Comments to Pharmaceutical Disposal Advisory Group

Carol Batterton

Water Environment Association of Texas

Overview of WEAT

- 501(c)3 non-profit technical and educational organization
- 1500 members statewide, including scientists, engineers, operators and regulators.
- Responsible for the design, operation and maintenance of wastewater collection and treatment systems all across Texas

Overview

- State member association of the Water Environment Federation
- Goal is to promote sound science in environmental policy and regulation

Background

- WEAT supported passage of SB 1757
- Study of disposal options is necessary to determine next steps
- Much research still needs to be done on the impacts of pharmaceuticals in treated wastewater and ambient water on the relation to public health and the environment

Background

- Future regulatory requirements to address pharmaceuticals in the environment need to be based on sound scientific information
- Not enough information at this point in time
- Best option now is to prevent unused pharmaceuticals from entering WWTP

Recommendations

- Texas should have an expedited and simplified process for handling and disposal of unused pharmaceuticals
  - Statutes and regulations of various agencies should be harmonized
  - Guidance documents should be developed for collection events or programs

Recommendations

- Responsibility for collection of unused pharmaceuticals should not be solely the responsibility of local government utilities
  - All stakeholders should have a role

Recommendations

- A source of funding needs to be identified for collection and disposal of unused pharmaceuticals

WATER ENVIRONMENT ASSOCIATION OF TEXAS

Preserving & Enhancing the Water Environment of Texas

Contact Information:

Carol Batterton
Executive Director
512-924-2102
carbat@beecreek.net
www.weat.org

Pharmaceutical Disposal Advisory Group

Loraine Fries

Inland Fisheries Division

Analytical Services

TPWD Mission

"To manage and conserve the natural and cultural resources of Texas and to provide hunting, fishing and outdoor recreation opportunities for the use and enjoyment of present and future generations"

TEXAS PARKS & WILDLIFE

SPORT FISH & WILDLIFE RESTORATION

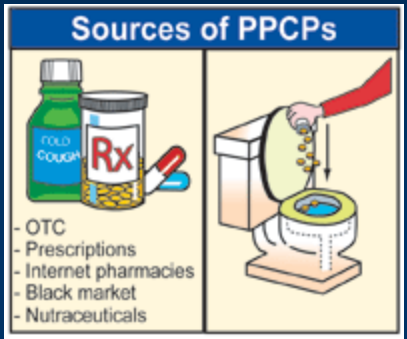
TPWD Code

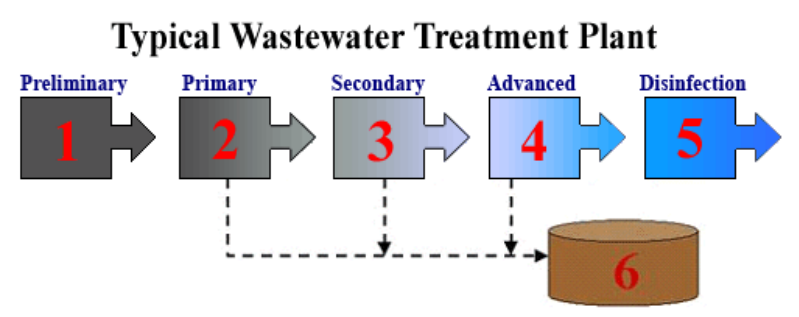
- § 1.012 - TPWD is authorized to protect the fish in public waters
- § 11.104 - Identify threatened land and water resources in this state
- § 12.0011 - TPWD activities include:
  - Investigating fish kills and any type of pollution that may cause loss of fish or wildlife resources
  - Providing information on fish and wildlife resources to entities that make decisions affecting those resources

Pharmaceuticals

- Endocrine disruption
- Altered behavior
- Toxicity

Wastewater Treatment

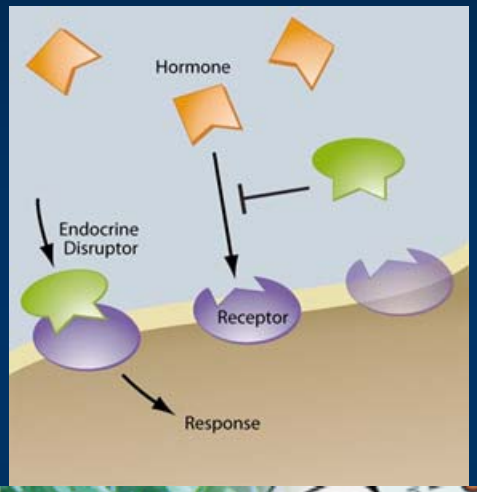




Rx

Endocrine Disruptors and Aquatic Life

- Continuous exposure
- Fish most studied
  - Intersex fish
  - Extinction



Studies in Texas

- PPCPs in fish tissue
  - Trinity River, Dallas
  - Pecan Creek, Denton
- Intersex fish
  - Rio Grande
    - 16-50% occurrence

TPWD Studies

- City of San Marcos WWTP
- City of Austin HBBMP
  - USDA-ARS
    - Soils
    - Water
    - Earthworms
    - Aquatic biota

Thank you!
TEXAS
PARKS &
WILDLIFE

Texas and Community Medication Take Back Programs

Jeanie Jaramillo, PharmD

TCEQ Pharmaceutical Disposal Advisory Group Meeting

May 27, 2010

Evolution of Medication Cleanout™

- What is Medication Cleanout™?
  - Community take back program began in Amarillo
  - Drive-through recurring collection events
  - Limited to households
  - Primary Goals: prevent poisonings, abuse, misuse and environmental contamination
  - Secondary Goal: collect data from events as initial step of discovery into why medications are not used/why they remain unused to begin with

Evolution of Medication Cleanout™

- Began research of laws, rules, and regulations in 2003
- Difficulties encountered:
  - Laws, rules, regulations cross disciplines
  - Not written with take back programs in mind
  - Inability to obtain answers
  - Fear of the unknown
- Invaluable resources:
  - Conference calls with other poison centers who had involvement in take back programs
  - Unused Pharmaceuticals in the Home & Environment Conference (Maine 2009)

TCEQ Questions: Why did we choose this model?

- Recurring vs. permanent/fixed location
  - Lack of funding for permanent collection site
  - Ability to spark community interest
  - Involvement of law enforcement
- Drive through vs. indoor collection tables
  - Recommended by experienced programs
  - Ability to secure collection area

Why did we choose this model?

- Participant survey vs. simple collection

  Ability to study:

  - Why people dispose of meds
  - What would they do otherwise
  - Where they store meds at home (poison prevention ?)
  - Ages of persons in home (poison prevention)
  - Outcomes measure

Why collect data?

- Pros:
  - Great outcome measure
  - Useful information to study what types of meds remain unused in homes
  - With adequate manpower to record the data, relatively complete information is available and can be obtained without the need for protected health information
  - Very little data currently available

Why collect data?

- Cons:
  - Resource consuming
  - In most cases, requires Institutional Review Board review (usually exemption)

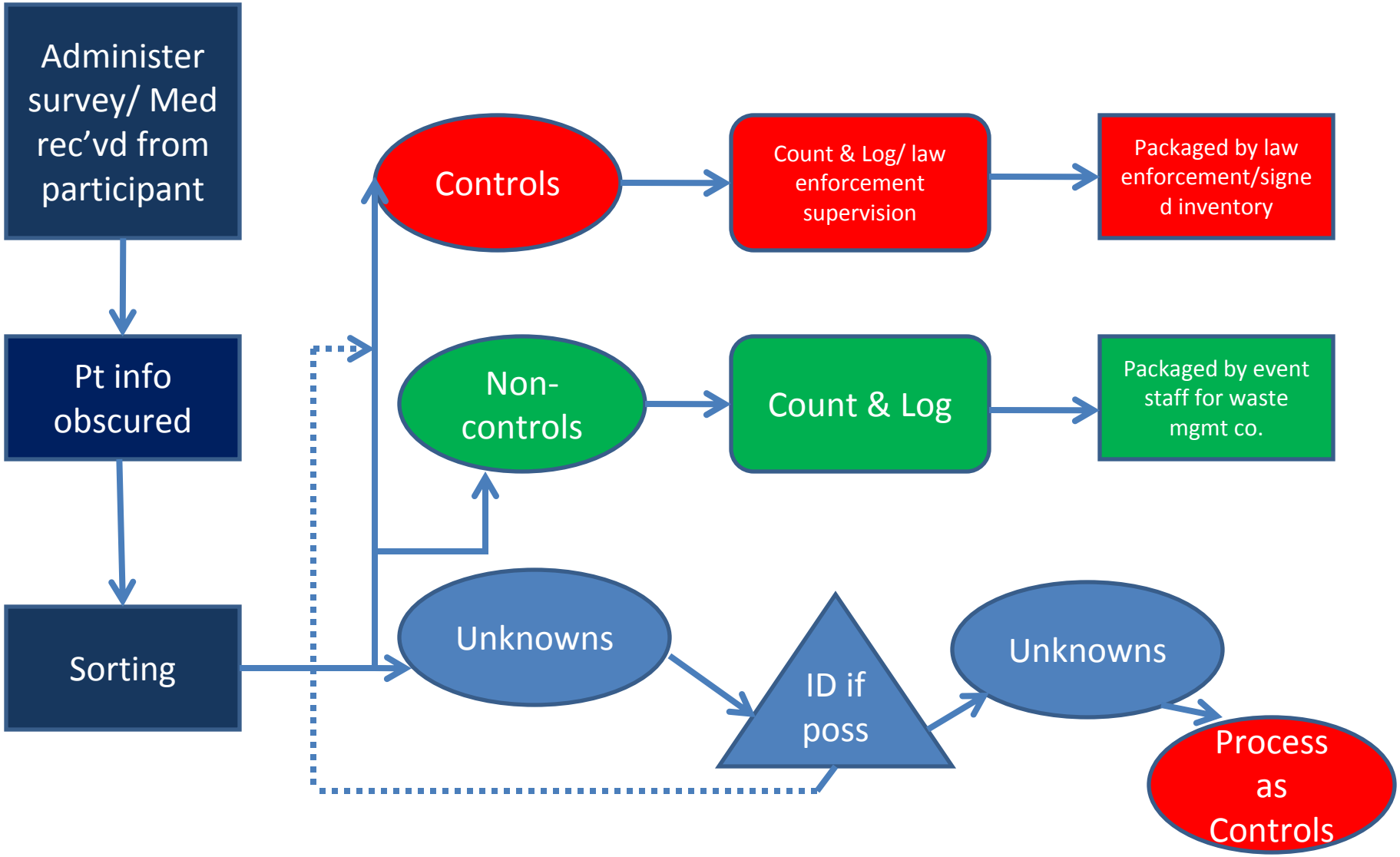
Why did we choose this model?

- Desire to obtain important data
- Poison center is hosted by school of pharmacy
- Ease of access to many volunteers
  - Pharmacy students required to obtain “volunteer” hours for Introduction to Pharmacy Practice course
  - Collaborative effort with school district which also provided volunteer base

Desired Impact/Outcome Measures

- Direct measures
  - Prevent poisonings
    - Reduce poisoning rates
  - Prevent abuse
    - Reduce abuse rates
  - Prevent misuse
    - Reduce misuse rates
  - Prevent contamination
    - Reduce amounts in water/environment
- Indirect measures
  - Volume of collected meds (pounds, packages, pills, milliliters, etc.)
  - Number of participants
  - Change in behaviors

Medication Cleanout™ Event Process



Medication Cleanout™ Measures

- First event – September 12, 2009; two locations within Amarillo
  - 296 participants
  - 900 pounds of medications
  - 70 pounds of controlled substances

What was collected?

- Most common OTCs:
  1. Vitamins & vitamin/mineral combinations
  2. Analgesics (acetaminophen, aspirin, ibuprofen)
  3. Dermatologic agents (creams, ointments)

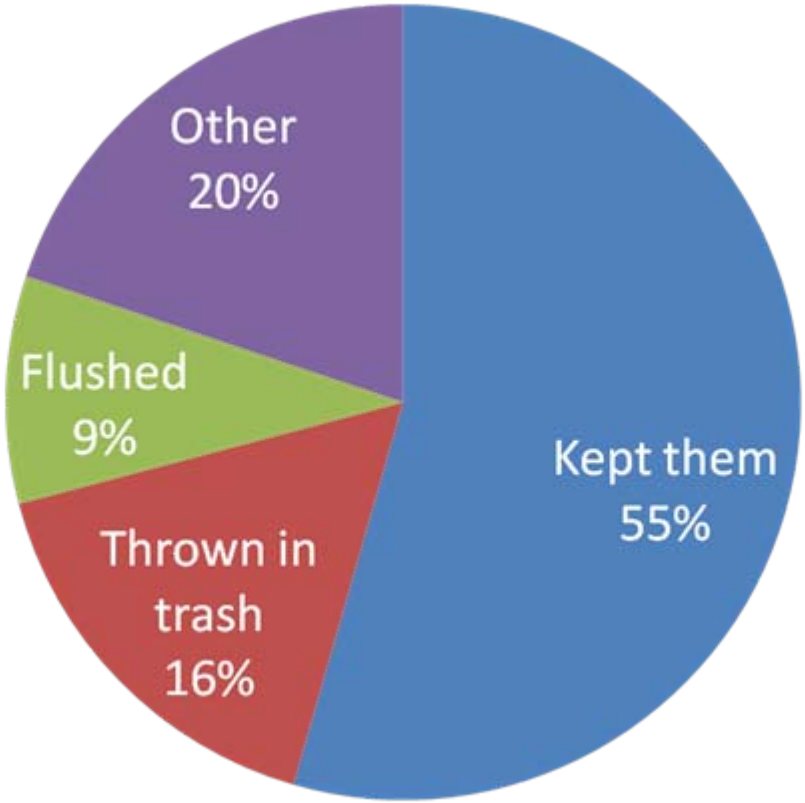
What was collected?

- Most common non-controlled substances?
  1. Cardiovascular agents (ACE inhibitors, beta blockers, calcium channel blockers)
  2. Analgesics
  3. Antidepressants

What was collected?

- Most common controlled substances:
  1. Analgesics (Vicodin, Lortab, Darvocet, etc)
  2. Upper respiratory agents (hydrocodone containing pills and liquids)
  3. Anxiolytics, sedatives, hypnotics (benzodiazepines, Ambien, etc)

What I Would Have Done With My Meds If Medication Cleanout™ Had Not Been Available



N=296

Challenges Encountered

- Laws, rules, and regulations in place do not specifically address take back programs and are somewhat left to interpretation
- Communication across and sometimes within disciplines is nearly non-existent
- Three separate DEA regional offices in Texas are not necessarily in agreement regarding take back programs

Request to TCEQ

- Consider dropping requirement to manage HHW “as if they were hazardous”
- Develop language for adoption in the TAC that is specifically geared for take back programs with clear guidance of what information should be provided to TCEQ and to whom, specifically

Other Needs

- Joint document incorporating direction from DEA, TSBP, and TCEQ as well as an organization representing local law enforcement agencies
- There are people and organizations out there that want to develop and implement responsible programs, but don’t because of fear and/or lack of ability to obtain answers

Concerns

- Take back programs are seeing a lot of interest at this point in time
- Programs could either be targeted for diversion/criminal activity or could be utilized as a method for diversion/criminal activity
- Irresponsible programs or illegal activity could produce mandate that all programs cease & desist

Statewide Program?

- Primary barrier: funding
- Difficulty with management of controls
- Research model not feasible on wide-scale basis
- Simpler model could be adapted
- Pharmacies are ideal location, but an adequate mechanism for prevention of diversion (of any substances) must be in place

Contact Information

Jeanie Jaramillo, PharmD

Managing Director, Tx Panhandle Poison Center

Assistant Professor, TTUHSC- School of Pharmacy

Email: jeanie.jaramillo@ttuhsc.edu

Phone: 806-354-1611

www.MedicationCleanout.com