Pharmaceutical (RX) Waste Management in a Hospital

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Overview of Discussion

• Discuss pharmaceutical waste management practices prior to partnering with Stericycle RX
• Discuss what it took to get the program started
• Obstacles to implementation
• Discuss the program moving forward (post implementation activities, things put into place, opportunities)
• Conclusion
RX Waste Management Prior to Program Implementation

- No formal program
- No formulary characterization other than chemo drugs, antineoplastic agents, & characteristic waste (ignitable, etc)
- P, K, U-Listed RX waste disposed of in infectious waste, general trash, or wasted down drain
- Expired pharmaceuticals that had not been used were processed and handled by a return goods company
- Chemo drugs designated as such on pharmacy label (CD) and disposed of in appropriate container (sharps & trace chemo waste disposed of in yellow sharps container & processed as regulated medical waste (low heat), if bulk waste it was managed properly and sent via 3rd party environmental firm for proper destruction & manifestation (high heat & lined HW landfill))
RX Waste Management Prior to Program Implementation

- No true leader prior to 2006 that could bridge all health disciplines
- Pharmacy provided meds, nursing administered & discarded, and environmental services removed
- Safety Officer involved only when there were discoveries of problems – often too late to impact significant change
RX Waste Management Prior to Program Implementation

- Staff were more concerned about recycling paper, plastic, and aluminum than pharmaceuticals getting into our waterways and POTWs
Getting Started

- Safety & System Pharmacy leader saw presentations on management of pharmaceutical waste & expanding enforcement activity in hospitals at professional trade shows in 2007.
- Both agreed we needed to formalize our RX Waste Management but didn’t really know what resources were available.
- Researched and at the time there were really only a couple of companies offering any form of RX consulting or waste programs (PharmEcology & Stericycle).
Getting Started

- Formed a multi-disciplinary committee to look into RX waste management
  - included reps from pharmacy, safety, facilities, environmental services, nursing, nursing education, infection control, risk management, physician leadership, etc.
- First few meetings focused on:
  - Background on why we need to do this discussing regulations, enforcement, etc.
  - Education on what a formal pharmaceutical waste management program is made up of asked PharmEcology and Stericycle RX to do presentations with committee and select leadership
Getting Started

- Committee realized quickly that hospital resources (staffing, expertise, etc) did not lend itself to creating an in-house program.
- Committee also identified that a complete turn-key program would offer the easiest strategy to implement quickly while remaining cost effective.
- Engaged Stericycle RX to begin a phased roll-out focusing on preliminary education building up to the programs formal roll-out in June of 2009.
Getting Started

• Timeline
  – Summer 2007 identified need to enhance our RX waste management practices & formed multi-disciplinary committee to begin process
  – August 2007 engaged Stericycle for program development, pricing, education, etc.
  – September 2007 engaged PharmEcology
  – Fall of 2007 presented RX Waste Program costs and reasoning to hospital CFO, Asst. Administrator, etc.
  – Fall of 2007 presented RX Waste Program costs and reasoning to system CEOs, and corporate leadership
  – May 14, 2008 presented RX Waste Program costs to new CFO and got approval to move forward (budgeted in FY09’ operating budget to begin implementation in October, 2009)
Timeline →

- July, 2008 - February, 2009 Safety department and Stericycle did numerous presentations at various hospital committees regarding the RX waste management program (monthly directors/managers meeting, environment of care committee, infection control committee, etc.)
- February, 2009 identified alternate vendors for RX waste management program and obtained additional quotes for service
- March, 2009 selected Stericycle RX as vendor of choice for RX Waste Management Program
- April 20, 2009 signed service agreement with Stericycle RX not only for BMH-Memphis but for system wide staged rollout
- April, 2009 – June 29, 2009 Stericycle did numerous education sessions with key user groups, characterized formulary
- June 9, 2009 - Stericycle Satellite Accumulation Area Walk Through & Formulary Review
- June 29 - July 3, 2009 Stericycle RX program implementation, roll-out, and initial training
Baptist Firsts

• Baptist Memorial Hospital – Memphis 1st hospital in state and city of Memphis to implement formal RX Waste Management Program (w/Stericycle)

• BMH for Women 2nd hospital in state and city to implement program

• BMHCC rolling out RX Waste programs system wide
Obstacles to Implementation

- Overall lack of resources to provide assistance in implementing an RX waste program
  - lack companies/consultants offering service in 2007 (still a growing segment of waste management sector)
  - formulary review capabilities limited
  - labeling/notification of waste categorization codes on pharmaceuticals so that staff can dispose of properly
  - lack of companies with knowledge specific to the healthcare environment
Obstacles to Implementation

- Overall lack of awareness and knowledge in healthcare concerning EPA (RCRA), DOT, state, & local regulations regarding the management of hazardous waste to include pharmaceutical waste
- Pharmacists are not experts in the chemical breakdown and long term impact on the environment
- Education of hospital work groups, leadership, system leadership, etc. (TELLING THE STORY of WHY!)
- Going from minimal costs related to the management of RX Waste to requesting $200,000.00 be added to our annual operating budget
Obstacles to Implementation

- Time it took to get key players educated and service agreements in line we had turnover in critical leadership positions so we had to re-educate and sell the need to implement an RX Waste Management Program multiple times

- Legal review of contracts was time consuming especially sense it was negotiated as a system wide contract with staged roll-out for our 15 hospitals throughout 3 states

- The large number of staff to be trained for an effective rollout - BMH-Memphis 3500+ employees →difficult to get staff buy-in

- Process for compliance program is overwhelming on paper but in operation it is quite simple
Obstacles to Implementation

• Introducing 3+ new waste containers
  – Cost of the containers $28,000 (one time cost, until replacements needed or additional containers needed)

• Identifying Satellite Accumulation Areas (SAAs) throughout the hospital → space constraints, locations that work best with work flow, buy-in to location selection, security of locations, etc.

• Identifying Central Accumulation Area (CAA) → space constraints, location that works best for work flow, security, mandatory items (phone, fire extinguisher, fire rating of room, etc.)
Obstacles to Implementation

• Implementation week training → identifying times that work best for users, especially key user groups such as Pharmacy, Environmental Services, Education departments, key department managers, house supervisors, etc.

• Implementation week only having 3-5 focused days of user training by Stericycle RX; from there train-the-trainer (buy-in from those trained and management of training) and After-Care support from Stericycle RX

• Lack of true/formal after care program post-implementation (this exists now and we have sense implemented at Baptist Memphis and Womens facilities)
Obstacles to Implementation

- Size of Formulary
- Coding Formulary based on Characterization so that staff can easily identify what waste stream the RX waste needs to follow
  - Confusion with Dual Waste (Regulated Medical Waste and RCRA Hazardous)
- Confusion and training on definition of “Empty” in regards to RX waste**
- OR/ED environments (physicians, LIPs, etc) training and buy-in from key staff like anesthesia
- Lack of educational materials
- Lack of resources in-house to facilitate implementation, roll-out, training, inspections, etc.
- Confusion as to what defines RX waste (trace, empty, P listed, etc)
Program Moving Forward

• Program implemented June 29 - July 3, 2009
• Focused training leading up to roll-out helped with buy-in and ease of transition
• 3 Days of round the clock focused training with key departments and user groups to include pharmacy, environmental services, clinical nurse educators, directors, managers, charge nurses, etc
• 5-15 minute department specific training sessions in the departments around the clock
Program Moving Forward

• Stericycle reps on site just about every other week following roll-out of program doing rounds throughout the building looking at compliance of program, educating users, identifying areas to focus in on

• 45 Day Post-Implementation Audit showed the program was being utilized but we have opportunities for continued training and creation of tools to facilitate compliance (sharps in blue/black containers, empty bags in containers, liquids not placed in Ziploc bags)

• After Care program initiated by Stericycle after our programs implemented at BMH-Memphis & Womens—consists of weekly focused audits and training for a designated amount of time, then drops to monthly, then quarterly, so-on
Program Moving Forward

- Weekly audits/documentation of our Central Accumulation area are completed by safety/facilities/EVS staff
- Manifests are tracked according to applicable regs
- RCRA Haz disposed of on 9/14/09 - 6 drums; 11/12/09 - 5 drums; 2/15/10 - 6 drums; 5/12/10 - 7 drums; rest incinerated as regulated medical waste
- Developed numerous cheat sheets for end user to facilitate compliance
- Developed new hire orientation slides specific to RX Waste Management program
- Updated annual web based mandatory training module to include RX Waste Management program
Program Moving Forward- Opportunities

- Develop department specific formulary with breakdown by category and code (RCRA Haz, Chemo, Characteristic, etc.)
- Proficiency Testing
- Focused education sessions throughout the year
- Focused in-house Hazardous Waste Officer/Manager
- Continued partnering with Stericycle to enhance our RX Waste Management Program and keep up with industry Best Practices
- Changing Generator Status – assistance from Stericycle RX experts
  - leaned on them to help with this process
Program Moving Forward - Opportunities

- Develop Process Improvement monitors to track compliance and performance – set a baseline and move forward
- Examples of PI:
  - Proper Segregation of Waste by Staff
  - SAA Area Inspections
  - Full Containers Collected Promptly
  - Staff Training Current
Program Moving Forward- Opportunities

- Internal processes for ensuring the hospital’s formulary is always characterized and current
- Waste characterization of Clinical Investigational compounds – ensure these are captured
- Processes for Patient Medications brought into facility to account for waste RX
- Ensure that you manage the H&S of employees involved in use and disposal of hazardous drugs.
- Ensure you do not increase occupational risks by managing disposal
• Some states are looking at managing Pharmaceutical waste similar to universal wastes.
  –EPA announced intention to propose include RCRA pharmaceutical waste under universal wastes.
Conclusion

- Hospitals want to do the right thing for our patients and environment but there are lots of opportunity for improvement
- Prior to formal program we were not fully compliant with federal, state, or local regulations
- Turn-Key Programs take time to implement (2 years for us) and cost money
- Training (prior to), training (during and post implementation), & continued training key to success
- Many obstacles to implementing a compliant RX program but it can be done!
- Even 1 year post-implementation we are still identifying ways to enhance our program
- Thanks
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