

Save Some Green: The Economics of an Eco-friendly Practice

As Americans continue to dig themselves out of the financial crisis, one truth is increasingly evident—saving money on energy and converting to more eco-friendly medical practices makes more sense now than ever before.

By Joel Kreisberg, DC, MA

Is everybody going green? Is going green simply a matter of changing light bulbs? Economics aside, green healthcare is good for people and the planet. The business case for investing in the short run is compelling, and the economics will clearly demonstrate that you will save money over the long run by going green in your practice. By supporting many of the global health initiatives, such as reducing greenhouse gases, shrinking your carbon footprint, and supporting health opportunities for you and your patients, you'll be leading a massive shift toward a healthier healthcare system. To pilot this change, you'll need to focus on three areas: creating a green clinic or health center, advocating for a healthy environment, and practicing medicine sustainability.

Greening a clinic

A green building protects the immediate health of its occupants, it protects the health of the surrounding community, and it supports the health of the global community and its natural resources (www.gghc.org). The early returns are pretty compelling for constructing a green building. The Packard Foundation (*Building for Sustainability Report: Six Scenarios for the David and Lucile Packard Foundation*; www.packard.org/pdf/2002Report.pdf) found that "a cost benefit analysis of green buildings in California determined that 'a minimal upfront investment of 2% of construction costs typically yields life-cycle savings of over ten times the initial investment.'" The report concluded that Leadership in Energy and Environmental Design (LEED; www.usgbc.org/leed) certification only adds 1% to the usual

costs of a building when environmental savings are taken into account. LEED certification was developed by the US Green Building Council (USGBC; www.usgbc.org), which externally reviews and recognizes green buildings. If you are in the business of building health clinics or hospitals, the Green Guide for Healthcare (www.gghc.org) is the place to start.

However, most physicians and healthcare professionals are not in the building industry. For most practitioners, greening the office is about reducing the environmental impact. This translates into monitoring environmental performance, conserving resources, and reducing waste. Tools and audits offered by the Teleosis Institute (www.teleosis.org) and Practice Greenhealth (www.practicegreenhealth.org) can help. These non-profit educational organizations offer members useful tools and the practical knowledge required to evaluate all areas of environmental performance, including solid waste reduction, recycling, water conservation, energy conservation, pollution prevention, medical technology, and even healthy people. If proper staffing is committed to completing the audit, a clinic can complete each of the six self assessment audits in a few hours. These assessments give your staff the knowledge necessary to develop a greening plan, which many times can consist of some easily completed activities that lead to the greatest environmental impact for the least amount of money.

Our recent greening efforts at a trio of smaller community clinics provide an example of savings. Life Long Medical Clinics in Berkeley, CA, saw annual savings of \$17,000

by converting to Energy Star computers. NorthEast Medical Services in San Francisco, CA, reduced overhead by \$12,000 per physician by switching to electronic medical records. Finally, Tiburcio Vasquez Medical Clinic in Hayward, CA, is saving more than 40% on energy bills by retrofitting to more efficient lights. With energy and lighting, many utility districts offer free audits and incentives to reduce energy consumption.

More importantly, creating an eco-friendly clinic is not just about saving money. Gary Cohen, co-executive director of Health Care Without Harm notes that the green hospital or clinic "situates itself in the broader ecology of its community and region and acts as a healing force" (www.practicegreenhealth.org/private/library_resource/385). A growing body of research shows that green hospitals improve patient outcomes and reduce length of stay for patients, as well as reduce missed workdays for employees (www.rwjf.org/pr/product.jsp?id=21765). Put it all together and green medical facilities serve as models for communities committed to promoting the health of people and the environment.

Advocating for the environment

Do you know the most significant environmental health risks in your community? Advocating for a healthy environment, the second domain of Green Health Care, has traditionally been the aim of organizations such as the EPA, state departments of environmental quality, or smaller non-governmental organizations that promote environmental initiatives. Green

healthcare brings this into the clinic. A green clinic stays informed on local environmental issues, such as air quality, water safety, toxic waste issues, and healthy sun practices. Physicians committed to environmental health in a green clinic become environmental health advocates. Once you learn the basics about your ecological region, you are better able to recognize the effects of environmental illness in your patients. For many professionals, this requires learning protocols for the evaluation and examination of patients. Several resources for completing environmental screenings can be found at the websites for the National Environmental Education Foundation (www.neefusa.org) and Physicians for Social Responsibility (www.psr.org). Most professionals quickly learn to ask a few simple questions to determine environmental exposures. With this knowledge in hand, practitioners are better able to report environmental illness to public health officials and/or refer patients to environmental health physicians (www.aem.org).

Knowledge of environmental health can also set up a ripple effect for the health of the community. Local and regional governments better support the findings of medical providers that report environmental illness. Rather than placing the burden on environmental activists for regulatory change, clear medical evidence of environmental illness can greatly improve the ability of local agencies to act to prevent further environmental risk. Other elements of environmental advocacy include supporting other green health professionals, promoting public health initiatives, patronizing green businesses, becoming engaged with local environmental agencies and, ultimately, becoming a voice for green healthcare.

A recent study of pediatricians found that parents have a far greater interest in environmental health than many pediatricians have themselves (www.ehponline.org/docs/2002/110p823-827kilpatrick/abstract.html). Due to ongoing increases in medical expenditures, a shift is underway to make medicine more sustainable. Still in its infancy, sustainable medicine allows for improved outcomes, greater equity, and a more balanced distribution of health opportunities. To date, few physicians have taken a hard look at the consequences of medical practices on the environment. Welcome Health Care Without Harm (www.noharm.org), which has begun educating hospitals about the consequences of medical waste on the environment. Other organizations have joined the discussion, including Collaboration of Health and the Environment (www.che.org), Physicians for Social Responsibility (www.psr.org) and Practice Greenhealth (www.practicegreenhealth.org).

Teleosis Institute is the only organization that has developed educational programs that teach principles of ecology, sustainability, and medicine as an integrated subject. The 40-hour online course Leadership in Green Health Care (www.teleosis.org/ghcp.php) offers continuing education units for physicians and nurses, and provides an interactive forum for comprehending, applying, and working with fellow professionals, as well as identifying and implementing sustainable practices.

Once professionals understand the consequences of downstream medical waste, less toxic medical practices are easily found. For example, the reliance on single-use medical supplies can be replaced with a more modest system of refurbished instruments. An example of how sustainability enters the field of medicine can be found in emerging news about the disposal and waste of pharmaceuticals in the US. Many readers are aware that concentrations of pharmaceuticals are now consistently found in surface and drinking water in the US. While still low enough as single entities, precaution is required because the combined effects of the mixture of contaminants are unknown. Fish populations are beginning to show abnormal developments that could be a result of these micro-levels of waste pharmaceuticals. Unused and expired medicines are accumulating in people's homes, causing not only a risk of poisoning or diversion for improper use, but an addition to the cost of unused pharmaceuticals, which is staggering. Recent data released by Teleosis Institute suggests that Americans have \$70 billion in unused pharmaceuticals stashed away in their homes, which will cost upwards of \$600 million to dispose of properly (http://teleosis.org/pdf/Healthcare_Water_and_Pharm_Burden.pdf). Sustainable pharmaceutical choices include prescribing starter packs, shifting to unit doses when possible, and recommending diet and lifestyle changes before introducing pharmaceuticals whenever possible.

Another approach to sustainability in medicine is to promote health opportunities before more intensive medical interventions are necessary. Again, diet and lifestyle changes for diabetes and heart disease are more cost effective, and even if eventual pharmaceutical or surgical interventions are necessary, the burden to the economy and the environment are still reduced. Integrative physician Dean Ornish has conducted studies that show an 80% success rate with a mind-body medicine program for reducing health disease at a cost of \$8,000 per person per year, compared with \$34,000 for angioplasty or over \$60,000 for surgery (<http://jama.ama-assn.org/cgi/content/abstract/280/23/2001>). The savings are significant, with outstanding outcomes for

the community and environment as well.

Sustainable medicine encourages healthcare professionals to first consider medical techniques that are less resource dependent. Many choices exist that produce no waste in production while continuing to be safe, harmless, clean, non-toxic, non-polluting, and cost-effective. Examples include all forms of manual care or physical therapies, which are far more sustainable than traditional orthopedics. Supportive care, rather than cures, allows services to be distributed more equally and serve more of the overall population.

Prevention is an important example of sustainable healthcare. Placing more emphasis on preventative services saves money and saves lives. The Prevention Institute (www.preventioninstitute.org) provides many examples of the economic and health benefits of prevention. Primary prevention includes anti-smoking legislation, immunizations, and water fluoridation. A clear example is setting the value of recommending breast-feeding for newborns. One study found that babies in California breast fed for six months on average required \$1,435 less medical care than formula-fed babies (www.preventioninstitute.org). Prevention, precaution, and promotion are all medical interventions that continue to be overlooked by the primary care physician who provides services dominated by pharmaceuticals and surgery. While there is certainly a place for all three of these well-developed interventions, a sustainable medical system places greater emphasis on basic medical interventions such as primary care services and public health investments. Each outperforms medical interventions for preventing acute and chronic illness, returning higher returns on money invested while increasing health opportunities for all people.

Green healthcare emphasizes medicine and healthcare that is rooted in the local community. A green hospital, a healthy environment, and a practice of sustainable medicine are investments in people and local community. I encourage all healthcare professionals to consider the wisdom and value of creating a healing environment to live, work, and play. In the spirit of health, we have the opportunity to bring greater prosperity and health to each member of our society by simply becoming mindful of how we live with one another and how we live with the place we call home. *mdng*

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