Reduce Waste

The health care sector generates a large amount of waste. This waste has an impact on the planet – transporting waste to landfills via fossil fuel-burning trucks increases greenhouse gas emissions. Landfills emit methane and garbage-burning incinerators are sources of dangerous pollutants. Making environmentally conscious decisions throughout the life cycle of the goods used by the health care sector, from the extraction of materials, manufacturing process, distribution, usage, and end-of-product-life decisions, can help to reduce greenhouse gas emissions.[i] By reusing and recycling materials, the health care sector can reduce demand for materials used in the manufacture of end products, including wood products that act as carbon sinks.

Health Care Without Harm and Practice Greenhealth[ii] recommend the following interventions:

- **Prevent waste –** *Through less material manufacturing, reduced use of virgin material, better procurement practices.* Physicians and facility procurement staff can work with suppliers to purchase tools and medical supplies that meet the needs of the practice and have a reduced environmental impact. Choose products with limited or zero packaging waste or with packaging that is recyclable or compostable. Procurement tips from Health Care Without Harm can be found here: https://noharm-uscanada.org/issues/us-canada/purchasing-goals

- **Recycle and buy recycled products –** *Recycle all recyclable products, including electronics.* According to the Healthcare Environmental Resource Center, the U.S. healthcare facilities create nearly 2 billion pounds of paper and cardboard waste a year.[iii] Paper use can be decreased by printing on both sides of a sheet of paper, using a smaller font and by paying bills electronically.[iv] If your practice contracts with a paper shredder service to meet privacy law requirements, make sure that they recycle shredded material. Procurement staff should purchase items that are made of recycled materials. Consult the EPA Comprehensive Procurement Guideline Program for additional information. New York Presbyterian-Queens hospital recycles over 17% of all waste and installed a bio-digestor organic waste decomposition system in its food service department to curb food waste.[v] Healthcare Without Harm has published a list of materials that health care facilities may be able to recycle: https://noharm-uscanada.org/sites/default/files/documents-files/2379/Recycling_Fact_Sheet.pdf

- **Collect and recycle nitrous oxide anesthetic gases –** *limit the amount that escapes into atmosphere during use and reuse.* Wasted anesthetic gases contribute to global warming and ozone depletion[vi] and may pose health hazards such as headaches, fatigue and nausea.[vii] Anesthetic gas scavenger systems can capture and recycle wasted gases so they can be reused, mitigating environmental and health-related harm and lowering costs.[viiiix]

- **Dispose of waste locally –** *Local disposal reduces travel-related emissions.*
- **Divert at least 90% of constructed waste –** *Building material produced during construction and demolition can be reclaimed and recycled.* The U.S. Environmental Protection Agency estimates that for nonresidential construction, the average waste generation rate is 4.34 pounds per square foot.[x] For a 250,000 square foot medical facility, that equals nearly 1.1 million pounds of construction and demolition waste.[xi] By reclaiming or recycling materials like drywall, asphalt, shingles, metal, and cardboard, waste disposal and transportation emissions as well as demand for raw material can be reduced.

Case Study: Virginia Mason Single-Use Device Reprocessing Project[xii]

- Single-use devices including arthroscopic/orthopedic, laparoscopic devices, end up in landfills and use energy during manufacturing, disposal and transport.
- Virginia Mason worked with a reprocessing vendor to help them reduce costs and waste.
- Reprocessed devices must meet FDA safety standards.
- Physicians on the leadership team observed reprocessing facility quality control and inspection process.
- As a result, purchasing costs dropped by $3 million since 2012, in 2014 Virginia Mason reported it had reprocessed or recycled nearly 19,000 pounds of devices.

Resources

U.S. Environmental Protection Agency. https://www.epa.gov/recycle

Healthcare Environmental Resource Center: http://www.hercenter.org/index.cfm

U.S. Environmental Protection Agency. Climate Change and the Life Cycle of Stuff. https://www3.epa.gov/climatechange/climate-change-waste/life-cycle-diagram.html

U.S. Environmental Protection Agency. Comprehensive Procurement Guideline Program: https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program

Health Care Climate Council. https://climatecouncil.noharm.org/

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[i] U.S. Environmental Protection Agency. Climate Change and the Life Cycle of Stuff. Accessed at https://www3.epa.gov/climatechange/climate-change-waste/life-cycle-diagram.html

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