

Creating a Healthier and Greener Medical Office: Saving Green by Going Green

By Cindy Russell, MD
VP of Community Health, SCCMA

Below is a summary of the valuable information and resources gleaned from the recent “Greening Your Medical Office” June 2010 seminar, co-sponsored by Stanford, SCCMA, and Palo Alto’s Community Environmental Action Partnership. You will find out where to recycle electronics, how to have a free energy audit, how to get a free low flush toilet in your office or home, and much more! Visit the Going Green section of the SCCMA website for continued updates.

What Sustains You?

Trick question. What’s the first step to greening your office? Answer—Knowing why you are doing it. In a presentation at the “How to Green Your Medical Practice” seminar, on June 1, Dr. Kreisberg, founder of the Teleosis Institute, had us pair up and ask each other four times “What sustains you?” We found out it was the same things—our family, our community, a fulfilling job, and nature. Creating a shared vision of caring and stewardship in your office, by sitting in a circle and bringing each of your staff into this, is the foundation. Bring yourselves into the process. Your Green Team will sprout and grow, as you foster this connection by a common concern for all that you care about. The interesting thing is that you can actually save money doing it. Conservation pays!!!

Think Global and Green Local: Graceful Greening

Gracefully greening your medical office may not seem easy, but Dr. Joel Kreisberg, founder of Teleosis Institute in Berkeley, is a local and national leader in this field. Motivation is what he feels is the primary element. Beyond that, his leadership seminars have you use checklists to glide through the options of energy conservation, environmentally-preferable purchasing, green pharmacy program, and waste minimization. The Institute produces a beautiful quarterly journal packed with useful information and inspiring articles.

Dr. Kreisberg’s approach is holistic and effective. Any physician can join his organization and take advantage of the courses and resources he has to offer locally. They even have an online leadership course in sustainable medicine, which is approved for 40 units of CME! Check out their excellent website at www.Teleosis.org.

The Florida Medical Association recently launched its My Green Doctor Office Program as well, that can help guide any doctor’s office to improve its energy and environmental practices (www.mygreendoctor.org).

Are You Creating Asthma in Your Office?

Dr. George Tingwald is a rare professional who is both an architect and physician. He planned the California Pacific Medical Center’s five-campus master plan in San Francisco and is director of medical planning for Stanford Medical Center’s Renewal Project. He is also chief consultant for the upcoming PBS documentary “The Greening of Medicine and Healthcare.” He pointed out that hospitals are not healthy places to work. He stated that health care is responsible for the largest incidence of work-related asthma in the United States. Hospitals alone account for 63% of work-related asthma in the health care industry. Unbelievable, but true. This is due to exposure to latex, cleaning products with sensitizing chemicals, air fresheners, formaldehyde in carpet and furniture,

as well as other chemicals causing poor indoor air quality. Displacement ventilation is the new mantra for healthy indoor air in hospitals and he plans to use it in the new Stanford Hospital.

For the PBS documentary, Dr. Tingwald has gathered an “A list” group of “Green Action” health care professionals, including Gary Cohen of Health Care Without Harm, Debra Levin from the Center for Health Design, Robin Guenther of Sustainable Healthcare Architecture, Mary Pittman from the Public Health Institute, Kathy Gerwig from Kaiser Permanente’s Workplace Safety and Environmental Stewardship Program, and Dr. Richard Jackson, formerly with the CDC and now at UCLA’s School of Public Health. Dr. Tingwald concluded his excellent presentation saying “Trying to save the planet, while poisoning the environment, doesn’t make any sense!” Look for the upcoming special on PBS next year.

Medical Waste Reduction: Waste Not, Want Not

Hospitals are the third largest source of waste in the nation and discard about two million tons of medical waste per year, according to Health Care Without Harm. About half are now recycling at least some medical waste. Some hospitals are using reprocessed surgical instruments that are, in many cases, better than new and save money. Reprocessing and remanufacturing programs from Ascent Healthcare Solutions have saved its hospitals more than \$82 million in supply chain costs during the first half of 2009.

In a throw away economy, we are not fully aware that our common trash can is part of our environment (air, soil, and water) that we depend upon for our own health and well-being. As you know, with many synthetic products, there is no such thing as “throwing it away.” Many of these synthetic chemicals enter a cycle of pollution. Products that are manufactured with toxic chemicals are then disposed of in a landfill with a toxic legacy of groundwater pollution and soil contamination. The oceans are filled with plastic waste (mostly from land-based trash), which eventually breaks down into small particles that “feed” the bottom of the food chain. Pollution prevention is the key!

Jack McGurk, former long-term chief of the Environmental Management Branch of the California Department of Health Services, is a hero of waste reduction for health care. He played a key role in the California Waste Management Act and developed and led a pollution prevention project with California hospitals to reduce solid waste. The mercury reduction program was overwhelmingly successful with a 95% reduction in mercury products in hospitals. The new concern is Red Bag Waste, which costs hospitals and private physicians a lot of money for disposal. The problem is two-fold. One, there have been violations where needles, liquid body fluids in tubing, and blood-soaked gauze were found in the municipal trash and cost the hospitals thousands of dollars in fines and also limited options for disposal for the violator. The second is an overinterpretation of the Medical Waste Reduction Act that causes much more regular trash to be put in the red bags, thus costing more.

What Is Red Bag Waste?

Stanford Hospital has solved the problem of red bag waste by sterilizing and treating all hospital garbage other than recycled items and compost, thus rendering it safe for municipal garbage. Needles are placed in Daniels reusable needle containers, which are dumped, then returned, saving thousands of pounds of waste. Biohazard red bag waste includes fluid blood, heavily blood-saturated items, bags and IV tubing containing blood products, suction canisters, hemovacs, chest drainage units, and hemodialysis products. What doesn’t go in the red bag is garbage, sharps, pathology specimens, hazardous waste, and medication. A tip to reduce waste is to put the red bag container in a location away from regular trash to discourage regular garbage from going in it. Lightly saturated gauze and other dressings can go in the regular trash.

What We Pour Down the Sink, We Eventually Drink

Pharmaceutical waste has become a huge issue, Mr. McGurk states, as we are now finding hundreds of pharmaceuticals in our drinking water, including antidepressants, birth control pills, antibiotics, and chemotherapy agents. They find their way into the water by inappropriate disposal of unused medications in landfills or flushed down the toilet.

Another pathway is municipal sewage placed on agricultural fields, which contains unmetabolized medications excreted in the urine and feces of people. The sludge also contains personal care products and antimicrobials we commonly use containing endocrine disrupting chemicals, which have been found to adversely affect aquatic animals. The solution is multifold and includes: 1) prescribing less medication to patients; 2) removing or reducing pharmaceutical samples in our offices; 3) having widespread pharmacy take-back programs in which hopefully all pharmacies would eventually participate; and 4) incinerate pharmaceuticals as hazardous waste.

How to Reduce Pharmaceutical Waste

- Prescribe less
- Decline pharmaceutical samples
- Encourage companies to give patients drug vouchers instead of samples
- Encourage pharmacy take-back programs to patients
- Put pharmaceuticals in hazardous waste for incineration

Greenwaste Recycling

Instead of throwing away your recyclables at the office, some doctors are taking the small amount of bottles and cans from the office and bringing them to their house once a week, putting them in their own recycle bins. Marc Green of Greenwaste, the waste collection for many cities in the area, agrees that is a good idea. Greenwaste has a successful model to sort and divert about 90% of the waste from the landfill. They use a covered compost program for food and yard waste as well. They are working hard in Palo Alto with the Zero Waste Program and are now taking blue wrap around sterilized instruments.

Water Water Everywhere: Save Water and Get a Rebate!

Water is the 21st century gold and it won't get any cheaper. Karen Morvay, from the Santa Clara Valley Water District (SCVWD), encourages every business and resident to get a **free water audit** from them. Water conservation is just one of many programs the SCVWD has to offer. They provide great ideas to cut back on water usage and have rebate programs for energy efficient washers and also have **free high efficiency toilets!** Worth looking into! For information, call 408/496-6965 and talk to the folks at Water Wise Consulting, who contracts for them. You can also visit www.valleywater.org.

Right Lights Program: Don't Kilowatt—Save a Watt!

New lighting upgrades for your business can save money and energy for years to come. Jay Melena, from the Right Lights Program, highlighted options including new thinner tubular fluorescents that are more energy efficient, but fit in the same older fixtures. They pay for

themselves in two years. Occupancy sensors are another great way to save money in areas of low use. They now offer “daylighting” sensors to turn lights on or off in response to natural lighting in high use areas. The Right Lights Program offers **free audits!** They serve all businesses, regardless of size, and will walk through your office with you to help you customize your program. Stanford Medical Center saved about 40,000 kilowatts and \$5,000 per year after the audit. Skinspirit, a smaller venture in Palo Alto, saved about 11,000 kilowatts per year. For information, contact Ecology Action, a nonprofit group that sponsors the program, at www.RightLights.org.

E-Waste: The Fastest Growing Waste Stream

Did you know that it takes a rhinoceros’s weight of raw materials (1.8 tons) to make your computer? That means each time you buy another computer, another 1.8 tons of materials are mined from the earth. The average computer is junked after just two years. The average cell phone lasts only 18 months. When the cell phone, computer, television, or other electronic equipment is put in the landfill, lots of harmful chemicals leach out into the landfill and into our water. Computers are especially toxic, containing cadmium, lead, and mercury.

These electronic devices are not designed with recycling in mind and most find their way to India, Africa, and China, where low-wage earners, including children, break apart the devices and are heavily exposed to the toxins, while poisoning the air, land, and water. It is piling up fast! Of the three million tons of E-Waste discarded in 2007, only 13% was recycled. Reputable recyclers are hard to find, and Judy Levin of the Center for Health and the Environment www.ceh.org made us aware of several places to properly recycle your E-Waste. They have an E-Steward Program that certifies recyclers who do not export overseas, do not send E-Waste to prisons, and who do not release private information and data from computers. Beware, not all recyclers recycle—they may just be collectors!

Where to Recycle Your E-Waste

If we gathered all the E-Waste in the U.S., it would form a 22-story pile that covers an area the size of Los Angeles (470 square miles)!

In our area, there are several companies that are E-Steward certified.

- **Green Citizen** is one and they have three locations: San Francisco, Palo Alto (next to Whole Foods), and Burlingame (www.GreenCitizen.com).
- **ECS Refining, LLC/United Data Tech Distributors** in Santa Clara (www.UnitedDatatech.com).
- For others, visit the **E-Steward website** at http://www.electronicstakeback.com/recycling/find_a_responsible_recycler.htm.

Buying Greener Electronic Gadgets: Shop With EPEAT

It is always more sustainable to upgrade and add memory to your old computer, but when you must buy a new computer, EPEAT can help you evaluate a product with high environmental standards in mind. EPEAT is a program of the Green Electronics Council and they look at a variety of criteria including:

- Intentional elimination of lead, mercury and cadmium, and other harmful materials
- Use of post-consumer plastic
- Design for end-of-life recycling
- Longevity and upgrade ability (instead of planned obsolescence)

- Energy conservation
- Packaging
- Corporate environmental responsibility

You can visit their website at WWW.EPEAT.net.

Greener Cleaning Products

Unfortunately, green cleaning is a difficult problem for medical offices. Products that disinfect have toxic properties and contribute to asthma, chemical sensitivities, and other health problems. Quaternary compounds are one such common chemical used as an antimicrobial, but it does do the job of cleaning. We do need to remove harmful bacteria, such as MRSA, and viruses with surface cleaning. Research is now being focused on greener cleaners including just very dilute bleach. Krisanne Hanson, project director in the General Services Division at Stanford University Medical Center, says hospitals such as Stanford have an Environmentally Preferable Purchasing Program (EPP). Safer products can be used that are fragrance free. Metal-free floor products are important (high gloss has its environmental price). The best option is no floor wax! If you are buying cleaning products for your medical office, look for the GREEN SEAL or ECO LOGO certification. They are “greener” than others.

Microfiber cloth is an extremely effective cleaning material. It holds up to seven times its weight in water, absorbs oils, is non-abrasive, and does not leave lint or dust. According to tests, the microfibers remove 99% of bacteria, whereby normal cloth reduces bacteria by 33%. Microfiber cannot be used on high-tech coated surfaces as it does accumulate dust that can be transferred. Microfiber must be washed in regular washing detergent without fabric softeners or oils, as these clog the fibers. They are a synthetic material and are not biodegradable, but they are reusable. The most common use in offices is for mops and cleaning rags.

Ms. Hanson pointed out it is important to know your cleaning contractors, so you can help them choose safer products. A good janitor is your primary method of choice to incorporate Integrated Pest Management to reduce or eliminate pesticides in your office. Your office staff can help with good housekeeping. Keeping food in the refrigerator, and sealing cracks and crevices or other openings for bugs is key. Stanford has an excellent environmental program led by Ms. Hanson. They recently won an Environmental Excellence Award at the Clean Med Conference in Baltimore.

The Clean Med Conference brings together hospitals, nonprofits, and businesses interested in greening medicine. Next year, it will be in Phoenix, Arizona on April 6-8. If you are interested, visit <http://www.cleanmed.org/>. It is inspiring to know that there is a growing effort in many areas to transform medicine toward a more sustainable path. We can all be part of the change.

References/Greening Resources

- 1) Work Related Asthma Among Healthcare Workers, Pechter et al.
<http://www.cdph.ca.gov/programs/ohsep/Documents/hcw.pdf>
- 2) Kaiser Greening Efforts.
<http://xnet.kp.org/newscenter/opexcellence/2009/022609kathygerwig.html>

- 3) Teleosis: Health Professionals in Service of the Global Environment WWW.Teleosis.org
- 4) Medical Waste regulation
- 5) Red Bag information-
<http://www.calrecycle.ca.gov/ReduceWaste/Business/posters/redbag.htm>
- 6) www.Greenwaste.com
- 7) www.RightLights.org
- 8) To find a reputable E-Waste Recycler
http://www.electronicstakeback.com/recycling/find_a_responsible_recycler.htm
- 9) More sustainably manufactured electronics WWW.EPEAT.net
- 10) WWW.CleanMed.org
- 11) City of Los Angeles Dept of public works, Bureau of Sanitation
http://www.ci.la.ca.us/san/solid_resources/pdfs/medicalwastereduction.pdf
- 12) <http://www.cleanmed.org> Annual Conference
- 13) <http://www.noharm.org> Health Care Without Harm
- 14) <http://www.healthandenvironment.org> Collaborative on Health and Environment
- 15) <http://green.harvard.edu/green-office> Harvard's Green Office Program
- 16) www.mygreendoctor.org Florida Medical Association Green Doctor Program