

# Guide To Proper Management of Pharmaceutical Waste at a Healthcare Facility

The logo for Triumvirate Environmental is a stylized green triangle with a red outline, positioned centrally behind the company name. The background of the entire slide is a close-up photograph of various pharmaceutical pills in shades of red, yellow, and white.

TRIUMVIRATE  
ENVIRONMENTAL

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# What are Hospitals doing and when did they get started?

## 2000

EPA starts conducting water quality studies

Results were atypical (Found higher than anticipated levels of endocrine and hormone disruptors, Bisphenol A, and pharmaceuticals)

Sent out a statement of findings and continued research

## 5 years ago

Began completing the studies that were started in 2000

Started to ask questions (Who What Where Why When)

Fingers started pointing to Healthcare for the answers

# What are Hospitals doing and when did they get started?

## 3 - 5 years ago

- Questioning Regulation / Does this actually apply to me?
- Worrying about Large / Small Quantity generator status
- Waiting for others to start
- Seeking insight from Federal / State / and Local regulators

## 2 - 3 years ago

- Reviewing if they actually have hazardous waste relating to medication waste
- Still waiting for others to get started
- Began evaluating existing “formulary”

# What are Hospitals doing and when did they get started?

## 1 - 2 years ago

Digging in on their “formulary”

Learning about how their “reverse distribution” program really works

Selecting SAA’s

Training nurses, Pharmacy, Environmental

## Past 6 months - Today

Revising their formulary / Reacting to exemptions and new requirements

Purchasing less

More Training / New Policies and Procedures



# Five Factors When Building a Program

1. Simplicity
2. Safety
3. Compliance
4. Education
5. Cost



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# Pharmaceutical Waste Management Summary

1. Generator Size / State
2. Pharmacy Formulary
3. Pharmacy Returns Program
4. Physical SAA locations (Satellite Accumulation Areas)
5. Waste Streams (Hospital Specific)
6. Containers
7. Employee Education
8. Pharmacy Characterization Code

# Generator Size & State

1. Large Quantity Generators
2. Small Quantity Generators
3. State-specific exceptions & exclusions



# RCRA Generator Status

## ↘ CESQG\*

- Less than 100 kg/month
- No accumulation limit up to 1,000 kg

## ↘ SQG\*

- Between 100-1,000 kg/month
- 180-day accumulation limit

## ↘ LQG\*

- Greater than 1,000 kg/month
- 90-day accumulation limit
- Most stringently regulated

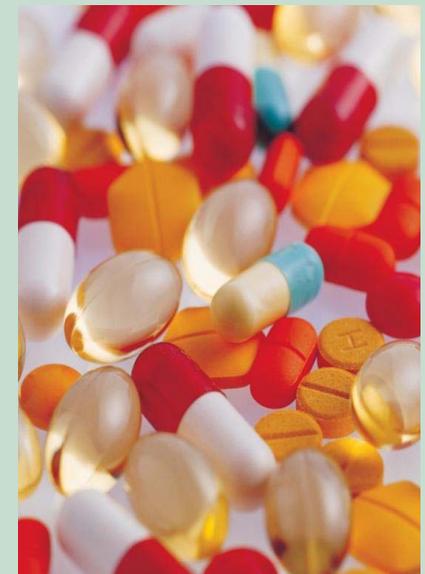
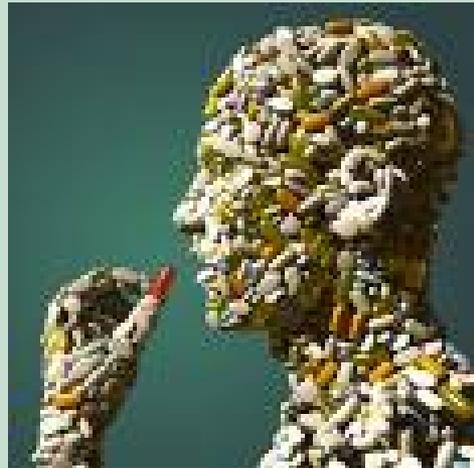
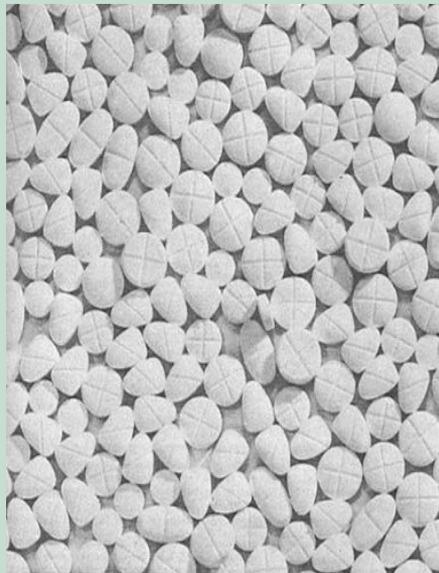
# Formulary Review

1. Triumvirate's database
2. Identification phase
3. Identifying other lists of materials

CHLORAL HYDRATE	121053205	Chloral Hydrate 500 mg / 5 mL UD Cup
CHLORAMBUCIL	173063535	Leukeran 2 mg Tab
CHLORPROMAZINE HCL	641139835	CHLORPROMAZINE HCL INJ 50MG/2 ML
COLLODION	574056004	Collodion 120 mL Bottle
CYCLOPHOSPHAMIDE	54412925	Cytosan 25mg Tab
	10019095501	CYCLOPHOSPHAMIDE INJ 500MG
EPINEPHrine	548906100	Epinephrine 1mg/mL;30mL Vial
EPINEPHrine HCL	409724101	Epinephrine 1:1000 1mg /1mL

# Reverse Distribution Review

1. Critical understanding of existing program
2. Reduction of liability in existing program
3. Additional fact-finding step



# Satellite Accumulation Areas

1. Identifying SAA Locations
2. Analyzing work flow
3. Ease of use
4. One bucket program

## Hazardous Waste Satellite Accumulation Area

1. The waste area must be identified by a sign

2. The waste container must remain closed except when waste is being added

3. The waste container must be labelled with approved hazardous waste label

**The Following Waste Products Must Be Collected At This Location:**

All Measles Virus Vaccine (Attenuvax + MMR Vaccine)	D009
Cyanide Antidote Kit	D009
All Hepatitis B Vaccine, and Globulins	D009
FML Ophthalmic Drops (Phenyl Mercuric Acetate)	D009
Phenylephrine Shark Liver Oil (Formulation R - Preparation H)	D009
Gentimycin Eye Drops (Eye Drops)	D009
Isopto Tears (Eye Drops)	D009
All Mumps Vaccines	D009
Neosporin ophthalmic ointment and solutions	D009
Vaqta Vials	D009

When your waste bin is full please call for a pickup and bin replacement:  
**Environmental Services**  
**X 4487**

4. All full chemical waste bins must be dated and removed from the SAA within 3 days.

5. The Pharmacy waste container must be clearly segregated from the pharmacy's stock materials

# Waste Streams

1. Nursing Locations & Nursing Units **\*\*P-Listed**

- Easy one bucket system

2. Pharmacy

- Customized System

3. Other Areas

- Emergency Rooms
- Operating Rooms
- Etc.

**U-Listed**

**D-Listed**

**Chemotherapy**

**DEA Regulated Material**

# Container Choices

How do I choose a waste container?



# Employee Education



- Pharmacy

- Nursing

- Individuals responsible for pickups and inspections

- Provider does pickups

# Pharmacy Characterization Coding

1. Pyxis / Omnicell
2. Color-coded markings
3. Visual signage and labels

H-waste

H-waste

H-waste



# Five Factors to Remember

## 1. Simplicity

- One Bucket System

## 2. Safety

- Non-reusable containers

## 3. Compliance

- Compatibility, SAA's, Survey's

## 4. Education

- Focused, Hospital specific training

## 5. Cost

- Waste minimization, shipping in larger quantities, etc.



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# Thank you for your Time

➤ Questions?

➤ Please email or call

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