

SPECIAL REPORT

Greener Hospitals: Building Consensus for Health Care Sustainability



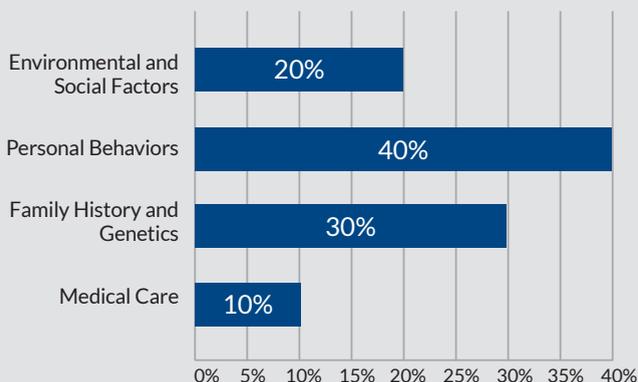
INTRODUCTION

Talking About Sustainability in Health Care: If you want to bring people to the table, make sure you know what to serve.



Until recently, health care was not a major part of the sustainability discussion. And the reverse was just as true: Few within the health care industry thought much about sustainability. Yet the two fields overlap in many important ways.

Health care has a sizeable impact on the environment. In her book, *Greening Health Care*, Kathy Gerwig, vice president of employee safety, health and wellness at Kaiser Permanente, notes that hospitals are the second-most energy-intensive commercial buildings in the U.S. and that the industry is responsible for 8% of the country's greenhouse gas emissions. "Health care institutions are consistently among the top 10 water users in their communities," she writes, and they are "the single-largest users of chemical agents." The volume of waste flowing out of hospitals is mammoth — more than 2.3 million tons per year — including everything from paper and cardboard to infectious materials and radioactive waste.



Drivers of Health (from Greening Health Care, by Kathy Gerwig)

The impact of the environment on health care is just as significant. One often-cited study from 2002 shows that social and environmental factors vastly outweigh medical care in determining people's health (see *Drivers of Health*).

All of which begs the question, how do we spark meaningful dialogue between sustainability and health care professionals?

That was the question addressed at the October 2014 Wharton San Francisco conference, "Metrics that Matter; Messages that Motivate," co-sponsored by

Johnson & Johnson and Wharton's Initiative for Global Environmental Leadership (IGEL).

The answer depends on who's involved in the discussion. Almost everyone in health care is concerned one way or another with finances. A great deal may be in flux within the U.S. health care industry, but one truism remains unshakable, even among non-profit institutions: no margin, no mission. Whether it is the executives in the C-suite, the managers of departments or even the vendors and suppliers who do business with hospitals — all clearly see a direct link between hitting their financial goals and keeping their business afloat.

That's why many at the Wharton conference emphasized the importance of focusing on the business benefits of sustainability. As the first article in this report emphasizes, it's not difficult to make a strong business case for any number of sustainability efforts. After all, a more sustainable operation is almost always more efficient, and a more efficient organization is almost always financially stronger in the end.

One challenge facing some sustainability efforts, however, is how long it can take to realize the business benefit. CEOs of public companies have to keep their eyes on the next quarterly report, and virtually everyone with control of a budget has short-term goals they miss at their peril. So how do hospitals move beyond sustainability efforts that make a significant business contribution in the short term to include others—just as important—that may take longer to benefit the bottom line, or may only impact it indirectly? The second article looks at a few key strategies that emerged both during the Wharton conference and in interviews with industry experts afterwards.

The final section of this report looks at the ways in which health care employers and employees are talking to each other about sustainability. It's a two-way conversation. In some cases, senior management is fostering green activities among employees; in others, employees are the driving force within the organization. Frequently, it's a mutually reinforcing combination of the two.

In all these efforts, success hinges on the most basic tenet of salesmanship: Don't talk about what *you want*. Talk about what *your customer wants*.

CONTENTS

The Triple Bottom Line: Making a Convincing Case for Sustainability 1

Sustainability can be a tough sell to financially stressed hospitals, because many in health care still associate “green” with increased costs. But research confirms that environmental stewardship often leads to substantial savings. Hospitals are generally not willing to pay more for a greener product, but companies are finding ways to create affordable products that improve patient outcomes *and* the environment. Such innovations benefit patients, hospitals and the planet — a compelling triple bottom line.

How to Talk about Sustainability When It’s Not a Simple Win-win 4

When a sustainability project fails to “pencil out” in the short term, it’s a mistake to promote it solely as a way to save the planet. The challenge is to show how the effort is relevant and beneficial to a hospital’s interests and those making purchasing decisions. Sometimes short-term costs yield long-term savings. Other times sustainability initiatives offer employee and community health benefits that improve financial performance. And when it comes to maintaining an unblemished reputation, it’s hard not to invest in sustainability.

Employees Can Be a Powerful Force in Sustainability 7

Sometimes individuals can drive important changes on their own, but there’s strength in numbers. In general, interdisciplinary “green teams” play an important role, bringing together people from all parts of an organization — including some departments that are rarely consulted — to launch sustainability initiatives that benefit everyone. Most successful are those institutions that find ways to incorporate the enthusiasm of green champions into the culture of the workplace.

PUTTING THEORY INTO PRACTICE: CASE STUDIES

Inova Health System 10

At Inova Health System, programs aimed at keeping patients and staff healthy work hand in hand with those reducing waste, since both aim at preventing problems before they require expensive intervention.

Kaiser Permanente 11

In 2010, Kaiser Permanente, the managed care consortium, became the first health care organization to launch a sustainability scorecard for medical product purchases, complementing its many other environmental initiatives

Stanford University Medical Center 12

Sustainability efforts at Stanford University Medical Center have been a boon both to the environment and to the organization’s bottom line.

SPONSORS

Johnson & Johnson and the Initiative for Global Environmental Leadership (IGEL) have partnered to create this special report on health care sustainability.



The Triple Bottom Line: Making a Convincing Case for Sustainability

SUSTAINABILITY CAN BE A TOUGH SELL to financially-stressed hospitals, because many in health care still associate “green” with increased costs. But Blair Sadler, senior fellow at the Institute for Health Care Improvement, says that a Commonwealth Fund research study, to which he contributed, “turns on its head the belief that introducing environmental sustainability measures increases operating costs. In fact, it is just the opposite.”

According to Kathy Gerwig, a vice president and environmental stewardship officer at Kaiser Permanente, in her book, *Greening Health Care*, “There is a preponderance of evidence that a greener health care enterprise is not only affordable, but in most cases it results in an improved cost structure.” The Commonwealth research, she says, indicates that a program of energy conservation, reduced waste and more efficient purchasing could save the health care industry more than \$15 billion over 10 years.

As an example, Gerwig said that because spending on processing waste (especially red bag biohazard waste) is “money down the drain” for health care institutions, programs that reduce or redirect it can have early buy in and quick payback.

Ensuring short-term savings is often key when arguing the business case for sustainability. Gary Cohen, co-founder and president of Health Care Without Harm, which campaigns for the environment, agrees that convincing health care administrators to make a sustainability decision — even when long-term savings are promised — “is a difficult challenge. For example, it’s far easier to get hospitals to invest in energy efficiency, with a return on investment of 18 months to three years, than renewable energy, with a return that can take seven years.”

Just as hospitals look to sustainability for savings, they look away if asked to pay more for greener products. According

to Kris Soller, senior manager of business solutions at Ethicon, a division of Johnson & Johnson, “Our customers are asking us to make our products more sustainable, but they’re not necessarily willing to pay more for them.”

Johnson & Johnson’s Earthwards program, which helps drive sustainability at every step in new product development, has recognized 73 of the company’s products as offering substantial environmental benefits. For example, Ethicon’s Harmonic Focus+ surgical shears (which were recently recognized by Earthwards) weigh 25% less than the previous model, for a worldwide reduction of about six tons of red bag waste. Packaging was reduced by 21%, and energy savings in transportation translates to a 2,800-pound carbon dioxide reduction annually.

But just because a product is more sustainable doesn’t mean customers will tolerate a higher price. “Our products are priced more on the patient outcomes they drive than they are on their environmental characteristics,” said Soller. Product innovations that improve outcomes can command higher prices, and those new innovative products are likely to be greener — but customers are paying for the benefit to the patient, not to the environment.

CONNECTING SUSTAINABILITY AND WELLNESS

Eric Olson, a senior vice president at Business for Social Responsibility, was a speaker at the fall 2014 Wharton San Francisco conference, “Metrics that Matter; Messages that Motivate,” co-sponsored by Johnson & Johnson and Wharton’s Initiative for Global Environmental Leadership (IGEL).

He said that as recently as 10 years ago, doctors were saying, “Why are we bothering with fringe issues when I’m trying to save lives every day?” But, he said, “We’ve made a lot of progress since then. Now we have the concept of

'wellness,' [i.e.] everything necessary to keep people well — as a regular part of total population health. And it's much more common to look at climate and energy impacts, air quality, water issues, and waste production."

The umbrella of wellness, in fact, is helping to advance the cause of sustainability at many institutions. Seema S. Wadhwa, assistant vice president for sustainability and wellness at Inova Health System, and the former director of the Healthier Hospitals Initiative, said that "a lot of elements correlate" when talking about healthier patients and greener hospitals — the quality of food service, for example, or building air quality.

"We've learned the lesson that it's important to tie in peoples' health to make the case for sustainability," Wadhwa said. "When people ask why they should personally care about the environment, we want them to realize that these issues are connected to the air they breathe and the food they eat. Once it's personalized, it becomes more relevant."

BSR's Olson agrees, citing such patient health concerns — and environmental issues — as carcinogenic flame retardants in hospital furniture and DEHP plasticizer in IV bags. "The contribution sustainability can make to good patient outcomes is large and exciting, but sometimes hard to quantify," he said. John Frey, sustainable innovation technologist at Hewlett Packard added that even product packaging can become a wellness issue, because boxes that sit on loading docks can accumulate dust and mold. As a result, he said, one large health care unit leaves all packaging behind when it brings purchases inside.

Susannah Patton, media manager at Kaiser Permanente, said at the Wharton conference that her company banned flame retardants in furnishings in 2015. "We tapped into a hot-button environmental issue and a personal health concern at the same time," she noted.

FINDING ALLIES

Still, many good ideas, even money-saving ones, never get implemented. There's plenty of evidence that the success of one sustainability program will lead to another — but how does the first one get launched?

Janet Howard, director of facility engagement at Practice Greenhealth, a nonprofit advocating for environmental stewardship, said a good start can be building on what a hospital is already doing. When a clear sense of purpose drives just about everything a health care facility does, the challenge is to show how sustainability efforts tie into that. "Find the bigger fish that you can swim next to," Howard said, whether it's performance excellence, community benefit or population health.

Such mission-based "drivers" are common to large institutions. In smaller hospitals, the driving force is more likely to be sheer survival. In such cases, when everyone is swimming as hard as they can just to stay afloat, it's even more crucial "to integrate sustainability into something that is happening already," said Howard. At the most basic level, for instance, every hospital needs to maintain its accreditation if it is to survive. The Joint Commission, which handles most hospitals' accreditation, includes among its requirements an "environment of care" standard, and, noted Howard, "many aspects of sustainability can live there."

"For 100 years, health care was so important that no one worried about the cost. But when health care is 20% of the economy, you have to think about cost. And you have to think about all these externalities, including all the ones related to sustainability."

- Geoffrey Garrett, Wharton dean, from opening remarks at the fall 2014 Wharton San Francisco conference, "Metrics that Matter; Messages that Motivate."

It helps to build early allies within the institution. Krisanne Hanson, director of sustainability at Stanford University Medical Center, said at the Wharton conference, "Clinicians who have been putting perfectly clean items in the trash for years are easy to engage, and want to do something different."

Those workers are ripe to be recruited, and it helps when the results are there. Hanson said that Stanford, which now tracks 25 separate and distinct waste streams, saves \$289,000 annually by diverting much of what used to go to landfills to more productive uses. She added that sending material to a recycler reduces per compactor load costs by 80%. "And as we march through areas of the hospital with highly engaged nurses, we can find ways of achieving 50% savings with very little effort."

HP's Frey added that some simple savings are unintentionally thwarted by lack of communication between departments within the same institution. "The health care sector is above average when it comes to sustainability, but it's a regulated industry and is often conservative about new ideas or technology," he noted. So while many purchasing departments order Energy Star-rated computers, the IT department, responsible for maintaining regulated medical records and other

vital health information, often turns off the critical power management features that earned the Energy Star rating in the first place. "We see it with 80% of our larger customers," said Frey, a conference speaker. "The purchasing department feels it's done the right thing by buying the computers, but IT has good technical reasons for having them consume more electricity."

TIPPING POINTS

When hospitals launch high-performing sustainability initiatives that serve the triple bottom line, it gives them the appetite to do more. Success breeds more success, and eventually leads to leadership in the field. Although it was barely on the radar a decade ago, sustainability is increasingly driving global hospital purchasing decisions, according to a new Harris Poll study of health care professionals. More than half (54%) said their hospitals currently incorporate sustainability into purchasing

decisions, and 80% expected that to be the case within two years, according to the survey, commissioned by Johnson & Johnson. These global findings mirror the actions and intents of U.S. health care professionals: 52% say their hospitals currently incorporate sustainability into purchasing decisions, with an increase to 81% expected in two years.

And sometimes sustainability initiatives are pursued to their logical conclusion. Gundersen Health System in Wisconsin, for example, now makes all its energy, with a landfill gas-to-energy project, two wind turbines, a biomass boiler, a geothermal heat pump and multiple solar installations. And the bottom-line benefits are already becoming clear: Gundersen is a consultant to other health care organizations, outlining how they can save money in the same way.

Sustainability, it seems, is catching. ■



How SUSTAINABLE is health care?

Global health care professionals share their thoughts on sustainability

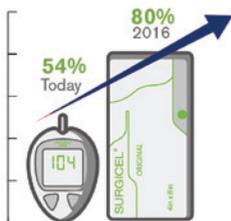
Support for Sustainability

Health care professionals agree, sustainability initiatives:



76% are more likely to purchase a company's products or services if they have environmentally sustainable practices

60% report their hospital has a strong commitment to sustainability from top management



Sustainable Purchasing on the Rise

Hospitals expect the integration of sustainability into product purchasing to **INCREASE BY MORE THAN 45%** by 2016

More is Needed

Health care professionals also identify key barriers:



Help Wanted

Hospitals Seek Help from Medical Manufacturers



They want manufacturers to:



Johnson & Johnson

applies lifecycle thinking to new products and packaging. Its Earthwards® program has recognized sustainability improvements for:



55+ PRODUCTS representing **\$8B+ DOLLARS**



How to Talk about Sustainability When It's Not a Simple Win-win

IT'S NOT HARD TO GET SOMEONE'S ATTENTION when you start off talking about cutting costs and strengthening the bottom line. But what about those times when the best environmental move *increases* costs, at least in the short term? During a time of tumultuous change and tightening budgets, it can be tough to engage a hospital in activities that don't offer immediate financial gain. "When things cost more, we've got a big challenge in front of us," says Janet Howard, director of facility engagement at Practice Greenhealth (PGH), a non-profit membership organization.

When the financial benefit of an environmental project does not drop straight to the bottom line, the temptation is to start justifying the project's cost in terms of its sustainability benefits. It is a temptation that should be resisted, says John Frey, sustainability innovation technologist at Hewlett Packard, who spoke at the fall 2014 Wharton conference, "Metrics that Matter; Messages that Motivate," held in San Francisco and co-sponsored by Johnson & Johnson and Wharton's Initiative for Global Environmental Leadership (IGEL). The challenge is to "tell the story in a way that is meaningful to someone who doesn't speak sustainability-ese, to translate our message into a relevant conversation with a customer."

Frey cited the example of a project that would streamline the admission process at a hospital. "Telling an IT executive that I can help him reduce his carbon footprint is mildly to not interesting at all." But, said Frey, if he explains instead how the streamlining project will reduce the number of devices that IT has to maintain and troubleshoot, his customer is suddenly very attentive.

The same is true when Frey speaks to others in the hospital about the same project. He can explain to those in marketing how the new approach will help improve

patient satisfaction by reducing the time patients have to wait to see a clinician. Department managers will respond positively when they hear how the process will help relieve clerical staff of numerous manual chores and frustrations. And the people in finance are sure to be delighted to hear that the suggested changes will save the hospital nearly \$29 per patient.

The sustainability benefits of such a project, which might range from energy savings to waste reduction, would be mentioned only as happy by-products of all the other benefits.

Summing up Frey's presentation, Joel Makower, chairman and executive editor of GreenBiz Group Inc. and moderator of the Wharton conference, noted that the real job of a chief sustainability officer is "to be a 'chief translation officer'."

FINDING A WAY TO THE BOTTOM LINE

The benefits that are most important to those in finance, of course, are the ones that affect the bottom line. So if a proposal does not have an immediate return, it's important to avoid sustainability-ese and focus instead on less obvious, but no less important, financial benefits.

The simplest approach when higher costs threaten a sustainability project is to look for ways to cover the costs. Howard offered the following example. According to the Centers for Disease Control (CDC), multi-drug-resistant organisms represent "one of the world's most pressing public health problems," and the illnesses these organisms give rise to represent one of the gravest threats hospitals are now facing. Given that meat and poultry production, which accounts for 80% of the antibiotics sold in the U.S., is a leading cause of drug-resistant organisms, hospitals have ample reason to purchase only antibiotic-free meat and poultry.

But it costs a good deal more to purchase such meat — as much as \$200,000 a year more for a large hospital, according to Howard. On the lookout for a way to cover the increased cost, PGH noted that Americans consume far more meat than the U.S. Department of Agriculture (USDA) considers optimal. So the group advises hospitals to reduce the amount of meat purchased overall. By serving smaller portions, instituting meatless Mondays and developing vegetarian options that are more interesting than just veggie burgers, a hospital can help improve patients' and employees' health, model healthier eating habits and save enough money to offset the cost of purchasing healthier meat.

Another approach is to stretch the time horizon of a sustainability project. What looks like an increased cost in the short-term may well save money over time. This approach is well known to U.S. consumers, who are often willing to pay a bit more for an Energy Star appliance because they recognize that lower energy bills over the life of the product will more than cover the higher upfront costs.

“With the passage of the Affordable Care Act and the mandate to conduct community health needs assessments and align community benefit dollars with those community needs, we will see far greater accountability demanded of hospitals from community members.”

- Gary Cohen, co-founder and president of Health Care Without Harm

As common as this mindset is among consumers, it is often lacking in hospital budgeting, at least for products with shorter lifespans than the 30 to 40 years common to infrastructure projects. According to Keith Sutter, director of medical device sustainability at Johnson & Johnson, “Five years is probably a longer time horizon than many are looking at.” Some hospitals are more forward looking on this front than others, but overall, noted Sutter, “This is new within health care. It’s really been within the past three years that requests for proposals (RFPs) have begun asking about costs beyond the purchase price.”

Still today, many hospital leaders remain focused on the short term and are consequently pushing their purchasing departments to move upfront costs ever lower. That’s

why Howard believes it’s important to educate senior management. “It’s going to take health care leaders to value more than just the upfront costs to have things change,” she said.

To help support this effort, PGH champions the development of a total cost of ownership (TCO) model, which uses evidence-based hard numbers to analyze long-term savings. Software now being developed by PGH promises to simplify such analysis, which should strengthen advocates’ ability to make the long-term case for sustainability savings.

SCALE MATTERS

Even when a sustainability effort can be shown to benefit the bottom line, often the benefit is simply not significant enough to warrant consideration, especially at larger institutions. The challenge, according to Eric Olson, senior vice president at Business for Social Responsibility (BSR), is for a project to “rise to the level of materiality that turns the head of a CFO.”

Olson added that building-related purchasing is often financed and planned for individual facilities, “which makes it difficult to get people excited about replacing a chiller. The ROI might be pretty good, but the CFO is just not going to spend a lot of time thinking about something at that scale.” But roll such a project out across an entire network, he said, and the financial impact can be “eye-popping and absolutely rise to the level of a strategic investment.” (Smaller organizations do not have this option, but then their assessment of materiality is also likely to be less demanding.)

EMPLOYEE HEALTH

Hospitals exist to improve health, but they cannot succeed in that noble mission if they fail to maintain their own financial wellbeing. The phrase often heard in hospital boardrooms is, “no margin, no mission.” So no matter how beneficial it might be to public health for a hospital to reduce its use of carcinogenic chemicals or to improve the quality of its food, it’s often necessary to justify such changes by making a sound business case.

One way to tie the health benefits of green initiatives to the bottom line is to focus on the wellness of a hospital’s own employees. The same changes that benefit employees will, of course, also benefit the health of patients and visitors, but few of them will spend enough time inside the building to realize much of that benefit, and virtually none of them will make future decisions about where they seek medical attention based on the improvements.

RETURN ON INVESTMENT IN WELLNESS*

On average, for every \$1.00 spent on employee wellness programs:



*Data from a critical meta-analysis of the literature on costs and savings associated with employee wellness programs: "Working Wellness Programs Can Generate Savings," by Katharine Baicker, David Cutler and Sirui Song, in *Health Affairs*, 29, no 2 (2010):304-311

Hospital employees, however, who spend much of their lives within the hospital, will see and feel the benefits. And in one respect, the business case for improving employee health is financially straightforward. Seema Wadhwa, assistant vice president for sustainability and wellness at Inova Health System, calls it "bending the cost curve of our own employees' health care."

Less obvious but increasingly well documented is another advantage: increased productivity. Shawn Mason, associate director of outcomes research and data analytics at Johnson & Johnson's Health & Wellness Solutions, spoke at the Wharton conference about the metrics being developed around employee health and productivity. According to the company's website, a two-year study by Towers Watson shows "that companies treating health and workplace performance as a strategic business advantage achieved significantly better market premiums and reduced employee turnover rates than companies that do not effectively link health to business imperatives."

Another 2007 study by the Milken Institute puts the matter in stark financial terms. Lost productivity due to employee health problems costs the economy \$1.1 trillion each year, quadruple the amount spent on health care.

OUTSIDE THE HOSPITAL

Hospitals and health plans have traditionally been paid for the services and procedures they provide, which does nothing to incentivize preventive care or improved patient outcomes. The whole idea behind prepaid plans, such as Kaiser Permanente's, is to shift this calculus. In such plans, members pay a fixed amount per month in return for a specified level of care. Since the amount of money the hospital receives is fixed, it can improve its bottom line only by reducing the amount and/or the cost of the care its patrons require.

It is in the hospital's financial self-interest to do all it can to keep people healthy, which means not only making changes inside the facility, but also reducing negative impacts on the surrounding community. For example, cutting back on waste, air pollution and energy use improves the environment, improves community health and thus reduces hospital costs.

Most hospitals are not pre-paid, of course, but the Affordable Care Act (ACA) is "pushing health care in the direction of preventing problems before they start," said Kathy Gerwig, vice president of employee safety, health & wellness at Kaiser Permanente. With its emphasis on preventive care, the ACA is, she believes, encouraging hospitals to consider the impact they are having on the health of the surrounding community. Thanks to ACA, she noted, "a new door has been opened."

REPUTATIONAL RISK

Avoiding reputational risk can be a strong motivator. Hospitals tend to shy away from promoting their own efforts in sustainability, in part because they see more downside than upside. As Makower noted, talking about environmental accomplishments often draws attention to remaining deficits, or to the fact that there was a problem in the first place.

But if hospitals see little upside in cultivating a reputation for sustainability, they do see enormous downside in developing a reputation for environmental negligence. "I don't think people choose hospitals for their sustainability profile," observed Gary Cohen, president and co-founder of Health Care Without Harm (HCWH), "but increasingly people expect hospitals to be environmentally responsible corporate citizens."

The extent to which well-regarded institutions are willing to go to avoid tarnishing their reputation as good neighbors was illustrated by a story Krisanne Hanson, director of sustainability at Stanford University Medical Center, told at the Wharton conference. When a local landfill found mishandled medical waste from other health care institutions, Stanford's CEO declared zero tolerance for such errors and organized a specially trained team of employees to go out to the landfills and sort through five tons of waste. When some errors were found, new procedures were put in place that resulted in a costly increase in regulated medical waste. The increased cost was willingly accepted, not because it would save money in the long run, nor primarily because it would improve community health. The money was spent to avoid reputational risk and allow clinicians to focus on the highly complex patient care underway at the medical center. ■



Employees: A Powerful Force in Sustainability

SUSTAINABILITY OFTEN BEGINS WITH PASSIONATE EMPLOYEES. “Health care is full of passionate people. The place is teeming with individuals who want to do this work,” said Janet Howard, director of facility engagement at Practice Greenhealth (PGH), a non-profit membership organization. At the beginning of her career, when Howard was conducting hospital waste audits, she was struck by the fact that no matter which unit she was in or what care was being delivered, “Everybody, from waste handlers to food service people, nurses and surgeons — they all had opinions about what we could do to improve our environmental performance.”

In some cases, hospital executives are not even aware of these “green champions,” but, Howard said, “They’re out there, whether they have been identified or not, because they see the work as an extension of health and healthy communities and healthy people.” In fact, when administrators tell Howard that their institutions aren’t doing anything about sustainability, she generally hands them a self-assessment checklist developed by PGH. Once they start talking to employees, often the administrators quickly discover examples of sustainability they never knew existed — a cook who has started a community garden on the hospital grounds, for example, a doctor championing reusable plastic sharps containers, or a nurse who is collecting unopened suture packs that would normally be thrown out and sending them to Haiti.

Sometimes these individuals drive important changes on their own. Keith Sutter, director of medical device sustainability at Johnson & Johnson, tells the story of a packaging engineer who questioned the widely held belief that regulations prohibited the use of recycled material in medical device packaging. This one dedicated advocate had the commitment, perseverance and the knowledge needed to push changes all the way through the system, resulting

in significantly greener packaging for an important surgical product.

Generally though, said Kathy Gerwig, vice president of employee safety, health and wellness at Kaiser Permanente, “The organizations that are successful in bringing environmental stewardship into their health care programs all have interdisciplinary teams that guide the work.”

GREEN TEAMS – TURNING PASSION INTO ACTION

“The magic comes in working together as a group,” said Gerwig. These “green teams” play two key roles. First they bring together people from different disciplines, each of whom can spot challenges others might miss or provide information that is essential to the work the team is doing.

Green teams can also help overcome one of the bureaucratic hurdles that sustainability efforts commonly face. All too often, one business unit will be called upon to do work and incur expenses that benefit the P&L of a different unit. To deal with situations like this, “It’s important to get people talking to each other,” said Gerwig, so that they can reach an agreement that is in the best interests of the whole organization. Together, the members of a green team can discuss costs and benefits, regardless of whose budget they affect. “They can say that, as a hospital, yes that’s worth the investment.” The group as a whole gains a larger perspective than any one member’s and can see that it’s worth moving past parochial department budgets to achieve an outcome that benefits the entire hospital.

Most of the 1,000-plus hospitals that are part of PGH have green teams with members that are well equipped to deal with direct operational issues, such as waste, energy and water. But Gerwig stressed that teams often lack

expertise in parts of the hospital that deal with higher-level activities upstream in the supply chain. To tackle such issues, teams need to bring in leaders from procurement and facilities. “If you want to change out the flooring from vinyl to something that doesn’t create dioxin pollution, for example, that’s a facilities move, and you need someone from that part of the operation to join the team. That’s why the most successful teams are the ones that not only have an interdisciplinary approach, but also include some folks from procurement and facilities.”

Early wins can lead to enduring change. For the contagious enthusiasm of green champions and green teams to spread throughout a hospital, it’s important to celebrate their successes and build on them. “You build a quiet little army,” said Howard, “and you gather your successes and you write them up and then, and only then, you sit down with leadership, and together as a team in a very coordinated fashion, you demonstrate the value that’s already been realized, and you make a formal pitch for a real program.”

TAKING ROOT

Once those in the C-suite see the concrete value in sustainability, they can help promulgate it by setting ambitious but reachable goals and rewarding achievement either through financial rewards or personal recognition. Ultimately, the goal is for these incentives to wither away as sustainability takes root and becomes self-sustaining within an organization. This is what happened at Inova Health System. For some time, executives at Inova were rewarded for achieving sustainability goals. But eventually it became clear that the incentives had worked, that sustainability had become firmly embedded within the culture. Sustainability, said Seema Wadhwa, assistant vice president for sustainability and wellness at Inova, is now built into basic job responsibilities. As an example, she pointed out that people in food services and environmental services now handle waste audits for their units as part of their everyday jobs, a task that used to fall to Wadhwa herself.

Now that sustainability is well established, Inova has shifted its use of incentives. For the first time this year, executives will be rewarded for reaching wellness, rather than sustainability, goals.

There is more than one way to engage employees in sustainability. One key lesson that Wadhwa said she learned from her work in sustainability is that people are motivated to confront global issues when those issues are brought home to them at a personal level. This realization is part of the reason for the shift at Inova from rewarding sustainability to rewarding wellness. With that focus, which encompasses preventive health care, Inova brings sustainability down to the personal level. Encouraging

everyone “to see not just what effect we are having on the environment, but what effect the environment is having on us,” said Wadhwa, engages employees more deeply in both their own health and sustainability: “Why should I care about the environment? Because it impacts the air I breathe and the food I eat.”

“For something to be truly sustainable and to solve a social issue at scale, it’s important to find a way for the business to be successful.”

— Susan Beverly, director of global citizenship and policy, Abbott

Johnson & Johnson has engaged employees in sustainability through its innovative Earthwards program. Unable to find a single external standard that could be used to measure sustainability for all its diverse product lines, J&J consulted with other organizations to identify seven key categories — material and packaging selection, energy, water and waste reduction, innovation, and social impact — and key measures within each. To gain Earthwards recognition, a product, which has already satisfied regulatory compliance and met company standards, must also make significant improvements in at least three of the seven impact categories.

The Earthwards approach drives innovation internally by encouraging teams from different parts of the company to find improvements throughout a product’s lifecycle. “By requiring three significant improvements in different categories, we incentivize collaboration across functions,” said Keith Sutter, director of medical device sustainability at Johnson & Johnson. The R&D team may have used green chemistry to improve the formulation of a product, but to secure Earthwards recognition, the packaging team, for example, may also have to get involved. And because the improvement in each category has to be at least 10%, teams that have not quite attained that level have to reach out and collaborate with others who can help put them over the top.

The work that goes into achieving Earthwards recognition is significant, and the reward is significant visibility within the company. The success of the program demonstrates just how powerful such recognition is. J&J’s corporate goal was to recognize 60 products. By the end of 2013, 55 products had been recognized, representing more than \$8 billion in annualized sales, approximately 12% of total revenue. By the end of 2014, the company had surpassed

HOW TO ENCOURAGE EMPLOYEE ENGAGEMENT

A few of the ways that University Hospitals of Northeast Ohio, engages its employees in sustainability:

SUSTAINABILITY CERTIFICATION PROGRAM: A novel training program on health care sustainability is customized for hospitals' frontline leaders.

"EAT REAL FOOD" PHOTO CONTEST: Employees sent in photos that illustrated how they were incorporating real, unprocessed, locally grown food into their lives. Winners were recognized on National Food Day.

EARTH DAY CELEBRATIONS: Various annual celebrations, including large employee fairs, are hosted across the system.

SUSTAINABILITY PLEDGE: Available to UH employees and non-UH community members, those who take the interactive and educational pledge show their commitment to becoming more environmentally, socially and economically responsible both at work and at home.

GREEN HEALTH HEROES: Peer-nominated employees who take leadership roles in helping UH to advance environmental responsibility, promote health and wellness, and save money.

ZERO-WASTE ANNUAL SUSTAINABILITY CELEBRATION: An annual, system-wide, year-end sustainability celebration commemorates employee accomplishments.

SUSTAINABILITY VIGNETTES: A series of short online video vignettes illustrates sustainability efforts taking place across the system.

EMPLOYEE INTRANET WEBSITE: A Greening UH intranet site offers employee-specific information about all sustainability initiatives and current events, and includes useful resources.

its original goal with 73 different products having achieved Earthwards recognition.

As with Inova and J&J, Abbott, the global health care company, has developed an approach to sustainability that it hopes will integrate such efforts into the work lives of employees throughout the company. While many in health care have discovered that driving sustainability also drives business, Abbott has formalized the relationship between the two by adopting the management concept of "shared value," pioneered by Nestlé.

For many years, Abbott approached social issues through its philanthropic fund. But "business is at its best when it acts as a business and not as a charity," noted Susan Beverly, director of global citizenship and policy. "For something to be truly sustainable and to solve a social issue at scale, it's important to find a way for the business to be successful."

As part of this shared value approach, senior executives throughout the company are encouraged to identify social issues, including sustainability, that are barriers to business success. Those employees who are eager to tackle a sustainability issue have to show it will serve a strategic business purpose and everyone who undertakes a business initiative must stop to consider if there are any relevant sustainability issues that might interfere with their efforts. Every employee becomes a potential green champion.

How will hospitals and businesses involved in health care know when they have succeeded in making sustainability an integral part of their culture? Green journalist Joel Makower once asked the environmental manager of a company with 9,000 employees how many people within his organization were working on the environment. Without hesitation, the manager responded: 9,000. "Perfect answer," said Makower.

Makower was also a moderator at the fall 2014 Wharton conference, "Metrics that Matter; Messages that Motivate," held in San Francisco and co-sponsored by Johnson & Johnson and Wharton's Initiative for Global Environmental Leadership (IGEL). ■

Inova Health System: A Holistic Program for Employees and the Environment

SEEMA WADHWA is not only assistant vice president for sustainability and wellness at Inova Health System; she's also co-author of *Sustainability for Health Care Management* (2012) and the former director of the Healthier Hospitals Initiative (HHI). Inova's approach goes beyond helping the planet, however. It also focuses on healthier employees.

"Studies show that health care workers are among the unhealthiest," she said. "When you really delve down you find reasons for that going beyond the stereotype of working women who take care of their patients but don't always take care of themselves. Our populations work long shifts, even when compared to other business sectors like Wall Street. It's very intense work, and there are crazy hours."

The Virginia-based nonprofit's program focuses on wellness for the company's 16,000 employees at five hospitals and on being kind to the environment; and it's very comprehensive on both counts. Inova became a founding sponsor of HHI in 2011, and since then it has presented six challenges to its workforce, including engaging hospital leadership, providing healthier local and sustainable food, cutting back on metered energy, reducing waste, using safe chemicals and adopting a smarter purchasing program. Many of Inova's sustainability goals are now self-sustaining and embedded into wellness outreach.

Programs aimed at keeping patients and staff healthy work hand in hand with those reducing waste, since both are aimed at prevention and heading off expensive intervention. Inova sponsors both a wellness ambassador campaign and a green champions initiative, with plenty of overlap in between. According to Inova CEO Knox Singleton, "It's moving from a statement of, 'We're getting great at scraping the toast after it's burned,' to, 'How do you keep the toast from burning in the first place?' How do you keep people from getting sick?"

For example, beyond targeting LEED standards for new buildings, Inova is now working to meet WELL-Building Standards, which adds evidence-based health and wellness interventions to environmental and energy construction design. Wadhwa offers another example: making stairways more attractive to use than elevators so that people get exercise while saving energy.

Food is another category where Inova can tie sustainability back to people's health. Employees and patients may understand how local organic farming is better for the environment, but now they are discovering how it can also help them stay healthy. In 2009, monthly farmer's markets were started in hospital cafeterias, and in 2010, Inova became a sponsor of the Northern Virginia chapter of Buy Fresh, Buy Local. Celebrity chefs are brought in, and there are local food employee cook-offs. Inova convened the Let's Move the Needle on Childhood Obesity Summit in 2011.

Also in 2011, Inova spent more than \$45,000 on local produce to support the community and local farmers, and it matches local residents' farmer's market purchases of up to \$10 made with Supplemental Nutrition Assistance Program (SNAP) benefits. Inova estimates that if each employee spent just \$5 a week at a farmer's market instead of a grocery store, \$1.2 million would stay in the local economy.

"People ask why they should care about the environment," Wadhwa said. "We want them to realize that the air they breathe and the food they eat are core factors in their personal health. We are engaging our patients with these issues in a fun way while they're here at Inova." ■

Building Sustainability at Kaiser Permanente

KAISER PERMANENTE (KP), the managed care consortium, has 170,000 employees and 19,000 doctors, so building company-wide consensus for sustainability initiatives can be a challenge. According to Susannah Patton, media manager at the California-based company, “We weave sustainability into the message that good health belongs to everyone.”

In 2010, KP became the first health care organization to launch a sustainability scorecard for medical product purchases; the company already had environmental guidelines for cleaning products and IV tubing free of dangerous chemicals. It has also thoroughly revamped its food policies, with one result being more than 50 farmer’s markets taking place at KP facilities. “Transparency is good for us,” said KP’s Patton at the Wharton conference. “People expect health care facilities to have sustainable operations, and we’ve been able to put a human face on a large institutional food service.”

Embedding sustainability across companies “is not yet the norm” in the U.S., said Kathy Gerwig, a vice president and environmental stewardship officer at KP. “I don’t think we’re quite at a tipping point yet, but there are still great examples of steps taken in the right direction. And they can point the way forward for organizations that are leaving money on the table.”

As a prepaid nonprofit, KP has made preventive care a core focus. According to Gerwig, that means environmental initiatives like reducing carcinogens from flooring fits into KP’s mission to reduce the incidence of cancer in its host communities. She added that the Affordable Care Act, with its focus on prevention and quality outcomes, is helpful in “encouraging the sustainability conversation to happen.”

And at KP, and an increasing number of health care institutions, one sustainability conversation leads to another. “The green teams end up motivating each other,” Gerwig said.

KP’s green teams have gotten a lot accomplished:

- KP said in mid-2014 that it would increase its onsite solar generation to as much as 50 megawatts, including at facilities in Hawaii, California and Colorado. The company already has solar panels at 13 locations, including hospitals, a distribution center and medical offices. In Oregon, some of its new panels will be delivered by bicycle messenger. In 2013, KP’s arrays generated 1.8 million kilowatt hours, and helped bring the company closer to its goal of a 30% greenhouse gas reduction by 2020. KP’s Ramé Hemstreet, chief energy officer, said adding clean energy “is not only the right thing to do for our communities, it makes good business sense.”
- KP is plugging in with electric vehicle EV charging stations, especially in California where the cars are most plentiful. In the next two years, KP plans to offer at least three charging stations at 50 locations around the country. Charging stations are a benefit for employees with EVs, but KP also sees them as a community benefit in reducing tailpipe pollution.
- In 2014, KP said it would no longer purchase furniture treated with toxic flame retardants, becoming the first health system in the country to adopt that policy. KP spends \$30 million annually on furnishings, and its decision could affect more than 38 hospitals and 600 medical offices in eight states and the District of Columbia. ■

Stanford Medical Center: “When We Can Control Our Resource Use We Should”

PRACTICE GREENHEALTH has named the Stanford University Medical Center in Palo Alto, California a “Partner for Change with Distinction,” and it’s not hard to see why. Visit the campus today, according to Krisanne Hanson, director of sustainability, and you’ll see no less than four construction cranes in a one-block area, part of an ambitious program of LEED-certified hospital building construction.

“We started going green on the building side relatively early,” Hanson said at the fall 2014 Wharton San Francisco conference, “Metrics that Matter; Messages that Motivate,” co-sponsored by Johnson & Johnson and Wharton’s Initiative for Global Environmental Leadership (IGEL). “The next phase is deep renovation, addressing air handling, and lighting such as LEDs in operating rooms.”

The medical center’s 6,000 tons of waste per year has been covered by recycling since the 1970s, but today the effort is very thorough, and 40% of the stream is being diverted from the landfill, with 50% in sight. In particular, 59% of all acute-care patient areas have implemented recycling, engaging more than 4,000 clinicians on a daily basis; 100% implementation is expected by the end of 2015.

One way to reduce waste is to ensure that it doesn’t get generated in the first place. Stanford’s medical center has signed Health Care Without Harm’s Healthy Food and Healthy Beverages pledge, and all food waste is composted. Styrofoam cups and standard plastic flatware have been abandoned in favor of biodegradable alternatives—even drinking straws can be composted.

The medical center was also a recipient of the “2013 Food and Climate Health Connection Award” from Healthy Food in Healthcare. Clean Food procurement milestones include 100% sustainable seafood as designated by Monterey Bay Aquarium Seafood Watch program; 100% free-range, hormone and antibiotic-free poultry; 100% cage-free eggs; 100% rbGH-free dairy; and 80% grass-fed and antibiotic-

and hormone-free beef purchases. The medical center’s next products to tackle are deli and breakfast meats.

The center has aggressive programs to green the supply chain and reduce the impact of transportation on its overall carbon footprint. In the parking lot are hybrid and electric cars, and all employees are offered free Caltrain Go public transit passes.

Also in the center’s plans are strategies to continue reducing packaging waste and water use. The environment is a major commitment at Stanford — just the new building programs, which have sustainability at the forefront, are a \$2 billion investment.

And the investments are paying off. The medical center’s sustainability efforts have been a boon both to the environment and to the organization’s bottom line. Savings over the past few years include:

- 26,883,960 gallons of water and \$513,324 in cumulative costs associated with water conservation projects; and
- 54,322,557 kWh and \$5,070,526 in cumulative, annual costs tied to energy efficiency projects. ■

Special Report

GREENER HOSPITALS: Building Consensus for Health Care Sustainability

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