



Can Medicine Learn from Organic Agriculture?

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We associate organics with sound environmental stewardship and improvement of the quality of life and social justice for those participating. We associate organics with fairness, openness, and doing the right thing. We associate organics with values that include improved health and food and worker safety. Finally, we associate organics with reforming agriculture from its present system to one in which people live within the bounds of nature.

— Michael Sligh, "Organics at the Crossroads," in *Fatal Harvest*

In 1971 a handful of organic farmers in Maine formed an organization called the Maine Organic Farmers and Gardeners Association (MOFGA). Today, over 3,000 farms are members. In 1973, 50 farmers formed the California Certified Organic Farmers (CCOF). By 1979 CCOF had pushed through the first legislation in the country defining organic standards. By 2003, organic food products had become the fastest growing sector of the commercial food system in the country, increasing by more than 20% each year.

What distinguishes organic agriculture from industrial farming? Organic agriculture promotes and enhances biodiversity rather than creating catastrophic environmental and health impacts. It is a management system based on the biological life cycles of plants, animals, and the soil, rather than artificial fertilizers. An organic approach to farming is premised on minimal use of materials not available at the farm itself, rather than large-scale machine production. Organic management restores, maintains, and enhances ecological harmony rather than creating a steady dependency on artificial pesticides and fertilizers.

Each year, ever-increasing numbers of people commit to eating organically grown food. Is there something that medicine can learn from organic farming? What would medicine be like if it had goals similar to those of organic agriculture? Simply put, our medicine would improve the quality of life on Earth by allowing people to live within the bounds of nature. Is this possible? I believe it is. The rationale of Ecologically Sustainable Medicine (ESM), which is central to the concept of Green Health Care, is that ultimately, medicine must be considerate of the Earth to be truly good for people. ESM not only improves medicine and health, it also encourages sound environmental stewardship by encouraging eco-wise medical choices.

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Michael Sligh uses the term *organic integrity* to describe the essential value structure of organic agriculture. The key elements of organic integrity are environmental stewardship, accountability, and a fair pricing system. Together, these three attributes drive an alternative food system that is accessible to all people. Is it possible for these qualities to be incorporated into medicine? And if so, why haven't we begun to create this system?

Environmental stewardship in agriculture involves valuing the land itself as well as the life we share with other beings—organic and inorganic—in our environment. This includes supporting healthy biological activity while promoting and enhancing biodiversity. Environmental stewardship in agriculture involves a shift away from artificial ingredients, preservatives, genetically modified organisms, and radiation as well as artificial pesticides and fertilizers. When farmers think of themselves as environmental stewards, their practices improve biogeochemical lifecycles of the land and enhance the output and quality of farm-grown food. As environmental stewards, we can better the larger ecosystem of which the farm is an integral part by providing healthier natural habitats for local flora and fauna. Such an approach also establishes an economic balance for local communities.

The principle of environmental stewardship can be applied readily to medicine. The medical equivalents of chemical pesticides and fertilizers are pharmaceutical drugs and commercially derived nutritional supplements. Medicine that reduces habitual dependence on drugs and supplements provides stewardship by encouraging the natural lifecycles of people and communities both urban and rural. A shift to natural, organically produced, local food and medicine improves the overall quality of life for all; it also provides economic benefits enhancing personal and environmental wellness.

Sustainable medical practices that are good for people and the environment support individuals in re-learning how to live within natural life cycles. For example, it can help people make informed decisions on such issues as the proper role of sunlight and high quality air and water in maintaining optimal health. Sustainable medicine initiates lifestyle choices that support healthy physical practices, including exercise and movement, good work habits, appropriate amounts of relaxation, and such important mind-body practices as meditation and affirmations.

Ecologically Sustainable Medicine teaches stewardship by reinforcing precaution through personal care. Taking greater responsibility for one's health has far-reaching implications for individuals and their local environment. Thus, using sustainably produced goods and products in homes and workplaces, "greening" public buildings, and cultivating and maintaining parks and open spaces are all choices for a healthier world. Likewise, practicing precaution in medicine is a powerful tool for restoring the balance between contemporary medicine and the laws of nature.

While environmental stewardship in agriculture promotes a shift away from artificial ingredients, preservatives, genetically modified organisms, and radiation, one must wonder why medicine has not made a similar shift away from the conflicting claims and questionable marketing tactics of mainstream pharmaceutically-driven health care. Natural medicines found in ESM, for example, use no artificial ingredients or preservatives. They use no genetically modified organisms and no radiation. In fact, careful scrutiny reveals that the public continues to voice a loud negative reaction to eating genetically modified organisms. Yet scarcely, if ever, does that

The Criteria of Ecologically Sustainable Medicines

Ecologically sustainable medical practices are:

- Safe and harmless
- Clean and non-toxic
- Cost-effective
- Non-polluting
- Adaptable and flexible
- Renewable
- Protective of the quality of life on Earth, the environment and Earth's natural resources
- Synergistic with human health and planetary well-being
- Connected with the web of life

same public object to the growing use of GMOs in medicines, which has occurred for nearly a century!

Sligh offers a second definition of organic integrity as *accountability*. Could accountability in our medical system be improved? Pages could be filled on this important and complex subject. The pharmaceutical industry (which, incidentally, also produces pesticides and fertilizers) fails to take responsibility here. Unfortunately, we have come to assume that good medicine requires randomized clinical trials (RCT), providing us with the “best” proven medicine. Yet each year several books on bestseller lists reveal how pharmaceutical companies are hijacking the process of creating medicines in a variety of ways. Information with potential negative implications is suppressed during drug testing. Contradictory claims or long-term negative consequences—such as the reluctantly acknowledged toxicities of VIOXX or Phenfen—appear years later. We have grown accustomed to finding out years after the fact that original research omitted or overlooked pertinent information. Universities, pharmaceutical companies, and the FDA are intertwined in a dance of shared power that yields inconsistent precautionary value.

RCTs are not the only way to achieve accountability. Costs might be a simple precautionary factor. Heart by-pass surgery costs \$60,000 and balloon angioplasty costs \$30,000; these expenses are largely covered by insurance companies and Medicare. However, Dean Ornish's Program for Reversing Heart Disease, which costs \$8,000 per person annually, is seldom covered by insurance, even though Dr. Ornish has proven in quality clinical trials that the program is 80% successful.

In general, nutritional and lifestyle practices found in mind-body medicines and other forms of ESM are more modest in cost and easier to use. Occupational and physical therapies are often more cost effective than long-term drug dependence. Yet there is little economic accountability to address special interests and medical hegemony.



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A sustainable medical system promotes health care that is good for people and the environment. Why? Because the environment is a significant determinant of our health. Without clean air, water, and food, maintaining good health is elusive. Accountable medicine begins with healthy environmental choices. By choosing ESM practices first, costs can be contained, saving expensive medical technologies for difficult cases. The savings could be enormous. Programs that include one hour a day of moderate exercise, three times a week have proven to reduce the onset of chronic disease by 2% a year^{1,2}. . . or by extension 10% in five years or 50% in 25 years! Given the size of our population, such reductions would achieve huge cost savings while improving public health and providing higher quality services to the underserved.

A fair pricing system, Sligh's third element of organic integrity, requires an examination of the most difficult obstacle facing Green Health Care and ESM. Our current system of health care reimbursement is based in privately owned insurance companies or the federally funded program Medicare. However, it has not always been this way. The custom of co-pay in private insurance, which later led to managed care, developed in the 1940s and 1950s. Workers' unions successfully leveraged workplace safety to create a health care entitlement—health insurance. As our society became increasingly affluent and more risk averse, medical insurance has been covering larger portions of health services, without necessarily questioning the overall value of such expenditures.

What is the actual cost of the health insurance entitlement? The subject is rarely discussed. Countless people say they can't afford to see an acupuncturist, a chiropractor, or a physical therapist. Can we afford *not* to? Isn't medicine that keeps us healthy worth the investment? Our insurance system as presently constructed is a "sick care" medical system. Expenses are covered and benefits provided if you are sick. With marginal regard for the outcome, physicians and the hospitals are paid for services. In traditional Chinese medicine, the healer was only paid when he or she kept you well. When someone was sick, the service was free!

The costs to the community and to the environment are seldom factored into the medical equations, at least not at the level of treatment choices. Americans spend over 15% of the nation's GNP on health care, twice as much as most European countries.³ Yet we are not twice as healthy (in fact in many ways we are less healthy!). Economic investment in medical technology is failing to produce healthy results.

A fair pricing system in medicine would include the "externalized costs" of production and disposal of medicine, the high cost of high-tech hospital based medicine, and the value of wellness and prevention. Our extensive investment in pharmaceutical medicine requires that Americans blindly participate in an inefficient consumption of huge resources that degrade the environment. Measuring the *real* costs to the environment of medicines would significantly alter the cost of health care, shifting the emphasis to more sustainable non-pharmaceutical practices.

If individuals were confronted with the full costs of medicine, cheaper, more sustainable choices would be the outcome. Perhaps if co-payments were higher, this would happen. By comparison, most complementary therapies—such as personal trainers, nutritional programs, and exercise programs—seem much more practical if



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the real costs of mainstream medicine are passed on to the user. In the example of Dr. Ornish's system, four hours a week of nutritional counseling, yoga, exercise, a home cooked meal, and meditation over a period of eight years equals the price of one single by-pass surgery! Studies fail to show that by-pass surgery adds eight years of good health to the patient's life, only that it prevents imminent mortality.

Sustainable medical practices are cost effective because they are local and consist primarily of hands-on services. They offer the community great benefit. Similar to noninsurable expenses, sustainable medical practices *seem* more costly because they are embedded in a system that subsidizes technological innovation, pharmaceutical marketing, and the very high expense of centralized hospital services. The shift to Ecologically Sustainable Medicine brings a fairer pricing system; the shift to a service economy keeps money circulating within the local community, rather than dispersing it to global corporate manufacturing conglomerates.

Finally, the most important value medicine can learn from organic agriculture is that just a handful of well-intentioned people have successfully reformed a huge industrial manufacturing sector of the economy: the food industry. The challenge for Green Health Care and Ecologically Sustainable Medicine is to boldly show the same leadership by offering health care shaped by a sound environmental ethic—one that “improves the quality of life and social justice for those participating.” ESM and Green Health Care offer medicine that will bring not only improved health and wellness for all who participate, but also provides a vision and the means for what health care might and should become: a system that is fair, open, and does the right thing!

SOURCES

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