CEPOP National Webinar: 
*Combatting the Opioid Epidemic Through Safe Disposal Strategies*

Monday, November 18, 2019
1:00pm – 2:00pm ET
Today’s Agenda

• Welcome and Introductory Remarks
• Providing Communities Safe Disposal Resources to Combat Misuse & Diversion
  General Arthur T. Dean, Chairman and CEO, Community Anti-Drug Coalitions of America
• The What, Why and How of Safe Opioid Disposal
  Chad Brummett, MD, University of Michigan Medical School and Michigan Opioid Prescribing Engagement Network
• Improving Opioid Disposal in Pediatric Patients
  Jennifer Cooper, PhD, Nationwide Children’s Hospital and The Ohio State University
• Facilitated Question & Answer with our Speakers
• Concluding Remarks
The Collaborative for Effective Prescription Opioid Policies (CEPOP)

- 85 national organizations representing public and private-sector stakeholders.
- Convened by CADCA and The Honorable Mary Bono in October 2014.
- Dedicated to a comprehensive and coordinated opioid epidemic response.
- www.CEPOPonline.org
The Collaborative for Effective Prescription Opioid Policies (CEPOP)

**CEPOP Working Groups**
- Prevention
- Safe Use
- Safe Disposal and Anti-Diversion
PROVIDING COMMUNITIES SAFE DISPOSAL RESOURCES TO COMBAT MISUSE & DIVERSION

Gen. Arthur T. Dean

Chairman & CEO, CADCA
The What, Why and How of Safe Opioid Disposal

Chad Brummett, MD
The What, Why and How of Safe Opioid Disposal

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Twitter: @drchadb
Most Opioids Prescribed for Outpatient General Surgery Procedures Go Unused

72% OF PRESCRIBED PILLS WENT UNUSED

Why Dispose?

Risks

Every 10 minutes a child visits the ER for accidental medication poisoning

Misuse

3 of 5 teens say it’s easy to get prescription opioids from their parents’ medicine cabinet

7 out of 10 people who misuse opioids got them from friends or family

Abuse

3 of 4 heroin users started with prescription opioid use
Sources of Prescription Opioid Abuse

- Obtained for free from friend or relative: 55.0%
- Taken from friend or relative without permission: 4.8%
- Purchased from friend or relative: 11.4%
- Purchased from drug dealer or stranger: 7.1%
- Prescribed by clinician: 17.3%
- Other: 4.4%

Source: CDC 2011/Drugfree.org
DID YOUR HEALTHCARE PROVIDER TALK TO YOU ABOUT MEDICATION DISPOSAL?

What do I do with my leftover medication?

Do not keep your opioids! Dispose of them as soon as possible!

HAVE A DISPOSAL PLAN
### How to Store and Dispose?

**Storage**

- Store opioids out of sight and reach of children, teen, and pets.
- Store opioids in private areas and lock up your pills if possible. Do not store in common rooms (ex: bathrooms) or purses.
- Keep a count of how many pills you have left.

**Disposal**

- Use a permanent medication drop box:
  - [Michigan-OPEN.org/takebackmap](https://Michigan-OPEN.org/takebackmap)
- Drop off at a community Medication Take Back Event.
- Use household trash as last resort:
  - Scratch out personal information and dispose original container.
  - Mix with unappealing substances (ex: coffee grounds) and throw away.
- **DO NOT** flush opioids down the toilet.
Activated Charcoal Bag for In-Home Disposal
Increased Self-Reported Opioid Disposal after Surgery

Brummett CM et al, JAMA Surgery 2019
Patient & Community Education

Stopping the opioid epidemic starts with educating our communities.

Share Michigan OPEN's brochures, flyers, and posters with your patients and fellow providers.

Brochures

Surgery: Opioids and Pain Management
Ask questions and know the facts before using opioids for your pain.
- What is an opioid?
- Understanding the risks of using opioids
- Understanding pain after surgery
- Using opioids safely
- Safe storage & disposal of opioids

Also available in Spanish and Arabic through our Customization Request Form.

Customization Request Form
First Name *

Last Name *

Organization *

Customized materials with your organization's logo are available by request, free of charge. Materials will be sent as a PDF for you to print using your preferred method.

Please complete the request form below, and a member of the Michigan OPEN team will be in contact with you to confirm your request and collect your organization's logo.
Improving Opioid Disposal in Pediatric Patients

Jennifer Cooper, PhD
Improving Opioid Disposal in Pediatric Patients

Jennifer Cooper, PhD
Principal Investigator, Center for Surgical Outcomes Research and Center for Innovation in Pediatric Practice, Abigail Wexner Research Institute at Nationwide Children’s Hospital
Assistant Professor of Pediatrics and Epidemiology, The Ohio State University
Disclosures

• This work was supported by The Ohio State University Opiate Innovation Fund and Award Number UL1TR002733 from the National Center for Advancing Translational Sciences.

• No other disclosures
Importance of opioid disposal

- Opioids are an important component of pain management in children recovering from severe injuries or surgery, but these medications are often prescribed in excess and rarely disposed of appropriately\(^1\-^5\)
  - <30% of surgical patients dispose of their excess opioids
- Lack of prompt and proper opioid disposal places children at risk of accidental ingestion and enables diversion for non-medical use
- US FDA recommends utilizing take-back options for disposal of unused or expired opioids
  - If these are inaccessible, flushing is recommended

Impact of educational interventions

• Studies evaluating the provision of educational materials describing recommended methods for safe disposal to adult surgical patients have had mixed results¹-⁴

• Lack of consistent impact may be due to the inconvenience of recommended methods of disposal or patients’ desire to retain opioids for future pain

Drug disposal bags

• Activated charcoal adsorbs medication in pills, liquids, or patches, allowing for safe disposal in home garbage

• Numerous government organizations, health systems, and pharmacy chains are now distributing these bags or similar products

• Unclear whether providing these bags to pediatric surgical patients increases proper postoperative opioid disposal
Study Population and Intervention

- Included parents/guardians of children aged 1-17 who were having outpatient otolaryngologic or urologic surgery and were expected to be prescribed an opioid at discharge
Flow of Participants in Trial

Assessed for eligibility (n=210)

Excluded (n=8)
- Not meeting inclusion criteria (n=5)
- Declined to participate (n=2)
- No guardian available to consent (n=1)

Randomized (n=202)

Received disposal bag (n=103)

Lost to follow-up (n=11)
- No opioid prescribed (n=4)
- No survey completed (n=7)

Analyzed in intention to treat analyses (n=92)
- Analyzed in per protocol analyses (n=77)
- Excluded due to not filling an opioid prescription (n=8)
- Excluded due to having no leftover opioids (n=7)

Received standard care (n=99)

Lost to follow-up (n=10)
- No opioid prescribed (n=5)
- No survey completed (n=5)

Analyzed in intention to treat analyses (n=89)
- Analyzed in per protocol analyses (n=77)
- Excluded due to not filling an opioid prescription (n=1)
- Excluded due to having no leftover opioids (n=11)
## Study Population Characteristics

<table>
<thead>
<tr>
<th>Study Population Characteristics</th>
<th>Disposal Bag (N= 103)</th>
<th>Standard Care (N= 99)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Patient age in years (median, interquartile range)</strong></td>
<td>6 (5-9)</td>
<td>7 (6-10)</td>
</tr>
<tr>
<td><strong>Surgical procedure</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tonsillectomy with or without adenoidectomy</td>
<td>75 (72.8)</td>
<td>79 (79.8)</td>
</tr>
<tr>
<td>Inguinal hernia repair</td>
<td>12 (11.7)</td>
<td>5 (5.1)</td>
</tr>
<tr>
<td>Orchiopexy</td>
<td>10 (9.7)</td>
<td>3 (3.0)</td>
</tr>
<tr>
<td>Other</td>
<td>27 (26.2)</td>
<td>26 (26.3)</td>
</tr>
<tr>
<td><strong>Type of opioid prescribed (N=193)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hydrocodone</td>
<td>72 (72.7)</td>
<td>78 (83.0)</td>
</tr>
<tr>
<td>Oxycodone</td>
<td>27 (26.5)</td>
<td>16 (17.0)</td>
</tr>
<tr>
<td><strong>Opioid formulation (N=193)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pills</td>
<td>3 (3.0)</td>
<td>5 (5.3)</td>
</tr>
<tr>
<td>Liquid</td>
<td>96 (97.0)</td>
<td>89 (94.7)</td>
</tr>
<tr>
<td>Anyone with chronic pain in household</td>
<td>18 (17.5)</td>
<td>12 (12.1)</td>
</tr>
<tr>
<td>Anyone using prescribed opioids in household</td>
<td>3 (2.9)</td>
<td>6 (6.1)</td>
</tr>
</tbody>
</table>
## Outcomes

<table>
<thead>
<tr>
<th></th>
<th>Disposal Bag (N= 92)</th>
<th>Standard Care (N= 89)</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Intention to treat analysis</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proper opioid disposal</td>
<td>66 (71.7)</td>
<td>50 (56.2)</td>
<td>0.03</td>
</tr>
<tr>
<td>Opioid disposal by any method</td>
<td>67 (72.8)</td>
<td>54 (60.7)</td>
<td>0.01</td>
</tr>
<tr>
<td>Filled opioid prescription</td>
<td>84 (91.3)</td>
<td>88 (98.9)</td>
<td>0.03</td>
</tr>
<tr>
<td>Any opioids leftover after pain had resolved</td>
<td>77 (83.7)</td>
<td>77 (86.5)</td>
<td>0.37</td>
</tr>
<tr>
<td><strong>Method of disposal (N=67, 54)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drug disposal bag</td>
<td>60 (89.6)</td>
<td>0 (0)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Toilet/sink</td>
<td>6 (9.0)</td>
<td>34 (63.0)</td>
<td></td>
</tr>
<tr>
<td>Threw in trash after combining with unpalatable substance</td>
<td>0 (0)</td>
<td>7 (13.0)</td>
<td></td>
</tr>
<tr>
<td>Took to drug takeback event</td>
<td>0 (0)</td>
<td>2 (3.7)</td>
<td></td>
</tr>
<tr>
<td>Took to law enforcement agency or authorized pharmacy</td>
<td>0 (0)</td>
<td>7 (13.0)</td>
<td></td>
</tr>
<tr>
<td>Threw away in trash as is</td>
<td>1 (1.5)</td>
<td>3 (5.6)</td>
<td></td>
</tr>
<tr>
<td>Dumped in backyard</td>
<td>0 (0)</td>
<td>1 (1.9)</td>
<td></td>
</tr>
<tr>
<td>Used disposal bag to dispose of other medications</td>
<td>10 (10.9)</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td><strong>Per protocol analysis</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proper opioid disposal (N=77, 77)</td>
<td>66 (85.7)</td>
<td>50 (64.9)</td>
<td>0.003</td>
</tr>
<tr>
<td>Opioid disposal by any method (N=77, 77)</td>
<td>67 (87.0)</td>
<td>54 (70.1)</td>
<td>0.01</td>
</tr>
</tbody>
</table>
Conclusions from Trial

• Providing a drug disposal bag to the caregivers of children receiving postoperative opioids increases the likelihood of opioid disposal.

• High rate of opioid disposal in our control group likely reflects our institution’s efforts to instruct all families about proper opioid use, storage, and disposal.

• Providing a drug disposal bag to families may emphasize the dangers of opioid use, leading some to avoid filling their child’s prescription.

• Key limitations:
  – Ambulatory surgical patients only
  – Most children were young and 97% received liquid medication.
Second Opioid Disposal Study

• Prospective pre/post cohort study in our institution’s outpatient pharmacies
  – Included all parents/guardians filling an opioid prescription for their child (age<18 years) and young adult patients (age≥18 years) filling their own opioid prescriptions at one of our outpatient pharmacies
  – First 6 weeks: Standard education (no disposal bag)
  – Second 6 weeks: Standard education, disposal bag, and instructions on its use
  – Follow-up survey to assess opioid use and disposal completed at 4-7 weeks
# Study Population Characteristics

<table>
<thead>
<tr>
<th></th>
<th>Disposal Bag (N= 83)</th>
<th>Standard Care (N= 63)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type of participant</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parent/guardian</td>
<td>78 (94.0)</td>
<td>61 (96.8)</td>
</tr>
<tr>
<td>Patient (≥ 18 years)</td>
<td>5 (6.0)</td>
<td>2 (3.2)</td>
</tr>
<tr>
<td><strong>Age of the patient prescribed opioids</strong></td>
<td>11 (7-15)</td>
<td>11 (5-15)</td>
</tr>
<tr>
<td><strong>Reason opioids were prescribed</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Procedure/surgery</td>
<td>66 (79.5)</td>
<td>57 (90.5)</td>
</tr>
<tr>
<td>Injury/burn</td>
<td>15 (18.1)</td>
<td>3 (4.8)</td>
</tr>
<tr>
<td>Chronic or recurrent pain</td>
<td>7 (8.4)</td>
<td>7 (11.1)</td>
</tr>
<tr>
<td><strong>Opioid formulation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liquid</td>
<td>45 (54.2)</td>
<td>37 (58.7)</td>
</tr>
<tr>
<td>Pills</td>
<td>38 (45.8)</td>
<td>26 (41.3)</td>
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## Outcomes

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<tbody>
<tr>
<td>Any opioids leftover after pain had resolved</td>
<td>60 (72.3)</td>
<td>48 (76.2)</td>
<td>0.87</td>
</tr>
<tr>
<td>Opioid disposal (N=60, 48)</td>
<td>43 (71.7)</td>
<td>25 (52.1)</td>
<td>0.04</td>
</tr>
<tr>
<td>Method of disposal (N=43, 25)</td>
<td></td>
<td></td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Drug disposal bag</td>
<td>41 (95.4)</td>
<td>0 (0)</td>
<td></td>
</tr>
<tr>
<td>Toilet/sink</td>
<td>0 (0)</td>
<td>17 (68.0)</td>
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<td>Took to law enforcement agency or authorized pharmacy</td>
<td>2 (4.7)</td>
<td>4 (16.0)</td>
<td></td>
</tr>
<tr>
<td>Threw away in trash as is</td>
<td>0 (0)</td>
<td>1 (4.0)</td>
<td></td>
</tr>
<tr>
<td>Used disposal bag to dispose of other medications</td>
<td>10 (12.1)</td>
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</tr>
</tbody>
</table>
Overall Conclusions

• In comparison to adults, leftover opioids seem more likely to be disposed of in the pediatric population.

• Providing a drug disposal bag to the caregivers of children receiving opioids increases the likelihood of excess opioid disposal.

• Greater availability of drug disposal products can complement prescribing reduction efforts in the ongoing fight to reduce opioid misuse.
Thank You!

*Please reach out with any thoughts or questions:*

jennifer.cooper@nationwidechildrens.org
OPEN QUESTION & ANSWER

Please enter any questions into the WebEx chat box on the right-hand side of your video screen or email Matthew.Rubin@FaegreBD.com.
Thanks from CEPOP!

Please contact Matt Rubin with any questions on CEPOP or today’s program.

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