

Chapter 3

Resource Allocation and Priority Setting

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3.1 Resource Allocation in Public Health

There has been much discussion of resource allocation in medical systems, in the United States and elsewhere. In large part, the discussion is driven by rising costs and the resulting budget pressures felt by publicly funded systems and by both public and private components of mixed health systems. In some publicly funded systems, resource allocation is a pressing issue because resources expended on one disease or person cannot be spent on another disease or person. Some of the same concern arises in mixed medical systems with multiple funding sources.

Although much has been written on resource allocation issues in medicine, there has been less discussion about how resource allocation affects public health. Federal, state, and local public health budgets in the United States constrain investments in health at those levels. In this regard, they are more like some foreign medical systems than the more fragmented and mixed public-private medical system of the United States. In the context of budget cuts domestically and in many countries responding to an economic downturn, how to invest (and allocate) public health resources is a pressing issue.

Most investments in public health aim to reduce population health risks, but some risks are greater than others, and resource allocation decisions must respond to risks. Sometimes resource allocation decisions focus on the immediate payoff of reducing risks from a specific disease, whereas other resource allocation decisions affect the infrastructure needed to respond to health risks over time. In addition, resource allocation decisions may determine who faces risks—the distribution of

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risks matters, not just the aggregate impact. Resource allocation in public health thus focuses on deciding *what* risks to reduce—which depends in part on their seriousness as population factors and who faces them—and *how* to reduce risks.

The cases in this chapter that discuss resource allocation force us to contemplate decisions about priorities in public health as opposed to the more frequently discussed medical issues about health care priorities. Later we suggest that making decisions about these issues should be part of a deliberative process that emphasizes transparency, stakeholder participation, and clear, relevant reasoning.

3.2 Collective Lessons from the Cases

Collectively, these resource allocation cases bring out several important points. Separately, they raise other central issues. It is worth noting these general issues before commenting on the more specific problems raised by each case.

The first point the cases collectively make is that *efficiency* has ethical and not just economic importance (Daniels et al. 1996). If one health system is more efficient than another, it can meet more health needs per dollar spent than the less efficient one. If we want systems to meet more health needs, and we should, then we prefer more efficient health systems. Specifically, if we think we have obligations to meet more health needs, or if we think meeting more “does more good,” and we ought to do as much good as we can with the resources we have, then we have an ethical basis for seeking more efficient health systems. The economic pursuit of efficiency should not, then, be dismissed as something that has no ethical rationale.

A second point the cases collectively make is that efficiency is not the only goal of health policy, for we have concerns about how health benefits are *distributed* as well as how they add up. Health policy is not only concerned with improving population health as a whole, but also with aiming to distribute that health fairly (Daniels 2008). That means many resource allocation decisions involve competing health policy goals.

The point about competing goals is illustrated by a problem often encountered in policy decisions: should we always favor getting the best outcome from the use of a resource, or should we give people “fair” chances to get a benefit if it is at least significant (Brock 1988)? For example, during an influenza pandemic, should we allocate ventilators to those with the best chance of survival, or should we give significant but lesser chances to a broader group?

Reasonable people often disagree about when the difference in expected benefits means we should favor best outcomes over fair chances, or even about what counts as a fair chance. Hence, a third point emerges from the cases taken collectively: *reasonable people often disagree* about the choice, and it is not possible to simply dismiss one side as irrational or insensitive to evidence and argument (Daniels and Sabin 2008). Indeed, reasonable people will disagree about how much priority to give to the sickest (or worst off) patients. They may think we have to weigh the seriousness of an illness against the potential benefit that we know how to deliver, they may disagree about how to trade off those considerations, or they may disagree

about when modest benefits to larger numbers of people outweigh greater benefits delivered to fewer people. Together these “unsolved rationing” problems—the best outcome versus fair chances problem (when to prefer best outcomes to fair chances), the priorities problem (how much priority to give to those who are worst off), and the aggregation problem (when do modest benefits to more people outweigh significant benefits to fewer people)—mean that there is pervasive ethical disagreement underlying many resource allocation problems (Daniels 1993).

There are other common sources of disagreement. One of the most common sources of controversy in resource allocation decisions arises when a particular intervention is seen as the last chance to extend life by some—a necessity if we are to act compassionately—and when it is seen primarily as an unproven intervention by others that we have no obligation to provide it. Denials of such interventions in last-chance cases have been considered the “third rail” of resource allocation decisions (Daniels and Sabin 2008). Here we have two competing public values—compassion and stewardship—and most public officials would prefer to be seen by the public as committed to saving lives rather than as hard-nosed stewards of collective resources.

The cases taken collectively bring out one final point: our *main analytic tools for aiding resource allocation decision making are limited* in several ways, particularly by insensitivity to various ethical issues, especially issues of distribution. In short, these tools may take the first point, about the importance of efficiency, seriously, yet fail to help us with the second and third lessons the cases collectively bring out, that we are also interested in distributing efficiently produced health fairly, and that reasonable people disagree about how to do that. To see this, consider two widely used tools: comparative effectiveness research (CER), which has been given prominence as a research focus in the Patient Protection and Affordable Care Act of 2010, and cost-effectiveness analysis (CEA). Both help to answer policy-making questions. For example, a typical use of CER compares the effectiveness of two interventions (drugs, procedures, or even two methods of delivery), and policy makers may want to know if a new technology is more effective than older technologies.

Of course, they may also want to know if the new technology provides additional effectiveness at a reasonable cost, which points to a shortcoming of much CER in the United States, where considerations of cost are generally avoided. Similarly, if there is only one effective treatment for a condition, CER tells us nothing useful. It also tells us nothing about whether a more effective intervention is worth its extra cost. And, CER cannot help us compare intervention outcomes across different disease conditions, since it uses no measure of health that permits a comparison of effectiveness. Indeed, decision makers face many resource allocation questions that cannot be answered by CER, even if CER can help avoid wasteful investments in interventions that do not work or that offer no improvement over others.

In Germany, however, CER is combined with an economic analysis that takes cost into account and that allows the calculation of “efficiency frontiers” for different classes of drugs (Caro et al. 2010). Presumably, this method could be extended to different classes of public health interventions if they are grouped appropriately. To calculate an efficiency frontier, the effect of each drug in a class in producing some health outcome is plotted against its cost, and the curve is the efficiency frontier for that class of drugs.

It is then possible to calculate if a new intervention in that drug class improves effectiveness at a price more or less efficient than what is projected from the existing efficiency frontier. This use of CER allows German decision makers to negotiate the price of treatments with manufacturers, rejecting payments that yield inefficient improvements. German policy makers can then cover every effective intervention sold at a price that makes it reasonably efficient. Still, because German use of CER cannot make comparisons across diseases, it allows vast differences in efficiency across conditions.

CEA aims for greater scope than CER. It deploys a common unit for measuring health outcomes, either a disability-adjusted life year (DALY) or a quality-adjusted life year (QALY). This unit purports to combine duration with quality, permitting us to compare health states across a range of disease conditions. With this measure of health effects, we can construct a ratio (the incremental cost-effectiveness ratio, or ICER) of the change in costs that results from the new intervention with the change in health effects (as measured by QALYs or DALYs). We can then calculate the cost per QALY (or DALY) and arrive at an efficiency measure for a range of interventions that apply to different conditions.

Critics have noted problematic ethical assumptions in the construction of the health-adjusted life-year measures and in the use of CEA (Nord 1999; Brock 2004). To see some of these problems, consider the following table:

Rationing problem	CEA	Fairness
Priorities	No priority to worst off	Some priority to worst off
Aggregation	Any aggregation is OK	Some aggregations OK
Best outcomes/Fair chances	Best outcomes	Fair chances

CEA systematically departs from judgments many people will make about what is fair. The priorities problem asks how much priority we should give to people who are worse off. By constructing a unit of health effectiveness, such as the QALY, CEA assumes this unit has the same value, regardless of who gets it or wherever it goes in a life (“A QALY is a QALY” is the slogan). But intuitively, many people think that a unit of health is worth more if someone who is relatively worse off (sicker) gets it rather than someone who is better off (less sick) (Brock 2002). At the same time, people generally do not think we should give complete priority to those who are worse off. We may be able to do little for them, so giving them priority means we would have to forego doing more good for others. Few would defend creating a bottomless pit out of those unfortunate enough to be the worst off.

Similarly, CEA assumes that we should aggregate even small benefits. Then, if enough people get small benefits, it outweighs giving large benefits to a few. But intuitively, most people think some benefits are trivial goods that should not be aggregated to outweigh larger benefits to a few (Kamm 1993). Curing many people’s colds, for example, does not outweigh saving a single life.

Finally, CEA favors putting resources where we get a best outcome, whereas people intuitively favor giving people a fair (if not equal) chance at a benefit. Locating an HIV/AIDS treatment clinic in an urban area may save more lives than placing a clinic in a rural area, but in doing so, we may deny many people a fair chance at a significant benefit (Daniels 2004).

In all three of these examples of rationing problems, CEA favors a maximizing strategy, whereas people making judgments about fairness are generally willing to sacrifice some aggregate population health to treat people fairly. In each example, whether it is giving some priority to those who are worse off, viewing some benefits as not worth aggregating, or giving people fair chances at some benefit, fairness deviates from the health maximization that CEA favors. Yet we lack agreement on principles that tell us how to trade off goals of maximization and fairness in these cases. People disagree about what trades they are willing to make, and this ethical disagreement is pervasive.

Determining priorities primarily by seeing whether an intervention achieves some cost/QALY standard is adopting a health maximization approach. This approach departs from widely held judgments about fairness, even where people differ in these judgments. Thus, the National Institute of Clinical and Health Excellence (NICE) in the United Kingdom has had to modify its more rigid practice of approving new interventions only if they met a cost/QALY standard in the face of recommendations from its Citizens Council. This council, intended to reflect representative social and ethical judgments among British citizens, has proposed relaxing NICE's threshold in various cases where judgments about fairness differed from concerns about health maximization. The judgments of the Citizens Council in this regard agree with what the social science literature suggests are widely held views in a range of cultures and contexts (Dolan et al. 2005; Menzel et al. 1999; Nord 1999; Ubel et al. 1999, 2001).

There are, of course, those who criticize departures from the NICE threshold of the sort that the Citizens Council recommended. Compromising the maximization of health that CEA promotes may be seen as a moral error, perhaps the result of elevating the rescue of an "identified" victim (say, a cancer patient whose life might be extended modestly by a new drug) over benefits to "statistical" lives (using the resources to provide greater benefits to others). The reasonable disagreement about how to proceed suggests that we should view CEA as an input into a discussion about resource allocation, not as an algorithm for making decisions. This "aid to decision making" role was proposed by the Public Health Service in its recommendations about the use of CEA (Gold et al. 1996). In short, controversial ethical positions are embedded in CEA, and using CEA uncritically commits one to these views, even though many disagree with them.

3.3 Specific Ethical Issues in Resource Allocation

We have already noted that the *efficiency* of a health system has ethical consequences. But what should we count as *efficiency*? Should we use our resources to generate more revenues for a unit of the health system—say, a hospital? Doing so would define efficiency the way most businesses do: other things being equal, an allocation that produces a greater return on investment is a more efficient use of stockholder or owner resources. Alternatively, we might narrow the range of effects to health effects on the covered population. Then we have greater efficiency when an allocation produces more positive health effects in that population than an alternative allocation.

The case Guzmán brings from Colombia raises this issue forcefully. Should hospitals, or a specific health plan, allocate resources favoring services (certain treatments) that raise more revenues than an alternative allocation (certain preventive measures)? Perhaps the gains from the treatments will involve fewer population health gains over time than those obtained by the preventive or health promotional measures, even if they show their improvement more quickly and so look better sooner. Which plan should the policy maker adopt?

This issue examines our purpose in designing a health system. Is it to meet the health needs of a population or is it to provide a good return on investment for those who invest in health services? We might think that this question is easier to answer in a system where health care delivery is seen largely as a public undertaking aimed at improving population health. In such a system, it might seem that there is only one purpose behind the health care system. Return on investment for the taxpayer funding such a system should be measured by how efficiently the system improves population health. In systems where resources are owned privately (and there are many of these), however, it seems we must consider at least two goals. Even if the private sector must in part seek to improve population health, which may be a requirement of state-imposed health care regulation or, in some people's opinions, a social responsibility of corporations, private health-care organizations still must deliver a reasonable return on investment for owners. Thus, policy makers within private health-care organizations have a dual task. Balancing return on investment with improvement in population health thus becomes the central issue in the Colombian case study.

The Chilean case written by Gómez and Luco raises a similar issue, but this case focuses on measurable differences in the cost effectiveness of certain services and in the severity of two conditions. If we consider only cost effectiveness, we view efficiency in one way—the best health outcomes in the aggregate for the population for an investment in health. If we take severity of condition into account, we might view this as an equity demand—in which case, we have an efficiency-equity conflict and must make a trade-off. Or, we might think of efficiency as a ranking of needs by severity of condition. In the latter, the resource allocation case turns on how we define efficiency. Specifically, the Chilean category of Guaranteed Health Interventions could include cataract surgery (the leading cause of blindness in the Chilean population), but not multiple sclerosis (MS) treatments, which might be viewed as maximizing efficiency in a standard sense. Or, the Guaranteed Health Interventions scheme could include the less cost-effective treatment of MS but not cataract surgery, since MS is viewed as a more severe condition (because it can be life threatening and lead to premature death), even if it is far less prevalent than cataracts. If this were the case, the more efficient system, in this nonstandard view, would rank treating more severe conditions as more efficient than treating less severe conditions. If budget limitations mean only one should be included in the Guaranteed Health Interventions program, either MS or cataract surgery, which should it be?

The cataract surgery intervention delivers a significant benefit in terms of QALYs to a larger part of the population than does the intervention package for MS, but the greater severity of premature death seems to be an important reason for favoring MS. If this reason is given priority over cost effectiveness and over the standard view of efficiency, then are less effective treatments for more severe conditions

supposed to have priority over more effective and cost-effective treatments for less severe conditions? If so, what kind of a health system does that produce if all needs can not be met given resource limits? Alternatively, do we want a system that always weighs cost effectiveness more highly than the severity of a condition that some people have? That too seems problematic.

Suppose we think improving population health is a worthwhile and defensible goal of a health system, we favor improving population health over increasing revenues for the private sector (in the Guzmán case), and we also favor giving priority to cost effectiveness over severity of a condition (in the Gómez and Luco case). A conflict still remains between health maximization in the aggregate and concerns about equity, as illustrated in the Blacksher and Goold case (and arguably in the case about triage in pandemics by Smith and Viens).

In the case that Blacksher and Goold describe, the task is to decide whether to reallocate resources from a program focused on maternal-child health and reduction of black-white infant mortality disparities to a program that may get more health per dollar spent through other interventions. Infant mortality among blacks and whites has declined rapidly in the United States; and in absolute terms, the decline has been more rapid for blacks. Still, the ratio of black infant mortality to white infant mortality has increased. Because the public health department is in a highly segregated city, this shift in program focus might seem to require viewing the remaining black-white health disparities as morally acceptable (especially given the high rate of improvement that past programs gave to black infant mortality rates). When should we view health disparities as morally acceptable? When should we weigh reducing health disparities as more important than some aggregate gains in health that we know how to produce in a population? If public health has two goals—improving population health and distributing that health fairly—how should we weigh the goals when they conflict?

One important feature of the Blacksher and Goold case, namely the opinions within the community whose inequalities are at issue, is really a feature to which nearly all cases warrant attending. People affected by a policy ought to have some influence in determining that policy. Some people might believe this is what democracy requires. A difficulty this view of democracy faces, however, is that those who speak for the community may not appropriately represent the community affected by the decision. Nevertheless, the opinions of a broader range of stakeholders may improve deliberation (depending on how those opinions are managed). It may also improve the acceptance of the decisions, which arguably enhances the legitimacy of the decision-making process.

Resistance to including a broader range of stakeholders in decision making about health priorities may come from a concern that they bring with them “partiality.” This resistance may come from the view that greater impartiality leads to better deliberation. Arguably, this concern about partiality ignores the positive gains that partiality often brings to deliberation, especially if we know how to manage such deliberation so that we minimize the risks that partiality sometimes brings. We need such management skills in any case since partiality is unavoidable in most contexts. Rather than banning what cannot be eliminated, managing partiality in deliberations is the best way to improve decision making in contexts of reasonable disagreement.

The conflict between improving population health and treating people fairly can arise in other contexts. Arguably, the problem raised by Smith and Viens about the principle that should govern triage in pandemics can be viewed as a conflict between health maximization, in this case, saving the most lives, versus recognizing the claims that the sickest people have on us for assistance. Ordinarily, health systems give some priority to those who are sickest, but should that priority disappear in favor of saving lives when scarce resources, such as ventilators, are allocated in pandemic conditions? If we allocate our ventilators to the sickest patients, we may save fewer lives than if we allocate them to those whose lives we can better expect to save. Even if we think we should give priority to those worst off, do we ordinarily think that concern for them should govern triage policy in pandemics? If we believe saving the most lives trumps concerns about helping those who are sickest in pandemics, can we justify why the priority we give to the sickest should be revised in pandemics?

Suppose we have an acceptable way of measuring the burden of disease in a population, and according to this measure, mental illness is not given the priority it ought to have. That is, it contributes more to the burden of disease than is normally recognized in standard health systems, which provide too few services to meet mental health needs. This is the problem upon which Rentmeester et al.'s case focuses. Specifically, some mental health conditions require significant resources for what Medicaid terms as "behavioral management," which is seen as a social support service not a medical treatment. As a result, these services, to the extent they are provided, fall to state-funded social service budgets. The services place a burden on state finances that would be diminished if they were instead included in Medicaid budgets (50 % of which are financed by each state). Arguably, the stigma that attaches to mental health issues is one important reason for this underprovision of social supports for people with mental health issues. In Nebraska, the political opposition to expanded Medicaid coverage through the Affordable Care Act adds to the burden on state budgets and the potential under-servicing of these mental-health induced needs.

It takes resources to meet public health needs. Suppose we can increase the resources to meet some of those needs by accepting a public-private partnership that improves a compromised private partner's image? Should we meet health needs at this price?

That is the issue posed by the Hernández-Aguado case from Spain. Specifically, should public health authorities put their stamp of approval, in the form of their logo, on flu epidemic notices printed on soft drink labels? The inclusion of the logo is a requirement of the private entities that are willing to donate space on the labels of their products. Obviously, this provides a form of public support for soft drinks that arguably contribute to obesity in a population and thus to the prevalence of noncommunicable diseases associated with obesity. But in view of the low budgets available for flu warnings, is this a price worth paying? What would the decision maker have to know about the effects of such labels to decide this case, or is the decision something that can be made independently of the specific payoffs of implementing the warning system? Is there a way to consider the cost and assess whether the outcome of the warning is worth this price? Is this simply an efficiency calculation about the cost effectiveness of reducing a disease burden in this way?

3.4 Decision-Making Process

One final crosscutting issue lurks behind all the cases in the resource allocation chapter (perhaps all the cases in the volume)—namely, the nature of the decision-making process that addresses the issues they raise. Public health decisions about resource allocation—judging from the cases on that topic in this volume—face reasonable ethical disagreement. That is because the tradeoffs involved in the two main goals of public health policy—improving population health and distributing health fairly—are trade-offs about which people often reasonably disagree. How can public health decisions be made in real time, given these ethical disagreements, in ways that enhance their legitimacy and are arguably fair to all parties?

One approach to the problem is to construct a fair process for making those decisions and to rely on the outcomes of such a process. People will judge the outcomes of a fair process to be fair (Daniels and Sabin 2008). What conditions should such a decision-making process meet if it is to be considered fair? Four conditions are arguably necessary (even if some may think they are not sufficient and want to add others): (1) The decisions and the rationales for them should be made *public*. (2) They should be based on reasons all think are *relevant*. (3) They should be *revisable* in light of new evidence and arguments. And (4), these conditions should be *enforced* so that the public can see that they obtain. Some explanation is needed for these conditions.

The publicity condition is widely embraced, even if it is fairly strong. It calls for the grounds for decisions—not just the content of the decisions—to be transparent. People have a right to know why decisions that affect their health are made the way they are. Moreover, making the reasoning for such decisions public is a way of exposing them to scrutiny so errors in reasoning or evidence can be detected and decisions improved. Even though we may not be able to be explicit in advance about all criteria we use to decide such cases, that is, we may work out our reasons through deliberation, we can explain on what we base our decisions. And that gives people affected by our decisions the knowledge they have a right to possess.

The search for reasons that all consider relevant to making a reasonable public health decision about resource allocation can narrow disagreement considerably. Even if people can agree on what reasons they think are relevant—in the spirit of finding mutually justifiable grounds for their decisions—they may not agree about the weight they give these reasons. One way to test the relevance of such reasons is to subject them to scrutiny by an appropriate range of stakeholders. What counts as appropriate may vary with the case. Who should be heard in deliberations is itself worthy of deliberation. Stakeholders raise different arguments that should be heard, and including their voices improves buy-in to decisions. Since stakeholders may not in many instances be elected representatives, we may be skeptical about whether the democratic process is improved by including them, but, if the deliberation is well managed, the quality of the discussion may improve greatly.

The revisability condition, requiring that decisions be modifiable in light of new evidence and argument, is also widely embraced and not considered controversial. Decisions are made on the basis of evidence and arguments, and better evidence and

arguments may emerge that require revisiting some decisions. Some decisions can then be modified, though it may be too late for others, and our consolation is that we made the best choices we could, given the evidence and arguments.

The intent of the enforcement condition is to ensure that the other, more substantive, conditions are met. Sometimes enforcement is a matter of state regulation. Sometimes it can be the result of voluntary conformance with a process.

Since ethical disagreements abound in resource allocation decisions, we need a process that enhances legitimacy. But can we claim that a decision-making process that is fair yields fair outcomes? One view is that we may ultimately become persuaded by a good argument that fairness requires a different decision than one that emerged from a fair process. We can in this way defeat the fairness we might ordinarily attribute to the outcome of a fair process. Does the prospect of defeating the fairness of a decision emerging from a fair process mean that we should not attribute fairness to the outcomes? Alternatively, we can admit that the fairness that comes from a deliberation is only “defeasible” fairness, but it is the fairest conclusion we can reach at the time.

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3.5 Case 1: Priority Setting and Crisis of Public Hospitals in Colombia

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This case is presented for instructional purposes only. The ideas and opinions expressed are the author's own. The case is not meant to reflect the official position, views, or policies of the editors, the editors' host institutions, or the author's host institution.

3.5.1 Background

During the 1990s, many Latin American countries began reforming their health systems according to a neoliberal development model that emphasizes free markets (Homedes and Ugalde 2005; Stocker et al. 1999). Approved in 1993, health reform in Colombia was supposed to overcome problems such as low coverage, inequality in access and use of health care services, and inefficiency in the allocation and distribution of resources. But the reform also hoped to encourage more focus on illness prevention and health promotion and more community participation in health decision-making processes. The reformers advocated predominantly for neoliberal values like efficiency, free choice, universality, and quality. Although they were also committed to the communitarian values of solidarity, equity, and social participation.

The Colombian health reform was one of the first examples of implementing managed competition in the developing world (Plaza et al. 2001). To stimulate competition among insurers and health service providers, both public and private, health reformers applied the theory of managed competition (Enthoven 1993). According to this theory, competition achieves efficiency and reduces cost, making health care services responsive to consumer needs (Londoño and Frenk 1997). Hospitals become responsive when they are able to sell services and become financially sustainable. To achieve sustainability, supply subsidies (direct transfers from the state to hospitals) had to replace demand subsidies (transfers directed to the poor through a subsidized security plan).

The Colombian reform established a General Social Security System in Health that featured two insurance plans: (1) The Contributory Plan, financed by mandatory contributions (formal employees and employers from the public and private sectors). (2) The Subsidized Plan, funded by resources from the Contributory Plan and from taxes and other sources, which covered people unable to pay (Vargas et al. 2010). The actors of the system are the insurance companies, the health service providers, and the state regulatory organizations. Insurance companies contract with health service providers, and the regulatory organizations control compliance with the defined basic health packages.

To optimize resources, the reform placed controls on medical practitioners and established explicit priority criteria based on clinical guidelines that defined benefit packages. From 1993, some adjustments to the reform have been introduced, such as the creation, in 2012, of the Institute for Health Technology Assessment to provide an evidence base for health decisions. The Institute recommends which medical technologies should be paid with public resources on the basis of which technologies optimally improve the quality and cost effectiveness of medical care. To determine these technologies, it conducts health outcomes research that guides technology development, evaluation, and use (Giedion et al. 2012).

Nevertheless, 20 years later, the promise of reform lies unfulfilled and many patients still experience high out-of-pocket costs, long wait times, or denial of services. To access health services, frustrated citizens are turning to the legal system as a last resort and, by so doing, congesting the courts (Defensoría del Pueblo 2012). Physicians are responding to economic incentives and penalties by restricting hospitalization time and decreasing the use of expensive diagnostic tests and specialist referrals (Abadía and Oviedo 2009). To further reduce labor costs, service providers have increased the workload of health professionals and the number of patients seen per day, while reducing the time spent with each patient (Defensoría del Pueblo 2007).

Insurance companies often take a long time to pay health service providers, and they also contract their own service network (a process known as vertical integration), so many public hospitals are in serious financial difficulties. Meanwhile, hospital workers frequently disrupt the normal operation of hospitals as they strike to improve work conditions and have their paychecks issued more promptly. Should hospitals fail—40 % of the 968 public hospitals in Colombia are classified as being at medium or high financial risk—nearly ten million people could be left without health service (Ministerio de Salud y Protección Social 2012; Quintana 2002). Add to that, the reforms have increased inequity, as more affluent patients can more easily access quality health care services than can low-income patients (Vargas et al. 2010).

The described problems reflect a complex situation that requires profound structural reform. As one way to address the immediate problems of efficiency and quality, Colombia in 2012 instituted public hospital accreditation. Accreditation requires hospital directors to reach goals in service delivery related to financial viability, quality, and efficiency. Hospital boards can now fire directors who fail to meet these goals within a specified period (Rodríguez 2012). Given the imbalances between budgets, service demands, and ongoing costs, hospital directors face enormous challenges and ethical dilemmas in formulating and executing their management plans.

3.5.2 Case Description

You are a director of a public hospital that focuses on health promotion and prevention activities, such as general practice, dentistry, clinical laboratory, hospitalization, and emergency care. In developing your management plan, you must make decisions about which services to prioritize. If you prioritize services that represent higher revenues and lower costs as a way of conserving resources, you may have to reduce priority for some services. To guide your decision making, you conducted a retrospective study of service billing in the past 2 years and learned that the clinical laboratory and external medical consultation yielded higher incomes. The lowest yielding programs in the short term—vaccination, educational programs to improve lifestyles, and provision of micronutrient supplements to children and pregnant women—were associated with the best long-term health results.

Taking seriously your fiduciary responsibilities, you try to guarantee financial sustainability by containing labor costs, restricting consultation times, and shortening hospital stays. Your challenge is to do these things without diminishing the quality of patient care. But because you compete with other institutions, you must also assure sufficient reserves to maintain and update medical equipment that will improve the “sale of services.” Knowing that every management decision you make will affect the population you serve, you begin to reflect on the factors affecting your hospital management plan.

3.5.3 Discussion Questions

1. Who are the major stakeholders in this case and what are their interests, values, and moral claims? Between which of them are there ethical conflicts or tensions?
2. Which of these interests, values, and moral claims should be prioritized? How would you justify your priorities?
3. Would you prioritize programs that in the short term brought in needed revenues or those programs that had highest impact long term?
4. How can tensions between the goals of efficiency, financial viability, and quality be resolved? What weight should be assigned to each goal by the hospital board when evaluating your performance?
5. At least in the short run, the new reforms seem to be prioritizing efficiency, viability, and quality over equity. Should a health system attain the former goals before tackling the problem of equity, or should it insist on equity from the start?
6. Can equity in health care be achieved without doing something about wealth inequity and other social determinants of health?
7. Should you justify your decisions by emphasizing solidarity with other hospital directors and seeking community support?
8. How could collaborations between public health, communities and the health care system begin to address neoliberal concerns with efficiency, viability, and quality?

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3.6 Case 2: Intersection of Public Health and Mental Health: Meeting Family Needs

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3.6.1 Background

The Global Burden of Disease (GBD) compares disease burdens based on epidemiological measures of prevalence, mortality, disability, and associated costs. The GBD for mental illness amounts to 14 % of the world's total disease burden (World Health Organization 2005). In the United States alone, every fifth child suffers from a mental disorder (Perou et al. 2013). Although mental illness clearly causes disabilities (Prince et al. 2007), underservice to those with mental illness is commonplace. Lack of access to mental health services counts as the first of many hurdles facing families who have a child with a mental illness. Stigma and the lack of parity in health coverage for physical and mental illness are other hurdles for these families. Not surprisingly, these hurdles can critically affect the development of children with mental illness.

Lack of access to mental and behavioral health services for children 5 years and younger especially threatens their development. Rapid brain growth occurs in the first 5 years of life, which lays the foundation for cognitive, emotional, and moral development. Exposure to chronic stress can prompt the release of hormones in the brain that can have enduring consequences for how the adult brain is organized and how it functions (Shonkoff and Phillips 2000). Because poor health can show up in children as developmental delay, access to mental and behavioral health services is critical. Longitudinal studies demonstrate positive and long-acting effects of early childhood interventions, such as environmental enrichment programs, on a range of cognitive and noncognitive skills, social behaviors, academic achievement, and adult job performance (Heckman 2008). The estimated annual rate of return on investment from targeted early childhood development programs is 7 %, and early intervention reduces the predictable need for higher, more costly levels of care in later life (Heckman et al. 2010).

In the United States, Medicaid is a government-funded program that provides health coverage to people with certain disabilities and to low-income adults and their children. The Federal Medicaid Act (FMA) requires states participating in Medicaid programs to provide *medically necessary* treatment to eligible children.

Under federal Medicaid law, states must provide “early and periodic screening, diagnostics, and treatment,” also known as EPSDT services, to eligible Medicaid recipients under age 21 (U.S.C. § 1396d(a)(4)(B)). The definition of EPSDT includes *necessary health care*, diagnostic services, treatment, and other measures described in the Medical Assistance subchapter for the United States Code (42 U.S.C. § 1396d (a)) (2012) that correct or ameliorate defects and physical and mental illnesses and conditions discovered by the screening services, regardless of whether such services are covered under the state plan (42 U.S.C. § 1396d (r)(5)) (2013). The *medical necessity* standard, which is based on clinical standards of care, refers to interventions that may be justified as reasonable, necessary, or appropriate. States must comply with the FMA standard to cover all treatments for a Medicaid-eligible child’s physical or mental condition, even if service coverage is optional for adults covered by Medicaid. FMA also bars states from arbitrarily denying or reducing the amount, duration, or scope of a required service to an otherwise eligible recipient solely because of the diagnosis, illness, or condition (Nebraska Legislature 2012).

Despite the provisions of FMA, the U.S. Department of Health and Human Services, which oversees the Medicaid program, excludes certain behavioral health treatments for children with developmental disabilities and autism (National Health Law Program 2012; Autism Society of Nebraska 2012). In addition, some states’ Medicaid contracts allow insurers more freedom than other states to deny payment for services. States also vary in who—the claimant or the insurer—must prove whether coverage provisions are adequate or fall short of federal Medicaid legal standards (Rosenbaum and Teitelbaum 1998). Differences among states in approval of payment for specific treatments, including mental and behavioral health treatment, illustrate the need for more consistency in Medicaid coverage provisions and the lack of parity between mental and physical health coverage. Mental health benefits must be offered at parity with medical services to newly eligible recipients as part of the 2010 Patient Protection and Affordable Care Act (ACA), and Medicaid expansion controversy is clear evidence that parity is a work in progress (Mental Health America 2013; U.S. Department of Labor 2008).

Because of inadequate coverage for mental and behavioral health services for Medicaid-eligible children, some parents have no option other than to surrender their child to the child welfare system so that the child will receive full coverage for necessary mental and behavioral health care services. This results in significant cost-shifting from Medicaid to the state’s child welfare system. That is, when a state provides federally mandated services to Medicaid-eligible children, it receives a financial match from the federal government to pay the costs. When a state denies federally mandated Medicaid services and a family surrenders a child to state custody so the child can receive care, the state pays the expense of the previously denied Medicaid costs plus the expense of entitlements the child acquires as a ward of the state.

The ACA Medicaid expansion offers a window of opportunity to increase coverage for behavioral health treatment for children with mental illnesses. Although the federal government will bear the primary financial burden of Medicaid expansion, some states have elected, for political reasons, not to participate in this expansion. For participating states, ACA Medicaid expansion will replace state and local mental health services funds with federal Medicaid money that will cover a wider range

of home and community-based services for mental illness treatment (Bazelon Center for Mental Health Law 2012).

Public health agencies and leaders often provide input for the Medicaid system, helping to develop protocols, criteria, and rules about which treatments are defined as *medically necessary*. Such decisions about medical necessity affect clinicians, patients, and families because they determine which treatments get recommended at the clinical level and influence which treatments insurers cover.

3.6.2 Case Description

You are the Medicaid director of a state with the country's highest percentage of children in the child welfare system. Twenty-five percent of children in the state's foster care system are there not because of abuse or neglect, but because of behavioral problems and mental illnesses. As a state official, you are aware that this results in significant cost-shifting from Medicaid to the state's child welfare system.

Recently, the case of 4-year-old Sam has come to your attention. Sam's family cannot afford mental and behavioral health care for Sam, although he is Medicaid-eligible and insured through Magiscare (a private company with a state contract to administer Medicaid for mental and behavioral health services). Sam's parents are considering surrendering their boy to become a state ward to get him the mental health services he needs.

Sam, you learn, eats random objects and dirt, throws tantrums, bangs his head on the ground, hits and bites himself and others, and often runs away. Recently diagnosed by his physician as having autism, Sam was referred to a psychologist who recommended outpatient behavioral therapy. Both the physician and the psychologist expect this therapy to be covered through the family's Magiscare plan.

Magiscare denied the psychologist's requests for payment on the grounds that, for children of Sam's age, behavioral management is not covered under state law because it is not "medically necessary." Magiscare substantiated their denial of payment because Sam's behaviors primarily reflect developmental disabilities related to autism, which are not covered under their contract with the state. When you ask the Magiscare executive director about this case, she suggests that Sam's parents could attend therapy sessions to help them cope with their son's behaviors, but she reasserts that behavioral management is not covered for children as young as Sam under state law because it is not medically necessary.

Members of the state legislature and child mental health advocacy groups are trying to expand access to home-based and community-based mental health services. They have asked you to support their efforts. You also consider that your governor, who is your boss, has publically stated his firm opposition to ACA Medicaid expansion, thus denying the state the opportunity to expand coverage for children's mental and behavioral health treatment through the ACA. At present, you know that your state is offering limited mental and behavioral health services and that narrow definitions of *medical necessity* are used to limit access to those services.

As the state Medicaid director, which steps should you take?

3.6.3 Discussion Questions

1. Who are the main stakeholders in this case, and what are their primary interests?
2. “Passing” the expense of coverage denied by Medicaid to other components of public service, such as the child welfare system, has fiscal and social implications.
 - (a) What are some of these implications?
 - (b) How should prevalence, mortality, disability, and cost be factored into thinking about ways to balance short- and long-term risks and benefits to individuals and to the public in this case?
3. Suppose a policy advisor warns that expanding behavioral health care for children will strain the Medicaid budget and require cuts in services for adults or reduce their eligibility.
 - (a) How should you respond?
 - (b) Which considerations or priorities would guide your funding allocations?
4. What role should ethical principles such as *stewardship*, *public health leadership*, and *moral courage* play in this case?
5. *Medical necessity* implies an acute care model of health service delivery and reflects a clinical perspective. How well does this idea apply to a public health prevention model of health service delivery? Are there better alternatives?
6. Parity in insurance coverage for mental health is federally mandated for private insurers, which covers most citizens, but has proven to be an elusive goal for people who do not have private insurance or do not have enough coverage. Medicaid is a public (government funded) insurance program, not a private one. Although Medicaid beneficiaries receive coverage for medically necessary mental health services, each state defines *medical necessity* uniquely.
 - (a) Should a federal mandate define *medical necessity* for mental and behavioral services?
 - (b) What financial implications would such a mandate have from a state perspective and from an overall perspective?
7. The term *principle-policy gap* can be used to characterize situations in which most people support health coverage in principle; but in practice, they are unable to pay for coverage or unwilling to take the political, social, cultural, or fiscal risks necessary to enable such coverage. What do such gaps tell us about which values the majority favors, and how might the term *principle-policy gap* help us understand the dynamics in this case? What roles should public health leaders play in responding to principle-policy gaps?

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3.7 Case 3: Public-Private Partnerships: Role of Corporate Sponsorship in Public Health

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3.7.1 Background

Public health systems are usually underfunded in comparison with health care systems. In fact, the Organisation for Economic Co-operation and Development (OECD) countries allocate on average only 3 % of their health spending to public health and prevention activities (OECD 2011). This low funding of public health programs hinders the capacity to implement effective public health policies (Robert Wood Johnson Foundation 2011).

Population health challenges, such as influenza pandemics, are increasingly complex, and tackling them involves urgently executing a wide array of public health measures to prevent disease transmission. In the case of influenza pandemics, measures can vary from border quarantine, social distancing, provision of antivirals and vaccines, and personal hygiene strategies. Recommendations often need to be made quickly even when knowledge about the seriousness and potential health and social effects are incomplete. The target for preventive interventions is the entire population. However, resources for intense and sustained health campaigns through mass communications are expensive. In addition, the social determinants of the disease must be understood and considered (Crowcroft and Rosella 2012). This typically involves the need for policies that engage the health and non-health sectors, such as educational policies and social or economic factors (Savoia et al. 2012). This complexity, together with decreasing funds and other factors, has contributed to increasing private sector involvement in health care.

According to the World Health Organization (WHO), a public-private partnership gathers a set of actors for the common goal of improving population health through agreed roles and principles. This may also be described as public sector programs with private sector participation (WHO 2013). WHO has described several types of partnerships, including philanthropic, transactional, and transformational. Sponsorship is a form of a public-private partnership defined as “any form of monetary or in-kind payment or contribution to an event, activity, or individual that

directly or indirectly promotes a company's name, brand, products, or services" (Kraak et al. 2012). In this sense, sponsorship is a commercial transaction, not type of philanthropy.

Public-private partnerships have become increasingly common for public health campaigns. Some transnational companies and their corporate foundations collaborate with public institutions, such as United Nations agencies and governments, to tackle complex public health problems, such as treatment of diarrhea in developing countries (Torjesen 2011), tuberculosis, and malaria (Ridley et al. 2001). These collaborations have been encouraged by international institutions and experts as a way to mobilize resources and expertise, which could complement the public sector. WHO has also encouraged using public-private partnerships to deliver health services for a range of health problems, including HIV infection, malaria, tuberculosis, trachoma, and vaccine-preventable diseases (Buse and Walt 2000a, b). However, corporations' increasing role in public health has been criticized as jeopardizing the mission of public health and its commitment to population health (Hastings 2012; Ludwig and Nestle 2008). Some corporations have used tactics that discredit public health actions, such as distorting scientific information and using financial tactics and political influence to avoid unfavorable regulations (Wiist 2011).

Public health professionals, public health agencies, and governments often must decide whether to collaborate with the private sector to improve population health. These decisions are increasingly frequent as health department budgets shrink and public-private partnerships are seen as a way to secure funds for core public health programs. Ethical considerations can help us decide whether and when to form such partnerships. However, the available public health ethics frameworks (e.g., Public Health Leadership Society 2002; Nuffield Council on Bioethics 2007; Kass 2001) do not specifically discuss public-private partnerships. Only the Public Health Leadership Society provides guidance for such collaborations. Principle 10 proposes that, "Public health institutions and their employees should engage in collaborations and affiliations in ways that build the public's trust and the institution's effectiveness." Continued discussion about the ethical implications of private-public partnerships is needed.

3.7.2 Case Description

Top health officials in an industrialized country have declared a public health emergency due to an influenza pandemic. The head of the country's health department receives a call from the president of a multinational company that produces sugary, high-calorie drinks. The company president expresses his concern about the pandemic and wants to collaborate with the government to prevent the spread of flu. The company offers the health department a considerable amount of space, one-third of each can, on its star product (a soft drink) free of charge, to include messages on flu prevention. The company insists that the health department logo be included on the can along with the preventive messages. For them, the association

between the health department (through the logo) and their product is essential for the collaboration as it would be an acknowledgement by the health department of the company's social responsibility.

The head of the health department arranges a meeting with several health authorities and officials to consider the offer. On one side, some members of the group support the proposal because of the need to carry out far-reaching public health campaigns to limit the impact of pandemic flu. At that stage, the incidence of pandemic flu is increasing quickly and the number of new outbreaks in schools is worrying the health authorities and the population. There have been recent budget cuts to the health department, and some officials argue the company's contribution may be the best option to ensure a far-reaching campaign on prevention measures to benefit the population. They see sponsorship as a form of social responsibility because the company does not have any apparent economic interest in flu-related activities. They also note that there are no other companies offering a similar collaboration.

But other officials say the company's soft drink products contribute to the obesity and diabetes epidemic and that the company's use of the health department logo would label it a pro-health industry with the backing of the highest health authority in the country. They also raise concerns about risking the independence of the health department in future regulatory action on sugar-rich beverages.

As the head of the health department, you must decide if you should collaborate with the company.

3.7.3 Discussion Questions

1. What considerations should the health department director weigh when deciding whether to collaborate with the beverage company?
2. Who are the major stakeholders the health department should consider, and what values might each of these stakeholders bring to this decision?
3. In making your decision, what values should be prioritized?
4. What positive or negative impacts would displaying the health department logo on the soft drink cans have on health department operations?
5. How might sponsorship by a company that produces sugary beverages affect public trust in the health department and the institution's effectiveness?
6. Would the decision be different if the company produced healthy foods and the department's logo was placed on a healthy product?
7. Would community involvement facilitate decision making and the consideration of the ethical questions? What ethical criteria or guidance should be established to accept or reject a future donations or sponsorship of a public health program by a company?

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3.8 Case 4: Black-White Infant Mortality: Disparities, Priorities, and Social Justice

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3.8.1 Background

Preterm births, the leading cause of infant mortality, are increasing annually worldwide (World Health Organization 2012). The United States shares company with Nigeria, India, and Brazil among the top ten countries with the highest numbers of preterm births and ranks 31st among Organisation for Economic Co-operation and Development (OECD) nations in infant mortality (OECD 2010). Within the United States, racial and ethnic disparities in infant mortality remain entrenched and have increased (MacDorman and Mathews 2009). U.S. health policy leaders have made the elimination of health disparities a top public health priority (Centers for Disease Control and Prevention 2011; U.S. Department of Health and Human Services 2011). Infant mortality is an important area of focus for eliminating disparities, both in its own right and because the rate of infant mortality serves as an indicator of the nation's health due to its association with maternal health, social and economic conditions, racial discrimination, access to health care, and public health practices (MacDorman and Mathews 2009).

During the twentieth century, U.S. infant mortality declined 93 % (MacDorman 2011). In 1900, about 100 infants died per 1000 live births. By 2000, that number fell to 6.89. During the last half of the twentieth century, the rate of black infant mortality dropped dramatically. In 1950, black infant mortality was 43.9 deaths per 1000 live births compared with 26.8 deaths per 1000 live births among whites (Mechanic 2002). But by 1998 black infant mortality fell to 13.8 deaths per 1000 live births compared with 6.0 deaths per 1000 live births among whites. As these numbers show, both groups made significant absolute gains, with blacks gaining more in absolute terms—a reduction of 30.1 for blacks and 20.8 for whites. Yet, black infant mortality still remained about twice that of whites.

These disparities have persisted in the twenty-first century. In 2006, non-Hispanic black women experienced the highest rate of infant mortality, with 13.4 infant deaths per 1000 live births, while non-Hispanic white women had a considerably lower rate, with 5.6 infant deaths per 1000 live births. Citing a 2006 report from the National Healthy Start Association, MacDorman and Mathews (2009) report that programmatic efforts to reduce disparities in black-white infant mortality have had some successes at local levels, but eliminating the disparities is difficult.

The U.S. Centers for Disease Control and Prevention and the U.S. Department of Health and Human Services have prioritized both the elimination of health disparities and improvement in overall population health. These twin goals—one distributive, the other aggregative—are separate and sometimes conflict (Anand 2004). Increases in health disparities often accompany advances in aggregate gains in population health (Mechanic 2007). Although this case is specific to the United States, the dilemma is not. Data show that significant progress on child mortality has been made in many countries but that this overall success is often coupled with increased inequalities between advantaged and disadvantaged groups (Chopra et al. 2012). In China and India, for example, disparities in mortality persist between boys and girls younger than 5 years, a function of entrenched gender discrimination (You et al. 2010). These examples raise challenging questions about how ethically to assess such cases and set priorities for the allocation of scarce public health resources.

3.8.2 Case Description

You serve as the director for the local health department in a racially segregated urban city in the Midwest with one of the greatest concentrations of African Americans in the United States. The city has a long history of civil rights activism that led to protests and marches that ultimately empowered and mobilized black communities and organizations. Your health department has a history of prioritizing maternal-child health and the elimination of black-white disparities in infant mortality in its programs, an investment of resources affirmed by the city residents through the department's community outreach program and planning processes.

Chronic underfunding of public health, made worse by the economic downturn, has resulted in drastic and unprecedented reductions in the public health budget. In consultation with your staff and community board of health, you have raised the possibility of redirecting resources from maternal-child health into other programs based on a number of practical and ethical considerations. As with national statistics, the city has seen significant declines in black infant mortality, even as black-white disparities remain. You note that although the maternal-child health programs are cost-effective, their impact on reducing black-white disparities seems to have stalled. Other programs appear to meet targets more consistently. To help support these other programs, you note that allocating resources to more effective programs provides more "health" per dollar, thus meeting the utilitarian demand to maximize overall health, which many view as the primary goal of public health and health policy (Powers and Faden 2006). In addition, although black-white disparities in

infant mortality persist, blacks have made significant gains, declining more than whites in some decades. You note that remaining inequalities could be deemed ethically acceptable by some standards of equity, such as the “maximin” principle. Although this distributive principle is subject to interpretation (Van Parijs 2003), it is generally understood to require that social and economic inequalities work to benefit society’s least advantaged groups. Thus, inequalities (even significant ones) are morally acceptable as long as the least advantaged have significantly benefited (Powers and Faden 2006).

The director of community outreach proposes that the health department not make this decision unilaterally, but instead listen to community opinions on these questions of priorities and fairness. He suggests that the health department collaborate with community partners to host a series of public forums. He insists that a topic of such historic and contemporary concern to the community must be subject to public deliberation. Despite having a history of supporting community discussions, you are concerned about the cost of community forums, noting that they will drain resources from an already slim budget.

3.8.3 Discussion Questions

1. Have local health departments met their ethical obligations when community health improves overall, but health disparities persist? If not, why not? If so, on what grounds?
2. Is there something about infant mortality that makes it special in considerations of fairness? If so, what is it?
3. Should the role of race and racism in infant mortality shape priority setting and the allocation of resources in public health? If so, why?
4. On what grounds and how should you as the local health department director make resource allocation decisions? What standards—evidence, principles of justice, public opinion—should influence priority setting?
5. Should the community have a role in identifying community health priorities or, more specifically, in providing input into allocation decisions that directly affect them? If so, how should the community be involved and who represents the community?

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3.9 Case 5: Priority Setting in Health Care: Ethical Issues

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This case is presented for instructional purposes only. The ideas and opinions expressed are the authors' own. The case is not meant to reflect the official position, views, or policies of the editors, the editors' host institutions, or the authors' host institutions.

3.9.1 Background

The Chilean System of Guarantees in Health—created by law in 2004—aims to establish guaranteed health care interventions in health promotion, disease and injury prevention, diagnosis and treatment, rehabilitation and palliative care (Ministerio de Salud 2004). The law mandates that public and private insurers provide the resources needed to protect the public against excessive health-related

spending and guarantee timely and universal access to authorized interventions based on standards of care.¹

National health objectives, established by the Ministry of Health, determine the list of guaranteed interventions. This list, however, is reviewed every 3 years and amended as new scientific and health information emerges. As of 2013, the System of Guarantees in Health included interventions for 80 health-related conditions (Ministerio de Salud 2013), accounting for almost 60 % of the Chilean burden of disease. The System of Guarantees in Health is a priority system based on acknowledged criteria, namely scientific evidence and socially shared values. For the system to be effective, the criteria must be transparent, publicly accepted, and open to review and modification.

The law that created the System of Guarantees in Health also mandated a procedure for selecting the guaranteed interventions (Ministerio de Salud 2004). The procedure factors in public opinion research to identify social consensus on health priorities, studies to identify effective interventions that prolong and improve quality of life, and assessments of interventions' cost effectiveness (Burrows 2008). The procedure determines priorities with an algorithm that includes these factors and information on disease burden and health system capacity (Missoni and Solimano 2010). After choosing the health interventions, the health ministry elaborates on a package of interventions related to specific health conditions and develops clinical guidelines for such interventions.

3.9.2 Case Description

You direct a team within the Ministry of Health that is responsible for recommending priorities for guaranteed health interventions. The priority ranking system emphasizes the selection of cost-effective interventions for conditions with the greatest burden. However, the health ministry also has authorized including expensive interventions that are less effective or treating health conditions with low prevalence, if that condition or those interventions significantly impact health. Because of budget reductions, a number of interventions are under review. Your team has been asked to recommend funding interventions for two health conditions—cataract (a common condition with highly effective treatment) and multiple sclerosis (a less prevalent condition but one with significant health and social impact).

¹Law 19.966 for the System of Guarantees in Health includes the following definitions for guarantees: *Guaranteed Access*—Public and private health insurers must grant the resources to provide guaranteed interventions; *Guaranteed Opportunity*—Guaranteed interventions must be delivered within a deadline established in the protocols elaborated by the Ministry of Health; *Guaranteed Quality*: Interventions must be delivered by registered and accredited health care providers; *Financial Protection*—A maximum copayment is established to avoid the insured falling into financial insolvency.

Cataract, the main cause of blindness, primarily affects people over 40. This health problem has a high impact as measured by quality-adjusted life years (QALYs) (Ministerio de Salud 2007). Its surgical treatment is effective for 80–95 % of patients. The package of guaranteed interventions includes diagnostic confirmation within 180 days after suspected diagnosis and surgical treatment 90 days after confirmation. In 2013, it was expected that 48,424 cataract surgeries would be performed in Chilean public hospitals and 416 in private institutions.

Multiple sclerosis, an autoimmune inflammatory disease leading to demyelination in the central nervous system, produces a progressive deterioration of health and quality of life. It represents a minimal disease burden at the population level, mainly due to premature death. In Chile, it is estimated that 385 patients are treated for multiple sclerosis each year. The package of guaranteed interventions includes diagnostic confirmation within 60 days; confirmed cases must receive treatment within 30 days. Treatment includes pharmacological therapy and physiotherapy.

3.9.3 Discussion Questions

1. What are some of the ethical, scientific, and social considerations that should be weighed in deciding if interventions for both cataract and multiple sclerosis should be covered by the System of Guarantees in Health?
2. Is there an obligation for health systems to cover all health problems affecting a population? Are there limits?
3. How should health problems be prioritized and who should have the authority to make these decisions? Which criteria should receive the most weight in ranking priorities?
4. How should resources be distributed among health conditions affecting many people versus health conditions affecting few people?
5. How should resources be distributed among procedures that are preventive versus treatments for existing conditions?
6. How does taking a public health perspective versus a clinical medicine perspective affect your thinking about including these two conditions in the System of Guarantees in Health?
7. What role should transparency play in the selection procedure?

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3.10 Case 6: Critical Care Triage in Pandemics

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3.10.1 Background

Infectious diseases such as pandemic influenza and severe acute respiratory syndrome (SARS) have attuned the attention of policy makers and health practitioners to the importance of protecting and promoting the public's health in the face of increased care needs and extreme resource scarcity. In particular, acute care needs for the critically ill and discussions of treatment priorities have been the subject of much debate in pandemic planning (Hick et al. 2007; Melnychuk and Kenny 2006; Uscher-Pines et al. 2006). This is not surprising, as it has been estimated that more than 700,000 Americans may require mechanical ventilation during a pandemic, far outnumbering available ventilators (Rubinson et al. 2010; U.S. Department of Health and Human Services 2005). Additionally, shortages of hospital beds, personnel, and other equipment can be expected during a pandemic, which may limit the ability to meet an expected increase in patient volume (World Health Organization 2008).

Prudentially planning for the public's increased care needs during a pandemic requires assessing surge capacity, especially in critical care units (CCU). However, as pandemics increase in severity, they can overwhelm critical care capacity and

contingency arrangements. To make the best use of resources and personnel (even in the absence of a pandemic), patients are triaged—evaluated to determine the type and priority of care to be received. While medical information informs the development of triage criteria, ethical considerations about triage goals—whether explicit or implicit—also play a role. For public health emergencies that overwhelm capacity, some propose adjusting critical care triage criteria to emphasize certain public health goals, like saving the most lives possible (Christian et al. 2006; Silva et al. 2010).

Some contend that utilitarian reasoning should predominate in critical care triage, based on the intuition that, when resources are scarce, allocation decisions should produce the greatest good for the greatest number (Charlesworth 1993; Childress 2004). Critics of utilitarianism reply that it requires coercion or covertness to succeed, because the public will not voluntarily sacrifice their lives or their loved ones for the greater good (Baker and Strosberg 1992). Utilitarian triage may be unpalatable to the public on the further ground that it quantifies and judges the value of one life over another, which could disproportionately impact particular population groups (Hoffman 2009). Others therefore would base triage decisions on egalitarian considerations, for instance, by giving everyone an equal chance at obtaining a scarce good, an approach for which historical precedent exists (Baker and Strosberg 1992).

Whatever approach is adopted, prior arrangements between policy makers, practitioners, and the public based on thoughtful, transparent deliberation about the most ethical approach to CCU triage usually will improve the legitimacy of decisions. Those who promote an approach based on fairness and equity need to consider that, during public health emergencies, the goal of saving lives may force a retreat to utilitarian ethics (Kirkwood 2010; Veatch 2005). While not necessarily unethical in itself, a retreat that overturns prior arrangements lays itself open to charges of illegitimacy.

Variability in the frameworks used to allocate public health resources illustrates the importance of reflecting upon the values that undergird policy decisions and individual practices, like critical care triage. Appealing spontaneously in the heat of the moment to values that have not been adequately reflected upon or discussed in a transparent and deliberative manner may lead to undesirable outcomes and accusations of unethical practices. While discussions of CCU triage criteria ultimately concern institutional clinical policy and practice, they reflect a larger discussion about the overarching public health goals in the face of large-scale, widespread public health emergencies, like pandemics.

3.10.2 Case Description

An outbreak of a novel influenza virus has progressed to the point that the World Health Organization has declared a pandemic. In the pandemic's first wave, hospital capacities were sufficient to handle the influx of pandemic influenza patients, whose

morbidity and mortality rates mirrored rates for seasonal influenza. However, despite a vaccination campaign and other measures, such as ensuring surge capacity, rates of morbidity and mortality associated with the virus have increased drastically during the pandemic's second wave.

The resulting increased number of patients needing hospital beds has overwhelmed even the surge capacity of the CCUs of a metropolitan city's tertiary care hospitals. To meet this challenge, a teleconference has been scheduled between several members of the hospitals' administration, the CCU directors from each hospital, and public health officials involved in leading the jurisdiction's pandemic response. As a public health official who played a central role in developing the pandemic plan for your jurisdiction, you have been included on the call to provide guidance for the pandemic response.

During the meeting, a number of CCU directors report that their physicians and nurses are concerned about the type of patients being admitted into the CCU. Some of the directors see a trend that they suggest is ultimately undermining the efficiency of the pandemic response. They argue that, as the severity of the pandemic continues to increase, their triage criteria should be modified so as to use CCU resources to save the most lives possible. They worry that admitting those who present with the most need is preventing treatment of those who will benefit most from CCU admission. "So long as our triage scheme saves the most lives, it is ethically justifiable" a number of them declare.

The group takes up the proposal of a CCU director to triage according to Sequential Organ Failure Assessment (SOFA) scores—which are derived using a tool that determines a patient's organ function and failure rate to predict outcomes (Vincent et al. 2000). Were the pandemic's severity to increase, the group suggests that, in addition to the CCU director's proposal to use SOFA criteria, even more inclusion, exclusion, and priority criteria could be added with the goal of saving as many lives as possible. They've proposed exclusion criteria for CCU admittance that include patients with a poor prognosis, patients with other known health issues, and some mention of age cut-offs, to name a few.

Others involved in the teleconference question whether this is the right approach to take. They argue that, by aiming to save the most lives possible, those who may benefit less from CCU admission, like older adults or individuals with disabilities, will be unfairly affected. They say, "we should not just aim to save lives, but rather save lives *fairly*." As you and your public health colleagues are leading the pandemic response, the hospital administrators and CCU directors look to you for a recommendation or decision about how to proceed.

3.10.3 Discussion Questions

1. Ensuring that the CCU has surge capacity is a common strategy to accommodate an influx of patients who have been infected with pandemic influenza.

- (a) Does surge capability require alternative critical care triage criteria?
 - (b) If the population's health needs exceed contingency arrangements, should alternative critical care triage criteria be used?
 - (c) How should these decisions be made?
 - (d) What principles, values, or processes should influence these decisions?
2. What considerations might exist during a pandemic that do not exist in everyday critical care and critical care triage that do or do not support the modification of triage criteria? If pandemic critical care triage requires a unique conceptual framework, what principles ought to be valued in such a framework (e.g. need, equality, utility, efficiency)?
 3. Would the severity of a pandemic ever warrant the use of a utilitarian scheme for critical care triage, given that the public generally finds it unpalatable and carrying out such a plan could require coercion? How could an adverse public reaction to coercive or covert measures be mitigated?
 4. In a pandemic, the most seriously ill patients with the lowest probability of being saved might be left untreated because their care would require too many resources with little prospect of recovery. This illustrates a conflict between the common good and the best interests of individual patients. What other conflicts might arise when triaging in a pandemic?
 5. Triage can be used to maximize the number of lives saved with available resources. Should we aim to maximize the number of lives or, alternatively, the number of life years saved? This can also give rise to questions about the quality of those lives and years lived. Is it ever appropriate to make allocation decisions based on quality of life or life years?

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