



CLEANING UP OUR "ENVIRONMENTAL FOOTPRINTS"

Catholic health care is a ministry to the community: healing the sick, serving the vulnerable, and leading by example. It follows in the footsteps of Jesus, who not only healed the sick but challenged and transformed the social norms of society. Through its strength as more than 2,000 Catholic health care sponsors, systems, facilities, and related organizations, the ministry has the power and responsibility to transform the health care industry to make it more environmentally responsible and safe.

Concern for environmental issues grows out of Catholic social teaching to promote and defend human dignity at every stage of life, as well as a special commitment to care for vulnerable persons. Environmental hazards are particularly harmful to developing children—both before and after birth—and to poor, frail, and sick persons.

Hospitals are significant sources of pollution in communities because of the waste generated through modern health care delivery. Hospitals for a Healthy Environment (see p. 25) estimates that the nation's hospitals produce 7,000 tons of

Catholic Organizations Are Taking Responsibility for Environmental Protection

BY JAYNE E. MARDOCK

waste per day. According to the U.S. Environmental Protection Agency (EPA), medical waste incinerators are the third largest source of the dioxin and the fourth largest source of the mercury released into the environment.¹ Health care's environmental footprint has health consequences not just for patients, but also for staffs and the communities they serve.

Health professionals are committed to the ancient healer's motto: "First, do no harm." Catholics have a rich tradition of social teaching that calls on each person to care for the sick and vulnerable, the unborn, and all of creation. The commitment to serve the community and be a good neighbor requires Catholic health care facilities to take steps to reduce the environmental burden of health care delivery.

But there are also financial reasons to be environmentally responsible. Waste is lost money; but those losses can be minimized through the deliberate reduction of waste. Hospitals and other care facilities are finding ways to reduce, reuse, and recycle waste, thereby saving thousands of dollars. They can leverage significant buying power to transform materials procurement so that the products used are more consistent with environmental goals, as well as cost competitive. By acting strategically, the Catholic health ministry can lead by example to help make health care delivery less wasteful and polluting.

CATHOLIC TEACHING AND ENVIRONMENTAL CONCERNS

Catholic health care organizations are rooted by their commitment to fulfill Jesus' ministry of healing, caring for the poor and upholding the dignity of each person. The U.S. Conference of Catholic Bishops stated in its 1981 pastoral letter, *Health and Health Care*, that the long Catholic tradition in health care results from the fact that "the Church considers health care to be a basic human



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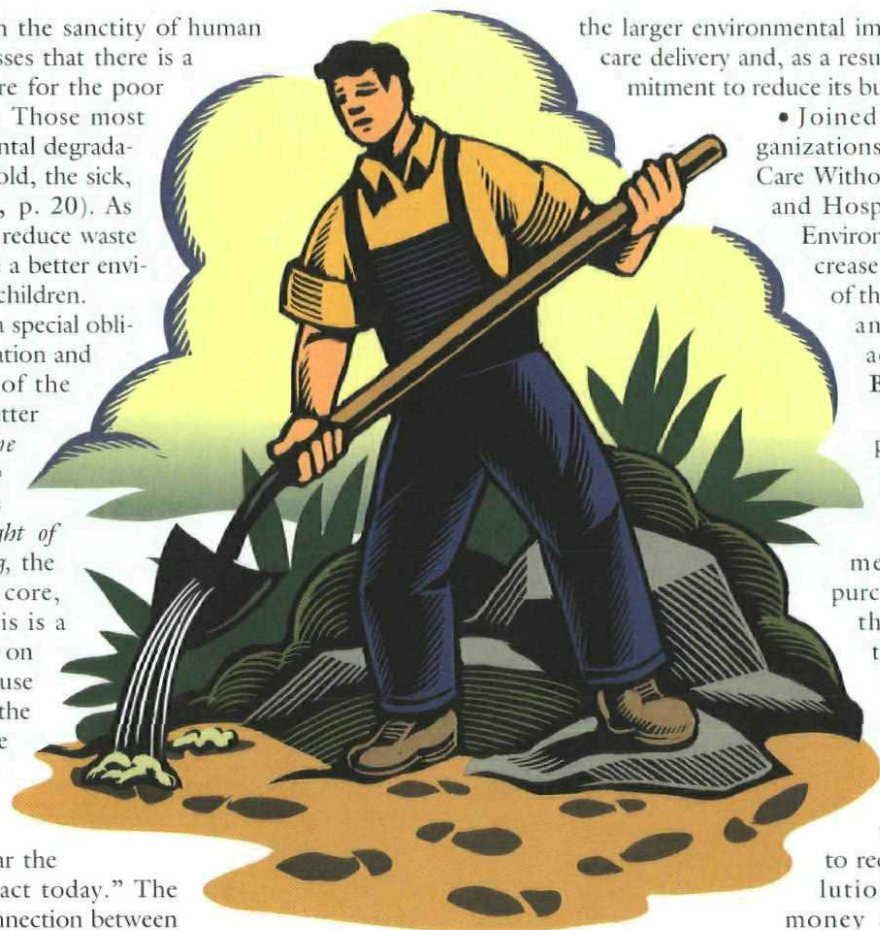


right, which flows from the sanctity of human life." The tradition stresses that there is a special obligation to care for the poor and vulnerable as well. Those most vulnerable to environmental degradation are the young, the old, the sick, and the poor (see **Box**, p. 20). As Catholic health facilities reduce waste and pollution, they leave a better environmental legacy to our children.

The ministry also has a special obligation to care for all creation and to be a good steward of the earth. In their pastoral letter of 1992, *Renewing the Earth: An Invitation to Reflection and Action on Environment in Light of Catholic Social Teaching*, the bishops wrote: "At its core, the environmental crisis is a moral challenge. It calls on us to examine how we use and share the goods of the earth. . . . The whole human race suffers as the result of environmental blight, and generations unborn will bear the cost for our failure to act today." The bishops made a clear connection between the costs of pollution and those most vulnerable to it, saying, "It is the poor and the powerless who most directly bear the burden of current environmental carelessness. Their lands and neighborhoods are more likely to be polluted or host toxic waste dumps, their water to be undrinkable, their children to be harmed."

As health care facilities work to protect the sanctity of all life, they must reduce the chemicals in the environment that disrupt learning, development, and reproduction. The womb is the first environment, and it is often polluted by the chemicals and metals that find their way into the body through food, air, water, and our surroundings. The Centers for Disease Control and Prevention estimate that 1 in 10 American women have within them levels of mercury high enough to affect an unborn child's ability to learn and concentrate.² Breast milk contains hundreds of chemicals—chemicals that taint the best food a woman can give her child. Lead, which is stored in the bones, is mobilized during pregnancy so that a child is born with much of its mother's lead.³ As the amount of chemicals that pollute our bodies is reduced, the sanctity of all life is preserved.

Over the past decade, the Catholic health ministry has become increasingly concerned about



the larger environmental implications of health care delivery and, as a result, has made a commitment to reduce its burden. It has:

- Joined with other organizations, including Health Care Without Harm (HCWH) and Hospitals for a Healthy Environment (H2E), to increase our understanding of the problems involved and ways we might address them (see **Box**, p. 21)
- Asked group purchasing organizations (GPOs) to use their leverage to provide environmentally preferable purchasing (EPP) plans that deliver alternative, less damaging products for use in health care facilities
- Engaged its member organizations to find ways to reduce waste and pollution while saving money and being better environmental stewards

Health care organizations cause ecological damage in several ways.

• Joined other national Catholic organizations in the Catholic Coalition for Children and a Safe Environment to "practice what we preach" in health care delivery as a means of protecting children and the environment

The reader can learn more about the available resources from the **Box** at the end of this article (see p. 21). But, first, more should be said about health care's contribution to environmental degradation and what the ministry can do about it.

HOW HEALTH CARE CAN HARM

Health care organizations can cause environmental damage in several ways, including the generation of nonmedical waste, waste incineration, and widespread use of polyvinyl chloride (PVC) plastics.

Nonmedical Waste Health care uses a great deal of paper and plastic disposable products in routine care and administration. HCWH estimates that 53 percent of hospital solid waste is paper and cardboard, 17 percent is food and organic matter, 15 percent is plastic, and 15 percent is metals or other waste.⁴ Health care is always looking for ways to reduce costs, and facilities are beginning to see that by reducing waste, they are saving thousands of dollars.



The leaders of St. Elizabeth Health Partners, Covington, KY, estimate that the facility has saved \$98,000 through recycling programs and donates about two tons of unused, prepared food to area food banks.⁵ St. Peter's Health Care Services, Albany, NY, has saved \$300,000 by using a third-party vendor to reprocess selected medical devices, such as certain catheters, compression devices, scalpels, wands, and scissors, and by buying back reprocessed equipment at a reduced price.

A waste audit can help facilities identify problems and devise ways to reduce waste. Health care organizations can make it easy for staff to recycle and segregate trash throughout their facilities. Marian Medical Center, Santa Maria, CA, solicits employee suggestions for improving its ecological program and rewards those employees who submit ideas. The facility has also cut its energy costs by 13 percent, saving \$60,000 so far.

MEDICAL WASTE INCINERATION

For decades, hospitals turned to incineration to address their waste problems. However, medical waste incineration remains a significant source of harmful mercury and dioxin air emissions, in addition to toxic ash residue, which can contaminate water sources if not disposed of properly. A host of other toxic chemicals and metals can be found in medical waste as well.

Dioxin Dioxin is a class of chemicals created by the burning of chlorinated waste, and it is one of the most potent pollutants known to humans. The incineration of plastics is the primary source of health care dioxin emissions. Although dioxin is ingested by most people when they eat meat, fish, and dairy products, it passes to unborn children in

Medical waste incineration is a significant source of harmful mercury and dioxin emissions.

utero and to infants through breast feeding. Dioxin exposure has been linked to disrupted sexual development, birth defects and damage to the immune system, IQ deficits, and developmental delays.

St. Elizabeth Health Partners has reduced costs by \$17,000 by switching from waste incineration to sterilization and shredding, thereby reducing medical waste volumes by 80 percent.

Mercury Mercury is a potent neurotoxin, especially for the unborn, infants, and children. Medical waste contains as much as 50 times more mercury than ordinary waste, according to the EPA. Mercury is found in various thermometers, blood pressure cuffs, esophageal dilators, measurement devices in medical laboratories, fluorescent lighting, and batteries. In addition, thermometers used in the home account for 10 percent of the mercury in the municipal waste stream.⁶ In 2001 the U.S. Food and Drug Administration released advisories urging pregnant and nursing women to avoid eating shark, swordfish, tilefish, and king mackerel because they had been found to contain enough mercury to damage unborn babies and young children.

A number of Catholic health care organizations—including Pittsburgh Mercy Health System; St. Joseph Mercy Health System, Ann Arbor, MI; Dominican Hospital, Santa Cruz, CA; and St. Joseph's Hospital, Atlanta—are involved in mercury-reduction efforts, including community thermometer exchanges. Through its participation in H2E, CHA and many of its members have committed themselves to beginning to eliminate mercury whenever possible.

PVC Plastics and DEHP PVC is pervasive in health care delivery. It is found in intravenous feeding and blood bags, plastic tubing, bedpans, patient ID bracelets, plastic wrap, vinyl-coated notebook binders, flooring, and even wallpaper. PVC has a higher chlorine content than any other plastic and therefore creates much more dioxin when manufactured and burned in an incinerator. Compounding the problem is DEHP—Di(2-ethylhexyl) phthalate—a chemical added to PVC to make it supple. However, DEHP does not bind to PVC and can leach out when it comes in contact with liquids, lipids, or heat. For this reason, it is a poor choice for medical devices and equipment. DEHP is especially dangerous for male babies and can cause sexual reproductive problems in them. At a minimum, hospitals should try to eliminate all PVC and DEHP products from maternity, pediatric, and neonatal ICU departments. Bags, tubes, and gloves account for 98 percent of the *disposable* PVC care products used in health care. Office supplies and food preparation are the other areas of concern. Cost-competitive alternatives exist for most of these products. Consorta, a GPO used by

Populations Especially Sensitive to Pollution

Although anyone can be affected by adverse environmental conditions, some people are more at risk because of their stage in life, economic status, or overall health condition.

- *The Young* The bodies and minds of babies not yet born, infants, and children are still developing and do not have the same defenses as do adults. Pound for pound, children eat more food, drink more liquids, and breathe in more air than adults do—and they take in more toxins in the process.

- *The Old* Elderly bodies are, by definition, deteriorating. Older people have experienced long lifetimes of exposure to pollution.

- *The Sick* People who are ill, especially those already weakened by immune deficiencies, dysfunctional cardio-pulmonary systems, and cancer, are more likely than healthier people to be affected by environmental pollution and toxins.

- *The Poor* Poor people have less access to high-quality health care; they often have poor nutritional health and live in substandard housing.



many Catholic health care facilities, has developed an extensive EPP program that provides products that reduce or eliminate toxic waste. The program also labels PVC products, thereby helping facilities track PVC use and possibilities for reduction. Some facilities, in their efforts to reduce PVC use, are looking at building materials such as flooring and wallpaper.

REDUCING HEALTH CARE'S ENVIRONMENTAL FOOTPRINT

Catholic and other health care organizations are doing a number of things to eliminate or at least limit damage to the environment.

Plastic Reduction To better manage their use of plastics, such organizations are:

- Conducting audits to identify products containing PVC and DEHP and determine appropriate alternatives.
- Targeting disposable PVC items first, especially those used in neonatal intensive care units, maternity, and pediatric departments. They are also phasing out PVC office supplies.
- Seeking plastic products that are easily recyclable (no. 1 and no. 2 plastics) or are made with recycled plastics.
- Taking advantage of products that can be returned to the manufacturer, such as printer cartridges.
- Purchasing PVC-free office furnishings and construction materials when renovating or building new wings or buildings.
- Specifying that durable medical products must be PVC-free.

Paper Reduction To better manage their use of paper, they are:

- Supporting aggressive waste minimization and recycling efforts throughout the facility
- Using both sides of paper, when possible
- Avoiding paper products that cannot be recycled, when alternatives exist
- Separating paper and other nonmedical waste from medical waste during disposal

Mercury Elimination To reduce the use of mercury, they are:

- Conducting facility-wide mercury audits
 - Accessing the H2E listserv, which offers information and strategies for the reduction or elimination of mercury in medical facilities
 - Taking H2E's "Making Medicine Mercury-Free Pledge," thereby joining hundreds of other medical facilities that are equally committed to reducing and eventually eliminating medical uses of mercury (see **Box**, p. 26)
 - Implementing a mercury-free purchasing policy, encouraging materials managers to learn about alternatives, and asking the GPO to provide an EPP plan involving mercury
 - Holding community-wide mercury thermometer exchanges and providing mercury-free thermometers to parents of newborns and other patients
 - Sponsoring a local battery roundup, collecting batteries from employees and their families for proper disposal
- Purchasing with the Entire Life-Cycle in Mind** Health care organizations are also:
- Seeking paper products that have higher recycled content and are "chlorine free," thereby helping to reduce dioxin emissions at paper mills

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A group purchasing organization can be a valuable ally.

Environmentally Friendly Resources

Catholic systems and facilities are working with the following organizations to make health care more environmentally responsible:

• **Health Care Without Harm (HCWH)**, which can be reached at www.noharm.org or 202-234-0091. HCWH is an international coalition of more than 375 organizations committed to reducing the environmental harm from health care, with particular emphasis on the phasing out of mercury, PVC, and incineration. The coalition offers extensive materials and information on its website, including "Going Green: A Resource Kit for Pollution Prevention in Health Care."

• **Hospitals for a Healthy Environment (H2E)**, which can be reached at www.h2e-online.com or 312-422-3860. H2E is a compact involving the EPA, American Hospital Association, HCWH, and the American Nurses Association. The partnership based on the compact offers extensive materials on waste reduction strategies and mercury elimination.

• **Sustainable Hospitals Project**, which can be reached at www.sustainablehospitals.org or 978-934-3386. A project sponsored by the University of Massachusetts at Lowell, MA, the project has extensive product information relating to latex, mercury, needles, PVC,

and other potential hazards. It also has a catalogue of alternative products and better practices resources.

• **Catholic Health Association**, which can be reached at www.chausa.org or 202-296-3993. CHA has established a team of leaders, called the Partnership for Environmental Responsibility, working to unite the Catholic health ministry behind key environmental goals. The partnership is open to all Catholic health care providers. CHA also can connect interested parties with other Catholic health facilities that have begun to reduce their environmental footprint.

THE EARTH IS OUR "HOUSEHOLD"

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the effort, financially as well as morally.

The effort will not succeed, however, without the commitment and enthusiastic support of the facility's administration, specifically the CEO. A health care institution's eco-conversion is not just one more project to take on. It is the context in which all health care organizations must organize and operate. We have an excellent medical care system in this country. Our response to medical crises is second to none. What we do *not* have is an adequate health care system. We do not care for people's health. We care for their injuries and for their illnesses.

We will not be true providers of health care until we understand that our well-being is contingent upon clean air and water, healthy soils and food, toxin-free clothing and plastics and metals and building materials. If the planet around us is not healthy, then neither are we. We have an obligation to speak out for the health of the entire household. And if the very buildings in which we gather the sick are not healthy, what service do we provide? We must take on the task of reducing or eliminating what we can and challenging the many industries who supply us to live up to their responsibilities as well.

All our medicines, all our surgeries, all our interventions to make people well will be in vain until we understand the connection that binds us to the whole. I challenge the health care system in this country to take the lead in educating and promoting a mutually sustaining and healthy planet. □

NOTES

1. National Conference of Catholic Bishops, *Renewing the Earth: An Invitation to Reflection and Action on Environment in Light of Catholic Social Teaching*, in Patrick W. Carey, ed., *Pastoral Letters and Statements of the United States Catholic Bishops*, vol. 6, U.S. Catholic Conference, Washington, DC, 1998, pp. 404-405.
2. Paul J. Glenn, *A Tour of the Summa*, B. Herder Book Co., St. Louis, 1960, pp. 42.

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- Looking for products that are easier to recycle or return to the manufacturer

- Buying PVC- and DEHP-free products, when alternatives exist

WORKING WITH OTHER ORGANIZATIONS

The Catholic health ministry, through participation in several national efforts aimed at reducing the harm from the health care industry, has become increasingly committed to environmental stewardship. Through their involvement in HCWH and H2E, Catholic facilities have access to a wide range of materials and expertise that will help them become more sensitive to environmental problems (see **Box**, p. 21).

GROUP PURCHASING ORGANIZATIONS

A GPO can be another important ally for facilities seeking to become more environmentally responsible. In October 2002 four large GPOs—Premier, Inc.; Novation; Broadlane; and Consorta—committed themselves to providing clients with EPP plan options. Most EPP plans provide products that replace those containing mercury and PVC plastic, reduce wasteful packaging, and support increased recycled content and "recyclability." Over the years, CHA and many of its members have worked closely with Consorta, which operates in more than half of all Catholic hospitals, to become an industry leader in providing environmentally responsible product lines.

In the past decade, the Catholic Church has become a prophetic voice for environmental stewardship. This has grown out of the church's longstanding commitment to protect the sanctity of life, especially the lives of the most vulnerable. In his 1989 address, "And God Saw That It Was Good," Pope John Paul II said, "Faced with the

widespread destruction of the environment, people everywhere are coming to understand that we cannot continue to use the goods of the earth as we have in the past. . . . *The ecological crisis is a moral issue.*"

Committed Catholics and health care professionals have a moral responsibility to do everything possible to minimize wastefulness and pollution. Significant strides have been made, and the Catholic health ministry is poised to be a leader in today's health care environmental transformation. □

NOTES

1. U.S. Environmental Protection Agency (EPA), *Mercury Report to Congress*, 1997; EPA National Center for Environmental Assessment, *Inventory of Sources of Dioxin in the United States*, 1998.
2. Centers for Disease Control and Prevention, "Blood and Hair Mercury Levels in Young Children and Women of Childbearing Age—United States," *Morbidity and Mortality Weekly Report*, vol. 50, no. 8, 1999, p. 140.
3. Ted Schletter, et al., *Generations at Risk: Reproductive Health and the Environment*, MIT Press, Cambridge, MA, 1999, p. 53.
4. Health Care Without Harm, *Going Green: A Resource for Pollution Prevention for Health Care*, 2001.
5. "Catholic Health Care Providers' Environmental Practices Reflect Mission," *Catholic Health World*, April 15, 2003, 2003, pp. 4-6. Other examples cited here of environment-protection practices at Catholic health care facilities are also taken from that article.
6. U.S. Environmental Protection Agency, *Background Information on Mercury Sources and Regulations*, available at www.epagov/grtlakes/bnsdocs/merc-srce/merc_srce.html (Table 2B).
7. Pope John Paul II, "And God Saw That It Was Good," (1990 World Day of Peace message, delivered December 8, 1989), *The Pope Speaks*, May-June 1990, pp. 200, 206.

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