2010 Sustainable Operations Survey

green++greener

Hospitals embrace sustainability, though laggards remain
pg. 15
Hospitals embrace environmentally sustainable practices, though laggards remain

**ARTICLE BY DAVE CARPENTER • DATA BY SUZANNA HOPPSZALLERN**

They may not yet be treading lightly, but hospitals are starting to move a bit faster in efforts to reduce their carbon footprints. The improvements aren’t all about saving the Earth. More health care organizations are finding measurable ways to reap savings from sustainable-operations initiatives as, after years of green talk, they start to walk the green walk.

While some recommended practices are proving slow to take root nationwide, a Health Facilities Management survey conducted in cooperation with the American Society for Healthcare Engineering (ASHE) and the American Society for Healthcare Environmental Services (ASHES) found that hospitals generally are starting to embrace sustainability for its bottom-line benefits as well as the obvious pluses for the environment and community.

In a still-rocky economy, hospitals feel they have no choice but to make it about the money. Cost savings was the No. 1 factor cited by the 960 ASHE and ASHES members who participated in the survey in terms of influencing whether their facility opts for environmentally sustainable operations.

Yet it’s clear that a return on investment is being found more often. The survey showed that organizations are incorporating greener ways of thinking into core areas of operations—energy, water, waste and cleaning—and achieving measurable results from various initiatives.

Some of the greatest progress has come in energy cost savings, critically needed since the nation’s hospitals tend to be energy intensive. Beyond energy conservation, though, organizations also are seeing steps in recycling, waste management, waste reduction and innovative cleaning methods pay off. The category selected most often by respondents when asked to describe their facility’s single greatest success in a sustainable operations project was green cleaning—environmentally sustainable cleaning materials, chemicals and microfiber products.

The increased interest and commitment testify to unprecedented momentum behind sustainability efforts, according to Richard Beam, director of construction and sustainability at Providence Health & Services in Renton, Wash. “The health care community is really coming together around sustainability,” he says. “It is really resonating as a topic right now.”

That is a far cry from the prevailing skepticism of just a few years ago. Charles A. “Skip” Smith, CHFM, SASHE, corporate director of facilities for Catholic Health Initiatives and president-elect of ASHE, recalls the reluctance of other facilities professionals when the original Green Guidelines for Healthcare Construction were being developed. He remembers sitting at conference tables and hearing comments such as “It’s not going to happen.” “Costs are just too high” and “Leadership is not seeing this as important.”

No longer: “It’s night and day from where we were seven or eight years ago,” Smith says. “More people are seeing the light today than ever before, and they’re in the majority. Rarely do I see an organization that is not looking at environmental interests.”

Despite the widespread acceptance, the survey results underscore that sustainability gains are not universal. Large numbers of hospitals still do not monitor their energy performance, measure their water usage or participate in the U.S. Environmental Protection Agency’s ENERGY STAR® program. Along with all the early adopters and fast followers are many laggards who, while perhaps focused on clinical quality initiatives, are missing out on the savings and other benefits of eco-friendly practices.

But the industry seems to have turned a corner in attitude and effort thanks to a...
Benefits of Being Green

The survey, conducted online in March and April by Perception Solutions Inc., Aurora, Ill., found that four factors were singled out by more than 70 percent of respondents as very important in determining whether they should pursue environmentally sustainable operations. Besides cost savings, cited by 79 percent, the other most-mentioned reasons were quality of indoor environment for staff, patients and families (77 percent); long-term cost benefits and sustainability (75 percent); and “fits with hospital mission” (71 percent).

The priority on a quality indoor environment likely reflects that air quality is of paramount concern for hospitals. Indoor air can be as much as 10 times more polluted than outside air, and building materials and the products used to clean and maintain them can all be significant sources of volatile organic compounds (VOCs) and other indoor pollutants, Reed notes.

Bottom-line priorities also came through loud and clear in the responses to a question about how much of a challenge or barrier various issues are to environmentally sustainable practices. The only issue deemed a major challenge by most poll participants was competing investment and spending priorities.

Dale Woodin, CFHM, FASHE, executive director of ASHE, says he realizes there’s a lot of pent-up demand for patient initiatives after last year’s slowdown, which could bump down sustainability projects to a lower organizational priority. But facilities management and environmental services departments can still generate support for their projects, he says, by updating other leaders frequently about how they’re reducing waste, improving efficiency and saving money.

Just 21 percent of survey respondents said their facility had designed a single title or position with responsibility for sustainability. That number is likely to increase as organizations see more results, according to Woodin.

In another result that shows room for improvement, only 7 percent said their facility includes any performance metrics for sustainability—such as an ENERGY STAR rating, total waste generation or a recycling rate—in its senior management dashboard.

Woodin was flabbergasted. “You’ve got to be able to understand what your hospital is doing from a usage standpoint,” he says. “If you don’t even have that baseline data, you don’t even have the starting point of a conversation.”

Entering with Energy

When hospitals take the first step toward going green, it’s often in energy efficiency. There’s strong incentive to look for savings in this category. U.S. hospitals are among the most energy-intensive commercial buildings, with more than 25 times the energy intensity and carbon dioxide emissions of commercial office buildings.

Nearly 70 percent of those responding to the HFMA/ASHES survey said their facility measures energy savings. “Hospitals are seeing that energy efficiency is a good place to start,” says Reed. “The savings are tangible, and they can then be used to increase further energy efficiency upgrades or fund other green initiatives going on at their hospital.”

Energy savings can prove substantial. Three hospitals awarded ASHE’s 2009 Energy Efficiency Commitment (E2C) designation achieved double-digit percentage reductions in energy costs: Mercy Medical Center in Dubuque, Iowa (29 percent); St. John Medical Center in Longview, Wash. (20 percent), and Methodist Hospital in Houston (11 percent).

No single energy performance monitoring tool or energy management activity was cited by a majority of poll respondents. Half said they conduct energy audits, 45 percent set energy budget and performance targets and monitor them annually, and just 35 percent participate in ENERGY STAR. Because the federal program is free, hospitals, such a relatively low level of participation represents a big opportunity for the industry to improve its energy performance record once more are persuaded to join, says Janet Brown, director of facility engagement for survey co-sponsor Practice Greenhealth formerly Hospitals for a Healthy Environment in Amherst, Mass.

Organizations are using a variety of energy management initiatives to reduce energy costs. A majority of those surveyed said they had implemented at least one of the following in the last two years: preventive maintenance plans, transition to electronic ballast and energy-efficient lamps (T8 or T5), light-emitting diode (LED) exit signs, occupancy sensors or timers to reduce lighting use, technology upgrades for plant equipment and upgrades to building control systems.

Renewable energy practices are less in favor with hospitals. The three initiatives that most organizations said they have no plans to undertake are purchasing off-site renewable energy sources; upgrading conventional systems with hybrid plants using fuel cells, photovoltaic systems or solar thermal systems; and photovoltaic harvesting systems for low-power indoor devices. Photovoltaic systems don’t yet have a very attractive return on investment, says Gail Vittori, co-coordinator of the Green Guide for Health Care, a project of Health Care Without Harm and the Center for Maximum Potential Building Systems. “It is not surprising that there is greater tendency to invest dollars in preventive maintenance that provides long-term, persistent savings,” she says.

Waste Water

As with energy, hospitals are prodigious users of water. But they have not moved anywhere near as aggressively to put con-
HOSPITAL SUSTAINABILITY PROJECTS run the gamut

Health care systems across the country have launched a wide variety of initiatives designed to make both environmental and economic sense. A handful are even trying to go green from top to bottom, which makes for sustainability multitasking but with more chances for success.

For instance, Gunderson Lutheran Health System in La Crosse, Wis., has a lot of green on its plate: initiatives in renewable energy and energy conservation; engineering work on a new Leadership in Energy and Environmental Design (LEED) hospital; and projects in waste management, water conservation, and other initiatives.

Tom Thompson, Gunderson’s sustainability coordinator, says it’s “good—and necessary—to have multiple opportunities because you don’t get to track if projects gets dugged down. ‘To be sustainable you really have to have a balanced approach. You can’t just pick and choose one or two things,’” he says.

These are not do-gooder projects; each brings real savings. “I’ve heard for so long that an environmental program would be nice but it costs too much money,” Thompson says. “Well, we’re proving that you can be green and you can make green. You can be economically viable, you can make money and save money by doing the right thing.”

Following is a sampling of health system initiatives under way, based on responses to the Health Facilities Management/Association for Healthcare Engineering/American Society for Healthcare Environments 2010 Sustainable Operations Survey.

ENERGY MANAGEMENT Among the energy management initiatives, Gunderson Lutheran did energy audits of several campuses and used the results to perform retrocommissioning. That two-year process examined heating and cooling systems, lighting and employee behavior and used low-cost measures to improve efficiency and reduce energy demand. It helped the system achieve a 25 percent improvement in energy efficiency by the end of 2009, reducing its annual energy costs by $1.2 million.

The Nebraska Medical Center in Omaha hopes to save $600,000 annually in energy costs—30 cents per employee per day—by getting each of its 5,000 employees to turn off their computer monitors at the end of the day, turn off lights and adjust thermostats. Swedish Medical Center in Seattle lowered energy usage at its First Hill campus by 3.4 percent after building systems engineer Jeff Greene recommissioned HVAC systems that had not been set up properly at its two-year-old Swedish Orthopedic Institute. Other energy-saving projects at the campus have included a garage lighting retrofit to change out obsolete lamps and ballasts, optimizing garage ventilation systems and improving the chilled water system that provides cooling to campus facilities.

Other energy initiatives mentioned by respondents include using landfill methane to operate boilers at a new hospital, using microturbines for cooling and heating, using thermal energy storage tanks to reduce peak electric demand and cost cutting costs, and a three-day “treasure hunt” analyzing a facility’s use of energy to develop over 100 energy savings ideas.

WATER CONSERVATION In the area of water conservation, a “green linen” program at the Nebraska Medical Center has resulted in $600,000 a year in savings. The program simply limits the linen taken into patient rooms, restricting the amount to what’s needed and avoiding ‘just in case’ extras. Excess linen must be washed because it is considered contaminated once it’s taken to patient rooms, so the program eliminates a lot of clean linen needing to be washed. “Linens management hasn’t been around for a long time and a lot of people don’t know how effective it is,” says Paul Turner, director of environmental services and housekeeping at the center.

Another example is Nathan Littauer Hospital & Nursing Home in Gloversville, N.Y., has cut its municipal wastewater treatment charges by 40 percent in four years by monitoring its solid waste sources and reducing them.

Other water conservation initiatives involve moisture sensors on an irrigation system, use of native plants to lessen the need for watering, and waterless urinals.

WASTE MANAGEMENT Among the waste management initiatives, St. Mary’s Regional Medical Center in Russellville, Ark., used bar code tags to reduce its medical waste to 0.9 pounds per patient per day, saving $117,000 each year.

Mercy Hospital in Janesville, Wis., saves 40 percent on floor finishing costs in patient rooms and corridors with a more eco-friendly, efficient finish. It also installed door pops in patient restrooms that freshen the air through door movement, eliminating the need for aerosol fresheners. Mercy, too, eliminated aerosol cleaning products and is moving away from spray bottles, using flip-top bottles instead.

Other cleaning initiatives feature ionized water for floor cleaning, green chemical purchasing and high-temperature steamers.

COVER STORY
respondents when asked what they had no plans to implement.

Most respondents indicated that their facilities recycled cardboard (91 percent), paper (84 percent), beverage containers (67 percent), plastic (58 percent) and metal (54 percent).

Even an initiative as basic as recycling, however, can be hard for small, rural hospitals to pursue due to limited resources and staff, notes Patti Costello, executive director of ASHES. She knows of at least two facilities in downstate Illinois, for example, that want to recycle but cannot afford to because of the absence of competitive pricing. Take-back programs, too, are of widespread interest but are likewise focused on cities, she says.

Costello asks: ‘Contracting for waste stream reduction sounds good, but when the consultant leaves can the culture sustain what has been accomplished given the higher priorities of patient satisfaction, quality and safety?’

**CLEAN AND GREEN**

Just 31 percent of facilities surveyed measured savings from environmental cleaning practices. But efforts in that area appear to be accelerating. All 10 cleaning initiatives listed on the survey had been implemented by 49 percent or more of respondents within the past two years.

“My sense is everybody is going to use environmentally friendly cleaning materials or looking at them,” says Smith. “With issues around air quality, the increase of asthma and other respiratory problems, people are just trying to stay away from those as much as they can.”

Initiatives implemented most often involved microfiber mops and cleaning cloths, which data have shown perform better, reduce water consumption and minimize the need for chemical use; cleaning equipment that does not hamper indoor air quality; infection control risk assessments; and the use of pre-diluted disinfectant systems for worker safety.

The top three items that organizations have no plans to implement are sustainable floor care materials, integrated pest control and eco-labeled cleaning products. The difficulty with most of these initiatives, says Costello, is that measuring the savings and efficiencies isn’t always easy—yet that’s what is needed to demonstrate their value to organization leaders.

**’IT TAKES TIME’**

Just as the survey results show that many doubters have been won over to eco-friendly practices, they provide evidence that many holdouts remain. And financial barriers may keep them on the sidelines if they can’t find a way to overcome the high initial costs of some green programs.

“Just about everyone is tuned in to the environmental push,” says Costello. “Finding balance between cost and competing priorities is a bigger challenge.”

Sustainability programs will likely take a backseat to patient initiatives. Woodin agrees, at least until the financial crunch that began in 2008 has gone away. But if departments prove their value, ultimately the resources and funding will come.

In the meantime, advocates of environmental sustainability hope that health care organizations will continue their gradual greening.

“Hospitals are realizing success in sustainability a program at a time, and we’re seeing the effects of that,” Brown says.

“But the survey shows that we’re just getting started. It demonstrates that there’s a lot of need for education around sustainability in health care. It takes time.”

Dave Carpenter is a Chicago-based freelance writer who frequently reports on health care industry topics. Suzanne Hopkins is senior editor of data and research for Health Facilities Management’s sister publication Hospitals & Health Networks.

---

**TOP 10 CLEANING INITIATIVES being implemented to clean ‘green’**

<table>
<thead>
<tr>
<th>Initiative</th>
<th>Implemented in the last 24 months</th>
<th>Plan to implement in the next 24 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use microfiber mops and cleaning cloths to reduce water and chemical use</td>
<td>81%</td>
<td>11%</td>
</tr>
<tr>
<td>Use cleaning equipment that does not negatively impact indoor air quality</td>
<td>78%</td>
<td>12%</td>
</tr>
<tr>
<td>Conduct an Infection Control Risk Assessment that identifies areas where use of disinfectants is required</td>
<td>76%</td>
<td>12%</td>
</tr>
<tr>
<td>Use pre-diluted disinfectant systems for worker safety</td>
<td>75%</td>
<td>7%</td>
</tr>
<tr>
<td>Adopt an operational policy to limit exposure of building occupants and staff to potentially hazardous chemicals, biological and particulate contaminants</td>
<td>67%</td>
<td>13%</td>
</tr>
<tr>
<td>Adopt an environmentally preferable cleaning policy for surfaces such as floors, walls, furniture and medical equipment</td>
<td>65%</td>
<td>19%</td>
</tr>
<tr>
<td>Use low-moisture carpet extractors</td>
<td>62%</td>
<td>15%</td>
</tr>
<tr>
<td>Integrated pest management program versus pest program based on use of chemicals</td>
<td>61%</td>
<td>13%</td>
</tr>
<tr>
<td>Use sustainable floor care materials (i.e., rubber)</td>
<td>50%</td>
<td>19%</td>
</tr>
<tr>
<td>Use cleaning products labeled GreenSeal™ or EcoLogo®-certified</td>
<td>49%</td>
<td>26%</td>
</tr>
</tbody>
</table>