

No. 165

MODELS OF HEALTH CARE RATIONING

Volker H. Schmidt

Department of Sociology
National University of Singapore
11 Arts Link
Singapore 117 570

Tel:65-68743176
E-mail: socvhs@nus.edu.sg

ISSN 0129-8186
ISBN 981-3033-59-2
All rights reserved 2003

Models of Health Care Rationing¹

Volker H. Schmidt

Abstract

The paper discusses and exemplifies three models of health care rationing observed in affluent, economically advanced countries. Its underlying premise is that no welfare system in the world can be exempted from any rationing whatsoever. This raises the question as to how the problem ought best to be resolved. But before thinking about normatively appealing answers it might be helpful to study how the problem is actually dealt with in the real world. For such a study brings to light several advantages and drawbacks of various rationing schemes which it would be hard to consider (even conceive) in the abstract alone, but whose knowledge may be highly relevant, perhaps indispensable, for the designation of adequate solutions.

1. Introduction

All welfare states must ration health care because *no* public system is able to finance the entire (theoretically boundless and largely supply-driven) demand for health care arising *within* such a system. The only system that could dispense with any rationing whatsoever would be a completely unregulated market in which the supply and demand for medical goods and services would be brought into equilibrium by the price mechanism, thus leaving no need for further selection. But a pure market system would have several undesirable (side-)effects, rendering it practically infeasible and leaving no alternative to at least some degree of public care provision.

If there is no genuine (defensible and legitimate) alternative to a public health care system, and if within such a system it is at the same time inevitable to limit spending, then hard choices have to be made about how this ought to be done at all levels concerned. At the macro level, it has to be decided which amount of a given Gross Domestic Product (GDP) is to be used for medical purposes as against other societal concerns and interests. At the next lower meso level, it has to be decided how the medical budget as a whole is to be distributed among the various branches and sub-divisions within medicine. And finally, at the micro level of concrete

¹ Revised and extended version of a paper presented at the 15th World Congress of Sociology, Brisbane, Australia, 7-13 July 2002.

physician-patient interaction it has to be decided who shall receive (or be denied) which kinds of treatment.

The present paper focuses on macro-level policies, but looks at some of their implications for the other two levels as well. It is divided into two main sections, followed by a brief conclusion. Drawing upon a widely used distinction between implicit and explicit rationing, section 2 outlines three models of rationing and exemplifies them with the systems found in (1) Germany (a public system predominantly following the implicit approach, based on clinical judgment and physician discretion), (2) Oregon in the United States (a public health care plan in a predominantly private environment and following an explicit approach by defining a given package of treatments covered), and (3) Singapore's system of compulsory savings accounts and various government-backed or regulated insurance plans which ration explicitly through limiting the amount of funding to which individual subscribers are maximally entitled over the course of their lifetime.²

All three models have their advantages and (at times rather tragic) drawbacks. It seems, however, that they roughly represent and delineate the scope of available options for the designation of rationing policies in economically advanced countries. In the past, implicit rationing clearly was the predominant form. However, more recently pressures on the funding of health care systems have become so acute that a gradual move to (more) explicit rationing seems to be taking place in many countries. Given that explicit rationing is quite visible, it brings to the surface all kinds of ethical dilemmas, which, despite being no less prevalent in regimes of implicit rationing, can be more easily ignored ("escaped") there. They are the subject of section 3, which discusses a number of theoretical and practical arguments for and against each model.

Ultimately, all health care systems have to decide how best to tackle these dilemmas. And since the option not to choose is unavailable, it is good to know what is on offer. For only then can one make a conscious choice, weigh the various pros and cons deliberately and determine which trade-offs appear most tolerable in a given socio-cultural environment. However, understanding the advantages and disadvantages of various models is only a first step in policy development and, especially, in policy implementation, which, if successful, has to overcome many practical difficulties. This problem cannot be adequately dealt with within the confines of

² The three models are not mutually exclusive because each system contains some elements from either one or both of the others as well. They differ, however, in the relative weights they accord the various elements. For analytical purposes it is therefore useful to treat them as clear-cut alternatives, even though no pure models are found in the real world.

this paper. However, in the concluding section I will briefly touch upon it and suggest that it does not invalidate the perspective adopted here; not least because there are not only examples of failed policies and (at best) incremental reforms, but also of quite successful ones.

2. Forms of Rationing

Before turning to the models themselves, the meaning of the term “rationing” must be clarified because of its very different uses in the pertinent literature. Here, it is understood as referring to any policy which causes some patients to forego medically beneficial treatment *within a collectively financed* (insurance or tax-based) *system of health care provision*. This definition³ excludes market allocation as a form of rationing. Instead, it considers rationing as *diametrically opposed* to the market principle. Rationing becomes necessary *only* when some goods – in the present case: certain forms of medical treatment – are taken off the market, when they are decommodified and offered to needy recipients *regardless* of their ability or willingness to pay. Once such decommodification takes place, however, rationing is inevitable because providing unrestricted (free or generously subsidized) access to *all* medically useful services would be unaffordable; according to calculations undertaken by health care economists, one could easily spend the entire GDP of a wealthy, industrialized nation on health care even after eliminating all waste (see Breyer and Kliemt, 1994).⁴ Public health care is therefore always *limited* health care, is care within the bounds of politically determined (and hence: medically arbitrary!) budget constraints.⁵ But the limitations that exist are not always publicly acknowledged. This is especially true of countries that resort to implicit modes of rationing.

³ A fuller exposition and justification of this definition is given in Schmidt and Gutmann, 2002.

⁴ This may seem an exaggerated, even fantastically high figure. Yet, in the light of other estimations, it still reflects a rather moderate assessment. For instance, Hall (1997: 11) cites a study according to which it would require “five-and-one-half times the French gross national product” to provide all French citizens with all medically beneficial treatment. For evident reasons, the French spend less than this on health care. They must be rationing. For some of the ways in which they are rationing, see Vassy, 2001.

⁵ The essentially political nature of rationing is also (strongly) emphasized by Light and Hughes. However, while they are concerned primarily with the micro-politics of rationing “as a struggle over definitions, reflecting different situated interests and perspectives” (2001: 560), my objective in the present paper is to lay out an empirically founded (and illustrated) conceptual heuristics of rationing

2.1. *Implicit or Bedside Rationing*

The country best known for a politics of implicit rationing is the United Kingdom (see the now classical study Aaron and Schwartz, 1984).⁶ This approach has been adopted in Germany too, but the fact that rationing takes place there has always been denied. Instead, policy makers and clinical practitioners alike claim that all needy patients are provided with the necessary care. Rationing is scorned, portrayed as something that can and must be prevented. For not only does it lead to medically unwarranted exclusions, it is also associated with a two-tier (or, as it is called there, two-class) system in which the wealthy are better cared for than the less well-off, and such social differentiation is considered unacceptable in egalitarian-minded Germany (see, e.g., Clade, 1997).

But rhetoric and everyday realities are not easily reconciled. For one thing, the German system *has always been* a two-tier system. Subscription to a social insurance scheme is mandatory only for the lower income groups, and tenured public servants are even legally excluded from membership in such a scheme. So they have no choice but to buy insurance on the private market. Likewise, higher income groups are permitted to opt out and purchase private insurance. At least for younger and relatively healthy people, private insurance rates tend to be significantly lower. At the same time, the reimbursement that doctors can claim from private insurers is much higher than what they receive from social insurance schemes.⁷ Not surprisingly, this translates into better service for privately insured patients who are often given priority treatment (e.g., allowed to jump queues), are more thoroughly investigated, are more often

models which it is hoped can usefully complement normative reflections about appropriate rationing policies.

⁶ Further important studies are Halper, 1989 and Klein et al., 1996; for more recent accounts see also Griffiths and Hughes, 1998, several papers in the 2001 special issue of *Sociology of Health & Illness* (vol. 23, no. 5) on rationing, Day, 2002, and Hunter, 2002. As especially the work of Griffiths and Hughes (1998) shows, reforms of the British NHS during the 1990s have made rationing slightly more explicit, or rather have partly shifted the rationing power from the providers of health care to the purchasing bodies (the district health authorities), which have found their own ways of making rationing decisions invisible. Since the British case is well documented in the literature whereas very little is known about German rationing policies, the following focuses on the latter case.

⁷ The terms social and public insurance are used interchangeably in this paper.

referred to reputable (and hence expensive) specialists, and receive better implants and tooth fillings.⁸ The list could be extended almost infinitely.

But not only has there always been a class difference *between* the public and private sectors, there can also be no doubt that rationing takes place *within* the public sector. Not every technically feasible treatment is made available to every medically indicated patient, and when treatment alternatives exist, doctors are urged to take cost considerations into account; in fact, they now even face (the possibility of) monetary penalties if they refuse to do so. As a result, less intensive care is offered or less time is spent on patients than would be medically optimal, and second best rather than first best medication or technology is provided. This is *rationing by dilution*. Next, there is *rationing by (premature) termination*. Patients are increasingly discharged earlier from hospital than desirable. This can significantly impair the recovery processes and also lead to higher rates of recidivism – thus actually raising treatment costs. A third form of rationing, *rationing by rejection*, is also becoming more widespread. Many hospitals refuse admission to emergency patients whose treatment costs are expected to be higher than the reimbursement they receive from the patients' insurance plans, thus making them a financial liability. Instead of reserving some capacities for acute cases, beds in emergency wards are filled with elective and more lucrative patients who do not really belong there. Related to this, there is *rationing by re-directing*: would-be patients are refused at the reception stage and sent to other settings which are purportedly better equipped to serve them but which may in fact deny them access as well. In order to improve output (i.e., “success”) rates, hospitals also increasingly give priority to less urgent over more needy patients whose prognosis is worse (but not hopeless). This could be called *utilitarian rationing*. It is driven primarily by efficiency concerns and can, when taken too far, subvert the very purpose of the treatment in question.⁹ Finally, there is *rationing by delay*. Waiting lists are becoming the norm in a widening scope of treatment areas due to a lack of equipment and/or (qualified) nurses and physicians. As a result, the patients' conditions worsen;

⁸ A good description of the key structural components of the German health care system and their consequences for its everyday functioning is to be found in Alber, 1992.

⁹ An example are premature organ transplants in patients who could well be kept alive for months or even years by conservative means, but whose transplantation improves a center's survival statistics – and hence makes its performance appear better than that of (some of) its competitors (see Schmidt, 1998).

sometimes to the point where the treatment no longer makes any sense. In other cases, the patients die before it is their turn. Intended or not, both reduces costs.¹⁰

The form that rationing takes in these and numerous similar instances is *implicit* because the affected patients are not informed about their less than optimal treatment. Instead, they are led to believe that they receive the best possible treatment, with doctors resorting to all kinds of rationalizations to camouflage their rationing behavior. In other words, they offer medical reasons to justify decisions which are in fact motivated by economic considerations or constraints. Partly for the (presumed) comfort of the patients, partly for their own comfort, doctors deceive patients about the true grounds of their refusal (see Halper, 1989). One observer has aptly referred to such practices as “merciful lies” (see Gäfgen, 1985). Germans have long been oblivious to health care rationing and thought of it as a problem that might trouble other systems but not theirs. This is an illusion.¹¹ Recent research has provided ample evidence that German doctors face the same dilemmas as their colleagues in other parts of the world and deal with them in the same ways (e.g., Schmidt, 1996; Kuhlmann, 1998; Dietrich, Kliemt and Imhoff, 2002; Breyer, Kliemt and Thiele, 2002).¹²

¹⁰ The terms rationing by dilution, rationing by termination, and rationing by delay are borrowed from Klein (1997). Evidence for one or another of the above forms of rationing in the German health care system can be found in Schmidt, 1996, Krimmel, 1997, Kuhlmann, 1998, Rothgang, 1999, and Feicht, 2002.

¹¹ One consequence of the “illusion of abundance”, from which many Germans suffered until recently, is that an open debate about health care reform and rationing is only just beginning. There are many reasons for the long denial of this unpleasant reality. They include an overrating of the country’s economic potency, an unwillingness to accept the reality of selection (a term which is thoroughly discredited in German public discourse due to the Holocaust experience), and a fear of electoral punishment for unpopular reforms by politicians.

¹² It is now increasingly recognized that rationing is a global problem affecting practically all health care systems in the world and from which no country is exempted (see, e.g., the chapters in Coulter and Ham, 2000).

2.2. *Explicit Rationing: Oregon's Medicaid Program*

Oregon's rationing plan came into being by default, as it were.¹³ In 1987, the state's Medicaid program refused to pay for a bone marrow transplant – the only survival chance for a seven-year-old boy suffering from leukemia. The case drew much public attention and criticism, eventually forcing Medicaid to reinstate funding for transplants discontinued just prior to the onset of the boy's disease. The rationale for this decision was the prospect of providing 1,500 people who had thus far been without *any* treatment coverage with basic medical care. Medicaid's budget is relatively small, and it had been estimated that by excluding payment for the 34 patients who were expected to require transplants in the upcoming year, enough resources would be freed to include 1,500 new enrollees in the program. The price of 34 unidentifiable, "statistical lives" seemed tolerable against this background.

The tragic episode became the starting point for the designation of a clearly defined package of care to which all enrollees are entitled; what is not included in Medicaid's list of specified services is not covered. The state legislature appointed a commission whose task was to draft the list. The commission's goal was to determine the relative cost-effectiveness of the various Medicaid services and to rank them accordingly. Services generating large benefits at small costs would be at the top of the list and vice versa. Gradually moving down the list, the state would then estimate the cost of providing each service to an expanded number of beneficiaries and draw a line at the point where the budget was exhausted. Services falling below that line would no longer be reimbursed by Medicaid.

The first list produced by the commission was a complete failure; it was not even forwarded to the state legislature. The reason was that the chosen method of ranking yielded several undesirable results. An oft-cited example is the prioritizing of tooth capping over appendectomy (Hadorn, 1991). But this did not discourage the commission. The members concluded that, in addition to the results of (as yet rather imperfect) cost-effectiveness analyses whose sole purpose is to maximize the benefits from given resources, further considerations, such as fairness and equality of access to health care, the comparative urgency/severity of different medical conditions and their respective impact on people's health and overall welfare, etc., had to be factored in. This led to several rounds of revision and improvement. In 1994, the list was finally approved and implemented. Since then, Oregon's government-sponsored Medicaid

¹³ The case is discussed broadly in the literature. The following account draws on Ubel (2000). An early book-length account of the lessons to be learned from the Oregon experience can be found in Strosberg et al., 1992.

scheme, which remains in place, has been the most widely discussed example of a system of explicit health care rationing in the world.¹⁴

2.3. Rationing Through Personal Savings Accounts: The Singaporean System

The Singaporean system has two major components, one for outpatient treatment and the other for inpatient treatment requiring hospitalization. Outpatient treatment, which tends to be very moderately priced due to heavy subsidization by the government,¹⁵ must be paid directly by the patients themselves; often, however, they can claim some assistance from their employers. To be able to pay their hospital bills, employees can use their Central Provident Fund (CPF) savings. All employees must set aside 20 percent of their monthly income (added by another 16 percent contributed by their employers) in a compulsory, individual savings account administered by the government-run CPF.¹⁶ Of these monthly savings, between 6 and 8,5 percent (depending on the employee's age and subject to an upper limit of S\$ 360 to S\$ 480) go into separate Medisave accounts.¹⁷ The savings in this account (the total of which is currently limited to S\$ 10,000 to avoid excessive build-up) are reserved for payment of hospital charges and certain costly outpatient services (such as renal dialysis, radiotherapy and chemotherapy) incurred or utilized by the account-holders and their immediate relatives (parents, spouses and children). They can also be used to purchase insurance against catastrophic disease, provided the respective insurance plan contains palpable deductibles and co-payments for the subscribers.¹⁸

¹⁴ The rationing practices of American HMOs cannot be discussed in this paper. For brief overviews, however, see Williamson, 2002 and Powell, 2002.

¹⁵ Primary care services at public hospitals and polyclinics are subsidized at 50 percent of the costs.

¹⁶ For a recent official self-description of the CPF system and its history, see Central Provident Fund Board, 2000. The contribution rate for employers has been reduced to 13 percent in the second half of 2003.

¹⁷ Workers aged 55 and above must gradually pay lower CPF rates. At the same time, the share of their CPF contributions that is reserved for the Medisave accounts increases.

¹⁸ For a comprehensive discussion of the various components of the rather complex Singaporean system (whose details cannot be fully described here) and their underlying rationales, see the pertinent chapters in Tan and Chew, 1997. The present account draws heavily on the chapters of Aw and Low and of Lim in that volume.

Like outpatient treatment, hospital services are subsidized, albeit to different degrees (that is, depending on the ward class chosen by the patients). With decreasing levels of comfort, the government subsidy increases up to a maximum of 80 percent for patients housed in multi-bedded class C wards which lack various amenities (such as air conditioning) found in higher-class wards but supposedly offer the same quality of care as the latter, less or non-subsidized wards.¹⁹ Despite the high levels of subsidization, patients stricken with very costly and/or chronic diseases may still not be able to cover their full share of the bill with savings from their Medisave accounts. To cover this gap, in 1990 the government introduced Medishield, a low-cost catastrophic illness insurance plan. Premiums are paid directly from Medisave contributions unless the account-holder opts out. They range from just above S\$ 10 annually for those up to 30 years, to less than S\$ 300 for those above 70 years, thus allowing even low-income earners to buy at least some insurance-based protection.

A private alternative, which basically functions the same way, but provides more extensive coverage at somewhat higher cost, is the Incomeshield plan from the National Trades Union Congress (NTUC).²⁰ It comes in three versions, differing in their premium and reimbursement rates, respectively: Put simply, whoever pays higher premiums gets more in return. Premiums are still rather low though.²¹ At the same time, there are upper limits in all three plans to what subscribers can maximally claim. The “best”, and most expensive, version covers up to S\$ 100,000 per policy year and S\$ 450,000 during one’s lifetime. Any treatment costs exceeding these limits have to be borne by the policyholder. There are also relatively high annual

¹⁹ C wards are designed, if not by declaration so certainly by intention, for rather poor, low-income patients. To opt for them means to forego some of the privileges enjoyed in more expensive wards. Thus, a choice of physician is no longer possible, one may be given generic drugs upon the doctors’ discretion (without necessarily being informed about it), and one will likely find oneself in a ward of eight people, with almost no frills whatsoever. Moreover, to be allowed to opt for this ward, one needs a referral letter from a public polyclinic, which can thus exercise a gate keeping function along the lines of a British general practitioner. Theoretically, this gives the polyclinics an opportunity to manage (i.e., reduce) the “demand” for such low-class, high subsidy wards. To what extent such management actually takes place is not known.

²⁰ Two other private providers offer alternative schemes, which differ only marginally from the NTUC plan and hence can be neglected here.

²¹ For instance, a person entering the plan at age 40 and purchasing the most expensive of the three policy versions must pay an annual premium of S\$ 252 at current subscription rates. With growing age of the policyholder, the premiums gradually become higher.

deductibles whose exact amounts depend on the ward class chosen. Moreover, no claims are possible without significant co-payment, comprising 25 percent or more of all expenses incurred, on the part of the policyholder. And finally, there are age limits for subscribers. The last possible entry age is 75, the last coverage age 80 years. Patients older than 80 are not eligible for any reimbursement even if they have not yet fully consumed their lifetime maximum. Any remaining balance goes back to the pool.

A long list of exclusions specifies conditions that are not covered by the plan. They include self-inflicted and/or sexually transmitted diseases such as drug addiction, injuries resulting from attempted suicide or AIDS, mental illness, hereditary conditions, dental care, maternity charges and abortions, cosmetic surgery, vaccination, and several others. Coverage is thus deliberately restricted to care for serious, especially life-threatening or incapacitating conditions, severe injury, etc. Some of the excluded conditions are covered by other, government-sponsored programs, others are not.

Through political intervention into the health market, the government generally (and by and large successfully) tries to keep treatment costs down. Coupled with the subsidization of many procedures and drugs, this ensures that good and affordable basic medical care is available to all Singaporeans. Beyond that, personal responsibility is strongly emphasized and promoted. As a result, only the poorest must be supported directly by the state (see Duff, 2001). For this purpose, an endowment fund (called Medifund) was established in 1993. It provides basic coverage for citizens who have exhausted all other means to rely on, including the savings of immediate family members. Eligible persons may apply to hospital-based Medifund Committees for assistance.

So much for a brief description of the three major models of health care rationing discussed here. As mentioned before, none is anywhere practiced in pure form. Thus, even health care systems predominantly relying on implicit (hidden) rationing mechanisms usually contain at least some elements of explicit rationing as well, typically in the form of exclusions of certain conditions and procedures (such as cosmetic surgery) from coverage or of various co-payments (which are becoming increasingly prominent in Germany). Conversely, some degree of bedside rationing seems indispensable even in the most explicit of rationing systems. For doctors must inevitably judge the cost-worthiness of given procedures in individual cases *and act accordingly*;²² if they didn't, they could easily ruin any (public) health care system in the world

²² For instance, through not mentioning certain available, but only marginally beneficial services to patients under their care.

(Ubel, 2000). There is simply too much good medicine can do nowadays. And Singapore's system is a mixed case anyway, combining self-selection on the part of policyholders themselves with known exclusions from third party reimbursement and some degree of bedside rationing too.

3. Merits and Drawbacks

Health care rationing can be harsh and is always unpleasant. It means that avoidable harm and premature deaths are allowed to happen. They are the outcome of contingent (political) choice. If more resources were devoted to health care or if some of the available resources were spent differently within the health care sector, some unnecessary harm and deaths could be prevented. However, the price would be the inability to address other societal concerns, including other health-related concerns. We have to choose, and any choice we make will inevitably produce winners and losers (somewhere) because there is no (public) spending without opportunity costs. The dilemma itself cannot be escaped. But it can be resolved in different ways. The three policies described above reflect different philosophies for doing so. Some of their merits and drawbacks are the subject of this section.

The most important advantage of policies of *implicit rationing* is probably their invisibility, protecting them from criticism. What is not known cannot be questioned, challenged, probed. Moreover, no one has to take responsibility for less than optimal treatments and outcomes. Patients who receive second best care or are denied appropriate care altogether are told that nothing (better) can be done for them medically. Even patients who are denied a (knowingly) scarce transplant are often led to believe that it is ultimately not the scarcity itself which necessitates their exclusion; rather, their personal prospects are too poor, or no suitable donor can be found for them in due time, etc.²³ That is, whatever may be withheld from them would not benefit them anyway. Instead, they are only spared unnecessary suffering, painful interventions leading to no good. Who could object to that?

Such lies may be merciful because for many people it would be exceedingly hard to accept the truth: that they have to die (or put up with second or third best medication), not because there is no alternative to this, because any additional effort to improve their condition would be futile, but simply because whatever else could be done is deemed too expensive. Yes, the means are there, but not for you. They have to be reserved for others; not for others who need

²³ For empirical evidence, see Schmidt, 1998.

them more, who are medically more eligible, but for others who are given socio-moral priority.²⁴ In principle it would of course be possible to treat you (better) too, but that would require more resources. The budgets are limited, so “tragic choices” (Calabresi and Bobbitt, 1978) have to be made. Merciful lies serve to conceal these choices. They invisibilize their contingency by couching them in the language of necessity. The defenders of this policy argue that it permits affected patients to make peace with their fate. Ignorance spares them the “deprivation disutility” (Coast, 1997) derived from knowing that more (or something) could be done, but is not; from the resentment, anguish, and despair they (are likely to) feel when informed correctly.²⁵

But merciful lies are still lies.²⁶ This makes their justification somewhat dubious. Too much lying may well erode the trust, which is so important for the doctor-patient relationship. For how can one trust people who systematically lie in matters of life and death? Who withhold beneficial treatment when it is their professional duty to act in one’s best interest? Isn’t this a recipe for generating fear and suspicion? If people discover that they have been deceived (say, through acquaintance with social scientists’ work and their popularization through the media),

²⁴ There are various ways in which such a priority can be expressed. Up until the second half of the last century, it was quite common to make reference to the differential “social worth” of different (categories of) patients and to distribute scarce medical resources accordingly (see, e.g., Scarce Medical Resources, 1969). Later, that term was not used anymore (at least less frequently) because it was politically discredited. The practice nevertheless persists, suggesting that the underlying intuition has retained much of its force in everyday morality (Schmidt, 1996).

²⁵ Committed subscribers to the ideal of patient autonomy may find this hard to believe. But there is some supporting evidence. For instance, members of self-help patient organizations in the field of transplant medicine have demanded a “right to ignorance” about the exact policies of recipient selection (see Kracht and Tapp, 1997). They “want” to believe in the myth that it is ultimately objective “medical” criteria which determine who is to receive a given organ, even though it is now firmly established that such criteria, strictly speaking, do not exist and cannot be developed because the problem itself is not a medical one (on this point, see especially Gutmann and Land, 1997).

²⁶ It is important to distinguish between genuine lies and judgments based on pervasive uncertainties which may appear as untruthful to external observers but are actually made in good faith. In practice, it will not always be easy to draw a clear line between the two. Still, there is sufficient evidence about doctors who are fully aware of their lying behavior in contexts of health care rationing. See, for instance, Halper (1989: 149) who quotes a British nephrologist with the following remarks: “Some of us have to tell lies to older patients, partly to make the patients more comfortable and partly to make ourselves more comfortable”.

might their sense of betrayal not outweigh any distress from being told the truth? And does not the recognition of the patients' autonomy rights *require* honesty (Doyal, 1997)?

Another objection comes from the medical community itself which is becoming increasingly restive about having to carry responsibility for scarcities beyond its control and which it would much rather ameliorate through more resources devoted to health care. Doctors are, after all, not (meant to be) "society's coffers". If politicians make bad decisions about societal resource allocation (and rationing, whatever its political justification, cannot be but a disturbing bad from a medical point of view), then they should also be held accountable for them. The medical profession should refuse to participate in rationing activities (Agnell, 1985; Anheier, 1996).

A third, related criticism (coming from outside the profession, though) of bedside rationing questions the authority of doctors-as-rationing-agents. Rationing is not about the proper application of medical knowledge but rather the distribution of scarce societal resources, and for this task physicians neither possess any special expertise nor prerogative. It does of course require medical knowledge to determine a patient's eligibility for a given treatment, but there is nothing in medicine that tells one who shall receive better or worse forms of treatment *if* not all can be treated equally well. When such questions arise, they must be dealt with in their *own* terms, in terms of public policy and of ethical rightness. They concern competing interests and conflicting values, and hence must be taken out of the doctors' office and into the public arena where they truly belong (see, e.g., Veatch, 1991).

A fourth problem with bedside rationing is the flip side of what, to some, makes it appear more humane than explicit rationing: precisely because they do not know about the rationing that actually takes place (or where it is most prevalent and which categories of patients it affects most), people are kept from taking otherwise possible precautions. Were one (made) aware of the often rather idiosyncratic (if not to say, arbitrary) rationing decisions which doctors daily make without admitting them, then one might consider purchasing additional coverage on the private insurance market. But one cannot make a rational choice about the appropriate amount of additional coverage if one does not know what is included in the basic package, what one is and is not entitled to in the public sector. In effect this amounts to depriving people of life chances. They may virtually die although they could have lived had they been properly informed about their condition and the extra payment it requires for treating it with state of the art medical procedures. Seen in this light, merciful lies might be equated with professional malpractice.

Explicit rationing schemes offer the requisite transparency, and this is probably their greatest merit. People know exactly what to expect within the rationed sphere. Such knowledge

may sometimes be hard to bear, especially when it concerns exclusions. But if one wants protection against medically unwarranted exclusions (or simply beyond what is covered by a public scheme), one can buy it – at market rates, of course, and provided one can afford them. But *if* one can afford them, one may well decide to do so. If, on the other hand, one freely chooses not to do so, then there is nobody to blame should a situation arise in which expensive treatment is withheld from oneself.

Affordability means that there will be different standards and qualities of treatment for different social groups, depending on their willingness and ability to pay. This has often been criticized as ethically inappropriate because health care is deemed special, a good so important that all should have equal access to it. But if rationing itself is unavoidable, then the only way to guarantee absolutely equal access would be to prohibit the development of a private market altogether. At least in free, democratic societies this appears both undesirable and infeasible. So some inequality must be tolerated, whether one likes it or not. Equality is not an absolute value, and it often has to be traded against competing, no less important values to which concessions must be made. Defenders of explicit forms of rationing argue that some degree of inequality may well be socially just (at least: ethically tolerable), provided a “decent minimum of health care” (Daniels, 1996) is guaranteed for all.

Another problem with explicitness is that it makes for vulnerability. Implicit rationing is doubtless politically more convenient. To be able to define a package, to determine what should and should not be included in a list of publicly funded services, one needs criteria which are acceptable to both the public and professionals involved, and given the value pluralism which is so typical of modern society such criteria are hard to come by. There is no one-best solution to the problem of setting health care priorities, nor is there a clear cut-off point separating effective from non-effective treatments (Light and Hughes, 2001). Instead, several suggestions are on offer for which reasonable arguments can be made. Ultimately, what ought and ought not to be included in a given package depends on value commitments, which are not generally shared and hence make all proposals contentious. Why (only) these condition/treatment pairs and not others (as well), why this ranking rather than a different one? Whose views about what is most important (are to) count more, whose less? Since no one can claim to possess the authority to settle such disputes once and for all, any chosen policy invites criticism from somewhere.

Skeptics believe therefore that the likely result of any attempt to draw up a clear list of services covered will be unrelenting agitation for budget increases (Mechanic, 1995) which in turn can easily doom the whole enterprise. No rationing is possible without painful exclusions, but exclusion, when visible, quickly tends to meet with public outcries. The price of visibility is

triviality, says health policy analyst Rudolf Klein (1997), so in the end the really hard decisions will have to be relegated back to the clinical level anyway. He adds that Oregon cannot be taken as counter-evidence, because Medicaid's original purpose was to *extend* coverage to previously uninsured (rather than *limit* what is to be available to already protected) people, and expansion is always easier to defend politically than contraction because it seemingly hurts nobody.²⁷ If that were the case, then policies of explicit rationing would be ill suited to precisely those problems which they are meant to address, namely those of cost containment.

A further problem with explicit forms of rationing is that "blanket exclusions ignore the fact of patient heterogeneity" (Klein, 1997: 508). Justice demands equal treatment for equal people and unequal treatment for unequal people. A treatment that would be of marginal utility to most patients may be essential for a few who may never need any of the procedures included in a list of covered services. Defined packages have no room for the subtleties of individual cases. Klein therefore pleads for greater openness for condition/treatment pairs that may qualify for reimbursement based on physician judgment: whether a particular service shall or shall not be made available to a given patient ought to be made dependent on that patient's personal circumstances. If the doctor in charge feels that someone strongly needs it for his or her ability to function socially, then even cosmetic surgery can be a candidate for public provision. But the discretion which is needed for decisions on a case by case basis would of course also open the door to precisely those idiosyncrasies which have turned many observers against implicit forms of rationing and which gave rise to calls for greater transparency and explicitness.

Some of the difficulties associated with both of the above rationing models can be avoided when entitlements, rather than being limited *qualitatively* through a set list of services, are specified *quantitatively* as an upper limit of expenses covered for each patient. This is the main feature of the Medicare and Medishield/Incomeshield programs forming the centerpieces of the Singaporean system, which accords maximum amounts of reimbursement per year and lifetime. This system rations very explicitly, leaving no doubt about where one (presently) stands, what one is (yet) entitled to. At the same time, it requires no definite exclusions of particular condition/treatment pairs. In its Singaporean "incarnation" it does of course contain such exclusions, even many of them. But these are no prerequisites of the proper functioning of a system based primarily on the principle of rationing through monetary limitations of entitlements. Instead, they are merely contingent (local) add-ons, which could easily be dropped without

²⁷ A misperception, of course, because whatever is publicly funded must ultimately also be paid by the public through (higher) taxation.

affecting the system's operational logic. What such a system *does* require though are prudent clients and honest doctors. The clients must be prudent because they have to allocate the resources available to themselves in such a way that their well being is maximized across a whole life span. They must think ahead, discount some of their (less urgent) present needs (or preferences) for potentially arising future needs, lest they be without sufficient means when something serious hits them later in life. In a word, they must become *their own rationing agents*.²⁸ The doctors, on the other hand, must be honest, because in a system like this it is vitally important that patients be well informed about the availability and relative merits of given treatments; otherwise no rational choices are possible about how best to spend one's limited insurance dollars.

The system rations not only through upper limits of reimbursement that subscribers can claim, but indirectly through the deductible and co-payment provisos as well. For such co-payment, especially when it is as palpable as in Singapore, strongly discourages moral hazard behavior. The experience with health care insurance around the world shows that without co-payment people are much more likely to utilize facilities they would not consider very worthy if they had to pay for them out of their own pocket. When expenses are distributed across many (anonymous) people, then people's health care "needs" generally tend to inflate. Once they are made to feel the costs of medical care, their needs become more modest. The high performance levels (measured in terms of factors such as life expectancy, infant mortality, etc.) achieved by the Singaporean system at rather low cost²⁹ – the country presently spends little more than 3 percent of its GDP for health care – indicate that this need not be to their disadvantage.

²⁸ Readers familiar with (and sympathetic toward) Norman Daniels' "prudential lifespan account of justice across generations" in the distribution of health care (see Daniels, 1996) may find this feature (combined with the age limit which the system also contains) quite appealing, and it may well be that the described policy is the closest approximation of an implementation of Daniels' ideas one can get to in the real world.

²⁹ The WHO World Health Report 2000 ranked it no. 6 in the world in terms of overall performance. Despite various objections which have been raised against the assessment methodology used for that report (see, e.g. Möller and Laaser, 2002), this ranking appears remarkable enough – not least when comparing it to those of many Western systems, such as the German or the American ones, which were ranked only nos. 25 and 37, respectively.

One of the drawbacks of the Singaporean system is probably its openly exhibited class character.³⁰ Whoever pays higher premiums gets better service, and whoever pays nothing gets only very little when in need. Moreover, there is hardly any redistribution from the rich to the poor, because the savings accounts approach means that each employee saves only for him- or herself. Coverage is thus largely provided in proportion to the individual's income rather than his or her need (see Lim, 1989 for this criticism); and the solidarity principle which plays a much greater role in collectivist systems such as those of Canada and several West European countries is clearly marginalized.³¹ Another potential problem is that the system's underlying premise that the patient/customer is the best judge of how he or she should spend his or her health care savings properly may be flawed to some extent, as has been suggested repeatedly in the pertinent literature and is seemingly confirmed by the observation that a sizeable portion of Singaporeans has been led to spend beyond their means by checking into higher-class wards than they can afford.³² Finally, the system does not discriminate between patients with chronic, very costly diseases and those who have been luckier in the "natural lottery" – or more generally, between those with greater and lesser medical needs. Some may find it unjust that some patients are bound to reach their upper reimbursement limits much quicker than others through no fault of their own. Would it not be fairer to compensate them somewhat for their bad luck, for example through a more flexible system of entitlements, one that was better adapted to circumstances beyond the individual's control?

³⁰ *If* this is a problem, it is one shared with any rationing scheme though, as mentioned before. The main difference to other systems seems to be that no attempts are made to camouflage its class character in Singapore.

³¹ It has been noted though that even the British NHS benefits the middle classes more than the lower classes (see Goodin and Le Grand, 1987). It may therefore well be that the differences are ones of degree rather than of principle.

³² A study conducted by the RAND Corporation (and reported by Hall, 1997: 49) also confirms that patients are not always capable of making good treatment decisions for themselves and thus rely heavily on their physicians' recommendations. This supports the point made above about the importance of the doctors' honesty in such a system.

4. Concluding Remarks

The question need not be answered here. For the purpose of the present paper is neither to criticize nor to promote any of the models discussed. Instead, the intention is only to highlight some of their main features and differences and to show that *no* system is perfect or wholly satisfactory. All have their advantages, but all are also problematic in certain ways. Once this is understood, the best one can hope for is a policy design which tries to combine the better elements of the various models and to eliminate, as well as possible, their ethically or otherwise most disturbing ones.

It would be beyond the scope of this paper to lay out the parameters of such a policy in detail. Some tentative suggestions seem nevertheless possible. If the criticisms made of various schemes of implicit rationing are not altogether unsound, and if the same applies to attempts at setting up explicit lists of services covered by a public health care package, then it might be worth considering giving at least *some* weight to the alternative(s) of personal savings accounts and/or insurance schemes along the Singaporean lines.³³ Thus, beyond providing universal access (with or without co-payment) to a decent level of primary and secondary care, people could be required to buy additional coverage for catastrophic disease (with or without co-payment) – but with the choice between insurance *either* protecting against a limited set of conditions *or* guaranteeing a maximum (lifetime) amount claimable for whichever treatment they need and seek. On top of that, the private market could offer coverage for any remaining “gaps” to those who are able and willing to pay for it. Such a system would combine compassion for the weak with some freedom for all; it would contain an inevitable degree of paternalism to protect people against their own weakness of will and short-sightedness, while at the same time permitting those who are sufficiently able and willing to care for themselves to make their own choices. It would thus strike a reasonable balance between conflicting values which are both important in their own right, but which can easily become oppressive when taken to extremes.

Now, one objection that can be raised against the perspective adopted here is that it seems rather naïve in that it ignores the complexities of real life politics. It is one thing to devise a blueprint for a rational policy in the abstract, and quite another to put it to work. That, of course, is undeniable. And it is doubtless important to be aware of such difficulties – or to be made aware of them through social scientific work. Indeed, much sociological work on policy reform,

³³ Savings account schemes are thus far not widely used. However, they have their advocates in Western societies as well. See, e.g., Pauly and Goodman, 1995.

including that on health care policy (see, e.g., Griffiths and Hughes, 1998), aims to do precisely this by directing our attention to policy failure, or at least to the ways in which policies are subverted, diluted and possibly even derailed by powerful, yet indispensable groups of negatively affected parties in the implementation process. At a more general level, the premises underlying this “impossibility theorem” of purposive social change and reform have expressed themselves in well known phrases such as “the science of muddling through” (Lindblom, 1959), the “garbage can model of decision making” (Cohen et al., 1972), or the “tragedy of dead hands” (Luhmann, 1989). But this perspective, too, has its limitations. For its implicit conservatism, induced by its focus on aspects of continuity, stability, the infeasibility of whole scale reforms, etc., ties our “sociological imagination” (C. Wright Mills) to present realities at the cost of blocking our sense for their contingency, changeability, and our ability to conceive of alternatives to known institutions and practices. The aim of the present paper is to foster awareness of alternatives in the field of rationing policies by going beyond the simple implicit/explicit dichotomy which dominates much of the (Western) scholarly literature on the issue. And while it remains important to unravel the complexities of policy implementation, the designation of a “heuristics of options” (Wiesenthal, 2003) for public policy is an equally legitimate task of social scientific work.

References

- AARON, Henry J. and SCHWARTZ, William B. (1984) *The Painful Prescription: Rationing Hospital Care*. Washington, D.C.: Brookings Institution.
- AGNELL, Marcia (1985) ‘Cost Containment and the Physician’, *Journal of the American Medical Association* 254: 1203-1207.
- ALBER, Jens (1992) *Das Gesundheitswesen in der Bundesrepublik Deutschland. Entwicklung, Struktur und Funktionsweise*. Frankfurt: Campus.
- ANHEIER, Herbert (1996) ‘Betriebsführung im Krankenhaus: Arzt oder (und) Manager?’, *Deutsches Ärzteblatt* 93: A-2758.
- AW, Tar Choon and LOW, Linda (1997) ‘Health Care Provision in Singapore’, in Tan Teck Beng and Chew Soon Beng (eds) *Affordable Health Care. Issues and Prospects*, pp. 50-71. Singapore: Prentice Hall.
- BREYER, Friedrich and KLIEMT, Hartmut (1994) ‘Lebensverlängernde medizinische Leistungen als Clubgüter? Ein Beitrag zum Thema Rationierung im Gesundheitswesen’, in Karl Homann (ed) *Wirtschaftsethische Perspektiven I. Ordnungsfragen, internationale Institutionen*, pp. 131-158. Berlin: Duncker & Humblot.

- BREYER, Friedrich, KLIEMT, Hartmut and THIELE, Felix, eds (2002) *Rationing in Medicine. Ethical, Legal and Practical Aspects*. Berlin: Springer.
- CALABRESI, Guido and BOBBITT, Philip (1978) *Tragic Choices. The Conflicts Society Confronts in the Allocation of Tragically Scarce Resources*. New York: Norton.
- CENTRAL PROVIDENT FUND BOARD (2000) *A People's Wealth, a Nation's Health: The CPF Story*. Singapore: CPF.
- CLADE, Harald (1997) 'Medizinischer Fortschritt und knappe Ressourcen: Das Dilemma der Prioritätensetzung', *Deutsches Ärzteblatt* 94: A-80.
- COAST, Joanna (1997) 'Rationing Within the NHS Should be Explicit. The Case Against', *British Medical Journal* 314: 1118-1122.
- COHEN, Michael D., MARCH, James J. and OLSEN, Johan P. (1972) 'A Garbage Can Model of Organizational Change', *Administrative Science Quarterly* 17: 1-25.
- COULTER, Angela and HAM, Chris, eds (2000) *The Global Challenge of Health Care Rationing*. Buckingham: Open University Press.
- DANIELS, Norman (1996) *Justice and Justification. Reflective Equilibrium in Theory and Practice*. Cambridge: Cambridge University Press.
- DAY, Valerie (2002) 'Practitioners as Gate Keepers in an Advanced Country: UK NHS – The Manager's Perspective', in Frank Dietrich, Hartmut Kliemt and Michael Imhoff (eds) *Micorallocations of Medical Resources. Economics and Ethics*, pp. 105-112. München: Accedo.
- DOYAL, Len (1997) 'Rationing Within the NHS Should be Explicit. The Case For', *British Medical Journal* 314: 1114-1118.
- DIETRICH, Frank, KLIEMT, Hartmut and IMHOFF Michael, eds (2002) *Micorallocations of Medical Resources. Economics and Ethics*. München: Accedo.
- DUFF, John (2001) 'Financing to Foster Community Health Care: A Comparative Analysis of Singapore, Europe, North America and Australia', *Current Sociology* 49: 135-154.
- FEICHT, Günther (2002) 'Daily Dermatology: A Dermatologist's Description of his "German" Experience', in Frank Dietrich, Hartmut Kliemt and Michael Imhoff (eds) *Micorallocations of Medical Resources. Economics and Ethics*, pp. 11-23. München: Accedo.

- GÄFGEN, Gérard (1985) 'Die ethische Problematik von Allokationsentscheidungen – am Beispiel des Ressourceneinsatzes im Gesundheitswesen', in Georges Enderle (ed) *Ethik und Wirtschaftswissenschaft*, pp. 249-274. Berlin: Duncker & Humblot.
- GOODIN, Robert E. and LE GRAND, Julian (1987) *Not Only the Poor: The Middle Classes and the Welfare State*. London: Allen & Unwin.
- GRIFFITHS, Lesley and HUGHES, David (1998) 'Purchasing in the British NHS: Does Contracting Mean Explicit Rationing?', *Health: An Interdisciplinary Journal for the Social Study of Health, Illness and Medicine* 2: 349-371.
- GUTMANN, Thomas and LAND, Walter (1997) 'The Ethics of Organ Allocation', *Transplantation Reviews* 11: 191-207.
- HADORN, David (1991) 'Setting Health Care Priorities in Oregon: Cost-Effectiveness Meets the Rule of Rescue', *Journal of the American Medical Association* 265: 2218-2225.
- HALL, Mark A. (1997) *Making Medical Spending Decisions. The Law, Ethics, and Economics of Rationing Mechanisms*. New York: Oxford University Press.
- HALPER, Thomas (1989) *The Misfortunes of Others: End Stage Renal Disease in the United Kingdom*. Cambridge: Cambridge University Press.
- HUNTER, David J. (2002) 'The Practice of Rationing Health Care in the United Kingdom', in Friedrich Breyer, Hartmut Kliemt and Felix Thiele (eds) *Rationing in Medicine. Ethical, Legal and Practical Aspects*, pp. 39-52. Berlin: Springer.
- KLEIN, Rudolf (1997) 'Rationing Within the NHS Should be Explicit. The Case Against', *British Medical Journal* 314: 506-509.
- KLEIN, Rudolf, DAY Patricia and REDMAYNE, Sharon (1996) *Managing Scarcity: Priority Setting and Rationing in the NHS*. Buckingham: Open University Press.
- KRACHT, Monika and TAPP Burkhard (1997) 'Allokationsprobleme aus der Sicht der Patienten', in Rolf Lachmann and Norbert Meuter (eds) *Zur Gerechtigkeit der Organverteilung. Ein Problem der Transplantationsmedizin aus interdisziplinärer Sicht*, pp. 39-47. Stuttgart: G. Fischer.
- KUHLMANN, Ellen (1998) 'Zwischen zwei Mahlsteinen. Ergebnisse einer empirischen Studie zur Verteilung knapper medizinischer Ressourcen in ausgewählten klinischen Settings', in Günter Feuerstein and Ellen Kuhlmann (eds) *Rationierung im Gesundheitswesen*, pp. 11-80. Wiesbaden: Ullstein Medical.

- LIGHT, Donald W. and HUGHES, David (2001) 'Introduction: A Sociological Perspective on Rationing: Power, Rhetoric and Situated Practices', *Sociology of Health & Illness* 23: 551-569.
- LINDBLOM, Charles E. (1959) 'The Science of Muddling Through', *Public Administration Review* 19: 79-88.
- LUHMANN, Niklas (1989) 'Politische Steuerung', *Politische Vierteljahresschrift* 30: 4-9.
- KRIMMEL, Lothar (1997) 'Ambulante Versorgung unter Budgetzwang: Was ist "medizinisch notwendig"?', *Deutsches Ärzteblatt* 94: A-20.
- LIM, Judy (1997) 'Health Care Reform in Singapore: The Medisave Scheme', in Tan Teck Meng and Chew Soon Beng (eds) *Affordable Health Care. Issues and Prospects*, pp. 277-285. Singapore: Prentice Hall.
- LIM, Linda Y.C. (1989) 'Social Welfare', in Kernial Singh Sandh and Paul Wheatley (eds) *Management of Success. The Moulding of Modern Singapore*, pp. 171-197. Singapore: Institute of Southeast Asian Studies.
- MECHANIC, David (1995) 'Dilemmas in Rationing Health Care Services: The Case for Implicit Rationing', *British Medical Journal* 310: 1655-1659.
- MÖLLER, Johannes and LAASER, Ulrich (2002) 'Der WHO Weltgesundheitsbericht 2000 – Anspruch und kritische Würdigung', *Zeitschrift für Gesundheitswissenschaften* 10: 276-288.
- POWELL, John W. (2002) 'Practitioners as Gate Keepers in an Advanced Country: American HMO II – The Manager's Perspective', in Frank Dietrich, Hartmut Kliemt and Michael Imhoff (eds.) *Micorallocations of Medical Resources. Economics and Ethics*, pp. 86-96. München: Accedo.
- PAULY, Mark and GOODMAN John (1995) 'Tax Credits for Health Insurance and Medical Savings Accounts', *Health Affairs* 14: 126-139.
- ROTHGANG, Heinz (1999) 'Rationierung im Gesundheitswesen: Fakt oder Fiktion – notwendig oder ethisch verwerflich?' *Journal für Anästhesie und Intensivbehandlung* 6: 134-136.
- 'Scarce Medical Resources' 1969: *Columbia Law Review* 9: 620-692.
- SCHMIDT, Volker H. 1996: 'Veralltäglicung der Triage', *Zeitschrift für Soziologie* 25: 419-437.
- SCHMIDT, Volker H. 1998: 'Selection of Recipients for Donor Organs in Transplant Medicine', *Journal of Medicine and Philosophy* 23: 50-74.

- SCHMIDT, Volker H. and GUTMANN, Thomas (2002) 'Einleitung', in Thomas Gutmann and Volker H. Schmidt (eds) *Rationierung und Allokation im Gesundheitswesen*, pp. 7-40. Weilerswist: Velbrück Wissenschaft.
- STROSBERG, Martin A., WIENER, Joshua M. and BAKER, Robert, eds (1992) *Rationing America's Medical Care: The Oregon Plan and Beyond*. Washington, D.C.: The Brookings Institution.
- TAN, Teck Meng and BENG, Chew Soon, eds (1997) *Affordable Health Care. Issues and Prospects*. Singapore: Prentice Hall.
- UBEL, Peter A. (2000) *Pricing Life. Why it's Time For Health Care Rationing*. Cambridge, Mass.: MIT Press.
- VASSY, Carine 2001: 'Categorisation and Micro-Rationing: Access to Care in a French Emergency Department', *Sociology of Health & Illness* 23: 615-632.
- VEATCH, Robert (1991) 'Who Empowers Medical Doctors to Make Allocative Decisions for Dialysis and Transplantation?', in Walter Land and John B. Dossetor (eds) *Organ Replacement Therapy: Ethics, Justice, Commerce*, pp. 331-336. Berlin: Springer.
- WIESENTHAL, Helmut (2003) 'Soziologie als Optionenheuristik?', in Jutta Allmendinger (ed) *Entstaatlichung und soziale Sicherheit*. Opladen: Leske + Budrich.
- WILLIAMSON, Paul K. (2002) 'Practitioners as Gate Keepers in an Advanced Country: American HMO I – The Physician's Perspective', in Frank Dietrich, Hartmut Kliemt and Michael Imhoff (eds) *Misallocations of Medical Resources. Economics and Ethics*, pp. 71-78. München: Accedo.
- WORLD HEALTH ORGANIZATION 2000: *World Health Report 2000. Health Systems: Improving Performance*. Geneva: World Health Organization.