

NANCY POOK MD FACEP

**THE POLY-DRUG EPIDEMIC  
AND MEDICINE'S NEXT STEPS**

Medical Director, KETTERING EMERGENCY DEPARTMENT

Clinical Service Chief, EMERGENCY MEDICINE

Chair, KHN PHARMACY AND THERAPEUTICS COMMITTEE

Co-chair, RESEARCH AND COMMUNITY PARAMEDICINE,  
GDAHA

Associate Clinical Faculty, WSU School of Medicine

Member, COAT PRESCRIBING COMMITTEE

Member, OHIO ACEP NIX OPIATES EDUCATION TEAM

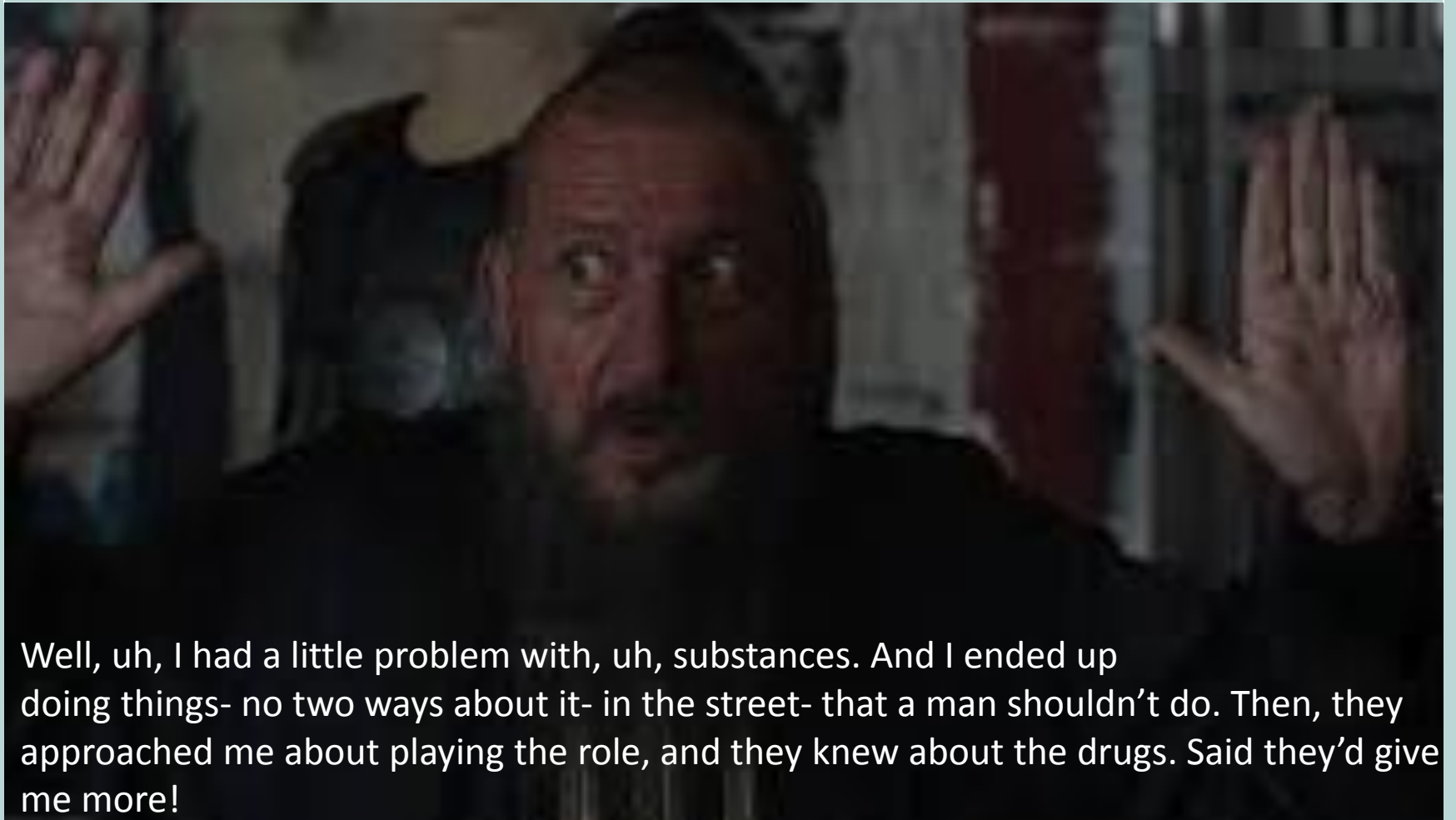
# Objectives

- A conversation about
  - PAIN
  - SUBSTANCE USE DISORDER
  - SAFE PRESCRIBING

In “The Overdose Capital of America”

NBC news June 17, 2017

# It's complicated.

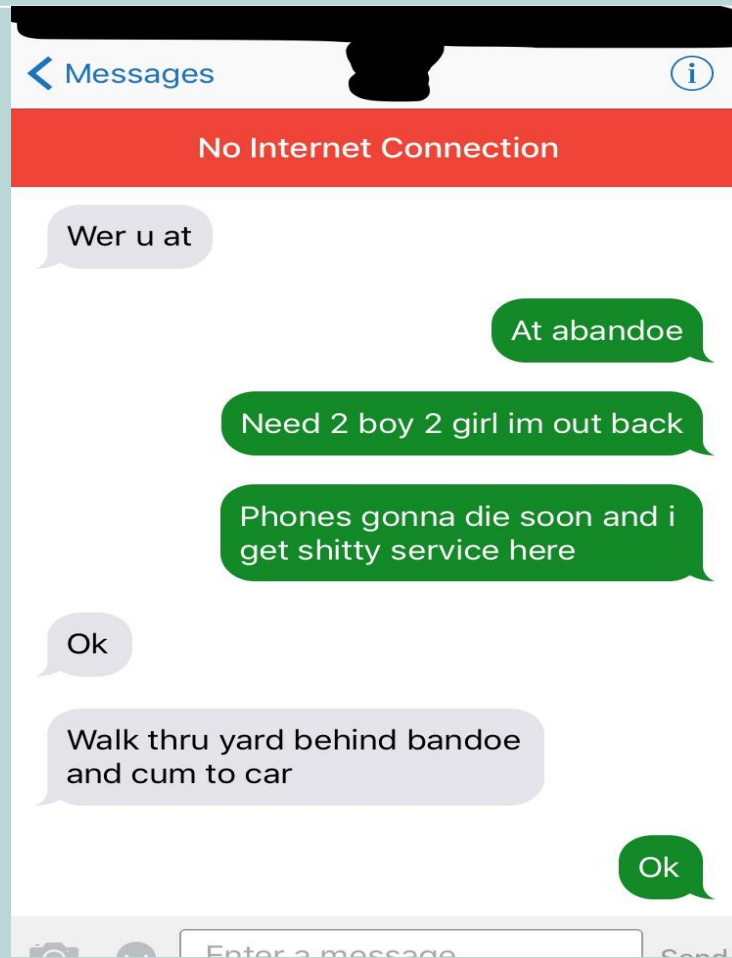


Well, uh, I had a little problem with, uh, substances. And I ended up doing things- no two ways about it- in the street- that a man shouldn't do. Then, they approached me about playing the role, and they knew about the drugs. Said they'd give me more!

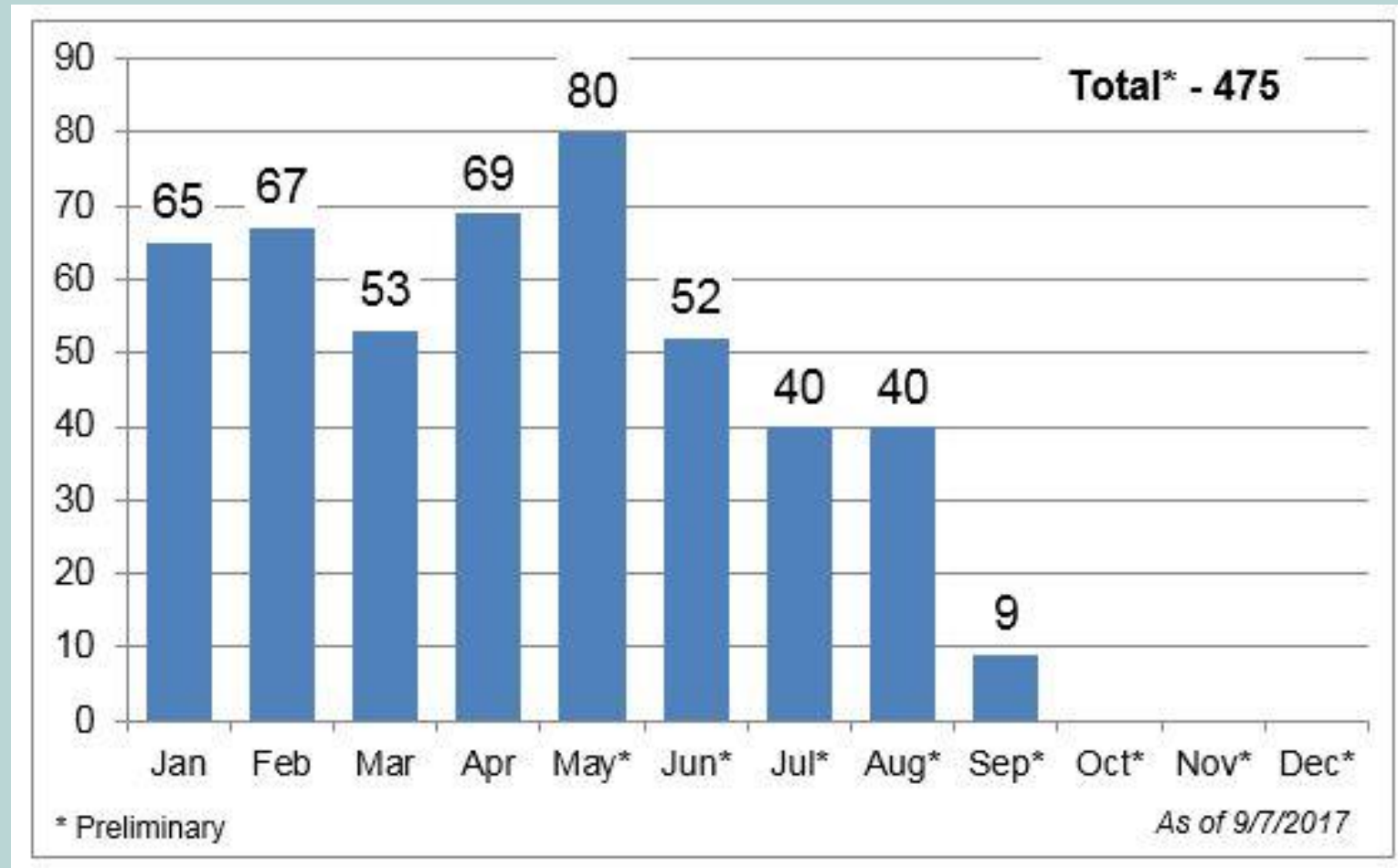
# It's complicated: Susan and Bobby



# Bobby's phone



# Dayton and Montgomery County Public Health Department Data 2017



# 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



Mike Peters, Pulitzer Prize winning editorial cartoonist, Dayton Daily News



# 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  
difficulty  
secondary to cost,  
and User looks to  
different avenues

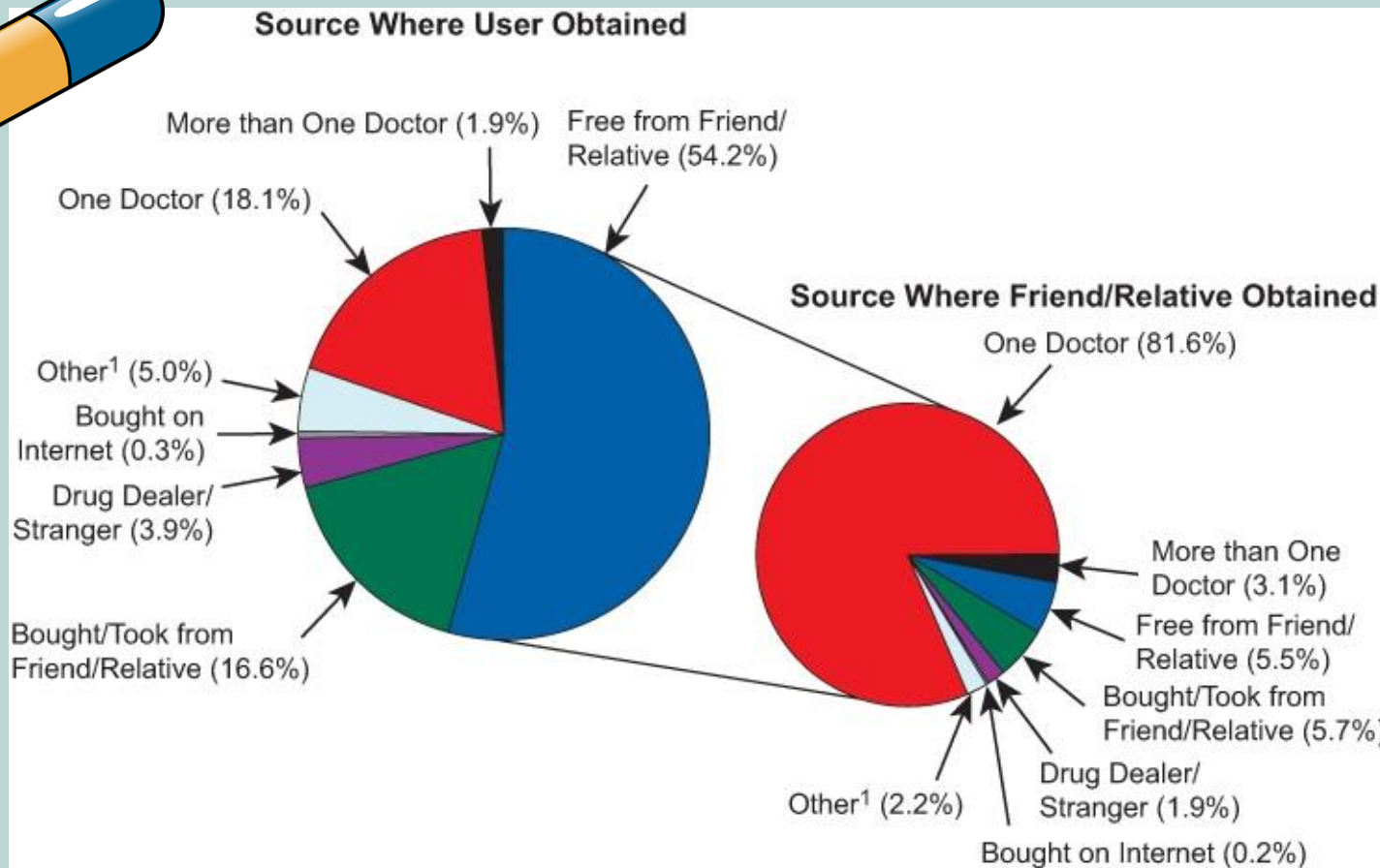


Introduced to  
Heroin  
because it is a  
cheaper high



Most people  
start by  
smoking/snorti  
ng heroin,  
vowing to  
never inject  
and inevitably  
become  
intravenous  
users

# THE PATHWAY TO FENTANYL



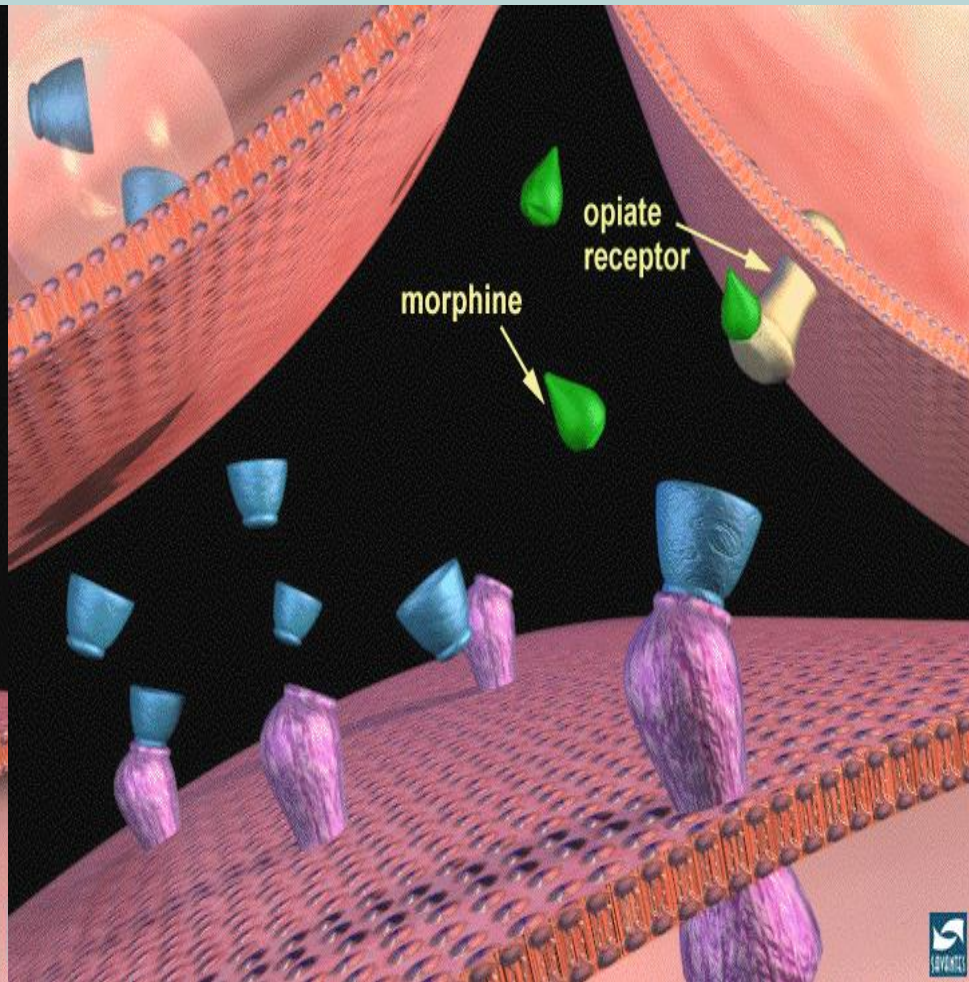
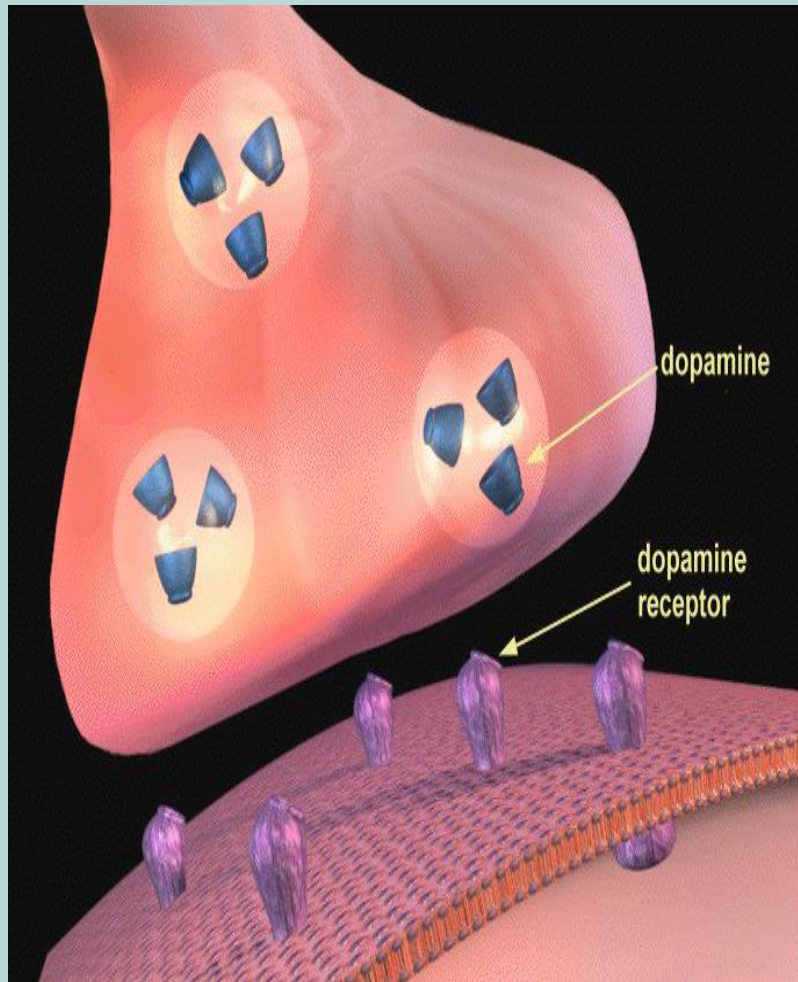
# DOPAMINE PATHWAYS



Frontal Cortex

“Runner’s High”

# DOPAMINE PATHWAYS

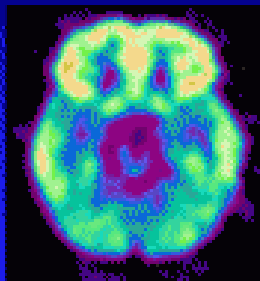


# ADDICTION CHANGES EVERYTHING

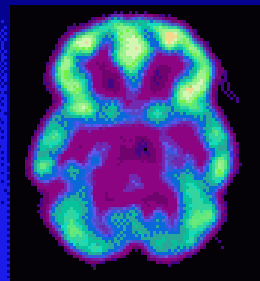
## *Addiction is Like Other Diseases...*

- It is preventable
- It is treatable
- It changes biology
- If untreated, it can last a lifetime

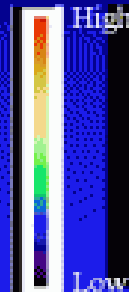
**Decreased Brain Metabolism  
in *Drug Abuser***



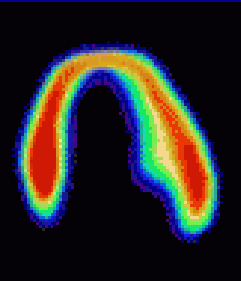
Healthy Brain



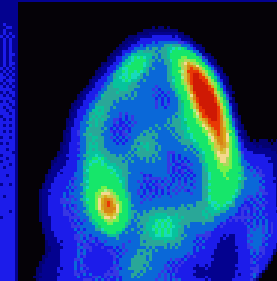
Diseased Brain/  
Cocaine Abuser



**Decreased Heart Metabolism  
in *Heart Disease Patient***



Healthy  
Heart



Diseased Heart

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

NIDA

# ADDICTION CHANGES EVERYTHING

- Good people
- Good families
- Good communities
- Good schools

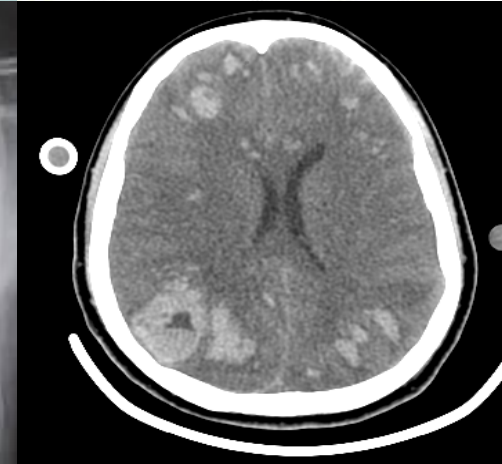
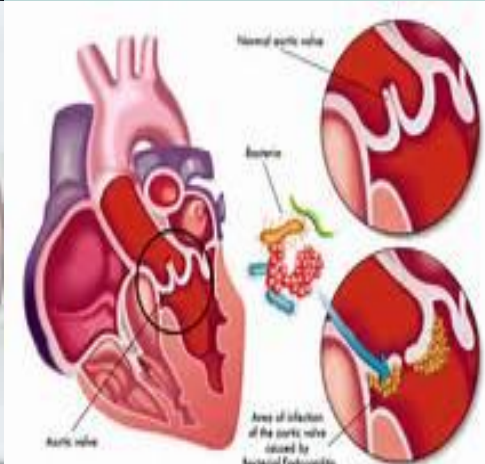
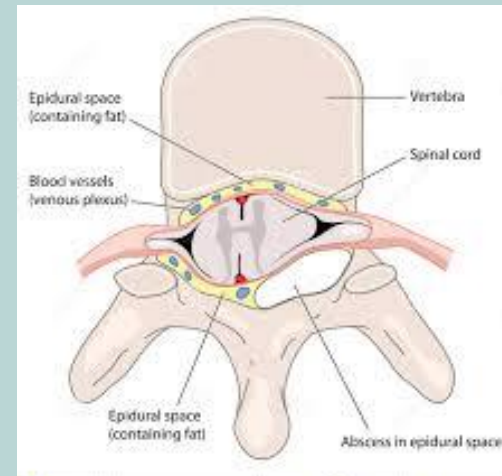


# ADDICTION CHANGES EVERYTHING



# ADDICTION CHANGES EVERYTHING

Acute fulminant infection  
Organ failure  
Hepatitis  
HIV

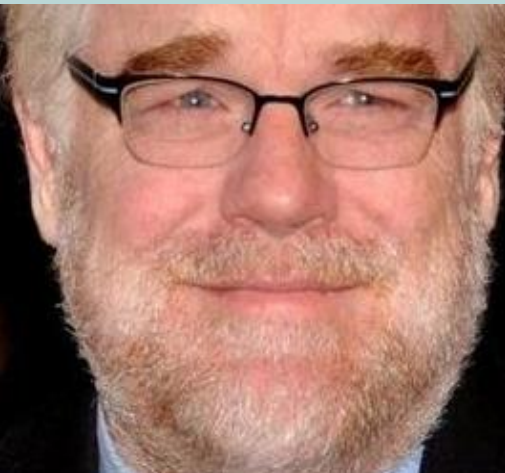




# ADDICTION CHANGES EVERYTHING

- US cost est. \$55.7 billion in 2007 Pain Medicine 2011; 12:657-667
- Now \$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

*Phillip Seymour Hoffman age 46*



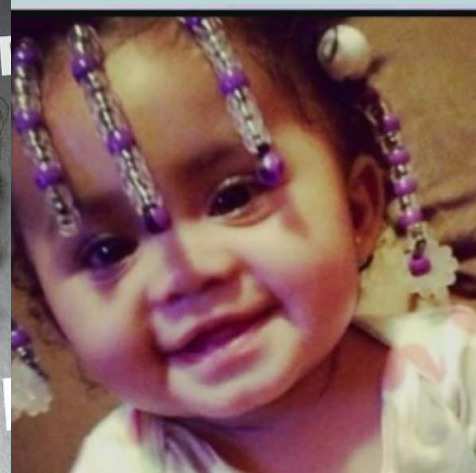
*Prince age 57*



*Heath Ledger age 28*



*Tiairee ages 3*



# THE BEAT ON THE STREET



# HEROIN/FENTANYL



# COUNTERFEIT PILLS

**REAL**



**FAKE**



Source: SF Public Health

# FENTANYL IN MARIJUANA?



# KRATOM



*Mitragyna speciosa*- Southeast Asia

# FLAKKA



Alpha-pyrrolidinopentiophenone (alpha PVP)

# METHAMPHETAMINE





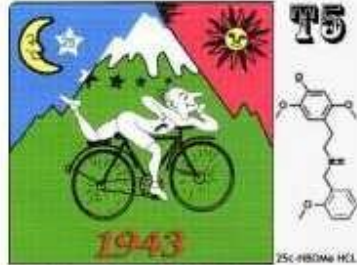
# COCAINE



# DARK WEB MAIL ORDER DRUGS?

Shop by Category

- Drugs 8,104
  - Cannabis 2,063
  - Dissociatives 193
  - Ecstasy 681
  - Opioids 594
  - Other 435
  - Precursors 39
  - Prescription 1,666
  - Psychedelics 974
  - Stimulants 1,039
- Apparel 265
- Art 118
- Books 869
- Collectibles 2
- Computer equipment 40
- Custom Orders 85
- Digital goods 548
- Drug paraphernalia 291
- Electronics 79
- Erotica 515
- Fireworks 2
- Food 8
- Forgeries 75



1,000 x 25c-NBOMe HCL blotters (800ug)  
**\$9.73**



5g white russian  
**\$1.69**



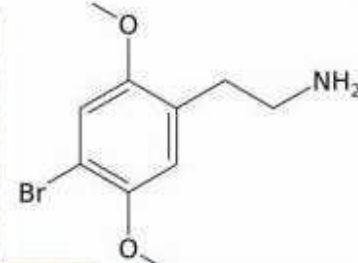
Cocaine Kokain Koks FLEX -- HIGH GRADE - 0.5  
**\$2.04**



5g Good quality Hash" from Chaouen  
**\$1.28**



5g Good quality "Ali baba's Hash" from Chaouen | emerald  
**\$6.09**



emerald 200mg  
**\$1.71**



**THINK AGAIN**

**BUILDING**

**AN *OPIATE-FREE* PRACTICE**

# UNDERSTANDING PAIN



# UNDERSTANDING PAIN

## Nociceptive vs Neuropathic Pain

### Nociceptive Pain

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

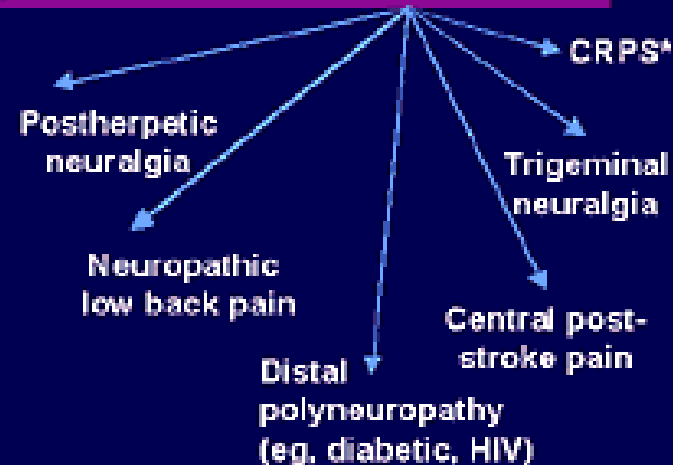


### Mixed Type

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



\*Complex regional pain syndrome

# IT'S TIME TO THINK AGAIN

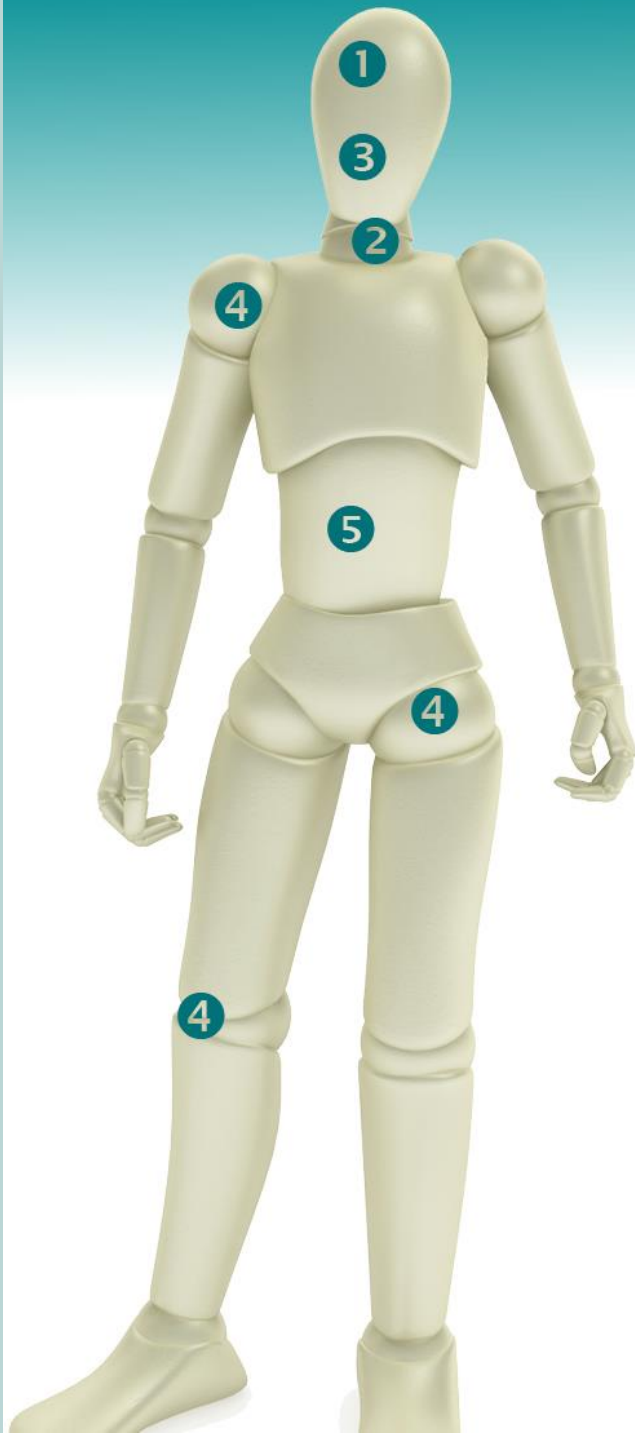
- CDC Rx recommendation: 3-7 day limit for acute pain
- Ohio Rx recommendation: 7 day limit for acute pain, unless documented
- OARRS prescription drug monitoring program check with all addictive Rx 
- Warning against concomitantly prescribing opiates and benzodiazepines

# THINK AGAIN

A primary pathway to manage chronic or  
benign pain

**THINK**  
**AGAIN**

# THINK AGAIN



## 1 CHRONIC BENIGN HEADACHE

- Ketorolac (Toradol)
- Metoclopramide (Reglan) or Prochlorperazine (Compazine) or Promethazine (Phenergan)
- Diphenhydramine (Benadryl)
- IVF (D5NS preferred if not diabetic)
- Sumatriptan (Imitrex)
- Valproate for migraine
- Injection therapy if occipital neuralgia
- Steroids if protracted headache

## 2 CHRONIC NECK OR BACK PAIN

- IM Ketorolac (Toradol) / Orphenadrine (Norflex)
- NSAIDs
- Muscle relaxer
- Lidoderm patch
- Gabapentin (Neurontin) if neurogenic origin
- Trigger point injection

## 3 CHRONIC DENTAL PAIN

- NSAIDs
- Chlorhexidine (Peridex) mouth rinse
- Benzocaine topical
- Antibiotic if infection
- Muscle relaxer if TMJ
- Dental block

## 4 CHRONIC JOINT PAIN

- NSAIDs
- Muscle relaxer
- Lidoderm patch
- Compression sleeve or splint prn

## 5 CHRONIC ABDOMINAL PAIN

- Dicyclomine (Bentyl) or Hycoamine (Levsin)
- Anti-emetic
- Ketorolac (Toradol)
- IV Methocarbamol (Robaxin) if NPO
- Laxative/ stool softener if constipation
- Lidocaine if recurrent renal colic



# THINK AGAIN: KEYS TO SUCCESS

- Standardization
- Education
- Built into EPIC- easy recall; correct dosage
- Accountability
  - NEW **provider report** shows Morphine equivalent to patient ratio

**THINK  
TWICE**

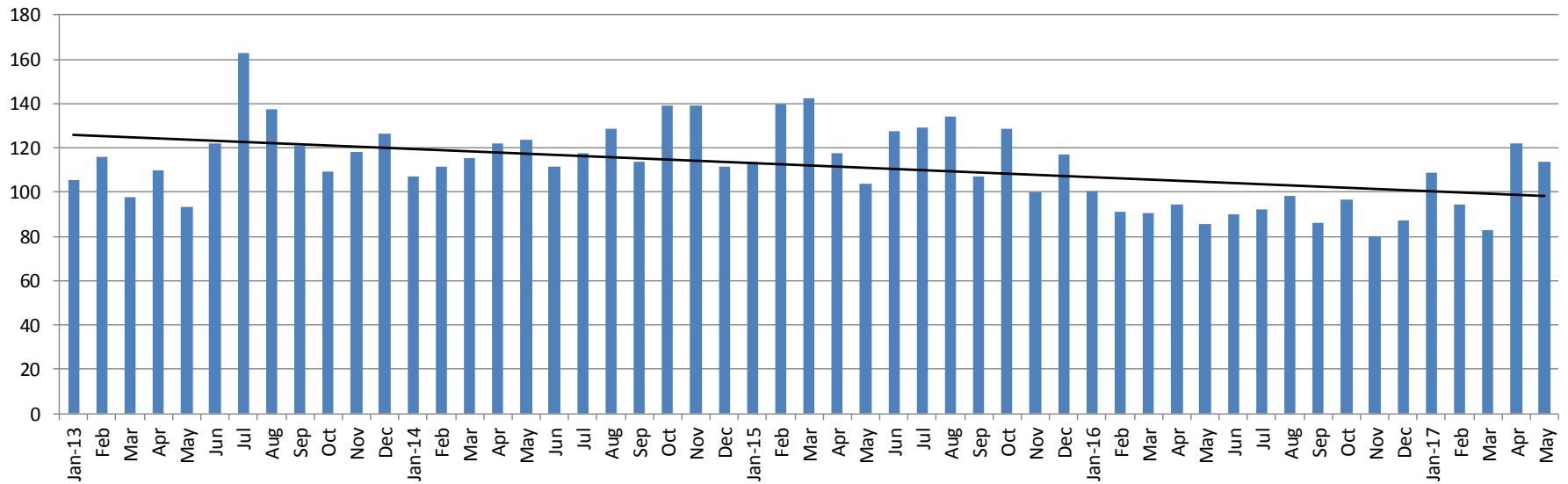
# THINK AGAIN STANDARDIZATION

General	Abx Stewardship	Imaging	Medications	Nursing	Think Twice
Chronic Benign Headache			Chronic Dental Pain		Chronic Abdominal Pain
<input type="checkbox"/> ketorolac (TORADOL) 30 mg IV			<input type="checkbox"/> ibuprofen (ADVIL,MOTRIN) 800 mg PO		<input type="checkbox"/> dicyclomine (BENTYL) 20 mg IM
<input type="checkbox"/> metoclopramide (REGLAN) 10 mg IV			<input type="checkbox"/> ketorolac (TORADOL) 30 mg IM		<input type="checkbox"/> hyoscyamine (LEVSIN) 125 mcg
<input type="checkbox"/> prochlorperazine (COMPAZINE) 10 mg IV			<input type="checkbox"/> chlorhexidine (PERIDEX) 0.12% mouth rinse		<input type="checkbox"/> ketorolac (TORADOL) 30 mg IV
<input type="checkbox"/> promethazine (PHENERGAN) 25 mg IVPB			<input type="checkbox"/> benzocaine (HURRICAIN ONE) 20 % topical spray		<input type="checkbox"/> methocarbamol (ROBAXIN) in 0 mg IVPB
<input type="checkbox"/> diphenhydramine (BENADRYL) 50 mg IV			<input type="checkbox"/> penicillin v potassium (VEETID) 500 mg PO		<input type="checkbox"/> polyethylene glycol (MIRALAX) :
<input type="checkbox"/> 0.9 % sodium chloride Bolus 1 liter			<input type="checkbox"/> clindamycin (CLEOCIN) 300 mg PO		<input type="checkbox"/> lidocaine (XYLOCAINE) 1.5 mg/k
<input type="checkbox"/> dextrose 5 % and 0.9 % sodium chloride bolus			<input type="checkbox"/> bupivacaine PF (MARCAINE MPF) 0.5 % (5 mg/mL) 5 mL Injection		
<input type="checkbox"/> sumatriptan (IMITREX) 6 mg SQ					
<input type="checkbox"/> valproate (DEPACON) 500 mg in 0.9 % sodium chloride 500 mg IVPB			Chronic Joint Pain		
<input type="checkbox"/> methylPREDNISolone sodium succinate (PF) (SOLU-MEDROL) 125 mg IV			<input type="checkbox"/> ibuprofen (ADVIL,MOTRIN) 800 mg PO		
<input type="checkbox"/> lidocaine 10 mg/ml (1 %) 5 ml Injection			<input type="checkbox"/> ketorolac (TORADOL) 30 mg IM		
<input type="checkbox"/> bupivacaine PF (MARCAINE MPF) 0.5 % (5 mg/mL) 5 ml Injection			<input type="checkbox"/> orphenadrine (NORFLEX) 60 mg IM		
			<input type="checkbox"/> orphenadrine (NORFLEX) 100 mg PO		
Chronic Neck or Back Pain			<input type="checkbox"/> lidocaine (LIDODERM) 5% 1 Patch		
<input type="checkbox"/> ketorolac (TORADOL) 30 mg IM			<input type="checkbox"/> Apply Splint/Cast/Sling/Other Orthotics		
<input type="checkbox"/> orphenadrine (NORFLEX) 60 mg IM					
<input type="checkbox"/> ibuprofen (ADVIL,MOTRIN) 800 mg PO					

THINK  
AGAIN

# SUCCESS: KETTERING ED

KH ED Opiate/Patient Ratio 2013 - May 2017



# SUCCESS: KETTERING HEALTH NETWORK



ED RECIDIVISM

# THINK AGAIN: Rx PATHWAY

- 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

**THINK**  
**AGAIN**

# THINK AGAIN: Rx PATHWAY

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



**THINK  
AGAIN**

# THINK AGAIN: Rx PATHWAY

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

**THINK**  
**AGAIN**

# THINK AGAIN: Rx PATHWAY

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

**THINK**  
**AGAIN**



# THINK AGAIN: Rx PATHWAY

- CHRONIC ABDOMINAL PAIN
  - Dicyclomine (Bentyl) or Hycosamine (Levsin)
  - Anti-emetic
  - H2 blocker or PPI
  - Stool softener if constipation; intermittent laxative use prn
  - Muscle relaxer may be helpful in some cases
  - Diet recommendations

**THINK**  
**AGAIN**

# THINK AGAIN: Rx PATHWAY

- 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

**THINK**  
**AGAIN**

# THINK AGAIN: Rx PATHWAY

- Lifestyle counseling: weight reduction, stress reduction, biomechanics, cognitive behavioral therapy, biofeedback, smoking cessation
- Therapies: massage, occupational, physical, manipulation
- Dietary recommendations

**THINK**  
**AGAIN**

# THINK AGAIN: Rx PATHWAY

- **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

**THINK  
AGAIN**

# THINK AGAIN: Rx PATHWAY

- **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

**THINK  
AGAIN**

# THINK AGAIN: SAFE PATIENT

- Sedating?
- Addictive?
- Fixed quantity
- Effective at lowest possible dose

**THINK**  
**AGAIN**

# THINK AGAIN: SAFE PATIENT

- **SAFE** home- medication disposal
  - Avoid water supply contamination
- **SAFE** family
  - empty medicine cabinet
  - Prescription lockbox

**THINK**  
**AGAIN**

# YOU ARE INVITED

Sept. 25, 2017 8:30 a.m.-3:30 p.m.

## STATEWIDE DISCUSSION



State of Ohio



THE OHIO STATE UNIVERSITY  
COLLEGE OF FOOD, AGRICULTURAL,  
AND ENVIRONMENTAL SCIENCES

OHIO STATE  
UNIVERSITY  
EXTENSION



**IDEAS** *in Practice*  
A Closer Look at the Continuum of Addiction Treatment

*Please join us for a conversation about addiction treatment and the need for a continuum of care. Health care professionals at all levels will gather in nine locations throughout the state to discuss, via a live interactive broadcast, the latest developments in addiction services. We hope you will join us to share your thoughts.*

**REGISTER AT:** [www.OhioAttorneyGeneral.gov/OpiateAbuse](http://www.OhioAttorneyGeneral.gov/OpiateAbuse)



**MIKE DEWINE**  
OHIO ATTORNEY GENERAL

[www.OhioAttorneyGeneral.gov](http://www.OhioAttorneyGeneral.gov)

*For more information, contact the Heroin Unit  
at [Heroin.Unit@OhioAttorneyGeneral.gov](mailto:Heroin.Unit@OhioAttorneyGeneral.gov).*



# THANK YOU

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*The way to get started is to quit talking  
and begin doing.  
-Walt Disney*