

Virtual Mentor

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CLINICAL CASE

Educating Patients as Medicine Goes Green

Commentary by Louise P. King, MD, JD, and Janet Brown

Ms. Chen had been going to Dr. Patel's outpatient gynecology practice for several years for her annual well-woman exam. The rural clinic was understaffed, and it was all the few participating physicians could do to manage the patient load.

A few months before Ms. Chen's yearly check-up, Dr. Patel's small group practice instituted a policy to stop using plastic specula for gynecological exams. The clinic-wide policy was an effort to reduce waste and avoid the increased shipping costs of plastic specula. Signs were posted in the clinic waiting area that informed patients of the practice's decision to "go green," and thanking them for their understanding and continued support.

Ms. Chen preferred the single-use plastic speculum, however, for hygiene reasons. She did not want to get a sexually transmitted disease from an improperly sterilized instrument and requested a single-use plastic speculum for her exam. Dr. Patel informed her that the clinic no longer stocked them and reassured Ms. Chen that measures had been taken to guarantee the metal specula were properly sterilized.

Commentary 1

by Louise P. King, MD, JD

Dr. Patel and her small group practice should be commended for "going green"—a movement that has become common in both large academic centers and public hospitals. Experts estimate that U.S. hospitals produce an average of 6,600 tons of waste per day. Over the past 10 years, waste production has increased as much as 15 percent with the escalating use of disposable, single-use products such as plastic specula [1]. Much of our medical waste is incinerated, with the resultant release of noxious gases that many argue are detrimental to the environment [2]. Movement toward recyclable materials should be encouraged not only as a cost-saving measure for hospitals and clinics but also as a necessary change to alleviate some of the burden of medical waste.

At the same time, Ms. Chen should not be faulted for expressing a fear, however unwarranted, that a change to a metal speculum would expose her to infectious disease. She is most likely unaware of the inherent safety of sterilization procedures. Perhaps Dr. Patel could educate her about this, which may or may not alleviate her fears. Ultimately, if Ms. Chen refuses an exam with a sterilized speculum, as the case asks, must Dr. Patel provide her choice of speculum? The answer is probably no.

As a question of principle, Dr. Patel should enforce the new green policy uniformly. Making exceptions in individual cases opens the door to an untenable situation. If enough patients demand specific nonreusable materials, this small practice might end up with a large stock room full of alternative materials. Even assuming one could charge the patient the cost of the speculum or other material, maintaining a room of alternative materials would be cost-prohibitive. More importantly, it would violate the group's new commitment to green practices, not only by including nongreen materials it had decided to exclude, but also by providing a market, albeit small, for them.

An argument might be made that Ms. Chen suffers from mysophobia (i.e., germaphobia) and that this condition could be recognized as a disability. Certainly no physician can refuse necessary medical care to a patient because of a disability, and the case implies that Ms. Chen cannot easily find another source of medical care. It is even possible that this rural clinic receives federal funding, which might oblige staff to consider making a reasonable accommodation for patients with special needs. This does not automatically mean, however, that ordering plastic specula is a reasonable accommodation for Ms. Chen's impairment.

Assuming a small, federally funded rural center might be required by law to consider accommodating Ms. Chen's mysophobia, the accommodation would not stop with the regulation for a plastic speculum. If Ms. Chen needs a biopsy of her cervix, for example, a Tischler biopsy forceps will be used. There is no plastic single-use equivalent. Much of the equipment in physicians' offices and operating rooms has no single-use equivalent. Ms. Chen might be surprised to learn this, since the process for obtaining consent to treat in either office or operating room does not include a specific description of the materials that will be used.

This raises a broader question. As offices and hospitals move forward to "green" their practices, what form of notification and consent is required? This clinic attempted to make patients aware of the change with a posted sign. But this sign did little to educate Ms. Chen about the relative safety of sterilized metal equipment, and there was no formal process to ensure she consented to this change in practice. It is unlikely that a formal consent process is legally necessary, based on the standard test of what a reasonable person in the patient's position would want to know; there is no inherent change in the risk of using a metal speculum as opposed to a plastic one. Both pieces of equipment are considered standard of care, and a strong argument can be made that a patient need not be informed of each piece of equipment that will be used for treatment. That said, educating patients on the need for multiple-use equipment and addressing their concerns regarding safety is an important part of the process of "going green." Perhaps in some instances, merely offering patients a handout that details the problem with medical waste and the process and safety of sterilization will suffice.

There may be situations, however, in which physicians should consider a formal consent process. One example is the trend toward sterilization of devices originally marketed for single-use in the operating room. A reprocessing industry has emerged that collects single-use products—such as laparoscopic trocars or skin staplers—sterilizes, and returns them to the hospital for reuse [3]. The process is inherently safe and does not pose any additional risk to the patient on whom the product is reused. These products, however, are being used in a way not originally intended. An argument can be made that patient consent must be sought specifically for reuse of these products and that they be allowed to opt out. This would make recycled products less attractive to hospitals and would severely hamper an important effort to make our hospitals “green.”

In sum, as hospitals move toward environmentally sound practices, the public must be educated about the safety of new “green” products. This education may take various forms, but without it the public is unlikely to accept alternatives that, at first blush, seem to put them at risk. There is no legal or ethical requirement, however, that physicians adhere to a patient’s request to use single-use products. A physician does not violate any duty to a patient by enforcing green policies in a practice.

References

1. Hoffman JM. Think “RECYCLE” for medical products. *Medical Design News*. June 5, 2003.
2. Health Care Without Harm. Medical waste. <http://www.hcwh.org>. Accessed April 27, 2009.
3. United States Government Accountability Office. Reprocessed single-use medical devices. 2008. <http://www.gao.gov/new.items/d08147.pdf>. Accessed April 27, 2009.

Louise P. King, MD, JD, is a third-year resident at Parkland Memorial Hospital in Dallas, in obstetrics and gynecology. Prior to becoming a physician, Dr. King specialized in constitutional and criminal law and legal concerns of indigent individuals.

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Commentary 2

by Janet Brown

Hospital mission statements emphasize healing environments, community, wellness, respect, and quality care. Yet, in the process of providing that care, hospitals simultaneously have a negative impact on human health and the environment through intensive energy and water consumption, use and disposal of toxic materials, and waste headed to landfills and incinerators. With the increased understanding of man’s impact on global climate and public health, physicians and health care

administrators must demonstrate leadership in addressing health care's role in environmental sustainability [1].

Over the last several decades, numerous reusable medical devices have been replaced with disposable ones in the name of infection control and ease of use. These decisions are coming back to bite us in the form of reduced landfill space and overuse of red bags—disposal of which costs at least five times more than disposal of nonregulated or regular waste. The sheer volume of waste has prompted health care professionals to look closely at inefficient practices and consider the value of going back to reusables in a number of areas—sharps containers, dishware, drapes, isolation gowns, and hard cases for sterilizing instruments, to name a few. Hospitals are working to reduce red-bag waste generation through staff education, standardized receptacles, and signage, and to cut the overall volume of waste through decreased use, reuse, and recycling.

Waste regulations and segregation practices have sometimes been based on *perceived* risk associated with a certain item, device, or practice, and not on science. This is precisely why, in the early 1990s when medical waste washed up on the eastern shores, IV bags were regulated in certain states and had to be handled as potentially infectious—not because they were infectious—but because they resembled blood bags. It proved to be a huge mistake costing hospitals hundreds of thousands of dollars to treat noninfectious wastes as if they were potentially harmful. Several years later, this perception-based regulation was changed to reflect scientific reality, but these poor habits have persisted in many facilities, where unnecessary red bagging is commonplace.

Health care professionals are in the best position to demonstrate their leadership through evidence-based approaches in sustainability initiatives and by correcting misinformation. In some cases, where scientific evidence is not yet available or difficult to study (for example, acceptable levels of exposure to multiple chemicals or the timing of fetal exposure), facilities are urged to take the precautionary approach [2]. The Precautionary Principle presumes an ethical imperative to prevent rather than merely treat disease, even in the face of scientific uncertainty. This principle can be understood as: “when an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically” [3].

In the case at hand, Ms. Chen is concerned about the possibility of infection from a reusable speculum. Dr. Patel can step in here to educate her on the safety and environmental benefits of reusable medical device use. Dr. Patel could ask the facility sustainability officer, safety director, or infection-control practitioner to demonstrate the sterilization or high-level disinfection of the reusable speculum recommended by the Centers for Disease Control and Prevention's Guideline for Disinfection and Sterilization in Healthcare Facilities. Cold-sterilant and high-level disinfectant manufacturers back up their disinfection claims through rigorous study and offer quality assurance controls through protocol of staff training, cleaning and

disinfection, and other quality control measures [4]. The quality assurance protocol includes infection control with standardized methodology, staff training, posted policies, verification testing, and periodic, unannounced inspections by safety and infection-control staffers. Joint Commission (on Accreditation of Healthcare Organizations) inspections often include a close review of protocol, including staff interviews and documentation review.

Taking a leadership role on sustainability does not mean cutting corners on safety, quality, or infection control. A diverse team with clinician participation considers all criteria for sustainability interventions, and implementation is preceded by pilot testing, evaluation, policy development, research review, and sign-off from leadership.

Some physicians are not fully engaged with the specific environmental sustainability programs in their health care facilities. “Higher-ups,” for example, sometimes don’t enforce basic training requirements and participation in sustainability programming for all staffers, so a physician may not receive specific training on recycling or red-bag segregation. Health care delivery is a complex organism, and the more engaged staffers (on every level) are in sustainability, the faster and stronger it develops and the more embedded it becomes in the culture of the organization. Having a separation between clinicians and other staffers creates a barrier that can lead to regulatory compliance violations, safety concerns, and reduced morale on the part of other staffers. When it comes to participation in sustainability programs, no one should have an opt-out clause.

Support staffers tend to feel greater respect when physicians and other clinical leaders take that extra step to maintain a safe and healthy environment. An individual who drops a needle should bend down and pick it up and properly discard it in a sharps container even if that individual is the division chief. A person who is rushing down a stairwell and tempted to drop disposable gloves on the ground should hold onto the gloves until a waste receptacle is found. Someone in a hurry after treating a patient at the bedside and tempted to leave the disposable kit with blood-stained material on the table for someone else to clean up should resist the urge. The generator of the waste material should be responsible for its proper segregation into the appropriate containers. Following these guidelines will go a long way in setting a tone of environmental excellence and respectful work environments. The next time someone complains, “Well, those doctors won’t participate”—someone will speak up, “Yes they will; they’re on board and want to participate.”

While new medical students may not feel powerful as they venture into the health care environment, they *are* the future of health care and have a voice and role in clinical leadership on sustainability. Clinical support of green building, energy and water conservation, and toxicity- and volume-reduction programs can help propel the initiatives to a new level. Clinical leadership has led to elimination of toxic cleaning chemicals and support for building with LEED certification as a goal. It can give a program the push it needs to attract the attention of senior leadership and help

connect action with public health; purchasing with disease; materials with air quality; and management with illness.

Often staffers accustomed to a pre-ecoconscious work environment are the most difficult to convince, which is why the incoming clinicians are critical to the mission with their commitment to responsible procurement, training, use, and management of equipment and materials. The next generation of clinicians has greater knowledge of environmental sustainability and eco habits well established in their homes and personal belief systems; they will infuse health care with the enthusiasm, commitment, and determination it needs to move the entire sector.

How do these committed clinicians know where their facility falls on the greening spectrum, where to start, and what to do next? One option is the Green Guide for Health Care, a self-certifying toolkit that steers facilities through greener design, construction, and operations [5]. A project of the Center for Maximum Potential Building Systems, Health Care Without Harm, and Practice Greenhealth, the toolkit breaks greening the landscape into manageable chunks. Facilities can use this toolkit to assess where they are and plot their course to improvements over the long term. Version 3, currently in development, strives to identify the restorative visioning of health care. Concepts like restoring ecosystems; zero waste; renewable energy; collecting rain water; toxin-free purchases, building materials, furnishings, and finishings; and hosting farmers' markets are part of this future. More and more hospitals and health systems are realizing the value of naming a sustainability officer to lead environmental activities. The activities are steered by a diverse committee—where clinical leadership is a must.

Physician leadership, knowledge, education, and ability to leverage authority are critical to environmental sustainability in health care. Increased physician involvement will help as we progress from a policy of “doing less harm” to one of “healing communities.”

References

1. Intergovernmental Panel on Climate Change. Climate change 2007: synthesis report. Summary for policymakers. http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr_spm.pdf. Accessed December 3, 2008.
2. Raffenberger C, Tickner J, Jackson W. *Protecting Public Health & the Environment: Implementing the Precautionary Principle*. Washington, DC: Island Press; 1999.
3. Rutala WA, Weber DJ; Healthcare Infection Control Practices Advisory Committee. Guideline for disinfection and sterilization in healthcare facilities, 2008. http://www.cdc.gov/ncidod/dhqp/pdf/guidelines/Disinfection_Nov_2008.pdf. Accessed May 5, 2009.
4. Ashford N, Barrett K, Bernstein A, et al. Wingspread statement on the precautionary principle. 1998. www.gdrc.org/u-gov/precaution-3.html. Accessed May 5, 2009.

5. Green Guide for Health Care. About the *Green Guide for Health Care*. <http://www.gghc.org/about.cfm>. Accessed May 6, 2009.

Janet Brown is the director of sustainable operations for Practice Greenhealth, a membership-based nonprofit organization that helps hospitals improve their environmental performance. Ms. Brown is a member of the steering committee of the Green Guide for Health Care and the planning committee of CleanMed.

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