Welcome & Pharmaceuticals in Context
Introduction

Soria Adibi
Environmental Planner
Dept. of Environment & Development
North Central Texas Council of Governments
Thank You To Our Sponsors!

Community Waste Disposal.com

NORTH TEXAS MUNICIPAL WATER DISTRICT

Wastewater And Treatment Education Roundtable

DEFEND YOUR DRAINS

SHARPS Compliance, Inc.

NTCRA North Texas Corporate Recycling Association

PRODUCT STEWARDSHIP INSTITUTE
What is NCTCOG?

- Voluntary association of local governments
- Established in 1966
- Assists local governments in:
  - Planning for common needs
  - Cooperating for mutual benefit
  - Recognizing regional opportunities
  - Resolving regional problems
  - Making joint decisions
- One of 24 COGs in Texas
Regional solid waste planning

• NCTCOG is the designated regional solid waste planning agency for North Central Texas.
  • Stores a Closed Landfill Inventory
  • Promotes education and outreach
  • Administers a pass-through grant program
  • Supports the solid waste advisory committee, the Resource Conservation Council

• Coordinates with partners to implement and advance materials management programs in North Central Texas.
• Maintains a regional plan for set new goals and define new metrics for materials management.
Funding Solid Waste Programs in North Central Texas

Where does solid waste funding come from?

- Each legislative session, the State Legislature allocates funds through the Texas Commission on Environmental Quality (TCEQ) to regional solid waste management agencies
- Funds are generated by solid waste disposal fees the TCEQ collects at the landfills

Who decides what programs receive pass-through grants?

- The Resource Conservation Council (RCC) is the regional solid waste advisory council for North Central Texas
- The RCC provides input to develop and update the regional solid waste management plan, identifies regional solid waste priorities and implementation projects, reviews solid waste grant applications, and makes recommendations on projects to be funded to NCTCOG’s Executive Board
North Central Texas (NCT)

- **Water contamination** by pharmaceuticals in NCT
  - Cost and added work for water quality authorities
  - Risk to aquatic life
  - Threat to sources of drinking water

- **Drug abuse** and misuse in NCT
  - Tarrant County (population 1.9 million) in 2015:
    - 177 fatal overdoses caused by drugs
    - 86 of these caused by opioids
    - Does not include near overdoses or concurrent drug use
**North Central Texas**

- **Solution:** *Drug take-back strategy*
  - Ex in NCT—Fort Worth, TX drug take-back program 2016:
    - 6,682 lbs from 9 permanent sites, 2 events, mail-back envelopes, and Walgreens program
    - Collections nearly **tripled** in 2013 when permanent sites added
  - Need strategy for NCT

- **Other:** source reduction and reuse opportunities
  - Re-dispensation legislation: TX [senate bill 1243](#), passed in 2015 to allow for the donation of unused drugs to a “participating drug provider”
Existing drug take-back collection sites in NCT

Walgreens + Law enforcement locations: timetorecycle.com/medtakeback/
Why We Are Here
Introduction to Pharmaceutical Stewardship

Scott Cassel
Founder & CEO
Product Stewardship Institute
the Product Stewardship Institute
Product Stewardship vs. EPR

Product stewardship

Manufacturer ("producer") responsibility

Voluntary programs

Mandatory programs (e.g., EPR)

Other government regulatory programs
# PSI Product Categories

<table>
<thead>
<tr>
<th>Category</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pharmaceuticals</td>
<td>Batteries, HHW</td>
</tr>
<tr>
<td>Packaging</td>
<td>Textiles</td>
</tr>
<tr>
<td>Paint</td>
<td>Mattresses</td>
</tr>
<tr>
<td>Electronics</td>
<td>Phone books</td>
</tr>
<tr>
<td></td>
<td>Medical sharps</td>
</tr>
</tbody>
</table>

**PSI Product Categories:**

- Pharmaceuticals
- Batteries
- HHW
- Textiles
- Mattresses
- Paint
- Phone books
- Electronics
- Medical sharps
PSI Product Categories cont’d

- Appliances with refrigerants
- Gas cylinders
- Pesticides
- Framework
- Carpet
- Auto switches
- Tires
- Radioactive devices

…and more!
Project Goals

- **Increase safe collection** and disposal of unwanted pharmaceuticals

- **Increase awareness** about problems associated with improper drug storage/disposal, and benefits of drug take-back to residents and pharmacies

- **Identify sustainable funding** for drug take-back programs
Workshop Expectations

- Learn about drug take-back *challenges and solutions*

- Understand *current landscape* in North Central Texas

- Consider drug take-back *best practices* around the country

- Begin to design a drug take-back *strategy* for North Central Texas
The Problem
Drug abuse
Accidental poisonings
Health & Safety
Aquatic impacts
Water quality
Environmental Health
The Solution
US Support for Drug Take-Back

- **Drug Enforcement Administration (DEA)**
  - Eleven national prescription drug take-back days

- **Office of National Drug Control Policy (ONDCP)**
  - Part of its national drug control strategy

- **Food and Drug Administration (FDA)**
  - Developed guidelines with ONDCP for drug disposal

- **Environmental Protection Agency (EPA)**
  - Promotes consumer use of take-back programs

- **States**
  - Majority of state agency websites provide information either on their own state programs and/or federal DEA take-back days
Drug Take-Back
Collection System Options

1. On-site receptacles
2. Mail-back envelopes
3. Take-back events
Drug Take-Back: Challenges and Solutions
Drug Take-Back Programs

Challenges & Solutions

Dr. Vivian Fuhrman
Sr. Associate for Policy & Programs
Product Stewardship Institute
Key Events in Drug Stewardship

2005
- PSI identified the problem & need for a national solution

2008
- Federal Secure and Responsible Drug Disposal Act passes

2010
- DEA final rule on collection of controlled substances

2014
- Alameda supreme court case

2015
- "Extended producer responsibility" (EPR) law passed

PSI briefing document + Stakeholder dialogue
Key Events in Drug Stewardship

- PSI identified the problem & need for a national solution
- 2005
- PSI briefing document + Stakeholder dialogue

- Federal Secure and Responsible Drug Disposal Act passes
- 2008

- DEA final rule on collection of controlled substances
- 2014

- Alameda supreme court case
- 2015

★ = “Extended producer responsibility” (EPR) law passed
Challenge: Convenience
Key Events in Drug Stewardship

- 2005: PSI identified the problem & need for a national solution
- 2008: Federal Secure and Responsible Drug Disposal Act passes
- 2010: PSI briefing document + Stakeholder dialogue
- 2014: DEA final rule on collection of controlled substances
- 2015: Alameda supreme court case

*=“Extended producer responsibility” (EPR) law passed
DEA’s Final Rule on the Collection of Controlled Substances

• Final Rule:  

• Final Rule Q&A:  
What is allowed by the DEA’s Final Rule on the Collection of Controlled Substances?

- Flexibility in collection of controlled substances
- Mail-back programs by DEA-authorized entities
- Continues to allow take-back events by law enforcement
- Addition of **pharmacies** as authorized collection sites

Increase in potential collectors will lead to additional permanent collection sites
Drug Take-Back
Program Location Options

Pharmacies
- Large chains
- Independent

Law enforcement
- Police stations
- Sheriff departments

Clinics with on-site pharmacy
- Hospitals
- Narcotic treatment programs
- Long-term care
Challenge: Cost
Drug Take-Back
Approaches and Funding Sources

Voluntary Programs
- Government funded
- Retail pharmacy
- Law enforcement

Mandatory Programs (legislation)
- Manufacturer funded
- Manufacturer managed
- Government oversight
Mandatory
“Extended Producer Responsibility”

State + Local EPR Laws:

3  5  9  11  13  15  18  24

104* EPR laws in 33 states

*not including 10 container deposit laws
Drug Take-Back

How many collection sites needed?

• EPR convenience standards for collection sites:
  ✓ Range from 1/6,500 residents to 1/60,000 residents
  ✓ Most fall between 1/15,000 – 1/20,000

• Variation depends on:
  ✓ Political feasibility
  ✓ Availability of potential collection sites (# of local pharmacies)
  ✓ Urban vs. rural environments

• Mandatory pharmacy participation in some EPR laws
Key Events in Drug Stewardship

- PSI identified the problem & need for a national solution (2005)
- PSI briefing document + Stakeholder dialogue (2008)
- DEA final rule on collection of controlled substances (2014)
- "Extended producer responsibility" (EPR) law passed (2015)
- Alameda supreme court case

* = "Extended producer responsibility" (EPR) law passed
No. ____

In the
Supreme Court of the United States

PHARMACEUTICAL RESEARCH AND MANUFACTURERS OF AMERICA; GENERIC PHARMACEUTICAL ASSOCIATION; BIOTECHNOLOGY INDUSTRY ORGANIZATION,

Petitioners,

v.

COUNTY OF ALAMEDA, CALIFORNIA; ALAMEDA COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH

On Petition for a Writ of Certiorari to the United States Court of Appeals for the Ninth Circuit

PETITION FOR WRIT OF CERTIORARI

DENIED
U.S. EPR Laws for Pharmaceuticals

Source: Product Stewardship Institute, Inc. (2017)
Pharmaceuticals Stewardship in the United States

Legislative activity at local, state, & federal levels
Pharmaceuticals EPR Programs in Canada and Europe

- **France**: established in 1993
- **British Columbia**: established in 1996
- **Portugal**: established in 2001
- **Manitoba**: established in 2011
- **Hungary**: established in 2005
- **Spain**: established in 2003

**Canada**: 4 programs

**Europe**: 15 programs

Voluntary Drug Take-Back Program Examples

Government funded
• State: NE, CO, IA, NY, ID, SD
• County: Lake County (IL)

Pharmacy funded
• Independent pharmacies
• Walgreens
February, 2016: Walgreens announced "Safe Medication Disposal Program"

- 500 retail store locations
- At least 40 states and Washington DC
- 24 hour locations
Pharmacy Participation

May 2014: CVS/pharmacy launched “Medication Disposal FOR Safer Communities” Program

- Mail-back envelopes in stores
- Raise awareness of collection programs
- Space for law enforcement take-back events

For sale in stores

Provided free to police stations
PSI Drug Take-Back Pilots

• 2016 USDA-funded pilot in rural NY counties
  ✓ 4 independent pharmacies
  ✓ 1 hospital pharmacy
• Pharmacy receptacles + mail-back envelopes
• Community outreach/education

• 2017 Oklahoma DEQ pilot across OK State
  ✓ 5 independent pharmacies
• Pharmacy receptacles
• Community outreach/education
PSI Pilot Coalition

Key Stakeholders

1. Pharmacies
2. Law enforcement
3. Public health agencies
4. Waste managers/recyclers
5. Wastewater treatment
6. Environmental advocates
7. Reverse distributors
8. Manufacturers
9. Medical community
10. Drug abuse/recovery centers
11. Poison control
12. Universities/ext. programs
13. Local drug abuse prevention/safe med disposal coalitions, etc.
Proven Benefits of Pharmacy-Based Drug Take-Back

1. High collection rates
2. Increased public awareness
3. Pharmacy experience
   • Community appreciation
   • Customer loyalty
   • Increased foot traffic
   • No safety problems or misuse of receptacle
   • High collection rates

Four out of five pharmacies paid to continue collections after the pilot!
Drug Take-Back Resources
PSI’s How-to Guide

Lessons learned from implementing pharmacy-based drug take-back programs


To view properly we recommend downloading the document to your computer
Pharmacy-Based Drug Take-Back

Best Practices

1. Complying with federal regulations
2. Choosing the right collection system
3. Setting up the program
4. Operating the program
5. Spreading the word
Lesson #1
Complying with Federal Regulations

Drug Enforcement Administration (DEA) Final Rule on Collection of Controlled Substances

The DEA enforces regulations and fees concerning the manufacture and distribution of controlled substances. The DEA issued a final rule in 2014 permitting more types of business to collect controlled substances to increase collection efficiency and encourage safe drug disposal. The rule allows manufacturers, distributors, reverse distributors, narcotics treatment programs, retail pharmacies, and hospitals/clinics with an on-site pharmacy to modify their registration with the DEA to maintain on-site drug collection receptacles, and implement programs that accept controlled substances.

DOT Special Permit: How to Comply

Why was the U.S. Department of Transportation (DOT) special permit created?

For the final DEA rule (see box on the right), pharmacies accepting controlled substances in their drug take-back receptacles are not allowed to inspect the collected material to determine whether it contained anything that would be considered hazardous material. Because the hazardous nature of the content is unknown, the Pipeline and Hazardous Materials Safety Administration of the DOT would normally require specific protocol to be followed to ensure the safe transportation of these collected pharmaceuticals. The shipping container would have to adhere to DOT specifications for the hazardous materials that may be present in the container, and the container would have to be marked accordingly for transportation to the treatment facility. This is burdensome and was not the intention of the DEA.

In order to ensure compliance with the DOT and DEA, the DOT approved a Special Permit, SF 20395, for alignment of materials collected through take-back programs using receptacles. The permit exempts collectors (e.g., pharmacies) from having to ship the collected contents of a take-back program receptacle as if it was hazardous material.

How long does the process take?

If not using a special permit to use DOT Special Permit, pharmacies will need to apply for “party status” in order to be considered one of a group of business eligible for this exemption under an approved special permit 30250. This process takes just 5-10 minutes once you have all of the information needed. It can take anywhere from one day to three weeks for the DOT to process an application after you submit by email. Upon party status approval, DOT provides an authorization letter via email as proof of compliance under a special permit.

More information on this special permit, including a recorded webinar and presentation slides, a full copy of SF 20395, and the sample submission for party status can be found on the PSI website.

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Lesson #2
Choosing the Right Collection System

APPENDIX C

Criteria for Choosing a Vendor

<table>
<thead>
<tr>
<th>Vendor Name</th>
<th>Compliance with DEA Standards</th>
<th>Cost</th>
<th>Delivery Time</th>
<th>Flexibility</th>
<th>Security</th>
<th>Receptacle Options</th>
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</thead>
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<td>Vendor 1</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Vendor 2</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Vendor 3</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

HELPFUL HINT

- Choose a vendor that is DEA-compliant and meets all necessary regulations.
- Consider the cost-effectiveness of the vendor.
- Evaluate delivery times and flexibility of service.
- Ensure security measures are in place.
- Review the options for receptacles and collection systems.
Lesson #3

Setting Up the Program

4) SET UP THE PROGRAM

Receptacle Installation
1. Determine an accessible place for the receptacle within sight of the pharmacy counter where it will not interfere with customers or line walls;
2. Read receptacle installation and use instructions;
3. Secure the collection receptacle to wall, floor, or countertop;

Log, Liner, Signs, and Mail-back
4. If a record-keeping log comes with the receptacle, find a secure place to store it;
5. Follow instructions to position a liner within the receptacle to double lock it;
6. Lock the access slot until you are ready to begin collections;
7. Display any signs or instructional materials that come with the receptacle so customers know what materials are permitted and what is not accepted; and
8. If applicable, place mail-back envelopes in a prominent location so customers are aware of the option.
Lesson #4
Operating the Program

5) OPERATE THE PROGRAM

Steps to Running Your Drug Take-Back Program

Educate and Train Your Employees
- Provide training to employees on how to handle and dispose of collected drugs.
- Educate employees on the program's goals and objectives.
- Establish guidelines for handling collected drugs.

5) OPERATE THE PROGRAM

Rules:
- Employees must be trained on how to handle collected drugs.
- Collected drugs must be disposed of properly.
- Proper handling and disposal of collected drugs are mandatory.

Monitor Your Program

- Regularly assess the program's effectiveness.
- Review feedback from participants and make necessary adjustments.
- Keep records of all collected drugs and their dispositions.

5) OPERATE THE PROGRAM

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Lesson #5
Spreading the Word

How to Promote the Program within Your Community

Community awareness is key to making your take-back program a success. Start outreach early and employ the following techniques often to achieve maximum effectiveness.

In-Pharmacy Advertising
Promoting the program within your store is a low-cost, targeted, effective method for reaching interested residents. Ensure branding is consistent across your program’s promotional materials (i.e., use the same colors, fonts, and pictures) to help customers recognize and remember your program.

- POSTERS: Bright, large, attractive posters catch customers’ eyes and direct them to your collection kiosk.
- SLEEVES: Stuff flyers into shopping bags. You can also hang flyers in store halls, libraries, schools, physicians’ offices, hospitals, healthcare organizations, and other frequently visited locations.
- PILL BOTTLE STICKERS: Small, bright stickers are effective on prescription bottles if space allows.
- PHARMACY BAG ADVERTISEMENTS: Easy for pharmacies to implement, these advertisements reach the right residents at the right time — when they are picking up prescriptions.
- PHONES: Train all pharmacy staff so they are prepared to answer customer questions about the program.

Have Leftover Medicine?

USE THIS BAG to bring back your unused or expired meds to either

- Dispose of your medicine safely through the program.
- Your state’s or local health department.

Don’t Flush! Empty your medicine cabinet in a safe, healthy, and more environmentally responsible way.

Powered by NYP-MediCure Breakthroughs in Medication Management, Medication Management Inc.

Outreach Methods in the Community

Outreach in the Community

Wider community outreach is vital to increasing foot traffic, gaining new customers, and increasing collection quantities. Make a larger impact by recruiting local law enforcement agencies, the medical community, environmental organizations, drug abuse prevention/recovery organizations, government offices (public health, environment, solid waste, water, recycling, etc.), and other community groups to promote your program.

NEWSLETTER OR EMAIL

Newsletters are a great way to reach your loyal customers. Customize the sample language below to fit your purposes, and send it to your community partners and ask them to send it out to their databases. Forwarding your newsletter to community or neighborhood newsletters is a great way to cast a wider net.

SAMPLE LANGUAGE FOR PHARMACY NEWSLETTERS

Do you have leftover medications hanging around in your medicine cabinet? Did you know that unused over-the-counter medications and prescription drugs contribute to poisonings and potentially deadly or addictive practices? Don’t flush that waste. Instead, return your medications to local pharmacies, clinics, and hospitals.

Visit us at:

Product Stewardship Institute
Safe Drug Disposal Flier

Consumer messaging on safest drug disposal methods

www.bit.ly/leftover-meds
Questions?

Dr. Vivian Fuhrman
Senior Associate for Policy & Programs
vivian@productstewardship.us

www.productstewardship.us
Current Landscape in North Central Texas/Statewide
Medication Take Back Tips for Success

Jeanie Jaramillo-Stametzz
Director, Medication Cleanout
Managing Director, Texas Panhandle Poison Center
Assistant Professor, Tx Tech UHSC School of Pharmacy
Medication Cleanout

• Started medication take back program with Tx Tech School of Pharmacy in fall 2009

• As of April 2017, conducted 50 events across Tx panhandle (primarily Amarillo, Abilene, Lubbock; on-campus)

• 13,434 participants (cars)
What we’ve collected

36,647 pounds of controlled & non-controlled medications

1,938 pounds of sharps

Image credit:
https://commons.wikimedia.org/wiki/File:Luxury_Motorhomes_Class_A_Diesel_Pusher_45_Foot_Tag_Axle_RV_-_2012_Thor_Motor_Coach_Tuscany.png

Image credit:
https://biomedicalwastedisposalvirginia.wordpress.com/
Trend of Pounds Collected & Participants by Year

- **Pounds Collected/ Participants**
- **# of events**

<table>
<thead>
<tr>
<th>Year</th>
<th>Participants</th>
<th>Pounds</th>
<th>curved line</th>
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</thead>
<tbody>
<tr>
<td>2009</td>
<td>864</td>
<td>296</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>725</td>
<td>1925</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>1189</td>
<td>3374</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>1276</td>
<td>3438</td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>2010</td>
<td>5540</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>1966</td>
<td>5094</td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>2300</td>
<td>5644</td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>2258</td>
<td>6681.9</td>
<td></td>
</tr>
</tbody>
</table>

**# of events**
- 2009: 1
- 2010: 5
- 2011: 9
- 2012: 6
- 2013: 7
- 2014: 7
- 2015: 6
- 2016: 6
Secrets to success

• Supportive institution

• On-going funding source
  • As little as $3,000/year, as much as $100,000/year
  • Poison center/ poison prevention funding
  • Xcel Energy grant

• Not reliant on DEA days

• Good relationship with law enforcement

• Effective advertising

• Consistent, on-going program
Law enforcement

- We started our program before DEA days began
- Developed relationship with local law enforcement
- Presented organized plan
- Ask for two officers (+/-)
- May need to pay for officers (~$35-$50/hr)
- Will law enforcement need to store/destroy or deliver to DEA?
Be safe

- Recognize that events may be target for theft
- Consider this when choosing site
- Drive-thru events keep level of separation between participants and staff
- Restricted indoor area for packaging of meds, weighing, etc.
- One officer inside, one outside (with patrol car visibility if possible)
- Choose event staffing wisely (background checks?)
Be prepared

• Will your event accept all medications?
  • Dallas DEA restricts inhalers
  • Chemotherapy?

• Sharps
  • People will often bring sharps to a drug take-back event
  • Prepare employees: How to prevent needle sticks
Structure of Medication Cleanout Events
Advertising

• Med Cleanout is usually low budget
• We print tear pads for all pharmacies in Amarillo and deliver these two weeks in advance of event
• Also deliver two flyers to each pharmacy
• Amarillo population = ~195,000
• Flyers and tear pads for all pharmacies
Front Page Newspaper Sticky Ad ~$2,000 in Amarillo
Prevent poisonings, abuse, and misuse. Protect the environment.

Bring unused, expired or no longer needed medications

*Please leave medications in their original containers. Households Only - See website or call for restrictions.

Drive Through at:
Texas Tech School of Pharmacy
1718 Pine Street
Saturday, March 25th
10:00am to 2:00pm

Medication Cleanout
MedicationCleanout.com
(806) 414-9495

Policé

TEXAS TECH UNIVERSITY HEALTH SCIENCES CENTER
School of Pharmacy

Hendrick Health System
DOCTORS RECOMMEND:
Free, Safe, Confidential Disposal Of Expired, Leftover, Unneeded Medicines

www.MedicationCleanout.com       (806) 414-9495

Medication
Cleanout

Take expired, leftover, unnecessary medicines to Medication Cleanout™. Join the Texas Panhandle Poison Center with Texas Tech University Health Sciences Center, Xcel Energy® and the Amarillo Police Department in making our communities safer. Please leave medications in their original containers to protect our volunteers. Identifying information will be obscured from all containers at Medication Cleanout™.

Saturday • September 12th
10:00 a.m.—2:00 p.m.
One day only
Texas Tech School of Pharmacy
1300 S. Coulter

No clinic or pharmacy loads, please. Households only.
Drive thru
Curbside Surveys & Collection Mechanism

Surveys allow tracking participation; “what number are we on?”
We staple one survey to each paper bag; pull apart as surveys are completed

Can number bags 1-300?
- Tailor survey to collect info that will help your organization
- Shorter is better
- If staff is limited and event is busy, may not be able to complete surveys, or may have to sample (i.e. every 5th car)
- Avoid identifying questions (name, address, phone, etc.)
- DEA does not like surveys, but they are not prohibited by Code of Federal Regulations

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<table>
<thead>
<tr>
<th>Question</th>
<th>Selections</th>
<th>Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Did you bring any of these items today?</td>
<td>___ Yes ___ No ___ I don't know</td>
<td></td>
</tr>
<tr>
<td>2. What is your home zip code (postal code – where you receive your mail)?</td>
<td>_______________</td>
<td></td>
</tr>
<tr>
<td>3. Have you participated in a Medication Cleanout event before?</td>
<td>___ Yes, how many? ___ No</td>
<td></td>
</tr>
<tr>
<td>4. Do you receive any medications through a mail-order service?</td>
<td>___ Yes ___ No ___ I don't know</td>
<td></td>
</tr>
<tr>
<td>5. What is the main reason for disposing of these medications today?</td>
<td>___ Not sure what they’re for ___ No longer using/don’t need ___ Patient died ___ Medication expired ___ Other (please specify: __________________)</td>
<td></td>
</tr>
<tr>
<td>6. WhichMEDICATION DISPOSAL IS MOST important?</td>
<td>[___ prevent abuse] [___ protect the environment] [___ prevent poisonings]</td>
<td></td>
</tr>
<tr>
<td>7. What would you have done with the products if this event had not taken place?</td>
<td>___ thrown them in the trash ___ kept them ___ flushed them down toilet ___ other: __________________</td>
<td></td>
</tr>
<tr>
<td>8. Do you have the number to the Poison Center?</td>
<td>Somewhere in your home? ___ Yes ___ No</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Saved in your cell phone? ___ Yes ___ No</td>
<td></td>
</tr>
</tbody>
</table>

Thank you for your participation!
Gloves

• I recommend everyone wear gloves
• Sticky stuff
• Potentially contagious stuff
• Leaking stuff
Processing

• Bring bags to secure area
• DEA provided boxes if DEA event
• Weigh boxes
• Label boxes with number & weight
• Record outcome measures
• If collecting sharps, will need own containers
Permanent Boxes vs. 1-Day Events

- Amarillo has installed two permanent collection boxes over last 18 months (Walgreens, Tx Tech Pharmacy)
- Both sheriffs’ departments have permanent disposal bins
- Volume of meds collected at our take back events continues to increase
Scaleability

• Take back events can be scaled based on amount of help
• For small community, handful of volunteers is sufficient
• Large events, lots of volunteers, add on data collection
Questions?

Jeanie Jaramillo-Stametz

Jeanie.Jaramillo@ttuhsc.edu

(806) 414-9402 (poison center)

(806) 376-0039 (mobile)

(806) 414-9495 (Med Cleanout)
# Take-Back Day Results

<table>
<thead>
<tr>
<th></th>
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<td>Sun City</td>
<td>915</td>
<td>849</td>
<td>865</td>
<td>1,123</td>
<td>944</td>
<td>1,290</td>
<td>1,294</td>
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<tr>
<td>Gtown - Downto</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>246</td>
<td>121</td>
<td>199</td>
<td>368</td>
</tr>
<tr>
<td>Cedar Park</td>
<td>* 428</td>
<td>230</td>
<td>343</td>
<td>300</td>
<td>678</td>
<td>777</td>
<td>587</td>
</tr>
<tr>
<td>Round Rock</td>
<td>* 372</td>
<td>276</td>
<td>445</td>
<td>550</td>
<td>703</td>
<td>665</td>
<td>608</td>
</tr>
<tr>
<td>Taylor</td>
<td>* 114</td>
<td>122</td>
<td>148</td>
<td>142</td>
<td>293</td>
<td>337</td>
<td>100</td>
</tr>
<tr>
<td>Leander</td>
<td>* -</td>
<td>-</td>
<td>-</td>
<td>161</td>
<td>406</td>
<td>299</td>
<td>216</td>
</tr>
<tr>
<td>Liberty Hill</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>35</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>915</strong></td>
<td><strong>1,763</strong></td>
<td><strong>1,493</strong></td>
<td><strong>2,305</strong></td>
<td><strong>2,218</strong></td>
<td><strong>3,604</strong></td>
<td><strong>3,740</strong></td>
</tr>
</tbody>
</table>

**Trends**
KEYS TO SUCCESS

1) Buy-in from all stakeholders
2) Buy-in from City Council
3) Obtain grant
4) Create ads / communication / training
5) Implement
**SharpsTRACER**

**Received Monthly By Date Range**

*From 10/15/2016 to 5/17/2017*

<table>
<thead>
<tr>
<th>Date</th>
<th>Total Received</th>
<th>Total Received Weight (lbs)</th>
<th>Average Received Weight (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nov 2016</td>
<td>4</td>
<td>216.24</td>
<td>54.06</td>
</tr>
<tr>
<td>Dec 2016</td>
<td>4</td>
<td>229.75</td>
<td>57.44</td>
</tr>
<tr>
<td>Jan 2017</td>
<td>4</td>
<td>206.22</td>
<td>51.56</td>
</tr>
<tr>
<td>Feb 2017</td>
<td>2</td>
<td>92.21</td>
<td>46.11</td>
</tr>
<tr>
<td>Mar 2017</td>
<td>5</td>
<td>230.91</td>
<td>47.78</td>
</tr>
<tr>
<td>Apr 2017</td>
<td>5</td>
<td>225.99</td>
<td>45.20</td>
</tr>
<tr>
<td>May 2017</td>
<td>2</td>
<td>97.74</td>
<td>48.87</td>
</tr>
</tbody>
</table>

---

**Graphs:**

*Upper Graph: Monthly Received Totals*

*Lower Graph: Monthly Total Received Weight (lbs)*
Future Considerations:

- Additional public/private partnerships
- Extended Producer Responsibility
- Encourage COG to form a funded program
Jordan Fengel, B.S.
City of Georgetown Environmental Services Program Coordinator
Chair of Texas Product Stewardship Council
jordan.fengel@georgetown.org
Office: 512-819-3171
HISTORY OF DRUG TAKE BACK IN FORT WORTH

Presenter: Debbie Branch, City of Fort Worth, Superintendent with Solid Waste Services
SAFE DISPOSAL —
TAKE BACK EVENTS

Predominant option in Fort Worth prior to 2010 was LANDFILL or FLUSH
“I buried my medicine in the backyard because I didn’t know what else to do.”
FORT WORTH’S 1ST RX TAKE BACK DAY
SEPARATED CONTROLS VS. NON-CONTROLLED

TCU Nursing Students sorted Meds:
47 lbs of controlled vs. 1200 lbs of non-controlled

Police took the controlled Rx and the City of Fort Worth Environmental Collection Center took the remainder
DRUG TAKE BACK PARTNERS

- FIRST EVENT Partners

- City of Fort Worth
  - Police
  - Water Department
  - Environmental Management
    - Environmental Collection Center

- Partners since 1st Event
  - TCU School of Nursing (Fall 2010)
  - DEA (Spring 2011)
  - Poison Control Center (Sp 2011)
  - Safe Kids of Tarrant County (Sp 2011)
  - UNT Health Science Center School of Nursing
  - JPS Hospital
  - Walgreens (Spring 2014)
  - Texas Health Harris Methodist Hospital
  - Other Municipalities
<table>
<thead>
<tr>
<th>Date</th>
<th># of Sites</th>
<th>Attendees</th>
<th>Weight</th>
<th>Lbs/car</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/13/2010</td>
<td>1</td>
<td>202</td>
<td>1247</td>
<td>6.2</td>
</tr>
<tr>
<td>4/30/2011</td>
<td>2</td>
<td>213</td>
<td>898</td>
<td>4.2</td>
</tr>
<tr>
<td>10/29/2011</td>
<td>3</td>
<td>195</td>
<td>634</td>
<td>3.3</td>
</tr>
<tr>
<td>4/28/2012</td>
<td>4</td>
<td>650</td>
<td>2329</td>
<td>3.6</td>
</tr>
<tr>
<td>9/29/2012</td>
<td>5</td>
<td>511</td>
<td>2150</td>
<td>4.2</td>
</tr>
<tr>
<td>4/27/2013</td>
<td>3</td>
<td>423</td>
<td>1206</td>
<td>2.9</td>
</tr>
<tr>
<td>10/26/2013</td>
<td>6</td>
<td>478</td>
<td>1597</td>
<td>3.3</td>
</tr>
<tr>
<td>4/16/2014</td>
<td>8</td>
<td>504</td>
<td>1771</td>
<td>3.5</td>
</tr>
<tr>
<td>9/27/2014</td>
<td>8</td>
<td>653</td>
<td>1953</td>
<td>3.0</td>
</tr>
<tr>
<td>9/26/2015*</td>
<td>9</td>
<td>923</td>
<td>3110</td>
<td>3.4</td>
</tr>
<tr>
<td>4/30/2016</td>
<td>9</td>
<td>945</td>
<td>3495</td>
<td>3.7</td>
</tr>
<tr>
<td>10/22/2016</td>
<td>8</td>
<td>707</td>
<td>2222</td>
<td>3.1</td>
</tr>
<tr>
<td>4/29/2017</td>
<td>8</td>
<td>620</td>
<td>2293</td>
<td>3.7</td>
</tr>
</tbody>
</table>

AVG/EVENT: 540, 1916, 3.5
Drug Take Back Wt (lbs) & Participation since 2010

Yellow Arrow –
No Spring DEA event & Fort Worth saw removal of drug take back kiosks

Red Arrow –
Fort Worth implemented Medicine Return Envelope Pilot Program
DRUG TAKE BACK KIOSKS
Spearheaded by Safe Community Coalition.

TCU nursing students petitioned funding by local hospitals.

Kiosks funded by:
* Cook Children’s Hospital
* Safe Kids of Tarrant County
* Fort Worth Emergency Services Collaboration (Texas Health FW)
September 2014 - Federal Ruling allows the following to accept medication:

- Manufacturers
- Distributors
- Reverse distributors
- Narcotic treatment programs
- Retail pharmacies
- Hospitals/clinics with onsite pharmacy
- Long-term care facilities

KIOSKS SUCCESSFUL UNTIL OCT 2014

Fort Worth removed drug take back kiosks AND DEA stopped sponsoring the Drug Take Back Day. No drug take back event spring of 2015.

Back to square one.
<table>
<thead>
<tr>
<th></th>
<th>North</th>
<th>East</th>
<th>South</th>
<th>West</th>
<th>Central</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nov ‘16</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Dec ‘16</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>32</td>
<td>0</td>
<td>32</td>
</tr>
<tr>
<td>Jan ‘17</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>14</td>
<td>0</td>
<td>14</td>
</tr>
<tr>
<td>Feb ‘17</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>54.5</td>
<td>29</td>
<td>83.5</td>
</tr>
<tr>
<td>Mar ‘17</td>
<td>0</td>
<td>56</td>
<td>0</td>
<td>30</td>
<td>0</td>
<td>86</td>
</tr>
<tr>
<td>Apr ‘17</td>
<td>14</td>
<td>32</td>
<td>42</td>
<td>59</td>
<td>0</td>
<td>147</td>
</tr>
</tbody>
</table>

**Improvements:** 5 vs. 3  
**Average 72.5 lbs/month**
OTHER FORT WORTH DRUG TAKE BACK KIOSKS

UNT Health Science Center
- Box installed 2013

Walgreens
- Installed Fall 2016 – One in Fort Worth proper, one on the border in Haltom City
DRUG RETURN ENVELOPES
Fort Worth implemented a pilot program during the fall of 2016.

Available by request.

Distributed 1166 to date.

Cost $4.64/each

Return Rate = 25%
7 years worth of lessons
**SURVEY RESPONSE TO QUESTION:**

**WHAT WOULD YOU DO WITH DRUGS WITHOUT TAKE BACK EVENT?**

<table>
<thead>
<tr>
<th>Event Type</th>
<th>11/13/2010 (%)</th>
<th>4/29/17 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kept them</td>
<td>58%</td>
<td>65%</td>
</tr>
<tr>
<td>Flushed them</td>
<td>6%</td>
<td>3%</td>
</tr>
<tr>
<td>Thrown them in trash</td>
<td>25%</td>
<td>19%</td>
</tr>
<tr>
<td>Taken to HHW event</td>
<td>5%</td>
<td>N/A</td>
</tr>
<tr>
<td>Sent to manufacturer</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Other</td>
<td>5%</td>
<td>11%</td>
</tr>
</tbody>
</table>
SUMMARY

- Feel public awareness is increasing and efforts making a difference.
- Don’t put all eggs in one basket.
- Involve many partners!
- Need to be as easy to safely dispose of medicine as it is to buy it.
QUESTIONS?

Debbie Branch
City of Fort Worth
Code Compliance
Superintendent
Debbie.branch@FortWorthTexas.Gov
817-392-5151
Other Drug Take-Back Programs
Thank You To Our Sponsors!

- CWD
- Waste Management
- Community Waste Disposal.com
- North Texas Municipal Water District
- Wastewater And Treatment Education Roundtable
- Defend Your Drains
- Sharps Compliance, Inc.
- NTCRA North Texas Corporate Recycling Association
- Product Stewardship Institute
San Francisco Safe Medicine Disposal Program

Eileen Leung
Environmental Need
Public Safety Need
Where Does Medicine Go?
San Francisco’s Past Efforts
SF Pilot Program launched April 2012
13 Independent Pharmacies
All 10 SFPD Stations
SAFE MEDICINE DISPOSAL

To find sites in San Francisco:

Para encontrar sitios en San Francisco:

SAFE MEDICINE DISPOSAL LOCATIONS

DISPOSICION SEGURA DE LOS MEDICAMENTOS AQUI

Pharmacies:

- Current Drug Store
- Charter's Pharmacy
- City Medical Pharmacy
- Discount Pharmacy
- Easy Vii Plus Pharmacy
- Police Station

All San Francisco police stations collect unused medicines.

Find your nearest police station by calling 311 or visit our website, sfenvironment.org/recyclinghere

*Controlled substances can only be accepted at Police Stations.

sfenvironment.org/recyclinghere (415) 355-3700

Printed on 100% post-consumer recycled paper.
Collected 87,000 Pounds of Medicine
That’s the Weight of 9 African Elephants!
Residents Prefer Pharmacies

Pounds Collected by Location Type

Pharmacies

Police Stations
Pharmacy Based Collection Works
SFPD Also Host DEA Days
Pharmaceutical Industry to Run Program

PhRMA
Manufacturers Submit Stewardship Plan
Department Oversees Implementation
Requires 5 Drop-off Locations Per District
Required to Promote Program
Received One Viable Stewardship Plan

MED-Project™
Medication Education & Disposal
Plan Approved in July 2016
There Have Been Challenges
26 Medicine Drop-Off Locations
33 Mail-Back Distribution Locations

This postage paid shipment MUST be in this provided envelope. Any other packaging will be rejected.
Take-Back Events
More Disposal Options Now
Ordinance is Working!
Thank you!

Eileen Leung
Safe Medicine Disposal Program
SF Department of the Environment
eileen.leung@sfgov.org

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DEA Drug Take Back Regulations

June 7, 2017
DEA Diversion Program
The mission of the Office of Diversion Control is to prevent, detect, and investigate the diversion of pharmaceutical controlled substances and listed chemicals from legitimate channels of distribution while...

ensuring an adequate and uninterrupted supply of controlled substances to meet legitimate medical, commercial, and scientific needs
Closed System of Distribution

1,683,023 (as of 5-24-17)
- Practitioners: 1,251,528
- Retail Pharmacies: 71,665
- Hospital/Clinics: 17,653
The Secure and Responsible Drug Disposal Act of 2010

- CSA establishes the closed system of distribution-stop diversion into illicit market before the end user
- The Secure destruction of unwanted pharmaceuticals-stop diversion into the illicit market after the end user
- Final regulations became effective October 9, 2014
Most Frequent Method of Obtaining a Pharmaceutical Controlled Substance for Non Medical Use

Friends and Family...For Free!!
FINAL RULE-THREE OPTIONS

- Take Back Events
- Mail-Back Programs
- Collection Receptacles
TAKE BACK EVENTS

- Law Enforcement events - Law Enforcement Officer has to be there, has to be in charge of the drugs, has to stay with the drugs, has to take the drugs with them, has to destroy the drugs.

- Non-Law Enforcement events - Law Enforcement Officer has to be there, has to be in charge of the drugs, has to stay with the drugs, has to take the drugs with them, has to destroy the drugs.
MAIL BACK PROGRAMS

- For sale
- Given away
- Goes back to a DEA Registrant for final destruction
Collection Receptacle

- AUTHORIZED-Hospitals and Pharmacies may maintain collection receptacles at their business.
- AUTHORIZED-Hospitals and Pharmacies may place receptacles at Long Term Care Facilities.
A Fourth Option?

- Federal, State, Tribal and Local Law Enforcement
  - At the law enforcement physical location
National Take Back Initiative
April 30, 2016

Got Drugs?

Turn in your unused or expired medication for safe disposal Saturday, October 28, 2017

10:00 AM – 2:00 PM
11th National Take Back Day: April 30, 2016

Total Weight Collected (pounds): 893,498 (447 Tons)
13th National Take Back Day: April 29, 2017

Total Weight Collected (pounds): 900,386 lbs. (450 Tons)

MA 3,435
RI 8,614
CT 27,140
VT 5,553
NH 2,690
PR & VI 43,408
NJ 7,407
DE 12,903
MD 1,124
DC 4
Overseas: 25

Drug Enforcement Administration Diversion Control Program
Public Health Epidemic
Opioid Overdose Deaths

2000-2014:

Unintentional drug overdose deaths in the US increased 137%, which was a 200% increase in overdose deaths involving opioids.

2015:

Over 47,000 drug-related overdose deaths

28,647 deaths involved opioids, including heroin
19,000 deaths involved prescription opioid
1 death every 11.16 minutes
46 deaths by end of a normal work day (8 ½ hours)
129 deaths every 24 hours

CDC National Center for Health Statistics/Morbidity and Morality Weekly Report (MMWR); January 1, 2016
How Much Hydrocodone?

- The United States makes up 5 percent of the world's population.

- What percentage of the world's hydrocodone usage does the United States make up?
Hydrodocone Top 10 List

- Guatemala 10 Kilograms
- Mexico 10 Kilograms
- Vietnam 20 Kilograms
- China 20 Kilograms
- Denmark 25 Kilograms
- Syrian Republic 50 Kilograms
- Germany 60 Kilograms
- Canada 100 Kilograms
- United States 79,700 Kilograms (99.5%)

Source: UN International Narcotics Control Board
Website. Estimated World Requirements of Narcotic Drugs in grams for 2015 www.incb.org
The Trinity

- **Hydrocodone**
- **Carisoprodol**
- **Alprazolam**

**Muscle Relaxant**

**Benzodiazepine**

C-IV as of 1/11/2012
Promethazine with Codeine
Happy 32nd Birthday Brandon
Fentanyl

- Fentanyl Patches
- Fentanyl Citrate dispensed in a berry flavored lollipop-type unit
- Fentanyl is 100 times more potent than morphine
- Intended to be used for chronic cancer pain & only for people who are tolerant to prescription opioid (narcotic) pain medicines
- Abused for its intense euphoric effects

Actiq®
What do these two things have in common?????
Dear Medics, Police, and Firefighters. Please share this with your colleagues. If you find drugs on a patient, be extremely careful when handling them. A new drug is in town called “carfentanil” which is so potent that it landed two first responders in the hospital from inhaling dust while closing a ziplock bag a patient had. Expect people who OD to take 10x more Narcan to start breathing again. The picture compares the lethal amounts of heroin, fentanyl, and carfentanil.
Mixing Fentanyl

[Diagram showing the mixing of tablet matrix, active substances, and the resulting product for tableting.]
Non-medical Prescription Opioid Users Who Try Heroin

- Prescription opioid use is a risk factor for heroin use. Approximately 4 out of 5 recent heroin initiates ages 12-49 used prescription opioids non-medically before heroin initiation.¹

- Transition from prescription opioid abuse to heroin use is relatively rare; approximately 4 percent of prescription opioid abuse initiates begin using heroin within five years of their initiation of prescription opioid abuse.²

- Injection-drug users report that tolerance motivates them to try heroin.³

- New research shows that heroin’s effects, price, availability, and ease of use motivate heroin users who formerly used prescription opioids.⁴

2. Ibid
Past Month and Past Year Heroin Use Among Persons Aged 12 or Older: 2002-2013

+ Difference between this estimate and the 2013 estimate is statistically significant at the .05 level.

Date Prepared/ Source: 2013 National Survey on Drug Use and Health, published September 2014. Figure 2.4.
Thank You To Our Sponsors!

Community Waste Disposal.com

Wastewater And Treatment Education Roundtable

North Texas Municipal Water District

Defend Your Drains

North Texas Corporate Recycling Association

Product Stewardship Institute
Facilitated Session:
Designing a take-back system for NCTCOG
How many collection sites are needed?
- Large geographic area with high growth expected
- Diversity of small, medium, and large cities

Location?
- Retail pharmacies, law enforcement, long-term care, hospitals

Type?
- Mix of rural, suburban, urban, tribal

Collection method?
- On-site receptacle, mail-back, events

Outreach/education
- Promotional campaign & public awareness survey
Drug Take-Back

How many collection sites needed?

• EPR convenience standards for collection sites:
  ✓ Range from 1/6,500 residents to 1/60,000 residents
  ✓ Most fall between 1/15,000 – 1/20,000

• Variation depends on:
  ✓ Political feasibility
  ✓ Availability of potential collection sites (# of local pharmacies)
  ✓ Urban vs. rural environments

• Mandatory pharmacy participation in some EPR laws
Launching a Drug Take-Back Pilot Project

• Gather data
  o Volumes
  o Costs

• Build relationships

• Follow How-to Guide
Thank You To Our Sponsors!

Community Waste Disposal.com

NORTH TEXAS MUNICIPAL WATER DISTRICT

Wastewater And Treatment Education Roundtable

DEFEND YOUR DRAINS

SHARPS Compliance, Inc.

North Texas Corporate Recycling Association

Product Stewardship Institute
Funding Options for Drug Take-Back Programs

- Government
- COG/potential grants
- TX state funding
- Law enforcement (municipality)
- Retailer pharmacies
- Manufacturers/EPR
- Other?
Safe Drug Disposal Flier

Consumer messaging on safest drug disposal methods

www.bit.ly/leftover-meds
Implementation of NCT Drug Take-Back Program

- Who should be the Lead implementing agency?
- Who is interested in running a pilot?
- What information do you need to succeed?
- Are any changes needed to state or regional regulations/statutes?
- Any additional advice to help design a drug take-back system for NCT?
- Any additional partners that should be included in implementation?
PSI Pilot Coalition

Key Stakeholders

1. Pharmacies
2. Law enforcement
3. Public health agencies
4. Waste managers/recyclers
5. Wastewater treatment
6. Environmental advocates
7. Reverse distributors
8. Manufacturers
9. Medical community
10. Drug abuse/recovery centers
11. Poison control
12. Universities/ext. programs
13. Local drug abuse prevention/safe med disposal coalitions, etc.
Next Steps
for North Central Texas
Thank you!

Product Stewardship Institute

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Scott@productstewardship.us

Vivian Fuhrman  
Sr. Associate for Policy & Programs  
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www.productstewardship.us