Issue At A Glance:

Climate Impact of Healthcare

Healthcare is responsible for almost 5% of global carbon emissions. In order to prevent the worst impacts of climate change, global net zero carbon emissions must be reached by 2050.[1] The healthcare sector can play an important role in meeting this goal to improve health.

Introduction

Healthcare is responsible for 4.4% of global carbon emissions.[1] If the healthcare sector were a country, it would be the fifth largest producer of carbon emissions with the US healthcare sector being the top emitter. The United States, China, and the European Union collectively produce 56% of global healthcare emissions.[1]

Severe weather events, displacement of communities, extreme heat, air pollution, changing disease vector ecology, worsening water quality, and food insecurity are all documented consequences of climate change that directly impact human health. These changes are already occurring, and we can expect to see worsening health impacts as global temperatures rise.[2] As such, healthcare institutions have a responsibility to limit further damage to the climate from healthcare emissions.

Limiting global temperatures to a 1.5 degree Celsius increase will prevent the worst effects of climate change. Achieving this goal will require global net zero emissions by 2050.[1] Despite increased fossil fuel spending and energy demands, we can still mitigate the worst effects of climate change with coordinated effort.[3]

Some Statistics on Climate Change and Health

- In 2020, air pollution caused 1.9 million deaths.[3]
- Changing seasons have caused dengue fever transmission potential to increase by up to 28.6%.[3]
- In 2021, droughts and heatwaves were associated with 127 million more people experiencing food insecurity.[3]
- If global temperatures rise by 2 degrees Celsius, 524.9 million additional people are projected to experience food insecurity.[3]

Healthcare Emissions

Sources of Healthcare Emissions

Carbon emissions in the health sector largely come from the use of fossil fuels.[1] These are separated into three categories called scopes. Scope 1 represents burning of fossil fuels to run company-owned facilities and vehicles. Scope 2 includes emissions from purchased electricity and steam. Scope 3 represents indirect emissions from all other activities including purchased goods, employee commute, leased facility operations, investments, and production of goods.[4] Scope 3 represents over 80% of emissions. Over 70% of global health sector emissions come from the supply chain alone.[1]

Tracking Emissions

The first step to decreasing healthcare carbon emissions is measuring institutional emissions. The Practice Greenhealth organization has made this task manageable with their Health Care Emissions Impact Calculator which provides step by step instructions in a spreadsheet template.[4]

Tracking emission sources allows institutions to make evidence-based strategies to decrease their emissions and track progress. It also makes them eligible for Joint Commission Sustainable Healthcare Certification. The Joint Commission is the accreditation body that gives United States healthcare organizations the permission to operate. This certificate requires institutions to track emissions data for two years and show reductions in three of six areas: energy use, purchased electricity, anesthetic gas use, pressurized metered-dose inhaler use, vehicle fossil fuel use, and waste disposal. Certification helps institutions meet environmental regulations and stay on track to meet patient care and sustainability goals.[5]

Health Sector Climate Pledge

The US Department of Health and Human Services began the Health Sector Climate Pledge initiative in 2022. Institutions can voluntarily sign the pledge to commit to the following:[6]

1. Reduce emissions by at least 50% by 2030 and achieve net zero emissions by 2050.
2. Designate an executive to lead sustainability initiatives and finalize a climate resilience plan that includes needs of local at-risk populations within 6 months.
3. Determine Scope 3 emissions by the end of 2024.

Recommendations for Decreasing Emissions

Action Plan

Making an Action Plan is an important starting point. For example, organizations such as Practice Greenhealth offers a Health Care Greenhouse Gas Emissions Reduction Action Plan that provides data-backed advice on both quick and long-term ways to decrease emissions for each scope. Cost and potential savings are tracked for each reduction strategy.[7]

Energy

Reducing fossil fuel use is essential to decreasing carbon emissions. By making healthcare facilities more energy efficient and transitioning from fossil fuels like natural gas, gasoline, and diesel to renewable energy resources such as solar, wind, and geothermal energy, hospitals can decrease their carbon footprint and reduce costs. Changing lighting systems and adjusting temperature settings are small changes with big impacts to increase energy efficiency.[8]

Water

Reducing water consumption is another way to reduce negative climate impacts while saving money. For example, reducing water usage for landscaping by planting native species and establishing efficiency monitoring systems for water pipes, laundry and dishwashing equipment can also help achieve this goal.[9]

Sustainable Procurement

Reducing harmful substances such as cleaning supplies and decreasing single use products while maintaining quality of patient care are daunting but achievable. For example, Virginia Mason Medical Center in Seattle, WA, has reduced purchasing costs by over $3 million since 2012 by reprocessing single use devices.[10] Loma Linda University Health has also made sustainable changes such as switching to reusable scrub caps in the operating rooms and eliminating plastic bags used to designate clean equipment by utilizing “clean device” tags instead. Innovative approaches such as these allow hospitals to save money while decreasing waste. Hospital waste removal is expensive and often includes EPA violation fees.[11]

Transportation

Emissions from transportation can be reduced through employee incentive programs for walking, biking, carpooling, and using public transportation. This can also save on costly and environmentally detrimental building of parking structures.[12]

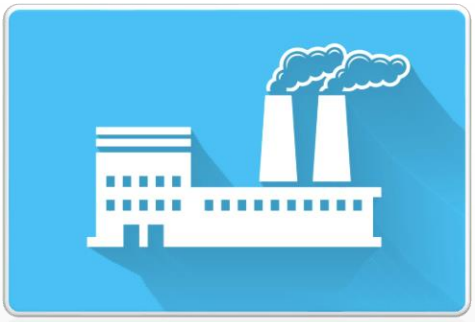
Anesthetic Gases

Anesthetic gases have a significant climate footprint and often make up more than 5% of a hospital’s overall emissions. By eliminating use of desflurane (the gas with the worst footprint) and preventing gas leaks, hospitals can reduce costs and emissions.[13]

Conclusion

Healthy ecosystems promote healthy people. In conjunction with other sectors, the healthcare sector has a role to play in mitigating the effects of climate change. As such, various healthcare institutions are stepping up to the challenge. For example, Loma Linda University Health (LLUH), a faith-based healthcare institution focused on wholeness and serving the region including San Bernardino County, has been leading the way to environmental stewardship in healthcare in the region by moving toward net zero emissions through various sustainability-oriented changes. Such steps are critical since San Bernardino County is especially vulnerable to the effects of climate change with 43% of the low-income population experiencing food insecurity and 49% of the population suffering from at least one chronic disease.[14] Achieving sustainability goals can improve the health of local communities such as San Bernardino County as well as the global community.

As a major threat to human health and well-being, climate change should be at the forefront of health policy. By taking swift action to reduce emissions, the healthcare sector can help prevent the worst effects of climate change, protecting people and protecting the planet.



Did you know?

US healthcare facilities spend over $8 billion on energy every year, and inpatient healthcare is the second largest commercial energy user in the United States.[8]

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