EMERGING DRUGS OF ABUSE: SYNTHETIC MARIJUANA, HEROIN AND MORE…
WHAT IS TRENDING NOW?

The Upstate New York Poison Center of Upstate Medical University
What do THESE people have in common?
What do THESE people have in common?
Synthetic Cannabinoids

- Are they back?
Presenting Symptoms

- Agitation
- Paranoia
- Hypertension
- Tachycardia
- Chest Pain
- Drowsy
- Pinpoint Pupils
- Bradycardia
- Nausea
- Vomiting

New Onset Psychosis
Challenges

- Not Detected on Urine Drug Screens
  - Gas Chromatography-Mass Spectrometry
- Chemical Configurations Vary
- Product Can Be Tested
U-47700

- 4-methoxy-butyryl fentanyl
- Synthetic opioid
- 30 deaths
- Much stronger
Cocaine- Still A Problem?

- Powder
- Crystal
Loperamide (Imodium®)
Liquid Nicotine
Honey Butane Oil

- Marijuana plant ground up, place in a tube extractor
- Pour butane through the extractor to remove marijuana resin
- Wait for the butane to evaporate before use
Hallucinogens

- Drugs that alter and distort perception, thought, and mood usually without clouding the ability to think
Salvia Divinorum

- Perennial herb grown in Mexico
- Currently popular for “legal hallucinations”, leaves can be smoked, chewed or infused
- Reports of “radically different” experience such as “switching realities”
- Erowid recommend: have a sitter and safe space when using
- Safe drug site www.Erowid.org
Other

- Antihistamines
- Jimson Weed
- Nutmeg
- Morning glory seeds
- Bufo toad
Designer Drug

Drugs that are manufactured or marketed to avoid laws or suspicion of drug trafficking

Names keep changing, chemical compounds keep changing
Are there still Raves?
MDM

- *Ecstasy; XTC; E; M & M*
- One-tenth the stimulant effect of amphetamine
- “Hallucinogenic Amphetamine”
Methamphetamine

- Continues to be a growing problem in NYS
- Clandestine “Laboratories”
  - Rural
  - Urban
Volatile Substance Inhalation Abuse (VSIA)

- Hydrocarbon derivatives
Nitrous Oxides
Alcohol.....
Powdered Alcohol.....

- Equivalent to a shot
- Mixes with 5 ounces of liquid
Powdered Caffeine

- Safe Dose is 1/16 of a tsp
  - Comparable to a cup of coffee
Heroin: What is it

- An opioid - man made
- A depressant
- Can be white or black powder
Opium – Morphine - Heroin

- **Opium** has been used for centuries as a medicinal for severe pain.

- In 1805 an organic alkaloid compound was isolated from the poppy plant that was 10 times more powerful than processed opium.

- The substance was named **morphine**, after Morpheus, the Greek god of dreams, for its tendency to cause sleep.
Heroin was first manufactured in 1898 by the Bayer pharmaceutical company of Germany and marketed as a treatment for tuberculosis as well as a remedy for morphine addiction.
Heroin: Who Abuses it?
Heroin: What does it cost?

- Heroin is cheap, cheaper than prescription pills/opioids
- As drugs arrive in states, diluted with fillers like baking soda, talc or even other cheaper drugs
- The $10 bags are about 25 percent pure heroin
How does it all begin?

Most people who become addicted to heroin begin on prescription pain meds.
Heroin: Why is it abused?

“Runner’s high”

It produces euphoria- a state of “well being”
Impact.....

- Highly addictive - brain likes it, becomes use to it, person feels very sick without it.
Neurons and Receptors

- Opioid receptors in the brain have a high affinity for heroin
Heroin

- **Heroin** is 2 to 3 times more potent than morphine.
Heroin: What happens?

Impacts the brain and the lungs

- Varying degrees of lethargy to coma
- Respiratory depression
- Pinpoint pupils
- May develop-
  - Seizures
  - Tachycardia
  - Hypertension
Complications…

- AIDS
- Endocarditis
- Hepatitis C
Naloxone

- Depending on route of administration delay in effects may be noted
- Staff need to protect themselves
- Withdrawal maybe precipitated
- Non medical staff are being trained to administer
  - Law enforcement
  - Police
  - School staff
  - Family
# Naloxone - Onset of Action

<table>
<thead>
<tr>
<th>Route</th>
<th>Response Time</th>
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<tbody>
<tr>
<td>IV</td>
<td>1-2 min</td>
</tr>
<tr>
<td>Subcutaneous</td>
<td>5 min</td>
</tr>
<tr>
<td>Intranasal</td>
<td>3 min</td>
</tr>
<tr>
<td>IM</td>
<td>6 min</td>
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</tbody>
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Narcan - complications?

- In a patient “naïve” to opioids - no effect
- In a patient who is dependent on opioids may precipitate withdrawal symptoms
Heroin: Excessive Craving

• Makes a person-
  - Do anything to get the drug
    • Steal from family and friends
    • Lie
    • Experiment with other drugs
    • Become violent
  • Loose control over their life........
How is Addiction Treated?

- Methadone
- Buprenorphine/Naloxone- Suboxone
- Buprenorphine alone- Subutex
- Naltrexone-Vivitrol *
- Behavioral Therapies
- A combination of medications and behavioral therapy
- * once a month injection
One Unintentional Outcome of abuse of Opiods
Babies Born with

Neonatal Abstinence Syndrome
Newborns with NAS were more likely to have:
- Low birth weight (19%)
- Respiratory complications (30%)

Estimated mean hospital charge for drug-dependent newborns exceeded $53,000 (uncomplicated delivery $10,891)

The payer of hospital charges was more likely to be Medicaid (2009 - 77%)
What is being done…

- NYS DOH have issued a ban on the sale of these products
- On a federal level legislation has been introduced
- On a state level legislation has been introduced
- Poison Center has launched a public and professional awareness campaign
- State and Federal Taskforces and Round Table Discussions
- Public Forums
National Efforts to Reduce Opioid Abuse/Misuse

- National Awareness Efforts
- National Drug Take Backs
  - Drug Enforcement Administration (DEA) Take Back Days
    In 8 collections over 4 years, 4.1 million pounds collected
- I-Stop Prescription Monitoring Program
  to detect prescription fraud and drug diversion
  Since 2012 - 75% drop in patients seeing multiple doctors for same drug
Governor Cuomo’s Recommendations
6/9/16

- Prescriber education
  - 7 days rather than 30 days
- Increase available treatments centers-beds
- Remove insurance barriers
- Encourage pharmacist to provide consumer education
- Expand Narcan education
Federal Initiatives

- 126 million allocated
  - CDC’s-Prevention of Drug Overdose Program
  - SAMHSA
  - National Institute on Drug Abuse
  - NIH
  - Community Health Centers
Thoughts
Contact the
Upstate New York Poison Center

www.upstatepoison.org

We are only a phone call away!
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