THE PATH TO CARBON NEUTRAL

A Guide to Building a Climate-Smart Health Care System

Co-authored by Kaiser Permanente and Health Care Without Harm

September 2020

Health Care
Without Harm

KAISER PERMANENTE®

Introduction

In 2016, Kaiser Permanente, one of the nation's largest not-for-profit health plans, serving 12.4 million members in 8 states and the District of Columbia, announced an ambitious goal: to become carbon neutral by 2020. Health care, as the only sector of our economy with healing as its mission, has a unique responsibility to address climate change. Increasingly, health care organizations such as Kaiser Permanente are taking that responsibility seriously, committing to leading efforts to address climate change and getting real results.

Doctors swear an oath to "do no harm," and the systems they work for must do the same. Yet, health care operations contribute significantly to climate change, and as a result, to the very diseases our health systems work every day to treat. The health care sector's greenhouse gas emissions make up 9.8% of the U.S. total. If it were its own country, U.S. health care would rank 13th in the world for greenhouse gas emissions, more than the United Kingdom. In that context, "do no harm" means taking action to: reduce the carbon footprint of health care facilities; use the voices of health care leaders and professionals to advocate for policies to address climate change; leverage health care's purchasing power to transition to a clean, safe, and sustainable economy; and work with and in communities to build equity and resilience.

This guide is intended to share the lessons from Kaiser Permanente's journey to carbon neutrality with other health care institutions. No single organization, including Kaiser Permanente, has all the answers. However, by sharing work and pointing to supporting resources, Kaiser Permanente and Health Care Without Harm hope to inspire others to get involved and start on their own carbon neutrality journey. The only way we're going to build a more sustainable world is by doing it together.

Why did Kaiser Permanente undertake such an ambitious project?

The day-to-day work in a hospital or other medical facility — caring for patients, treating disease, saving lives — is challenging work by itself. Why then would a hospital or health care system decide to add tackling global climate change to its already full to-do list? For Kaiser Permanente, it was an understanding of the connection between a healthy climate and healthy people. It was recognizing that climate change was having a direct impact on the health and well-being of patients, staff, communities, and even its facilities. And, it was understanding that these accomplishments could be achieved while maintaining a focus on quality, affordable health care.

Unprecedented heat waves, linked to a warming planet, are bringing more patients to the emergency department with respiratory and heart-related diseases. Climate change also has fueled extreme weather, including historic droughts that have contributed to longer wildfire seasons and ever-more-intense fires that have destroyed communities and made the air dangerous to breathe. In the face of the real threat of climate change, Kaiser Permanente made the decision that it was not enough to only prepare for and treat the impacts of climate change on its members and patients. The organization chose to lead an effort to address the root causes of carbon emissions by installing solar arrays, executing long-term renewable energy contracts, and building energy-efficient, green-certified hospitals and medical facilities. At the same time, Kaiser Permanente worked to ensure that its facilities and the communities it serves are more resilient to the impacts of climate change that are not preventable.

What does it mean to be carbon neutral?

Hospitals and other medical buildings are incredibly energy-intensive facilities that operate 24/7 year-round, powering high-tech medical equipment and computer systems. The typical hospital building uses 2.5 times more energy per square foot than a typical office building, using power that is often generated from fossil fuels.

Health care's climate footprint is much larger than the energy used in buildings. Emissions are generated by transporting patients, staff, and supplies to the facility in vehicles that burn fossil fuels. Plastics, pharmaceuticals, and chemicals, including anesthetic gases, used in hospitals often come with large carbon footprints. Even the food hospitals serve patients come with a carbon footprint.

Kaiser Permanente achieved the goal of becoming carbon neutral across its operations in accordance with The CarbonNeutral Protocol.

This milestone applies to:
+ Scope 1 emissions, including stationary combustion, fleet vehicles, and refrigerants
+ Scope 2 emissions, including electricity
+ Select Scope 3 emissions, including external considerations like corporate travel

By financing emissions reduction projects, Kaiser Permanente is supporting the transition to a low-carbon global economy, paving the way for a healthier planet and healthier lives.

Kaiser Permanente approached meeting carbon neutrality from several directions. Some of the actions the organization took were:
+ Purchasing utility-scale electricity from new renewable sources, including more than 360 megawatts of wind and solar generation
+ Installing 44 megawatts of on-site solar arrays — enough to power 9,600 homes for a year — and improving the energy efficiency of its buildings
+ Purchasing carefully selected carbon offsets to mitigate unavoidable greenhouse gas emissions, such as those produced by on-site boiler systems

For a health care organization to be carbon neutral, it must remove as much carbon from the atmosphere as it adds to it through on-site fuel combustion and grid electricity purchases. In practice, this means reducing emissions as much as possible and putting plans in place to reduce them further over time. To compensate for currently unavoidable emissions, certified carbon offsets can then be purchased to support activities such as land conservation and reforestation, renewable energy or energy efficiency projects, or other health-promoting activities that reduce or remove carbon from the atmosphere. As clean energy technologies and markets evolve, and other sectors decarbonize, the opportunities to reduce emissions will grow and become more cost-effective, and the need for carbon offsets will decline.

How did Kaiser Permanente become carbon neutral, and how can my facility follow suit?

It is no simple undertaking for an organization as large, complex, and energy intensive as Kaiser Permanente to become carbon neutral. Achieving this goal requires bold action on a number of different fronts all at the same time.

It all starts with commitment.

Going carbon neutral is a major organizational effort that requires buy-in from leadership and from teams across your organization.
+ Make a business case.
+ Show how going carbon neutral is key to advancing the health mission of your facility.
+ Get buy-in from top leadership, key players across your organization — from food service to facilities management to health professionals — and key partners.

Bernard J. Tyson, Kaiser Permanente's late chairman and CEO spoke and shared bold climate commitments at the Global Climate Action Summit in 2018. Greg Adams, Kaiser Permanente's current chairman and CEO, has continued this critical work.

Find out where you are: Gather data

+ Quantify emissions from your buildings and operations
+ Ask suppliers for emissions data
+ Collect data for employee commuting and business travel

Kaiser Permanente has developed a tool that converts the electric and gas utility bill data from each building to units of energy. This data allows Kaiser Permanente to track changes in energy intensity over time and compare between buildings. Facilities operations staff can identify which buildings or entire campuses need to be targeted for more aggressive intervention and track the impact of specific energy efficiency initiatives.

Set ambitious, public goals in line with the science

+ Set public goals supported by top leadership across the system.
+ Join initiatives like the Health Care Climate Challenge, Cool Food Pledge, Tree Campus Healthcare program, and We Are Still In.
+ Advocate for policies to address climate change at the local, state, and federal levels.
+ Tell your story and share best practices.

In 2016, Kaiser Permanente set bold goals for environmental performance, including a carbon neutral goal for 2020.

Reduce your energy use: Energy efficiency

+ Improve building efficiency. The cleanest energy is the energy you don't use.
+ Build right the first time (create carbon goals for new constructions)
+ Engage equipment manufacturers to improve energy efficiency of medical devices.

Kaiser Permanente has reduced energy use intensity* by 8% since 2013, avoiding over 35,000 tons of carbon dioxide equivalent emissions annually. Newly opened medical offices are 50% more efficient than facilities opened in 2012.

Switch to clean, renewable energy

+ Make the switch to renewable energy, on-site and off-site.
+ Drive impact with purchasing.
+ Build in climate resilience with microgrids and storage.

Kaiser Permanente has installed solar power at 100 sites. That power will generate 114 megawatt-hours by 2021, reducing carbon dioxide equivalent emissions by 27,203 tons. Kaiser Permanente also invested in offsite solar, purchasing 969,000 megawatt-hours of renewable electricity. Kaiser Permanente has 100 megawatt-hours of battery storage and will be adding battery storage to 12 solar projects to reduce demand on the power grid and increase resilience. In 2018, Kaiser Permanente installed the first hospital renewable microgrid at the organization's Richmond Medical Center.

Green your transportation

+ Install EV charging stations
+ Add fleet electrification
+ Offer telemedicine options to patients
+ Provide incentives to reduce single-occupancy commuting.
+ Reduce business travel and offset emissions.

Kaiser Permanente has deployed 500 electric vehicle chargers at 49 sites across its California, Hawaii, Oregon, and Colorado regions. The 2019 usage was equivalent to over 3.1 million miles driven.

Data services

+ Purchase Electronic Product Environmental Assessment Tool (EPEAT)-registered computers, servers, phones, and TVs.
+ Transition to renewable energy as data servers and cloud services use a lot of energy.

Since 2019, Kaiser Permanente has spent more than $100 million on EPEAT-registered products (computers and displays, imaging equipment, mobile phones, televisions, and servers).

Reduce your waste

+ Implement a sustainable procurement strategy.
+ Switch to reprocessed surgical devices.
+ Find reusable alternatives to single-use products.
+ Reduce emissions from anesthetic gases.
+ Recycle what you can, including surgical blue wrap.

To improve the health of its members and those in the surrounding communities, Kaiser Permanente is committed to applying Environmentally Preferred Purchasing guidelines and specifications for all major, strategic, and critical purchasing decisions. The principles mandate a variety of specific environmental criteria aligned with Kaiser Permanente's commitments to promote cleaner energy, safer chemicals, natural resource conservation, and waste reduction. In addition, sustainable food should be considered in purchasing decisions, along with product performance and cost-effectiveness.

Serve plant-forward meals and reduce food waste

+ Serve delicious plant-forward meals to staff and patients.
+ Buy locally grown vegetables and fruits.
+ Donate excess food to local food banks.
+ Compost your remaining food waste.

Kaiser Permanente is nearly halfway to its goal of purchasing 100% local and sustainable food products by 2025, pushing the national market to support more regional producers and processors. Kaiser Permanente features plant-based meals daily on patient menus and in cafeterias and purchases more than 70% of the meat it serves from local and/or sustainable sources. Kaiser Permanente is reducing its food waste while addressing food insecurity, with 3 hospitals currently piloting an edible food waste program in which food is picked up at facilities and redistributed to community agencies.

Support community health and resilience

+ Listen to and invest in your communities based on needs they identify.
+ Address both the economic and environmental benefits of products.
+ Buy local from diverse and sustainable suppliers.
+ Promote land stewardship and cultivating healthy ecosystems to protect natural resources.

Working with Anchors in Resilient Communities, Kaiser Permanente is investing in the East Bay Food Production Center to support the local food economy and build resilience in underserved communities. Located in Union City, California, the center will provide 200 to 300 union jobs, prioritize local and sustainable sourcing from minority and women producers and processors for institutional meal preparation, and help stimulate the growth of community businesses around the center. The 56,000 square-foot facility will feature environmentally sustainable building technologies, including a state-of-the-art carbon dioxide refrigeration system and 270 kilowatts of on-site solar power.

Engage your staff

+ Educate, train, and engage staff at all levels in carbon reduction initiatives. To reach carbon neutrality, all staff need to support the effort.
+ Think about behavioral and system changes to reduce your footprint.

At leading facilities, Kaiser Permanente Green Teams work to educate staff and engage them in activities to reduce the carbon footprint of hospitals and clinics. The teams share facility success stories in an "issue, challenge, solution" format so that successful initiatives can be replicated across the organization. Recent successes include switching from disposable to reusable operating table pads to protect patients during robotic surgery, donating unused patient meals, composting exam paper and paper towels, and instating Green Team department rounds.

Here are 5 things you can do in your personal life to help make a difference.

What comes next for Kaiser Permanente?

Kaiser Permanente is proud of becoming carbon neutral for emissions from its operations. However, the urgency and scale of climate change requires even bolder actions and visionary leadership. Looking forward, organizations that have reached this milestone shouldn't stop once they achieve carbon neutrality. For example, Kaiser Permanente will expand its focus by reducing the carbon footprint of its supply chain. It is important to work with others across the health care sector to draw upon leading practices and scientific research to identify a science-based target** for additional emissions reductions. Moving forward, assertive actions can make significant differences in addressing climate change while ensuring quality, affordable care. By reducing emissions through climate-smart programs, all organizations can help drive decarbonization across the global economy.

Energy Use Intensity expresses a building's energy use as a function of Its size or other characteristics.

**Science-based targets are emissions reductions targets that align with limiting global temperature rise to 1.5 degrees Celsius above preindustrial levels and reaching net-zero carbon emissions by 2050.*