By virtue of the fact that QALYs are the same no matter who receives it has an inherent kind of equality embodied in the design. A year of life extension for an infant, a forty year old and an eighty year old all have the same value in the QALYs produced (Anand et al., 2005).

The equity implication is that, since QALY is regarded as being equal to everyone regardless of who receives it, the outcome of resource allocation by QALY approach becomes automatically equitable irrespective of the inequalities involved and the people who were left unsatisfied (Wagstaff, 1991). The valuation of QALYs as being the same to everyone sometimes seems to conflict with the social role that individuals typically occupy at different ages and their emotional, physical and productivity levels. When such concerns are raised, one could then argue that we could discriminate in favour of the young and against those who have led irresponsible lifestyles. This becomes ethically problematic because it gives different weights between individuals with respect to their social and economic values (Anand et al., 2005).

More so, the survey approach also raises some concerns about eliciting views about equity. Most people find it difficult to distinguish between what is just and what is regarded as desirable (Wagstaff, 1991). The response by a smoker concerning a lung cancer intervention will be quite different from a non-smoker. Similarly, there is also an altruism effect, where people get personal utility from showing sympathy or undertaking actions that they consider to be a social duty (Dolan and Olsen, 2002). When responses are based on either of these prejudices and used in the analysis, then we tend to face reliability problems of the data used.

In other concerns, distributional equity dictates that, it is better for many people to receive little than for a few people to get a lot. This however contradicts with the notion that, one person getting ten years additional life is the same as ten people getting one each (Wagstaff, 1991). The question we ask is when should small benefits to large number of persons receive priority over large benefits to a small number of persons? The debate about priority setting in health and who gets what, how, when and on what condition should one condition be favoured rather than the other seems not unresolved. There are always those who win and those who lose. People argue that, health benefits are often qualitatively different and therefore cannot be measured on a single scale like QALY. In cost-effectiveness analysis we minimise the aggregate
burden of disease and maximize the aggregate health of the population without regards to the distribution of disease and health.

The concept behind QALYs is that; it does not matter who receives it, it counts the same to everyone. But we tend to ask the questions such as should we give it to the sickest person or the mother of the two year old? In most general cases, the issue of aggregation concerns the limits that is acceptable if aggregating together different size benefits for different people in comparing and prioritizing different interventions (Anand et al., 2005). But in most cases, prioritisation and rationing choices arise not from physical scarcity of needed health care resources, but from economic scarcity, limits in the money society is willing to pay for health care.

The normal assumption in health economics that health gains are to be valued equally no matter who gets it is coming under scrutiny. In a survey by Nord et al (1995), to find out from the Australian public about their views on their health service objective; the maximization of the QALYs gained irrespective of how it is distributed, it was found that, in a number of circumstances there was little support for such a policy especially when health benefits of the young is competed against the elderly (Mooney, 2009a).

CEA, CBA and CUA analysis are applied and to inform decision making when an intervention produces greater aggregate benefit at a given cost than using the same funds to treat or prevent conditions that has a great impact on each individual affected (Anand et al., 2005). A notable example is the Oregon Medicaid priority setting process where capping of teeth for exposed pulp was ranked higher than appendectomy for acute appendicitis which is a life threatening condition in cost-effectiveness. This is so because the aggregate benefit of capping the teeth of 150 patients is higher than an appendectomy for one patient. This mode of rationing can be unacceptable to many people considering the fact that, people can still live a healthy life without capped teeth whereas acute appendicitis can be dangerous and life threatening. Even though this was revised and another approach to prioritisation was adopted by the Oregon Medicaid, these methods continue to question our priorities and our ethical judgement.

In a clinical context, most physicians will want to treat patient who without treatment, their condition will worsen or based on the severity of illness. On the other hand, health policy makes emphasise on the aggregate benefit of the intervention on the population health. In most cases, the concepts of aggregating the health benefits can be considered ethically acceptable and equitable. The problem then is to be able to
identify when, how and for what reason does different forms of aggregation meet equity criteria and when they do not. Up to date, there is no consensus on this issue between lay people, researchers, policy makers and physicians alike. Health economic also overlooks the fact that, most inefficiencies in health care are embedded in customs, rules and the organization of work, professional values and institutional structures of work which carry with them various kinds of inequities as well (Light, 1992, Shortell and Kaluzny, 2006). Also greater resources are being directed towards administration and consultancy services to design new programmes rather than the actual policies towards mitigating inequities in health care programmes.

**Concluding Remarks**

Who gets what and on what basis they are treated differently is a matter of social justice. Of course the theoretical basis underlying economic evaluation; welfare economics claim that, individuals are the best judges of their own welfare. The accumulated preferences of all members of the society determine their welfare. Nevertheless, there has being the norm in economic evaluations to ask questions like how much life is worth, when we want to put monetary value on life and by also pointing to the limits we have in saving those life through our willingness to pay (Wagstaff and Doorslaer, 1992). However well documented, or informed these decision are, they always leave some diseases uncured, some people unsatisfied and some dead more than others.

There has been a considerable effort on the part of health economics and philosophers to examine and find ways of distributing health equitably (Wagstaff, 1991, Mooney, 2009a, Sen, 2002, Sen, 1992). Without a well defined approach to equity it becomes quite complex for researchers and policy makers alike to develop policies towards mitigating this issue. Health equity is a multidimensional concept. It cannot be treated in isolation but in relation to a number of different considerations which take us beyond the role of social and economic matters. In our quest to redistribute the scarce health care resources, various methods and criteria have been used.

Cost-effectiveness analysis and QALYs are being used, where an intervention which produces the greatest benefit for every penny spent is being prioritised. This will seem promising and equitable in most sense. QALYs count the same to everyone, it doesn’t matter who receives. But there are still distributional and legitimacy concerns, between the old and the young, the rich and the poor and the person who makes those decisions about who receives what. A programme that still leaves some people better off at the expense of others cannot be considered fair enough. There is a need for a
more multi faceted approach to the distribution of health. The next chapter discusses the alternative approaches to health distribution. Even though there is not a conclusive argument on what is appropriate, I hope that, the discussion below will open our minds to our possibilities.
Chapter five

Discussion and Conclusion

Introduction
In most circumstances there is no optimal criterion for distributing health care. The choice we make have implications involving ethical, equity and value judgement.

Here, I want to explore the various distributional theories which guides distribution in health care by using the health frontier. Next, I will explore the various priority setting approaches that has been employed by some European countries and finally provide the alternative approach to distribution. Here I argue that, we should rather concentrate our efforts on making the process of priority setting fair and equitable than the results of health distribution.

The Health Frontier
(Olsen, 2009) has given an explanation of how the health frontier functions. To distribute health, trade-offs are made and these can be analysed in terms of social welfare functions. All the three theories of justice can be explained in the form of health frontier. The assumptions underlying the health frontier is that,

1. A fixed budget is to be distributed among two groups of patients
2. The productivity on health care on health is positive and the marginal productivity is diminishing
3. Health care outcomes are measurable on cardinal scale and are interpersonally comparable.

The shape of the frontier is concave and thus includes a Pareto-efficient distribution; improving the health of one group implies reducing the health of another group. Due to the dissimilarities in the health production, the frontier is not symmetrical around the 45 degree equality line. Here the utilitarian, the maximin and the egalitarian are found on the same point. However the purpose of health frontier is to show the various solutions to health distribution. Due to differences in the capacity to benefit from intervention, and when the policy objective is to maximise health as in various health policies including Norway, then the point ‘max sum’ will be the most appropriate.

This frontier has its limitations in the sense that, the maximin and egalitarian are all found in the same point. To be able to distinguish between the three, it is proposed that the frontier be extended to include an increasing part. And with this one of the
assumptions is relaxed. In the more general frontier, we are able to distinguish clearly the various points of the theories of justice on the frontier. E(Equality) for A and B, R(Maximin) and U(Utilitarian) is the maximum total health. Most economists will prefer the point between R and U, it at this point that distribution appeals to ‘common sense conception of justice’. But if the policy objective is to pursue equality, then a point between E and R will be appropriate. Any point outside E and U will not be in line with any of the discussed distributive justice(Olsen, 2009).

Equality vrs Efficiency(Olsen, 2009) Fig 5.1

Various theories of justice been explained and their view on health distribution and priority settings. theory about health distribution should illuminate in us the idea that health care is special and should be treated differently from all other goods and also these theories should help us put our priorities right(Daniels, 2008). Health economist have applied distributive justice with the intentions and hope to find solutions as points identified on the health possibility frontier(Olsen, 2009). There seem not to be one approach that is considered ideal. They have various limitations, to what may seem acceptable in priority settings in health care. However, Daniels emphasised;

Our beliefs about acceptable designs of health systems should also have a bearing on what we think is just health and health care(Daniels, 2008:243).

He also notes that knowledge about ethics should guide us in practice and conversely acceptable moral practice should also be able to constraint ethical theories.

How much priorities should be given to some illness and their intervention and which ones should be funded? Different views come up when we want to set priorities in health. From Rawls and the difference principle; we should give priority to the worst-
off patient. On one hand, it is the view that we should give priority to the patients who has the greatest capacity to benefit. This is a utilitarian view and it forms the basis of welfare economics and economic evaluation. Equal access to opportunities has also being proposed by the Egalitarian theories and unequal distribution on the grounds that if the health status of an individual is as result of a well-informed choices among individuals who are presented with the same opportunity. All these have their implications for resource allocation to the health sector depending on the policy objective; whether it is for equal access, maximize health or to give priority to the worst off.

So far the arguments given in the preceding chapters have given critical review of economic evaluations as a tool for resource allocation in health. The arguments so far invoke in us the idea that, it not complete. The rational and motives behind it are nonetheless individualistic rather than the preference of the whole society. The concerns for efficiency in the health care sector have somehow over shadowed the equity implications that come along with it. Of course when we want to know which intervention is worth pursuing considering the available resources. CEA, CUA and CBA’s become the most appropriate tool for that analysis. But questions about whose benefit and on what basis should one intervention be adopted than the other, equity concerns and who should make the decision still remains unresolved.

Moreover, we cannot put the blame solely on economic evaluations in health because it is a quite recent development. Policies over the last 20 and 30 years have failed to deliver equity in health care(Mooney, 2003). Also, in most health care priority settings, research has shown that, most of the recommendations regarding economic evaluations has not actually being implemented due to various methodological and practical problems limiting its usefulness(Hauck et al., 2004). Given the evidence of the social determinants of health and the inability of health economics to address it; I will rather explore the possible ways for priority settings over the past few years.

**Priority settings in health care in Europe**
The knowledge that health is of special moral importance should guide our thoughts and actions when designing health policies. (Daniel,2008:108)argue that, the controversy that surrounds the winners and losers in resource allocation becomes a legitimacy problem; ‘under what conditions do decision makers have the moral authority to set the limits they impose’? Setting limits also require the authorities to be accountable for the reasonableness of the limits they set.
Priority setting per se is very important in our daily medical decision making. It is a general requirement of justice (Daniels, 2008). The fact that health has a moral importance and also opens up opportunity is also an opportunity cost in itself. Health is not the only important good. Resources directed towards health care delivery also means other sectors of the economy will not get any resource or less of what they actually needed. Therefore it is not only important but necessary to provide the adequate institutions and information needed to make resources allocated to the health care sector worthy. Priority settings also rest on value judgement and the general theories of justice may not be able to explain them. When we set the cost effectiveness acceptability curves and willingness to pay, they are not explained by distributive theories but value judgement about cost and benefits to the society.

Priority settings in health can be described as a systematic way of distributing the available health resources among demand in order to achieve the highest health care possible given the resource constraints (Hauck et al., 2004). Priority settings in health care is quite complicated and complex than in other sectors of the economy. It involves the lives and the survival of individuals, the aversion of death and the relief of pain. It also involves dignity restoration and the return to productive life. It involves value judgement about what to do and what not to do, trade-offs and equity concerns are also incorporated. At the same time, there is the need to have health care service that cost-efficient and cost-effective. Resource constraints and willingness to pay raises questions about justice and efficiency; which public intervention to be funded and how the resources should be redistributed.

With these factors at the background, it becomes necessary to make explicitly the objectives of health care system. (Sabik and Lie, 2008) argues that, explicitly addressing priority setting enables policy makers to develop fairer methods of resource allocation and to begin public dialogue to ensure legitimacy of the process. There is no universal method or approach to priority settings but it will depend on the objective function of the country in question. As noted earlier, Norway and the United Kingdom has a twin objective; maximize the health of the population and to reduce inequalities in the access to health care. Different public health financing systems; from public finance through tax system as found in the Scandinavians and the UK and social insurance as found in the Netherlands, Germany, Israel and other European countries will determine the objective of the health system.
Norway

In Norway, the concern for priority setting started as a result of the longer waiting times for medical treatment. There were increasing political and media pressure to reduce and prioritize patients on the waiting list. In other countries too, denial of potential life saving treatment such as bone marrow transplant for certain kinds of cancer called for explicit objectives to be made. In the UK differential access to health in different countries also put pressure on government for change.

In 1978, the Lønning commission set by the Norwegian government set forth the principles to guide in priority setting in the country. Severity of the disease was deemed to be the exclusive basis for prioritization. Other five priority group was also outlined. They were emergency care for life threatening diseases, treatments which prevent catastrophic long term consequences such as cancer, treatments which prevents less catastrophic consequences such as hypertension, treatment with some beneficial effects such as common cold and lastly, treatment of disease with no documented effect. Ten years later, another commission was set up. They saw the need to incorporate effect and cost-efficiency as a secondary principle to guide priority setting.

Other four principles of necessity were also introduced. It was defined broadly to mean any intervention that could provide some medical benefits. The principle of effectiveness was divided into those interventions that have evidence of effectiveness, those with limited evidence of effect and those with no evidence at all. This was also sub divided into those interventions that gave value for money, by funding only services that had efficient outcome and then excluding services that could be bought by the individual patient. For instance routine adult dental check up. This was argued on the basis not to let patient pay for their lifestyle choices such as eating habits but it was thought that, it was best left to the individual responsibility (Sabik and Lie, 2008).

Similar commissions were set up in many European countries. In Denmark, the commission of ethics laid down some principles that should guide priority settings in health care. They concluded in their report that, equality, solidarity, security and autonomy should be the basis for health delivery. These values helped in formulating the goal of their health system which is stated as ‘opportunity for self expression irrespective of social background and economic ability’. A partial goal was also made which include the achievement of equity, cost-effective and democracy. In the UK, the National Institute of Health and Clinical Excellence (NICE) was set up in the 1990 to appraise new technologies, develop clinical guidelines and assess intervention.
procedures. With this mandate, they also address issues such as what procedure intervention should be publicly funded and to incorporate cost-effectiveness analysis in public intervention programmes (Sabik and Lie, 2008).

How well do these recommendations inform actual decision about resource allocation in health care? (Sabik and Lie, 2008) and notes that, it is clear that, these commissions have no significant impact on actual practices at the policy, planning or clinical levels. It could also be the fact that, translating these seemingly abstract principles into real life decision is quite difficult since it has consequences for everyday life. Considering technological progress and new treatment possibilities, there is little reason to believe that, the difficulties in applying the principles to real life decisions will be any easier. Diseases that were thought to have no effective treatment are getting breakthroughs in terms of treatment options. In other areas, the outcome of the treatment is not just about whether the patient gets cured from the illness or not. It is about self dignity and fulfilment even if there is no complete cure for the illness.

Economic evaluations have been seen to be common in most of the commission’s recommendations. This may be due to the nature of economic evaluations as it forces decision makers to define explicitly the objectives of the health. It also allows researchers and decision makers to model the uncertainties and the conflicts that arise when priority settings is undertaken allowing the nature of trade-offs to be made known (Hauck et al., 2004). Notwithstanding, cost-effectiveness has been seen to come with a lot of methodological discrepancies and their inability to take into full considerations practical equity issues makes it less appropriate a sole criteria for priority setting in health.

More so, decision makers are not able to use the results of economic research evaluation. In general there is some reservation about the use of economic evaluations due to the discomfort and the uncertainty in dealing with cost and benefits. In Norway, the first commission did not include cost-effectiveness until after public debate drew the attention of the government to include in the principles. In Sweden the committee argued that cost should only be included when ‘all other things were equal’ (Sabik and Lie, 2008).

The discussions so far has shown that, the focus has been the outcome of priority setting decisions and principles. Equitable distribution of the health care resources was sought by applying the correct priority setting principles to secure rational assessment. The principles were seen to be too general to be implemented. For instance the severity of condition criteria used in Norway was problematic. It did not give a clear
definition of what is acceptable and what is unacceptable. Due to the subjective nature
of ‘severity’, so much discretion was used to manoeuvre strategically around the
financial system(Bærøe, 2009).

**The process of fair priority setting**

Policies directed towards reducing inequalities have to acknowledge the fact that
health cannot be redistributed like any other good such as income. Another approach
to priority settings now focused on the process to just distribution rather than the
outcome itself with emphasis on accountability and transparency(Bærøe, 2009).

If we have no consensus on principles capable of resolving disputes about resource allocation
for health and health care, then we must find a fair process whose outcome we can accept as
just or fair(Daniels,2008:109).

In an attempt to find an appropriate method at priority setting; my point of departure
will be in accordance with Norman Daniels ‘Accountability for Reasonableness’
argument. This approach is deemed right because many equity arguments in health
focus on fair distribution but leave open how it should be redistributed in practice. It is
a robust way of making sure that firstly, the ideas or reasons behind limit settings are
publicly available. Secondly, it should be agreed upon as relevant for patient care
under resource constraints. Thirdly, there should be a mechanism for revision and
improvement in policies when it faces challenges and fourthly, a regulatory body to
ensure that these conditions are met. These four conditions are able to help solve the
legitimacy and fairness problems by introducing a broader educative and a deliberative
democratic process.

Principles and procedures are put in place to ensure that, prioritization is consistent
with society’s goals and objectives(Sabik and Lie, 2008). The nature and importance
of equity employed in health care policies are political decisions. Usually, what we
assume is that, the decision maker will be able to translate what the society considers
as ‘fair’ into decision making. This not always the case; however, most of the time,
decision makers should also seek public view on what constitute fair distribution of
health and health care. The publicity condition is the first condition of the
‘accountability for reasonableness argument. It proposes that, the rationales for
decisions for new treatments and limit settings should be available to the public by the
decision makers. It will surprise us to know that, the public will prefer that more
health care resources be redirected towards people with low social class or with
adverse health prospects(Hauck et al., 2004). In addition to public support for the least
disadvantaged, it also demonstrates coherence and consistency in the priority setting
decision making. In doing so, similar cases will be dealt similarly and different case
can be identified and justified by relevant reasons.

A commitment to transparency improves the quality of the decision making and also
wins legitimacy for the authority making that decision. All the priority setting
commissions in the above mentioned countries saw the need to include transparency in
the setting priorities, by emphasising the inclusion of public discussions in the debate
in order to make the need for priority setting clear. There were varying degrees of
public discussions in the priority setting process. While Norway involved public
representatives in the commission, they only emphasised the importance of public
discussion. Denmark on the other hand actually held public discussion and also
disseminated priority setting materials (Sabik and Lie, 2008).

When health care policies engage in priority settings in any perspective or with any
principle on what service to be provided, it should be seen as an issue of equity and
therefore there should be reasons that justify a different course of action. The idea that
health care concerns human well being supports a wider range of reasons than the
narrower view of only the treatment of well -defined diseases (Bærøe, 2009). In this
sense, decisions about health care provision have implications not only on the
individual patient; there are consequences beyond the clinical level. Decision maker at
different levels of health care may follow different equity principles. Different
decision makers are involved in implementing the policy objectives of any health care
system. In most public health systems, there are political decision makers at the
national level and the administrators at the regional levels.

In addition, clinicians make decisions at the individual patient level. Politicians and
clinicians work at different environments and are subject to different constraints and
motives. To secure just distribution of health care, we need to both develop guidelines
and reasons behind them and rely on clinical legitimacy in judging the appropriateness
of these guidelines. Decisions at the clinical level are very important. It is at this level
that distribution actually takes place. It is here that interventions actually reach the
people and policies make a difference. Clinical guidelines are specified and clinicians
will usually know what to do in specific situations. However, clinicians have to judge
whether each case falls within the accepted guidelines or a different course of action is
justified (Bærøe, 2009).

Politician and clinicians alike should be able to give adequate reasons of how the
public agency or hospitals seek to provide value for money in meeting the health
needs of the population under resource constraints. Providing value for money is
relevant for efficient allocation of health care resources and will likely lead to fair allocation as well (Sabik and Lie, 2008). Despite the well known limitations to economic evaluation approaches, CEA is the best currently developed method to assess whether an intervention provides value for money or not. According to (Daniels, 2008), the disagreement about CEA application, does not mean that it is an irrelevant reason. Rather the disagreement must concern the process itself whether it incorporate fairness into its deliberations.

Authorities responsible for developing guidelines must request justification in case guidelines are not followed. In much the same way, the society has the right to demand changes and revision of guidelines from the authorities if they are not satisfied with the outcome. The revision principle closes the gap between the authorities and the people who are affected by the decision. It creates the potential for altered and improved decision making (Daniels, 2008). In the case of the state of Oregon, after public protest about the CEA ranking of diseases for treatment, the decision was revised to what the society accepted as relevant.

This was possible because the reasons behind the decision were made publicly available and therefore the people were able to understand the basis on which the decision was made. This does not however mean that, every challenge will lead to the reconsideration of the original decision, but it brings new knowledge to the table for further improvement in the system. The state of Oregon has an ongoing process of iterative reflection of past success and failures. NICE is however noted to be biased towards only new programmes since there is no clear systematic review of existing technologies (Sabik and Lie, 2008).

We should note however that, it is not automatic that the priority setting process will translate into decision making by the politicians. The Norwegian process did not solve the problem of longer waiting list; neither did the Oregon process lead to any cost-saving by eliminating some services that were provided in order to increase the coverage of the Medicaid programme (Sabik and Lie, 2008). The key to ensuring that decisions are implemented is to have a body of authority to see that it happens and to ensure that other conditions are also met when the priority setting process is going on. Daniels, proposes either public or private agencies to perform some form of regulations. In Norway, Denmark and the United Kingdom where there is publicly administered system, only some form of public regulation could undertake such regulation duties.
Concluding Remarks

Most equity concerns in health care distribution have usually focused on the outcome of the decision made by policy makers. In this chapter, I have argued that, we should rather look at the process of decision making rather than the outcome. Various authors have written about equity implications of health care designs but they leave empty how it can be achieved in practice. In practice, the priority setting process does not take place in isolation but within an environment that faces many political, institutional, and environmental and resource constraints. Limit setting per se is not a bad idea, but when the process becomes unfair; then it becomes an equity concern.

Priority settings have been going on in many European countries and in the US. Commissions have been set up to draw up guidelines and principles. But in practice, very few are translated into actual practice. The principles seem quite abstract and CEA methods are not easily understood. But when we do not have the acceptable principles applying to decision makers at all levels, then decision makers should be accountable for the reasonableness behind their course of action. The chapter have made use of the four conditions proposed by Daniels called as the ‘accountability for reasonableness’ to examine how the priority setting process can be done. There are varying degrees of how the public can be involved and in other places such as the UK; they rely mostly on the expert opinions to make such decisions. Some other policies were revised due to public demand for revision and changes. This is not to say that, this approach is the best, and also all challenge to these decisions will be revised. But it is step, the process becomes more transparent and the people will know the reasons behind the decisions even if they do not favour them. Authorities also become legitimate, responsible and accountable to the decisions they make.
Chapter six

Conclusion

The study began with aim of finding out why despite the general agreement that SES has great effect on health status health economics have not being part of the discussion. Why is equity concerns not adequately taken care of in health economics and what is the implications for policy making. I started by examining the effect of socio-economic status on health. I proposed that, health needs can be important factors that could help explain inequalities that are found in health care. This was followed by undertaking a critical review of economic evaluations as a tool for priority setting in health care in chapter three. I argued that, economic evaluation approach despite its usefulness in providing information about how we can get value for our money is incomplete. It is based on individual preferences and yet it is translated to decisions that affect the whole population. With this at the background, I examined the equity implications of health distributions with emphasis on QALYs as a tool for priority setting chapter four. Chapter five outlined the alternative approach of making sure that decision making in the health sector meet some standards of equity. Not forgetting the fact that, this is theoretical informed thesis, the argument made so far are mainly from secondary sources and it is subject to all the methodological weaknesses of secondary data. Based on the theories and the literatures I have read, I will then proceed to answer the research questions posed at the beginning of this thesis. What are the equity implications of economic evaluations in health care?

To be able to understand the need for equity in health economics and the impact on the population it is important for us to understand how extensive these differentials are in socio-economic status and health between and within countries. From the studies; it is apparent that, despite the rise in the popularity in economic evaluations across the globe, there is still a lack of interest on the part of economist to see social conditions as having a major influence on health outcomes. Over the past years, studies on this relationship have expanded dramatically and broadened out to recognize and focus on the powerful social determinants of health. However, we have tended to see the socio-economic aspects as just complementing health outcomes but not an integral part in health itself.

Our focus in achieving greater efficiencies in the health care system also means that, there is less attention given to the distributional concerns. As one author noted, the
distance now to achieving equity is far wider now than with efficiencies. Despite this
general interest in health care reforms, what we actually see is that, they report on the
health care expenditures rather than any major greater achievements in efficiencies.
The implications has been that, very little is known about the effects of these reforms
in the form of the delivery of health care. Given the strategic role of health economics
in the recent health reforms, we should have seen a major advancement towards
making health care more equitable. On the contrary, what we see is that they have
created a scientific mirage around the health care system now, making us see it as a
virtual world with a cost and benefit for every intervention and decisions.

There are of course outstanding achievement in this field. For us to know the value for
our money, with the increasing demand for quality and advanced health care,
advancement in health technology; CEA, CUA and CBAs provide us with the best
tools for such a task. However, the rationale for economic evaluations should go
beyond just the identification and measurement of cost and benefit but rather should
also take into considerations the distributions and the valuations of these cost and
benefits.

Global inequalities are a major problem both in advanced and low income countries.
What is more puzzling is that it is also found in countries where there is universal
access to health. This becomes a major problem because policy makers do not make
conscious efforts to reduce it because of the universal access to health. However,
studies have shown that, access to health do not explain the social gradient of health. It
shows that there is a systematic graded difference between people of different rank,
class and economic status. It is unlikely there is a single explanation to these
inequalities. Some will also argue that it is a price we have to pay as a result of trade-off we have to make between equity and efficiencies. With this at the background,
when researchers and policy makers fail to take account of these circumstances when
designing economic evaluations, then there are great consequences for the population
as a whole.

Individuals have different needs. Equity definition requires that persons of equal needs
be treated equally irrespective of personal characteristics such as ability to pay,
gender, place of residence. From the discussions above, I have argued that, when
access to health fails to explain the differences in health due to SES, then we should
take a look at the needs of those of people. Different SES produces different illness
and thus different needs. Individual have claims to health service not only because of
the amount on benefit expected to gain from the service but also the persons needs in
relation to the services capacity to meet those needs. Even though most decisions
towards equity are directed towards the population level rather than individual level,
we have obligations towards people who are in ‘needy’ conditions and these people
are usually those at the bottom of the social ladder.

Also the interpretation of need requires the considerations of the scope of improving
the person well being through medical interventions and the extent to which health
improvement is desired by social valuation. We cannot meet all the needs of the
individual. We need to make choices between what is desirable and what is not. This
is where health economics come in. Welfare economics over the years have provided
the theoretical foundation for economic evaluation. To be able to judge whether a
programme is desirable; we should be able to rank them. Welfare economics concerns
value judgement; they become a decision tool for ranking social states given the
available resources. Decision like this is not usually a straight forward thing and easy
as we it may seem.

Measurements and valuations of costs and benefits should be made. A perspective for
the analysis should also be made; either clinical or the societal perspective. Whichever
we choose have implications on what intervention will be adopted and which one to be
rejected. Discount rate is still a controversial issue among health economics. The
debate about whether to discount benefits and at what rate is still ongoing. There
methodological disagreements about which method to use, the valuation of human life
and wellbeing, uncertainties and results of the analysis. In most cases it will depend on
the objectives of the researchers and policy makers and the available resources in
terms of information. But considering its role in modern health care, there is the need
for widely understood methods and continuous improvements.

The difference in utility level forms the basis of the partial ranking in economic
evaluation. When we adopt such a ranking is to also imply that no clear judgement can
be made about whether there is equality in one situation than the other (Sen, 2002).
QALYs have been developed to combine the length of life and quality of life into a
single index. This is a major breakthrough in health economics for the measurement
problems. We see that by basing assessment on individual utilities is one the major
critics for the utilitarian ethics. Individuals are not well informed how to maximize
benefits in advance. Also the process of illness and health care do not have a clearly
defined outcome and as such patient will be expected to rely on the expertise of
professionals for information (Mooney, 2009a). In economic evaluations, expert
opinions and value judgement is an integral part of the decision making.
It is based on the professional opinions of these experts that decisions about equity and efficiency is made. But the credibility of these professional have come under scrutiny. They are in the position to make patient maximize health and also decide which treatment is medically interesting for them. Thus economic evaluation operates within a framework of experts who decide which treatment to be adopted. But the problem is not about the rules governing it; rather it is about the mechanism that underlie these rule that matter. How fair and how well do they appeal to reasonable judgement that is considered acceptable to all people?

The goal for an equitable health service will be to make the health of all individuals the same in all regions and same for all social class or least narrow the gap significantly(Wagstaff, 1991). To achieve health equity is an enormous task for policy maker. But what Sen argues is that, we should not see it as separated from the broader social arrangements. The health of the human population is closely linked to the environment in which they live and therefore the concerns for health equity should not be regarded as something in conflict with efficient health care but rather as a task both to be achieved.

With the high demand on health care, policy makers are trying to reduce the burden by making people responsible for their health. This proposal would have been quite acceptable if individuals are presented with information about their lifestyle and the consequences. But studies have shown that the choices we make in relation to lifestyle have something to do with our status in the society we find ourselves in. We can make people more responsible for their lives if we build upon their capabilities rather than to condemn them for their actions. When we undertake economic evaluations, we must not over look the ethical and moral concerns that take us beyond equity and efficiencies.

This brings us to the second research question where I try to have a look at the alternative approaches to health distribution. Different views come up when we want to distribute health care. From Rawls principle of giving priority to the worst off to the egalitarian view of equal distribution and the utilitarian view of maximizing health; all these have been applied in one way or the other in health policies. In most circumstances, there is no clear approach to health care distribution. It will usually depend on the policy objective of the country whether to maximize health, reduce inequalities or to prioritise the worst off in the society.

Health economics have failed to provide factual information about how interventions can change the existing health inequalities in the population let alone the value them in
the design of economic evaluations. Given these limitations in health economics, various authors have come up with possible approaches to overcoming these limitations. See for example (Mooney, 2009b, Cookson R et al., 2009). In this paper, I have chosen an approach based on (Daniels, 2008) ‘Accountability for Reasonableness’ argument.

Health is not the only important good. There is opportunity cost in every resources directed towards health care. Therefore it is not only important but necessary to provide the adequate institutions and information needed to make resources allocated to the health care sector worthy. Priority settings also rest on value judgement and the general theories of justice may not be able to explain them. When we set the cost effectiveness acceptability curves and willingness to pay, they are not explained by distributive theories but value judgement about cost and benefits to the society (Daniels, 2008).

The new approach to health distribution should focus on the process of the priority setting rather than the outcome with emphasis on accountability and transparency. The accountability for reasonableness argument is seen as a robust way of making sure that the reasons behind any decision in the public health concerning interventions are made publicly available. Secondly, it should appeal to reasonable people as relevant under resource constraints. Thirdly, there should be a mechanism for revision and improvement when it does not achieve its objectives and fourthly, there should be a regulatory authority to make sure that these conditions are met.

It is argued that, when public decisions are made public for debate, it increases the acceptability and the transparency of the decision and the also legitimacy of the authorities making the decision. Studies have shown that, when the public involved, there is the high tendency for support for programmes that benefit the poor, socially disadvantaged and the severely ill (Hauck et al., 2004, Cookson R et al., 2009). Publicity in the decision making improves the quality of the decision and also the consistency.

In addition, the idea that health care is important supports a wide range of ideas than the simple process of treating diseases. Decisions are made at different levels and they face different constraints at different environments of decision making. To ensure a just distribution we should develop guidelines and reasons for our decision. At the clinical levels, clinicians are also advised to rely of clinical legitimacy in judging the appropriateness of the decisions they make. The disagreements about economic evaluation do not mean that it is irrelevant for priority setting. The disagreement
concerns the reasons behind the choice of some interventions and not others and whether equity and fairness was incorporated in the deliberations.

In much the same way, when an intervention is adopted, or when a decision about health care is made, they are not automatically bounded. The society has the right to demand revision of guidelines if they fail to meet equity criteria. The revision criteria give the opportunity for redress for people who are unfairly affected by a health care decision. Finally, there should be a body of authority to make sure that, certain criteria are met when designing economic evaluations.

From the above discussions, economic evaluation in health care has been a major breakthrough for policy makers who are faced with high demand for health care. Because of this, sometimes trade-offs has to be made between equity and efficiency. The rising cost in the health sector has led health economics to focus more efficiency rather than equalities and equities. There is growing concern for a more explicit incorporation of equity in the design of economic evaluations as way of addressing differences in individuals and their socio-economic status.
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