

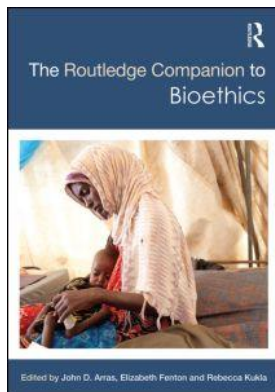
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ETHICAL CHALLENGES OF DISTRIBUTING LIMITED HEALTH RESOURCES IN LOW-INCOME COUNTRIES

Kjell Arne Johansson

Introduction

Children born in low-income countries (LICs) can on average expect to live 20.1 life years less and are 16 times more likely to die before their fifth birthday than children born in high-income countries (see Table 7.1). Is this inequality in life prospects acceptable? Many people live in poverty; 74 percent of the people in LICs live on less than U.S.\$2 per day. Low-income populations are growing due to high fertility rates and there is a high burden of disease; in addition, the majority of people in LICs live in rural regions and are hard to reach with health care services. Health care expenditures in LICs are on average 1/180th of high-income country expenditures. This scarcity of resources raises the justice issue: Whom should governments and charity organizations favor in allocating these limited resources? And what can theories of justice tell us about the moral grounds for making fair decisions? Policy decisions on access, availability, and quality of medical and public health services influence both the overall level of health in a population and the distribution of health between individuals. But access and quality of medical services do not solve the whole problem. Improving the position of the worst off in other, non-health domains of justice, such as liberty, income, education or capabilities, will have a substantial impact on population health. It is thus urgent to establish legitimate and practical procedures for making fair priority decisions and involving key stakeholders in an impartial and reasonable way. What should such legitimate priority setting procedures look like?

Many new and expensive health care technologies have been developed over the last several decades. However, few countries have universal coverage of even basic health care. The health gap, meaning the difference between the *potential* improvements in population health that could be achieved with universal coverage of all the health technology that is currently available, and the more *realistic* health improvements that are actually affordable, gives rise to many difficult problems. The scale of the gap problem is larger in LICs. Three methods can be used to narrow the health-gap: (1) Improve

Table 7.1 Key numbers that illustrate inequalities in global health (UN Population Division 2011)

Region	Population size	Life expectancy at birth	GDP per capita (\$-PPP)	Health expenditures per capita (US\$)	% living <2\$ a day (PPP)	Rural pop. (% of total)	Fertility rate (births per woman)	<5 mortality (per 1,000 live births)
High income	1 135 003 957	79.8	38 572	4 877	—	20	1.8	6.0
Upper middle income	2 489 098 440	72.6	10 705	380	20	40	1.8	20.0
Lower middle income	2 532 825 559	65.5	3 833	71	59	62	2.9	62.9
Low income	816 810 477	58.8	1 383	27	74	72	4.1	95.3
World	6 973 738 433	69.6	11 574	950	—	49	2.5	52.5

GDP = gross domestic product, PPP = purchasing power parity.

health care system efficiency; (2) increase health budgets; or (3) set priorities. All three approaches may narrow the health gap and influence distribution of health. Priority setting is crucial since it seems unrealistic that (1) and (2) are able to close the health gap sufficiently to make priority setting superfluous in any society. Methods (1)–(3) are not mutually exclusive options in any society, where for example the level of resources available and the efficiency of the health system have an impact on the urgency of making priorities between patient groups and interventions.

Because of the potential for different resource distributions to dramatically alter the health of populations, either positively or negatively, setting priorities for limited health resources is a significant concern of population-level bioethics and distributive justice (Wikler and Brock 2007). In a LIC where demand for health care vastly outstrips supply, the cost of making a poor allocation decision could amount to millions of lives. So how can these decisions be made? We cannot simply use our intuition to tell us who in the population is the most needy or will derive the greatest benefit from an intervention, since intuitions are a notoriously unreliable means of judging health and health-care allocation problems at the population level. Our intuitions need to be guided by ethical arguments and principles; and by rigorous health statistical information containing as little uncertainty as possible (Broome 1991).

As I will go on to show, however, there is no agreement on which of the available ethical principles should be used to solve difficult allocation problems. Moreover, there is no agreement on whether distributive principles should be applied globally, creating obligations for wealthier countries to assist LICs, or whether they should be limited to the distribution of resources within a single state. It is not my concern to engage these issues of global justice in this chapter, but it is worth mentioning that some argue that justice is only relevant domestically and appeal to weaker duties of humanitarianism and charity beyond borders (Nagel 2005). Others argue for more demanding commitments across borders, claiming that individual persons, not borders, are the appropriate objects of moral thought, and that principles of distributive justice should therefore operate globally (Caney 2005).

This chapter focuses on moral challenges concerning access to health care and health-related goods, such as the social determinants of health (Arras and Fenton 2009), at the population level. In the first section I introduce general priority setting issues that are relevant in many resource-poor settings. Second, I describe substantive distributive principles and show how they conflict on who should get what and which diseases or treatment groups should be prioritized. Third, I discuss how principled and reasonable disagreement about health care priorities can be addressed, and procedures for legitimate decision-making on those priorities.

Multi-Level Priority Setting Across Patient Groups

Priority setting occurs at different levels of health systems. At the international level, the Millennium Development Goals (MDGs) are a very influential priority setting mechanism. The MDGs were set by all government leaders at the United Nations Millennium Summit in 2000, and represent a united action to increase development aid to LICs. The goals give concrete priority guidance and serve as input to many key performance indicators for national health systems. For example, reductions in child and maternal mortality, treatment and prevention of HIV, tuberculosis, and malaria. Improvements in key social determinants of health (poverty, education, and gender equality) are considered more important than other health improvement interventions.

The goals are intuitively appealing. Nevertheless, they lack a coherent ethical justification. It is not clear what guiding ethical principles justify scale-up of the included MDG interventions rather than other plausible paths to better health and wellbeing.

Priority setting at the more concrete level of policy involves practical decisions on which *health services* to fund (e.g., should vaccines or treatment be scaled up to reduce the burden of diarrhea and pneumonia among children?) and *indications* for treatment and testing (e.g., when should one start antiretroviral treatment for HIV?). In addition, another set of priority decisions is health policies on *financing mechanisms* (e.g., user fees, partial or universal public finance), *infrastructure* (e.g., how many doctors to hire, health worker training programs, siting and quality of facilities, roads), *regulatory interventions* (e.g., curtailing smoking and alcohol consumption), or *education and communication programs* to improve healthy behaviors. Priority setting in health potentially involves the intentional or non-intentional withholding of some such useful services from individuals who could directly or indirectly benefit from them (Norheim 1996; Ham and Roberts 2003). Policy decisions of this kind, made either explicitly or implicitly, will all have an impact on who receives health benefits and on the size of health budgets.

In addition to these general priority setting challenges, there are particular and unique problems in health systems of LICs. Structural bottlenecks such as shortages of qualified health personnel, large rural populations that are hard to reach, and cultural barriers make scale-up of interventions more difficult. In addition, there is a large three-tiered burden of disease from communicable diseases, non-communicable diseases, and injuries (World Health Organization 2008). Often, there is a lack of financial protection and well functioning welfare systems for the many poor people in these countries. Moreover, a large proportion of health care funding in LICs comes from multiple international donors and many stakeholders with potentially different agendas. Donor-dependent health programs are also somewhat insecure and unstable due to the fact that financing always faces a risk of drying up if donors stop donating. The global economic crisis has for example created an additional pressure for many HIV programs, where treatment and prevention scale-up has flattened or slowed down due to shortfalls in HIV funding (Brock and Wikler 2009).

To appreciate these challenges, imagine that you are a Minister of Health in a LIC with extremely scarce resources and extremely large unmet health needs in the population. How would you decide which groups in the population will receive needed health-related goods and which will have to go without? To make these decisions you would need measures and information on baseline levels of the burden of disease and current coverage of services, and expected impacts and costs of available health interventions. Such estimates require large amounts of high-quality data and detailed population models, none of which your government may be able to acquire. Because such data are difficult to accumulate even when resources are available, your priority decisions would in many cases rest on imperfect information. Normative problems might be even more difficult than these technical difficulties. Just priority decisions and legitimate processes must be impartial and respect the interests of each individual in the society. As a rational, ethically motivated Minister of Health, you would want to deliberate on which distributive principles are relevant and on the relative importance of each one.

Distributive Principles

The distributive justice literature yields four distributive principles. First, the traditional utilitarian *greater-benefit principle* aims at maximizing outcomes (e.g., welfare, resources,

capabilities, wellbeing, goods) to the highest aggregated level for the lowest cost (Sen 1979; Coast 2009). Second, an *egalitarian principle* is more sensitive to the way in which outcomes are distributed within a population and favors strict equality in outcomes or chances between individuals (Temkin 2003). Third, a *prioritarian principle* represents something of a middle ground between egalitarianism and utility maximization. It views crude equality as insufficiently sensitive to total gains, and maximization as insufficiently sensitive to distributions. Prioritarianism instead opts for less demanding distributions where the worst off are given absolute priority (Parfit 2000). Inequality between individuals is acceptable on this view as long as the distribution raises the absolute level of the worst off in the society. Fourth, the *sufficiency principle* is a special form of prioritarianism and defends raising the worst off above a certain threshold level (Crisp 2003). Distributions above the threshold then matter less. Below, I explore disagreements and agreements between the first three general principles when applied to priority setting in health. For reasons of space I will not discuss the sufficiency principle any further below. A useful discussion of this threshold principle applied to a LIC setting can be found in Alvarez (2007).

Health Maximization

It is widely accepted that a principle of health maximization is important in the allocation of limited health care resources (Brock and Wikler 2006). Limited health resources should not be wasted; the population and individuals should attain the greatest achievable health level at the lowest cost possible (Weinstein and Stason 1977).

The most common method for determining how resources should be allocated to achieve the greatest benefit for the lowest cost is cost-effectiveness analysis or CEA. Standard CEAs rank interventions according to their efficiency, i.e., those interventions that generate the highest aggregated health benefits for the lowest costs are considered to be most efficient. The ratio between *incremental cost* (e.g., the marginal cost by going from health intervention A to B) and *incremental effectiveness* (e.g., marginal increase in any health metric by introducing health intervention A rather than B) determines the rank order of interventions (Weinstein and Stason 1977). Interventions with low cost-effectiveness ratios have high efficiency, and vice versa. Such efficiency rankings are typically done in the Disease Control Priorities Project (DCP) (see Figure 7.1) and WHO-CHOICE (Jamison et al. 2006; World Health Organisation and WHO-CHOICE 2012).

Life years lost or gained, with or without disability (DALY) or quality (QALY) adjustments, are common outcome metrics in CEA rankings. QALY and DALY metrics assess effectiveness over a lifetime and they allow for comparisons across life-saving treatments or preventions and interventions that only improve quality or disability (for a full discussion of QALYs and DALYs, see Chapter 4 in this volume).

CEAs are important decision-making tools for preventing waste in health systems (Weinstein and Stason 1977; Williams 1985). We see clearly from the DCP2 sum ranking in Figure 7.1 that there are large opportunity costs involved by choosing a less-efficient use of resources. For example, if U.S.\$1,000,000 were spent on a less cost-effective intervention like antiretroviral therapy (ART) for HIV rather than on a very cost-effective intervention like deworming (albendazole for soil-transmitted helminth infections), around 300,000 fewer DALYs would be averted according to DCP2 estimates. However, patients who need interventions with the least favorable incremental cost-effectiveness ratio will be excluded according to a crude health-maximizing principle.

LIMITED HEALTH RESOURCES IN LOW-INCOME COUNTRIES

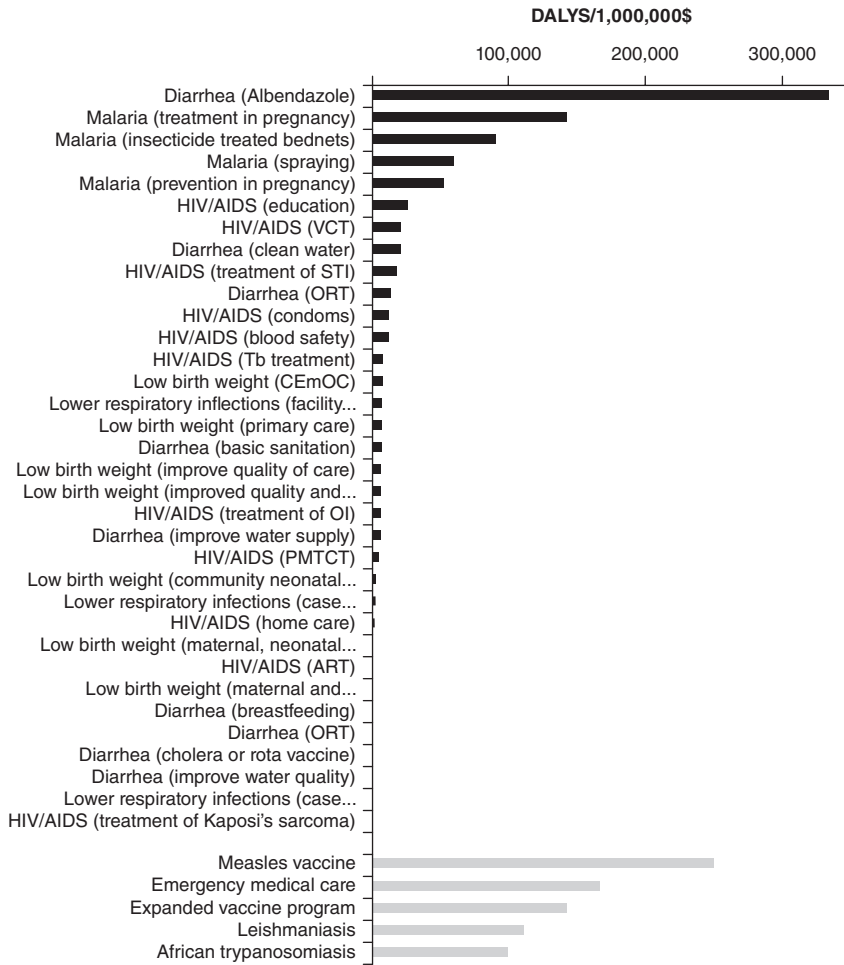


Figure 7.1 Huge differences in potential health gains from investments in health: DCP2 ranking according to the cost-effectiveness of interventions targeted to the five disease categories with the highest disease burden in LICs (black). The five most cost-effective interventions that do not target the top disease burdens (gray) are ranked at the bottom. For a complete list of interventions see the DCP2 web page (<http://www.dcp-3.org/dcp2>). ART = antiretroviral therapy, CEmOC = comprehensive emergency obstetric care, OI = opportunistic infections, ORT = oral rehydration therapy, PMTCT = prevention of mother to child transmission, STI = sexually transmitted infection, TB = tuberculosis, VCT = voluntary counselling and testing.

There are several moral problems with crude health maximization, which I will discuss further below. In addition to many of the moral problems, cost-effectiveness estimates also involve considerable uncertainty. Models with a high degree of transparency on calculations and underlying assumptions are more likely to avoid errors and arrive at better estimates. This is because if more people examine the details of the models, a better validation of methods and assumptions will result. This is important

since incorrect estimates can lead to incorrect conclusions, and the resulting recommendations will thus not maximize population health. The deworming case provides a useful example of this problem. GiveWell, a charity evaluator, found an error in the DCP2 estimates on deworming when they recalculated the DCP2 model. GiveWell experts reran the DCP2 model and estimated, after correcting for what they claim were errors in the model, that deworming is likely to be 100 times less cost-effective than what was previously reported (GiveWell 2012). If this is correct, investments in deworming rather than more cost-effective interventions will hinder the achievement of potentially larger health gains from more cost-effective interventions.

Standard CEAs have also been criticized for ignoring *distributive concerns* and *non-health benefits* (Brock 2003). Distributive concerns are raised by the fact that CEAs typically do not produce favorable results for persons with long-lasting disabilities, or lethal conditions of the young, or diseases among the poor. They also do not take into account non-health benefits, such as the financial protection gained from health care interventions. For example, scaling up less cost-effective interventions may be considered acceptable if doing so prevents catastrophic health expenditures among poor groups. The neglect of distributive concerns and non-health benefits in standard CEAs has diminished the perceived relevance of CEAs and hindered uptake of results from applied cost-effectiveness studies. For this reason, WHO-CHOICE recently developed broad multidimensional guidance for priority setting in resource-poor settings that emphasizes relevant normative criteria that are inadequately considered by CEA (World Health Organisation 2012). Three categories of normative criteria were singled out by WHO-CHOICE as reasons for deviating from CEA rankings: Disease related criteria (e.g., less cost-effective interventions are favorable if they target a severe health condition or patient groups with a poor capacity to benefit from treatment); criteria related to characteristics of social groups (e.g., less cost-effective interventions should be favored when they reduce disparities in health between geographic regions, genders, or socio-economic groups if they act on upstream factors like social determinants of health, prevention, and health promotion); criteria related to protection against the financial and social effects of ill health (e.g., less cost-effective interventions have special value when they protect against catastrophic health expenditures or enhance the target population's productivity and ability to take care of others).

It can be argued that diseases with high aggregated burden should be given more priority than those with a low aggregated burden. The five diseases that cause the highest burden of disease in LICs (black columns in Figure 7.1)—lower respiratory infections, diarrheal diseases, HIV/AIDS, malaria, and prematurity and low birth weight—together cause approximately 30 percent of the burden of disease in LICs (World Health Organization 2008). The gray columns show other very cost-effective interventions for diseases with a lower disease burden. Investments in the most cost-effective interventions will then maximize health, relative to cost, but will do less for those with diseases imposing greater burden to the society. The normative issue, then, is whether we are willing to sacrifice potentially large health gains in order to target those diseases that cause the highest aggregated disease burden.

Complicating this issue is the fact that a disease with an aggregated large disease burden is not necessarily a severe disease, and large aggregated benefits do not necessarily give large individual benefits. Deworming children with albendazole, for example, is the best aggregated buy because its use leads to a large reduction of aggregated disabilities. This antiparasitic medicine improves cognitive functioning for children due to

fewer symptoms of abdominal pain and less malnutrition from helminths. On an individual level, however, disabilities caused by helminthic infections are minor to moderate compared with other diseases, and few children die as a result of them. Decision-makers thus have to make a normative choice about whether it is acceptable to *aggregate* (i.e., add up) all of the benefits and burdens associated with this disease and its treatment, since only when they are aggregated do they amount to a significant health burden. Improved cognitive functioning from albendazole is also likely to improve school results and the productivity of millions of children. Decision-makers must therefore make a second normative choice on whether to take into account these *indirect non-health* benefits, or whether to restrict the relevant outcome to direct health benefits (Brock 2003).

Equality

Principles of equality in health aim at “leveling up” those members of the population with less health to the level of the healthy. Interventions targeted to diseases that are severe and cause a high burden would be given priority on an egalitarian view, regardless of how cost-effective they are. A principle of relative equality judges how bad a situation is by evaluating the health gap between groups in a population (Temkin 2003). Egalitarians view it as intrinsically bad that some persons are in an unfavorable position compared with others. A principle of equality in health would favor interventions that give equal health outcomes or equal chances to receive health benefits between groups (e.g., socio-economic groups, disease groups, geographic groups, ethnic groups, gender, age groups).

Equality of health outcomes is important because it secures equality in opportunity (Temkin 1993). However, equality is a contested concept with many controversies. First, given differences in individual choices, natural genetic profiles, health behavior skills, and available technology, it can be technically impossible to equalize actual and potential health attainments (Sen 1992). Second, egalitarianism appears to allow “leveling down” the better off groups as means to narrow the gap between groups (Temkin 2002). In health this would mean lowering the level of health for some members of the population to achieve equality, which many find intuitively unacceptable (Parfit 2000).

In addition to this difficult “leveling down” problem, there is the third problem that raising up the sickest members of the population to the level of health of the healthiest members can require a “bottomless pit” of resources (Daniels 1994). If health systems always give absolute priority to the worst off and relative equality, this may open up unlimited channeling of resources to patient groups that need vast resources to gain minor marginal benefits. The best-off groups may as a consequence of implementing egalitarian principles sacrifice potential large health gains.

Other controversies make it problematic to adhere fully to a principle of equality in health outcomes. One problem with strict outcome-based equality is that personal freedom may be restricted to a large extent if the distribution of end results is judged without concerns about how the results came about. Examples could be lifestyle choices, where inequalities that are caused by lifestyle choices may be perceived as legitimate (Fleurbaey and Schokkaert 2009). Another example is the case with user fees, where such financing mechanisms may “level up” the health of worse off groups. However, they may also result in catastrophic health expenditures for poor households. Even if such policies reduce health gaps between groups, they may be seen as illegitimate if they would exacerbate inequality in other social goods, such as welfare, income, education, or liberty.

Another central problem for health egalitarians is that health is a product not only of access to health care but also of a myriad of social conditions. Because of the influence of these social determinants of health, there is actually a limited amount that improved access to health care can do to improve health outcomes. As Michael Marmot (2008) puts it, what good does it do to treat people's illnesses, then send them back to the conditions that made them sick? Socio-economic inequalities in health are present within a range of diseases across contexts, even in countries with universal access to health care (World Health Organization and Commission on Social Determinants of Health 2008; World Health Organization 2010). Canada, for example, has an almost six-year difference in life expectancy between wealthy and poor groups. The wealthiest families in India have an under 5 mortality rate of 32.8 per 1,000 live births while the poorest families have a rate three times as high (92.1) (International Institute for Population Sciences 2007). Health egalitarians face a difficult question: If the goal is to equalize health outcomes, should limited health resources be invested in correcting existing social inequalities and improving social conditions, such as housing, education, and public transport, or should they instead be invested only in improving access to health care?

Prioritarianism

Prioritarianism represents a "middle way" between strict equality and strict health maximization. A principle of priority is understood to give some (absolute or weighted) priority to the worst-off persons (Parfit 2000, 2003). Principles of prioritarianism require us to organize social institutions so as to make the worst off as well off as possible and not to reduce the steepness of the inequality gradient. The first priority, according to prioritarianism, should be to elevate the position of the worst-off person as much as possible; the second priority should be to elevate the position of the second worst-off person as much as possible and so on up to the best-off person. A diminishing weight is assigned to benefits as recipients become better off and "benefiting people matters more the worse off these people are" (Parfit 2000).

Prioritarianism is a blend of a health-maximizing principle and an egalitarian principle, and it has wide support. However, some of the problems and controversies as discussed with a principle of equality in health outcomes are also relevant for prioritarianism. Perhaps the most difficult question for this view is who are worst off? Are they the sickest patients, or the youngest, or the most disadvantaged? It is also extremely difficult to determine priority weights in situations where the health level of a person is uncorrelated with their level in other justice domains, such as welfare, income, education, or liberty. Is it worse to be poor with good health than rich with poor health? The problems with social determinants of health are also just as intractable for prioritarianism as for a principle of equality in health. Should limited health resources give higher weights to correcting existing social inequalities and improving social conditions, or should they instead give weight to improving access to health care?

Nevertheless, prioritarians avoid some of the controversies that egalitarians face. The objections that genetic incurable diseases could be given too much weight, the "leveling down" objection, and the "bottomless pit" problem are less problematic for prioritarianism since the size of the expected health benefits are taken into account by assigning diminishing weights to health benefits as persons become better off. However, it is not clear how much weight the worse off should have compared with those who are better

off. In other words, the sizes of the priority weights are not clear. In the next section I therefore focus on the balance between giving weight to equality (or the worse off) and health maximization.

Balancing Equality and Maximization

To begin this discussion a case from the HIV program in the Iringa region in Tanzania is illustrative (Johansson et al. 2011; Johansson and Norheim 2011). The HIV program in this region was structured so as to give more weight to providing treatment to a large number of patients with HIV than to providing accessible services for poor patients in rural parts of the region, which would have gone some way towards reducing the gap in health outcomes between urban and poorer rural populations. Patients living in many of these rural areas had low access to facilities, and they were in a sense the worst off due to the high burden of HIV in the population (a severe disease that causes high rates of disability and kills young people), many HIV orphans, and high rates of extreme poverty. However, investing in programs to overcome rural barriers to health services, such as long distances and low population density, poor road conditions, and inability to pay for transport, would be very costly. Investments to enhance rural health outcomes would in this context give fewer health benefits compared with scale-up of services in the urban setting. There was already an existing health system in the cities and more patients with HIV lived in the urban catchment area. Larger health gains were therefore expected for fewer resources with an urban HIV treatment rollout.

A strict health-maximizing principle would clearly favor urban HIV treatment rollout since this would save a larger number of persons and more life years. A strict egalitarian principle would consider it important to narrow the geographical gap in health outcomes and therefore favor equal rollout of HIV treatment in urban and rural settings. This dilemma invokes legitimate disagreement and hard trade-offs (Daniels 1994). Anand frames the trade-off question as follows: What amount of healthy life years, if enjoyed equally by everybody, would have equivalent value to a greater average healthy life expectancy (Anand 2002: 485)? This question is relevant for all societies that have resource constraints on interventions that can influence the population health in a positive direction. General theories of distributive justice give inadequate guidance about what the right balance is between distributing health outcomes equally and maximizing health outcomes.

Social welfare functions could be useful in making such trade-offs explicit and they are typically used in welfare economics to operationalize the social value of welfare distributions. Such welfare functions could also be used in evaluations of health policies. Inequality measures like the Gini index and the Atkinson index are traditional welfare economic measures of inequality that handle trade-offs between efficiency and equity (Wagstaff 2002; Bleichrodt and van Doorslaer 2006; Norheim 2009). Such equity-sensitive measures evaluate the magnitude of inequality aversion that is needed to favor, for example, urban versus rural scale-up of HIV treatment.

Elsewhere, we tested the Atkinson index as an index for evaluation of a hypothetical case similar to the urban versus rural case above (Johansson and Norheim 2011). The Atkinson index can be seen as an inequality-sensitive summary measure of average health (Atkinson 1970). Inequality aversion, when applied to health policies, expresses the strength of preference for a concern for those who are worse off that is needed in

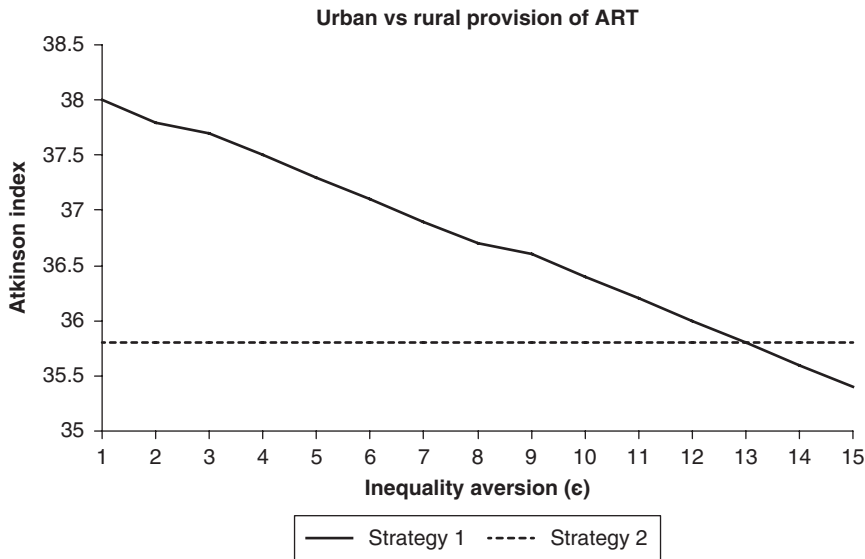


Figure 7.2 Atkinson index estimates from a previous study (Johansson and Norheim 2011) where we evaluated scale-up of HIV treatment only in urban settings (strategy 1) or 50/50 scale-up in both urban and rural settings (strategy 2). Fewer lives are saved and a more equal distribution is the result with strategy 2. ART = antiretroviral therapy.

order to favor, e.g., urban versus rural scale-up of HIV treatment. A parameter (ϵ) represents the magnitude of inequality aversion. High levels of ϵ indicate a large inequality aversion (when $\epsilon = 0$ there is no aversion to inequality and when $\epsilon = \infty$ there is absolute aversion to inequality). People's intuitions and preferences are often somewhere in between absolute and no aversion to inequality. See Figure 7.2 for the magnitude of inequality aversion that was needed in our evaluation of a similar case to the one above (Johansson and Norheim 2011). Urban scale-up of HIV treatment was favored for all $\epsilon < 12.9$, which indicates that a relatively large inequality aversion is needed in order to favor rural scale-up of HIV treatment (see Johansson and Norheim (2011) for more details on these calculations).

However, measures such as the Atkinson index have until recently been unexplored as normative analytical tools in distributive conflicts of health interventions (Anand 2002, 2004; Norheim 2010). Many different variables are relevant for the distribution of health care resources, including how severely ill persons are, the cost-effectiveness of interventions, and how effective an intervention is for the individual patient. Because these variables can come into conflict, however, trade-offs such as those in the urban versus rural case must be made between the value of equality and maximization of health (Norheim and Asada 2009).

Procedural Justice

How can societies respond fairly to the gap between available and affordable health care when resource limitations mean that some people will be denied substantial improvements in health? Reasonable people disagree on many of the substantive principles

discussed above, and we may suspect similar disagreements to occur in actual health care priority settings. It seems that we lack a supreme distributive principle that no one could reasonably reject, and therefore health allocation decisions will often be morally problematic, one way or another.

In the absence of agreement on substantive principled solutions, Daniels and Sabin have developed “accountability for reasonableness,” a theory of procedural justice in health care priority setting (Daniels and Sabin 2002). The goal of this theory is to ensure that the *process* of allocating resources is fair and just, so that even those who disagree with the final decisions can accept them as legitimate. Accountability for reasonableness has become a well known procedural framework internationally and was adopted in the 2004 WHO/UNAIDS guidance on ethics of HIV care and treatment roll-out (Holm 1998; Daniels 2004; World Health Organization 2004). Accountability for reasonableness specifies four conditions of a fair health care priority setting process (Daniels 2004):

1. *Publicity condition*: The process must be transparent and involve publicly available rationales for the priorities that are set. People have a basic interest in knowing the grounds for decisions that fundamentally affect their wellbeing.
2. *Relevance condition*: Stakeholders affected by these decisions must agree that the rationales rest on reasons, principles, and evidence that stakeholders view as relevant to making fair decisions about priorities.
3. *Revisability and appeals condition*: The process allows for revisiting and revising decisions in light of new evidence and arguments, and allows for an appeals process that protects those who have legitimate reasons for being an exception to policies adopted.
4. *Enforcement or regulation condition*: There is a mechanism in place that ensures the previous three conditions are met.

Private or public priority setting bodies that adhere to all four procedural requirements are accepted as legitimate moral authorities. The decisions will be legitimate (seen as acceptable by all parties) because, first, none of the four conditions specifies what the right distributions are, and second, the conditions ensure impartiality and include the perspective of all affected parties, including those being denied potentially beneficial health care (Daniels and Sabin 2002; Daniels 2008). The idea is to ground decision-making in a legitimizing process that is supported or bounded by substantive principles of justice, an idea that is based on theories of deliberative democracy and democratic decision-making (Gutman and Thompson 1996; Bohman and Rehg 1997).

Sabik and Lie argue that a shift from substantive principles to a fair process will not entirely solve the legitimacy problem, since problems of substantive justice are implicated in the choice of various processes (Sabik and Lie 2008). Even if a fair process ensures a more legitimate decision-making process, the end result may still be considered unjust if the outcome is in conflict with one particular view on justice. Friedman argues that the four conditions in accountability for reasonableness are inadequate and that there is a need for greater public involvement in a legitimate decision-making process. In addition, Friedman argues, democratic processes should allow for all kinds of reasons to enter the discussion, and that they should instead be judged by their consistency, plausibility, and explanatory power after they have entered the discussion (Friedman 2008).

Countries differ in how they set health priorities and assign relative weights to the substantive priority setting criteria, which is a good reason for having fair decision-making processes. Norheim and Kaporiri differentiate priority criteria into (a) acceptable, (b) unacceptable, and (c) contested criteria. *Acceptable criteria* are the following: (1) Severity of disease, i.e., prognosis without intervention; (2) effectiveness, i.e., prognosis with intervention; (3) cost-effectiveness, i.e., cost per QALY/DALY/life-year gained; and (4) the quality of evidence supporting criteria 1–3 (Norheim 1999; Kaporiri and Norheim 2004). There seems to be general consensus that these serve as an important basis of many of the health care priorities. The Norwegian health care priority setting guidelines, for example, are grounded on these acceptable rationing criteria (Norges Offentlige Utredninger 1997: 18). Other countries, such as Israel, New Zealand, the Netherlands, Sweden, Denmark, and the U.K. have applied different versions of these acceptable rationing criteria (Sabik and Lie 2008). Sabik and Lie found that some countries tend to focus more on severity of disease, while others emphasize cost-effectiveness and level of evidence behind the health technology. *Unacceptable criteria* are those reasons that are not relevant for all affected parties, which might include gender, sexual orientation, religion, race, tribe, social status, and educational level (Kaporiri and Norheim 2004). Rationing based on these criteria will not treat all people in the society with equal respect and lead to discrimination.

There are theoretical discussions about the acceptability of some hotly *contested criteria*, which sometimes figure in practical contexts (Kaporiri et al. 2007). The contested criteria include age, prioritizing the younger before the older, economic status (whether it is fair to prioritize the poorest), individual responsibility for one's own health status, and the individual's productivity for the family or the society (Kaporiri and Norheim 2004). Examples of uses described in the literature include the denial of organs for alcoholic liver failure (formulated in guidelines) and queue jumping in waiting lists (informal clinical decisions) (McGough et al. 2005).

Concluding Remarks

Our intuitions tell us that it is unfair and unjust when children die of diarrhea, when mothers bleed to death during childbirth, or when young people do not get access to health information and condoms. Policy-makers, donors, and health personnel face huge ethical challenges when dealing with these unmet health needs in distributing limited and often extremely scarce health resources. Through this sketch of moral reasons, substantive principles, and what legitimate priority setting procedures should look like, I have tried to show that there is no straightforward way to get priority setting decisions right. Legitimate decision-making demands that reasons for decisions be given and that the process is transparent. Reasonable disagreement exists about which principles and reasons are just, and how much weight should be assigned to each of them. I hope this introduction will motivate others to participate in the further exploration of these important issues.

Related Topics

Chapter 2, "Social Determinants of Health and Health Inequalities," Sridhar Venkatapuram and Michael Marmot

Chapter 3, "The Ethics of Rationing: Necessity, Politics, and Fairness," Daniel Callahan

Chapter 4, "QALYs, DALYs, and Their Critics," Greg Bogner

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