

Michigan Green Healthcare Conference

Hospital Operations Tour



Henry Ford Hospital
September 11, 2013

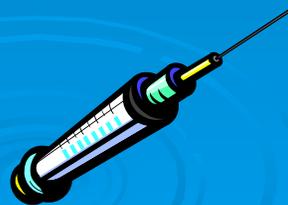
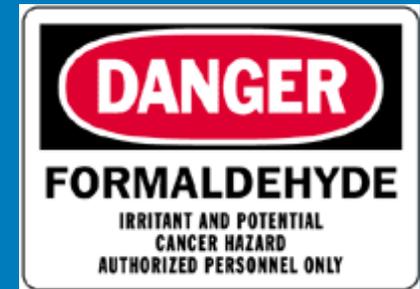
Henry Ford Health System

- Henry Ford Hospital is flagship facility, with 803 licensed beds, education/research complex, outpatient clinics
- More than 15,000 employees throughout Metro Detroit area at 5 hospitals and 35+ medical centers



Waste Management Priorities

- SAFETY: prevent exposures to infectious and chemical hazards
- COMPLIANCE: make sure each type of waste is packaged, disposed properly
- PUBLIC HEALTH: limit impact on our community and the environment
- COST: put waste in its proper place to save \$\$



What's in our Waste?

➤ Non-regulated

- Packaging: keeping stuff sterile
- Single use products
- Food service



➤ Regulated

- Potentially infectious (contaminated material)
- Hazardous (toxic, corrosive, reactive, flammable)
- Radioactive
- Wastewater
- Air emissions



Hospital Operations Tour

- Anatomical Pathology Lab
 - Tissue and Formalin management
- Recycling Overview
 - Cardboard, paper, bottles & cans
- Autoclave Center
 - Regulated Medical Waste processing
 - Pharmaceutical Waste Central Accumulation Area (CAA)

Tissue & Formalin Pilot

- Pathology lab identified opportunity to reduce both the volume and exposure risks of formalin, a suspected carcinogen
- Project has added benefit of reducing waste handling headaches and cost
 - Tissue fixed in formalin can't be disposed as regulated medical waste without first decanting (pouring off) formalin



Tissues & Formalin Project

- Reducing risk of spills
- Reducing employee exposure at satellite facilities
- Reducing volume of formalin in the lab needed for temporary storage of specimens
- Project includes vacuum seal equipment to change how specimens are handled



Recycling Success!

- In 2012, Henry Ford Hospital recycled:
 - Paper: 1.4 million lbs
 - Cardboard: 521,000 lbs
 - Scrap Metal: 183,000 lbs
 - Computers and E-Waste: 100,000+ lbs
 - Bottles and Cans: 12,000 lbs
 - Fluorescent Lights: 7,000 lbs
 - Ballasts: 1,500 lbs
 - Batteries: 12,000 lbs
 - Used Oil: 1,000 lbs
 - Alcohols and Solvents: 46,000+ lbs



Recycling Overview

- 25+ categories of recyclable material
- Management of recyclables is integrated into total waste operations
- Recycling opportunities are driven by cost, volume, space, demand



Greening Benefits!

➤ Henry Ford Hospital recycled 1.8 million pounds of waste in 2012

- Using recycled materials to make new products saves energy, water, and natural resources.
- Recycling saves money on trash disposal and generates credit
- Benefits resulting from one year of recycling at HFH:



4,329: Metric tons CO2 emissions saved by recycling, the equivalent of taking **787 cars** off the road for a year



18,220: Trees saved by recycling paper and cardboard



1,906: Households that could be powered for one month due to energy savings from recycling

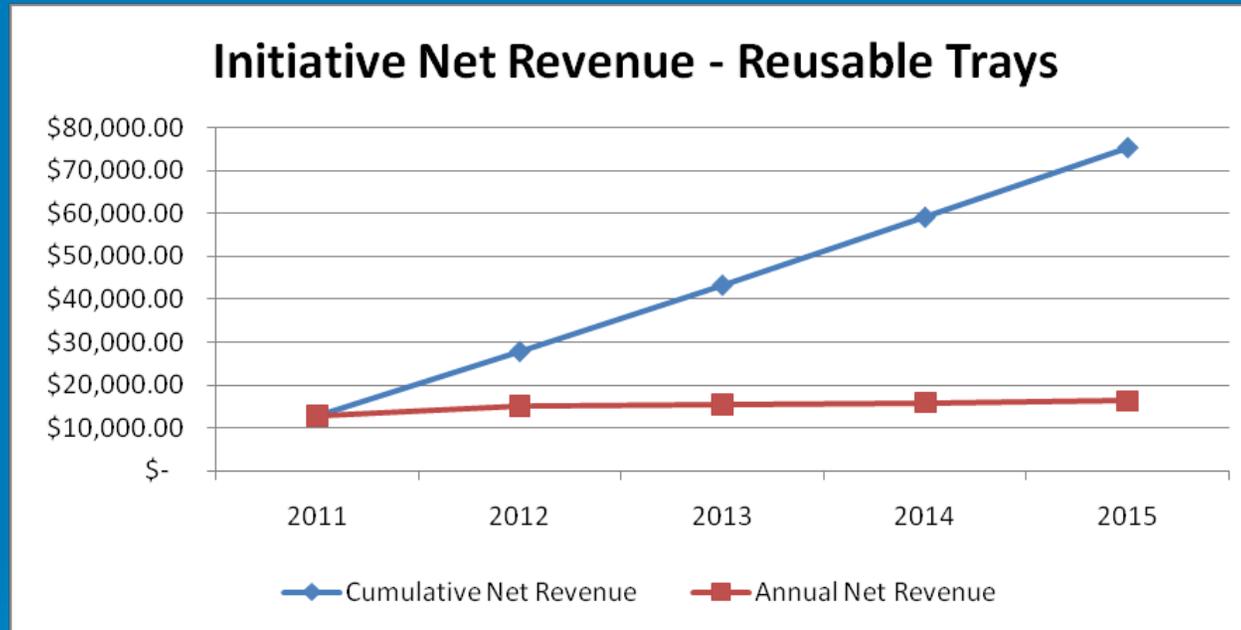


\$23,000: Rebates paid to HFH for recycled metal and cardboard.
\$39,000: Savings to HFH in avoided landfill disposal costs.



8.8 million: Gallons of water saved by HFH's recycling efforts, enough to meet an average American's water needs for **159 years**.

Business Case – Reusable Trays



Environmental Benefits

Waste Diverted from Landfill: 11,637.0 lbs

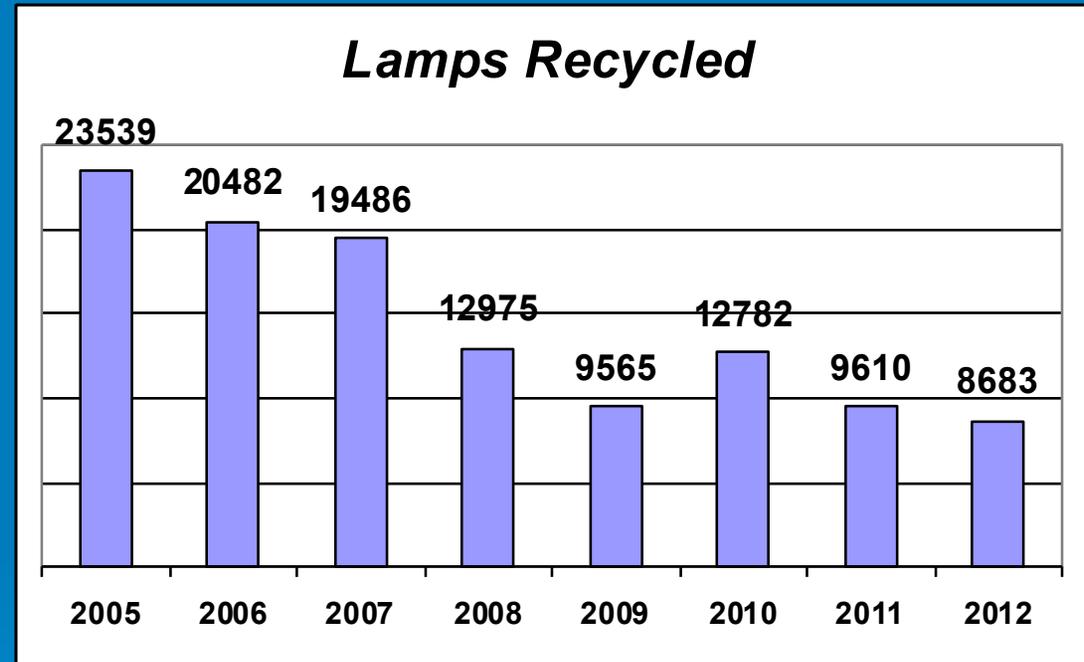
or the equivalent of: 7.4 compactor loads

Avoided CO2 Emissions: 13.0 metric tons CO2 equivalent

or the equivalent of taking: 2.6 cars off the road for 1 year

Lamp Recycling Case Study

- Fewer lamps recycled is a good thing!
- Added energy efficient T-8 fluorescents between 2005-2008



- Moving to LED lights now in exterior lighting, and some interior applications

Autoclave Operations

- Management of most red bag and sharps waste done in on-site autoclave and shredder operation
- 80,000+ pounds of waste processed each month
- Waste is decontaminated in with high pressure steam, then shredded to “unrecognizable” and disposed in solid waste landfill



Pharmaceutical Waste Program

- Comprehensive program for management of both hazardous and non-hazardous leftover medications
- Blue “reusable” bins used throughout most of hospital and clinic
- Black disposable bins used for chemo, and in specialty areas incl. O.R.s

