

HCA Healthcare Sustainability Plan

HCA Healthcare's 2019 Sustainability Plan includes the collective impact made in 2018 along with plans for the upcoming year.

HCA Healthcare Sustainability Plan

HCA Healthcare is committed to being a responsible and concerned citizen of all communities where it operates and is driven by its mission statement: Above all else, we are committed to the care and improvement of human life.

Purpose

HCA Healthcare seeks to protect and preserve the environment through a broad range of practices memorialized in our Sustainability Plan.

Overall Policy

HCA Healthcare is a responsible and concerned citizen of all communities where it operates. Therefore, the minimum standard for HCA Healthcare's environmental stewardship is meeting or exceeding all environmental legal and regulatory standards. In addition, HCA Healthcare will protect and preserve the environment through, at a minimum, the following practices:

- Encourage the recycling of materials where recycling is commercially practical and the minimization, consistent with the law, of waste streams which require additional processing.
- Facilities will consider the effect on the indoor environment before introducing a new product into the facility.
- Encourage the continued reduction of energy usage throughout its facilities.
- Evaluate, and where appropriate, incorporate environmentally-preferable alternatives when designing new construction and major renovations.

HCA Healthcare is also an active member of Practice Greenhealth (PGH), the nation's leading membership and networking organization for healthcare institutions that are committed to implementing sustainable, eco-friendly

practices. As a PGH member, HCA Healthcare seeks to:

- Achieve virtual elimination of mercury in its facilities.
- Reduce the quantity and toxicity of healthcare waste – from manufacturing, purchase and use of products and materials, to improved end-of-life management.
- Minimize the use and exposure to hazardous chemicals, including persistent, bio-accumulative and toxic (PBT) substances.
- Reduce healthcare’s environmental footprint through resource conservation and other measurable environmental improvements.
- Integrate sustainable design and building techniques with environmentally-sound operational practices to create true healing environments.

Organizational Structure

HCA Healthcare’s scale allows unparalleled access to talent from across the organization and business lines.

HCA Healthcare’s multi-disciplinary Sustainability Steering Committee provides overall guidance for the sustainability program.

Task forces and sustainability coordinators support the program.

Sustainability Steering Committee – The Sustainability Steering Committee provides the overall guidance for HCA Healthcare’s sustainability program. The committee is chaired by the senior vice president and chief ethics and compliance officer, a member of executive leadership. The committee includes representatives from Operations, Quality, Finance, Engineering (Facilities Management and Engineering), HealthTrust (our group purchasing organization), Design and Construction, Public Relations, Human Resources, the HCA Healthcare Foundation, and Risk and Insurance. The committee meets on a quarterly basis.

Task Forces – Four task forces have been established to work on environmental issues with company-wide application. They are Waste Stream chaired by Anna Ward, director of sustainability; Energy and Water chaired by Brian Weldy, VP of engineering; Construction and Major Renovation, chaired by Bryan

Seely, AVP of design and construction; and Environmentally Preferable Purchasing, chaired by Domini Pelki, director of supply expense management. These task forces identify and research ideas within their areas of responsibility.

Sustainability Coordinators – Our Program is supported by sustainability coordinators, who are expected to be appointed at all hospitals. They are responsible for the implementation of the program at their facilities. A job description to help the sustainability coordinators is available on our intranet.

We collaborate to raise the bar and improve sustainability across the healthcare sector.

HCA Healthcare is a member of PGH, a founder of HHI and a founding sponsor of the Greening the OR initiative.

Sponsorships and Memberships

Practice Greenhealth – HCA Healthcare and all facilities are members of Practice Greenhealth (PGH). As noted above, PGH is the nation’s leading membership and networking organization for healthcare institutions that are committed to implementing sustainable, eco-friendly practices. PGH provides webinars, checklists and other tools at no additional cost to its members.

Healthier Hospitals Initiative – HCA Healthcare is a founder of the Healthier Hospitals Initiative (HHI).

The initiative transitioned into Healthier Hospitals (HH), a free program of PGH. HH’s goals are the same as those under HHI. HH’s goal is to use a coordinated approach to achieve sustainability throughout the healthcare sector, which will prevent environment-related illness, create extraordinary environmental benefits, and save billions of dollars in health care expenses. The basic tenets of the HH agenda are to improve environmental health and patient safety, reduce use of natural resources and generation of waste, and institutionalize sustainability and safety. HCA Healthcare has access to various sustainability tools from HH.

Greening the Operating Room – HCA Healthcare is a founding sponsor of the Greening the OR initiative. Greening the OR seeks to identify key interventions

We are working with the next generation of sustainability and business leaders.

We will host our 10th Climate Corps Fellow in 2019.

Past project focuses have included lighting options and an energy improvement standard.

We unlock possibilities for our colleagues and share our experiences.

More than 20 internal webinars help facility sustainability coordinators become versed in healthcare environmental sustainability topics and provide peer-to-peer engagement.

that can reduce waste, energy usage, worker exposure to hazardous chemicals and costs. This initiative is an attempt to collect data on these interventions and share them as a means to encourage widespread adoption across the sector. HCA Healthcare is the first health system to recommend that all of its hospitals commit to Greening the OR. We continue to support this program and are an active participant in the PGH Greening the OR cohort.

Climate Corps Fellow – For the last nine years, in conjunction with the Environmental Defense Fund, HCA Healthcare sponsored a Climate Corps fellow to work on energy-related matters. These masters’ degree candidates work on projects which are designed to both save money and reduce resource usage. Lighting options, an energy performance improvement standard, and energy usage have been project focuses. The 10th consecutive Climate Corps fellow will work with HCA Healthcare in the summer of 2019.

Communications and Leadership

Intranet Websites – All HCA Healthcare colleagues have access to two intranet websites related to the sustainability program. ECHO (Environmentally Conscious Healthcare Operations) contains an overview of sustainability activities and results for the company. It also contains links to external resources. The PharmWaste intranet site contains tools and education on implementing an appropriate pharmaceutical waste disposal program at hospitals and other settings including, surgery centers, physician practices and imaging centers.

Program and Project Communications – HCA Healthcare sustainability

As part of our leadership, colleagues frequently present at sustainability conferences and create materials to support the healthcare sector.

As of 2019, individual hospitals have received more than 80 PGH Environmental Excellence Awards.

coordinators periodically receive emails regarding certain programs or events. The 2018 WebEx presentations remain accessible as part of a multi-year library of HCA Healthcare WebEx resources for sustainability coordinators. HCAFi is an additional method of communication available to facilities. HCAFi is an intranet resource specific for webinars on facility infrastructure, energy management and facility implementation of HCA Healthcare's Environmental Waste Management Plan.

50th Anniversary Communications – Throughout 2018, our organization's 50th anniversary year, HCA Healthcare publications featured the sustainability program and contributions from our facility sustainability coordinators. The communications served to showcase that sustainability is part of our company's culture.

Leadership – HCA Healthcare colleagues frequently present at sustainability conferences and create materials to support the healthcare sector. In 2018, an HCA Healthcare colleague presented on a Practice Greenhealth (PGH) Webinar. In 2019, an

HCA Healthcare colleague presented at a supply management industry conference. Three other HCA Healthcare colleagues will present in 2019 at the national CleanMed conference. We frequently provide documents for posting and sharing on the PGH website and as part of Healthier Hospitals.

HCA Healthcare hospitals have received PGH Environmental Excellence Awards. Six received a total of eight in 2018, and six received a total of seven in 2019.

HCA Healthcare, through its group purchasing organization (GPO), HealthTrust, was a leader in establishing uniform environmental attribute questions for contracts with healthcare entities. These standardized questions were published and disseminated industry-wide in conjunction with other healthcare entities and PGH. HCA Healthcare serves on HealthTrust's

HCA Healthcare is an active member of our GPO's Environmental Sustainability Network (ESN).

We educate vendors about expectations for environmental choices.

Environmental Sustainability Network (ESN), which works at a national level with industry leaders and educates vendors about expectations related to environmental choices. HCA Healthcare actively participates with HealthTrust in addressing the availability of local or sustainable foods through our participation in HealthTrust's ESN.

In addition, as of 2018, eight college students have learned about environmental sustainability in healthcare through a summer program at our HCA Healthcare corporate offices in Nashville.

Data Collection Efforts

Carbon Reduction Commitment – The United Kingdom requires any company of HCA Healthcare's size to calculate its energy usage, which is then translated into greenhouse gas equivalents. This effort has started for HCA UK facilities and greenhouse gas information for energy used at the facilities (scope 1) and energy purchased by the facilities (scope 2).

Greenhouse Gas Data – Under consideration is the means and need to establish a methodology to identify and collect greenhouse gas information company-wide for scopes 1 & 2. If this data is collected, the data would be published with year-to-year comparisons.

Waste Stream Data – Data on the various dispositions of solid waste is being collected for U.S. hospitals as part of the Integrated Waste Management contracts. In addition, construction debris data is being collected for new construction projects. As part of the *HH Less Waste Challenge*, this information is shared with an external organization. The most recent reporting of information for the *Less Waste Challenge* took place in 2019, reflective of the 2018 year.

HCA Healthcare's waste stream data on solid waste and construction debris is shared with an external organization for the benefit of the healthcare sector.

Sustainability Task Forces

Four task forces identify and research opportunities and ideas.

The four task forces also collaborate on initiatives across our organization.



Waste Stream

Pharmaceutical Waste Disposition – There are specific rules on the disposal of some pharmaceuticals and best practices that discourage sewerage for all others. Pharmaceuticals in the water is an area of increasing publicity and interest. A vendor has been contracted to identify the proper disposition of pharmaceutical waste. The vendor has also identified environmentally sustainable pharmaceutical waste stream management beyond current regulations. Our organization’s pharmaceutical waste program is implemented in all clinical settings at our affiliates. Educational materials have been developed to assist hospitals, surgery centers and physician

Education for pharmaceutical waste includes an interprofessional continuing education course for pharmacists and nurses.

practices. This includes capturing and disposing operating room back table irrigation containing pharmaceuticals. The continuing education course for pharmaceutical waste includes an interprofessional focus for pharmacists and nurses. The pharmaceutical waste programs continue to be evaluated.

28.4 million pounds of non-construction waste were recycled from hospitals in 2018.

This includes 7.6 million pounds of corrugated cardboard and 440 thousand pounds of rechargeable batteries in 2018.

Integrated Waste Management – Two companies conducted successful pilots to manage waste streams at a guaranteed savings over current spend and dual source contracts were awarded. The two vendors managing waste streams were to achieve savings by renegotiating disposal prices and increasing recycling rates. This project, now managed by a sole source vendor, also includes tracking of various waste streams' poundage. There is also training provided to employees on proper disposal and recycling practices. In 2018, there were 28,457,078 pounds of non-construction waste recycled.

Rechargeable Battery Recycling – We use two programs that recycle rechargeable batteries that no longer can hold a charge. In 2017, the provider of a free mail-back program began accepting alkaline batteries and changed to a fee service. The provider of the mail-back program continues to explore opportunities for increased battery recycling from our hospitals. Rechargeable battery recycling is also accomplished through a second program, integrated waste management. In 2018, 440,123 pounds of rechargeable batteries were recycled through the programs rather than being landfilled.

Cardboard Recycling – A checklist was developed and sent to every hospital to explore the feasibility of recycling cardboard. Most facilities already recycle to some extent. The other facilities are encouraged to begin cardboard recycling. In 2018, 7,674,775 pounds of corrugated cardboard were recycled through integrated waste management.

Mercury Reduction – Almost all facilities have significantly reduced the

Almost all facilities have significantly reduced mercury-containing devices within the facility.

In addition, as of 2019, 18 of our hospitals have won a PGH Making Medicine Mercury Free Environmental Excellence Award.

amount of mercury-containing devices within the facility. Steps are taken and contracts have been secured for proper waste disposal of items, such as fluorescent light bulbs. To provide additional education on why mercury reduction is important and memorialize standards, the feasibility of creating a policy to describe the virtual elimination of mercury in our facilities and eliminate bulb crushing will be considered.

Polystyrene Reduction/Increased Composting – In conjunction with the Environmentally Preferable Purchasing Task Force, alternatives to polystyrene for takeout food containers are being considered. However, in many cases there are limitations including that alternatives do not biodegrade under ordinary landfill conditions. Haul distance for commercial composters does not usually provide consistent access to composting, yet commercial

composting generates the higher heats necessary to break down the polystyrene alternatives and also allows all food waste to go into the same container for composting. The Waste Stream Task Force will work on identifying alternative products, commercial composting locations, commercial composting on site, and where it makes sense, encouraging local governments and vendors to get into the commercial composting business.

Duplex Printing – Printing on both sides of a sheet of paper has been implemented as a default printer option at HCA Healthcare’s corporate offices in Nashville. Printing in this manner cuts paper use by nearly 50%. We will work on identifying other opportunities to reduce paper use and increase duplex printing in non-clinical settings.

Integrated Pest Management – HCA Healthcare is the first health system to develop specifications designed to decrease the amount and toxicity of chemicals used to control pests. We developed these specifications in conjunction with a vendor and environmental services consultant. These specifications have been made available to other health systems and shared through the Practice Greenhealth website.

Energy & Water

Energy Operations Center – Our organization’s energy operations center monitors building systems for HCA Healthcare’s portfolio of buildings in order to identify building system optimization opportunities and alert facility managers to energy and cost-saving actions. In 2018, energy reductions of about 2.5 million kWh from 2017 were achieved. As of 2018, 69 facilities were equipped with real-time metering. 126 facilities have been upgraded with the new Building Automation System (BAS) software and hardware to better control building operating conditions for reduced energy consumption.

In 2018, our energy operations center helped achieve energy reductions of about 2.5 million kWh from 2017.

Retro commissioning – There is an ongoing process to evaluate and help assure existing building systems such as heating, ventilating and cooling (HVAC) systems and other energy use within hospitals are operating at optimal energy efficiency.

Minimum Efficiency Standards – There will be an exploration of the minimally-accepted efficiency standards for systems installed in renovations and appliances purchased. Advances in LED lighting technologies lower cost and better energy efficiency is moving this form of lighting into HCA Healthcare’s design standards.

Alternative Energy Sources – Five solar panel arrays have been installed at sites in Tennessee. At three locations, assessments were conducted of the feasibility of using wind energy. Wind energy was not economically feasible for these locations at the time. The company continues to consider new technologies or approaches to expanding alternative energy within our portfolio.

Energy Star – Energy Star is a U.S. Environmental Protection Agency (EPA) voluntary program. To earn certification, a facility that applies must operate

HCA Healthcare Engineering has undertaken a standardization initiative in our water treatment program to use less chemicals and reduce water systems losses through a quality management approach.

among the top 25 percent of similar facilities nationwide, with no sacrifices in comfort or quality. Two HCA Healthcare facilities have been Energy Star certified previously, one for 2016 and one repeat qualifier in 2017 and 2018. We continue to explore Energy Star certification for facilities.

Water Usage – Water consumption efforts continue with improvements in energy efficiency that reduce water used for cooling operations and installation of water-efficient fixtures. Where water-saving measures have been implemented, more than 3,300 gallons of water is saved a year for each patient room. Engineering has undertaken a standardization initiative in our water treatment program to use less chemicals and reduce water systems losses through a quality management approach.

Construction and Major Renovation

Pursuit of LEED Status – HCA Healthcare’s Nashville Data Center has received Leadership in Energy and Environmental Design (LEED) Certified status, the Medical Office Building at Reston Hospital Center received LEED Silver status, and Capitol View development in Nashville received LEED Silver accreditation. Medical City Alliance and HCA Houston Healthcare Pearland, two hospitals in Texas, each received LEED Silver accreditation. A vertical expansion at Medical City Dallas received LEED Certified status. A recently completed facility, Oviedo Regional Hospital in Orlando, Florida, was designed to be LEED accredited. Four additional projects targeting LEED accreditation are in the construction phases in El Paso, Texas; Nashville, Tennessee; Plano, Texas; and Orlando, Florida.

Environmental Building Scorecards – The LEED process or other building scorecards may be used to determine which sustainability options to

incorporate in new buildings. For construction projects where LEED certification is not pursued, frequently the LEED scorecard is used as a guide; items from the scorecard which make economic and environmental sense will be implemented. This will generally avoid substantial administrative costs associated with pursuing certification.

We are using increased recycled content in buildings materials.

This includes steel products, drywall, flooring and ceiling tiles.

Use of Materials – We have increased recycled content in building materials and are using wood products from sustainable forest management providers.

Recycling of Construction and Demolition Waste – HCA Healthcare has a recycling program for new construction projects. In 2018, 84% of all construction debris was recycled, for a total of 92,618,000 pounds. Concrete was the largest contributor by weight accounting for 28% of the total with metals accounting for 17%, plastic accounting for 11% and wood accounting for 10%.

92.6 million pounds of construction debris recycled in 2018 includes concrete, metals, plastics and wood.

Alternative Energy Sources – Solar, wind and combined heat and power energy systems can be incorporated into new construction. A free-standing emergency room completed in 2012 uses geothermal energy to reduce the energy cost for heating and cooling. Results on this installation have been very good.

Environmentally Preferable Purchasing

Purchasing of Reusables – Existing contracts provide the ability to purchase certain reusable items rather than disposable items. This applies to, among others: gowns, drapes, basin sets, instrument cases, pulse oximetry probes, and patient grounding pads.

In 2018, 1.2 million pounds of waste was diverted from landfill through the reprocessing program used by our hospitals and surgery centers.

Identifying a Greener Alternative – As contracts are renewed, an effort is being made to ensure greener alternatives are made available for purchase.

Purchasing of Reprocessed Single-Use Devices – There is an existing program to use FDA-approved reprocessed single-use devices to reduce waste and save costs. In 2018, more than 1,200,000 pounds of waste were diverted from landfills and \$26 million

in cost savings were achieved through the program.

Minimum Standards for Items to be Purchased – An exploration of the minimally-acceptable sustainability attributes for items to be purchased is being done for some items. For example, almost all computer-related purchases must be Electronic Product Environmental Assessment Tool (EPEAT) certified. Similarly, most consumer electronics offered for sale under contract must meet Energy Star criteria.

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HealthTrust Contracting – The principles of environmentally preferable purchasing (EPP) are built into the standardized contracting process used by HealthTrust, acting

as the group purchasing organization for HCA Healthcare, and will be applied at the contract/category level. While not all agreements cover goods or services with EPP relevance, the initial screening will be conducted on all agreements at the time of their regularly-scheduled expiration.

HealthTrust has adopted the use of standardized question sets for patient care and electronic devices. These questions were developed for the healthcare industry by a GPO work group in which HealthTrust participated. Details about the work group and standardized questions can be found at:

<https://practicegreenhealth.org/gsc/standardized>. In addition, HealthTrust and HCA Healthcare, through HealthTrust's Environmental Sustainability Network (ESN), are developing the use of standardized question sets for electronic medical devices. This has had coordination with Practice Greenhealth. The standardized questions are being included in selected HealthTrust contracts to identify environmentally preferable attributes for the items covered in these agreements. This information is used in the source selection process.

HCA Healthcare and HealthTrust, through HealthTrust's ESN, are developing the use of standardized question sets for electronic medical devices.

Improved Availability of Information Regarding Green Attributes –The incorporation of sustainability attributes and the ability to compare products based on their attributes has been requested to be included in the new catalogue purchasing system being designed by HealthTrust.