



# DRUG FACILITATED SEXUAL ASSAULTS

## WHAT IS A DFSA?

### Drug Facilitated Sexual Assault

Administration of an anesthesia type drug to render a victim physically incapable or helpless and thus incapable of giving or withholding consent for any type of sexual contact

## **COMMONLY USED DRUGS**

- ⦿ Alcohol - #1 agent used in DFSA's
- ⦿ Legal
- ⦿ Effective
- ⦿ Cheap
- ⦿ Synergistic effects with other medications

## **COMMONLY USED DRUGS**

- ⦿ Alcohol - #1 agent used in DFSA's
- ⦿ Hallucinogens - LSD, Psilocybin/mushrooms, peyote cactus
- ⦿ Dissociative Drugs - PCP, Ketamine
- ⦿ Psychostimulants - cocaine, crack, methamphetamines, Ritalin, ecstasy, GHB
- ⦿ Benzodiazepines - Valium, Xanax

## COMMONLY USED DRUGS

- ⦿ Opioids - morphine, Vicodin, oxycontin, heroin
- ⦿ Muscle Relaxants - Flexeril, Soma
- ⦿ GHB
- ⦿ Cannabis
- ⦿ OTC medications - Benadryl, sleep aids, cough syrup
  - *Perpetrators may use whatever is available to them or take advantage of agents voluntarily consumed*

## DRUG EFFECTS

- ⦿ Dose dependant
  - ⦿ User's body size
  - ⦿ Food ingestion
  - ⦿ Hydration
- \*Consider Synergistic effects from multiple medications

## **DRUG EFFECTS**

- ◉ Drug Facilitated Screening Worksheet
  - Assists LE or Prosecutors with determining the patient's ability to provide consent to act
  
  - May be determining factor for rape

## **DRUG EFFECTS**

- ◉ Most conscious patient report having “cameo appearances”
  - Commonly described as flashes of memory unclear in the order they took place

## **DRUG EFFECTS**

- ◉ Often causes delayed reporting or delayed seeking of medical treatment due to timeframe of feeling “hung over” or unclear memory of events

## **WHEN SHOULD COLLECTION OCCUR**

- ◉ By request of law enforcement
- ◉ Reported history of ingestion
- ◉ Unclear events of what happened
- ◉ Any impairment noted by the SANE or law enforcement personnel
  - ◉ Gross or fine motor impairment

## **S/S OF A DFSA**

- ⦿ Dizziness
- ⦿ Drowsiness
- ⦿ Impaired judgement
- ⦿ Severe intoxication feeling after consuming non-alcoholic (or less than usual amount of alcohol)
- ⦿ Slurred speech
- ⦿ Gross or fine motor impairment
- ⦿ Memory loss
- ⦿ Severe thirst (common in many agents)
- ⦿ Patient “feels” they were drugged

## **DDX OF DFSA VS BASELINE**

- ⦿ If s/s of a DFSA are present, assure the findings are not the patient’s baseline status
- ⦿ Consider consulting with physician about patient’s medical history
- ⦿ Rationale for performing a DFSA WILL be reviewed in court, it is pertinent to document in extreme detail

## WHEN SHOULD COLLECTION OCCUR

- ◉ Baseline testing should NOT occur per Ohio Protocol
- ◉ 96 Hours is rule of thumb for DFSA Collection (same as SA kits)
- ◉ DFSA can be collected anytime within the timeframe that a SA kit can be collected

## SPECIMEN TYPES FOR DFSA

- ◉ Serum Blood
- ◉ Urine
- ◉ BOTH urine and serum blood

The forensic examiner is the collector of the specimens. This assures appropriate chain of custody of the specimen.

(Chain of custody = assuring the item you collected came FROM that person you say it does and the collection items remained unadulterated or tampered with) - document trail to prove this

## DFSA COLLECTION KITS

- ◉ DFSA kits are kept at the SBC office for you to place in your forensic supply stock
- ◉ Assure you have adequate supply of kits on you at all times

## WHAT SPECIMEN TO COLLECT

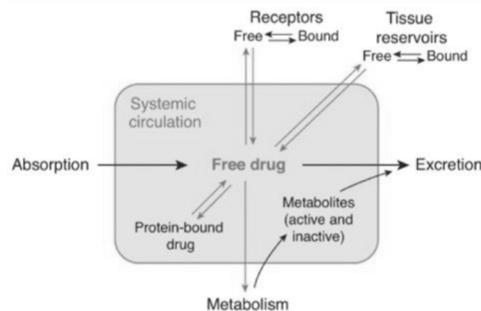
- ◉ Some drugs are metabolized within 6-12 hours from the blood and may not be detected in a blood sample after that timeframe
- ◉ If only urine is collected within 0-12 hours metabolites may not be detected in urine
- ◉ **Specimen types for collection will be as outlined below:**
  - 12 hours or less from ingestion = Blood Collection
  - 12 hours greater from ingestion = Urine Collection

## PHARMACOLOGY REVIEW

- ⦿ Pharmacodynamics (what drug does to body)
  - ⦿ ED50 = dose that 50% of population experiences therapeutic effect
  - ⦿ TD50 = dose that 50% of population will experience toxicity
  - ⦿ LD50 = dose that 50% of population will experience lethal dose
- ⦿ Important medical consideration = high potential for toxic side effects to be seen from medications due to large concentration or quantity of medication given at once
- ⦿ Example = Benadryl tablets are often crushed and placed in strong drinks to mask the taste. Can be up to 6 tablets at once
- ⦿ ANY SE that you may observe could be from the TD50 of the medication (unknown at time of exam). Report concerns to physician for any findings outside the patient's baseline (why it is important to KNOW the patient's baseline status)

## PHARMACOLOGY REVIEW

- ⦿ Pharmacokinetics (what body does to drug)
  - ⦿ Absorption
  - ⦿ Distribution
  - ⦿ Metabolism
  - ⦿ Secretion



## PHARMACOLOGY REVIEW

- ⊙ Pharmacokinetics (what body does to drug)
- ⊙ pKa = point that 50% of the drug is ionized and 50% is non-ionized
- ⊙ pKa dependent on pH of body environment

-each patient will metabolize medications at different rates, also depends on the volume of distribution for metabolism (patient may feel SE for several days beyond what is expected)

-Consider BBB penetrating agents >> molecules small in size and hydrophobic will penetrate the BBB much easier via active transport

Ex: Benadryl suppresses the CNS due to easy diffusion into the CNS via easy entrance into the BBB because it is small in molecular size and hydrophobic

## PHARMACOLOGY REVIEW

- ⊙ Pharmacokinetics (what body does to drug)
- ⊙ Concentration

The higher the concentration of agent used = greater the absorption will be

-CONSIDER FIRST PASS METABOLISM = passage across GI tract epithelium depends on pH, pKa ionization and if agent is hydrophilic or hydrophobic

\*\*PO drug amount actually given may be much higher than suspected but agent may have a high first pass metabolism

## PHARMACOLOGY REVIEW

- ⊙ Pharmacokinetics (what body does to drug)
- ⊙ Interactions with patient's Rx medications

- may effect Vd of agent used in assault
- may have synergistic effect with patient's medications
- TD50 = reach quicker due to active or inactive metabolites in meds

## PHARMACOLOGY REVIEW

- ⊙ Pharmacokinetics (what body does to drug)
- ⊙ CYP450

+50 enzymes predominantly in liver, responsible for metabolizing 90% of medications

Majority:

CYP1A2, CYP2C9, CYP2C19, CYP2D6, CYP3A4, CYP3A5

-medications metabolized by the CYP450 enzymes have interactions with other medications that can INDUCE or INHIBIT metabolism of the medications.

>>leads to potential for toxic doses quickly or non-therapeutic doses of their baseline medications

## PHARMACOLOGY REVIEW

### ◎ Pharmacokinetics (what body does to drug)

#### ◎ BASELINE ANTI-RETROVIRAL AGENTS

-patient's currently taking any type of anti-viral OR anti-retroviral agents should be carefully screened for toxic SE of any medications (know patient's baseline)

Rationale: antiretroviral agents have a much higher incidence of interaction due to CYP450 interactions

Ex: HIV medication therapy (Truvada) = dose may need to be adjusted based on patient's therapeutic levels below standards

CONSIDER: CYP450 induction and inhibition!

*Induction = inducing it's own metabolism of agent rendering it ineffective*

*Inhibition = higher incidence of SE and toxicities > inc plasma concentrations and inhibiting metabolism of drug causing higher levels (Rifampin, CYP3A4)*

## LEGAL BLOOD/URINE SAMPLES

### ◎ Common drugs utilized in drug facilitated sexual assaults CANNOT be detected by hospital laboratories

- Rohypnol/GHB (may remain in body for 4 days)
- Ketamine
- PCP
- Versed
- MANY others

- Legal blood/urine sample should be obtained same as DUI collection to be sent to crime lab

## **LEGAL BLOOD/URINE SAMPLES**

- ◉ May have false negative reading if blood or urine sample sent to hospital lab for processing
- ◉ Crime labs have a dramatically increased sensitivity to metabolites (found in urine) compared to other laboratories
- ◉ ALSO = chain of custody is LOST during hospital lab processing = cannot be used in court

## **LEGAL BLOOD/URINE SAMPLES**

- ◉ Appropriate chain of custody is maintained with legal blood urine collection
- ◉ SANE's and law enforcement much more familiar with collection process and chain of custody versus hospital personnel
- ◉ Maintain COC = can use results in court to prove the patient was UNABLE to provide consent during the assault

## **LEGAL BLOOD/URINE SAMPLES**

- ◉ Always package them separate
- ◉ Separate kit for DFSA and separate kit for SA
  
- ◉ THEY ARE SENT TO DIFFERENT LABS FOR PROCESSING the majority of time

## **LEGAL BLOOD/URINE SAMPLES**

- ◉ Kit cannot be processed if consent is not inside the kit
  - Informed consent - part of the SBC protocol
  - You will have a DFSA consent with every packet of forensic documents

## **LEGAL BLOOD/URINE SAMPLES**

- ◎ FOLEY collection
  - Informed consent
  - Collect urine from FOLEY TUBE and not the Foley bag
  - Defense attorney may attempt to say it is adulterated if collected from Foley bag

## **LEGAL BLOOD/URINE SAMPLES**

Alcohol is the #1 substance used in drug facilitated sexual assaults!!!!

## CONSIDERATIONS

- Patient may be under influence of narcotic/EtOH and unable to provide SANE with narrative history of assault events.
- Once initial exam is completed no addendums are made to SANE records

Make your exam COUNT! May need to defer exam for a few hours until patient is coherent to provide full details of assault

## CONSIDERATIONS

- Blood/Urine samples generally only able to be tested within 60-90 days from collection date
  - Dependant on crime lab processing standards
  - ALL specimens must be refrigerated by LE when stored until sent to crime lab

## DFSA COLLECTION PROCESS

- ◉ Part of exam that DFSA is collected:
- ◉ DFSA collection occurs immediately after obtaining generalized consent for the exam
- ◉ DFSA collection is prior to opening the SA kit

## DFSA COLLECTION PROCESS

- ◉ DFSA kit will be provided by the Forensic Examiner (keep adequate # of kits in your forensic "toybox")

- ◉ ALWAYS check Expiration date on DFSA kit prior to use



## DFSA COLLECTION PROCESS

- ◉ Kit will come with items needed for urine or blood collection

- ◉ May use butterfly Needle from hospital If desired rather than Larger needle inside DFSA kit



## DFSA COLLECTION PROCESS

- ◉ DFSA has a SEPARATE consent form from the general forensic exam consent
- ◉ Rationale: DFSA consent contains specific information only related to the specimen collection that explains material risks and benefits of that process

## DFSA COLLECTION PROCESS

If a DFSA is suspected the patient **MUST** sign the informed consent in order to have the specimens collected and processed

**\*\*NOTE:** if a DFSA is suspected the patient may choose to **NOT** have the collection performed, so have the patient sign they **DECLINE**

**\*\*note** the area for a witness of the collection

-be sure to include all dates and times as needed on form

### Consent for Blood/Urine Collection for Testing – (Form E)

I understand that I have the right to refuse such testing. I have been informed that results from any and all testing that I consent to can be used in a court of law for the purpose of prosecution of this crime. I understand that the results of such testing may reveal prescription or illegal drug use that may not be related to the reported assault. Use of illegal substances that may constitute felonious criminal activity may result in ineligibility for Crime Victims Compensation Funding. I authorize release of my name and other identifying information to S.A.N.E. of Butler County, Inc. and to the respective law enforcement agency along with the blood and/or urine samples for use in the investigation and prosecution of the reported crime. I release S.A.N.E. of Butler County, Inc. from any and all liability that can be associated with the collection process or use of the samples obtained.

Check one and sign to confirm this information has been reviewed with you:

I **CONSENT** to blood and/or urine collection       I **DECLINE** blood and/or urine collection

Signature of patient \_\_\_\_\_ Print name of patient \_\_\_\_\_

Date and Time of Signature \_\_\_\_\_

### Specimen Collector's Report

I hereby certify that I collected the specimen from the patient: Circle Specimen **BLOOD** **URINE**

Signature of RN collecting specimen \_\_\_\_\_ Print name of RN collecting Specimen \_\_\_\_\_

Date and Time of specimen collected \_\_\_\_\_

I hereby certify that I witnessed the actual blood draw or collection of urine from the above named individual:

Signature of witness \_\_\_\_\_ Print name of witness \_\_\_\_\_

Date and Time of witness \_\_\_\_\_

## DFSA COLLECTION PROCESS

Rationale for declining DFSA:

-any agents used within specific timeframes may show up as positive on the DFSA results

-this can have a negative impact on patient = consider any agents used **PRIOR** to the assault  
ex: marijuana, illicit drug use prior to assault

**\*\*this** can have a biased impact on jurors in court if the patient has a positive "hit" on their DFSA that was **NOT** related to the assault, however if collection **NOT** performed there is no chance to prove consent was unable to be performed

-explain material risks and benefits of both to the patient and **ALLOW THE PATIENT TO DECIDE**. Then indicate choice on the DFSA consent form

## DFSA COLLECTION PROCESS

- ◉ Blood = less than 12 hours from ingestion
- ◉ Urine = more than 12 hours from ingestion
- ◉ When in doubt, collect BOTH

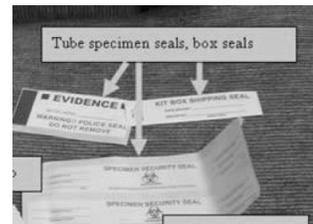
## DFSA COLLECTION PROCESS

- ◉ Collect blood in both tubes inside kit, fill completely
- ◉ Use iodine kit and NOT Alcohol swab to clean skin (this will alter results)



## DFSA COLLECTION PROCESS

- ◉ Invert tubes SLOWLY to mix preservative agent with serum blood after collection
- ◉ Place blood tube stickers evenly over collection tubes AFTER writing information on labels



## DFSA COLLECTION PROCESS

- ◉ Fill urine cup as indicated and seal tightly

-it is good practice to  
Document if you directly  
Visualized the patient use the  
Urine cup or not



**NOT ACCEPTABLE TO USE URINE NOT  
COLLECTED BY YOU!!!!!!!!!!**

## DFSA COLLECTION PROCESS

o Place specimens inside the Plastic bag and place inside Box and secure box with Evidence tape where indicated

\*\*make sure copy of consent Is placed inside the kit

\*place patient ID sticker on Outside of kit



## DFSA COLLECTION PROCESS

Review the Medical Protocol for Drug Facilitated Sexual Assault Collection Procedures

**QUESTIONS?**