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STATE OF THE WORLD

Transforming Cultures

From Consumerism to Sustainability

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STATE OF THE WORLD

Transforming Cultures

From Consumerism to Sustainability

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extreme close-up

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Reinventing Health Care: From Panacea to Hygeia

Walter Bortz

According to Greek legend, Asclepius, Apollo's son, was charged with the oversight of human well-being. He in turn delegated his responsibilities to his two daughters, Hygeia and Panacea. Hygeia was entrusted with the health aspects of humanity's life course, and Panacea with the disease and illness elements. This dichotomy of health and disease has pervaded medicine's brief history.¹

Since the discovery of penicillin in 1865, modern medicine has focused the bulk of its efforts on the treatment and repair of infectious disease, with many positive results. The development of antibiotics and the embrace of antisepsis (the prevention of infection) have unburdened humanity from many historically persistent scourges. Smallpox was eradicated in 1979, polio has been eliminated from much of the world, and infections such as guinea worm disease, measles, and rubella are no longer present in many regions. In several industrial countries, life expectancy rose 30 years in the space of a century, an event that has not been rivaled since.²

In the last 60 years or so, however, new disease conditions have emerged that are not caused by bacteria, viruses, or other microorganisms. Instead, they are triggered by envi-

ronmental pollution and by lifestyle factors such as poor diet and a lack of exercise. In many countries, obesity has become the "norm," with health implications such as diabetes, hypertension, and arthritis. For the first time in history, Africa is now home to more people who are overweight than are underfed. Rather than focusing on isolated disease components and individual events, medicine has entered the era of multiple causes and diagnoses.³

Facing New Health Challenges

The major contributors to global mortality today are for the most part preventable. According to the World Health Organization (WHO), childhood and maternal malnutrition cause an estimated 200 million "years of life lost" annually, followed by physical inactivity and obesity (150 million years), unsafe sex (80 million years), and tobacco (50 million years). A study of the "actual causes of death" in the United States in 2000 lists tobacco as the number one killer, with poor diet and physical inactivity coming in a close second.⁴

The global community has made important progress in responding to these chal-

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lenges—from improvements in water quality to the treatment of infant diarrhea. Yet the collective response by the medical system has been primarily to alleviate symptoms. This is because it is rarely possible to “cure” the major killers of today. The two principal therapies in medicine’s black bag—surgery and pharmacy—are largely irrelevant to the new disorders of aging and poor lifestyle choices. The medical system can treat symptoms, but heart attacks, stroke, diabetes, emphysema, arthritis, and neurologic disorders remain resistant to curative effort.⁵

These ailments are, however, notably open to modifications in lifestyle—from improved diets and exercise to efforts to reduce the use of tobacco and alcohol. But improving health literacy remains a significant challenge. Hygeia’s product of “health” has effectively played second fiddle to Panacea’s product of disease.⁶

Overhauling Global Health Care

From a financial perspective, prevention pays poorly, while sickness pays. In the United States, health care spending accounts for over 15 percent of gross domestic product (GDP)—a figure that is projected to reach 20 percent by 2015. Yet the current U.S. health system, addicted to high payments from surgery and

pharmacy, does not address the job requirements of medicine. In 2000, WHO ranked the United States first in the cost and responsiveness of its health system, but thirty-seventh in performance and seventy-second in overall health. U.S. infant mortality is the highest among industrial countries (see Table 9), and studies suggest that as the obesity epidemic spreads, today’s children may be the first in U.S. history who will not live as long as their parents. In the southeastern part of the country, life expectancy is falling to levels that approach those in Russia.⁷

Nearly all industrial countries provide some form of mandated universal health insurance coverage, but the United States is notably absent from this list. The degree of privatization in the U.S. medical system exceeds that in nearly all other countries, eroding much of the “locus of control” within communities. Nobel laureate economist Kenneth Arrow has observed that medical care cannot function like a standard competitive market because of inherent uncertainties and the gross imbalance of skills between physician and patient. Such “market failure” creates unlimited opportunities for perverse incentives such as rewarding medical procedures instead of health outcomes.⁸

Worldwide, the primary emphasis of med-

Table 9. Health Care Performance, Selected Countries, 2006

Country	Health Expenditures as Share of GDP	Infant Mortality	Life Expectancy	Healthy Active Life Expectancy*
	(percent)	(number per thousand live births)	(years)	(years)
Cuba	7.1	5	78	68
France	11.1	4	81	72
Japan	7.9	3	83	75
Sweden	7.9	3	81	73
United States	15.3	7	78	69

*Data for 2003.

Source: See endnote 7.

icine needs to be on health, not disease, and on prevention instead of repair. (See Box 17.) The medical structure must serve its function, which is the assurance of the human potential. Panacea must be downsized and Hygeia reconstituted in place of disease medicine.⁹



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An example of obesity in the U.S.

Emphasizing Health over Disease

There are hints of a transition in this direction. The region of North Karelia in Finland was notorious for having one of the highest rates of heart disease in the world, affecting 855 out of every 100,000 residents. But since 1972, the North Karelia Project—an integrated, population-based preventive effort—has registered a 68-percent reduction in heart-related deaths and a 49-percent reduction in overall mortality. WHO has since replicated the experience in other communities.¹⁰

France, credited as having one of the best-performing health care systems in the world, has always maintained a prominent role for its village doctors. According to a WHO report, these physicians provide the “personal, one-to-one, empathy, trust and intimate knowledge of individual case histories” that are often lacking in more “advanced” health care systems.¹¹

And Cuba, perhaps more than any country,

has emphasized primary care. The country’s “neighborhood health system” serves as an intimate antenna to the health circumstances of the people. Health care spending in Cuba represents only 7.1 percent of GDP, yet the country’s average life expectancy is 78 years and its infant mortality rate is lower than the U.S. rate. Interestingly, the rates of diabetes and obesity in Cuba fell precipitously after the U.S. trade embargo was imposed in the 1960s, as access to total calories, unhealthy foods, and mechanized transport all declined.¹²

The global health budget needs to include a massively increased commitment to health education. Health illiteracy is the biggest killer everywhere, and it deserves significant attention. People need to learn, for example, that when medical costs are included, fast food is in reality not all that cheap.

Research and training institutions should be redesigned to increase knowledge of the environment as well as determinants of human behavior. Medical schools must realign their teaching to the personal requirements of health medicine. And health educators must assume prominence over disease technologists. If something like half of all illness is preventable or lifestyle in origin, then half of health care costs are approachable—suggesting that a new emphasis must be placed on knowing how to age and how to die.¹³

Greening Health Care

The medical care system needs to be “greened” as well. The current health care sector is characterized by high usage of energy and other resources, rising emissions of greenhouse gases, and the release of toxins such as mercury and pharmaceutical chemicals into the environment. Medical institutions are also notorious

Box 17. Making Social Welfare Programs Sustainable

Around the world, but especially in industrial countries, social welfare programs take up a large share of government budgets. In 2005, social expenditures accounted for 16 percent of gross domestic product in the United States, 19 percent in Japan, 27 percent in Germany, and more than 29 percent in France and Sweden. The fundamental goal of these publicly mandated programs is to guarantee a certain minimum standard of living to every citizen, based on the premise that it is the state's responsibility to provide for the general well-being of its citizens.

In an ecologically constrained future where sustainability will need to take precedence over economic growth, governments will have to find ways to make social programs as effective as possible while minimizing cost and environmental impact. Fortunately, newer, more effective, more efficient programs are continually being tried, and many small programs that have proved effective are being scaled up in industrial and developing countries alike.

"Social farming," for example, is the use of agriculture for social purposes. More specifically, it involves the use of agricultural resources for rehabilitation, social inclusion, and education. It serves several purposes in that it generates agricultural products while creating jobs, providing social services, and building social capital. Thus far the popularity of social farming has been greatest in Europe, where roughly 700 social farms have been initiated in the Netherlands, and more than 1,200 have been started in France.

Norway has implemented an innovative twist on social farming on an island 75 kilometers south of Oslo at Bastøy Prison, which has been converted into the world's first "ecological prison." Inmates who have been transferred from maximum security prisons now live in unlocked houses, care for live-

stock, practice organic agriculture, and run a forestry operation. The prison's "human ecological philosophy" effectively rehabilitates prisoners by teaching useful skills while offering them responsibility and a crucial level of control over their own affairs. The prison also uses less energy, generates less waste through its composting program, and produces food and wood products for consumption and sale, thus reducing its ecological impact while saving money for the Norwegian government.

"Conditional cash transfer" (CCT) programs represent another innovative, low-cost, and highly effective social service. These involve giving money directly to poor households based on certain agreements, such as sending children to school and providing for their health and nutrition. The concept stems from the idea that the conditions on which transfers are made, especially those related to health and education, will generate human capital that will provide returns significantly greater than the value of the cash transfers themselves. *Oportunidades* in Mexico and *Bolsa Familia* in Brazil are two of the more well-known and successful CCT programs. Studies in Mexico have found that *Oportunidades* has significantly increased student enrollment and considerably reduced both maternal and infant mortality, among other outcomes.

Social programs of this type are proving very effective because they are low-cost, low-impact, and highly targeted. As these and other programs are scaled up and expanded to reach more people, governments will continue to discover more and better ways to meet their responsibilities to both people and the planet in more effective and less costly ways.

—Kevin Green and Erik Assadourian
Source: See endnote 9.

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A severely malnourished child, said to be 9 years old, in a village in India.

users of products made from polyvinyl chloride, which results in the production of dioxin, a known endocrine disruptor, when the wastes are incinerated.¹⁴

Hospitals are supplanting steel mills and oil refineries as major polluters. According to the U.S. Environmental Protection Agency, hospitals in the United States use more than twice

as much energy per unit area as office buildings. And a 2001 study of Lion's Gate Hospital in Vancouver, Canada, calculated the "ecological footprint" of the facility to be 2,841 hectares, corresponding to a land area about 719 times larger than the hospital's actual area. This was significantly higher than the estimated footprint for the City of Vancouver, which was about 180 times its actual area.¹⁵

Health Care Without Harm, a global coalition of 473 organizations in 52 countries, is working to limit the environmental footprint of industrial medicine by addressing everything from toxics reduction to the purchasing of more environmentally friendly products by medical institutions. In addition to reducing their ecological impact, green hospitals can also have a positive impact on patient health.¹⁶

Ultimately, hospitals and health care systems need to be redesigned in ways that do not make patients or other people sicker, such as through the production of toxic waste. Even more important, health care needs to be redesigned so that people are not getting sick in the first place and therefore are less likely to end up in the hospital to suffer needlessly and to indirectly cost societies and the environment significant resources. This will require not just a subtle retuning of health care policies, but a complete reinvention of health care as it is practiced today.

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Reinventing Health Care: From Panacea to Hygeia

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