



# SUSTAINABILITY

at The Ohio State University Wexner Medical Center



2020–2021



**THE OHIO STATE UNIVERSITY**

WEXNER MEDICAL CENTER





Dear Ohio State community and partners,

The Ohio State University Wexner Medical Center and Ohio State health science colleges are committed to addressing the social determinants of health, which includes the impact of the environment and climate change. According to the Centers for Disease Control and Prevention, climate effects can lead to respiratory and cardiovascular disease, weather-related injuries and premature deaths, changes in access and geographical distribution of food, threats to mental health and the development of water-borne illnesses and infectious diseases.

It's important to recognize that great health starts with a healthy environment. As a top-rated academic health center, we're committed to doing our part to tackle climate change by being responsible stewards of our resources through improving and maintaining efficient operations, conducting innovative research and implementing ideas that promote sustainability.

This year's sustainability report highlights several outstanding achievements and initiatives that are in alignment with both the medical center's strategic plan and the university's resource stewardship goals. We acknowledge and applaud the contributions of our faculty, staff and students who've focused on improving the health of our community, while reducing our environmental impact and simultaneously providing extraordinary patient care.

Sincerely,

**Frank Aucremanne, PE, MSCE, CHFM**

Associate Vice President of Space and Facility Planning, The Ohio State University Wexner Medical Center

**Jay Anderson**

Chief Operating Officer, The Ohio State University Wexner Medical Center

# Sustainability goals



Our sustainability efforts align with our strategic plan and The Ohio State University's resource stewardship goals (seen here). The progress of sustainability initiatives at the medical center towards our ambitious long-term goals is extraordinary due to the commitment of our institution and our people.

## SUSTAINABILITY



### Resource Stewardship Goals

#### University Fleet's Carbon Footprint

Reduce carbon footprint of university fleet per thousand miles traveled by 25% by 2025

#### Carbon Neutrality

Achieve carbon neutrality by 2050 per Presidents' Climate Leadership Commitment

#### Locally Sourced Food

Increase production and purchase of locally and sustainably sourced food to 40% by 2025

#### Ecosystem Services

Increase Ecosystem Services Index score to 85% by 2025



#### Potable Water Consumption

Reduce potable water consumption by 10% per capita every 5 years – reset every 5 years



#### Zero Waste

Achieve Zero Waste by 2025 by diverting 90% of waste away from landfills



#### Building Energy Consumption

Increase the energy efficiency of the university by 25% per building sq. ft. by 2025



#### Preferred Products

Develop and implement standards by 2025

## SUSTAINABILITY PROGRAM:

# Waste



Hospitals produce an average of 29 pounds of waste per patient stay. Health care's complex waste stream is also expensive, with regulated medical waste costing 10 times as much as solid waste. The medical center is committed to first preventing waste upstream and managing it appropriately through landfill diversion, recycling, composting and ensuring items end up in the correct waste stream.

- We increased the **diversion rate to 35%** with efforts such as blue sterilization wrap collection expansion, food waste reduction efforts and continued expansion of recycling infrastructure.
- Reusable sharps container implementation in the last quarter of FY21 already **prevented 7.5 tons** of plastic from going to the landfill.
- In fiscal year 2021, the medical center diverted 145 tons of pre-consumer food waste by using a digester (a machine that converts food to a liquid that drains to a wastewater line), donated 11 tons and composted two tons of pre-consumer food waste, which resulted in a total of nearly **160 tons of food diverted** from landfills.

*Picture source: Stericycle*





## SUSTAINABILITY PROGRAM:

# Energy



Per Energy Star, hospitals use about two and a half times more energy per square foot than an office building of the same size. From research, we know that emissions from fossil fuels are linked to a multitude of health conditions — which is why the Ohio State Wexner Medical Center is working to improve energy efficiency and transition to more renewable energy sources.

- In partnership with the Ohio State Energy Partners, we're continuing to complete the LED retrofit, began construction on energy conservation measures and finished installation of smart meters.
- In fiscal year 2021, **approximately 16%** of the electricity supplied to the medical center at main campus and 100% for off-site medical center locations was **carbon neutral** through the use of renewable energy credits.
- The Building Automation System team worked to institute scheduled setbacks in multiple buildings, leading to **significant energy savings**, such as at McCampbell Hall with a nearly **30% decrease** in energy use intensity.

*Picture Source: Blue Creek Wind Farm*

## SUSTAINABILITY PROGRAM:

# Greening the OR



According to Practice Greenhealth, operating rooms drive up to 60% of a hospital's revenue while producing more than 30% of a facility's waste and two-thirds of its regulated medical waste and consuming nearly three to six times more energy per square foot than anywhere else in the facility. The Ohio State Wexner Medical Center formed a Greening the OR task force to look at best practices and implement new procedures to improve efficiency and reduce waste.

- One goal of the task force was to lower the environmental impact of gases associated with anesthesia, with a special focus on reducing the use of the anesthetic desflurane, which has 10 times the global warming potential as sevoflurane, which is a similar alternative to desflurane. The task force achieved a **46% reduction** of desflurane across the health system, realizing nearly \$300,000 in cost savings over a two-year period.
- Collection of blue sterilization wrap (used to keep instruments sterile) continued at two new additional OR pavilions in FY21 and has resulted in more than **5 tons** diverted from landfills.



*Picture source: Nurse from Ross Heart Hospital operating room*



FIGURE 3: SUSTAINABLE PROCUREMENT CONSIDERATIONS (PRACTICE GREENHEALTH)



Picture source: Practice Greenhealth

## SUSTAINABILITY PROGRAM:

# Sustainable procurement



Hospitals purchase an enormous amount of goods and services, which presents an opportunity to make sustainable purchasing decisions that positively impact our community and the environment.

- Since 2011, we have diverted **nearly 115 tons** of single-use devices from the landfills through a reprocessed medical device program and saved **\$9 million**.
- We developed sustainable procurement guidelines and integrated sustainability criteria into the request for proposal (RFP) scoring matrix.
- In fiscal year 2021, **16% of all food** purchased by the medical center was sourced locally, thereby supporting local businesses and farmers.
- In fiscal year 2021, **75% of the medical center's spending** through its group purchasing organization, Vizient, had at least one environmental attribute, such as a product containing forest stewardship-certified wood or a plastic that's recyclable.
- In fiscal year 2021, the medical center's Space and Facility Planning and Supply Chain departments partnered together to integrate sustainability criteria into the procurement process for all current and upcoming construction projects. Not only have 80% of all materials installed met the sustainability criteria, but the medical center will also realize immediate cost savings and additional savings over the life cycle of these more-sustainable building materials.



## SUSTAINABILITY PROGRAM: Green building



- The Ohio State University launched its new Sustainable Design and Construction Policy in February 2021. All construction projects now incorporate more sustainability elements based on project type, project scope, jurisdiction and budget, and require suppliers to be more transparent around sourcing, material content and the carbon footprint of materials.
- One exciting example of the impact these standards have already had is the under-construction inpatient hospital that's **diverting 86 million pounds**, or 39,000 tons of materials — which translates to 98% of the waste materials being recycled.



## SUSTAINABILITY PROGRAM:

# Employee engagement and education



Employees who believe they can make a direct social and environmental impact through their job report higher satisfaction levels, according to a Net Impact survey. Attracting and retaining the top talent in clinical care, research and education is a priority for the medical center. Acquiring top talent allows us to accelerate the pace of discovery, quickly translate research findings into treatments and prevention methods, and ensure that we have well-trained and engaged health care providers in the years ahead.

- One way for faculty and staff to make a direct impact is through the Green Team, a group of volunteers who support sustainability initiatives throughout the organization. The Green Team was created in 2018 and now has more than **700 employees** eager to make a difference.
- Between January and June 2021, the Ohio State College of Medicine's student-led Sustainability in Medicine group recruited 120 households with 180 individuals to participate in a composting and recycling program. This initiative **diverted 6 tons of recycling and 24 tons of compostable materials** from the waste stream in just six months.
- Over **40 department leaders** participate in the Sustainability Council by leading sustainability initiatives within their respective departments and participating in monthly education and information-sharing calls.

## EARTH DAY 2021



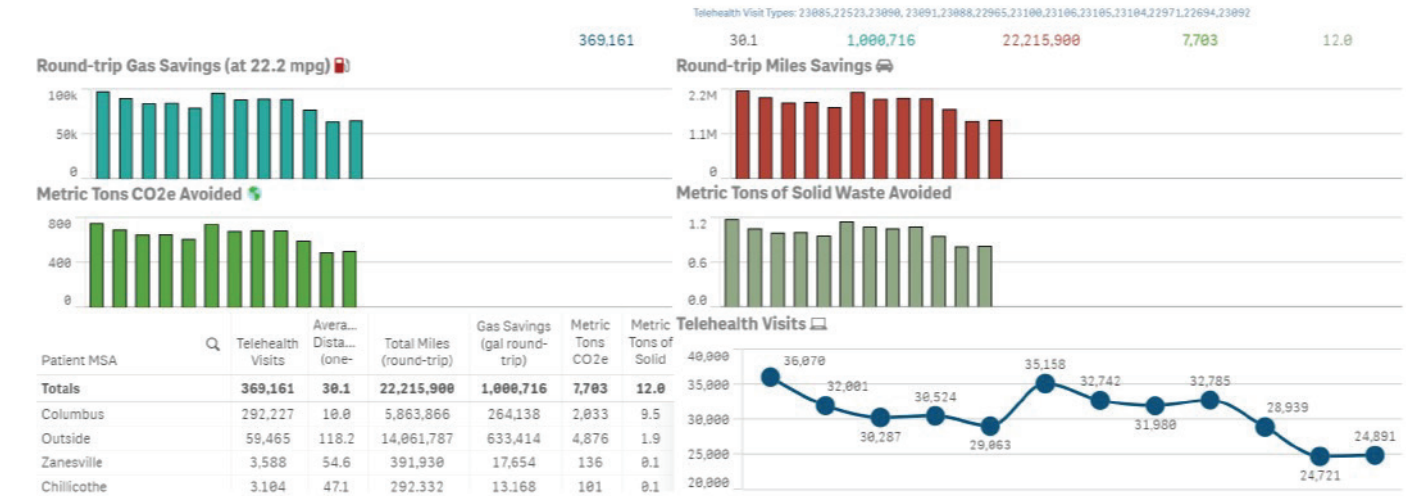
- The Ohio State Wexner Medical Center Green Team hosted an Earth Day event in April 2021 that collected and recycled more than 3,250 pounds of unwanted documents and gave away 150 native sapling trees for employees to plant during activities to celebrate Earth Day 2021. In addition, the Green Team collected 5.3 cubic yards of electronics and 50 pounds of batteries and donated more than 70 pairs of shoes to be recycled. More than 5,800 faculty and staff participated in the “Every Day is Earth Day” Your Plan for Health Challenge, in which they kept track of actions they took for the good of the Earth and their health.
- In FY21, a group of medical school students, residents, fellows, faculty, deans, sustainability staff and practicing clinicians came together to integrate climate change, health and environmental justice issues into The Ohio State University College of Medicine's existing curriculum, as well as into professional development offerings for established physicians.
- Sustainability leaders from the medical center contributed to the growing conversation around sustainability in health care in FY21. Solid Waste Authority of Central Ohio (SWACO) and Waste Today magazine featured Aparna Dial, MS, MBA, LEED AP, senior director for Sustainability and Strategic Services for The Ohio State University and the Ohio State Wexner Medical Center

# Transportation



Transportation is the No. 1 contributor of the nation's greenhouse gas (GHG) emissions, according to the U.S. Energy Information Administration. As major employers with complex supply chain logistics, hospitals are well-positioned to reduce transportation GHGs by influencing employee commutes, transitioning to low- or zero-emission fleet vehicles and optimizing supply chain distribution practices.

- In FY21, telehealth encounters grew to 369,161 and **saved patients nearly 22 million miles driven and 1 million gallons of gasoline**, and reduced appointment-related waste by 12 tons and 7,700 metric tons of carbon dioxide.
- A group of undergraduate students developed a formula to determine that the nearly 500,000 patient telehealth visits since the onset of the pandemic accounted for a reduction of more than **15.8 tons**. While the appointment-related waste is primarily small items — exam room table paper sheets, gloves and after-visit summary documents, it still has a significant aggregate impact.



# Awards, grants and leadership

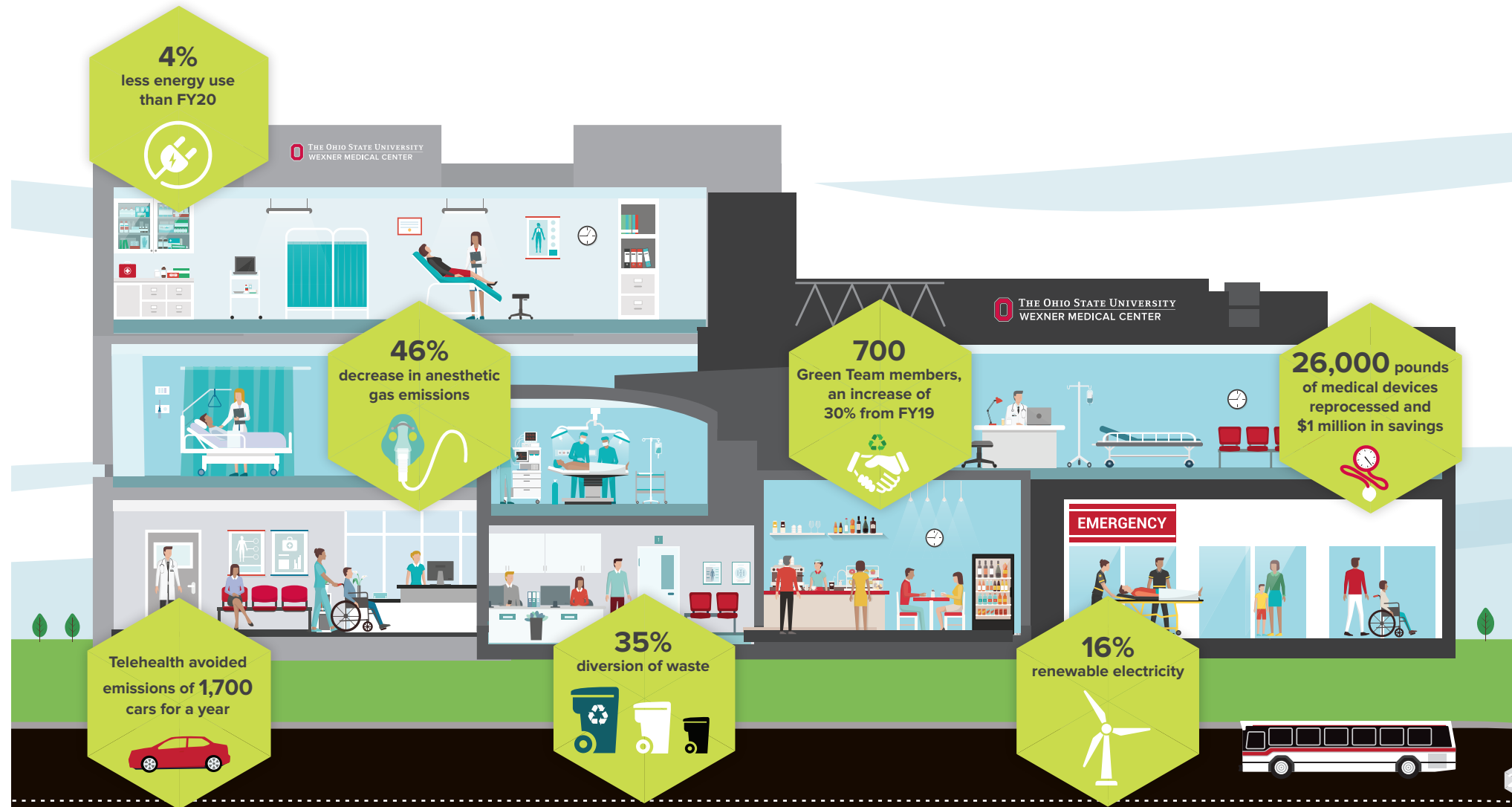


The Ohio State University is the third-largest university in the country, with both a major health system and seven health sciences colleges all located on one campus. This allows us to leverage the resources across our system and integrate them with sustainability efforts. The Ohio State Wexner Medical Center is committed to sustainable practices and sharing best practices with other institutions to advance sustainability initiatives across the nation. The medical center's commitment and successful integration of sustainability practices have been recognized locally and nationally by:

- [Practice Greenhealth's Environmental Excellence Award](#)
- [Arbor Day Tree Campus Healthcare Recognition](#)
- The medical center was awarded \$200,000 for zero waste efforts in FY21 to execute in FY22:
  - The Ohio Environmental Protection Agency (EPA) awarded the medical center and Ohio State Facilities Operations and Development \$100,000. The Ohio State University Administration and Planning matched this grant with an additional \$50,000.
  - Ohio State Energy Partners awarded the medical center \$50,000.
- Participation in leadership groups such as:
  - [Vizient Environmental Advisory Council](#)
  - [Healthcare Plastics Recycling Council Advisory Board](#)
  - [Ohio Hospital Association's Environmental Leadership Council](#)
  - American Society for Health Care Engineering Sustainability Taskforce



# FY21 sustainability results







**THE OHIO STATE UNIVERSITY**

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