

Family Health Centers Emissions Reduction Report



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Image provided by myfamilyhealth.org

Executive Summary

Family Health Centers (FHC) is a non-profit Federally Qualified Health Center providing healthcare to Okanogan County, located in North Central Washington. The organization has a compelling opportunity to track the uncertain amounts of waste and greenhouse gas emissions (GHGs) involved in their operations. **This project seeks to address the importance of quantifying the number of GHGs produced by FHC operations;** by doing so, the organization will be able to identify where they can most efficiently and effectively reduce pollution. This report also outlines strategies other healthcare organizations, including hospitals and smaller health centers, have taken to lower their GHG emissions, along with government regulations to help lower the impact that the healthcare industry currently has in contributing to pollution.

The current situation is informed by a history of industry reliance on fossil fuels and recent goals to shift to more sustainable actions. These new changes come from every level, from international agreements to local non-profits. Of particular interest is the **White House Climate Pledge**, which requires reducing emissions by 50% by 2030 (with net-zero emissions by 2050), conducting inventory on supply chain emissions by 2024, and installing a manager for reducing emissions and developing a climate resilience plan for operations by 2023 (Assistant Secretary for Health, 2022). While perhaps not strict requirements, the pledge offers an invigorating outline of how to take steps to a sustainable future. In the process, emissions-reducing actions are expected to save money on these long-term investments.

The organization, Practice Greenhealth in collaboration with Health Care Without Harm, created a **healthcare emissions calculator** that presents an option for calculating the amount of emissions produced by FHC and identifying which sectors produce the most. Unfortunately, in attempting to gather the necessary information we came up against significant barriers. FHC lacks reporting software that would provide the organization-wide data necessary. Additionally, some sectors of FHC are stringent with their information, withholding the data that's needed for the emissions calculator from other FHC sectors. Equally important are those who wish to help but are overwhelmed by work as is and don't have time for assisting.

These barriers speak to the **need for a centralized data reporting/tracking system**—beyond emissions, it can greatly improve the efficiency of FHC. An interoperable data collection process is crucial beyond emissions tracking for keeping stock of inventory,

expenses, resources, and for identifying areas of financial growth. Still, we provide general options for reducing emissions and encourage the development of such an accessible data system.

Family Health Center's mission statement dictates that "we promise to serve all patients, offer discounted fees to patients who qualify, not deny services based on a person's race, color, sex, national origin, disability, religion, sexual orientation, or ability to pay."

Climate change is a "threat-multiplier" meaning inequalities, social problems, and illnesses are exacerbated by climate change.

We found three main sectors with various solutions for FHC to strive for. These sectors are transportation, energy, and organizational changes. Each sector has the potential for increasing operations efficiency and thus decreasing costs to FHC. The authors also encourage the adaptation of the "**triple-bottom line**" into business and operations decisions. The triple-bottom line takes social, profit, and environmental impacts in all decisions to ensure a holistic consideration.

Transportation

- Vanpool/ride share
- Remote work /telehealth
- Electric vehicles & charging stations

Energy

- Renewable energy installation
- Energy audit
- DIY audit
- Efficiency improvements
- Energy saving protocols
- Install smart power strips
- LED lightbulbs

Organizational Changes

- Educating employees and patients
- Establishing sustainability as an FHC priority
- Partnership
- Create executive-level lead
- Data collection system

There is no question FHC is treating the effects of climate change in patients. For the health of the public, nature, and FHC itself, we recommend emissions reduction to take priority consideration in business and health decisions.

Introduction

FHC's five medical clinics and three dental clinics are primarily supported by grant funding and must follow strict guidelines to maintain support. Purchasing needed supplies has been traditionally done in bulk but has yet accounted for greenhouse gas (GHG) emissions. A new task force in FHC, the "**Green Team**," is interested in reducing the environmental impacts of operations, with a significant focus on waste and emissions reductions. This report focuses on the emissions side.

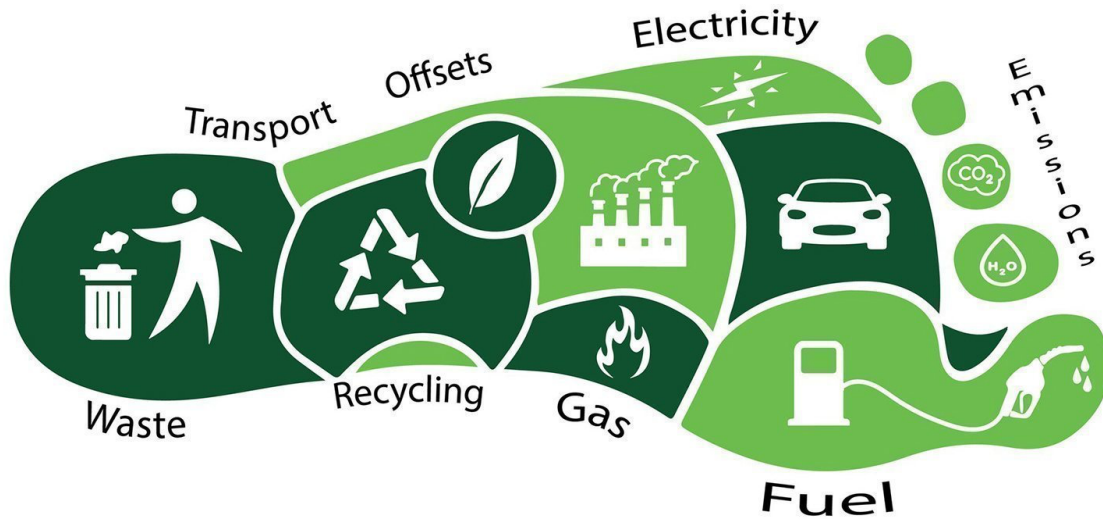
This work comes at a critical juncture point for both FHC and the world. The climate is continuing to change with increasingly negative effects on the productivity and health of the county, most visibly by fires and lasting heat. These contribute to side effects such as air pollution, declining snowpacks, and disruption of animal habitats and crop productivity (Washington Health Care Climate Alliance, 2019). The impacts of these are expected to disproportionately affect vulnerable populations, especially those with less access to health care—this is also the population that FHC has a focus on serving. Reduction of GHG emissions is thus critical for mitigating the worst effects of climate change and increasing the health of Okanogan County residents.

For example, over the past several years, air quality has been degrading due to wildfire smoke, yard waste burning, and landfill pollutants, among other causes. (Resilient Methow, 2021). With climate change as a threat multiplier, asthmatics and those with cardiovascular conditions are significantly affected by this worsening air quality, (Cleveland Clinic, 2021). Moving to green- focused healthcare practices and operations would lessen the harm of climate change's threat multiplier.

The development of the Green Team and the recent hiring of FHC's new supply accountant offer a moment of reframing and growing from established practices and materials to approaching sustainability as a main goal. The first step to reducing emissions in this process is identifying the emissions of each facet of the organization to determine what needs changing.

The primary instrument for identifying FHC's GHG emissions is the **Health Care Emissions Impact Calculator** created by the Practice Greenhealth (Practice Greenhealth, n.d.1). The Excel-based calculator inputs extensive data to calculate GHG emissions under organizations' operations. It establishes total emissions and percentages in comparison between sources so that organizations can identify where their emissions are coming from.

Through research of both Practice Greenhealth’s emissions calculator and case studies, along with the Green Team’s suggestions, this report was produced as a broad study of GHG emissions reduction in healthcare to support FHC in becoming a sustainable organization.



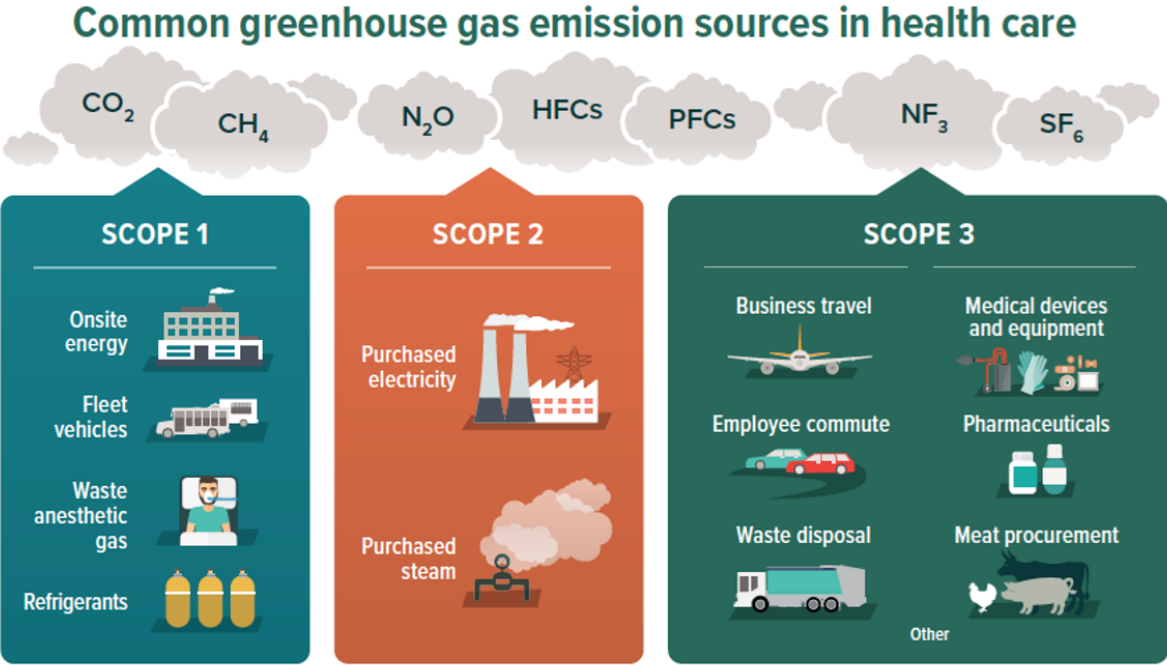
Explore local and global issues | Calculating Carbon Footprints | 3-5, 6-8, 9-10, 11-12 | ISTE Student Standards. (n.d.). Retrieved August 18, 2023, from <https://iste.web.unc.edu/activity/calculating-carbon-footprints-3-12/>

Methodology

This project began as a process to fill out the Healthcare Emissions Impact Calculator. However, due to not receiving the necessary FHC data in time we switched our focus to researching emissions goals and suggested actions. Ultimately, though we can outline various objectives and suggest numerous options for reducing emissions, our primary recommendation is creating a more comprehensive system to gather data for the calculator.

Emissions Calculator

Our choice of emissions calculator was based on two factors. In researching other healthcare emissions calculators, others are either restricted behind paywalls or are several years old. We chose to use Practice Greenhealth’s emissions calculator—created in association with Health Care Without Harm and Global Green and Healthy Hospitals—based on its accessibility, relevancy, and preference (Practice Greenhealth, n.d.).



Carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), nitrogen trifluoride (NF₃), and sulphur hexafluoride (SF₆)

Scope 3 Other: These are the most common emissions for health care, but there are other relevant categories in Scope 3. To review all 15 categories covered in Scope 3, visit the [GHG Protocol Scope 3 Guidance](#).

Source: Practice Greenhealth

Using the calculator is critical for developing and understanding an emissions portfolio. The best first step to stopping harmful GHG emissions is to find exactly what FHC’s emissions are in the first place. This is a core measure for all organizations switching to sustainable habits. Here we provide a rundown of how to use the calculator and all the information needed for input.

After reading through the calculator, we created a complete list of all required data inputs required. This includes variables and their associated quantities along with manufactures and costs, among other things. Our team requested this data from FHC’s Green Team staff, who worked to gather it for the calculator.

The calculator functions as an Excel spreadsheet that requires inputting specific data for use. This data is broken into “Scope 1,” “Scope 2,” and “Scope 3” sections, with varying levels of complexity. Most inputs only require a few pieces of data, and after meeting with the FHC Green Team we have removed all extraneous information to solicit data more efficiently. The next step is to gather this data for inputting into the calculator.

Scope 1 Data	Measurements
Mobile Combustion	The amount of gasoline consumed by FHC vehicles in liters or gallons.
Refrigerants and Fire Suppression	The type of equipment and gas used, as well as how much was recharged (in kilograms/pounds).
Anesthetic Gases	The bottle size (milliliters) and number of bottles purchased of isoflurane, sevoflurane, desflurane, and the total quantity (in pounds) of nitrous oxide, carbon dioxide, and 50/50 volume divisions of nitrous oxide and oxygen.

Scope 2 Data	Measurements
Electricity Use	How much grid electricity was consumed in kWh by facilities.
Water Use	Purchased water in lbs, kBtu, therms, or ton-hours for consumed steam, hot water, and chilled water.

	For chilled water, specificity if it is an electric driven chiller, an absorption chiller using natural gas, or an engine-driven chiller using natural gas.
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Scope 3 Data	Measurements
Purchased Chemical Products	Amounts of: adhesives; blood sugar, pregnancy, and other diagnostic test kits; chemicals (except basic chemicals, agrichemicals, polymers, paints, pharmaceuticals, soap, cleaning compounds); compressed gases; medicinal and botanical ingredients; other basic inorganic chemicals; other basic organic chemicals; pharmaceutical products (pills, powders, solutions, etc.); soap and cleaning compounds; toiletries; vaccines and other biological medical products.
Purchased Computer Products	Number of: analytical laboratory instruments; audio and video equipment; computer storage device readers; computer terminals and other computer peripheral equipment; computers; electromedical apparatuses; electronic capacitors, resistors, coils, transformers, connectors and other components (except semiconductors and printed circuit assemblies); irradiation apparatuses; telephones.
Construction	Construction of new healthcare buildings. Retrofits, HVAC, electrified operations
Data Processing, Internet Publishing, Information Services	Data processing and hosting. Other information services applicable.
Machinery	Air conditioning, refrigeration, and warm air heating equipment.
Other Services	Services besides government. Dry-cleaning and laundry. Repair and maintenance.

Waste Generated	Tons of mixed paper, metals, plastics, recyclables, MSW, and electronics (glass is trashed).
Waste Disposal	Tons recycled or put in landfills (no combustion used, no organic waste).
Electricity Consumption	Total consumption in kWh of various fuel types.
Business Travel	Flights and hotel costs (passenger ground transport if possible).
Upstream Leases	Square footage of leased buildings (in FHC's case, patient facilities).
Use of Sold Products	The number of units of inhalers using HFC-227ea and HFC0134a as propellants and the mass of those propellants per gram.

Research

During this time, we reconvened with the Green Team staff several times to discuss the project's work and objectives. We supplemented these meetings with weekly update emails. Through these meetings, we were able to pivot from focusing purely on the calculator to a broader focus on research and identify what FHC would find valuable. These interviews were essential as resources and guidelines to help evaluate our procedure's realism and importance. Both are essential for nuanced and informative recommendations.

After reading through of the calculator, we turned to research on the emission standards of healthcare sectors. The goal was to inform our final recommendations by comparing where FHC can reduce the most emissions with official objectives—a process known as benchmarking. Additionally, we investigated more general methods for reducing emissions not specific to FHC (due to not having the information for the calculator). With input from the Green Team, we settled on the White House Climate Pledge as the template for our primary goals and increasing energy efficiencies via savings as the most effective way of achieving those objectives.

Results & Recommendations

Our project's research consisted of reviewing various governmental objectives relating to reducing emissions (especially in the healthcare sector) and then reviewing recommendations for FHC to reduce its emissions while increasing financial efficiencies. Finally, our largest recommendation to meet the broader goals and improve energy and financial savings is creating a unified data gathering and tracking system throughout FHC operations.

Goals

Reducing GHG emissions ties to several climate change goals at varying levels of government. These include:

- Federal Sustainability Plan via Executive Order 14057
- Paris Climate Agreement
- Washington State Energy Strategy
- White House Climate Pledge

Of special interest are the “Sustainable Development Goals,” or “SDGs.” These outline broad goals FHC can design its own environmental objectives around. These include:

- Good Health and Well-being. This represents the reality of climate change as a threat-multiplier, negatively impacting health care amidst a number of compounding effects such as extreme weather and related strains on human health.
- Affordable and Clean Energy. This relates to the need for net-zero emissions buildings, spoken of in other goals such as the Federal Sustainability Plan and pursued by the FHC's Green Team.
- Responsible Consumption and Production. This is primarily handled by the other group, but is still important as less waste inherently equates to fewer emissions.
- Climate Action. This is important in declaring sustainability and reducing emissions to be a priority of the FHC, setting a policy by which sustainability measures or considerations are integrated into all policies.

For specific goals, our team decided to focus on the White House Climate Pledge in this report. As outlined in the *Executive Summary* (p. 3), the White House Climate Pledge has three main facets that can translate over to emissions goals for FHC. These goals include:

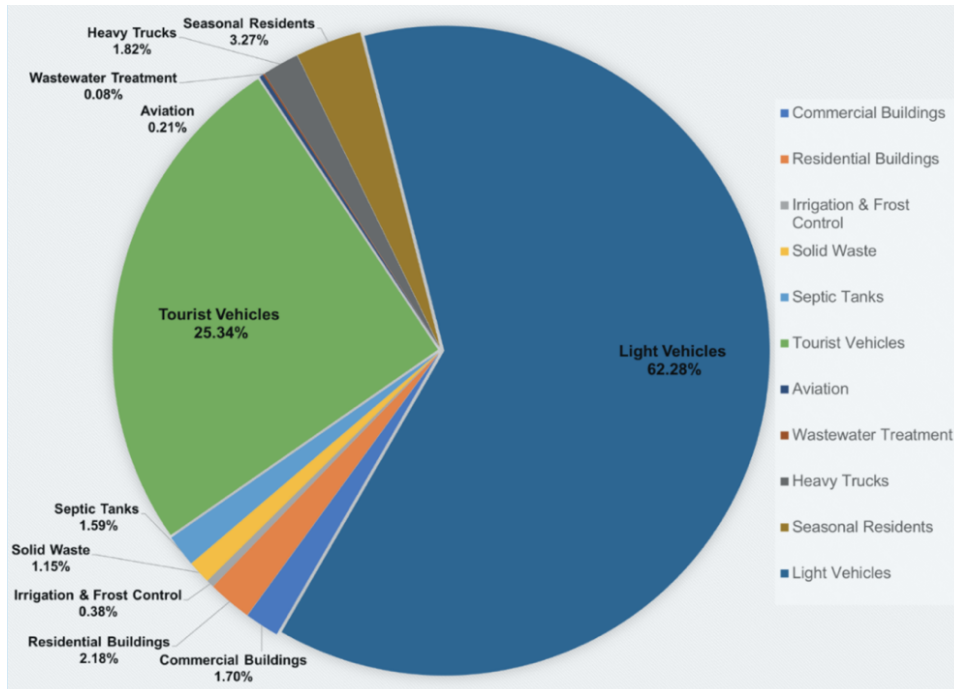
- Developing a climate resilience plan by the end of 2023, “anticipating the needs of groups in their community that experience a disproportionate risk of climate-related harm.”
- Designating an “executive-level lead” on reducing emissions by 2023 and conducting an inventory on Scope 3 emissions data by 2024 (see the *Methodology* section).
- Cutting GHG emissions by 50 percent by 2030 and achieving complete net zero by 2050.

Internationally recognized, these goals illustrate a bold direction to take FHC operations. There are numerous resources through the Department of Health and Human Services (HHS) for healthcare emissions reduction, including decarbonization, retrofitting, and funding opportunities. The authors highly recommend taking this pledge and following the guidelines presented, as well as using the HHS's living documents as a place of further resources and recommendations.

At the very least, the Climate Pledge offers an excellent outline of high-level steps FHC can take to focus on improving sustainability. This includes creating a **climate resilience plan**, an **executive-level position for reducing emissions and cataloguing inventory** (and by extension completing the data gathering and inventory calculator) and setting a **goal of 50 percent reduction of GHG emissions by 2030**.

Recommendations for Reducing Emissions

To reach the tentative goal of cutting FHC emissions by 50 percent by 2030 (or, more broadly, reduce emissions as a whole), we collected case studies of proven methods assuming these facets track onto FHC operations. Due to a lack of large-scale analysis of the entire county, we extrapolated the sectors most likely to produce the heaviest emissions. (Resilient Methow, 2021). We focus on emissions reductions in **transportation, energy, and organizational changes**, while increasing energy and financial efficiencies.



Note. Adapted from *Methow Valley Climate Action Plan* (p. 9). (2021). Resilient Methow. <https://www.resilientmethow.org/climateactionplan>

Goal 1 - Transportation

As the largest emitter of emissions in the region, we recommend focusing attention on reducing vehicle emissions wherever possible. Though we encourage large-scale adoption of public transportation such as TranGo, we understand that such an expansion is unrealistic in the short term. FHC has also suggested investing in electric vehicles in the future, which we wholeheartedly support.



Complete change is unlikely to happen in the short term and is a significant investment without outside funding. For carpooling, we suggest a rideshare system for employees, reducing the number of single-occupancy riders and, thus, vehicles on the road. For example, Mass General Brigham (formerly Partners HealthCare) in Massachusetts has developed a transportation system to minimize single-occupancy vehicles with public transportation passes provided at subsidies or sponsored bike shares (Climate Action Playbook for Hospitals, 2020). Most sustainably, they have pushed for remote working options, where over 20% of their workforce can perform their jobs remotely.

Seattle Children’s Hospital also offers alternatives worth exploring (Sustainability Program, 2023). Their solutions include discounting public transportation passes, providing daily commute bonuses, and supporting bicycle infrastructure by offering bikes and bike services. Additionally, they reserve spaces for “vanpool” and pay-per-use

parking, incentivizing bringing a bike or taking public transit. Seattle Children’s reduced single-occupancy drivers significantly through these systems. Lastly, we highly recommend a larger development of data gathering to record transportation.

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|--|
| <p>Examples</p> <ul style="list-style-type: none"> • Seattle Children’s Hospital • University of California Health • Mass General Brigham |
|--|

Recommended Action	Type of Action	Cost	Scale	Time Frame
Vanpool / Rideshare	Policy; Behavior Change	Low	Individual Facilities; Entire Operations	Medium
Remote Work / Telehealth	Policy; Operations	Low	Individual Facilities; Entire Operations	Long-term
Switching to Electric Vehicles / Installing Chargers	Policy; Investment	High	Individual Facilities; Entire Operations	Long-term

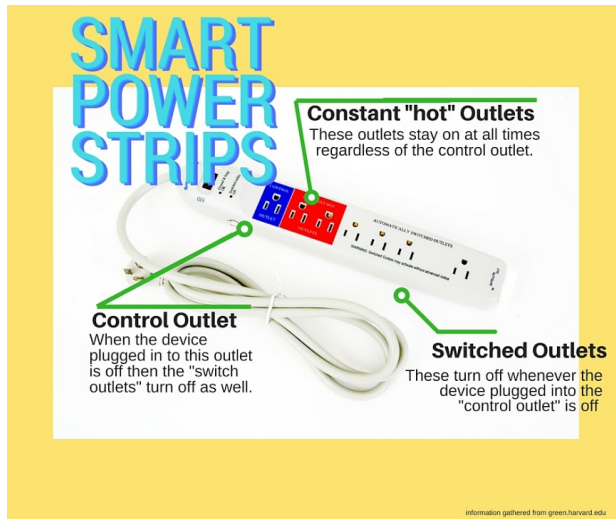
Goal 2 - Energy

A survey by the Energy Information Administration (utilizing an emissions calculator) found that a 30% cut in healthcare electricity carbon emissions by 2030 would not only reduce GHG impacts but also prevent “an estimated 4,130 premature deaths, 85,000 asthma attacks, 4 million respiratory symptom events, 3,750 hospital visit incidents, and would save about \$1.2 billion in medical costs” (Climate Action Playbook for Hospitals, 2020; EIA, 2012). Along with this, having newer clean energy technology that allows for energy storage can help health centers stay open during storms or other extreme weather events that would otherwise cut buildings off from the energy grid. FHC is already moving to invest in solar panels. Beyond this, energy efficiency retrofits offer an unexplored alternative to increasing both emission reductions and long-term cost savings.



Even simple adjustments can significantly save money and emissions. According to the U.S. Department of Energy (DoE), switching from conventional lighting to LED can save on energy by 75% and can last 25 times longer (U.S. Department of Energy, 2014). Similarly, replacing energy-inefficient appliances and equipment with energy-efficient ones makes sense from both a monetary and sustainability point of view.

Another adjustment that can greatly impact energy use is shutting down devices and unplugging when not in use, especially at the end of each workday. “Standby energy,” which comes from computers and printers that remain plugged in and in sleep mode when not in use, account for up to 5% of a building’s energy use from outlets. (U.S. Department of Energy, 2011a). Along with this, a low-cost addition that can have the same impact is using “smart” power strips. Using smart power strips saves energy with electronics such as computers and printers plugged in after the workday as the power strip will automatically cut off energy when the device is powered down.



- Examples**
- Health Care Without Harm
 - Advocate Aurora Health
 - Ascension
 - Gundersen Health System
 - Cleveland Clinic
 - HealthPartners
 - Providence St. Vincent Medical Center
 - Virginia Mason

(Reyes, 2016). Power Strips: Energy Saving Made Easy. Williams. Retrieved August 9, 2023, from <https://sustainability.williams.edu/news-events/power-strips-energy-saving-made-easy/>

Larger energy retrofits likely require an energy audit to identify the most cost-effective energy savings, though “do it yourself” assessments are a great first step. Especially as Okanogan County experiences extreme temperatures in summer and winter, checking that systems such as thermostats and lighting are properly working can save time and money. We recommend inspecting the facilities’ insulation, air tightness, HVAC systems, water heaters, and lighting with instructions for simple testing for each found with Okanogan County PUD (Johnson, n.d.).

Recommended Action	Type of Action	Cost	Scale	Time Frame
Install smart power strips	Investment	Medium	Facilities; Entire Operations	Short-term
Energy Saving Protocols	Behavior Change; Policy	Low	Individual	Short-term
Switch to LED light bulbs	Investment	Medium	Individual Facilities;	Short-term

			Entire Operations	
Energy Audit	Investment	High	Individual Facilities; Entire Operations	Short-term
DIY Audit	Operational	Low	Individual Facilities; Entire Operations	Short-term
Renewable Energy Installation	Operational, Policy	High	Individual Facilities; Entire Operations	Ongoing
Efficiency Improvements	Policy; Investment	High	Individual Facilities; Entire Operations	Ongoing

Goal 3 – Organizational Changes

Healthcare organizations like FHC offer unique opportunities to make significant progress on the regions sustainable practices. Declaring sustainability a priority of FHC will show employees' and patients' dedication to pollution-free health. It also offers the opportunity for partnerships with other organizations working toward climate solutions, avoiding placing the burden solely on FHC (Maibach et al., 2015).



For example, Inova Health System, based in Virginia, partnered with Virginia Clinicians for Climate Action to “educate health professionals across the state through meetings, online communications, and one-on-one discussions.” (Climate Action Playbook for Hospitals, 2020). Together, they worked on sustainable initiatives such as removing

Styrofoam from their operations, adopting green building standards, and educating workers in the field.

Together, we can see that partnerships offer opportunities to alleviate some of the logistical burdens of climate action while promoting collaboration. We recommend partnering with the sustainability-oriented organizations in Okanogan County.

Examples
<ul style="list-style-type: none"> • Dignity Health • Hackensack Meridian Health • Inova • Intermountain Healthcare • Kaiser Permanente • Providence • Virginia Mason

Lastly, establishing sustainability as a high priority of FHC is conducive to creating a comprehensive data collection system. The structurally supported free flow of information increases transparency and credibility of FHC as well as inform decisions on how best to decide energy and supply efficiencies. Establishing an “executive-level lead” position outlined in the White House Climate Pledge designated to overseeing all sustainability practices is important for coordinating actions.

Recommended Action	Type of Action	Cost	Scale	Time Frame
Educating Employees and Patients	Education; Policy	Low	Individual	Short-term
Establishing Sustainability as a FHC Priority	Policy; Operational	Low	Entire Operations	Short-term
Partnership	Policy	High	Entire Operations	Short-term
Data Collection System	Operational	Medium	Entire Operations	Medium
Create Executive-Level Lead	Policy	High	Individual; Entire Operations	Long-term

Monitoring & Evaluation

Research

The report can be amended and expanded with new developments in (mainly rural) healthcare systems' sustainable actions. Evaluation of the helpfulness of this research focuses on the availability and quality of resources found. From the lack of explicit documentation of rural health centers and sustainability, we suggest seeking out new examples as more health centers take sustainable action rather than delving into past examples. Although this might seem trivial in the short-term, continuing research does offer opportunities to identify and develop long-lasting solutions.

Calculator

The FHC can gain valuable information on the scope of the organization's emissions and what sectors are producing the most by completing the Greenhealth Health Care Emissions Impact Calculator. The process for gathering the data for the calculator is already in motion as of the time of producing this report, but this work must avoid falling into stagnation. Given the busy schedule of all FHC employees, we suggest not requesting direct data but rather the documents containing the data and identifying the needed items themselves.

Actions

Identifying where most emissions are coming from allows for evaluating how best to proceed. The next step is presenting data alongside a selection of actions that the Board can act on (including any selected from the Recommendations section). Working together with the Board and leadership at the earliest possible opportunity and throughout the process is crucial to maintaining a strong connection and motivation between the Green Team and other participants. This process will also bring new participants on board and invested in any project's outcome.

Moving Forward

To achieve goals laid out in the White House Climate Pledge and improve financial and energy efficiency, the most important action FHC can take is to create a comprehensive tracking system across the entire organization. This data is important not just for reducing emissions but also for making general operations more efficient.

Budget

The cost of moving this project to completion varies based on the actions taken. We expect the costs to be relatively minimal in financial input for research but present significant time commitments. From our studies, we suggest either committing to a research-heavy focus or spacing out research by acquiring ideas rather than searching for insights in rural healthcare systems.

For reduction in emissions to happen, an understanding of what sources are producing the most pollution is necessary. This data can be acquired through evaluation by the Health Care Emissions Impact Calculator or a professional energy audit. Energy assessments or audits can cost significant amounts, and so we recommend holding off on intensive third-party analysis until the calculator is complete.

The exact nature of these costs varies when taking actions that would reduce the emissions of FHC. However, we would recommend identifying them and where those costs are in relation to an action timeline; the payoff of switching anesthetic gases is much more immediate than switching the vehicle fleet to EVs and installing charging stations. Focusing on potential savings and a similar payback/return on investment timeline is helpful. Switching to energy-efficient ways of operations will eventually pay off itself, depending on the solution. Additionally, grant writing will be essential in gaining the funding necessary with resources already used elsewhere within FHC. This may be a part of the larger “executive-level lead” suggested by the White House Climate Pledge.

There is also a strong social budget that must be accounted for; as the Green Team is surely aware, FHC operations are strained as is with handling its clients. Therefore, suggesting sustainability changes must be made tactfully and strategically to gain traction and acceptance, while not taxing employee time and energy. Sustainability projects must be pursued with social capital in mind, emphasizing only those projects deemed to have the greatest impact for the lowest cost and time. Pushing too much too fast can burn out interest and capacity. This supports the idea of the “triple-bottom line” which factors in social, environmental, and profitability. When evaluating decisions, consider using the triple-bottom line to consider public & patient health (social), budget (profitability), and emissions (environment). Before acquiring new machinery, consider the emissions of the product, how useful it will be to patients, and budget. See our *Results and Recommendation* tables for assistance in evaluating these options.

Conclusion

There are numerous ways for FHC to become more environmentally friendly and efficient. Smart strips will pay itself off through lower energy bills. Clean, renewable energy has consistently been found to be cheaper and more reliable than fossil fuels. Promoting alternative commuting options will reduce GHG emissions while lowering gas costs on an individual level. All these solutions demonstrate a central theme. Emission reducing solutions go hand in hand with cost reductions. Overall, focusing change making on sectors that currently produce the most GHG emissions will be the most efficient long-term.

- Sign or adapt the **White House Climate Pledge**
- Three main sectors have the most impact: Transportation, energy, and organizational changes.
- Rideshare, electric vehicles, and telehealth are **transportation** solutions.
- Retrofits, LED lights, and smart power strips are **energy** solutions.
- Education, partnerships, and executive-level lead are **organizational** solutions.
- **Finance will improve** with emissions reduction and efficiency.
- Create a **data collection system**.
- Use Practice Greenhealth's **emissions calculator** using data collection system.
- Create **executive-level lead** for sustainability.

As more health care organizations sign onto the White House Climate Pledge and agree to cut emissions by 50% by 2030, our team recommends FHC consider the same. This commitment provides a compelling roadmap for the needed reductions in GHG emissions. As extreme weather events continue impacting the most vulnerable in Okanogan County, we must take swift action as a community to reduce our environmental impacts.

Appendix & Resources

Appendix

Suggested Emissions calculator

Health Care Emissions Impact Calculator | Practice Greenhealth. (2023). Retrieved August 8, 2023, from <https://practicegreenhealth.org/tools-and-resources/health-care-emissions-impact-calculator>

An earlier version of the calculator

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