

Best Practices Healthcare Waste Management



Presented by

Cathy Semer

Resource Manager

Henry Ford Hospital, Detroit MI

Henry Ford Health System

- Henry Ford Hospital is flagship facility, with 903 licensed beds, and large education/research complex
- More than 15,000 employees throughout Metro Detroit area at 6 hospitals and 50+ outpatient units



Why worry about waste?

- Regulatory Compliance
 - EPA, DOT, OSHA, MDEQ, NRC, Joint Commission
- Health and Safety
 - Exposure risks to patients, staff, visitors
- Impact on local community
 - Emissions to air, water, land
- Waste is Costly!



Where does “green” fit?

- Triple Safeties
 - Patient safety has always been at the heart of medical care
 - Workplace safety
 - Hospitals have the greatest number of occupational injuries/illnesses of any industrial sector
 - Environmental Safety and Sustainability

Why Waste Matters

- Hippocratic Oath:
 - First Do No Harm



Who cares about waste?

- Administrators: out of sight, out of mind
- Waste handlers: a job to do
- Waste generators: just get rid of it
- Disposal companies: \$\$ in the bank
- Regulators: follow the rules!
- Safety officers: paperwork??

Who Should Care about Waste?

- Facilities . . . Universal waste, Liquid Ind Waste
- Labs . . . Hazardous waste
- Nursing . . . Keep it sorted!
- Administration . . . Policies, Mission
- Clinical engineering/technology . . e-waste
- Pharmacy . . . More hazards!
- Security . . . Some waste is valuable
- Finance . . . Reduce our Costs!
- Resource Manager . . . Caring about it every day

A Resource Manager's Unique Perspective

- Waste is not inevitable
- Waste reduced = cost avoided
- If you can measure it, you can reduce it
- Performance standards drive compliance, cost control

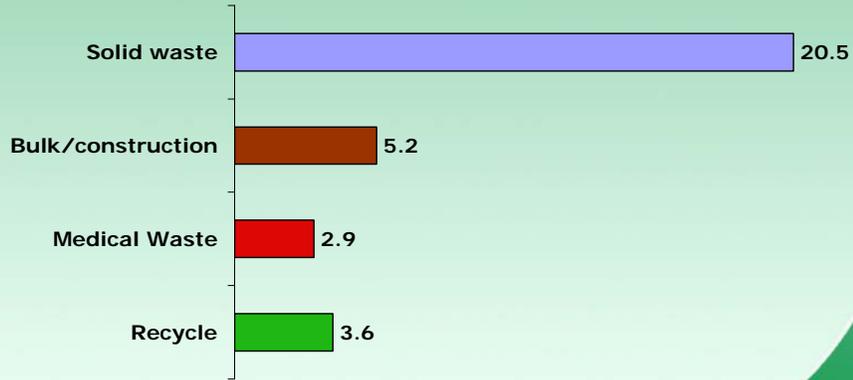


Rules of the Game: Benchmarks

- Data can document the effectiveness of organizational performance and justify your program
 - Material tracking (volume, frequency)
 - Program economics
 - Compliance
 - Continuous improvement
 - Costs/Savings

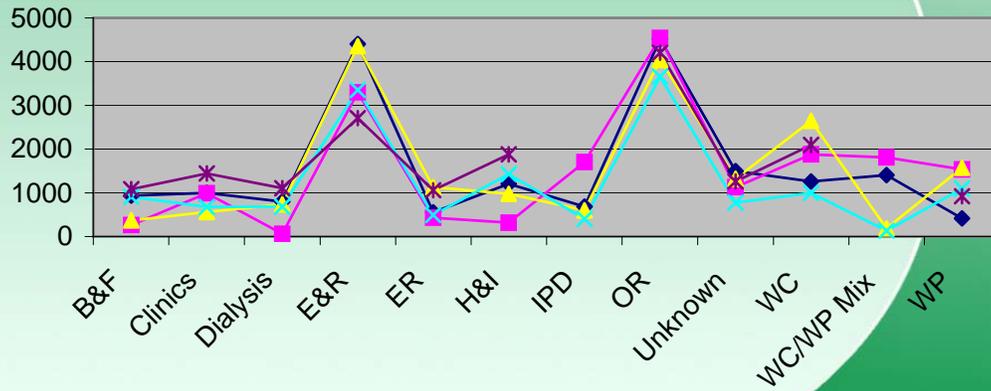
HFH Waste Benchmarks

Pounds per Adjusted Patient Day



Tracking waste generation

Regulated Medical Waste by Unit (lbs/wk)



Recycling Scorecard



	2006 (lbs)	2007 (lbs)
Cardboard	426,000	444,980
Paper	716,000	624,000
Universal waste	26,500	25,200
E-waste	5,300	12,700
Scrap metal	52,000	415,000
TOTAL	1,137,00	1,630,00

Rules of the Game: Compliance Audits

- Prevent exposure to potentially infectious fluids
- Prepare waste for proper containment, treatment and disposal
- Identify opportunities for improvement
- Staff training



Tracking Compliance

Monthly Audit Violations



Increased Attention on Hazardous Wastes

- Lab chemicals
- Pharmaceuticals including chemo agents
- Oils
- Pesticides
- Solvents
- Boiler, water, HVAC treatment chemicals



Rules of the Game: Waste Reduction Priorities

- Low hanging fruit
- Biggest cost saver (avoided costs)
- High visibility
- Biggest volume
- Most toxic
- Easy to implement
- Achieves regulatory compliance

Scrap Metal Recycling

- 25,000-30,000 lbs/month
- Construction/ demolition component
- Broken equipment, furniture
- Filling 5-6 roll-offs per month
- Generates revenue



Universal Waste

Universal Wastes

- A category of "less" regulated hazardous wastes to encourage environmentally sound collection and recycling

Examples are:

- Batteries
- Lamps
- Pesticides
- Mercury containing devices
- Electronics
- Pharmaceuticals



Recycling at the Cafe'

- Bottle and Cans
 - Deposit/non-deposit
- Mixed Paper (newspaper, magazines, non-confidential paper)
- 8,000 containers the first month



Electronics

- Recycling helps meet compliance needs
- Sources include Clinical Engineering (medical devices and monitors) labs, security, IT, facilities
- Some opportunities for reuse



Mercury

- Historic contamination (plumbing)
- Legacy equipment
- Preservative in lab chemicals
- Leadership recently updated Mercury Elimination Pledge
- Ongoing wastewater discharge monitoring



Mercury "Clean Sweep"

- Locating legacy equipment and devices
- Construction management initiatives
- Devices still being turned in, 10 years after initial Mercury Elimination Pledge



Mercury Clean Sweep

Efforts to eliminate mercury from clinical and laboratory uses began almost 10 years ago at Henry Ford Health System. The vast majority of mercury-containing syringes/needles, thermometers and other items were collected and safely disposed. Still, some old equipment and chemicals remain, perhaps hidden in closets and storage areas.

Have you seen us?

Because accidental release of mercury into the environment puts patients and employees at risk for exposure to the toxic material, our Clean Sweep program is seeking to retire and dispose any remaining equipment. Do us the honor of the following items:

- Mercury fever thermometers**
May be indicated by silver liquid, although some old mercury thermometers may contain red dye.
- Mercury sphygmomanometers**
Once the "gold standard" for blood pressure monitoring, these are easily replaced by mercury-free units. If legacy "sphygmom" are found, handle with care and call for safe transport and disposal.
- Batteries**
Those containing mercury are generally the small button batteries. RECYCLE.
- Mercury lamps (fluorescent bulbs)**
All fluorescent bulbs contain mercury. They are energy efficient and are recommended for use, but should be recycled. Includes high pressure sodium, neon, metal halide and ultraviolet lamps.

Other equipment to watch for:

- Ecological drains, Center tubes, Miller-Abbott tubes
- Small, hard
- Not identifiable
- Service kits for mercury devices, may include bottles of pure mercury

Got Mercury? Important Contact Information

Henry Ford Health System	248-312-2100
Mercury Collection Manager	248-312-2100
Dr. Larry Olson	248-312-2100
Mercury Coordinator	248-312-2100
Mercury Response Center	248-312-2100

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Benefits of Being Green

- A small environmental footprint can be a business asset
- Hospitals gain an “eco-advantage” when they document, report and actively pursue a reduction in their environmental impact
- Incorporating environmental thinking into business strategies leads to cost savings, risk reduction, improved product branding and increased revenue
- An environmental policy and management plan will drive change and reduce your “eco-footprint”



Resources

- www.recycle.com
 - Resource Recycling Systems, Inc
- Hospitals for a Healthy Environment (h2e)
 - www.h2e-online.org
- Healthcare Without Harm
 - www.noharm.org
- Premier Safety Institute
- Sustainable Hospitals Initiative