Ready, Set...

Pause
Not all pain is the same
NANCY POOK MD FACEP

• Medical Director, KETTERING HEALTH NETWORK
  Network Operations Command Center
  Network Emergency Services
• Co-chair, GDAHA Research and Community
  Paramedicine Committee
• Associate Clinical Faculty, WSU School of Medicine
• Member, COAT Prescribing Committee
• Member, OHIO ACEP NIX OPIATES EDUCATION TEAM
• Board Member, Ohio Hospital Association Opiate
  Response Initiative
• Board Member and Vice-President, Emergency Medicine
  Specialists, Inc.
Objectives

• A conversation about
  • PAIN
  • SUBSTANCE USE DISORDER
  • SAFE PRESCRIBING
  • And a tool for compassionate and professional patient care

From “The Overdose Capital of America”

NBC news June 17, 2017
Well, uh, I had a little problem with, uh, substances. And I ended up doing things—no two ways about it—in the street—that a man shouldn’t do. Then, they approached me about playing the role, and they knew about the drugs. Said they’d give me more!
It’s complicated:
Susan and Bobby
Bobby’s phone

Hey bro hate to complain but that Krystal with the white powder is trash

Ok I got sum mo

It looked small too, did u make em up?

5/20/17, 4:35 PM

If ur gonna have that stuff let me know cuz I dont like it id rather buy boy and girl

5/21/17, 11:50 AM

You got any better Krystal in?
No Internet Connection

Wer u at
At abandoe
Need 2 boy 2 girl im out back
Phones gonna die soon and i get shitty service here
Ok
Walk thru yard behind bandoe and cum to car
Ok

Want Ad-Free Talkatone?  
Tap to disable advertisements.
Dayton and Montgomery County Public Health Department Data 2017

http://www.phdmco.org/coat/158-accidental-overdose-death-totals
Unintentional Drug Overdose Deaths in Montgomery County 2010-2018

Unintentional Drug Overdose Deaths Occurring in Montgomery County

2010 - 2018

<table>
<thead>
<tr>
<th>Year</th>
<th>Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>127</td>
</tr>
<tr>
<td>2011</td>
<td>130</td>
</tr>
<tr>
<td>2012</td>
<td>162</td>
</tr>
<tr>
<td>2013</td>
<td>226</td>
</tr>
<tr>
<td>2014</td>
<td>264</td>
</tr>
<tr>
<td>2015</td>
<td>259</td>
</tr>
<tr>
<td>2016</td>
<td>349</td>
</tr>
<tr>
<td>2017</td>
<td>566</td>
</tr>
<tr>
<td>2018</td>
<td>289</td>
</tr>
</tbody>
</table>
WSU OVERDOSE DATA - April 2017

N=100 accidental overdose deaths

- 91% white
- 65% male

99 tested positive for fentanyl

- 56% tested positive for acryl fentanyl and furanyl fentanyl
- 3 carfentanyl positives
- Only 3 heroin positives

Daniulaityte et. al. CITAR Boonshoft School of Medicine, Wright State University
THE PATHWAY TO FENTANYL

Individual abuses Opiate Prescription pills for the first time recreationally

Escalating Doses Required in an attempt at the same response as the body becomes accustomed to the effect

Supply becomes difficult secondary to cost, and user looks to different avenues

Introduced to Heroin because it is a cheaper high

Most people start by smoking/snorting heroin, vowing to never inject and inevitably become intravenous users
THE PATHWAY TO FENTANYL

Source Where User Obtained

- More than One Doctor (1.9%)
- One Doctor (18.1%)
- Other (5.0%)
- Bought on Internet (0.3%)
- Drug Dealer/Stranger (3.9%)
- Bought/ Took from Friend/Relative (16.6%)
- Free from Friend/Relative (54.2%)

Source Where Friend/Relative Obtained

- One Doctor (81.6%)
- More than One Doctor (3.1%)
- Free from Friend/Relative (5.5%)
- Bought/Took from Friend/Relative (5.7%)
- Other (2.2%)
- Drug Dealer/Stranger (1.9%)
- Bought on Internet (0.2%)

2012 National Survey on Drug Use and Health: SAMHSA
DOPAMINE PATHWAYS

Frontal Cortex
executive function
personality

“Runner’s High”

Addiction hijacks the brain
Addiction HIJACKS the brain
Addiction changes everything

**Addiction is Like Other Diseases...**
- It is preventable
- It is treatable
- It changes biology
- If untreated, it can last a lifetime

**Decreased Brain Metabolism in Drug Abuser**
- Healthy Brain
- Diseased Brain/Cocaine Abuser

**Decreased Heart Metabolism in Heart Disease Patient**
- Healthy Heart
- Diseased Heart

*Research supported by NIDA addresses all of these components of addiction.*
Addiction changes everything

- Good people
- Good families
- Good communities
- Good schools
Addiction changes everything
Addiction changes everything

Acute fulminant infection
Organ failure
Hepatitis
HIV
Addiction changes everything

- US cost est. $55.7 billion in 2007  
- 10 years later, $700 billion annually  
  Addiction Policy Forum 2017
- US Healthcare attributed to Rx pain killers $25B  
  CDC
- Ohio $1.076 billion in 2007  
  Matrix Global Advisors 2015
- Every life is priceless
Weiner, et. al.

- Non-fatal OD treated in ED
- Massachusetts
- 17,421 patients
- 5.5% died within one year
THE BEAT ON THE STREET
HEROIN/FENTANYL
Carfentanil

100X more potent than fentanyl
To put this in perspective, wild African elephants—an animal that Carfentanil is used on—weigh between **5,000 and 14,000 lbs** as reported by National Geographic, which is roughly **26 to 72 times** the weight of your average adult male of **195.5 lbs**.
COUNTERFEIT PILLS

REAL

FAKE

Source: SF Public Health
FENTANYL IN MARIJUANA?
KRATOM
FLAKKA

Alpha-pyrrolidinopentiophenone (alpha PVP)
METHAMPHETAMINE
COCAINE
## Dark Web Mail Order Drugs?

<table>
<thead>
<tr>
<th>Category</th>
<th>Items</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Drugs</strong></td>
<td>8,104</td>
<td></td>
</tr>
<tr>
<td>Cannabis</td>
<td>2,063</td>
<td></td>
</tr>
<tr>
<td>Dissociatives</td>
<td>193</td>
<td></td>
</tr>
<tr>
<td>Ecstasy</td>
<td>681</td>
<td></td>
</tr>
<tr>
<td>Opioids</td>
<td>594</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>435</td>
<td></td>
</tr>
<tr>
<td>Precursors</td>
<td>39</td>
<td></td>
</tr>
<tr>
<td>Prescription</td>
<td>1,666</td>
<td></td>
</tr>
<tr>
<td>Psychedelics</td>
<td>974</td>
<td></td>
</tr>
<tr>
<td>Stimulants</td>
<td>1,039</td>
<td></td>
</tr>
<tr>
<td><strong>Apparel</strong></td>
<td>265</td>
<td></td>
</tr>
<tr>
<td><strong>Art</strong></td>
<td>118</td>
<td></td>
</tr>
<tr>
<td><strong>Books</strong></td>
<td>869</td>
<td></td>
</tr>
<tr>
<td>Collectibles</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Computer equipment</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>Custom Orders</td>
<td>85</td>
<td></td>
</tr>
<tr>
<td>Digital goods</td>
<td>548</td>
<td></td>
</tr>
<tr>
<td>Drug paraphernalia</td>
<td>291</td>
<td></td>
</tr>
<tr>
<td><strong>Electronics</strong></td>
<td>79</td>
<td></td>
</tr>
<tr>
<td>Erotica</td>
<td>515</td>
<td></td>
</tr>
<tr>
<td>Fireworks</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Food</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Formories</td>
<td>75</td>
<td></td>
</tr>
</tbody>
</table>

### Price Examples
- **1,000 x 25c-NBOMe HCL blotters (800ug)**: $9.73
- **5g white russian**: $1.69
- **Cocaine Kokain Koks FLEX -- HIGH GRADE - 0.5**: $2.04
- **5g Good quality "Ali baba's Hash" from Chaouen**: $1.28
- **Kush**: $6.09
- **500mg**: $1.71
Xylazine (horse sedative)

Use initially seen in Puerto Rico; recent adulterant deaths in OH
BUILDING
a safe prescribing PRACTICE
Case #1

• 60 yo male
• PMH: HTN hyperlipidemia
• on Cozaar and Lipitor
• 12 hour history of abdominal pain, now RLQ
• T 100F BP 170/90
• Formulate a treatment plan
UNDERSTANDING PAIN
UNDERSTANDING PAIN

INFLAMMATORY

HYPERALGESIA

ALLODYNIA

Nociceptive vs Neuropathic Pain

Nociceptive Pain
Caused by activity in neural pathways in response to potentially tissue-damaging stimuli

Mixed Type
Caused by a combination of both primary injury and secondary effects

Neuropathic Pain
Initiated or caused by primary lesion or dysfunction in the nervous system

Postoperative pain
Arthritis
Sickle cell crisis
Sports/exercise injuries

Mechanical low back pain

Neuropathic low back pain

Distal polyneuropathy (e.g., diabetic, HIV)

Postherpetic neuralgia

CRPS

Trigeminal neuralgia

Central post-stroke pain

Complex regional pain syndrome

Health Network.
100% functionality
50% functionality
<10% functionality
Forget the PAIN SCALE!!!

• (We’re not there yet).
What does research say?
Ready, set...

- CDC Rx recommendation: 3-7 day limit for acute pain
- Ohio Rx recommendation: 7 day limit for acute pain, unless documented
- OARRS prescription drug monitoring program check with all addictive Rx
- Warning against concomitantly prescribing opiates and benzodiazepines
• A primary pathway to manage chronic or benign pain
• Designed with multi-specialty input
• Hospital based Rx
• Outpatient Rx
KEYS TO SUCCESS

- Standardization
- Education
- Built into EPIC - easy recall; correct dosage
- Accountability

Provider Report shows Morphine equivalent to patient ratio
- OHA reporting
## Chronic Benign Headache

- ketorolac (TORADOL) 30 mg IV
- metoclopramide (REGLAN) 10 mg IV
- prochlorperazine (COMPAZINE) 10 mg IV
- promethazine (PHENERGAN) 25 mg IVPB
- diphenhydramine (BENADRYL) 50 mg IV
- 0.9% sodium chloride Bolus 1 liter
- dextrose 5% and 0.9% sodium chloride bolus
- sumatriptan (IMITREX) 6 mg SQ
- valproate (DEPACON) 500 mg in 0.9% sodium chloride 500 mg IVPB
- methylPREDNISolone sodium succinate (PF) (SOLU-MEDROL) 125 mg IV
- lidocaine 10 mg/ml (1%) 5 ml Injection
- bupivacaine PF (MARCAINE MPF) 0.5% (5 mg/ml) 5 ml Injection

## Chronic Dental Pain

- ibuprofen (ADVIL, MOTRIN) 800 mg PO
- ketorolac (TORADOL) 30 mg IM
- chlorhexidine (PERIDEX) 0.12% mouth rinse
- benzocaine (HURRICANE ONE) 20% topical spray
- penicillin v potassium (VEETID) 500 mg PO
- clindamycin (CLEOCIN) 300 mg PO
- bupivacaine PF (MARCAINE MPF) 0.5% (5 mg/ml) 5 ml Injection

## Chronic Abdominal Pain

- dicyclomine (BENTYL) 20 mg IM
- hyoscyamine (LEVSIN) 125 mcg
- ketorolac (TORADOL) 30 mg IV
- methocarbamol (ROBAXIN) in 0.5 mg IVPB
- polyethylene glycol (MIRALAX) 1.5 mg/100mL

## Chronic Joint Pain

- ibuprofen (ADVIL, MOTRIN) 800 mg PO
- ketorolac (TORADOL) 30 mg IM
- orphenadrine (NORFLEX) 60 mg IM
- orphenadrine (NORFLEX) 100 mg PO
- lidocaine (LIDOCAINE) 5% 1 Patch

## Chronic Neck or Back Pain

- ketorolac (TORADOL) 30 mg IM
- orphenadrine (NORFLEX) 60 mg IM
- ibuprofen (ADVIL, MOTRIN) 800 mg PO

- Apply Splint/Cast/Sling/Other Orthotics
SUCCESS: KETTERING ED

KH ED Opiate/Patient Ratio 2013 - May 2017
SUCCESS: KETTERING HEALTH NETWORK

ED RECIDIVISM
Rx Standardization

Opioid Rx 33%

Benzodiazepine Rx 67%
CHRONIC BENIGN HEADACHE

Put out the fire: immediate treatment to prevent progression

NSAIDs
Triptans
Muscle relaxant
Anti-emetic
Steroids if protracted headache
Biofeedback
Prophylaxis

Discontinue daily rescue meds in REBOUND headache syndrome
CHRONIC NECK OR BACK PAIN

- NSAIDs
- Muscle relaxer
- Lidocaine topical or patch
- Gabapentin (Neurontin) if neurogenic pain
- Trigger point injection
- Massage
- TENS
- Physical therapy
CHRONIC DENTAL PAIN

NSAIDs
Clorhexidine (Peridex) mouth wash
Benzocaine topical
Antibiotics if infection
TMJ
Muscle relaxer
OTC bite block
CHRONIC JOINT PAIN

NSAIDs
Muscle relaxer
Lidocaine topical or patch
Compression sleeve or splint prn
Physical therapy
Weight reduction prn
CHRONIC ABDOMINAL PAIN

- Dicyclomine (Bentyl) or Hycosamine (Levsin)
- Anti-emetic
- H2 blocker or PPI
- IV Lidocaine for renal colic
- Stool softener if constipation; intermittent laxative use prn
- Muscle relaxer may be helpful in some cases
- Diet recommendations
GENERAL PRINCIPLES

Specialty referral prn
Age, comorbidities, and risk/benefit ratio should be considered with any prescription order
Consider acetaminophen with any pain syndrome, unless contraindicated
GENERAL PRINCIPLES

• Lifestyle counseling: weight reduction, stress reduction, biomechanics, cognitive behavioral therapy, biofeedback, smoking cessation

• Therapies: massage, occupational, physical, manipulation

• Dietary recommendations
GENERAL PRINCIPLES

- **Gastroparesis** reminder: all opiates are contraindicated in the setting of gastroparesis as they slow GI transit; educate patient as needed

  **Cannabinoid hyperemesis syndrome** should be considered in cases of recurrent vomiting and abdominal cramping and is best treated primarily by discontinuation of cannabinoid products.
GENERAL PRINCIPLES

- Opioid induced hyperalgesia may be triggered by rapidly escalating doses or chronic opioid use - treatment is wean.

Unresolved behavioral health conditions often accompany somatic complaints.
Case #2

- 45 year old female
- Rolled her ankle, fell down a couple of stairs last night
- Pain is 10/10
- Ankle is swollen; cannot bear weight today
- What do you do?
- Next steps?
Normal x-ray
Avulsion fracture
Trimalleolar fracture
Nitrous oxide
Outpatient PAUSE

PAUSE - An Alternative to Opioid Management

Always consider these factors when prescribing:
- Age, co-morbidities, and risk/benefit ratio
- Specialty referral as appropriate
- Unresolved behavioral health conditions often accompany somatic complaints - specialty referral is appropriate
  - Gastroesophageal reflux: all opiates are contraindicated as they slow GI transit, educate patient as needed
  - Cannabinoid hyperemesis syndrome should be considered in cases of recurrent vomiting and abdominal cramping, and is best treated primarily by discontinuation of cannabinoid products
  - Opioid-induced hyperalgesia (hyperacute response to even minor physical activation) may be triggered by rapidly escalating doses or chronic opioid use, treatment is to wean

Non-prescription Treatment Options:
- Lifestyle counseling
- Therapies
- Dietary modifications
- PAUSE - Not all pain is the same

Pain Medication and Treatment Options

- Benign Headache
- Musculoskeletal Pain
- Benign Abdominal Pain
- Dental Pain
- Neuropathic Pain

Additional SmartSet Orders

Search

You can search for an order by typing in the header of this section.
### Pain Medication and Treatment Options

#### Benign Headache
- naproxen (NAPROSYN) 500 mg tablet
  - 500 mg
- ibuprofen (MOTRIN) 400 mg tablet
  - 400 mg
- ibuprofen (ADVIL, MOTRIN) 800 mg tablet
  - 800 mg
- methocarbamol (ROBAXIN) 500 mg tablet
- methylPREDNISolone (MEDROL, PAK) 4 mg dose pack
- Prednisone Tapering Dose
- prednISONE (DELTASONE) 10 mg tablet pack
- sumatriptan (IMITREX) 25 mg tablet
  - 25 mg
- promethazine (PHENERGAN) 25 mg suppository
  - 25 mg
- prochlorperazine (COMPAZINE) 25 mg suppository
  - 25 mg
- prochlorperazine (COMPAZINE) 10 mg tablet
  - 10 mg
- ondansetron (ZOFRAN ODT) 4 mg disintegrating tablet
  - 4 mg

#### Therapy referral
- Therapy: Referral to Sports Medicine for Biofeedback
  - Internal Referral, Routine, Sports Medicine, Eval and Treat
- Education: Understanding Headaches
- Education: Biofeedback
- Education: Stress Relief
- Education: Migraine: Simple Steps to Head off the Pain
Musculoskeletal Pain

- Musculoskeletal pain [M79.1]
- ibuprofen (ADVIL, MOTRIN) 800 mg tablet
- ibuprofen (MOTRIN) 400 mg tablet
- diclofenac (VOLTAREN) 1% topical gel
- methocarbamol (ROBAXIN) 500 mg tablet
- Lidocaine-menthol Patch
- gabapentin (NEURONTIN) 600 mg tablet
- TENS Unit
- Compression Sleeve or Splint for Arm
- Compression Sleeve or Splint for Calf
- Therapy: Referral for Osteopathic Manipulation Therapy
- Therapy: Referral for Massage Therapy
- Therapy: Referral for Occupational Therapy
- Therapy: Referral for Physical Therapy
- Therapy: Referral for Accupuncture
- Therapy: Referral for Medical Nutrition Therapy (MNT)
- Education: Weight and Joint Pain
- Education: Understanding TENS
- Education: Exercise and Musculoskeletal Pain
Case #3

• 32 year old male
• B9 medical history
• Doubled over in pain, holding his right flank, diaphoretic, just vomited
• What do you do?
What’s new?

NOT FAR FROM ME

STORIES OF OPIOIDS AND OHIO

EDITED BY DANIEL SKINNER AND BERKELEY FRANZ
FOREWORD BY TED STRICKLAND

Amazon or order via https://ohiostatepress.org/books/titles/9780814255384.html
What’s next?
The way to get started is to quit talking and begin doing.

-Walt Disney