



EHSSSENTIALS 2017

Environmental, Health & Safety Symposium for Healthcare

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Sustainability in Health Care 101

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Abstract

Because of the nature of their work, hospitals consume tremendous amounts of resources, whether they are energy, water, or products. Hospitals have significant effects on the environment and on the community in which they serve. This session will take the audience through the sustainability elements of health care, using the Practice Greenhealth framework as a guide. The session will deep dive into waste generation and into the complex world of Clinical Recycling Programs (Greening the OR), and illustrate the complexity of one piece of the sustainability landscape.

Sustainability in Health Care 101

Terry Duffina and Erika Kimball



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Agenda

- Environmental Impacts of Health Care
- Organizing a Movement
- Practice Greenhealth Intro & Framework
- Exercise: Take the Recycling Challenge
- Deep Dive: SHC Waste Reduction Program
- Q&A

Environmental Impacts of Health Care



2.5 times the energy of a comparable sized commercial building.

US Dept of Energy



Health Care sector is the largest user of chemicals in the U.S.

Health Care Without Harm



7% of all commercial & institutional water use in the U.S.¹



Health Care in U.S. represents 10% of total CO2 footprint.



5 million tons of waste annually.

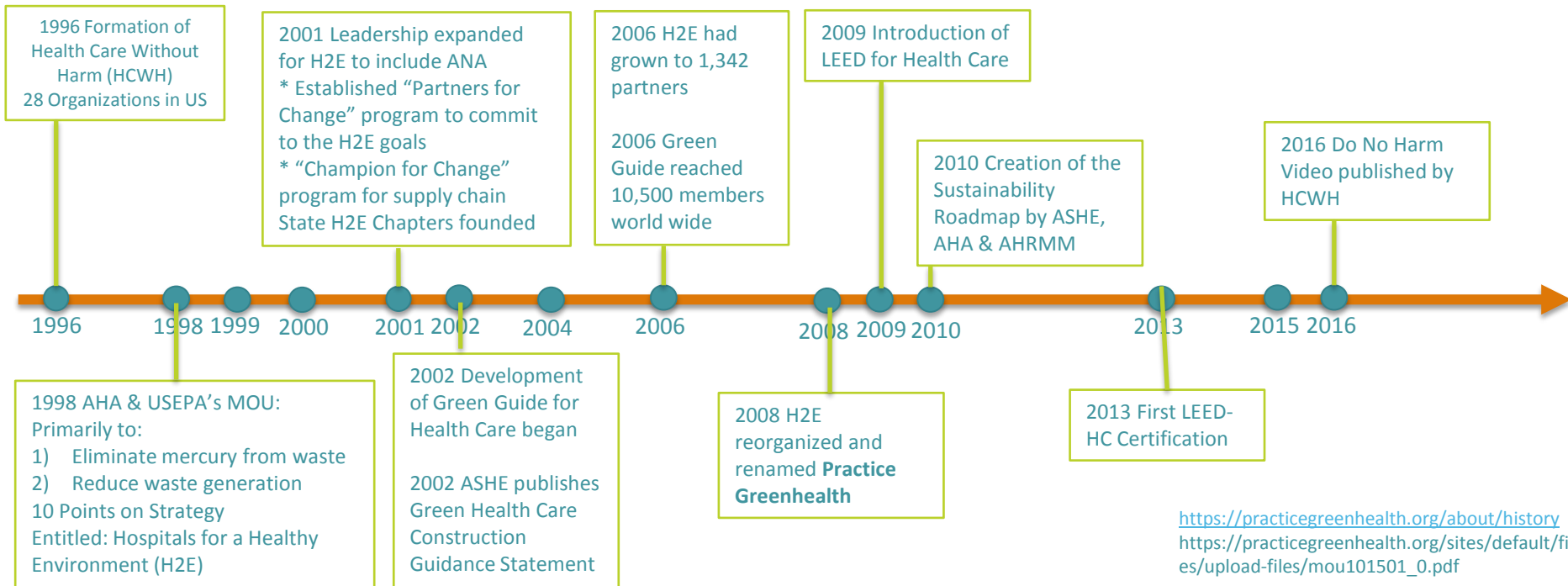
Practice Greenhealth



70% of antibiotics are used in food production. Health Care food spend is \$12billion / year

Pew Charitable Trust

Organizing a Movement



<https://practicegreenhealth.org/about/history>
https://practicegreenhealth.org/sites/default/files/upload-files/mou101501_0.pdf

Today

<https://donoharmstory.org/>

Today, all of these organizations are still actively pursuing sustainability in health care.

- HCWH
- PGH
- LEED
- ASHE
- AHA

Practice Greenhealth

Vision

Health Care mobilizes its ethical, economic and political influence to create an ecologically sustainable, equitable and healthy world.

Mission

Transform Health Care worldwide so that it reduces its environmental footprint, becomes a community anchor for sustainability and a leader in the global movement for environmental health and justice

<https://practicegreenhealth.org/>

Practice Greenhealth Framework



Efficiency Measures
Renewables



Water footprint
Efficiency Retrofits



Prevention / Reduction
Diversion



Green cleaning
Healthy Interiors



GHG Reductions
Climate resiliency



Healthy food
Sustainable food



Waste reduction
Resource efficiency



Engaged leadership
Goal setting, Standards

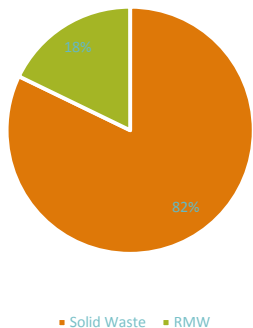
Exercise: Take the Recycling Challenge

- Each table has a box that contains several items commonly found in clinical waste streams.
- Your task is to sort the products into the appropriate waste bins (represented by paper bags).
- Pay attention to the label on the box, which represents the location of the waste generator.
- The team(s) that sort their items correctly receives recognition.

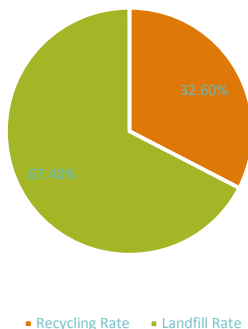
Lessons Learned

Deep Dive: SHC Waste Reduction Program

Waste Breakdown at SHC CY2016
Total Waste 10.1 million pounds



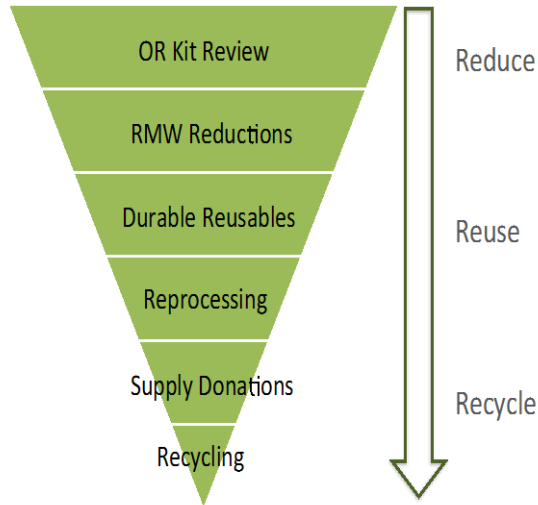
Adjusted Waste Reduction Opportunity
8.1 million pounds



- Stanford Hospital alone generated 10.1 million pounds of total waste in CY2016.
- Of that, 1.8 million pounds was regulated waste such as biohazard, pharmaceuticals, hazardous waste, and chemo.
- Since these regulated wastes are very difficult to reduce, the adjusted baseline for CY2016 is 8.3 million pounds.
- **That's over 22k pounds per calendar day, and around 47 pounds per bed per day!**
- In CY2016, SHC was able to achieve a 32.6% recycling rate.

In CY2016, SHC Achieved a 32.6% recycling rate of total non-regulated wastes.

How did we get here?



- ❑ 100% kit review annually
- ❑ Unbundling red bag waste
- ❑ Sharps containers, crates, patient positioners
- ❑ Invasive and non-invasive medical devices
- ❑ 8000 lbs. average monthly donations
- ❑ Extensive recycling and compost program

How did we get here?

Clinical Recycling Program

- 5 years
- 150 tons / year
- 165 volunteer Recycling Champions
- Every clinical department in hospital
- Established industry best practices
- Recycling market changes disrupted program



International Recycling Markets



- In 2016, China has changed their import regulations such that they no longer accept clinical items
- Greenwaste was no longer able to accept clinical items in recycling streams
- SHC removed all recycling containers from clinical areas; all waste coming out of clinical areas is now going to landfill
- SHC has maintained recycling and composting in non-clinical areas

S&E expects to add 300,000 pounds of additional landfill waste in CY2017 if no action is taken.

Relaunch Plan for Clinical Recycling Program at SHC

Current State	Target State
Subject knowledge base varies, no standard education or competencies	Standard education in Healthstream, utilize volunteer Recycling Champions as SMEs
Recycling Champion program is loosely structured, with limited opportunities for participation	Establish structure for participation within existing Nursing Leadership / Magnet framework
Educational content varies by department, is no longer accurate due to program changes	Education and signage are simple, standardized, and designed for flexibility with program updates
There is no regular feedback on quality or outcomes.	Staff know recycling goals and outcomes, including diversion rate and quality.

Critical Success Factors

- History of success
- Passion and commitment of clinical staff
- Nursing leadership support
- Vendor and partner relationships

Doing what we can to minimize the environmental impact of health care every day.

Q&A