Benzodiazepine Use Disorder Management

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- I have no disclosures.

Outline

- Definition of sedatives, anxiolytics, and hypnotics
- Brief history of sedatives
- Benzodiazepine Use Disorder Criteria
- Intoxication / Withdrawal
- Management
  - BZD Detection
  - BZD Equivalency
  - Level of care
- Conclusion

Definition of sedatives, anxiolytics, and hypnotics

- Sedative - calming effect
- Hypnotic – sleep inducing
- Anxiolytic – reduce anxiety

"Continuum of effects" = Calming, sleep, unconsciousness, coma, death

What are Sedative-Hypnotics?

Benzodiazepines (BZDs)	Barbiturates	BZD Partial Agonists	Others
Alprazolam	Phenobarbital	Zolpidem	Carisoprodol
Clonazepam	Butalbital	Zaleplon	Meprobamate
Diazepam	Butabarbital	Eszopiclone	GHB
Lorazepam	Pentobarbital		Chloral hydrate
Midazolam	Thiopental		~~Paraldehyde~~
Oxazepam			~~Ethchlorvynol~~
Chlordiazepoxide			Flumazenil*
Others			

Brief history of sedatives

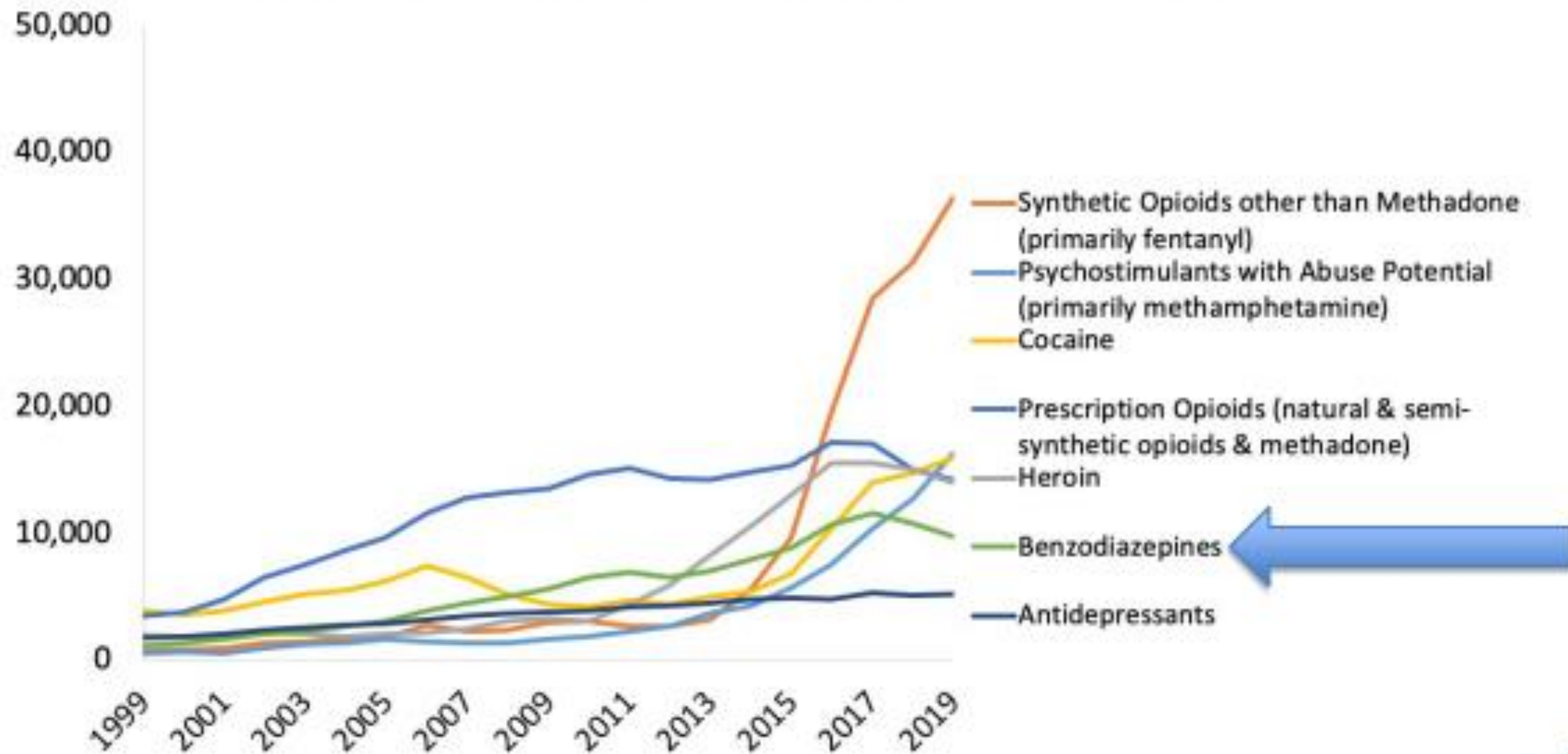
- 1864 – barbituric acid
- 1903 – barbital synthesized
- 1940s – in WW2 stimulants given to soldiers to keep them awake followed by barbituate to calm them down
- 1950 – meprobamate synthesized
- 1955 – 1st benzo synthesized = chlordiazepoxide
- 1960s BZD introduced to market in 60s. Valium 1963
- 1981 Xanax on the market

Benzodiazepine Use Disorder Criteria

Use Disorder
Larger amounts/longer periods of use
Desire/efforts to cut down
Time spent to obtain, use, recover
Craving, strong desire to use
Failure to fulfill major role obligations
Continued use despite social, interpersonal problems
Important activities given up/reduced
Recurrent use in hazardous situations
Continued use despite physical, psychological problems
Tolerance
Withdrawal

- Mild 2-3
- Moderate 4-5
- Severe 6-11

Why the concern for use disorder?



Risk of overdose – benzo+opioid+alcohol> benzo+opioid> opioid

BZD Intoxication

- Slurred speech
- Incoordination
- Unsteady gait
- Nystagmus
- Impaired cognition
- Stupor or Coma

BZD Withdrawal Symptoms

DSM-5:

- Autonomic hyperactivity
- Hand tremor
- Insomnia
- Nausea or vomiting
- Transient hallucinations or illusions (V, A, or T)
- Psychomotor agitation
- Anxiety
- Grand mal seizures

Systems:

- VS: tachycardia, hypertension, fever, orthostatic hypotension
- CNS: agitation, anxiety, delirium, hallucinations, psychosis, insomnia, irritability, nightmares, sensory disturbances (light, sound, taste, smell), tremor
- HEENT: tinnitus
- GI: anorexia, diarrhea, nausea
- Severe: seizures, delirium, death

BZD Management

BZD Equivalency

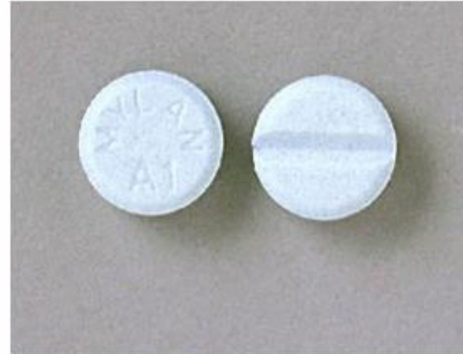
- Aprazolam (Xanax) 0.5 mg = Diazepam 5-10 mg
- Clonazepam (Klonopin) 0.5 mg = Diazepam 5-10 mg
- Lorazepam (Ativan) 1 mg = Diazepam 5-10 mg

Street Names

- Blue football
- Totem pole
- Bricks
- Z-bar
- Zanbar

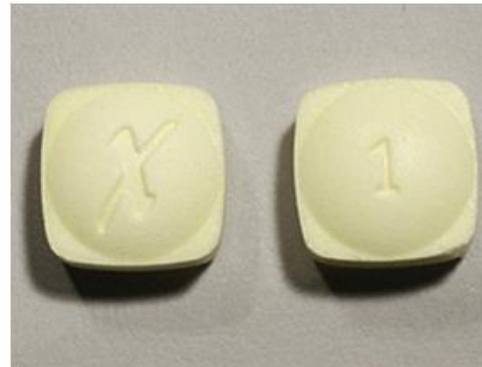
Xanax® 1mg

Xanax® 2mg

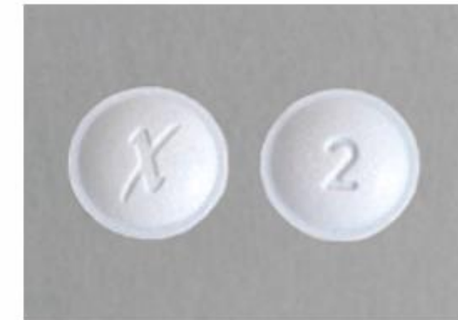


Alprazolam 1mg (Mylan)

Alprazolam 2mg (Dava)



Xanax® Extended Release 1mg



Xanax® Extended Release 2mg

Benzodiazepine detection

- Drug screens – serum, oral, urine
  - Quantitative (liquid gas chromatography mass spectometry)
    - Level of substance and level of substance's metabolites
  - Qualitative (antibody)
    - Yes/ no detection of substance
- Drug screen may not provide the pertinent information.
  - Qualitative
    - Positive benzodiazepine does not indicate positivity for the prescribed BZD.
    - Negative detection does not mean the patient is BZD negative. (ex klonopin)
  - Quantitative
    - May need to order the specific test to detect a particular benzodiazepine.
    - Quest's quant UDS will reflexively check benzodiazepine and metabolites only if benzo +

Patient who purchases a totem pole but is benzo negative,
think pressed fentanyl.

Level of Care

- Absence of intoxication / withdrawal = outpatient treatment
- Presence of early withdrawal symptoms
  - Outpatient vs Inpatient Treatment (Detoxification) based on physician & patient comfortability
- Prescence of severe withdrawal symptoms – seizure, delirium, etc.
  - Medically managed intensive inpatient (Hospitalization)
- Overdose – Hospitalization
  - flumazenil

Outpatient management

- Willingness to patient to remain abstinent from non-prescribed BZD is a necessity.
- Intermittent quant UDS to assess patient compliance and safety.
- Convert short acting to long acting benzodiazepine
- Decrease dose by 15% every 2 weeks
- Decrease dose by 25% every 4 weeks
- BUT taper is always individualized to the patient.
- Taper can take weeks to months.
- Treat co-morbid psychiatric disorders appropriately.
- Adjunct treatment with carbamazepine, gabapentin, etc.
- **Counseling**

Inpatient Management

- Long acting benzodiazepine
  - Valium 5-10 mg 5 times daily – Valium 5-10 mg 4 times daily – valium 5-10 mg 3 times daily, etc.
  - Adjunct gabapentin taper 300-600 mg QID – TID – BID – QHS in addition to long acting benzodiazepine.
- Adjunctive antipsychotics for hallucinosis and/ or agitation
- **<u>Ensure follow up with addiction medicine physician and therapist.</u>**

Questions / Comments

Thank you!