

Pharmaceutical Waste Management

Henry Ford Health Systems

Michigan Green Healthcare Conference
September 12, 2013



Changing how we manage unused drugs

- New collection bins, new disposal process
- Energetic effort to achieve full participation to and reach compliance and safety goals



RRx

Responsible Rx Disposal



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



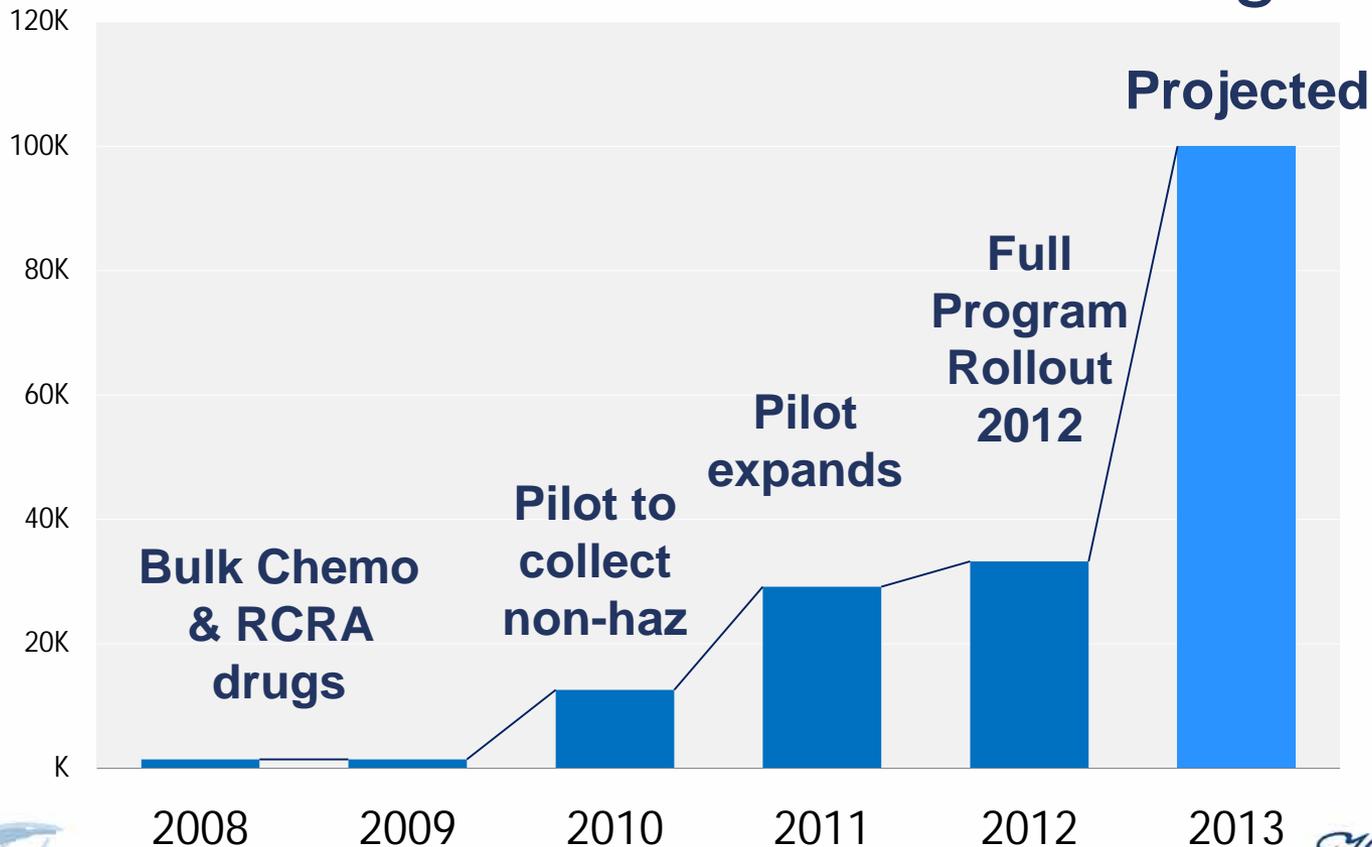
Program History

- Targeted collection of “bulk chemo” and RCRA hazardous drugs in 2005
- Added pilot in 2010 for expanded collection of haz and non-haz drug (pharmacies, patient units)
- RFP in early 2012 to select disposal vendor
- Summer of 2012 began final program design and stakeholder buy-in
- Fall 2012 began training with roll-out in November 2012



Multi-year Journey

- Program expansion to collect all leftover hazardous and non-hazardous drugs



Program Challenges

- Complex compliance requirements
- New disposal process for many staff
- Space constraints
- Competing priorities
- **COST!**



Opportunities

- Most staff want clear direction for disposal
- Well designed program will improve compliance
- Environmental/public health benefit can drive communication and training efforts
 - Do it because “it’s the right thing to do”

Who Owns the Program?

- Multiple Stakeholders
 - Nursing, Housekeeping/Collection staff, Facilities, Senior Leadership, Pharmacy, Departments (e.g. ER, OR, Radiology), disposal vendor
- Need a “chief”!
 - Monitor compliance
 - Coordinate collection and disposal logistics
 - Record-keeping

Collection Program Design

- Location, location, location
 - Introducing new collection bin to already crowded areas
 - Bin needs to be convenient and “secure”
- How much segregation, i.e. hazardous + non-hazardous
- Managing specialty areas (E.R., O.R. etc)
- Bin and vendor selection

Selecting a Container System

- One size does not fit all
- Pilot conducted to trial different bin and collection methods
- Container selection considerations:
 - Optimal user compliance
 - Ease of operation, servicing
 - Cost
 - Compatibility with waste



Pharmaceutical Waste Streams

Blue Bin

99% of Drug Waste

- Antibiotics
- IV drugs
- Pills/tablets
- Lotions, creams, ointments
- Tylenol/aspirin
- CT contrasts
- Transdermal patches
- Coumadin
- Antiseptics
- Vitamins
- Vials/ampoules w/drug remaining
- Nicotine



Exceptions

1% of Drug Waste Stream

Incompatibles

- Aerosols
- Unused silver nitrate
- Oxidizers
- Corrosives

Controlled Substances

“Wasting” procedure –
witnessed disposal to sink

DO NOT place in Blue Bin
or Sharps Bin

Expired Drugs

Return non-open,
expired drugs to
pharmacy for
manufacturer credit

Blue Bin Waste Examples

- Antibiotics
- Tylenol/aspirin
- Allergenic
- Antiseptics
- Gums/lozenges
- IV drugs
- Medicinal liquids
- Lotions, creams, ointments and paste
- CT contrasts
- “GoLytely”
- Pills and tablets
- Medication delivery devices and tubing
- Transdermal patches
- Vitamins
- Vials and ampoules w/drug remaining
- Nicotine (incl. packaging)
- Nitroglycerin
- Coumadin (warfarin) (including packaging)

Roll-out Process

- Stakeholder buy-in
- Detailed unit/site audits
- Container/supply ordering
- Meeting with specialty units
- Training



Blue Bin Disposal Criteria

YES. . .

- Leftover drugs in glass bottles, vials, IV bags
- Keep lid closed
- Keep container in secure area (non-patient)

NO. . .

- No “drippy” fluids
 - Use zip lock bag for drippy IVs
 - Bags located on side of **BLUE** bin
- No trash
- No incompatibles
- No controlled substances

Black Bin Disposable Container

- Any “blue bin” acceptable item, PLUS,
 - Non empty medication syringes
 - “Bulk” chemo
- Black bins selected for O.R.s at system hospitals, and for satellite medical centers



Key Training Messages

- Protect the environment
 - Clean water was the #1 favorite theme for nursing
- Compliance, compliance, compliance
 - Federal, state and local laws; Joint Commission
- Protect the safety of patients, staff & community
- Financial
 - Handling/disposal services are costly
 - Keep regular trash **OUT** of the Blue Bins and infectious waste containers



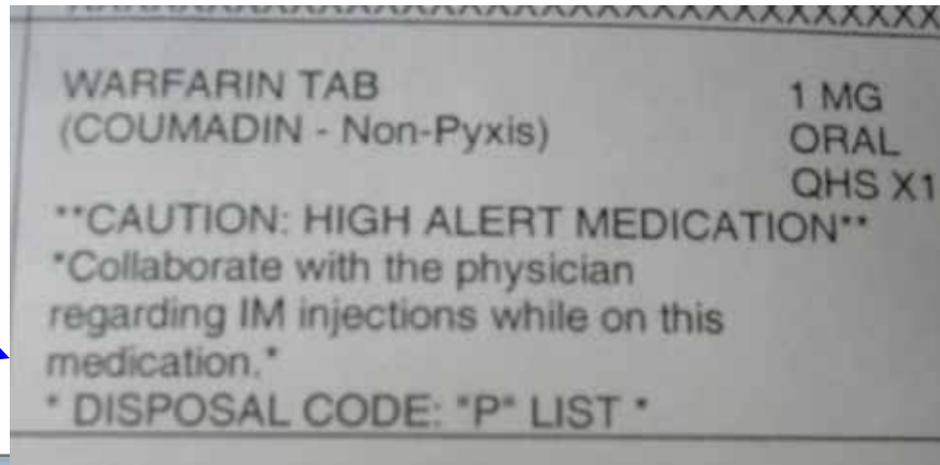
Training Challenges

- Staff want “simple” instructions!
- Wide range of training needed, including in-patient nursing, ambulatory nursing, residents, anesthesia, specialty treatment center staff
- On-going monitoring and re-training critical



Operational Challenges

- “P” list drugs
 - Drug packaging (due to residue) for some RCRA “acutely toxic” drugs must be disposed along with unused drug to **BLUE** or **BLACK** bin
 - Labeled as “Disposal Code: “P” list”
 - Examples include nicotine and coumadin



Non-Compatible Chemistries

“Exception” Examples

- Aerosols (e.g. Inhalers, Hurracaine Spray)
- Oxidizers (e.g. **Unused** silver nitrate sticks)
- Corrosives (e.g. Robinul, Glacial acetic acid)
- Dispose to bin labeled “Exceptions” in soiled utility room or other designated work room



WORXTEST, SIP
GLYCOPYRROLATE INJ (ROBINUL) 91989592 B725-A
1 MG INTRAMUSC. 1XONLY X1
DISP: 1 DOSES ORD# 13558948
DISPOSAL CODE: EXCEPTION RPh # _____
Henry Ford Hospital Dept. of Pharmacy Services



Operational Challenges

- Match collection schedule with varying waste generation levels
 - E.g. Cardiology units have higher waste volumes
- Need to reinforce disposal requirements for controlled substances
- Incompatible drugs (“exceptions”) are small quantity but confusing for staff

Monitoring your Program

- Audit to correct compliance problems
 - Sharps disposed in containers (non-contaminated needles from pharmacy)
 - Excessive regular trash (costly!)
 - Confusion about glass bottles
 - Containers over-filled
 - Empty IV bags
- Work with disposal vendor AND internalize monitoring process



Thank you for your support!

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