

SUNSETTED by the Board of Regents on 2/15/2022

ACP[®]

AMERICAN COLLEGE OF PHYSICIANS
INTERNAL MEDICINE | *Doctors for Adults*

HOW CAN OUR NATION CONSERVE AND DISTRIBUTE HEALTH CARE RESOURCES EFFECTIVELY AND EFFICIENTLY?

SUNSETTED by the Board of Regents on 2/15/2022

American College of Physicians
A Position Paper

2011

How Can Our Nation Conserve and Distribute Health Care Resources Effectively?

Summary of a Position Paper Approved by the Board of Regents, January 2011

Why Is It Important to Conserve Health Care Resources Effectively?

Health care spending in the United States has been growing at unsustainable rates, and there has been increasing pressure to control health care costs. This creates a need to make decisions on the quality and quantity of health care resources that are available; however, these decisions often result in inequitable treatment and frequently lack transparency.

Achieving a national consensus on how best to use health care resources effectively, efficiently, and rationally should distinguish between medical *rationing*, in which decision makers determine which scarce medical resources are provided and who receives them, and *rational* decision making, by which judicious choices are made among clinically effective alternatives. Rationing can result in denial of care, whereas choosing among clinically effective alternatives focuses on using medical evidence to provide appropriate and effective care to create better health outcomes.

How Do We Conserve Health Care Resources?

Conserving health care resources involves making informed decisions about the quality and quantity of health care services in a way that promotes positive health outcomes. Because the supply of health care resources is limited, they must be carefully allocated in order to achieve the most effective care.

Key Findings and Recommendations from the Paper

ACP recommends the following:

- Sufficient resources should be devoted to developing needed data on clinical outcomes and cost effectiveness of medical interventions, and there should be a transparent and publicly acceptable process for making health resource allocation decisions based on these data.
- The public, patients, physicians, insurers, payers, and other stakeholders should have opportunities to provide input on health resource allocation decision-making at the policy level.
- Multiple criteria should be considered in determining priorities for health care resources, and allocation decisions should be in accord with societal values, should not discriminate against categories of people, and be flexible enough to address variations in regional and population-based needs.
- Individuals should play an essential role in making their own informed decisions. Accordingly, they should be provided with information about different treatments, private insurers could vary patient cost-sharing levels to reflect the value of different services, and health care professionals should not be obligated to provide unnecessary or inappropriate services.
- Medical liability reforms are needed to decrease the practice of defensive medicine.

- Resource allocation process and priority setting should be periodically reviewed to reflect evolving medical and societal values and changes in evidence.

For More Information

This issue brief is a summary of *How Can Our Nation Conserve and Distribute Health Care Resources Effectively and Efficiently?* The full paper examines various means of conserving health care resources, including review of the Oregon Health Plan, the Veterans Administration Health System, and analysis of resource allocation mechanisms used in eight other countries. It is available at

http://www.acponline.org/advocacy/where_we_stand/policy/health_care_resources.pdf.

HOW CAN OUR NATION CONSERVE AND DISTRIBUTE HEALTH CARE RESOURCES EFFECTIVELY AND EFFICIENTLY?

JANUARY 27, 2011

A Policy Paper of the
American College of Physicians

This paper, written by Jack A. Ginsburg, MPE, Michelle Kline, and Robert B. Doherty, was developed for the Health and Public Policy Committee of the American College of Physicians: Richard L. Neubauer, MD, FACP, Chair; Robert McLean, MD, FACP, Vice Chair; Vineet Arora, MD, FACP; Jay D. Bhatt, DO, Associate; Robert M. Centor, MD, FACP; Jacqueline W. Fincher, MD, FACP; Luke O. Hansen, MD; Richard P. Holm, MD, FACP; Celine Goetz, Student; Mark E. Mayer, MD, FACP; Mary Newman, MD, FACP; P. Preston Reynolds, MD, FACP; and Wayne Riley, MD, MBA, MACP with contributions from J. Fred Ralston, Jr., MD, FACP (ACP President, ex-officio); Robert G. Luke, MD, MACP (Chair, ACP Board of Regents, ex-officio), and Donald W. Hatton, MD, FACP (Chair, ACP Medical Service Committee). It was approved by the Board of Regents on 21 November 2010.

How to cite this paper:

American College of Physicians. How Can Our Nation Conserve and Distribute Health Care Resources Effectively and Efficiently? Philadelphia: American College of Physicians; 2011: Policy Paper. (Available from American College of Physicians, 190 N. Independence Mall West, Philadelphia, PA 19106.)

Copyright ©2011 American College of Physicians.

All rights reserved. Individuals may photocopy all or parts of Position Papers for educational, not-for-profit uses. These papers may not be reproduced for commercial, for-profit use in any form, by any means (electronic, mechanical, xerographic, or other) or held in any information storage or retrieval system without the written permission of the publisher.

For questions about the content of this Policy Paper, please contact ACP, Division of Governmental Affairs and Public Policy, Suite 700, 25 Massachusetts Avenue NW, Washington, DC 20001-7401; telephone 202-261-4500. To order copies of this Policy Paper, contact ACP Customer Service at 800-523-1546, extension 2600, or 215-351-2600.

Executive Summary

The American College of Physicians (ACP), the nation's largest medical specialty organization representing 130,000 physicians and medical students, seeks to ensure that limited health care resources are used more effectively and efficiently. It recognizes that health care in the United States, like any country, involves decisions on the quality and quantity of health care resources that are available to the broad population and individual persons, but that such decisions are often made inequitably and in inadvertent ways that lack sufficient transparency. Physicians have an ethical responsibility to provide health care services that are necessary and effective and not to provide care that is ineffective, inappropriate, or harmful. However, resource allocation decisions concerning use of limited health care resources must also be made at a policy level for the health care system.

We recognize that discussion of the most effective and appropriate ways to make such decisions, to the benefit of individual patients and the broader population, are undermined when the debate becomes polarized over whether or how care in the United States should be “rationed”—a term that is poorly understood, emotionally driven, and not conducive to reaching consensus. Achieving a national consensus on how best to use health care resources effectively, efficiently, and rationally should instead seek to distinguish between medical rationing, in which decision-makers determine which scarce medical resources are provided and who receives them, and *rational* medical decision-making, by which judicious choices are made among clinically effective alternatives. We emphasize that choosing among clinically effective alternatives based on medical evidence to provide clinically appropriate and effective care that maximizes value is not the same as rationing, which results in denial of care. We also recognize that the term *cost-effectiveness* is often used and interpreted in a variety of ways. In this paper, we use the term *clinical effectiveness with consideration of costs* to mean, “The extent to which a health care intervention provides an outcome consistent with its intent and reflecting analysis of the comparative costs and value gained among services that provide equal or better clinical benefit.”

Health care spending in the United States has been growing at unsustainable rates, and pressures to control health care costs have been increasing. Both today, as well as in the past, physicians and patients have had to make medical decisions involving treatment choices among limited resources typically with very limited assistance from objective data on effectiveness and cost or even information on best practice. Fraud and abuse must be minimized or eliminated. Using limited health care resources judiciously and appropriately will involve shared decision-making in which patients and physicians choose among clinically effective treatment options based on medical evidence. Patients should not demand and physicians should not provide medical services that are unnecessary, ineffective, or harmful. However, changes in legal standards concerning professional liability are needed to curtail the practice of defensive medicine that accounts for much ordering of tests and procedures that are medically unnecessary.

This paper examines various means of conserving health care resources, with particular attention to the Oregon Health Plan and the Veterans Administration Health System. Appendix A summarizes the methods by which other countries conserve and allocate health care resources; Appendix B

provides more detailed analysis of the health resource allocation approaches used by other countries, identifying the pros and cons of each. Possible lessons to be learned are identified, recognizing that comparisons among countries are limited due to different historical/political experiences, differences in how health care services are organized and delivered, and differences in medical–legal climates, as well as other factors. A Glossary of acronyms and terms is provided.

Although health care costs in the United States are the highest in the world and are rising at an unsustainable rate, discussion on how to control costs fairly and effectively or to ensure that health care resources are used more efficiently has been limited. This paper seeks to stimulate further national discussion on wise and ethical use of health care resources.

ACP Positions Regarding Resource Allocation Decisions

1. Sufficient resources should be devoted to developing needed data on clinical and cost-effectiveness of medical interventions for comparative, evidence-based evaluations that should serve as the basis for allocation decisions about the utilization of health care resources.
2. There should be a transparent and publicly acceptable process for making health resource allocation decisions with a focus on medical efficacy, clinical effectiveness, and need, with consideration of cost based on the best available medical evidence.
3. The public, patients, physicians, insurers, payers, and other stakeholders should have opportunities to provide input to health resource allocation decision-making at the policy level.
4. Multiple criteria should be considered in determining priorities for health care resources. Factors that might be considered high priority, in addition to clinical effectiveness and costs, should include:
 - Patient need, preferences, and values
 - Potential benefit
 - Safety
 - Societal priorities that include fiscal responsibility and equitable access
 - Quality of life gained, consistent and compliant with the Americans with Disabilities Act
 - Public health benefit
 - Impact on families and caregivers
 - A balance between cost and clinical effectiveness to minimize adverse economic consequences on current and future generations.
5. Allocation decisions should be in accord with societal values and reflect moral, ethical, cultural, and professional standards.
6. Allocation decisions should not discriminate against a class or category of patients and should be developed and applied in compliance with established rules without prejudice or favoritism.

7. **The allocation process should be flexible enough to address variations in regional and population-based needs that are identified in a scientific way and to accommodate special circumstances.**
8. **Decisions on allocation of health care resources will have more public support if they incorporate an essential role for individuals to make their own informed decisions and to share in decision-making responsibility, rather than having such decisions imposed on them. Accordingly:**
 - A. **Patients and physicians should be provided with objective and understandable information about the benefits and costs of different treatments to enable them to make informed choices, in consultation with their physicians (shared decision-making), on the best treatment options.**
 - B. **To encourage patients to use health care resources wisely, public and private health insurers could vary patient cost-sharing levels so that services with greater value, based on a review of the evidence, have lower cost-sharing levels than those with less value.**
 - C. **Although everyone should be guaranteed access to affordable, essential, and evidence-based benefits, persons should be able to obtain and purchase additional health care services and coverage at their own expense. However, physicians and other health care professionals should not be obligated to provide services that are unnecessary, inappropriate, harmful, and/or unproven even if the patient requests to pay for such services out-of-pocket.**
9. **Medical liability reforms are needed to decrease the practice of defensive medicine.**
10. **Resource allocation process and priority setting should be periodically reviewed to reflect evolving medical and societal values and changes in evidence, and assess for any cost shifting or other unwanted effects.**

In addition, the paper raises the following issues for public policymakers to consider regarding the allocation and distribution of health care resources:

1. How can equitable and just decisions be made on the allocation of limited health care resources, and who should be involved in making such decisions?
2. What resource allocation mechanisms should be considered?
3. How can we best develop a process for health resource allocation decision-making, and how can public support for the process be maximized?

Contents

Executive Summary	1
Why Must the Nation Address Equitable Sharing of Limited Health Care Resources?	5
Why Is ACP Addressing This Issue?	7
What Is Rationing?	9
How Are Health Resource Allocation Decisions Made?	11
Prioritizing Health Care Services	13
Oregon Health Plan	13
Veterans Health Administration	15
Resource Allocation Approaches Used in Other Countries	16
ACP Policy Positions to Guide Resource Allocation Decisions	16
Issues for Public Policymakers to Consider Regarding the Allocation and Distribution of Health Care Resources	25
Conclusion	27
Appendix A: Mechanisms for Conservation of Health Resources Used by Selected Countries	28
Appendix B: Analysis of Resource Allocation Mechanisms in Selected Countries	30
Canada	30
France	33
Germany	36
Japan	39
Netherlands	42
Switzerland	44
Taiwan	47
United Kingdom	50
United States [Socioeconomic Data]	52
Glossary	53
References	56

How Can Our Nation Conserve and Distribute Health Care Resources Effectively and Efficiently?

Why Must the Nation Address Equitable Sharing of Limited Health Care Resources?

Health care spending in the United States is growing at unsustainable rates. The nonpartisan Congressional Budget Office (CBO) projected in December 2008 that, without any changes in federal law, spending on health care will rise from 16% of gross domestic product (GDP) in 2007 to 25% in 2025 and close to 50% in 2082.¹ Spending \$1 out of every \$4 spent in the USA in 2025, and half of all spending in 2082 on health care will crowd out money for food, housing, education, national defense, and everything else. The CBO also points out that as much as 5% of the nation's GDP—\$700 billion per year—is spent on tests and procedures that do not improve health outcomes.^{2,3} Resources that could be devoted to expanding access to health care or improving health care quality are instead often wasted.

The health reform legislation of 2010, known as the Affordable Care Act (ACA), will certainly have an impact on national health spending, but at present its effectiveness in “bending the cost curve” is uncertain.⁴ Regardless, health care spending is likely to continue to increase at a substantial rate and pressure to reduce spending, particularly government spending, will continue. The United States spends far more of its national income on health than all other countries, almost double the average of 8.9% in the 30 developed countries who are members of the Organization for Economic Cooperation and Development (OECD), and 5% of GDP more than France, the next biggest health care spender per capita. Spending per capita is \$7290 (\$US) in the United States, 2 ½ times higher than the average of \$2984 (\$US) per capita in OECD nations.⁵ Despite lower GDP spent by other developed countries, their outcomes and public health statistics (e.g., lower morbidity and mortality rates, longer longevity, and lower infant and maternal mortality), are generally better than those for the US.⁶ Most countries have mechanisms to restrict expenditures built into their health systems. These include regulating the volume of services or prices, controlling the dissemination of new technologies, enforcing budgets or expenditure caps, and requiring greater cost-sharing. Such trade-offs let these countries provide health services to all of their citizens at a lower cost than in the United States, but they also employ processes (usually involving a strong role for centralized government planning) that would be unacceptable to many Americans.⁵ Accordingly, any system of allocation of health care resources in the United States will need to recognize uniquely American values, including a strong tradition of individualism and personal responsibility, distrust of strong central governmental control, and a system of federalism that shares responsibilities between the federal and state governments.

In 2009, despite paying so much for health care, the United States had at least 50.7 million people without health insurance coverage.⁷ At least another 16 million more were underinsured.⁸ For most Americans covered by insurance, high-quality care is generally accessible without long waits but at high cost. Those without adequate health insurance often forgo needed care, endure preventable illnesses, suffer complications that could have been avoided if diagnosed and treated earlier, accumulate medical debt (the leading cause of bankruptcy⁹, and are at risk for premature mortality.^{10,11} The ACA is expected to extend health insurance coverage to 32 million more people, covering 95% of the US population by 2019.¹²

Although the US system provides high-quality care to most of its legal residents, decisions made on access to services are often unjust and inequitable in that the uninsured and the underinsured, the poor, and members of underserved minorities often have inadequate access to health care and suboptimum health outcomes—in some cases, worse than that of residents of developing countries.¹³ Disparities persist among racial groups with regard to access to and quality of health care.¹⁴

Health care resources are often spent on treatments that are of little benefit or are even harmful.^{15,16} Use of health care resources also varies widely across the United States,^{17,18} but studies have shown that the quality of care, access to care, and patient satisfaction are not better in higher-spending regions.^{19,20,21}

The health workforce is well-trained but is not well-distributed. There are too many physicians in some specialties and far too few in others, including primary care and some subspecialties of internal medicine.²² The supply of primary care workers is insufficient to meet the needs of an aging society. Physicians and other health professionals are also poorly distributed geographically, with consequent inequitable access to care for populations in rural and inner-city areas. There currently is no national workforce policy to determine requirements and ensure the supply and distribution of appropriately trained personnel.²³ However, the ACA created a national advisory commission that will report annually to Congress, starting in October 2011, providing data on current and projected supply and demand for health care professionals and recommendations on health care workforce education and training capacity. Undervaluation of primary care services and other factors result in barriers to medical care for patients and cause inadvertent rationing.

No country can afford to provide unlimited access to health care services for everyone. This is a societal issue that transcends medical care itself—how much should we as a society spend using public funds on health care versus education, the environment, or the defense of our country? Democracies like the United States have a responsibility to develop ways to allocate public resources that have broad public support; such decisions cannot and must not be “imposed” on the population without the consent of the people.

Spending by private health insurance also affects the resources available for other purposes and determines access to health care services. Private insurance in the United States also is subsidized by taxpayers, either through the tax exemption for employer-sponsored health insurance or from direct subsidies, such as the tax credits available under the ACA. This suggests that there should also be a process for encouraging judicious choices in the use of privately funded health resources. As health care consumes an ever-increasing share of private resources, there will be less for other needs. Consequently, private health care resources should be used wisely and not be spent on inappropriate or ineffective health care services. As efforts are made to control health care costs, it will be very important to allocate resources in the health care sector justly and equitably. We must assure that people receive the care they need but do not receive unnecessary care. This will involve finding better ways to share resources wisely to ensure that individuals get the right care at the right time in the right place, and in a way that has the support of the American people.

Why Is ACP Addressing This Issue?

The contentious debate over health care reform legislation evoked much controversy about the federal government's role in health care, including concerns about "rationing" health care services. Congress made decisions that determined who and what would be covered by public and private insurance programs, especially those receiving public subsidies. Decisions were influenced by the cost of various proposals and their impact on the federal budget deficit and the national debt. Trade-offs were made that reflected the cost and timeline for expanding health insurance coverage for the uninsured, largely based on the current system for delivering care. The public remains deeply divided over the ACA, and there is no consensus yet on how best to conserve and allocate health care resources. An informed discussion is now needed on how health care resources can be used most efficiently and judiciously and how decisions on health resource allocation can be better made in a way that will have broad support from the American public.

Physicians and their professional societies have a professional and ethical responsibility to "work toward ensuring access to health care for all persons; act to eliminate discrimination in health care; and help correct deficiencies in the availability, accessibility, and quality of health services."²⁴ Although the physician's primary responsibility is to the patient, ethical challenges may arise over equitable allocation of resources since health care takes place within social and institutional systems. Resource allocation decisions are policy decisions that are most appropriately made at the system level, not at the bedside. However, as ACP's Ethics Manual notes, physicians are also responsible for using health care resources wisely:

Physicians have a responsibility to practice effective and efficient health care and to use health care resources responsibly. Parsimonious care that utilizes the most efficient means to effectively diagnose a condition and treat a patient respects the need to use resources wisely and to help ensure that resources are equitably available.²⁴

The Charter on Medical Professionalism, which has been endorsed by ACP and 120 other medical organizations in the United States and internationally, states that professionalism involves commitments to improving quality of care, improves access to care, eliminating discrimination in health care, and justly distributing finite resources.²⁵ *The Charter* explains the commitment to a just and equitable distribution of finite resources as follows:

While meeting the needs of individual patients, physicians are required to provide health care that is based on the wise and cost-effective management of limited clinical resources. They should be committed to working with other physicians, hospitals, and payers to develop guidelines for cost-effective care. The physician's professional responsibility for appropriate allocation of resources requires scrupulous avoidance of superfluous tests and procedures. The provision of unnecessary services not only exposes patients to avoidable harm and expense but also diminishes the resources available for others.

The College recently issued a policy paper on Controlling Health Care Costs that identifies the top 10 key drivers of health care costs and provides 48 recommendations for addressing them.²⁶ Reforming the health care system to better provide patient-centered care; to emphasize care that is clinically effective and yields equal or greater value in terms of cost compared with alternative options, promotes preventive and coordinated care; and reduces the amount spent on health care would better align incentives of patients, providers, and payers. The College also plans to provide physicians and patients with evidence-based recommendations for specific interventions for a variety of clinical problems. ACP's High-Value, Cost-Conscious Care Initiative will assess benefits, harms, and costs of diagnostic tests and treatments for various diseases to determine whether they provide good value—medical benefits that are commensurate with their costs and outweigh any harm.²⁷ The effort will address common medical conditions for which inappropriate use of resources is known to be an issue, such as low back pain. It will provide evidence about which evaluation and management strategies work best for individual patients. Additional phases of the initiative may include patient education materials and curricula for medical students and residents. The next edition of ACP's Medical Knowledge Self-Assessment Program (MKSAP) will also have a focus on optimal diagnostic and treatment strategies, based upon considerations of value, effectiveness, and avoidance of overuse and misuse.

In this paper, we consider mechanisms by which the nation's limited health care resources can be made more equitably accessible and utilized more appropriately and efficiently. We also examine some of the mechanisms that have been adopted for conserving health care resources in the United States and other countries for possible lessons that can be learned.

As ACP noted when it analyzed the US health care system compared with other countries,¹³ any solution for the United States will be unique to our culture, demographics, and form of government. The US population is more racially and ethnically diverse than many other countries and has millions of undocumented immigrants. It has a unique constitutional system of government that limits the ability of the federal government to impose mandates and requires that authority be shared between federal and state governments. Americans have a tradition of individualism and distrust of the power of the federal government. The United States also has a legal system that protects commercial and individual free speech and limits the government's ability to regulate industry. Consequently, there is likely to be great resistance in the United States to adopting some mechanisms used by other nations for allocating health care resources, particularly those that involve a substantial expansion of the power of the federal government.¹³

The College maintains that discussion must begin on how to devise mechanisms to share health care resources justly, equitably, and in a manner that reflects societal values. This discussion should be transparent, understandable to the public, and politically acceptable. Public confidence in and acceptance of decisions about health care resource allocation may be greater if there is open discussion and agreement on a decision-making process with public participation supported by trusted clinicians.

What Is Rationing?

The term “rationing” evokes strong reactions. Webster’s Dictionary defines rationing as “to distribute equitably” and “to use sparingly.”²⁸ The Encyclopedia Britannica defines it as “Government allocation of scarce resources and consumer goods, usually adopted during wars, famines, or other national emergencies.”²⁹ An online medical dictionary defines medical rationing as “Planning for the equitable allocation, apportionment, or distribution of available health resources.”³⁰

Americans typically react negatively to the term “rationing.” We conjure up images of shortages, delays in obtaining treatment, long waiting lines, and government bureaucrats coming between patients and their physicians to deny needed medical services. There are concerns that those making coverage decisions will have excessive power, will undervalue the lives of the elderly and disabled, and will impose a one-size-fits-all approach that restricts physicians’ ability to deliver individualized care.³¹

ACP believes that a debate over whether or how the United States should “ration” care is unlikely to yield a consensus that will have the required support of the American people. The term is simply too misunderstood, emotional, and polarizing. **Instead, the goal should be to develop consensus on how to appropriately make decisions on using health care services effectively, efficiently, and rationally for the benefit of individual patients and the broader population.**

Still, although ACP recommends that the discussion should not center on “rationing” of health care, it is useful to define how different systems make decisions on conserving and allocating health care resources.

Every country places limits on access to health care and makes decisions on how to allocate available health care resources—that is, they make decisions that some would describe as “rationing” of care. Decisions must be made on how to allocate resources no matter how much is spent on health care. However, spending more on care is not necessarily “better,” if much of what one gets is unnecessary or even dangerous, especially if it keeps someone else from beneficial care. Denying sick children crucial drugs because someone is getting an unnecessary or unhelpful CT scan is not just, equitable, or sensible. As a society, we need to allocate resources in a way that will help control costs and save money, but we also need to improve how we decide how our available resources are shared.³² In part, we need to acknowledge that the United States currently makes decisions on access to health care resources, but in an irrational and uncoordinated fashion. We limit access to care primarily by the price of services, health insurance status, eligibility requirements, and the supply of doctors and other health care professionals and facilities, but these mechanisms are uncoordinated and have led to increased disparities in the quality of and access to care.

Explicitly prioritizing access to some services, like liver transplants, because of the very limited supply of livers available for transplantation is another example. Likewise, when there are limited beds in an ICU, decisions must be made with regard to who gets those beds. These types of overt rationing could be characterized as *supply-based rationing*.

Another type of rationing is *cost-based rationing*. Although not always explicit, this often involves decisions about not offering or providing some expensive

care. Health plans limit access to care by restricting coverage to network physicians or hospitals who agree to accept lower payments.³³ Clearly, \$100,000 -per-day treatments for everyone are unaffordable. Is \$50,000 or \$25,000 affordable? Determining costs is a real challenge. Prices may be higher or lower than actual costs. Both price and cost can change as volume changes. Analysis of the clinical effectiveness of care with consideration of cost can provide the basis for objective evaluation of value that then can be used in deciding what diagnostic and therapeutic options to pay for.

Incremental rationing often occurs when new drugs or technologies are developed. In the United States, new drugs and medical devices that are evaluated by the Food and Drug Administration (FDA) for safety and effectiveness are not denied approval based on cost. New technologies are evaluated for comparative effectiveness by the Agency for Healthcare Research and Quality (AHRQ), but are not screened by the government for insurance coverage as they are in some other countries. US physicians must decide on their own whether a new, more expensive drug or treatment offers sufficient incremental benefits for a particular patient over existing treatment options. For example, a new blood pressure drug might cost \$5 per day more than an existing drug but improve control by 5 mm Hg. The new drug is better, but the physician may need to determine if the incremental benefit is worthwhile for a patient who already has decent blood pressure control.

Yet another type of rationing could be called *public health rationing*. This involves choices in the use of limited public funds for public health. Paying for childhood vaccinations clearly trumps paying for less serious medical conditions. If the public health budget is limited, then a rationing concept is essential to get the most “bang for the buck.” Allocating resources within an annual budget determines what services are available at the VA and is the basis of the original Oregon Medicaid approach described later in this paper. However, political decisions regarding health care funding create opportunities for politically active groups to obtain coverage for their specific disease at the expense of less well-organized constituencies.

David Leonhardt of the New York Times notes, “Rationing is an inescapable part of economic life. It is the process of allocating scarce resources.” He observes, “The choice isn’t between rationing and not rationing. It’s between rationing well and rationing badly.”³⁴

Just and equitable allocation of health care resources would use a fair and impartial process that is also reasonable and unbiased and that has broad public support. This paper seeks to develop improved approaches not just for determining how resources are allocated, but also to ensure that scarce health care resources, including physicians’ time, are shared fairly and used more appropriately and efficiently. We wish to emphasize that choices that provide clinically effective care and maximize value are not the same as denying patients effective care or making choices about who can receive care or what services are available. Conserving resources where there aren’t absolute shortages can also minimize overt rationing.

The United States currently spends a much higher percentage of its GDP on health care than all other developed nations. It spends 2.5 times as much per person on health care than the average for other developed countries.³⁵ Choosing less expensive but clinically effective health care options, such as using generic medications when appropriate and conservatively ordering tests or procedures of marginal value, will help preserve resources so that overt rationing can be minimized. More effective use of resources could avoid many of the rationing decisions that many people fear.

How Are Health Resource Allocation Decisions Made?

In situations where supplies are limited, such as organs for transplantation or vaccines during an epidemic, allocation decisions can be based on **patient need**, so that highest priority is given to potential recipients most in need to sustain life or on **potential benefit**—giving highest priority to services and technologies likely to yield the most benefit in terms of years of life gained.

Health resources are also allocated based on **eligibility requirements**. State and federal eligibility requirements determine who can receive medical services under Medicaid. The Veterans Health Administration (VHA) provides health care to US military veterans according to eligibility criteria that give higher priority to those with service-connected conditions. The VHA and the Indian Health Service have **global budgets** that determine how much money can be spent annually. (See section on the VHA for more details.)

Price is a common means of allocating resources. In a freely competitive marketplace, prices are determined strictly by supply and demand. Those who can pay the price can purchase the service, while those who cannot must do without. However, health care is subject to other factors that influence the supply and demand for services.

In 2007, 37% of US adults reported that they did not obtain needed medical care for a doctor's visit; skipped needed medical tests, treatments, or follow-ups; or did not fill prescriptions or skipped doses because of costs.³⁶ Uninsured patients who must pay for their health care out-of-pocket often make different choices from those who are insured. Health insurance insulates patients from the full charges for the health care services they receive³⁷, and patients can be unaware of these charges until they receive an insurance statement. Patients may pay the same copayment for expensive products and services as for cheaper but clinically equivalent products and services. Federal tax law, which excludes employer payments for health insurance from personal income and payroll taxes, also obscures the true cost of health insurance.³⁸ Even if employees know how much they and their employer pay for health insurance premiums,³⁹ they may not realize the cost of their health insurance in terms of foregone wages or other benefits.⁴⁰ Insured patients pay out-of-pocket for health insurance premiums, non-covered services, and copayments and deductibles for covered services. More than 18% of employees with employment-sponsored private insurance incurred health care costs in 2006 that constituted a high financial burden, consuming more than 10% of their income.⁴¹

Physicians and non-physician health care professionals may establish their own nominal prices, but what they are paid is often determined by governments, health insurance companies, and self-insured employers. Professional and ethical standards also may influence physicians to provide care at reduced prices or at no charge to patients who may not otherwise be able to afford it. Essential health care services are generally available on an emergency basis for those without the financial means to pay for their care. The Charter on Medical Professionalism affirms that "Medical professionalism demands that the objective of all health care systems be the availability of a uniform and adequate standard of care. Physicians must individually and collectively strive to reduce barriers to equitable health care."²⁵ Nevertheless, prices may limit access to needed care.

Health insurance is another means of determining who receives health care services and what services are provided. Health insurance plans specify

eligibility criteria for enrollment, determine what is covered, establish limits on the number and frequency of allowed services, and until recently were permitted to set annual and lifetime limits on claims. Limiting reimbursement for out-of-network services may reduce access to health care. Out-of-pocket costs may limit access to nonemergency health care. Health insurance, and consequently access to health care services, is often limited by eligibility restrictions based on age, income, employment status, disability status, and other criteria. Those without health insurance coverage have much more limited access than those with insurance.^{11, 42}

Allocation decisions can also be based on determinations of **medical necessity, clinical effectiveness,** and/or **cost.** In a 2007 ACP position paper on Comparative Effectiveness Research, the College observed:

It is clear that health care resources are limited, even in this rich country, and that cost factors already play a role and will continue to play a role in health care expenditure decisions. Making valid and reliable cost-effectiveness data from a trusted source available to all stakeholders would provide a needed tool for the general population and traditional health care purchasers (e.g., government programs and employers) to help ensure improved value in their purchases. It would also ultimately result in a better and more socially equitable means of controlling overall costs than our current approach of limiting access to care for some of our most vulnerable, needy citizens or using cost information in the decision-making process in a non-transparent manner that doesn't consider effectiveness.⁴³

Regulating the supply of health care facilities, workforce, or equipment is another means of allocating health care resources. Examples include establishing a process for approving new hospital beds, regulating the health care workforce through funding the number of training positions for physicians and other health care professionals, and requiring regulatory approval of health care facilities and large capital equipment. Requiring approval for the introduction of new and costly technologies and procedures is an allocation process that controls costs but limits supply.

The United States attempted to improve the allocation of health resources at the state and local levels by enactment of the National Health Planning and Resource Development Act of 1974 (P.L. 93-641), which created a comprehensive national health planning program that involved local, regional, state, and federal planning agencies in developing health plans to contain costs, reduce disparities, and improve the accessibility and quality of health care. A process was established to engage the public in addressing local and regional needs. Reallocation of resources and cost containment were to be achieved by reducing redundancy of facilities, equipment, and personnel. Regulatory tools included certificate-of-need programs that restricted the supply and expansion of hospitals and other health care facilities and limited capital equipment expenditures.^{44, 45} This controversial program was not reauthorized in the early 1980s. Proponents claimed that it was needed to allocate resources efficiently to improve access and quality and to help constrain upwardly spiraling health care costs, while critics said it failed to keep costs down, created additional bureaucratic hurdles, and insulated existing facilities from competition.^{46, 47}

Access to health care resources can also be inadvertently limited through **unintended barriers**, such as long waiting times for appointments and limited hours of operation. Patients can be deterred from seeking care by excessive paperwork and documentation requirements, limiting access to those unwilling to endure the bureaucratic process—this may be a reason why many people don't enroll themselves or their children for public programs despite being eligible. Allocation decisions also reflect **moral, ethical, or religious restrictions** (e.g., bans on abortion services or denials of treatments for illnesses resulting from lifestyle choices). **Legislative decision-making** often determines which health services are paid for by governments (e.g., Medicare coverage of ESRD excludes undocumented people).

Prioritizing Health Care Services

Prioritizing health care resources involves determinations about the relative needs of patients, the potential benefits to individuals, and the maximum benefit to society. Trade-offs among competing interests can be extremely difficult. Some treatments may be essential and extremely beneficial to a small number of patients, while others may modestly improve outcomes for the entire population. New technology may offer outstanding improvements in health care but at such a high cost that it would prevent full funding for other needed services.

Oregon Health Plan

In 1989, the Oregon Legislature created the Health Services Commission and directed it to develop a prioritized list of health services ranked in order of importance to the entire population to be covered, using a method for allocating resources for health care that was both effective and accountable. A guiding principle was to develop a methodology that would meet budget constraints by reducing benefits rather than by cutting people from coverage or reducing payments below cost. The 11-member Commission, which included 5 physicians, compiled information on the relative clinical effectiveness, expected outcomes, and costs of treating approximately 700 conditions. It obtained information on public values through town hall meetings, focus groups, and public surveys.⁴⁸

Initially, the Commission utilized a formula to derive cost/utility values and ranked health services accordingly. This method was abandoned because it gave higher priority to very inexpensive, very effective treatments for relatively unimportant conditions (e.g., malocclusion due to thumb sucking) over moderately expensive, moderately effective treatments for very serious conditions. The Commission therefore established general categories of treatment, which were ranked to reflect relative importance based on public input first, and then effectiveness and cost.

However, before its first prioritized list was published in 1993, the Commission had to revise its methodology to comply with the American with Disabilities Act (ADA), to remove public input on social values that might reflect biases against people with disabilities. Consequently, only two objective factors are now considered: clinical effectiveness and comparative effectiveness based on cost. Public values are reflected by the subjective collective judgment of the Commissioners.

Although the process was originally intended to apply to the entire population of the state, it has only been applied to Medicaid recipients. Diseases and medical conditions are ranked in order of priority.⁴⁹ The state budget (including Oregon's share of federal Medicaid dollars) determines how far on the priority

list coverage will be provided. In 2002, there were 736 treatments ranked on the prioritization list, and the state funded the first 566. In 2009, the list ranked 680 treatments and the state would pay only for the first 503. Ranked highest (1 through 5) in 2009 were, respectively: maternity care, newborn care, preventive services for children from birth to 10 years of age, preventive services over age 10, and treatment for drug abuse or dependence.

The Oregon Health Commission attests (50):

The Prioritized List has succeeded in guiding decisions about the allocation of public resources for health coverage and in making these decisions more explicit and accountable. It has also succeeded in making health policy more reflective both of the best evidence available on clinical effectiveness and of the preferences of those affected by these health policy decisions. Also, physician practice has altered over time to reflect the benefits defined by the Prioritized List.

However, the Commission acknowledges:

The Prioritized List has not succeeded in shifting responses to budget constraints entirely to reductions in benefits, although this was a major policy objective from the beginning. This is because the federal government has been reluctant to allow Oregon to reduce benefits when revenues decline, forcing the state to make adjustments in eligibility and in payment levels to keep within budget. This political constraint has prevented a full exploration of the effectiveness of the prioritization of services in meeting budget limits while maintaining the commitment to cover all those in need and the commitment to pay providers at levels sufficient to cover the cost of care.

The Commission further notes:

Even if Oregon were free to move the line further, the range just above the current funding level begins to include some serious but treatable conditions. Reducing benefits to within this range would present serious medical and ethical difficulties, as this population would likely not be able to afford the care otherwise.

The Prioritized List has had a modest impact on costs per member per month. The actuary has estimated that the costs associated with the funded portion of the List are approximately 90% of the cost of funding the entire List. The reason the impact is not greater is that much of the more expensive care is found high on the List. In fact, diagnostic services—which are very expensive and becoming more costly every year—are in effect ranked at line zero in the sense that the care required to arrive at a diagnosis is always covered.

Veterans Health Administration (VHA)

Health Care services for some US military veterans are provided by the VHA. This organization is the nation's largest integrated direct health care delivery system and provides care at over 800 locations to 5.5 million veterans.⁵¹ Services are based on patient priority according to eligibility criteria. VHA services are funded by annual appropriations by Congress. Funds are allocated geographically among 21 Veterans Integrated Service Networks (VISNs) through a system that is largely based on patient workload. If funding is exhausted before the end of a fiscal year, services can be curtailed; however this occurs only rarely and typically only with purchased care.⁵²

Eligibility for VHA services is ranked according to a priority system. "High-priority" or "core" veterans are eligible to receive needed hospital and medical care at no cost. Veterans with non-service-connected medical conditions and those with incomes and net worth above the VHA means test thresholds have lower priority to receive services and have copayments for medical services and for medications for non-service-connected conditions.

Health care services are provided predominantly in government-owned facilities by salaried professionals, but substantial services are also purchased. The VHA allocates resources by controlling the supply of health care professionals and the numbers and types of health care facilities and equipment. Costs are also controlled through use of a primary care-based system. Under some circumstances, the VHA will pay for care provided to eligible veterans by non-VA physicians and nonphysician providers. Prescription drug costs are controlled through the use of a national pharmacy benefits management service (PBM) that coordinates pharmacy benefits and administers a national formulary that lists drugs that VHA providers are expected to use. There is also a non-formulary drug request process that allows access to medications not listed on the national formulary when clinically necessary. The VHA is also moving increasingly to value-based purchasing using national contracts for equipment and supplies as well as drugs. The VHA also controls costs by using a health information technology system for maintaining electronic medical records and for ordering drugs electronically. Additional savings are achieved through the use of the Computerized Mail-Out Pharmacy (CMOP) program.

Inpatient and outpatient care for eligible dependents of veterans is provided in the private sector through the Civilian Health and Medical Program of the Department of Veterans Affairs (CHAMPVA). The VA system thus provides health care within budgetary limits to a distinct population of patients based on eligibility categories. The innovation and delivery system design applied by the VA, if applied elsewhere, could produce efficiencies and reduce health care costs.⁵³ This would help to minimize or avoid the need for overt rationing.

Resource Allocation Approaches Used in Other Countries

Most other countries have some process for allocating health care resources (see Appendix A and B). Australia, the United Kingdom (England and Wales), and other countries have mechanisms for approving new health care technology. Global budgets are used, for example, in Germany, New Zealand, Taiwan, Canada, and the United Kingdom. In Israel, the government provides universal coverage for its residents but controls costs by not covering adult dental services, private physician fees, or privately ordered medications. In addition, Israelis enroll in one of four sickness funds that share risk with the consumer through copayments, which are typically high compared with those in the European community. Governments negotiate prices in Belgium and Canada. In Japan, New Zealand, England, and Wales, the government sets and controls prices. However, price controls can result in shortages of services, delays in obtaining elective procedures, cost-shifting, and creation of parallel private sector markets for those who can afford to go outside the system.

Health care resources in developing countries are often scarce and insufficient to meet patient needs. Consequently, much overt rationing occurs. A recent article in the *New England Journal of Medicine* noted that in much of Africa, “the overriding rationale behind current guidelines for antiretroviral therapy is rationing—limiting the number of people who must be treated, providing the cheapest available drugs, and delaying shifts to more expensive drugs for as long as possible.”⁵⁴

Appendix B contains brief summaries of health care systems and approaches to allocating health care resources in Canada, France, Germany, Japan, Netherlands, Switzerland, Taiwan, and the United Kingdom (England and Wales). The pros and cons of each are identified along with possible lessons for the United States.

ACP Policy Positions to Guide Resource Allocation Decisions

- 1. Sufficient resources should be devoted to developing needed data on clinical and cost-effectiveness of medical interventions for comparative, evidence-based evaluations that should serve as the basis for allocation decisions about the utilization of health care resources.**

Comparative effectiveness evaluations of new technologies compared with existing technologies could better ensure that health care resources are used judiciously. A strong evidence base is needed to determine what good-quality care is, what is clinically effective, what is clinically effective with proper consideration of cost, what resources exist, how to ethically and equitably balance these factors, and how to make choices based on evidence of comparative effectiveness. US efforts to gather these kinds of information to date have been haphazard.

Much comparative effectiveness research in this country focuses solely on evaluating relative clinical differences without considering cost.⁵⁵ Indeed, the US Preventive Services Task Force (USPSTF) in developing revised guidelines on breast cancer screening did not consider cost.⁵⁶ However, the Agency for Healthcare Research and Quality (AHRQ) sponsors research to determine both

clinical effectiveness and comparative effectiveness, including evaluations based on comparative costs, and works with clinicians and health care organizations to disseminate this information.⁵⁷ Most studies of comparative effectiveness evaluate new medications and therapies compared with no intervention or a placebo, rather than comparing both new and existing treatments to each other and to nonpharmacologic interventions (e.g., diet or exercise) or different medication approaches.⁵⁸ Evidence regarding treatment of the frail elderly is especially limited.

In its 2008 policy paper on comparative effectiveness, (43) ACP observed:

The United States currently does not have a systematic means of producing comparative information on the relative effectiveness of drugs, durable equipment, therapies, or procedures. The limited amount of comparative effectiveness data that is produced is done piecemeal, with little or no rational prioritization on the basis of the benefits it would provide to individual patients and the general population, little coordination or harmonization of evaluative efforts, and uneven methodological standards for evaluating and reporting the results to clinicians and patients. Furthermore, the United States currently spends less than 0.1% of its approximately \$2 trillion annual health care expenditures, including both public and private sources, on effectiveness research—exclusive of pharmaceutical industry-funded clinical trials—with a much smaller portion of this amount specifically related to comparative effectiveness research.^{59, 60}

ACP concluded:

- The United States expends insufficient funds to develop comparative effectiveness data.
- There is no coordination or prioritization of current efforts in either the public or private sector to help produce comparative effectiveness information that would provide the greatest health care impact.
- The absence of readily available, essential comparative effectiveness information interferes with the ability of physicians and their patients to make effective, informed treatment choices that meet the unique needs and preferences of the patient and the ability of payers to optimize the value received for their health care expenditures.

The American Recovery and Reinvestment Act (ARRA) of 2009—economic stimulus legislation—provided increased federal funding for comparative effectiveness research: \$300 million to the AHRQ, and \$400 million to the National Institutes of Health (NIH). Although this one-time increase was substantial compared with the previous levels of funding for comparative effectiveness research, some believe it was insufficient. The ACA of 2010 established a private entity, the Patient-Centered Outcomes Research Institute, to provide comparative effectiveness information to assist patients, clinicians, purchasers, and policymakers in making informed health decisions. The Institute will prioritize health care areas to address and engage in research and evidence synthesis efforts, and disseminate its findings to all stakeholders. The function of the Institute is solely informational; it is specifically precluded from making

mandates regarding coverage, reimbursement, or other policies for any public or private payer. Nonetheless, it is expected that both private and public payers will over time use the comparative effectiveness information from this source in various policy decisions.

The federal government is permitted to use the evidence and findings from the new Patient-Centered Outcomes Research Institute to make a Medicare coverage determination only if the process is transparent, based on multiple sources, includes public comment, and considers the effect on subpopulations. Furthermore, the federal government is prohibited from using this information in determining Medicare coverage, reimbursement, or incentive programs in a manner that would preclude or have the intent to discourage individuals from choosing health care treatments based on how the individual values the tradeoff between extending life and the risk for disability. The legislation also specifically prohibits the Institute from using cost-effectiveness analyses, such as quality-adjusted life-years (QALYs), as a threshold for determining what health care is recommended.⁶¹

The legislation also required the creation of a Center for Medicare & Medicaid Innovation within CMS. The purpose of the center will be to research, develop, test, and expand innovative payment and delivery arrangements to improve the quality and reduce the cost of care provided to patients.

ACP has been developing evidence-based clinical guidelines and encouraging use of these guidelines for almost 30 years. The College also publishes a continually updated, evidence-based reference of internal medicine practices and offers the Physicians' Information and Education Resource (PIER), a Web-based decision-support tool designed for rapid point-of-care delivery of up-to-date, evidence-based guidance for clinicians, free to its members. ACP Guidelines are also published in ACP Medicine. Other organizations also develop clinical guidelines, but there is much variation in methodology and guidelines can be conflicting. Consequently, ACP has supported the creation of an independent, trusted entity to facilitate the development of evidence-based data and guidelines on clinical effectiveness and comparative effectiveness reflecting analysis on the basis of costs and value added.

- 2. There should be a transparent and publicly acceptable process for making health resource allocation decisions with a focus on medical efficacy, clinical effectiveness, and need, with consideration of cost based on the best available medical evidence.**
- 3. The public, patients, physicians, insurers, payers, and other stakeholders should have opportunities to provide input to health resource allocation decision-making at the policy level.**

Making decisions on medical resource allocation is not an exact science. Policy experience in the United States is fairly limited (see VHA and Oregon Plan), although medical triaging is commonplace. As noted in the ACP Ethics Manual, "Physicians, patient advocates, insurers, and payers should participate together in decisions at the policy level; should emphasize the value of health to society; should promote justice in the health care system; and should base allocations on medical need, efficacy, cost-effectiveness, and proper distribution of benefits and burdens in society." (24)

The Ethics Manual also advises:

Resource allocation decisions are most appropriately made at the policy level rather than entirely in the context of an individual patient-physician encounter. Ethical allocation policy is best achieved when all affected parties discuss what resources exist, to what extent they are limited, what costs attach to various benefits, and how to equitably balance all these factors.²⁴

Making rational allocation decisions that are just and equitable on a regional, state, or national level requires a process that involves opportunities for public input, including from informed patients and from health professionals with expertise in the delivery of health care services and in the education and training of the health care workforce. Without public participation, decisions made by “experts” and “stakeholders” will be distrusted and will be less likely to receive public support. The recent release of new guidelines for mammography screening by the US Preventive Services Task Force created a public outcry, as many people did not understand how the guidelines were developed and perceived that they would unnecessarily restrict access to a potentially life-saving procedure.⁶²

In England and Wales, the National Institute for Clinical Excellence (NICE) established a Citizens Council of 30 lay people representing a cross-section of the population to inform its decision-making and to build a basis for its legitimacy.⁶³ Although the NICE process is not likely to be adopted in the US, it is a successful example of how to provide public input into a health resource allocation decision-making process.

4. Multiple criteria should be considered in determining priorities for health care resources. Factors that might be considered high priority, in addition to clinical effectiveness and costs, should include:

- Patient need, preferences, and values
- Potential benefit
- Safety
- Societal priorities that include fiscal responsibility and equitable access
- Quality of life gained, consistent and compliant with the Americans with Disabilities Act
- Public health benefit
- Impact on families and caregivers
- A balance between cost and clinical effectiveness to minimize adverse economic consequences on current and future generations.

Deciding how to provide scarce health care resources, such as organs for transplantation, should be guided by established procedures to assure that the process is just and equitable. Allocation of scarce resources raises many ethical challenges, including considerations of the value and benefits of treatment to one patient versus another and the value and benefits to society.⁶⁴

A process for establishing priorities in advance at the policy level can help resolve difficult and conflicting ethical dilemmas that may arise. As noted in the ACP Ethics Manual, “a patient’s preferences may conflict with the interests or values of the physician, an institution, a payer, other members of a managed care plan who have equal claim to the same health care resources, or society.” The Ethics Manual advises²⁴:

Physicians have an obligation to promote their patients’ welfare in this increasingly complex health care system. This entails forthrightly helping patients to understand clinical recommendations and to make informed choices among all appropriate care options. It includes management of the conflicts of interest and multiple commitments that arise in any practice environment, especially in an era of cost concerns. It also includes stewardship of finite health care resources so that as many health care needs as possible can be met, whether in the physician’s office, the hospital, or the long-term care facility or at home.

One approach for determining priorities for specific services that are in great shortage would be to follow a process like that used by United Network for Organ Sharing (UNOS) for organ transplantation. Screening of organ transplant recipients involves objective consideration of which patients are most likely to benefit. Data about every organ transplant in the United States are collected and managed by UNOS, a nonprofit, scientific, and educational organization that administers the Organ Procurement and Transplantation Network established by Congress in 1984. According to UNOS, the organ donation allocation process works as follows:

When organs are donated, a complex process begins. The procuring organization accesses the national transplant computer system, UNetsm, through the Internet, or contacts the UNOS Organ Center directly. In either situation, information about the donor is entered into UNetsm and a donor/recipient match is run for each donated organ.

The resulting match list of potential recipients is ranked according to objective medical criteria (i.e., blood type, tissue type, size of the organ, medical urgency of the patient as well as time already spent on the waiting list and distance between donor and recipient). Each organ has its own specific criteria.

Using the match of potential recipients, the local organ procurement coordinator or an organ placement specialist contacts the transplant center of the highest ranked patient, based on policy criteria, and offers the organ. If the organ is turned down, the next potential recipient’s transplant center on the match list is contacted. Calls are made to multiple recipients’ transplant centers in succession to expedite the organ placement process until the organ is placed. Once the organ is accepted for a patient, transportation arrangements are made and the transplant surgery is scheduled.⁶⁵

Criteria other than potential patient benefit should be considered. Providing clinically effective preventive care at an acceptable cost can result in early detection and treatment of diseases that would be much more complex and difficult to address at later stages. Other preventive services, such as immunizations and prenatal care, can reduce the prevalence of disease and help people live longer, healthier lives. Many preventive services also offer good value for increasingly scarce health care dollars.⁶⁶

The impact on public health should also be considered. Treatments for contagious diseases might warrant high priority. Other criteria to be considered could include the impact on worker productivity and the economy; the impact on families in caring for patients with permanent disabilities; public health concerns about the spread of infectious diseases; costs to the public for social services; and public safety concerns about untreated, severe mental illnesses. Getting benefits to the most people is another criterion that might be given high priority. Counseling on diet and exercise might be ranked high for the potential to prevent obesity and to control chronic conditions like diabetes and high cholesterol that affect an increasingly large portion of the US population.

In England and Wales, prioritization of health services involves measurements of all health effects on individuals and the costs to the public sector, including the costs of social services. (67) Services are evaluated according to expected gains in life expectancy and value judgments on quality of life in terms of physical mobility, ability for self-care, ability to carry out activities of daily living, absence of pain and discomfort, and absence of anxiety and depression.⁶⁸

Although it is tempting to believe that health care resources can be allocated principally based on objective evidence of potential benefit, impact on the individual person, and broader impact on society, the evidence often is unclear, and the public's preferences and values also need to be considered and respected. The public may decide, for instance, based on individual and collective preferences and values, that it is important for patients to access some services that may be considered of "marginal" benefit—based on the evidence—even if this would result in fewer resources for other medical services that may have higher benefit. In a free and democratic society, the public may elect to have public funds spent in ways that would be at variance with a strict application of evidence-based criteria. Such public preferences and values need to be incorporated, along with consideration of evidence of effectiveness, in decisions relating to health resource allocations.

Setting priorities for health resource allocations involves complex decisions involving multiple criteria. A process for prioritizing the allocation of health care resources in the United States should consider all relevant criteria. Accordingly, priority setting should use multi-criteria decision analysis.⁶⁹

- 5. Allocation decisions should be in accord with societal values and reflect moral, ethical, cultural, and professional standards.**
- 6. Allocation decisions should not discriminate against a class or category of patients and should be developed and applied in compliance with established rules without prejudice or favoritism.**

As explained in the ACP Ethics Manual (24):

Physicians have a responsibility to practice effective and efficient health care and to use health care resources responsibly. Parsimonious care that utilizes the most efficient means to effectively diagnose a condition and treat a patient respects the need to use resources wisely and to help ensure that resources are equitably available. In making recommendations to patients, designing practice guidelines and formularies, and making decisions on medical benefits review boards, physicians' considered judgments should reflect the best clinical literature, including data on the cost-effectiveness of different clinical approaches. When patients ask, they should be informed of the rationale that underlies the physician's recommendation.

Health plans are not obliged to underwrite approaches that patients may value but that are not justifiable on clinical or theoretical scientific grounds or that are relatively cost-ineffective compared with other therapies for the same condition or other therapies offered by the health plan for other conditions. However, the plan must have in place a fair appeals procedure. In instances of disagreement between patient and physician for any reason, the physician is obligated to explain the basis for the disagreement, to educate the patient, and to meet the patient's needs for comfort and reassurance.

Other countries (e.g., United Kingdom, Canada, and Australia) have attempted to reflect societal values in allocating health care resources. The Oregon Health Plan also relies on public input to determine and reflect societal values. Resource allocation processes by themselves do not necessarily reflect a society's moral, ethical, or professional standards. Hypothetically, a medical procedure could be both clinically effective and save money, but could reduce quality of life so extensively that it would be morally and ethically unacceptable and would violate professional standards of care.

To be fair and equitable, resource allocations should not result in discrimination against individual patients and categories of patients based on their socioeconomic status or race, ethnicity, or gender. Accordingly, allocation decisions should be developed and applied in compliance with established rules without prejudice or favoritism.

7. The allocation process should be flexible enough to address variations in regional and population-based needs that are identified in a scientific way and to accommodate special circumstances.

Resource allocation decisions should allow for exceptions to reflect justifiable geographic and population-based variations in need for health care services. State, regional, and local involvement in the allocation process would help assure that national guidelines are applied in a manner that is sensitive to demographic and geographic variations. An ideal allocation process would not be so rigid that it would preclude access to services or treatments that would primarily benefit only a minority of patients. Likewise, there should be safeguards to assure that physicians maintain options in treating patients for whom "approved" treatments are contraindicated (e.g., allergic reactions, at risk for serious side effects) and to accommodate patient idiosyncrasies both among patients in their responses to pathologic insults and the issue of complications of underlying disease. Accordingly, coverage and regulatory decisions should be subject to an appeals or exceptions process to accommodate unusual and justifiable clinical situations.

- 8. Decisions on allocation of health care resources will have more public support if they incorporate an essential role for individuals to make their own informed decisions and to share in decision-making responsibility, rather than having such decisions imposed on them. Accordingly:**
 - A. Patients and physicians should be provided with objective and understandable information about the benefits and costs of different treatments to enable them to make informed choices, in consultation with their physicians (shared decision-making), on the best treatment options.**
 - B. To encourage patients to use health care resources wisely, public and private health insurers could vary patient cost-sharing levels so that services with greater value, based on a review of the evidence, have lower cost-sharing levels than those with less value.**
 - C. Although everyone should be guaranteed access to affordable, essential, and evidence-based benefits, persons should be able to obtain and purchase additional health care services and coverage at their own expense. However, physicians and other health care professionals should not be obligated to provide services that are unnecessary, inappropriate, harmful, and/or unproven even if the patient requests to pay for such services out-of-pocket.**

Involving the doctor and patient in shared decision-making is a way to ensure that treatment decisions are optimally aligned with patient values and preferences, prevent unwanted treatments and procedures, and avoid potential health care costs. Medical treatment decisions should always reflect individual desires, values, and preferences of patients as expressed in consultation with their physicians. Many tools have been developed to facilitate the participation of patients in shared decision-making and to ensure that they are well-informed. Clinical trials have found that decision aids improve people's knowledge of options, create realistic expectations of benefits and harms, reduce difficulty with decision-making, and increase participation in the decision-making process.⁽⁷⁰⁾ Clinical trials of shared decision-making have shown that patients are less likely to choose interventions, such as invasive surgery, when they are fully informed—not necessarily because they are trying to save money but rather because they may have different values, preferences, and incentives than their physicians.⁷¹

For cost-sharing provisions to effectively encourage personal responsibility, patients must have better access to accurate and understandable information so they can make informed decisions. Health systems should provide easy access to information about the actual prices of medical services and available treatment options. Patient education should include information about health, diet and nutrition, and preventive health care. Patients should have access to treatment options, but also to information about the effectiveness of medical tests and procedures. Improved transparency with public access to information about the qualifications and performance of physicians, hospitals, and other providers of health care services would also help patients in their decision-making.²⁶

Patients should be able to obtain health care services using their own resources. The United States has a long history of individualism and of preserving the freedom of individuals to make their own choices. Individuals

may choose to spend their own money to obtain services that they desire, regardless of the scientific evidence of effectiveness. However, physicians and other health professionals have an ethical obligation “to do no harm” that includes not providing ineffective services that are harmful or impair the patient’s ability to obtain effective therapy. Likewise, physicians and other health professionals should not order tests or procedures for which there is marginal patient benefit solely for defensive medicine purposes.

The ACP Ethics Manual provides the following advice:

Health plans are not obliged to underwrite approaches that patients may value but that are not justifiable on clinical or theoretical scientific grounds or that are relatively cost-inefficient compared with other therapies for the same condition or other therapies offered by the health plan for other conditions. However, the plan must have in place a fair appeals procedure. In instances of disagreement between patient and physician for any reason, the physician is obligated to explain the basis for the disagreement, to educate the patient, and to meet the patient’s needs for comfort and reassurance.²⁴

9. Medical liability reforms are needed to decrease the practice of defensive medicine.

As cited previously from the *ACP Ethics Manual*, physicians have a responsibility to practice effective and efficient health care and to use health care resources wisely and responsibly. This infers that services not be provided that are known to be ineffective or unnecessary, and certainly not to provide services that are harmful. Ordering such excessive tests or procedures can cause harm by either toxicity or by impairing patient’s ability to obtain effective therapy. Yet, to reduce the risk for being sued, some physicians order tests and procedures that are unnecessary or have minimal medical benefit in an effort to demonstrate that they have taken all actions that might be considered appropriate. This defensive medicine results in inefficient use of health care resources. It also unnecessarily adds to health care costs, including physician costs for malpractice insurance. Tort reform is necessary not only to reduce these costs but also to remove a major impediment that inhibits physicians from responsibly ordering tests and procedures based primarily on clinical and cost-effectiveness in accord with practice guidelines. ACP has extensive policy on alternatives to the current medical liability system.^{72, 26}

10. Resource allocation process and priority setting should be periodically reviewed to reflect evolving medical and societal values and changes in evidence, and assess for any cost shifting or other unwanted effects.

Experience in Oregon and the United Kingdom has shown that societal values change and that prioritization of health care resources should reflect these changes. Clinical effectiveness with consideration of cost is an important criterion for evaluating health care services, but changing societal values should also be considered.

Priorities of the Oregon Health Plan are reviewed biennially and have changed significantly since the program’s inception.⁷³ In 2002, treatment for severe head injuries ranked #1 on the plan’s prioritization list, but in 2010, it ranked #100. Type 1 diabetes was ranked #2 in 2002, but fell to #10 in 2010.

Meanwhile, maternity care, which was ranked #55 in 2002 rose to #1 in 2010, and newborn care, which was ranked #56 in 2002, was elevated to #2 in 2010.⁷⁴ Many of the changes in Oregon's prioritization reflected increased valuation of preventive care and chronic disease management, and reduced (although they remain high on the list) ratings for many life-saving procedures.⁷⁵ Proponents assert that the process successfully combines qualitative information on public values and priorities with quantitative data on comparative effectiveness.³¹ However, critics maintain that the Oregon process increasingly favors coverage for politically popular care and treatments for diseases with active political constituencies.

Issues for Public Policymakers to Consider Regarding the Allocation and Distribution of Health Care Resources

1. How can equitable and just decisions be made on the allocation of limited health care resources, and who should be involved in making such decisions?

Making allocation decisions that are just and equitable on a regional, state, or national level requires public input and input from health professionals who have expertise in the delivery of health care services and in the education and training of the health care workforce. Government must be involved not only for its role as a purchaser and payer of health care services, but also for its role in funding education and training programs for health professionals. A process is needed for evaluating the supply and requirements of each health profession and for projecting future needs. (23) Government funding decisions at the regional, state, and local levels could then be based on objective data on workforce needs.

A just and equitable process for determining societal values and the appropriate supply of health care facilities and equipment could also better allocate resources to address patient care needs. While decisions on approving new facilities and equipment might best be made at the local and state levels to reflect local priorities, evaluations of effectiveness of technologies can best be made at the national level to avoid duplication of effort.

Other countries have tried various approaches for using health resources wisely that employ significantly greater coordination, centralized prioritization, and use of clinical effectiveness and cost-effectiveness data than the United States.^{76,77} Examples include Canada, Great Britain, Germany, France, Sweden, and Australia (Appendix B), as well as multinational collaborations, such as the European Medicines Agency and the European Network for Health Technology Assessment.

2. What resource allocation mechanisms should be considered?

Decisions must be made justly and equitably. They should be (1) based on science whenever possible; (2) reflective of public participation; (3) transparent and provide clinicians, patients, health facilities, and communities the information they need to make decisions; and (4) ensure that resource allocations do not result in discrimination against individual patients and categories of patients based on, for example, socioeconomic status, race, ethnicity, age, or gender.

Appendix B describes some mechanisms used in other countries to allocate health care resources. Global budgets are used in many countries and in the US VHA. Other mechanisms include a national health service (NHS) with explicit rationing based on evaluations of clinical effectiveness, cost, and societal values (England and Wales); screening of new technology (England and Wales, Germany, and Japan); government regulation of prices and coverage with tight controls on utilization (Japan); negotiation of prices (Canada and Switzerland); patient responsibility for full out-of-pocket payment at point of service (France); managed competition with consumer-driven choices and primary care gatekeepers (Netherlands and Switzerland); and government determination of a compulsory benefits package with restrictions on private insurance company profits (Switzerland).

As noted, any resource mechanism applied to the allocation of health care resources in the United States will need to accommodate this country's unique cultural, political, social, historical, and economic characteristics. Since the United States already devotes a much greater share of its resources to health care than other countries, more efficient use of its resources could lead to expanded access to appropriate services without resorting to overt rationing.

3. How can we best develop a process for health resource allocation decision-making, and how can public support for the process be maximized?

Public acceptance and support of a process that involves choices about the availability of health care resources will be difficult to achieve. The need for such a process and the benefits must be clear and convincing. A skeptical public will need to be convinced that a process for just and equitable allocation of health care resources to prevent less desirable alternatives must be established. These include growing disparities in access and quality, as public and private health insurance become prohibitively expensive—causing cutbacks in coverage and benefits—and fewer resources become available for other national priorities, like education, defense, or protecting the environment. There would be a growing gap between those with adequate health insurance or private resources and those without sufficient financial means or insurance. The public needs to be aware that as an increasing share of our nation's production and earnings are spent on health care, there will be little left for everything else, including employee wage increases.

Public information and communication about the need for a just and equitable process of resource allocation is also necessary. Public information campaigns should utilize all available means of communication, such as public hearings and town hall meetings, the legislative process involving elected representatives, or alternatives, to engage people in discussion about sharing resources that ensure that all voices are heard and considered. These might include opinion polls, focus groups, and public referenda. Public input and accountability may be preferred to having coverage decisions made arbitrarily by managed care organizations and health care plans.

The process needs to be transparent and understandable. An arbitrary or secretive process will be suspect and not likely to gain public acceptance. The process for developing priority criteria also needs to have public input and be acceptable to the public.

The public needs to be involved in developing a process for informed decision-making that would be effective and politically acceptable. White House conferences could be held to help build consensus on the need for such a

process. Congress could hold hearings to highlight the need for a more rational decision-making process for allocating health care resources and to obtain expert input on how to develop the process. Congress might consider following the Oregon Health Plan example of creating a Commission to develop an effective and accountable method for allocating resources.

However, the allocation of resources will ultimately be made, within the broader constraints on resources, at a far more focused level, probably at the state or even local level. States and localities could serve as crucibles for testing how to share health care resources more equitably. Financial support for research and demonstration projects could stimulate such experimentation.

Conclusion

Rising health care costs and an increasing demand for health care services consume a growing and unsustainable share of the nation's economy. Critical choices will need to be made to control health care costs to enable individuals, families, and local and state governments to balance their budgets. Such choices will not be easy and will involve trade-offs. Physicians play an essential role in using health care resources judiciously. However, resource allocation decisions also must be made at a systems level. Fraud and abuse in health care must be eliminated. Medical liability reform must be enacted to deter the practice of defensive medicine. In addition, payment systems must be reformed to achieve greater value in health care.

There is a national imperative to begin a conversation about the need for a deliberative, politically feasible process acceptable to the public that will determine how finite health care resources can be utilized more effectively. The public must be involved in making these decisions. Decisions seen as imposed by government or by those with vested interests will be less acceptable than those in which the public is directly engaged, as shown by the experience with the development of the Oregon Health Plan. Judicious use of health care resources by physicians and non-physician health care providers, informed by evidence-based research on clinical effectiveness and evaluations of comparative cost reflecting societal values, offers a more acceptable alternative to continued increases in health care costs that will inevitably lead to more explicit rationing. Further development of comparative effectiveness data is essential for more efficient use of health care resources.

This position paper provides examples of how explicit and implicit health care rationing in the United States leads to disparities in access and quality. We also examine how other countries make decisions about distributing health care services. The paper is intended to foster an informed debate on how to structure the health care system better to deliver services more effectively and judiciously. Accordingly, ACP policy positions are offered to guide decisions on the just and equitable allocation and distribution of finite health care resources. The positions are not all-inclusive and are not mutually exclusive. We urge public policymakers to begin discussion now on a process for health resource allocation decision-making so that a process can be developed for the United States that will be reasonable, understandable, and publicly acceptable and will avoid or minimize actual rationing.

Appendix A. Mechanisms for Conservation of Health Resources Used by Selected Countries

Country	Global Budgets	Price Negotiation	Primary Care Workforce	Services Covered by Public Plan	Technology	Determination of Clinical Effectiveness	Health Insurance Options/Coverage
Canada	Yes	Provincial and territorial governments negotiate salaries of health professionals and physician fee services	Patients may choose to receive care from any physician	Free access to preventive care, medical treatment, hospital care, dental surgery, and other “medically necessary” services; dental surgery, and other “medically necessary” services	Limited investment, has resulted in outdated technology and medical equipment		Universal single-payer coverage; private insurance not allowed for services covered by public plan; supplemental insurance permitted for uncovered services
France	Yes	National medical fee schedules are negotiated yearly by the three main health insurance funds, associations representing health professionals, and the national government	Primary care physicians act as gatekeepers	Public health insurance covers services ranging from hospital care, outpatient services, prescription drugs, thermal cures in spas, nursing home care, cash benefits, and to a lesser extent, dental and vision care	The National Health Authority reviews technology before reimbursement	The National Health Authority reviews technology	All residents are eligible to enroll in the public health insurance plan and can purchase private insurance in addition to the public plan.
Germany	Yes, regional global budgets	Office-based physicians in every region negotiate with insurers to arrive at collective annual budgets	Primary care physicians hold the patient’s medical records and take responsibility for coordinating patient care	Universal coverage for inpatient and outpatient care, prescription drugs, dental care, and medical devices	New technology is evaluated for clinical benefits and comparative cost	Government decides what medical goods and services are included in the health benefits package, with a committee representing doctors, hospitals, and the sickness funds	Patients choose between public and private insurance (based on earnings)
Japan	No	National fixed reimbursement schedule is negotiated between the Ministry of Health and providers every two years	Supply of physicians is limited; primary care physicians do not serve as gate-keepers	Only reimburses the treatment of disease and excludes preventative care	Tight controls on technology	Basic coverage and costs are determined by the special committee in the Ministry of Health, Welfare, and Labor every other year	Patients do not have a choice of plan

Appendix A. Mechanisms for Conservation of Health Resources Used by Selected Countries (cont.)

Country	Global Budgets	Price Negotiation	Primary Care Workforce	Services Covered by Public Plan	Technology	Determination of Clinical Effectiveness	Health Insurance Options/Coverage
Netherlands	No	Insurance companies have the power to negotiate prices for physician and hospital services	Primary care physicians act as gatekeepers for specialists and hospital care and coordinate care across specialties	Mandatory basic insurance includes coverage of care by general practitioners and specialists, as well as pharmaceuticals and hospital care		The Dutch national government works in conjunction with an independent board to allocate and distribute health care funding.	People may choose to purchase supplemental insurance.
Switzerland	No	Physicians' fees are negotiated between the medical association and the Swiss insurance association		Core benefits package is mandated to be identical for all residents	The federal government establishes what new technology is covered	The Department of Home Affairs establishes the formulary for prescription drugs, sets the maximum allowable prices for drugs, and determines which laboratory analyses and medical devices are covered	Everyone is required to purchase private insurance
Taiwan	Yes	Government has strong leverage to discount payments to doctors	There is a low ratio of doctors and nurses to the general population	Benefits cover inpatient care, preventive and medical services, prescription drugs and certain over-the-counter drugs, dental services, laboratory tests and diagnostic imaging, traditional Chinese medicine, day care for the mentally ill, and home nurse visits	All residents carry a "smart card" that entitles them to health care; the card gives doctors a medical profile of the patient and automates payment.	Prior authorization is required for certain high-cost treatments	Single payer system
United Kingdom (England and Wales)	Yes	NHS employs all physicians.	Primary care physicians serve as gatekeepers	National Health Service determines which services are covered.	Slow spread of technology through the system	NICE assesses safety and efficacy of new diagnostic and therapeutic procedures	Universal coverage is provided through government run National Health Service

Appendix B. Analysis of Resource Allocation Mechanisms in Selected Countries

Canada (78)

Adoption/reform of national health system	1984
GDP (billion US\$)	\$1,435 (2007)
Health expenditure as percentage of GDP (2007)	10.1%
GDP growth rate (2002-2007)	14.3%
Population	32.98 million
Population growth rate	1.0% (2002-2007)
Unemployment rate (% of total population)	3.3%
Morbidity rate (% of total population with good health, self-reported)	88.2%
Life expectancy (total population at birth, years)	80.7
Infant mortality (deaths/1000 live births)	5
Maternal mortality (deaths/100,000 live births)	8.8
Methods used to control health care costs	Global budgets, outdated technology, single payer

Canada's national health care system consists of 10 provincial and 3 territorial health insurance plans.⁷⁹ As noted in the ACP paper, *Achieving a High-Performance Health Care System with Universal Access: What the United States Can Learn from Other Countries*, (16) the Canadian government broadly oversees the health system, but provincial and territorial governments are responsible for planning, financing, and evaluating provisions for preventive care; medical treatment from primary care physicians and hospitals; negotiating salaries of health professionals; and negotiating physician service fees. Each province's public health insurance plan differs slightly, primarily in how far each system extends coverage beyond "medically necessary" physician and hospital services.⁸⁰ However, the criteria and conditions specified in the Canada Health Act (CHA) must be satisfied for the provincial and territorial health insurance plans to qualify for their full share of federal funding. Provinces are not obligated to provide services outside of those listed in the CHA. Most provinces provide supplemental coverage for some services, such as prescriptions and basic dental care, in addition to the standard coverage.⁸⁰ Some provinces (Ontario, British Columbia, and Alberta) require health insurance premiums, but health services cannot be denied for failure to pay the premiums.⁸¹

These single-payer plans provide free access to preventive care, medical treatment, hospital care, dental surgery (not basic dental care), and other "medically necessary" services. User charges and balance billing are not permitted. Health care providers, including primary care physicians, specialists, and hospitals, operate predominantly in the private sector. One hundred

percent of the financing is provided through provincial budgets, with block grants from the federal government to the provinces amounting to only about 20% of the provinces' total health care costs. Global budgets predetermine how much will be spent on health care.

Canadians may choose to receive care from any physician or hospital, and there is no limit to the number of different physicians a patient can see. If patients are not satisfied with the care of one physician or hospital, they may change to another. This creates an incentive for physicians to provide good care for their patients so patients will not seek care elsewhere. Rationing results in long wait times, especially for diagnostic tests and nonemergency care. For services unavailable in Canada, the government will reimburse for care received in the United States, but patients are required to apply in advance. Many patients also travel to the United States to obtain medical services at their own expense. For care in Canada, there is no utilization review, and all services are covered in full without copayments. However, the use of expensive health care services is limited by supply.⁸²

Only prescription drugs that are administered in the hospital setting are covered under the public health system. Outside the hospital setting, public prescription drug coverage, along with coverage for ambulatory care, is determined by each provincial government but not required by the CHA. The provincial governments use their bargaining power as single-payers to negotiate prices for prescription drugs and other health care. Physician and hospital care currently account for less than half of all health care expenditures, whereas prescription drug costs exceed physician care costs.

Private insurance is not permitted for services covered by the public plan and can only cover supplemental services. Consequently, everyone is restricted to the level of care provided by the public system for covered medical services.

The number of MRI units, 5.5 per million people, is much lower than the US ratio of 26.6 per million people. The number of inpatient hospital beds is slightly higher than in the United States (2.9 per 1000 people versus 2.7 per 1,000) but is lower than in most other industrialized countries. Canada's limited investment in medical technology has resulted in delayed introduction of new technologies, often resulting in use of outdated and less-advanced technologies and medical equipment.

In 2001, the Prime Minister established the Commission on the Future of Health Care in Canada (Romanow Commission) to undertake a national dialogue on the future of the public health system and recommend policies to ensure its long-term sustainability. The Commission completed an 18-month study and concluded that the system is sustainable even though the federal share of health funding had been decreasing and health care costs were increasingly being borne by the provincial governments. The report recommended changes for modernizing the CHA, such as expanding coverage beyond physician and hospital services to include home health care and diagnostic services, encouraging adoption of electronic medical records, expanding the scope and effectiveness of technology assessment, fostering applied research, and enhancing accountability of the system. Other recommendations included targeting funds to improve access in rural and remote areas, reducing wait times for diagnostic services, removing obstacles to renewing primary care delivery, and allowing provincial drug programs to expand and improve coverage.⁸³ The Canada Health Infoway program was also adopted in 2001, with the goal of nationwide adoption of electronic health records.

Pros

- Everyone is covered by a provincial health plan and has equal access to and choice of all physicians and hospitals.
- No copayments, bills, or forms for patients—the government pays in full for covered services.
- Physicians have fewer hassles: relatively little paperwork, no filing of claims or otherwise having to deal with multiple private insurance companies, and little utilization review.
- Most Canadians strongly support the system and consider equal and timely access to health care a right of citizenship.⁸³
- Services that are not available in Canada are covered by the government if the patient gets prior approval, and patients are free to obtain health care abroad at their own expense.
- Global budgets control costs by limiting how much will be spent on health care.
- Canada spends much less than the U.S on health care—9.8% of GDP in 2005 compared with 15.3% in the United States,⁷⁸ but age-adjusted health status measures are similar for the two countries.⁸⁴
- Prescription drug prices are lower than in the United States due to negotiation of prices by the provincial governments' single-payer plans.⁸⁴
- The national program sets broad criteria and conditions for the health system, but the provincial and territorial governments have flexibility in planning, financing, and negotiating salaries and fees and may extend coverage beyond “medically necessary” physician and hospital services.

Cons

- Everyone is restricted to the level of care provided by the public system for covered medical services.
- Global budgets limit how much can be spent on health care.
- Private insurance is not available for services covered by the public plan.
- Wait times for nonemergency care are long.
- Introduction of new technology is slow, and medical equipment can be outdated.
- Prescription drugs comprised 17.8% of health spending compared with 12.4% in the United States in 2005 and are higher than in most other industrialized countries.⁸⁴

Lessons Learned

- Allocations of health care resources can be made in a rational manner at the provincial (or state) level.
- Rational allocation of resources can be achieved without adversely affecting age-adjusted health status measures.
- Supply shortages will exist if supplies are not adequately funded under global budgets.
- Single-payer plans can negotiate to reduce drug prices; hassles for physicians can be minimized under a single-payer system.
- A predominantly private sector health care system can be maintained under a single-payer system.
- Lack of patient cost-sharing counteracts efforts to control health care costs.

France (78)

Adoption/reform of national health system	Since 1996, government has presented to Parliament laws financing social security and health care
GDP (billion US\$)	\$2,866.663 (2007)
Health expenditure as percentage of GDP (2007)	11.0%
GDP growth rate (2002-2007)	12.1%
Population	61.71 million
Population growth rate	0.6% (2002-2007)
Unemployment rate (% of total population)	3.6%
Morbidity rate (% of total population with good health, self reported)	75.7%
Life expectancy (total population at birth, years)	80.9
Infant mortality (deaths/1000 live births)	3.8
Maternal mortality (deaths/100,000 live births)	5.3
Methods used to control health care costs	Global Budget, National Health Authority

The French health care system evolved in stages, starting with mutual aid societies in the nineteenth century and establishment of a limited NHI program in 1928. NHI initially covered low-paid salaried workers in industry and commerce. Coverage was extended to all industrial and commercial workers and their families in 1945 and subsequently to farmers and agricultural workers (1961) and independent professionals (1966). Universal coverage was proclaimed in 1974, and comprehensive first-dollar coverage was extended to all legal residents in 2000.⁸⁵ In 2000, the French system also was named as the “best health system in the world” by the World Health Organization.⁸⁶ The French system successfully mixes public and private financing and administration to provide guaranteed universal health care coverage for all of its 64 million residents. The national, regional, and departmental levels of government all share responsibility for health services. Health insurance is mandatory. All residents are eligible to enroll in the public health insurance plan, administered by the social security system (*Sécurité Sociale*), based on occupational status. Individuals also are free to purchase private insurance. Health care services are delivered by both the public and private sectors. The fundamental principles of France’s health care system are personal payment for service (with subsequent reimbursement), patient choice of physician, and physician freedom of practice. The system achieves high marks for health status and patient satisfaction.⁸⁵

In 2005, 79.8% of health care spending was funded through public sources, namely by employer and employee contributions and taxes on alcohol and tobacco. Employees and employers contribute approximately 20% of the employee’s annual salary through direct payroll deductions—employees pay 7%, while employers pay 13%.⁸⁵ Low-income individuals and families who do not have supplemental insurance are eligible for complementary state-funded health coverage, which ensures that all basic health services are fully covered.⁸⁷ The

remaining 24% of health spending was funded through private sources, including private supplemental insurance and patient copayments.⁸⁸ Premium contributions to the *Sécurité Sociale* go into quasi-public insurance funds, which are administered jointly by employee representatives and employers.

Patients have complete control over which doctor they see and how often they see a doctor. However, health care services are not free at the point of service. Upon receiving care, patients must first pay the full price before obtaining insurance reimbursement from their local insurance fund. For other services, such as pharmaceutical costs, they are reimbursed on the spot.⁸⁹ Reimbursement for a visit to a general practitioner or a specialist is generally 70% of the national fee schedule amount.⁽⁹⁰⁾ Patients are responsible for the remainder, either through supplemental insurance or out-of-pocket. There are no deductibles. Consequently, 80%⁸⁷ to 90%⁸⁵ of the population purchases supplemental private health insurance. Supplemental insurance can be purchased either through one's employer or directly from an insurance company.⁹¹ There are a wide variety of supplemental insurance plans to choose from; thus, residents can purchase coverage to fit their needs (i.e., an individual with a chronic condition may wish to purchase coverage for prescriptions or an individual in generally good health may wish to purchase coverage for catastrophic events only).

Doctors and other health care professionals are mostly self-employed and paid on a fee-for-service basis—except for physicians working in public hospitals who receive a salary. National medical fee schedules are negotiated each year by the three main health insurance funds, associations representing health professionals, and the national government.⁹² Approximately 97% of physicians agree to adhere to the national fee schedule. These physicians or practices are known as *conventioné*. Reasonable charges above the national fee schedule are allowed for those with extra qualifications or experience. *Non conventionés* are free to charge more, but must post their prices.⁸⁷ In order to be indemnified for physician visits, all French residents are required to register with a general practitioner (GP), although they can change physicians at any time for any reason. Further, residents must receive a referral from their GP before visiting a specialist in order to be fully reimbursed.⁹³

French NHI covers services ranging from hospital care; outpatient services; prescription drugs (including homeopathic products); thermal cures in spas; nursing home care; cash benefits, and to a lesser extent, dental and vision care. Efforts to improve quality include establishment of a new national agency to promote health care evaluation, prepare hospital accreditation procedures, and establish medical practice guidelines.⁸⁵

Total health expenditure accounted for 11% of France's GDP in 2007. France's health spending of \$3374 per capita was well above the OECD average of \$2759 in 2005.⁹⁴ Pharmaceutical spending has been a key factor behind France's high health expenditures. Allowable prescription drugs prices for reimbursement under NHI are set by a commission that includes government representatives.⁸⁵ France spends 29% of the total of its per capita health spending on pharmaceuticals, a greater share than the United States, where pharmaceutical spending amounts to a 20% share.⁸⁶

Each year, the French parliament passes a law that creates the annual prospective global budget that sets annual health care spending goals for public health expenditures (although spending often exceeds those targets). The federal government then contracts with health insurance funds to manage the system. The government also sets reimbursement rates for both public and private hospitals, which are generally not allowed to bill beyond the negotiated fee schedules. While fees are restricted, private hospitals control their own budgets, whereas public hospitals operate under global annual budgets imposed

by the Ministry of Health. Global budgets and fee restrictions for hospitals have led to a recurring lack of capital investment, resulting in a shortage of medical technology and lack of access to care.⁹⁵

Universal coverage has not resulted in less access to care. In France, there are three types of medical institutions: public hospitals, private not-for profit hospitals, and private for-profit hospitals and clinics. The supply of hospitals and medical technologies is sufficient to avoid the issue of wait times that is common in other nations with universal coverage.⁹⁶ This is largely due to the increasing role of supplemental insurance and the French willingness to pay more for health services.⁹¹

Health care technology that the National Health Authority has categorized as “insufficient medical service rendered” cannot be purchased by public hospitals and its use at clinics is not reimbursable through national insurance schemes. In denying reimbursement for such technology, the French government is showing that it prefers to commit its resources to other expenditures that it deems more useful from a collective point of view.⁹⁵

Pros

- The French system is ranked highly compared with other countries.
- The system achieves high marks for health status and patient satisfaction.
- All legal residents are eligible for coverage under the public health insurance program.
- Individuals who wish to purchase private coverage are free to do so.
- A wide variety of supplemental insurance allows patients to purchase coverage that best fits their needs.
- There is ready access to physicians, hospitals, and medical technology without long waiting times.
- Patients have complete control over which doctor they see and how often they see a doctor, causing doctors to compete on the basis of quality and charges above the national fee schedule.
- Global budgets help restrain public expenditures for health care.
- Health care providers and facilities have considerable autonomy in daily spending and decision-making.
- A mix of public and private financing and administration maintains competition.
- Patient sensitivity to prices is enhanced by requiring patients to pay in full before receiving reimbursement; this may help to reduce overuse and unnecessary patient visits. However, price-sensitivity is reduced by the widespread use of supplemental insurance.
- Physicians are paid on a fee-for-service basis, have a role in negotiating the national fee schedule, and are free to charge above fee schedule amounts.⁹⁰

Cons

- National health expenditures in France (11% of GDP) are second only to the United States (16% of GDP).
- The system runs chronic deficits.
- Global budgets restrict funding for new technology and services and do not provide effective incentives for improved efficiency.
- Pharmaceutical costs are high (29% of health spending).
- Access to specialists requires a referral from a GP.
- Decision-making is overly centralized.
- Taxes are high (20% payroll tax).
- Patients must pay full fee out-of-pocket prior to receiving reimbursement.

Lessons Learned

- Universal health insurance coverage can be achieved through an incremental approach without adopting a single-payer system.
- Global budgets can help restrain health care costs, but do not provide effective incentives for improved efficiency unless the annual expense budget is reasonable and the target region is small enough to motivate individual providers to avoid overutilization of services.
- Universal health coverage can be achieved through a combination of public and private financing.
- France’s two-tiered health care system provides universal health coverage while also encouraging citizens to utilize the private insurance sector as well. This system provides the United States with an example of how to offer universal health care while maintaining the principles of our capitalistic society.
- Private health insurance can serve both complementary and supplemental roles in a largely single-payer national health care system.
- Upfront patient payment for health services (with subsequent reimbursement) as well as copayments can encourage responsible utilization of health services.
- Physician payments on a fee-for-service basis with physician ability to charge above the national fee schedule amounts and participation in negotiations of a national fee schedule by physician organizations may help ensure physician support for a national health care system.

Germany (78)

Adoption/reform of national health system	1883
GDP (billion US\$)	\$3,664 (2007)
Health expenditure as percentage of GDP (2007)	10.4%
GDP growth rate (2002-2007)	10.4%
Population	82.26 million
Population growth rate	0.0% (2002-2007)
Unemployment rate (% of total population)	4.4%
Morbidity rate (% of total population with good health, self reported)	72.6%
Life expectancy (total population at birth, years)	80.0
Infant mortality (deaths/1000 live births)	3.9
Maternal mortality (deaths/100,000 live births)	4.1
Methods used to control health care costs	Global budgets (by region), new technology, medication, services and benefits package are evaluated for clinical benefits and comparative cost

The German system, known as the Bismarck model, was established in 1883 and is the oldest health care system in the world. It provides universal coverage with financing provided through regional sickness funds. Health care is delivered in both the public and private sector. Most hospitals are enrolled in a hospital plan that is financed 93% by sickness funds and the remaining 7% by state government plans.⁸⁹ The legislature (Bundestag and Bundesrat) decides what medical goods and services are included in the statutory health insurance benefits package with input from a committee representing doctors, hospitals, and sickness funds. It considers many aspects of health care medically essential. There is universal coverage for inpatient and outpatient care, prescription drugs, dental care, and medical devices.⁹⁷ German law states that a service must be necessary in order to be covered by the statutory health insurance system. Care is deemed to be “necessary” if it has scientifically proven benefits—clinical trials must show that it reduces the risk for death or disability or improves health-related quality of life. Germany further allocates its resources by only financing technology that has a proven relevant benefit and no similarly or more clinically beneficial alternative that is less costly. The German system places clear priority on clinical benefit for patients; costs play a secondary role unless there is an alternative that is determined to be equally good medically. For example, if a new drug proves to be just as effective as the competing drugs but is more expensive, the patient must bear the additional cost or switch to other alternatives. In this manner, choice is limited for physicians and patients for the good of the community to keep costs down.⁹⁸

Health care financing in Germany involves an internal subsidy model, in which individuals and employers contribute a flat percentage rate to statutory community-based sickness funds. Federal subsidies are also paid to the funds that distribute monies to insurance plans on a capitation basis. Private health insurers charge risk-based premiums, and patients are subject to cost-sharing in the form of coinsurance and deductibles. Doctors are allowed to charge privately insured patients more than twice as much as those with public insurance.⁹⁹

The German health care system offers patients reduced cost-sharing if they register with a general practitioner and obtain referrals to specialist care. The GP usually holds the patient’s medical records and takes responsibility for coordinating the patient’s care and referrals to specialists. Germany also has an annual cap on out-of-pocket spending to help minimize financial barriers to patients.⁹⁹

Nearly all hospital-based physicians are salaried. Their salaries are part of hospital budgets and are negotiated each year between hospitals and “sickness funds.” Office-based physicians get a fee from insurers for every visit and every procedure they perform. Office-based physicians in every region negotiate with insurers to arrive at collective annual budgets. These regional global budgets are divided into quarterly amounts. Once doctors collectively use up this money, there is none left until the next quarter. This is designed as an incentive for doctors to exercise restraint and not to provide more care than is necessary.¹⁰⁰

In 2007, Germany enacted significant reforms to the system with a goal of mandatory universal health insurance coverage; improvement of medical care; modernization of sickness funds; and reform of the health fund. The Ministry of Health introduces and executes health policy for the country. The current policy emphasizes equal access to high-quality care for all citizens, regardless of ability to pay. Furthermore, policy is based on the concept that if risks are spread among the population, optimal medical care can be offered to all.⁹⁸

The covered population falls into three categories: compulsorily covered by public insurance because of income, voluntarily covered by public insurance, and covered by private insurance. Germany’s dual system of coverage allows people earning above a certain amount (around \$69,000 per year for three consecutive years) to choose between public insurance and private insurance.⁹⁹

Pros

- Coverage decisions are based on clinical effectiveness.
- Cost plays a secondary role in coverage decisions except when choices are made among equally beneficial alternatives.
- New technology is evaluated for clinical benefits and comparative effectiveness.
- Funding is provided to insurers through community-based sickness funds.
- The German health care system seems to have successfully combined consumer choice with universal access to care.
- There is ready access to care, including same-day and walk-in appointments and after-hours care.
- Germans have free choice of physicians and specialists (no referral required).
- Health insurance coverage is portable and is not tied to one's employer despite employer contributions toward employee premiums.
- Germany is a leader in quality improvement, and Germans generally enjoy positive health outcomes.

Cons

- The German health care system is expensive. With 10.4% of GDP spent on health care, it ranks 4th highest among OECD countries, behind the United States, France, and Switzerland.
- Choice of treatments is limited to those that are considered necessary and clinically effective.
- Government decides what medical goods and services are included in the health benefits package, although input is provided from a committee representing doctors, hospitals, and the sickness funds.
- Global budgets hold health care providers collectively responsible for constraining costs and leave patients at risk that services will be unavailable when budget limits are exceeded.

Lessons Learned

- A pluralistic national health care system based on private nonprofit sickness funds can achieve universal access to health care without barriers based on ability to pay.
- Investments in quality improvement can result in better health outcomes.
- Expenditure targets and global budgets negotiated among physicians and insurers at the local or regional level may be more sensitive to regional needs and variations, but still hold health care providers collectively responsible for constraining costs and leave patients at risk that services will be unavailable when budget limits are exceeded.

Japan (35)

Adoption/reform of national health system	1920s (government enacted series of welfare programs, providing medical services and subsidies to population)
GDP (billion US\$)	\$4,380 (2007)
Health expenditure as percentage of GDP (2007)	8.1%
GDP growth rate (2002-2007)	2.3%
Population	127.77 million
Population growth rate	0.0% (2002-2007)
Unemployment rate (% of total population)	2.0%
Morbidity rate (% of total population with good health, self reported)	32.7%
Life expectancy (total population at birth, years)	82.6
Infant mortality (deaths/1000 live births)	2.6
Maternal mortality (deaths/100,000 live births)	3.2
Methods used to control health care costs	Limited supply of physicians, excludes preventive care reimbursement, tight control on technology

Japan has broad health insurance coverage for its population of approximately 127.3 million people, featuring a private delivery system with a public financing scheme. The government's objective is to provide equitable access to "necessary and adequate" medical services to the entire population at a relatively low cost. This has led to the exclusion of some advanced medical care services and research and development of new medicine. Health insurance only reimburses treatment of disease and excludes preventive care, including medical check-ups. A lump-sum payment is provided for normal childbirth care. In line with the emphasis on equality, each institution provides essentially the same treatment to patients with the same medical problem, with little possibility for purchasing premium medical services or differentiated treatment.¹⁰¹ The health care system is financed by both public and private funds. It is organized around three types of insurance: (1) employer-managed plans; (2) a government-managed plan, and (3) prefectural-level plans.⁸⁹

The Employer Health Insurance (EHI) program provides coverage in company-specific plans for employees (and their dependents) who work for medium- to large-sized companies, national or local government, or private schools. Premiums for the EHI are based on an individual's monthly salary—on average 4%—and contributions are split 50-50 between employees and employers. Under EHI, individuals pay 20% of their medical costs for hospitalizations, 30% for outpatient care, and a copayment for prescriptions. All participants in EHI have cost-sharing ceilings, after reaching the ceiling all medical and hospital costs are covered in full. EHI also provides allowances based on salary for long-term illnesses for employees or their spouses as well as funeral allowances.⁸⁹

The government-managed NHI program covers self-employed individuals; those working in small businesses, agriculture, forestry or fisheries; and nonworkers (including retirees, pregnant women, and students). The NHI is funded by the government and by member premium contributions. Premiums for the NHI are based on an individual's salary, property, and dependents. Under the NHI, individuals pay 30% for all medical and hospital care and a copayment for prescriptions. It also has cost-sharing ceilings. Unlike EHI, NHI has restrictions on certain treatments and conditions for which coverage is not provided, including orthodontic surgery, vaccinations, injuries incurred while drunk or fighting, or abortions.⁸⁹

A national health program for the elderly covers individuals over age 70. Japan launched the Long-Term Care Insurance System (LTCI) for the elderly in 2000 as part of social security. This mandatory insurance is operated by municipalities and provides benefits to persons over the age of 65 who are certified as eligible based on an objective assessment of their physical and mental condition by the municipality in which they live. Once eligibility is determined, a "care manager" employed by a welfare or health care facility develops an appropriate plan of care. The prices for LTCI services are set by the government and apply to all providers, who are subject to nationwide quality standards. Patients are required to pay 10% of the cost out-of-pocket, with the remainder split equally between the government and insurance contributions by those over age 40. Premiums for persons between the ages of 40 and 64 are set by health insurers, while those paid by persons over the age of 65 are set by municipalities and thus vary widely.¹⁰¹

A national fixed reimbursement schedule is one of many major cost-containment measures in Japan. Rates for virtually all medical and hospital services are set by a fee schedule, which is negotiated between the national Ministry of Health and providers every 2 years. Rates are set and adjusted separately for each procedure and drug, rather than by across-the-board adjustments to a conversion rate. Rates for services that show large increases in volume tend to be reduced. Volume is also controlled through tight limits on utilization for such services as MRIs and CT scans.¹⁰² Another way Japan limits health care spending is by constraining the supply of physicians. The number of medical students is set by the government, and there is estimated to be two physicians per thousand people. Physicians generate a high volume of services to boost their income by seeing more patients throughout the day. Patients often complain that they spend 3 hours waiting for 3 minutes with the doctor (long waiting times occur primarily in university hospitals). In addition, the large numbers of appointments per physician result in very long work hours, which has become a serious problem.¹⁰¹

All three programs are financed primarily by the national government, private employers, and individual coinsurance payments, but the services are delivered through a mostly privately operated hospital and clinic system. Basic coverage and costs are based on the medical fee schedules set by the special committee in the Ministry of Health, Welfare, and Labor every other year.⁹⁷ All programs cover a broad range of services but cover little in the way of preventive care.¹⁰³ Consumers do not have a choice about the program from which they obtain coverage. Premiums vary based on income even though entitlements and reimbursement rates are standard. Premiums can vary from 6% to 9.5% of monthly income. All residents, with the exception of children, the elderly, and those with certain chronic diseases, have a 30% copayment. The Japanese universal coverage system has no gatekeeper component, and patients have free access to any provider at any time.⁸⁹ Financially, however, access is less equitable as lower-income patients pay a larger percentage of their total income toward premiums and copayments, even with government assistance.

Pros

- Broad health insurance is provided for all.
- Funding is shared by public and private sources.
- Patients pay a share of costs for medical and hospital care and copayments for prescriptions.
- Employers and workers share in the cost of premiums, and the government subsidizes the cost of the program for the self-employed, retired workers, and certain others.
- There is a ceiling on cost-sharing for those in the EHI plan (employees and their dependents of medium and large companies and government).
- Services are delivered through a mostly privately operated hospital and clinic system.
- There are no gatekeepers, and patients have free access to any provider at any time.

Cons

- All programs cover a wide range of services, but cover little in the way of preventive care.
- There are not competing health plans, so consumers do not have opportunities to choose among plans.
- Premiums vary based on income, but access is less equitable, as lower income patients pay a larger percentage of their income toward premiums and copayments, even with government assistance.
- The system is highly regulated with tight controls on technology and utilization of services.
- There are no limits on cost sharing for those in the NHI plan (self-employed, those in small business and certain industries).
- Waiting times are long.
- Recordkeeping is poor, with little use of electronic medical records, short consultation times, lack of information and communication with patients, lack of monitoring systems for quality, and high incidence of medical errors.¹⁰²

Lessons Learned

- A health care system heavily regulated by the government with controls on utilization and limits on payments can reduce overall health expenditures, but at the cost of increased medical errors, lower quality, inefficiency, and fewer physicians.
- Cost control in Japan has relied heavily on government price fixing of both primary and secondary care. In order to achieve egalitarian provision of services to all, costs must first remain within the government's budgetary limits, fees and prices must be micromanaged (to reflect volume expansions and declining costs to the provider), and providers must be reimbursed the same amount for the same service to avoid discrimination because of the patient's insurance plan.¹⁰³

Netherlands (78)

Adoption/reform of national health system	2006 (new health insurance system enacted)
GDP (billion US\$)	\$875 (2007)
Health expenditure as percentage of GDP (2007)	9.8%
GDP growth rate (2002-2007)	12.1%
Population	16.38 million
Population growth rate	0.3% (2002-2007)
Unemployment rate (% of total population)	1.7%
Morbidity rate (% of total population with good health, self reported)	78.2%
Life expectancy (total population at birth, years)	80.2
Infant mortality (deaths/1000 live births)	4.1
Maternal mortality (deaths/100,000 live births)	5.0
Methods used to control health care costs	The Dutch national government works in conjunction with an independent board to allocate and distribute health care funding

In 2006, the Netherlands enacted changes to its health insurance system based on Alain Enthoven's managed competition model. The government enacted a gradual series of reforms to transition the system from supply-side regulation to managed competition. The law covers care by general practitioners and specialists, as well as pharmaceuticals and hospital care, which is determined by the Minister of Health. People may choose to purchase supplemental insurance covering care that is not included in the mandatory basic insurance, including dental care, physical therapy, eyeglasses, and cosmetic surgery.¹⁰⁴

The Dutch national government works in conjunction with an independent board to allocate and distribute health care funding. In the Dutch system, individuals, employers, and the government share the costs of the new health care system and individuals over the age of 18 pay a premium to their insurer based on income. Each insured patient must register with a single general practitioner who provides primary care. The general practitioner acts as a gatekeeper for specialists and hospital care and coordinates care across specialties. Although compulsory health insurance operates within the public health system, insurance products are provided through private insurance. Private insurers are required to accept all patients in their coverage area; medical selection is expressly prohibited. In addition, insurance companies are not obligated to contract with every provider. Insurers can negotiate for discounts with certain providers and use incentives to encourage patients to see preferred providers. Insurance companies also have the ability to negotiate average, fixed prices for many pre-defined diagnosis/treatment combinations. General practitioners are paid on both a capitation and consultation fee basis, while specialists receive a salary, a service fee, or both. Physicians contract directly with insurers, increasingly turning to integrated care, which helps to control costs.⁸⁹

Pros

- Costs are shared among individuals, employers, and the government.
- An independent board assists the government in allocating and distributing health care funding.
- The system encourages managed competition.
- Insurance is provided through the private sector, but insurers are highly regulated.
- Insurers must accept all applicants in their coverage areas regardless of health status or preexisting conditions.
- Insurers can negotiate discounts with certain providers and use incentives to encourage patients to see preferred providers.
- Insurance premiums are based on income and cannot vary based on age, gender, health status, or lifestyle.
- Employers do not bear administrative responsibility or administrative costs of insurance.
- General practitioners coordinate care.
- Integrated care helps control costs.

Cons

- Insurance companies have the power to negotiate prices and discounts for physician and hospital services and can contract with preferred providers.
- General practitioners acting as gatekeepers can restrict access to specialist and hospital care.

Lessons Learned

- Managed competition among private insurers can help to control health care costs.
- Government working in conjunction with an independent board can effectively allocate and distribute health care funding.
- A well-regulated private insurance sector can operate within a public health system.
- General practitioners serving as gatekeepers to specialists and hospital care can better assure that care is coordinated, but can also restrict access.
- A health care system with accessible primary care as the point of entry for all individuals, delivered in small practices that are integrated into the wider health care system, may offer the best guarantee for clinically effective care and greater value in terms of cost.
- Physician payments can be made by using a blended reimbursement system that includes capitation per patient, fee per consultation, and pay-for-performance.

Switzerland (78)

Adoption/reform of national health system	1994
GDP (billion US\$)	\$426 (2007)
Health expenditure as percentage of GDP (2007)	10.8%
GDP growth rate (2002-2007)	8.9%
Population	7.55 million
Population growth rate	0.7% (2002-2007)
Unemployment rate (% of total population)	2.1%
Morbidity rate (% of total population with good health, self reported)	86.7%
Life expectancy (total population at birth, years)	81.9
Infant mortality (deaths/1000 live births)	3.9
Maternal mortality (deaths/100,000 live births)	8.2
Methods used to control health care costs	Department of Home Affairs establishes the formulary for prescription drugs, sets the maximum allowable prices for drugs, and determines which laboratory analyses and medical devices are covered.

All Swiss residents are required to purchase health insurance under the 1994 Federal Health Insurance Act. The federal tier of government sets the standard benefits required for each resident; however, the organization and administration of the health care system fall within the purview of the cantons (provinces).⁸⁹ Switzerland's Federal Department of Home Affairs establishes the formulary for prescription drugs and sets the maximum allowable prices for drugs. The Department also determines which laboratory analyses and medical devices are to be covered by compulsory insurance. Authority to plan the capacity of the hospital and nursing home sectors rests with the cantons. Only those on the approved list are entitled to reimbursement under compulsory health insurance.¹⁰⁵ The cantons are responsible for regulating health issues, administering and delivering health services, health education and disease prevention, and implementing federal law.¹⁰⁶ This highly decentralized system is a combination of public, private, and subsidized private health care.

In Switzerland, consumers, not employers or the government, primarily pay health care expenses through premiums to private sickness funds and out-of-pocket payments.¹⁰⁷ Health care financing is inconsistent between the cantons and has minimal government regulation. Private sickness funds collect most of the financing directly from the insured based on broad age categories. Premiums for the compulsory minimum benefits package are determined within each canton according to age groups. The premiums are community-rated and are not modified directly based on disease status or health risk. Premiums are not based on ability to pay; however, subsidies are provided by the cantons to purchase compulsory insurance for those for which premiums exceed 8% to 10% of

their income.⁸⁹ As the core benefits package is mandated to be identical for all residents, insurers cannot compete for customers on the basis of covered benefits. Instead, insurers compete on the basis of premium and deductible costs.¹⁰⁸ Residents pay monthly premiums to the sickness funds, and copayments are generally made in the form of annual minimal deductibles. Private insurance companies aren't allowed to make a profit on the compulsory insurance. The companies are allowed to operate at a profit by providing supplemental insurance for non-covered services, such as dental care, alternative medicine, or the guarantee of a private hospital room. (109) Premiums for supplemental insurance are allowed to vary based on the applicant's history, risk, and sex; and insurers are not required to accept all applicants for supplemental insurance.

Physicians' fees are negotiated between the medical association and the Swiss insurance association. Physicians can bill compulsory enrollees only for services included in their health insurance and may not supplement their bills. Consumers buy health insurance plans and know the full cost of care received, enabling them to obtain what they consider "good value for the money."¹⁰⁷

Public hospitals are guaranteed deficit coverage and/or subsidies from public funds within negotiable limits. Payments to private hospitals are negotiated by the hospitals with health insurance companies and patients. Patients may pay the higher private hospital rates through supplemental insurance or out-of-pocket.

Sickness funds often act in concert with general practitioners to control costs. Each canton typically supports between 40 to 70 sickness funds, which engage in different tactics to minimize risk exposure. Some funds use managed care and physician gatekeepers to control cost by denying coverage for certain treatments. High-deductible plans are available at lower costs. Most health insurers have HMO divisions, which consist of insurance-owned group practices with salaried physicians. Primary care networks utilize general practitioners as gatekeepers to control access to specialist care and limit unnecessary hospitalizations.⁸⁹

Pros

- Everyone is covered for a uniform comprehensive package of basic health care services set by the federal government.
- The federal government controls costs by establishing a formulary for prescription drugs and sets the maximum allowable prices for drugs. It also determines which laboratory tests and medical devices are covered.
- Employers and government incur little costs, as consumers pay insurance premiums and out-of-pocket costs.
- Residents have free choice of providers and insurers.
- Insurers must accept all applicants who seek coverage.
- Premiums are based on age and are not individually adjusted based on health status or preexisting conditions, but are community-rated.
- Individuals have choices that include lower cost plans (HMOs and gatekeeper plans).
- State subsidies are provided to those with premiums exceeding 8% to 10% of income.
- Health insurance coverage is not tied to one's employer despite employer contributions toward employee premiums. As such, coverage is portable should one leave his/her place of employment.
- Physicians are reimbursed on a fee-for-service basis.
- Regulation and cost-control initiatives are at the local (canton) level.
- There is competition among plans on the basis of price.
- Private insurance companies aren't allowed to make a profit on the basic health benefits package, but can make profits on supplemental policies.

Cons

- Health care expenditures, both as a percentage of GDP and on a per capita basis, are higher than in all other OECD countries except the United States.
- Individuals are responsible for a greater share of health care costs than in other OECD countries.
- Everyone is required to purchase private insurance.
- The federal government sets maximum allowable prices for drugs and determines which laboratory tests and medical devices are covered, thus limiting which drugs and devices are available.
- Health care financing is inconsistent between the cantons and has minimal government regulation.
- The negotiated fee schedule does not account for differences in quality of care.
- Public hospitals, assured of clientele and government budgets, have fewer incentives for efficiency.
- Allocation of resources among the cantons can distort treatment. For example, hospitals might admit patients to a ward because inpatient care receives public subsidies, unlike outpatient and short-stay inpatient care. (107)

Lessons Learned

- Universal access to health insurance can be achieved through a public-private partnership that retains a major role for private insurance.
- Subsidization of private insurance can assure coverage for low-income families and individuals.
- Cost control may be attributable to the consumers' significant role in health care payments and the resulting cost transparency. Consumer control also helps achieve consumer responsiveness.
- Allowing variation and experimentation in insurance coverage beyond a basic benefits package may foster competition and help attain cost control and consumer responsiveness.
- Community rating and risk-adjustment reflect the enrollees' risk status.¹⁰⁷
- To reward efficient, effective providers, it is necessary to permit health care providers to innovate freely in the delivery and pricing of health care. Providers will be motivated to innovate in health care services for the sick and to earn revenues by responding to consumer demand rather than by relying on guaranteed budgets or clients.¹⁰⁷

Taiwan (111,112)

Adoption/reform of national health system	1995
GDP (billion US\$)	\$732 (2007 est.) (89)
Health expenditure as percentage of GDP (1999)	6.0%
GDP growth rate	6% (2007) (110)
Population	23 million
Population growth rate (1994-2000)	5.2%
Unemployment rate (% of total population)	Unavailable
Morbidity rate (% of total population with good health, self reported)	Unavailable
Life expectancy (total population at birth, years)	74.9
Infant mortality (deaths/1000 live births)	6.5
Maternal mortality (deaths/100,000 live births)	Unavailable
Methods used to control health care costs	Global budget, low ratio of doctors to patients, single payer

In 1995, after 7 years of planning that included studying health insurance systems abroad, Taiwan adopted an NHI program that provides universal health insurance. Since its inception, coverage has expanded from 57% to 98% of the population.¹¹³ Taiwan's single-payer approach is key to keeping costs generally affordable. Everyone is in the same insurance pool, so risks are spread widely and premiums from the relatively low-cost of insuring healthy people help pay for the care of sick people. The single-payer system also gives government strong leverage to discount payments to doctors, and doctors in Taiwan are paid much less than those in the United States.¹¹⁴

The NHI is financed on a pay-as-you-go basis with income-based premiums and a payroll tax of 4.5%. Employers and the government contribute to help pay for this plan. There is also a surcharge on tobacco and lottery revenues to help fund the system. In 2000, 32.15% of the NHI's total premium revenue came from employers, 38.08% from individuals, and 29.77% from the government.¹¹²

Taiwan has a market-driven health care delivery system with a mix of publicly and privately owned hospitals. Approximately 63% of physicians are employed by hospitals and paid on a salaried basis. These physicians can receive bonus payments based on productivity, known as the "professional fee" system. This system compensates doctors mainly on the basis of their revenue productivity: the number of patients seen, procedures performed, and lab test ordered, along with teaching and scientific articles published, speeches given at outside institutions, and even articles written in papers.¹¹² The remaining 37% of physicians are fee-for-service private practitioners who work in private clinics. These private practitioners deliver primary care in their offices or clinics and do not have hospital-admitting privileges. In response, many of the clinics maintain about a dozen beds for their patients.¹¹¹ Taiwan's health care providers also get revenue from proceeds from the sale of products and services not covered by the NHI.

The NHI provides a comprehensive benefits package that covers inpatient care; preventive and medical services; prescription drugs; and certain over-the-counter drugs, dental services, laboratory tests and diagnostic imaging, traditional Chinese medicine, day care for the mentally ill, and home nurse visits. Patients have freedom of choice among providers and therapies. There are no direct restrictions on utilization, although prior authorization is required for certain high-cost treatments like heart, lung, and bone marrow transplants.¹¹²

Patients have a \$5 copayment for outpatient visits, an \$8 copayment for hospital outpatient clinic visits, and 10% coinsurance for inpatient services (with a cap at 10% of the average income per person). The copayment and coinsurance rates are regressive because they are fixed and unvaried by a patient's income.¹¹¹ Taiwanese citizens have access to modern medical technology, including bone marrow transplants, joint replacement surgery, cataract surgery, and coronary artery stents. However, patients pay more out-of-pocket for more advanced technology. The system is cautious about adopting new technology. It also lacks funding for research and development and has lower ratios of doctors and nurses to the general population.¹¹⁴

Taiwan relies on global budgets and use of diagnosis-related groups to keep costs under control. Global budgets are set by sector—dental care, Chinese medicine, primary care and hospitals. Payments for each sector are based on a point system that measures the level of health care resources being used. The payment rate drops per point if doctors are ordering too many appointments, tests, and procedures that are likely to exceed the cap. Points are recalibrated every 3 months (except for urgent care), and doctors respond by seeing fewer patients if necessary.¹¹⁴

Taiwan has managed to minimize administrative costs by using a “smart card” system. Each resident of the country carries a “smart card,” which entitles them to health care. The card gives doctors a medical profile of the patient and automates payment. When a provider swipes the card, the patient's medical history and medications show up on the computer screen and the government is billed for the provider's services. About 99% of all claims are processed electronically, and there is a uniform reporting and claim-filing system. Consequently, overall administrative costs are low.¹¹⁴

Taiwan's system is unevenly distributed with regard to geography and specialty. Although patients have nearly equal financial access to care, many patients do not have equal physical access because of misdistribution of health care resources.¹¹¹ The overall ratio of physicians per 1,000 population in 2001 was 1.37, yet was only .33 among Taiwan's aboriginal people and 0.8 in the mountainous areas and offshore islands. In addition, there is a shortage of practitioners in certain medical specialties in which fees are low, difficulty of the work is high, or the risk for malpractice suits is high and compensation is not commensurately higher (this includes inpatient care, emergency care, major illnesses, surgery, pediatrics, and obstetrics/gynecology).¹¹²

The low physician payment rates and inappropriate incentives in Taiwan adversely affect physician specialty choices and may seriously affect the ability of the workforce to meet Taiwan's health care needs.¹¹³

Pros

- The Taiwan NHI program greatly expanded health insurance coverage so that nearly all citizens have equal financial access to a comprehensive benefits package and protection from large medical expenses.
- The NHI offers the insured complete freedom of choice among providers and therapies, including traditional Chinese medicine.
- There is no rationing or queuing for care. (115) The Taiwanese point system measures the level of health care resources being used and allows adjustments in payments and patient load to achieve quarterly global budget limits.
- The use of the “smart card” speeds payment, reduces administrative costs and burdens, and helps to identify and prevent duplication of services.
- The single-payer system has considerable market power over fees and drug prices.
- The professional fee system rewards salaried physicians for increased productivity.

Cons

- Although there is equal financial access, problems remain with maldistribution of resources and among physician specialties.
- Fees under the fee-for-service system are considered to be too low and have resulted in rapid increases in the volume of services and maldistribution of physicians among specialties.
- Taiwan doctors are known for short patient visits, which can lead to misdiagnosis, treatment only of symptoms, improper treatment, and delays in proper treatment.

Lessons Learned

- Adoption of a single-payer NHI program can achieve universal and equitable access to health care.
- Planning and studying other health care systems can help in designing an NHI program.
- Expansion of access to a comprehensive package of health benefits coupled with low payments in a fee-for-service payment system can result in dramatic increases in the volume of services provided and could undermine the quality of care.
- Global budgets coupled with a point system that tracks utilization of resources at the physician’s level can help restrain health care costs and allow for adjustments to achieve budget targets.
- Adoption of a uniform billing system and electronic processing of claims improves efficiency and reduces administrative expenses.

United Kingdom (England and Wales)

Adoption/reform of national health system	1948
GDP (billion US\$)	\$2,802
Health expenditure as percentage of GDP (2007)	8.4%
GDP growth rate (2002-2007)	11.8%
Population	60.98 million
Population growth rate	0.6% (2002-2007)
Unemployment rate (% of total population)	2.6%
Morbidity rate (% of total population with good health, self reported)	75.0%
Life expectancy (total population at birth, years)	79.5
Infant mortality (deaths/1000 live births)	4.8
Maternal mortality (deaths/100,000 live births)	6.9
Methods used to control health care costs	Global budgets, National Institute of Clinical Excellence, slow spread of technology, single payer

Perhaps the country with the most explicit use of health care rationing is the United Kingdom. In England and Wales, universal coverage is provided through the government-run NHS. The NHS is funded largely by taxpayers and managed by the national Department of Health, which sets overall health policy. There are 10 Strategic Health Authorities (SHAs) under the Department of Health that oversee all NHS operations and are responsible for monitoring the performances of local Primary Care Trusts (PCTs), which assess health needs of local communities and obtains needed services.¹¹⁶ Physicians and other health care professionals are employed by the NHS, which also owns and operates all health care facilities. Consequently, the NHS is able to allocate and control the supply of health professionals and facilities. Primary care physicians in the United Kingdom earned an average annual income of \$220,000 in 2008, which exceeded the income of many specialists in the United Kingdom and most primary care physicians in the United States.¹¹⁷ Patients are free to choose their general practitioner within their region. More than 99% of the population has a registered general practitioner, and about 90% of all patient contact is with a general practitioner. Patients only have access to specialist care through their general practitioner, unless it is an emergency situation.

NHS relies on the National Institute for Health and Clinical Excellence (NICE), formerly the National Institute for Clinical Excellence, for assessments of safety and efficacy of new interventional diagnostic and therapeutic procedures. Evidence-based assessments provide guidance on effective means for the prevention and treatment of illness and management of specific conditions. Technology appraisals are conducted on the use of new and existing medicines, treatments, and procedures. Cost is only one of the factors considered in determining comparative effectiveness. Social value judgments about what is good for society are also made. Advice on social values is obtained from a Citizens Council. The incremental costs of new technologies are calculated on the basis

of QALY per unit of health benefit. Although arbitrary thresholds are not established, scores above a certain level, such as £25,000 – £35,000 per QALY, generally are not recommended for coverage. When new technologies cost more than existing ones, NICE then determines the likely increase in health to be obtained from the increased expenditure (incremental cost/benefit ratio).⁶⁸

Criticisms of the NHS include long wait times for nonemergency care, poor quality of hospital facilities, excessive bureaucracy, and slow spread of technology throughout the system.¹¹⁸ However, in 2000, the NHS began a series of modernization reforms designed to transform the NHS through enhanced managed competition that included a commitment to significantly reducing waiting times for health services; expanding capacity; and undertaking major investments in clinical priorities, such as cancer, heart disease, and mental health.¹¹⁹ Further reforms to reorganize the NHS were proposed in July 2010 that would give more responsibility to consortia of primary care physicians to plan health care services and spending for their patients, but would hold the physicians accountable for their patients' outcomes and for overspending.¹²⁰

Pros

- Employment of physicians and other providers and ownership and operation of all health care facilities allows the NHS to allocate and control the supply of health professionals and facilities to meet the needs of the community.
- Everyone has equal access to health care and patients are free to choose their general practitioner.
- Coverage decisions reflect evaluations of new and existing medicines and technologies based on evidence-based assessment of clinical effectiveness and expected additional QALYs gained per unit of cost benefit.
- The process for determining social values involves public input from a Citizens Council.
- Health care spending is controlled within a budget.
- Primary care physicians are well compensated.

Cons

- Long wait times for nonemergency care.
- Poor quality of hospital facilities.
- Excessive bureaucracy.
- Slow spread of technology throughout the system.
- Government ownership of health facilities eliminates competition and reduces incentives for innovation.
- Salaried employment of physicians does not provide financial incentives for entrepreneurship or compensate for superior quality.

Lessons Learned

- Allocations of health care resources can be made in a rational manner.
- Government operation of the health care system can result in excessive bureaucracy and reduced incentives for innovation.
- Under a government-run, single-payer system, salaried primary care physicians can be well compensated and a sufficient supply of physicians can be maintained.
- Allocations of resources using evidence-based evaluations of technology involve trade-offs regarding access to technologies and services. Incremental clinical effectiveness with consideration of cost of new technologies can be calculated on the basis of QALYs per unit of health benefit.
- Coverage decisions can reflect social values, determined by public input, in addition to evidence-based assessments of effectiveness.

United States (78)

Adoption/reform of national health system	2010
GDP (billion US\$)	\$13,742
Health expenditure as percentage of GDP (2007)	16.0%
GDP growth rate (2002-2007)	5.7%
Population	301.62 million
Population growth rate	0.9% (2002-2007)
Unemployment rate (% of total population)	2.3% (2007); 9.5% (July 2010) ¹²¹
Morbidity rate (% of total population with good health, self reported)	88.1%
Life expectancy (total population at birth, years)	78.1
Infant mortality (deaths/1000 live births)	6.7
Maternal mortality (deaths/100,000 live births)	15.1
Methods used to control health care costs	Various

(Socioeconomic data provided for comparative purposes. Analysis of the US health care system is provided throughout the paper.)

Glossary

ACP	American College of Physicians
ADA	American with Disabilities Act
ACA	Affordable Care Act (P.L. 111-148) Health reform legislation (H.R. 3590) signed law into on 3/23/10, also known as the Patient Protection and Affordable Care Act (PPACA). The legislation was further modified March 30, 2010, when the President signed into law H.R. 4872, on the Health Care and Education Reconciliation Act of 2010, the “Reconciliation Act,” (P.L. 111-152)
AHRQ	Agency for Healthcare Research and Quality
CHA	Canada Health Act
CBO	Congressional Budget Office
CHA	Canada Health Act
CHAMPVA Affairs	Civilian Health and Medical Program of the Department of Veterans Affairs
Cost benefit analysis	<p>“Cost benefit analysis measures and compares the costs and benefits of different interventions for the same condition solely in monetary terms. This analysis requires estimates of the monetary value of health care benefits; deriving and agreeing on these estimates is often problematic.”</p> <p>—<i>Improved Availability of Comparative Effectiveness Information: An Essential Feature for a High-Quality and Efficient United States Health Care System.</i> Philadelphia: American College of Physicians; 2008: Position Paper.</p>
Clinical Effectiveness (or Efficacy)	<p>“The extent to which a health care intervention provides an outcome consistent with its intent.”</p> <p>—<i>Improved Availability of Comparative Effectiveness Information: An Essential Feature for a High-Quality and Efficient United States Health Care System.</i> Philadelphia: American College of Physicians; 2008: Position Paper.</p> <p>“Effectiveness implies ‘real world’ performance of clinically relevant alternatives provided to patients with diverse clinical characteristics in a wide variety of practice settings.”¹²²</p> <p>—<i>Medicare Payment Advisory Commission</i></p>
Clinical Effectiveness With Consideration of Cost	<p>“The extent to which a health care intervention provides an outcome consistent with its intent”</p> <p>—<i>Improved Availability of Comparative Effectiveness Information: An Essential Feature for a High-Quality and Efficient United States Health Care System.</i> Philadelphia: American College of Physicians; 2008: Position Paper)</p> <p>and reflecting analysis of the comparative costs and value gained among services that provide equal or better clinical benefit.</p>

How Can Our Nation Conserve and Distribute Health Care Resources Effectively and Efficiently?

Comparative Effectiveness	<p>“The relative (clinical) effectiveness, safety, and cost of two or more medical services, drugs, devices, therapies, or procedures used to treat the same condition. Although the use of the term comparative effectiveness broadly refers to the evaluation of both the relative clinical and cost differences among different medical interventions, it is notable that most comparative effectiveness research engaged in and used by stakeholders in this country focuses solely on evaluating relative clinical differences to the exclusion of cost factors.”</p> <p>—<i>Improved Availability of Comparative Effectiveness Information: An Essential Feature for a High-Quality and Efficient United States Health Care System. Philadelphia: American College of Physicians; 2008: Position Paper.</i></p>
Cost	<p>“Cost means different things to different people: aggregate costs to payers of services (Medicare), the economy (societal costs), the individual (in the form of out of pocket expenses, health care premiums, or individual tax payments to support public programs), or clinicians (whose professional value system often puts primacy of the individual patient’s needs and preferences over societal costs) re very different afrom each other and will result in different value judgments.”</p> <p>—<i>ACP Testimony to House Ways and Means Committee Subcommittee on Health, 12 Jun 2007.</i></p>
Cost-effectiveness	<p>“The incremental or marginal economic cost per unit of health care gain observed among different interventions for the same condition without attempting to monetarize the health care gain.”</p> <p>—<i>Improved Availability of Comparative Effectiveness Information: An Essential Feature for a High-Quality and Efficient United States Health Care System. Philadelphia: American College of Physicians; 2008: Position Paper.</i></p>
Cost-effectiveness ratio	<p>“The difference in comparison interventions’ costs (in dollars) divided by the difference in their health effectiveness or outcomes.”</p> <p>—<i>Improved Availability of Comparative Effectiveness Information: An Essential Feature for a High-Quality and Efficient United States Health Care System. Philadelphia: American College of Physicians; 2008: Position Paper.</i></p>
EHI	Employer Health Insurance : Japanese health insurance program for employees (and their dependents) who work for medium to large size companies, national or local government, or private schools
ESRD	End- stage renal disease
FDA	Food and Drug Administration
GDP	Gross domestic product
Global budget	A predetermined budget that establishes a limit on total health spending for a budget period (usually one year).

LTCI	Long-Term Care Insurance System (Japan)
MRI	Magnetic resonance imaging
NHI	National Health Insurance (France, Japan, Taiwan)
NHS	National Health Service (England and Wales)
NICE	National Institute for Clinical Excellence (United Kingdom), formerly the National Institute for Clinical Excellence, agency that assesses the safety and efficacy of new interventional diagnostic and therapeutic procedures
OECD	Organization for Economic Cooperation and Development
OHP	Oregon Health Plan
PIER	Physicians' Information and Education Resource
QALY	Quality-adjusted life-years (England and Wales) A measure of the incremental benefit of new drugs and technologies. “A QALY gives an idea of how many extra months or years of life of a reasonable quality a person might gain as a result of treatment “ —NICE 7/23/10: http://www.nice.org.uk/newsroom/features/measuringeffectivenessandcosteffectivenessstheqaly.jsp
UK	United Kingdom
UNOS	United Network for Organ Sharing
USPSTF	US Preventive Services Task Force
VA (and VHA)	Veterans Health Administration

References

1. **Congressional Budget Office.** Budget Options Volume I: Health Care. Washington, DC, Dec. 2008. Accessed on 16 Dec 2009 at www.cbo.gov/ftpdocs/99xx/doc9925/12-18-HealthOptions.pdf.
2. **Orszag PR.** Increasing the Value of Federal Spending on Health Care. Testimony to Committee on the Budget, U.S. House of Representatives, July 16, 2008. Accessed on 13 Sept 2010 at <http://budget.house.gov/hearings/2008/07.16orszag.pdf>.
3. Fisher ES, Bynum JP, Skinner JS. Slowing the growth of health care costs— lessons from regional variation. *N Engl J Med* 2009;360:849-52.
4. **Doherty RB.** The Certitudes and Uncertainties of Health Care Reform. *Annals of Internal Medicine*, 2010;152. Accessed on 29 April 2010 at www.annals.org/content/early/2010/04/05/0003-4819-153-1-201007060-00235.full?aimhp.
5. **Pearson M.** Disparities in health expenditure across OECD countries: Why does the United States spend so much more than other countries? Statement to Senate Special Committee on Aging, 30 Sept 2009. Accessed on 16 Dec 2009 at www.oecd.org/dataoecd/5/34/43800977.pdf.
6. **OECD Health Data, 2010.** Accessed on 31 Aug. 2010 at www.ecosante.org/index2.php?base=OCDE&langh=ENG&langs=ENG&sessionid=.
7. **US Bureau of the Census.** Income, Poverty, and Health Insurance Coverage in the United States: 2009 (60-238). Accessed on 22 Nov 2010 at www.census.gov/prod/2010pubs/p60-238.pdf.
8. **Schoen C, Doty MM, Collins SR, and Holmgren AL.** Insured But Not Protected: How Many Adults Are Underinsured? *Health Affairs Web Exclusive*, June 14, 2005. Accessed 17 Dec 2009 at <http://content.healthaffairs.org/cgi/reprint/hlthaff.w5.289v1?maxtoshow=&HITS=10&hits=10&RESULTFORMAT=&fulltext=underinsurance&andorexactfulltext=and&searchid=1&FIRSTINDEX=0&resourcetype=HWCIT>.
9. **Himmelstein DU, Thorne D, Warren E, and Woolhandler S.** Medical Bankruptcy in the United States, 2007: Results of a National Study. *American Journal of Medicine*, 2009;122(8):741-46.
10. **Tu HT and Cohen GR.** Center for Health Systems Change. Tracking Report: Financial and Health Burdens of Chronic Conditions Grow, Results From The Community Tracking Study • NO. 24 • April 2009.
11. **Ayanian JZ, Weissman JS, Schneider EC, Ginsburg JA and Zaslavsky.** Unmet health needs of uninsured adults in the United States. *JAMA*, 2000; 284:2061-69.
12. **Congressional Budget Office.** H.R. 4872, Reconciliation Act of 2010, Table 4 (Final Health Care Legislation), March 20, 2010). Accessed on 12 Apr 2010 at www.cbo.gov/doc.cfm?index=11379.
13. **Ginsburg JA, Doherty RB, Ralston JF, et al.** Achieving a high-performance health care system with universal access: what the United States can learn from other countries. *Ann Intern Med*. 2008;148(1):55-75.
14. **Agency for Health care Research and Quality.** National Health care Disparities Report, 2008. Accessed on 29 Dec 2009 at www.ahrq.gov/qual/nhdr08/Key.htm.
15. **Sirovich BE, Gottlieb DJ, Welch HG, Fisher ES.** Regional variations in health care intensity and physician perceptions of quality of care. *Ann Intern Med*. 2006;144:641-9. [PMID: 16670133].
16. **American College of Physicians.** Achieving a High-Performance Health Care System with Universal Access: What the United States Can Learn from Other Countries. *Ann Intern Med*, 2008;148(1):55-75.
17. **Dartmouth Atlas of Health Care.** Accessed on 29 Dec 2009 at www.dartmouthatlas.org/.
18. **Gawande A.** The Cost Conundrum: What a Texas town can teach us about health care. *New Yorker*, 1 Jun 2009. Accessed on 5 Oct 2010 at www.newyorker.com/reporting/2009/06/01/090601fa_fact_gawande?printable=true.
19. **Fisher ES, Wennberg DE, Stukel TA, Gottlieb DJ, Lucas FL et al.** The Implications of Regional Variations in Medicare Spending. Part 2: Health Outcomes and Satisfaction with Care. *Ann Intern Med* 18 Feb 2003;138:288-298.

20. **Skinner J, Chandra A, Goodman D, and Fisher ES.** The Elusive Connection Between Health Care Spending and Quality. *Health Affairs*, Dec 2008;28:w119-w123.
21. **Sirovich B, Gallagher PM, Wennberg DE, Fisher ES.** Discretionary decision making by primary care physicians and the cost of U.S. health care. *Health Aff (Millwood)* 2008;27:813-23.
22. **American College of Physicians.** How Is A Shortage of Primary Care Physicians Affecting the Quality and Cost of Medical Care? A Comprehensive Evidence Review. White Paper, October 2008. Accessed on 17 Dec 2009 at www.acponline.org/advocacy/where_we_stand/policy/primary_shortage.pdf.
23. **American College of Physicians.** Solutions to the Challenges Facing Primary Care Medicine. Policy Monograph, April 2009. Accessed on 17 Dec 2009 at www.acponline.org/advocacy/where_we_stand/policy/solutions.pdf.
24. **American College of Physicians.** Ethics Manual Fifth Edition. *Ann Intern Med.* 2005; 142:560-582. Accessed on 28 Dec 2009 at www.acponline.org/running_practice/ethics/manual/ethicman5th.htm.
25. **ACP-ASIM Foundation, European Federation of Internal Medicine, and American Board of Internal Medicine.** Medical Professionalism in the New Millennium: A Physician Charter. *Ann of Intern Med*, 2002;136(3):243-46. Accessed on 15 Dec 2009 at www.annals.org/content/136/3/243.full.pdf.
26. **American College of Physicians.** Controlling Health Care Costs While Promoting the Best Possible Health Outcomes: White Paper, 2009. Accessed on 12 Dec 2009 at www.acponline.org/advocacy/where_we_stand/policy/controlling_health_care_costs.pdf.
27. **ACP Announces High-Value, Cost-Conscious Care Initiative 4-23-10 Press Release accessed 7-26-10 at** www.acponline.org/pressroom/hvccc.htm.
28. **Merriam Webster Online.** Accessed on 20 Nov 2009 at www.merriam-webster.com/.
29. **Encyclopedia Britannica.** Rationing. Accessed on 12 Dec 2009 at www.britannica.com/EBchecked/topic/492077/rationing.
30. **Mondofacto.** Online Medical Dictionary: Definition of Health Care Rationing, Dec 1998. Accessed on 8 Jan 2010 at www.mondofacto.com/facts/dictionary?health+care+rationing.
31. **Saha S, Coffman DD, and Smits AK.** Giving Teeth to Comparative-Effectiveness Research—The Oregon Experience. *N Engl J Med*, 2010; Accessed on 16 Mar 2010 at <http://content.nejm.org/cgi/reprint/NEJMp0912938.pdf?ssource=hcr>.
32. **Brook RH.** What If Physicians Actually Had to Control Medical Costs? *JAMA*, 2010;304(13): 1489-90. Accessed at <http://jama.ama-assn.org/cgi/content/full/304/13/1489>.
33. **Kowalczyk L.** Some health networks drop elite hospitals: Once unthinkable, now a trend as costs soar. *Boston Globe*, April 17, 2010. Accessed on 29 April 2010 at www.boston.com/news/health/articles/2010/04/17/some_health_networks_drop_elite_hospitals?mode=PF.
34. **Leonhardt D.** Health Care Rationing Rhetoric Overlooks Reality. *NY Times*, June 17, 2009. Accessed on 28 Dec 2009 at www.nytimes.com/2009/06/17/business/economy/17leonhardt.html?_r=1&hp.
35. **Organization for Economic Cooperation and Development.** Health at a Glance 2009 OECD Indicators. Accessed on 28 Apr 2010 at www.oecd.org/health/healthdata.
36. **The Commonwealth Fund Commission on a High Performance Health System, Why Not the Best? Results from the National Scorecard on U.S. Health System Performance, 2008,** The Commonwealth Fund, July 2008.
37. **Aaron HJ.** The Challenge of Rationing Health Care: Can We Say No? Proceedings, Brookings Institution, Washington, DC, 7 Feb 2006.
38. **Emanuel EJ and Fuchs VR.** Who Really Pays for Health Care? The Myth of “Shared Responsibility.” *Journal of the American Medical Association*, 2008;299(9): 1057-1059.
39. **Schoen C, Nicholson JL, and Rustgi SD.** Paying the Price: How Health Insurance Premiums Are Eating Up Middle-Class Incomes—State Health Insurance Premium Trends and the Potential of National Reform, The Commonwealth Fund, August 2009. Accessed on 29 Dec 2009 at www.commonwealthfund.org/Content/Publications/Data-Briefs/2009/Aug/Paying-the-Price-How-Health-Insurance-Premiums-Are-Eating-Up-Middle-Class-Incomes.aspx.

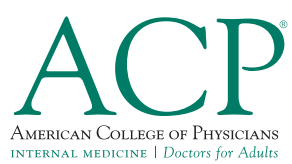
40. **Aaron HJ and Ginsburg PB.** Is Health Spending Excessive? If So, What Can We Do About It? *Hlt Affairs*, 2009;28(5):1260-75.
41. **Cunningham PJ.** The Growing Financial Burden of Health Care: National and State Trends, 2001–2006. *Hlt Affairs* 2010;29(5):1037-44.
42. **Kaiser Commission on Medicaid and the Uninsured.** The Uninsured: A Primer, 2009, pages 7-8. Accessed on 28 Dec 2009 at www.kff.org/uninsured/upload/7451-05.pdf.
43. **American College of Physicians.** Improved Availability of Comparative Effectiveness Information. Position Paper, 2008. Accessed on 28 Dec at www.acponline.org/advocacy/where_we_stand/policy/health_care_system.pdf.
44. **Rubel EJ.** Implementing the National Health Planning and Resources Development Act of 1974. Accessed on 29 Dec 2009 at www.ncbi.nlm.nih.gov/pmc/articles/PMC1432083/pdf/pubhealthrep00156-0005.pdf.
45. **Institute of Medicine.** Health Planning in the United States: Issues in Guideline Development, Report of a Study. Washington, DC: National Academies Press, 1980.
46. **Moran DW.** Whence and Whither Health Insurance? A Revisionist History. *Health Affairs*, 2005;24(6):1415-1425. Accessed on 29 Dec 2009 at <http://content.healthaffairs.org/cgi/content/full/24/6/1415>.
47. **Vest J, CEO, Signature Health Services, Inc.** Testimony. Senate Interim Committee on Certificate of Need. 30 Aug 2006. Accessed on 29 Dec 2009 at www.senate.mo.gov/06info/comm/interim/need/Vest_testimony.pdf.
48. **DiPrete B. and Coffman D.** Oregon Health Services Commission. A Brief History of Health Services Prioritization in Oregon. March 2007. Accessed 23 Nov. 2009 at www.oregon.gov/OHPPR/HSC/docs/PrioritizationHistory.pdf.
49. **Oregon Department of Human Services.** Oregon Health Plan. The Prioritized List. Accessed on 23 Nov. 2009 at www.oregon.gov/DHS/healthplan/priorlist/main.shtml.
50. **Office for Oregon Health Policy and Research, Department of Administrative Services, Oregon Health Commission.** Report to the Governor and the 74th Oregon Legislative Assembly, 2007. Accessed on 23 Nov. 2009 at www.oregon.gov/OHPPR/HSC/docs/07HSCBiennialReport.pdf.
51. **US Office of Management and Budget.** The President's Budget Fact Sheets: US Department of Veterans Affairs, 2010 Federal Budget. Accessed on 25 November 2009 at www.whitehouse.gov/omb/fy2010_department_veterans/.
52. **Panangala SV.** Congressional Research Service. Veterans' Medical Care: FY2007 Appropriations. CRS Report for Congress (#RL33409), May 8, 2006.
53. **Krugman P.** Health Care Confidential, Op-Ed. *New York Times*, 27 Jan 2006. Accessed at http://select.nytimes.com/2006/01/27/opinion/27krugman.html?_r=1&pagewanted=print.
54. **Ford N, Mills E and Calmy A.** Rationing Antiretroviral Therapy in Africa—Treating Too Few, Too Late. *N Engl J Med*, 2009; 360(18):1808-10.
55. **Hochman M. and McCormick D.** Characteristics of Published Comparative Effectiveness Studies of Medications. *JAMA*, 2010;303(10):951-58.
56. **Calonge N and Petitti D.** Testimony before the Committee on Energy and Commerce Health Subcommittee, United States House of Representatives, 2 December 2009. Accessed on 11 March 2010 at: http://energycommerce.house.gov/Press_111/20091202/calonge_petitti_testimony.pdf.
57. **Clancy CM.** Testimony on Technology, Innovation, and the Costs of Health Care to Joint Economic Committee, July 9, 2003. Accessed on 11 March 2010 at www.ahrq.gov/news/test70903.htm.
58. **Hochman M and McCormick D.** Characteristics of Published Comparative Effectiveness Studies of Medications, *JAMA*;2010;303(10):951-958.
59. **Moses H, et al.** Financial autonomy of biomedical research. *Journal of the American Medical Association*, Sept. 2005;294(11):1333-1342.

60. **Academy Health.** Placement, Coordination and Funding of Health Services within the Federal Government. September 2005. Academy Health Report. Accessed at www.academyhealth.org/publications/placementreport.pdf on 12 July 2007.
61. **American College of Physicians.** An Internist's Practical Guide to Understanding Health System Reform; June 2010. Accessed on 4 Aug 2010 at www.acponline.org/advocacy/where_we_stand/access/int_prac_guide.pdf.
62. **Miller A.** New Mammography Guidelines Jolt Medical Field. Doctors Predict By-product of Screening Debate: More Talk With Patients About Mammograms. WebMD, 20 Nov 2009. Accessed on 15 March 2010 at www.webmd.com/breast-cancer/news/20091120/mammography-guidelines-jolt-medical-field.
63. **Klein R.** A middle way for rationing health care resources: Technical analysis is indispensable but only the start. Editorial. *BMJ*, 2005;330:1340-41.
64. **Hall MA and Berenson RA.** "Ethical Practice in Managed Care: A Dose of Realism." *Annals of Internal Medicine* 128:395-402, March 1, 1998. Accessed at www.annals.org/content/128/5/395.full.pdf.
65. **United Network for Organ Sharing (UNOS).** What We Do. Accessed on 29 Dec 2009 at www.unos.org/whatWeDo/organCenter.asp.
66. **Cohen JT and Neumann PJ.** Cost Savings and Cost-Effectiveness of Clinical Preventive Care. The Synthesis Project, Issue 18, Sep 2009. Accessed 30 Mar 2010 at www.rwjf.org/pr/product.jsp?id=48508&c=.
67. **National Institute for Health and Clinical Excellence.** Methods for development of NICE public health guidance, 2006. Accessed on 27 Mar 2010 at www.nice.org.uk/media/FB9/59/PHMethodsManual2006.pdf.
68. **Rawlins MD and, Culyer AJ.** National Institute for Clinical Excellence and its Value Judgments. *BMJ*,2004;329:224-27.
69. **Baltussen R and Niessen L.** Priority Setting of Health Interventions: The need for multi-criteria decision analysis. *Cost-effectiveness and Resource Allocation*, 2006;4:14. Accessed on 30 Mar 2010 at www.resource-allocation.com/content/4/1/14.
70. **O'Connor AM, Stacey D, Entwistle V, Llewellyn-Thomas H, Rovner D, Holmes-Rovner M, Tait V, Tetroe J, Fiset V, Barry M, Jones J.** Decision aids for people facing health treatment or screening decisions. *Cochrane Database of Systematic Reviews* 2003, Issue 1. Art. No.: CD001431. DOI: 10.1002/14651858.CD001431. Accessed on 4 Aug. 2008 at www.cochrane.org/reviews/en/ab001431.html.
71. **The Dartmouth Institute.** An Agenda for Change: Improving Quality and Curbing Health Care Spending: Opportunities for the Congress and the Obama Administration. Dec. 2008.
72. **American College of Physicians.** Reforming the Medical Professional Liability Insurance System. Position Paper. Jan. 2003. Philadelphia: (Product #500700230) Accessed 5 Oct. 2010 at www.acponline.org/ppvl/policies/prof_lib.pdf.
73. **Oregon Health Services Commission.** Past Prioritized Lists. Accessed on 16 March 2010 at www.oregon.gov/OHPPR/HSC/past_prior.shtml.
74. **Oregon Health Services Commission.** Prioritized List of Health Services, Jan. 1, 2010. Accessed on 16 March 2010 at www.oregon.gov/OHPPR/HSC/docs/Jan10PList.pdf.
75. **Gorman L.** National Center for Policy Analysis. Rationing Care: Oregon Changes Its Priorities, Brief Analysis No. 645, 19 Feb 2009. Accessed on 16 Mar 2010 at: www.ncpa.org/pub/ba645/.
76. **Institute of Medicine.** Learning What Works Best—The Nation's Need for Evidence on Comparative Effectiveness in Health Care. Issue Overview. IOM Roundtable on Evidence-Based Medicine. March 2007.
77. **Wilensky G.** Developing a center for comparative effectiveness information. *Health Affairs*. November 2006 w572-w585.

78. **Organization for Economic Co-operation and Development.** OECD Health Data 2009: Statistics and Indicators for 30 countries.
79. **Health Canada.** Canada Health Act: Provincial and Territorial Health Insurance Plans. Accessed October 1, 2007 at www.hc-sc.gc.ca/hcs-sss/medi-assur/pt-plans/index_e.html.
80. **Health Canada.** Canada's Health Care System (Medicare). Accessed July 18, 2007 at www.hc-sc.gc.ca/hcs-sss/medi-assur/index_e.html.
81. **Canadian Health Care.** www.canadian-health-care.org/.
82. **Ross, J; Detsky, A.** Health Care Choices and Decisions in the United States and Canada. *JAMA*. 2009;302(16): 1803-1804. Accessed April 14, 2010 <http://jama.ama-assn.org/cgi/reprint/302/16/1803>.
83. **Commission on the Future of Health Care in Canada.** Building on Values: The Future of Health Care in Canada – Final Report, November 2002. Accessed on September 25, 2007 at www.hc-sc.gc.ca/english/pdf/romanow/pdfs/HCC_Final_Report.pdf.
84. **Sanmartin CJ, Berthelot JM, Ng E, Murphy K, Blackwell DL, et al.** Comparing Health And Health Care Use In Canada And The United States. *Health Affairs*, July/August 2006; 25(4): 1133-1142.
85. **Rodwin VG.** The Health Care System Under French National Health Insurance.: Lessons for the United States. *Am J Public Health*, 2003;93(1),31-7. Accessed on 6 April 2010 at <http://ajph.apublications.org/cgi/content/full/93/1/31>.
86. **Embassy of France in the U.S. "The French Health care System."** www.ambafrance-us.org/atoz/health.asp.
87. **FrenchEntrée.com.** "Health care in France – An Introduction." www.frenchentree.com/fehealth/DisplayArticle.asp?ID=197&printversion=yes.
88. **Organization for Economic Cooperation and Development (OECD).** *OECD Health At A Glance – How France Compares*. OECD Observer 2003. www.oecd.org/publications/Pol_brief and Op Sit Embassy of France.
89. **Schabloski, A.H.** "Health care systems around the world." Insure the Uninsured Project, 2008. www.itup.org/Reports/Fresh%20Thinking/Health_Care_Systems_Around_World.pdf.
90. **National Coalition on Health Care (NCHC).** Health Care in France. www.nchc.org/facts/France.pdf.
91. **Green DG.** and Irvine B. Health Care in France and Germany: Lessons for the UK. CIVITAS: Institute for the Study of Civil Society, London.
92. **Dutton Paul.** *Health Care in France and the United States: Learning From Each Other*. The Brookings Institution Center on the United States and France.
93. **Expatica.** "A Guide to Health care in France." www.expatica.com/actual/article.asp?subchannel_id=29&story_id=4923.
94. **World Health Organization.** World Health Statistics 2007.
95. **Tanner, M.** The Grass is Not Always Greener: A Look at National Health Care Systems Around the World. *Policy Analysis CATO Institute* No. 613 March 18, 2008. Accessed April 15, 2010 www.cato.org/pubs/pas/pa-613.pdf.
96. **International Health Systems.** Background Brief: France. Kaiser Family Foundation. Accessed April 14, 2010 www.kaiseredu.org/topics_im_ihs.asp?imID=4&parentID=61.
97. **Global Health Care Snapshot.** Market Watch. Accessed on April 14, 2010 www.marketwatch.com/health-care/reform/snapshot.
98. **Sawicki, P.** Communal responsibility for health care – the example benefit assessment in Germany. *N Eng. J. Med.* 2009 Nov 12;361(20):e42. E pub 2009 Oct 28. Accessed April 14, 2010 <http://content.nejm.org/cgi/content/full/361/20/e42>.
99. **Thomson, S; Mossialos, E.** Primary Care and Prescription Drugs: Coverage, Cost-Sharing, and Financial Protection in Six European Countries. Commonwealth Fund pub 1384. Vol 82. March 2010. Accessed April 14, 2010. www.commonwealthfund.org/~media/Files/Publications/Issue%20Brief/2010/Mar/1384_Thomson_primary_care_prescription_drugs_intl_ib_325.pdf.

100. **Knox, R.** Keeping German Doctors On a Budget Lowers Costs. NPR July 2, 2008. Accessed April 14, 2010 www.npr.org/templates/story/story.php?storyId=91931036.
101. **Randall, J.** Health-Care Reform in Japan: Controlling Costs, Improving Quality, and Ensuring Equity. Economics Department Working Papers No. 739. Accessed on April 14, 2010 [www.oecd.org/olis/2009doc.nsf/LinkTo/NT000088AE/\\$FILE/JT03275812.PDF](http://www.oecd.org/olis/2009doc.nsf/LinkTo/NT000088AE/$FILE/JT03275812.PDF).
102. **Ikegami N and Campbell JC.** “Japan’s Health Care System: Containing Costs and Attempting Reform.” *Health Affairs*, 2004; 23:26-36.
103. **Ikegami, N.** The Japanese Health Care System: Its Success and Challenges for the Future. *Harvard Health Policy Review*. 9:1: Spring 2008: 110-118. Accessed April 14, 2010 www.hcs.harvard.edu/~hhpr/currentissue/110-118%20International_Ikegami.pdf.
104. **Enthoven, AC; van de Ven, WP.** Going Dutch – managed- competition health insurance in the Netherlands. *N Eng J Med*. 2007 Dec 13,; 357(24):2421-3. Accessed April 14, 2010 <http://content.nejm.org/cgi/content/short/357/24/2421>.
105. **Reinhardt, U.** The Swiss Health System. *JAMA* 2004;292: 1227-1231. Accessed April 14, 2010 <http://jama.ama-assn.org/cgi/content/full/292/10/1227>.
106. **European Observatory on Health Care Systems.** Health Care Systems in Transition, Switzerland. 2002. www.euro.who.int/document/e68670.pdf.
107. **Herzlinger, Regina E.; Parsa-Parsi, Ramin.** “Consumer-Driven Health Care: Lessons From Switzerland” *JAMA* 2004;292(10):1213-1220. Accessed at <http://jama.ama-assn.org/cgi/content/full/292/10/1213> on March 9, 2010.
108. **Green DG. and Irvine B.** *Health Care in France and Germany: Lessons for the UK*. CIVITAS: Institute for the Study of Civil Society, London.
109. **Edmonds, M.** 10 Health Care Systems Around the World. How Stuff Works. Accessed April 14, 2010 <http://health.howstuffworks.com/10-health-care-systems5.htm>.
110. **CIA World Factbook.** Accessed on 3 Aug 2010 at <https://www.cia.gov/library/publications/the-world-factbook/geos/tw.html>.
111. **Lu, R; Hsaio, W.** Does Universal Health Insurance Make Health Care Unaffordable? Lessons from Taiwan. *Health Affairs* 22, no. 3 (2003) 77-88. Accessed on April 14, 2010 <http://content.healthaffairs.org/cgi/content/full/22/3/77>.
112. **Cheng, T.** Taiwan’s New National Health Insurance Program: Genesis and Experience So Far. *Health Affairs* 22, no 3. 61-76. Accessed April 14, 2010 <http://content.healthaffairs.org/cgi/reprint/22/3/61.pdf>.
113. **Davis, K; Huang, A.** Learning from Taiwan: Experience with Universal Health Insurance. *Annals of Internal Medicine*. Vol 148 no. 4 313-314. Accessed April 14, 2010 www.annals.org/content/148/4/313.short.
114. **Reichard, J.** Taiwan: Surprising Lessons from a Small Island. *The Commonwealth Fund*. Accessed on April 14, 2010 www.commonwealthfund.org/Content/Newsletters/Washington-Health-Policy-in-Review/2008/Jun/Washington-Health-Policy-Week-in-Review—June-9—2008/Taiwan—Surprising-Lessons-from-a-Small-Island.aspx.
115. **Wen CP, Tsai SP, Chung W-S I.** A 10-Year Experience with Universal Health Insurance in Taiwan: Measuring Changes in Health and Health Disparity. *Ann Intern Med*, 2008;148:258-267.
116. **NHS.** About the NHS: How The NHS Works. www.nhs.uk/England/AboutTheNhs/Default.cmsx.
117. **Ronald, M.** The Future of Primary Care: Lessons from the UK. *N Engl J Med*. 2008 Nov 13;359(20):2087, 209 accessed at <http://content.nejm.org/cgi/content/full/359/20/2087-b>.
118. **European Observatory on Health Care Systems and National Coalition for Health Care.** Health Care in the United Kingdom, www.nhc.org/facts/UnitedKingdom.pdf.
119. **NHS.** *The NHS Plan: A Plan for Investment, A Plan for Reform* A Summary. www.nhs.uk/nhsplan.
120. **Trapp D.** UK primary care physicians to gain greater control under NHS reforms. *American Medical News*, 23 Aug 2010.
121. **Bureau of Labor Statistics.** The Employment Situation June 2010. Press Release (USD-10-0886), 2 July 2010. Accessed on 3 Aug 2010 at www.bls.gov/news.release/pdf/empst.pdf.
122. **Medicare Payment Advisory Commission (MedPAC).** Report to Congress: Promoting Greater Efficiency in Medicare. June 2007.

How Can Our Nation Conserve and Distribute Health Care Resources Effectively and Efficiently?



Product #510101030