



## Transportation

Transportation accounted for 27% of total U.S. greenhouse gas emissions in 2015.<sup>i</sup> Vehicles release carbon monoxide, nitrogen dioxide, hydrocarbons, particulate matter and other emissions that pose a risk to human health.<sup>ii</sup> Pollutants from traffic are associated with asthma, nonallergic respiratory morbidity, and cardiovascular morbidity.<sup>iii</sup> In the health care sector, emergency medical service operations, with ambulances that are typically powered by diesel or gasoline, emit a substantial amount of carbon per unit response.<sup>iv</sup> The transportation carbon footprint of the health care sector also includes suppliers and other fleet vehicles.

Health Care Without Harm and Practice Greenhealth<sup>v</sup> recommend the following interventions:

- **Reduce fleet emissions** – *Hospital fleets, including emergency medical service vehicles, hospital shuttles, and supply vehicles, may include high-fuel efficiency, hybrid, alternative fuel vehicles.* Utah's Intermountain Health Care has 23 natural gas vehicles and one electric car, cutting its fleet's carbon footprint by 20% from 2013 to 2014.<sup>vi</sup> Stockholm Sweden's County Council and Council-owned ambulance company AISAB developed the world's first "eco-ambulance," which runs on renewable, low-emission biogas.<sup>vii</sup> AISAB has also promoted "eco-driving," training its drivers to operate vehicles in a manner that reduces fuel consumption.
- **Help commuters reduce emissions** – *Encourage use of mass transit, establish vanpool/carpool programs to make employee commuting more efficient; telecommuting for employees; shuttles to public transit.* Mount Sinai Hospital has increased its shuttle service frequency to encourage carpooling and has installed electric car charging stations and bike parking around the campus.<sup>viii</sup> Hospitals, clinics, and physician offices can choose sites near public transportation and mixed use areas, encouraging transit use and improving accessibility for patients and employees while reducing the number of automobile trips.
- **Choose suppliers with efficiency or alternative-fuel standards** - *Select vendors and suppliers that share your facility's sense of mission.*
- **Prefer local suppliers** – Using local suppliers can help reduce transportation and shipping distance, and fuel consumption. The Nottingham University Hospitals NHS Trust sourced its milk from a local dairy, and nearly all of its meat from local providers. The change "saved an estimated 150,000 food miles a year and 6 (million GBP) in costs."<sup>ix</sup>
- **Purchase energy-efficient shipping** – Choose lighter products with less packaging, encourage environmentally sustainable packaging.

### Case Study: Seattle Children's Hospital

- SCH developed a Comprehensive Hospital Transportation Plan proposal.<sup>x</sup>
- The plan includes strategies to reduce vehicle traffic by providing shuttles that link to transit hubs, parking changes, encourage carpooling, free transit for employees, and vanpool service.
- It recommends providing areas that are more walking and cycling-friendly through capital investments that link hospital and surrounding community to larger walking/biking networks, free bikes to employees who pledge to bike to work, cash for those who don't drive to work, on-site bike maintenance, and discounts on gear from in-house bike shop.
- According to Streetsblog, the hospital is more than halfway to its goal of getting from 50 percent car commuting to 30 percent.<sup>xi</sup>

### Resources

Best Workplace for Commuters <http://www.bestworkplaces.org/>

Health Care Climate Council: Climate Action Playbook - <https://climatecouncil.noharm.org/>

---

<sup>i</sup> U.S. Environmental Protection Agency. Sources of Greenhouse Gas Emissions: Transportation. Accessed at <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions>

<sup>ii</sup> <http://www.dft.gov.uk/vca/fcb/cars-and-air-pollution.asp>

[http://www.prevent.org/data/files/transportation/pages%20from%20transportation%20and%20health\\_%20policy%20final%2007082011%20chapter%201-1.pdf](http://www.prevent.org/data/files/transportation/pages%20from%20transportation%20and%20health_%20policy%20final%2007082011%20chapter%201-1.pdf)

<sup>iii</sup> Krzyzanowski M, Kuna-Dibbert, and Schneider J, editors. Health effects of transport-related air pollution. Copenhagen: World Health Organization; 2005.

[https://books.google.com/books?hl=en&lr=&id=b2G3k51rd0oC&oi=fnd&pg=PR1&dq=transportation+and+health+effects+emissions&ots=O64ybDFm4z&sig=zH\\_gPY7FJYFZLmosg6YJf24KcT8#v=onepage&q=transportation%20and%20health%20effects%20emissions&f=false](https://books.google.com/books?hl=en&lr=&id=b2G3k51rd0oC&oi=fnd&pg=PR1&dq=transportation+and+health+effects+emissions&ots=O64ybDFm4z&sig=zH_gPY7FJYFZLmosg6YJf24KcT8#v=onepage&q=transportation%20and%20health%20effects%20emissions&f=false)

<sup>iv</sup> Page D. How Green Are We? Studies measure the carbon footprint of EMS. Jrl Emer Med Svcs. March 9, 2011. Accessed at <http://www.jems.com/articles/2011/03/how-green-are-we-0.html>

<sup>v</sup> Health Care Without Harm and Practice GreenHealth. Addressing Climate Change in the Health Care Setting: Opportunities for Action. Accessed at <https://practicegreenhealth.org/pubs/toolkit/reports/ClimateChange.pdf>

<sup>vi</sup> Lee P. Intermountain Healthcare Receives Utah's "Excellence in Energy" Award. July 15, 2014. Accessed at <https://intermountainhealthcare.org/blogs/2014/07/intermountain-healthcare-receives-excellence-in-energy-award>

<sup>vii</sup> Stockholm City Council. The World's First Eco-Ambulance. Accessed at [https://www.sll.se/Global/Om%20landstinget/Miljo/Green\\_ambulance\\_web.pdf](https://www.sll.se/Global/Om%20landstinget/Miljo/Green_ambulance_web.pdf)

<sup>viii</sup> Mount Sinai Hospital. About Mount Sinai: Green Transportation. 2016. Accessed at <http://www.mountsinai.org/about-us/who-we-are/greening-mount-sinai/greening-at-the-medical-center/green-transportation>

<sup>ix</sup> Building Better Healthcare. Carbon reduction: NHS catering bosses urged to avoid meat and 'go local.' August 26, 2011. Accessed at [http://www.buildingbetterhealthcare.co.uk/news/article\\_page/Carbon\\_reduction\\_NHS\\_catering\\_bosses\\_urged\\_to\\_avoid\\_meat\\_and\\_go\\_local/71308](http://www.buildingbetterhealthcare.co.uk/news/article_page/Carbon_reduction_NHS_catering_bosses_urged_to_avoid_meat_and_go_local/71308)

<sup>x</sup> Seattle Children's Hospital. Comprehensive Transportation Plan. Accessed at [http://masterplan.seattlechildrens.org/documents/CTP\\_booklet\\_final.pdf](http://masterplan.seattlechildrens.org/documents/CTP_booklet_final.pdf)

<sup>xi</sup> Schmitt A. How Seattle Children's Hospital Took the Lead on Healthy Transportation. Streetsblog. May 8, 2015. Accessed at <http://usa.streetsblog.org/2015/05/08/how-seattle-childrens-hospital-took-the-lead-on-healthy-transportation/>