

An Introduction to the Ethical Implications of Economic Evaluations for Healthy Public Policy

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Answering policy questions with economic evaluation

Public health actors analyzing policy options usually try to assess and compare the expected effects of policies on the health of the population. They can take on neutral brokering roles, simply providing the best available information to decision makers, or they can also engage in advocacy-related analysis. Whatever their role, those looking at policy options often try to answer — or are asked by others to answer — questions such as the following: Which option will result in broader social benefits, including but not restricted to health benefits? Which option will be less costly, financially, socially, and otherwise? Who will benefit and who will pay for each option, and when will these benefits and costs accrue? Which policy option will provide “the biggest bang for the buck”?

Economic evaluations use a set of tools or methods that have been developed to answer these kinds of questions. The answers they provide can play a major role in decision making, especially when resources are limited and hard choices have to be made between programs or policies. Economic evaluations also play an important role in the move towards more evidence-informed decision-making processes, using data to facilitate standardized comparisons, whether data are epidemiological, economic, or of some other kind. Public health actors are increasingly confronted with evidence coming from economic evaluations, whether they are generating it themselves, using it, or reacting to how others are using it.

Economic evaluations and other evidence-informed methods claim to offer those who use them a higher level of rigour and reproducibility than is often otherwise available. This can give policy analysis and decision making more solid foundations; however, many of the difficult ethical issues present in policy work remain. At first, the numbers presented in economic evaluations, which can be used to analyze, influence, and justify policy decisions, may seem akin to hard

truths. In other words, they may seem to be free of value judgements and ideologies and to be largely devoid of ethical implications. As economists know, however, the reality is quite different. Both the process of conducting economic evaluations and the evidence they produce are the results of numerous choices. These choices include selecting and highlighting some aspects of an issue and not others, giving more weight to some considerations over others, and using one particular method rather than others. Such choices are necessary, but they bring with them sets of values and assumptions that are often implicit and usually remain in the background.

Indeed, some of the values that underlie economic evaluations may conflict with other social values or policy objectives, such as justice, equity, and our responsibility to future generations. This means that economic evaluations can have profound ethical implications that are both relevant and important for the practice of public health, and call for skills in critically analyzing them. Just as practitioners develop skills to critically analyze epidemiological studies or systematic reviews, there is value in developing these abilities with respect to economic evaluations. This puts economic evidence into context in terms of values and allows practitioners to analyze the underlying choices that gave rise to the evidence they present.

This briefing note is the first in a series that introduces a critical analysis of the ethical implications of economic evaluations, especially as they arise in the context of healthy public policy. It begins with a quick overview of economic evaluations. Next, there is a short discussion of the main methods of economic evaluation.¹ This is followed by a look at the key methodological and ethical assumptions that form the background to economic evaluations. The next section considers some questions about how benefits should be defined in evaluations in light

¹ A much more thorough discussion of the topic will make up the second paper in the series.



of these assumptions. Finally, the paper closes with some thoughts about incorporating economic evaluations into an ethical framework that can include a broad array of principles.

Introducing economic evaluations

Regardless of where it is used, an economic evaluation evaluates a single policy or a number of policies with respect to economic efficiency. Economic efficiency measures benefits against costs and ranks options according to the ratio of benefits to costs. For any choice, the most efficient option is that with the highest such ratio, that is, the choice that provides a given level of benefit for the lowest cost. Efficiency builds on effectiveness: where effectiveness measures how well an intervention achieves its stated goal, efficiency measures the extent to which the goal can be met while incurring the least possible cost.

While a totally ineffective intervention cannot be efficient, it is possible for an effective intervention to be inefficient due to prohibitive cost. To take an intuitive example from the health sector, imagine funding a new cold medication. The medication is highly effective: it relieves most symptoms and halves the length of the illness. Imagine further, however, that this medication costs \$50,000 per patient. Though highly effective, it would be an inefficient means of fighting the common cold when considered on its own. Finally, imagine comparing this medication to another that costs only 50 cents per patient but merely limits the duration of a cold by one hour without affecting any other symptoms. This second remedy may turn out to be more efficient than the first despite being largely ineffective. Thankfully, most policy choices do not resemble this exaggerated example, and competing options are often all effective to some extent and at least somewhat efficient.

Where **effectiveness** measures how well an intervention achieves its stated goal, **efficiency** measures the extent to which the goal can be met while incurring the least possible cost.

Being able to gauge what is efficient and what is not is important. Many see the use of economic evaluations — the weighing of benefits and costs — not only as part of responsibly administering public funds, but also as fundamental to the duty of providing good care (Donaldson, 1998). Beyond this,

efficiency on its own is a laudable goal; it is difficult to argue against getting the most out of public funds based on sound evidence and analysis. Economics focuses on efficiency because it is one facet of the most general economic problem of making do in a world where desires (here, for health) often exceed the possibilities offered by finite and scarce resources. Yet economists recognize that efficiency is but one of many competing values, especially in the realm of public policy. Even principles as appealing as efficiency and effectiveness cannot be separated from an array of ethical presuppositions (Williams, 1992). Indeed, standard economic analysis is driven by a very particular and often unstated set of values and assumptions that, if made explicit, may come into conflict with other social values or policy objectives.

For better or for worse, efficiency is often the most easily quantifiable objective or value, and as a result it can at times be seen to dominate other potential concerns. Here is an example in the realm of prevention. Imagine a choice between spending a sum of money on a vaccine for a disease that strikes rarely but has high morbidity and spending the same sum on prevention programs for mild heart disease, a condition that afflicts many but has significantly lower morbidity. Imagine further that an economic evaluation was carried out and points to a greater efficiency of one of the two programs. With a limited budget, the more efficient, cost-effective option can understandably be difficult to turn down even if there might be other less tangible and quantifiable values such as equity that would provide reasons for choosing another program. The competing values in the background may become more explicit if, for example, it turns out that the vaccine is the less efficient option, but the deadly disease it could prevent disproportionately strikes Aboriginal women, an already-disadvantaged population with far worse health outcomes than the general population. It could also turn out that the benefits of the second, more efficient program were calculated based on participation rates from higher-income neighbourhoods and that this is where this program would primarily be implemented due to the availability of space and equipment. Even with these admittedly caricatured descriptions provided to make some of the competing values embedded in the decision explicit, it might still be difficult — for better or for worse — to turn down the more efficient, cost-effective option. Still, making these competing values explicit allows decisions to be made in a context where the trade-offs are known. This, in turn, could

make it easier to address the shortcomings of these decisions with complementary policies.

What is valued, how it is valued, who is asked, and what circumstances are considered are all important questions that are part and parcel of economic evaluations and their broader policy context.

Methods of economic evaluation

Within the realm of economic evaluations themselves, the answers to some of these difficult ethical questions depend to some degree on the choice of evaluation method. While the methods of economic evaluation share some basic assumptions, which will be discussed in this paper, it is helpful to first briefly distinguish the three major methods: cost-benefit analysis (CBA), cost-effectiveness analysis (CEA), and cost-utility analysis (CUA). These three dominant methods of economic evaluation differ primarily in how they approach the question of valuing benefits. That is, when constructing ratios of costs to benefits and thereby measuring efficiency, they differently define, measure, and assign values to the benefits side of the ratio.

Cost-benefit analysis (CBA) is the oldest of the three methods and expresses both the costs and benefits of a policy in dollars. This allows competing policies to be compared directly with respect to how efficiently funds are used. When applied to a policy choice, this method makes it easy to see which intervention provides the best ratio of benefits to costs, regardless of the kind or kinds of benefits compared. The difficulty lies in translating the various benefits into dollar values. While some benefits have well-defined prices — for example, additional wages earned due to returning to work earlier as a result of a health treatment — others do not. Many health benefits fall into this latter category, and gauging their value is a delicate and difficult task. For example, in a CBA of a healthy public policy such as a new bicycle path, measuring and valuing the costs of implementing the policy is relatively straightforward; these would need to include the raw materials, labour time, productivity lost due to construction disruptions at nearby businesses, and so on. Measuring and valuing the benefits, on the other hand, would be more complex. The benefits would need to include factors that are difficult to precisely quantify and value: foregone hospital bills from lower rates of heart disease and other conditions mitigated by increased exercise

(assuming increased ridership), productivity gained due to less time and stress spent in traffic, fewer sick days taken for health problems caused by air and noise pollution generated by motorized traffic (assuming a reduction in traffic volume), and so on. Placing precise dollar values on many of these items is very difficult. One commonly used method involves asking people how much they would be willing to pay for a given benefit, such as better health status, a less polluted environment, or a more equal society. It is called “willingness-to-pay” (WTP).

Cost-benefit analysis (CBA) expresses both the costs and benefits of a policy in dollars.

Cost-effectiveness analysis (CEA) attempts to sidestep the difficulty of measuring and valuing the benefits stemming from an intervention under consideration by expressing these in standardized, non-monetary, health-related units. These units can be mortality rates, disease incidence rates, body-mass indices, or a host of other quantifiable options. On the one hand, this strategy of judging interventions based on a singular, measurable health effect overcomes the chief difficulty in CBA of placing hard-to-value benefits on a dollar scale. On the other hand, in focusing on a single benefit measure, CEA ignores the wide range of benefits that often stem from any policy, thus radically simplifying the analysis. For example, a social housing program could be evaluated and compared to other programs according to how much it costs in terms of people it prevents from becoming homeless. However, such an evaluation would not capture other potential benefits, such as increased social cohesion, stress reduction, and increased affordability of nutritious food.

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Further, in evaluations where several options are considered, CEA can only be used when the interventions under consideration have the same broad goal and their effectiveness can be measured via a common, relevant unit. If CEA is feasible, the policies can be as similar as two different treatments for the same disease. But they can also be quite diverse. Looking to decrease lung cancer incidence

rates, the choice could be between distinct policies, such as requiring more stringent separation of cigarettes from other merchandise in stores and creating larger non-smoking areas in public spaces.

Often, however, there is a need to evaluate interventions that impact on different aspects of health. Even if there is no direct choice between interventions, policy makers often want to know how an intervention under consideration compares with respect to its efficiency against other interventions that may be far removed. For instance, decision makers may be interested in knowing how a vaccination campaign for children compares to a free school meal program in terms of its efficiency in improving the health of children. Such comparisons are impossible using CEA and difficult using CBA. They are enabled through the use of measures that have been constructed to capture overall health and quality of life. The method that uses these measures is **cost-utility analysis (CUA)**. Because of the measures it uses, this method limits its analysis to the health benefits of policy options. This may tend to undervalue healthy public policies since these, unlike health policies, usually do not aim primarily at achieving health outcomes (and they certainly do not make this their exclusive aim).

Cost-utility analysis (CUA) uses measures that have been constructed to capture overall health and quality of life.

The unit of measure that most often figures in CUA is the “quality-adjusted life year” or QALY (pronounced “kwa-lee”). The QALY is a measure of self-reported health status. It values time, generally life years, modified by an estimation of its quality, most often with respect to overall health. Health quality is measured on a scale from 0, signifying death, to 1, signifying full health. So, for example, two years at 0.4 quality or one year at 0.8 quality are both worth 0.8 QALYs. Efficiency is commonly measured as the dollar cost per QALY gained, where interventions with a lower cost per QALY are more efficient. Some regional and national jurisdictions now use cost per QALY thresholds in evaluating whether to pursue health interventions (Eichler, Kong, Gerth, Mavros, & Jönsson, 2004). The UK National Institute for Health and Clinical Excellence (NICE) is an example of an organization that uses such thresholds. NICE

stipulates that explicit reasons be given for not offering interventions whose cost-effectiveness is less than £20,000 per QALY; on the other hand, it says that there should be increasingly stronger reasons for funding interventions with cost-effectiveness higher than £30,000 per QALY (NICE, 2008).

CUA escapes some of the difficulties associated with CBA, but introduces other problems of its own. Under CBA, it is difficult to value benefits such as health states in dollar terms, and their value may depend highly on who is asked: individuals of different socio-economic backgrounds may be willing to pay very different amounts for certain health benefits. The QALY is seen by some to avoid these potential biases. However, this measure may be subject to different biases of its own. Evaluations of health conditions can also depend on who is asked, for example, whether it is someone who has experienced the condition in question.

All methods of economic evaluation are constantly being refined, as economists and other researchers try to address biases and shortcomings (Miller & Sethe, 2005). No method can claim to be superior to others in all contexts, and all the methods have significant strengths and corresponding limitations. These are summarized in Table 1. They will be discussed at length, with other issues, in the next paper of this series.

Key assumptions underlying economic evaluations

The various methods of economic evaluation differentiated above share at least two underlying, fundamental assumptions to which they owe their analytical neatness. First, their methodology takes for granted that the focus should be on the individual person as the unit of analysis. This is a *methodological* assumption termed “individualism.” Second, they assume that the more the preferences of the individuals are satisfied, the better. This is an *ethical* assumption called “preference-view utilitarianism.” Both are described below along with their main ethical implications.

Table 1 Strengths and limitations of the most common methods of economic evaluation

Method	Calculation of costs	Calculation of benefits	Strengths	Limitations
CBA: <i>Cost-benefit analysis</i>	Monetary units	Monetary units (via willingness to pay, or WTP)	Universal: can compare policies from across fields Flexible: can account for all types of benefit	Difficult to value health outcomes and many other items in monetary terms WTP framework may introduce biases
CEA: <i>Cost-effectiveness analysis</i>	Monetary units	Natural units depending on the context (e.g., body mass index)	Typically uncontroversial and precise calculation of benefits	Cannot compare policies that impact different aspects of health Even policies that impact the same health variable are compared only with respect to this single variable Could undervalue healthy public policies, compared to health policies, since the primary aim of the former is usually not to improve health
CUA: <i>Cost-utility analysis</i>	Monetary units	Health-adjusted life years (most often QALYs)	Possible comparison of policies that impact different aspects of health Complex measure of overall health	Calculation of QALYs poses methodological problems and biases, e.g., depending on who is asked and the size of potential health gains Could undervalue healthy public policies, compared to health policies, since the primary aim of the former is usually not to improve health

METHODOLOGICAL ASSUMPTION IN ECONOMIC EVALUATIONS: INDIVIDUALISM

Much of economics uses an explanatory framework called “methodological individualism,” which assumes that all social phenomena can be explained with reference only to the actions and beliefs of individual human beings. Although we may act in groups, whether it be countries, firms, hospitals, trade unions, churches, or families, ultimately, “we” can always be reduced to a collection of “I”s. Under this assumption, decisions of the whole are considered representative of the thoughts, preferences, and actions of the individuals who make up the whole. This means that individual preferences can be analyzed in isolation. An individual’s decision to buy an apple instead of a chocolate chip muffin in the morning is, in this sense, no different from a city’s decision to provide 300 kilometres of road and 15 kilometres of bike path rather than the other way around.

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Methodological individualism has important ramifications. Ethical values such as individual liberty and autonomy will tend to be promoted, while others such as solidarity, justice, and equity will tend to be downplayed because they refer to a collective body, such as society as a whole. In other words, any social facts will have to survive a reduction to the level of solely individual actions and beliefs. Societies can have complex needs for equality, justice, and related values, but under methodological individualism, such values can only be conceptualized and counted if they stem from individual preferences (Alesina & Giuliano, 2009).

For example, community empowerment can be a desired outcome of a healthy public policy. Community can be thought of both as a collection of individuals and as a system that has its own value

outside of what it provides to individuals (Shiell & Hawe, 1996). There are ways to look at community empowerment that go beyond individual preferences for those things that community can deliver, such as a sense of belonging, safety, or altruistic behaviour. The web of relationships fostered by community can be valuable in its own right and the well-being of the community can be more than the sum of the health and well-being of its members. Thus, if a sense of community and community empowerment are desirable outcomes of a given policy, these may not be reflected entirely in economic evaluations which are based in methodological individualism.

Although methodological individualism can be an immensely powerful simplifying tool, inherent in its use is the risk that reducing social phenomena to the preferences and actions of individuals may render these phenomena more narrowly than sometimes desired. In a nutshell, critics argue that social phenomena tend to be downplayed in traditional economic evaluations, thus skewing comparisons in favour of policies that do not aim at promoting or sustaining social phenomena.

ETHICAL ASSUMPTION IN ECONOMIC EVALUATIONS: UTILITARIANISM

Just as methodological individualism is the dominant methodological assumption behind much of the economic theory that informs economic evaluations, “utilitarianism” is its dominant ethical assumption. Utilitarianism belongs to the broader group of ethical theories called “consequentialism.” According to consequentialism, everything — individual actions, social policies, entire institutions, and anything else — should be judged to be right or wrong, good or bad, based on its consequences. So, for example, universal access to housing is good only if it leads to better consequences than an alternative housing regimen rather than it being good because housing is a human right.

Utilitarianism is the type of consequentialism that defines good and bad in terms of “utility.” Initially, utility was simply understood to mean that pleasure is good and pain is bad. So, a policy would be judged right or wrong, good or bad, in light of the amount of utility it produces, or the amount of pleasure and pain that results from it. However, the term “utility” has come to mean different things in the various versions of utilitarianism that have been developed over the past two centuries. Much of economics takes the “preference-satisfaction” view

of utility: greater utility stems from that which people prefer when given a choice between several options.

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In a health context, if a person were given a hypothetical choice between living several years with a mild disability or one year in perfect health, then what this person chooses describes what has more utility. In other words, for those who adopt the preference-satisfaction view, his or her choice defines what is ethically better. A person could also face a choice between living a leisurely life in a more polluted environment and expending more personal effort in cleaner surroundings. Similarly, someone could be given a choice between excellent health for the next five years followed by fifty mediocre years or fifty mediocre years followed by ten years of excellent health. It is precisely these types of hypothetical choice questions that define what has utility under the preference-satisfaction view; they are also the type of questions posed when measures such as the QALY are constructed using survey data.

Aside from assuming that only utility-type consequences are ethically relevant, the preference-satisfaction version of utilitarianism makes two other important assumptions. First, individuals are assumed to be the best and only judges of their own good and welfare. This means that even if utility is calculated implicitly by policy makers, their reference point should always be what the individuals in question would see as better for themselves. Second, this version of utilitarianism is a maximizing theory. That is, the theory states that, when faced with two possible choices, one should sum up the utilities produced by each option and choose the option under which this sum is greater. There is no ranking of different kinds of goods or utilities as better or worse. In other words, it is not better or worse to achieve a given level of utility or welfare by satisfying preferences for eating fast-food, having access to affordable housing, or enacting low taxation on capital gains. A greater amount of total welfare is always better than a lesser amount.

The version of utilitarianism just described is frequently labelled “welfarism.” Its key assumptions

are that goodness comes from utility, that utility is that which satisfies individual preferences, that individuals know best what is good for them, and that more total utility is always better than less.

While it is a robust simplifying tool, this view has been questioned along several lines. One concern is that welfarism can absorb virtually any value judgment: anything a particular individual chooses can be considered to be a benefit for that person. For example, it does not matter whether someone's preference for fast food over more nutritious options has been conditioned by poverty, marketing, or other circumstances beyond their control; if this individual has this preference, then satisfying it is good and the more it is satisfied the better. It is not hard to see that this kind of analysis can conflict with the perspective of public health.

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Critics have also argued that some of the assumptions of welfarism are potentially ethically vacuous. If utility is simply what people choose because they choose it, then it can be argued that the theory has no explanatory power in the ethical realm. It describes rather than explains and prescribes. This criticism drives a wedge between the descriptive and prescriptive aspects of economic evaluations (Richardson, McKie, & Sinha, 2010). Critics argue that an evaluation is a means of analyzing different options in light of the values of absolute individual autonomy. If policy wants to take into account a social point of view that defines goodness beyond individual preference satisfaction, then that aspect will have to come from outside an economic evaluation. An economic evaluation becomes a tool for measuring options on a specific individualist, utilitarian scale, which on its own makes for potentially selective decision making.

Usefulness of a policy: Defining its positive effects (benefits) under welfarism

Nevertheless, economic evaluations can be an important element in policy making, keeping in mind that they are not value-neutral. One key area where

evaluations help the policy process is in defining, measuring, and valuing the benefits stemming from policy options. This topic will be more fully developed in the second paper of this series, which compares the various methods of evaluation in greater detail. There are, however, some ramifications for the question of how to count benefits stemming from the assumptions discussed above.

The methodological and ethical presuppositions underlying economic evaluations impose limitations that can impact the results of policy analysis. These limitations affect the question of how benefits are conceptualized.

WHAT IS A BENEFIT? COMPARING CBA AND CUA

The limitations of welfarism already highlighted apply most acutely to CBA. This method fully adopts the individualist, utilitarian, and maximizing assumptions found in much of mainstream economic analysis and so is most fully subject to the limitations imposed by those assumptions. Benefits accrue to individuals, are based on their preferences, and are valuable in so far as they increase utility.

On the other hand, CBA is also the method that can include the widest possible array of benefits in its calculations. Anything for which someone can have a preference can potentially count in the overall calculation of the benefits produced by a policy. While welfarism has been critiqued for not always being compatible with other kinds of values that policy makers and society at large might hold dear, such as indisputable human rights, equity, and solidarity (Sen, 1970), some authors have tried to include such motivations and preferences within CBA. Values such as fairness and equality can potentially figure within welfarist calculations using a variety of proxies (Lowry & Peterson, 2012). One example is to approximate rights with thresholds of utility, which must be exceeded in order for actions to be deemed good within a welfarist framework.

CUA, on the other hand, approaches the question of benefits differently. Indeed, CUA is often referred to as an "extra-welfarist" approach (Brouwer et al., 2008) because it breaks with some of the key assumptions of the welfarist framework. It does so out of a concern with the issue of which benefits should count in an evaluation and for how much. CUA considers only directly health-related benefits and thus limits the array of benefits to a single overriding type. The way that health is measured still

depends on increases in subjectively felt well-being but now only along a single overriding axis of health.

FOR HOW MUCH SHOULD EACH BENEFIT COUNT? WEIGHING AND RANKING BENEFITS

Looking at the types of benefits that should count in an economic evaluation leads directly to a second question: for how much should each benefit count? The standard preference-satisfaction view sees all individuals as equivalent and has a single utility scale for measuring benefits. It does not matter whether someone is rich or poor, young or old, healthy or ill; a unit of utility is a unit of utility. This is a radical kind of equality that certainly has its upsides: it does not discriminate between citizens and gives everyone an equal chance to be counted. However, when combined with the maximizing principle, which states that those choices that maximize the sum of benefits are best, this kind of equality means that we could be sacrificing equity for a greater sum of benefits — promoting autonomy at the expense of solidarity. For example, an increase of the already high level of health of a wealthy minority could be promoted at the expense of the relative stagnation of a hard-to-reach minority whose health status is already low.

Two issues arise. First, it is possible to ask whether all individuals should be treated equally even when they are not equal in some relevant aspect. Second, there is the question of whether benefits should be maximized across a population at the expense of other values. Answering either of these in the negative breaks with the ethical assumptions of mainstream economic theory, which underpin economic evaluations. There are alternatives, such as assigning weights and rankings to the benefits accruing to different individuals, but this is a difficult task and requires ethical justification on the basis of criteria external to economic evaluations.

Incorporating alternative principles in analysis with economic evaluations

Taking stock of a broader set of values may be especially relevant for healthy public policy, as this field takes on very broad definitions of health, well-being, and the means to achieve them. For example, healthy living interventions often have wide-ranging secondary benefits — for example, a cleaner environment — as well as benefits that accrue further into the future and to those not directly

impacted by these interventions. Also, in public health, many preventive health measures can be more sensitive to broader ethical concerns, such as equal distribution and fairness, than acute care can be (Brock, 2007). All of these may be difficult to capture via the individual, subjective accounts of benefits that underlie most economic evaluations.

Indeed, many ethical principles can be potentially left out of economic evaluations; although principles beyond those of welfarism can be taken into account, this is rarely the case (Richardson et al., 2010). The individualist and utilitarian grounding of most economic evaluations limits the space for alternative ethical principles within the evaluations themselves. The array of values that can conflict with the assumptions of an economic evaluation is very broad. In the realm of pure health-related benefits, there could be desires to prioritize services according to the severity of existing health conditions or age, or to not discriminate according to the potential for recovery or the cost of procedures, amongst others (Richardson & McKie, 2005).

For example, imagine having to choose between funding two treatments (T1 or T2) addressing two different illnesses (I1 and I2). The first treatment (T1) addresses an illness (I1) for which there is no other treatment available, while the second treatment (T2) addresses an illness (I2) for which an efficient but less effective treatment is already available. Imagine further that the benefits stemming from the first treatment (T1) are calculated to be lower than those from the second treatment (T2). A desire to not discriminate according to the potential for recovery could still mean funding the first treatment (T1) even if it is less effective and efficient than the second (T2). In such a case, the value of non-discrimination is placed above effectiveness and efficiency.

Equity could also be a factor as the potential for recovery can be highly influenced by a range of social and economic factors, including the ability to pay for additional uninsured services, the ability to take extra unpaid leave from work, lower overall stress levels, and access to a healthier lifestyle. Taking equity into account means that the decision to fund an intervention targeting people of low socioeconomic status could still be made even if, for this disadvantaged group, the intervention is considered to be less “efficient,” as the low recovery rate could stem from social factors rather than technical inefficiency. In this case, the decision to fund the relatively inefficient program could be made

to reduce or not exacerbate existing inequalities, thus placing equity above efficiency.

In health care, studies have shown that there is disagreement in the general population over whether equity or efficiency should be prioritized in the rationing of health resources. Some authors have found that a section of the population appears to value equity, even to the detriment of the maximization of health outcomes (Richardson, Sinha, Iezzi, & Maxwell, 2012), at least in high-income countries (King, Harper, & Young, 2013). Others have found that people believe that decisions should not always be based on pure maximization, regardless of what is maximized — whether preference-satisfying utility, QALYs, or some other unit. Their studies indicate a desire for a range of principles to guide decisions in public policy (Coast, 2004). Potential values that go beyond efficiency could include environmental sustainability, social solidarity, and economic justice.

In response to these concerns, some have suggested crafting different methods of economic evaluation that directly incorporate principles other than efficiency. The range of non-welfarist, non-maximizing theories upon which to base such methods is large. Some argue that the worst off in society should be given special consideration, even if that means supporting an outcome that does not maximize total welfare (Parfit, 1997). Others claim that equality of some sort — whether of outcomes, opportunities, or some other criteria — should be prioritized, also potentially at the cost of greater amounts of aggregate welfare. A third possibility is to focus on “capabilities” rather than outcomes (Sen, 1985). Such an approach focuses on the range of possible activities and opportunities open to people rather than on goods and the benefits they confer.

The capabilities approach, in particular, has received some attention within the health policy community (Coast, Smith, & Lorgelly, 2008). Capabilities can range from simple, such as being well-nourished, to complex, such as being able to actively participate in social life. Looking at capabilities may be especially relevant to decision making in healthy public policy, where utilitarian measures of health can underestimate the long-term and far-ranging positive impacts of some policies (Lorgelly, Lawson, Fenwick, & Briggs, 2010).

Conclusion

While new methods may offer means of expressing a wider range of values explicitly, the most common existing methods of economic evaluation, such as CUA and CBA, are well accepted and well entrenched within policy circles. Adopting a wide ethical lens does not conflict with analytical rigour or existing methods; it does, however, require openness about the values that underlie economic evaluations and the ability to openly weigh these against other values that may conflict with them in the decision process. Efficiency and effectiveness are among a broad set of values often considered.

While economic evaluations gauge relative cost-effectiveness, equity and other hard to quantify concerns can be and often are taken into account alongside them in coming to decisions (Brock, 2007). Squaring numerous values is difficult, and few guidelines exist as to how to proceed (Richardson, 2009), but decision making in the policy sphere is rarely clear-cut. Awareness of the ethical assumptions and context of economic evaluations allows decision makers to consider what is efficient in the context of what is appropriate and what satisfies any range of other ethical demands. As is often the case where ethical issues are broached, crisp resolutions may not be the norm. Even with the help of economic evaluations, the difficulties of choosing what is good, what is just, and what is socially desirable remain.

To help public health actors critically analyzing economic evaluations to identify some of their potential ethical implications, here are some questions that summarize the main issues raised in this briefing note:

- Do some of the policies evaluated aim to foster or sustain social phenomena that might be hard to fully grasp by focusing on individual preferences (e.g., community empowerment or sense of belonging)? If so, it should be noted that a traditional economic evaluation might undervalue these policies.
- Are there good reasons to believe that individuals are not the best judges of their own good and welfare in some of the policies evaluated (e.g., when preferences for unhealthy habits are conditioned by socio-economic factors or marketing)? If so, it should be noted that a traditional economic evaluation will usually count

the satisfaction of these preferences as any other benefit.

- Is a comparison made between health policies and healthy public policies based on their efficiency at achieving health outcomes (either in CUA or CEA)? If so, healthy public policies might be undervalued compared to health policies, because their primary aim is usually not to achieve health outcomes.
- Are there good reasons to believe that kinds of preferences should be distinguished (e.g., needs and wants), and that these should be prioritized or ranked in some of the policies evaluated? If so, it should be noted that a traditional economic evaluation will usually count all satisfied preferences equally.
- Are there good reasons to believe that the preferences of some sub-populations or the outcomes in some sub-populations (e.g., worst-

off groups or individuals) should weigh more than the preferences or outcomes in other sub-populations (e.g., for equity or non-discrimination purposes)? If so, it should be noted that traditional economic evaluations usually treat all people equally.

- Are there good reasons to think that efficiency should not trump other ethical values (e.g., social equity and human rights, such as the right to housing) in the evaluations of some policies? In this case, since traditional economic evaluations are meant to measure efficiency, it might be worth presenting the other values and the possible trade-offs alongside the measure of efficiency. If a decision or a recommendation is made to adopt a policy that favours efficiency at the expense of other relevant values, it might be suitable to think about complementary policies that can be recommended to address these values.

References

- Alesina, A. F. & Giuliano, P. (2009). *Preferences for redistribution* (No. w14825). National Bureau of Economic Research.
- Brock, D. W. (2007). Ethical issues in applying quantitative models for setting priorities in prevention. *Ethics, Prevention, and Public Health*, 111–128.
- Brouwer, W. B. F., Culyer, A. J., van Exel, N. J. A., & Rutten, F. F. H. (2008). Welfarism vs. extra-welfarism. *Journal of Health Economics*, 27(2), 325–338.
- Coast, J. (2004). Is economic evaluation in touch with society's values? *British Medical Journal*, 329(7476), 1233–1236.
- Coast, J., Smith, R., & Lorgelly, P. (2008). Should the capability approach be applied in health economics? *Health Economics*, 17(6), 667–670.
- Donaldson, C. (1998). Economic evaluation: An ethical imperative? *Inflammatory Bowel Diseases*, 4(1), 40–44.
- Eichler, H. G., Kong, S. X., Gerth, W. C., Mavros, P., & Jönsson, B. (2004). Use of cost-effectiveness analysis in health-care resource allocation decision-making: How are cost-effectiveness thresholds expected to emerge? *Value in Health*, 7(5), 518–528.
- King, N. B., Harper, S., & Young, M. E. (2013). Who cares about health inequalities? Cross-country evidence from the World Health Survey. *Health Policy and Planning*, 28, 558–571. doi: 10.1093/heapol/czs094.
- Lorgelly, P. K., Lawson, K. D., Fenwick, E. A., & Briggs, A. H. (2010). Outcome measurement in economic evaluations of public health interventions: A role for the capability approach? *International Journal of Environmental Research and Public Health*, 7(5), 2274–2289.
- Lowry, R. & Peterson, M. (2012). Cost-benefit analysis and non-utilitarian ethics. *Politics, Philosophy & Economics*, 11(3), 258–279.
- Miller, J. & Sethe, S. (2005). Gods with a limited budget: Putting the utility back into utilitarian health politics. *Interdisciplinary Science Reviews*, 30(3), 273–278.
- National Institute for Health and Clinical Excellence. (2008). *Social value judgements. Principles for the development of NICE guidance. Second Edition*. Retrieved from: <http://www.nice.org.uk/Media/Default/About/what-we-do/Research-and-development/Social-Value-Judgements-principles-for-the-development-of-NICE-guidance.pdf>
- Parfit, D. (1997). Equality and priority. *Ratio*, 10(3), 202–221.
- Richardson, J. (2009). Is the incorporation of equity considerations into economic evaluation really so simple? A comment on Cookson, Drummond and Weatherly. *Health Economics, Policy and Law*, 4, 247–254.
- Richardson, J. & McKie, J. (2005). Empiricism, ethics and orthodox economic theory: What is the appropriate basis for decision-making in the health sector? *Social Science & Medicine*, 60(2), 265–275.
- Richardson, J., McKie, J., & Sinha, K. (2010). The need for a new framework for the economic evaluation of health services in a national health scheme. *Health*, 2(9), 1120–1133.
- Richardson, J., Sinha, K., Iezzi, A., & Maxwell, A. (2012). Maximising health versus sharing: Measuring preferences for the allocation of the health budget. *Social Science & Medicine*, 75(8), 1351–1361.
- Sen, A. (1970). *Collective Choice and Social Welfare*. San Francisco: Holden-Day.
- Sen, A. (1985). *Commodities and Capabilities*. Oxford: Oxford University Press.
- Shiell, A. & Hawe, P. (1996). Health promotion, community development and the tyranny of individualism. *Health Economics*, 5, 241–247.
- Williams, A. (1992). Cost-effectiveness analysis: Is it ethical? *Journal of Medical Ethics*, 18(1), 7–11.

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