ROANE COUNTY SHERIFF'S OFFICE



SHERIFF JACK STOCKTON

DETECTIVE JOHN H MAYES

DOCTOR THOMAS BODUCH, ROANE COUNTY MEDICAL

EXAMINER

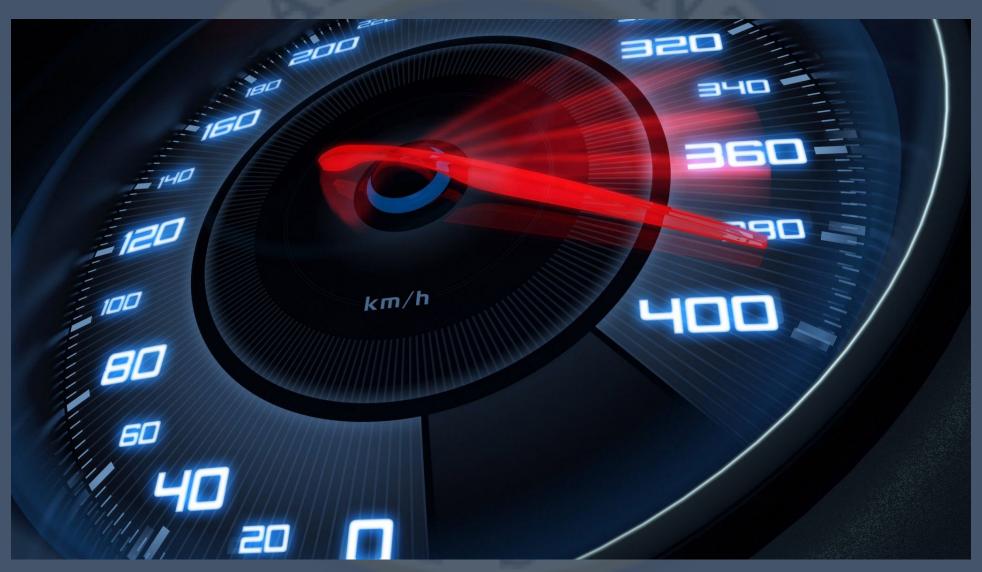
Central Nervous System Stimulants



Learning Objectives

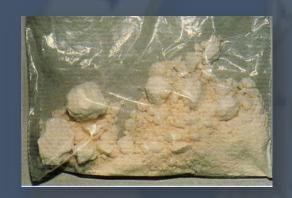
- Explain a brief history of CNS Stimulant drugs
- Identify common drug names and terms
- Identify common methods of administration
- Describe signs, symptoms, and other effects
- Explain typical time parameters
- Describe indicators likely to emerge

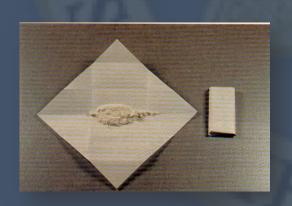
CNS Stimulant Overview



CNS Stimulants

Cocaine











CNS Stimulants

Amphetamines

- Methamphetamine
- Amphetamine Sulfate
- Desoxyn









NDC 0555-0767-02

Adderall®

(Dextroamphetamine Saccharate, Amphetamine Aspartate, Dextroamphetamine Sulfate and Amphetamine Sulfate Tablets) (Mixed Salts of a Single Entity Amphetamine Product)

20 mg

PHARMACIST: Dispense the accompanying Medication Guide to each patient.

R only

100 TABLETS

TEUM

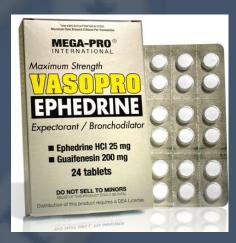
CNS Stimulants

Others

- Ritalin
- Ephedrine
- Caffeine







Coca Plant

"Erythroxylon Coca"



Amphetamines







Medical Uses of Amphetamines

- Control appetite, symptoms of narcolepsy, and hyperactivity in children
- Relieve or prevent fatigue
- Treat mild depression

Other Medical Uses of Amphetamines

- Antagonize effects of depressants
- Prevent and treat surgical shock
- Maintain blood pressure during surgery
- Treat Parkinson's disease
- Enhance the action of analgesic drugs

Commonly Prescribed Pharmaceutical Amphetamines

Dexedrine

Dextroamphetamine Sulfate

Adderall

Dextroamphetamine and Amphetamine

• Benzedrine

Amphetamine Sulfate

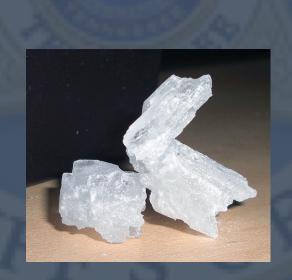
Desoxyn

Methamphetamine Hydrochloride

Commonly Abused Illicit Amphetamines

Methamphetamine









Other CNS Stimulants

• Ritalin

Methylphenidate Hydrochloride

- Ephedrine
- Cathine and Cathinone
- Methcathinone





Other CNS Stimulants

- Energy drinks
- OTC





Methods of Ingesting Stimulants









Common Methods of Ingesting Stimulants

- Methamphetamine
 - Injection
 - Orally
 - Snorting
 - Smoking
- Other Amphetamines
 - Orally











Possible Effects of CNS Stimulants

- Euphoria
- Hyperactivity
- Release of inhibitions
- Misperception of time and distance
- Inability to concentrate
- Bruxism (Grinding of the teeth)

Cocaine Time Factors

- Smoked (freebase)
 - Virtually immediate effects
 - O Very intense "rush"
 - Effects last 5-10 minutes

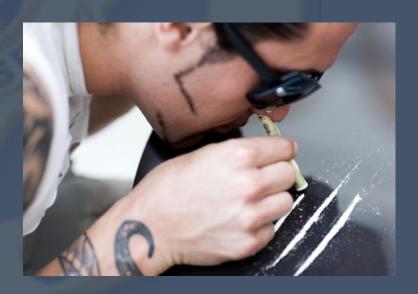


- Injected
 - Effects are felt within seconds
 - O Very intense "rush"
 - Effects generally last 5-15 minutes



Cocaine Time Factors

- Snorted (insufflated)
 - Effects are felt within 30 seconds
 - o Intense "rush"
 - Effects last 30-90 minutes



Cocaine Time Factors

- Oral Ingestion
 - Effects last 45-120 minutes
 - Effects begin within 3-5 minutes
 - Effects are less intense



Methamphetamine Time Factors

- Effects are felt within seconds
- "Rush" is very intense for 5-30 seconds
- Effects can last up to 12 hours

Overdose Signs and Symptoms

Cocaine Psychosis or Cocaine Delirium:

- Convulsions, faint, or pass into a coma
- Heartbeat (pulse) increases
- Hallucinations may occur



Sudden Respiratory Failure







Subjects Under the Influence of CNS Stimulants

Vital Signs:

- Pulse Up
- Blood pressure Up
- Body temperature Up
- Muscle Tone Rigid

Subjects Under the Influence of CNS Stimulants

General Indicators:

- Anxiety
- Body tremors
- Bruxism
- Dry mouth
- Euphoria
- Excited
- Exaggerated reflexes
- Eyelid and leg tremors

- Increased alertness
- Insomnia
- Irritability
- Restlessness
- Rigid muscle tone
- Talkative
- Redness to nasal area
- Runny nose







PC 1039 - Prescribing and Reporting Opioids

- Limits opioid prescriptions to up to a 3 day supply with a total of 180 MME
 - Several exceptions apply
 - Up to a 10 day supply with a total of 500 MME
 - Up to a 20 day supply with a total of 850 MME for a procedure that is more than minimally invasive
 - Up to a 30 day supply with a total of 1200 MME when other reasonable and non-opioid treatments have been attempted and failed and the risk of adverse effects from the pain exceeds the risk of the patient developing an addiction or OD
- Rulemaking effective May 21, 2018; all other sections effective July 1, 2018; Sunset July 1, 2023

PC 1039 - Prescribing and Reporting Opioids

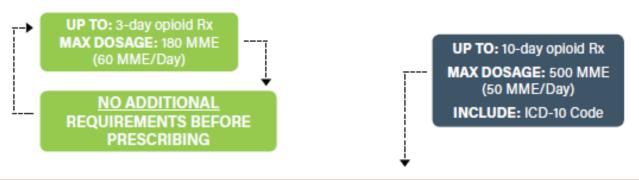
- Prescribing under the exceptions requires the prescriber to:
 - Check the CSMD;
 - Conduct a physical exam of the patient;
 - Consider non-opioid alternatives;
 - Obtain informed consent including counseling on NAS and contraception for women of childbearing age; and
 - Document the ICD-10 code for the patient's primary disease
- 10, 20, and 30 day scripts will only be filled by dispensers in an amount of half the full prescription at a time
 - Requires patients and pharmacists to consider whether the patient requires the full amount prescribed

PC 1039 EXCEPTIONS

- Exceptions to the script limits for patients:
 - Undergoing active or palliative cancer treatment;
 - Receiving hospice care;
 - Diagnosed with sickle cell disease;
 - Administered to in a hospital;
 - Being treated by a pain management specialists or collaborating (formerly supervising) provider in a pain management clinic;
 - Who have received 90 days or more of opioid scripts in the year prior to April 2018 or subsequently do so under one of the exceptions;
 - Receiving treatment for medication-assisted treatment (MAT); or
 - Suffering severe burs or major physical trauma

Rule Number One: Always consider non-opioid treatment before initiating the prescribing of opioids.

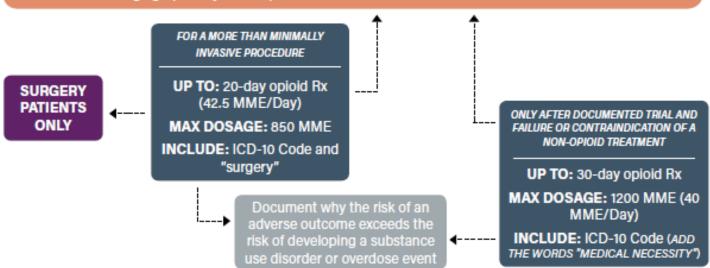
Public Chapter 1039 requires that more guidelines and checkpoints between healthcare practitioners and patients are in place before an individual is put on a chronic regimen of opioids.



ADDITIONAL REQUIREMENTS BEFORE PRESCRIBING MORE THAN 3 DAYS OF OPIOIDS

- Obtain written informed consent (risks, benefits, alternatives) that includes:
 - · Risk of dependency, addiction and diversion
 - Expectations and how to use
 - Condition-specific alternatives
 - Information on neonatal abstinence syndrome and accessing contraceptives if woman is of child-bearing age (15-44 years old)

- ☐ Obtain written informed consent (risks, benefits, ☐ Check the CSMD (see CSMD schedule on back)
 - Conduct a thorough evaluation of the patient
 - Document consideration of alternative treatments for pain and why an opioid was used
 - ☐ Include ICD-10 code in the chart and on Rx
 - Pharmacy may fill no more than half of total prescribed amount initially



Calculations of MME (Morphine Milligram Equivalent) for Commonly Prescribed Opioids

Morphine milligram equivalents (MME)/day: a measurement used to equate the strength of various drugs to morphine. One milligram of hydrocodone is equivalent to one milligram of morphine, and one milligram of oxycodone is equivalent to 1.5 milligram of morphine.

Opioid	Dosage	Times Per Day	MME Per Day
	5 ma	3	15 MME
Hydrocodone	5 mg	4	20 MME
	10 mg	3	30 MME
		4	40 MME
	F	3	22.5 MME
Oxycodone	5 mg	4	30 MME
	10 mg	3	45 MME
		4	60 MME



For easy and helpful dosage conversions, try using the CDC App, CDC Opioid Guideline.

This App, including the calculator, is not intended to replace clinical judgment. Always consider the individual clinical circumstances of each patient.

Checking the Controlled Substances Monitoring Database (CSMD)

- The new law requires the prescriber or healthcare
- practitioner extender to check the database:
- • Before prescribing an opioid or benzodiazepine at
- the beginning of a new episode of treatment (drug
- not prescribed within previous 6 months)
- Prior to the issuance of each new prescription for
- the controlled substance for the first ninety (90)
- days of a new episode of treatment
- At least every six months when that controlled
- substance remains part of the patient's treatment
- plan

ROANE COUNTY MEDICAL EXAMINER 2018 DRUG OVERDOSE CASES AS OF 7/10/19

DATE	M/F	AGE	SUBSTANCE(S)	PENDING/	
DIED				CONFIRMED	
1/13/18	F	63	Ambien and Oxycodone	CONFIRMED	
1/14/18	F	41	Hydrocodone	CONFIRMED	
2/9/18	F	52	Methamphetamine	CONFIRMED	
2/13/18	F	52	Heroin, Fentanyl, Alcohol, Valium	CONFIRMED	
3/4/18	М	45	Alcohol and Methadone	CONFIRMED	
3/14/18	F	38	Subutex, Citalopram and Benadryl	CONFIRMED	
3/20/18	М	22	Methamphetamine (suicide)	CONFIRMED	
4/11/18	F	38	Oxymorphone	CONFIRMED	
4/12/18	М	45	Fentanyl	CONFIRMED	
4/12/18	М	32	Cocaine, Meth, Fentanly, Clonopin (S)	CONFIRMED	
4/21/18	М	34	Methamphetamine (suicide)	CONFIRMED	
5/14/18	М	32	Morphine, Acetyl Fentanyl, THC, Xanax	CONFIRMED	
5/19/18	F	59	Oxycodone	CONFIRMED	
5/25/18	F	55	Codeine and Elavil	CONFIRMED	
6/6/18	М	59	Oxymorphone	CONFIRMED	
6/24/18	F	63	Tramadol	CONFIRMED	
6/29/18	М	49	Fentanyl, Xanax, Alcohol	CONFIRMED	
7/3/18	F	37	Methamphetamine	CONFIRMED	
7/7/14	М	68	Ultram	CONFIRMED	
7/9/18	F	55	Methadone & Xanax	CONFIRMED	
7/14/18	F	58	Alcohol and Quetiapine	CONFIRMED	
7/21/18	F	51	Morphine, Oxycodone & Paxil	CONFIRMED	
7/25/18	F	43	Methamphetamine	CONFIRMED	
9/2/18	М	41	Methamphetamine	CONFIRMED	
9/6/18	F	39	Heroin, Xanax, Oxycodone, Fentanyl	CONFIRMED	
9/8/18	F	47	Valium, Morphine, Fentanyl, Ultram	CONFIRMED	
9/10/18	М	33	Methamphetamine, Alcohol	CONFIRMED	
11/18/18	М	65	Oxycodone and Valium	CONFIRMED	
11/22/18	F	53	Oxycodone, Methadone and Valium	CONFIRMED	
12/11/18	F	57	Crack Cocaine and Xanax	CONFIRMED	
12/13/18	F	58	Klonopin, Xanax, Hydrocodone, Subutex, THC	CONFIRMED	
12/16/18	М	17	Methadone	CONFIRMED	
Averag	e Age	46.9			

2018 OVERDOSES OPIATES - 69%

STIMULANTS – 25%

ROANE COUNTY MEDICAL EXAMINER 2019 DRUG OVERDOSE CASES AS OF 9/16/19

DATE	M/F	AGE	SUBSTANCE(S)	PENDING/	AVG. CUM.
DIED			•	CONFIRMED	Morphine
1/23/19	F	43	Hydrocodone, Methamphetamine & Ambien	CONFIRMED	
2/11/19	М	27	Heroin & Fentanyl	CONFIRMED	
2/22/19	М	43	Fentanyl	CONFIRMED	
3/10/19	F	34	Moonshine & Methamphetamine	CONFIRMED	
4/2/19	F	29	Opiates	CONFIRMED	
4/28/19	F	54	Methamphetamine, Alcohol & TRAUMA	CONFIRMED	
5/5/19	M	40	Methadone, Xanax & Methamphetamine	CONFIRMED	
5/16/19	F	44	Methamphetamine	CONFIRMED	
7/9/19	F	29	Methamphetamine	CONFIRMED	
8/3/19	M	37	Opiates & Methamphetamine	CONFIRMED	
8/27/19	F	54	Methamphetamine	CONFIRMED	
9/11/19	F	57	Heroin	PENDING	
Average	Age	40.9			

2019 OVERDOSES

OPIATES - 58%

STIMULANTS – 66%

QUESTIONS

Sheriff Jack Stockton 865-717-4700 Detective John H Mayes

865-717-4711

865-809-7425 cell

Doctor Thomas Boduch 865-376-1212