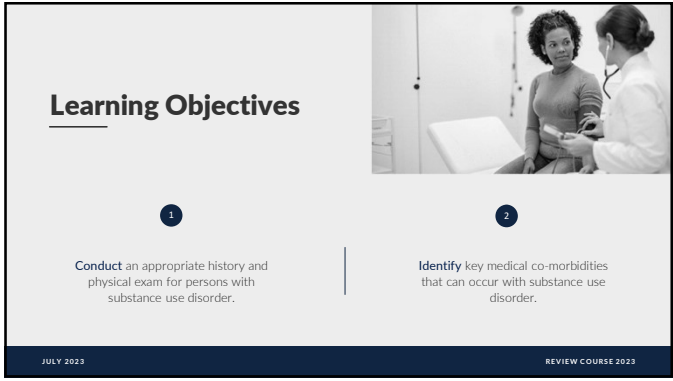


1



2



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Presentation Outline

<p style="text-align: center; margin: 0;">Routine and Preventive Care</p> <ul style="list-style-type: none"> • History • Physical examination • Labs • Preventative Care • Preconception Care 	<p style="text-align: center; margin: 0;">Medical Consequences of Alcohol and Drug Use</p> <ul style="list-style-type: none"> • Alcohol • Tobacco • Opioids • Stimulants • Injection Drug Use • Cannabis
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SUD = Poor Medical Care

- Reasons
- Barriers
- Consequences

Chan Carusone, S., Guta, A., Robinson, S. et al. "Maybe if I stop the drugs, then maybe they'd care?"—hospital care experiences of people who use drugs. Harm Reduct J 16, 16 (2019).

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General Medical Evaluation

- Medical History
- Physical Examination
- Tests
- Preventative Counseling
- Preventative Screening
- Immunizations

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Alcohol

- Affects every organ system
- Women >> Men
- Is any ETOH safe?
- Physical Exam Findings:
 - Spider angiomas
 - Palmar Erythema
 - Jaundice
 - Ascites

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Alcohol

- GI-
 - Esophagitis/gastritis, Mallory-Weiss tears, esophageal varices
 - Pancreatitis (dose-related toxic effect)
 - Alcohol-related liver disease
 - AST/ALT > 2
 - Fatty liver
 - Alcohol related hepatitis (ALH)
 - Cirrhosis-10-20%

UCSF, Department of Surgery

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Alcohol

- Respiratory
 - Aspiration
 - OSA
- Infectious
 - Hepatitis
 - SBP
 - TB
- Nutrition-vitamin and mineral deficiencies
 - B1, B6, riboflavin, niacin, Vit D, Mg2+, Ca2+, folate, PO4, zinc

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Alcohol

- CV
 - HTN-dose dependent
 - Cardiomyopathy-dilated
 - Atrial Fibrillation "Holiday Heart"
- Heme/Oncology
 - Anemia-macrocytic
 - Thrombocytopenia/pancytopenia
 - Coagulopathy
 - Increase CA: breast, oral, GI, hepatic (no safe threshold)

Zhao J, Stockwell T, Naimi T, Churchill S, Clay J, Sherk A. Association Between Daily Alcohol Intake and Risk of All-Cause Mortality: A Systematic Review and Meta-analysis. JAMA Netw Open. 2023;6(3)

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Alcohol

- Neurological
 - Neuropathy-peripheral/autonomic
 - Sleep
 - Cognition
 - Cerebellar dysfunction
 - Trauma

Wernicke Encephalopathy	Korsakoff's Syndrome
C-Confusion	R-Retrograde amnesia
O-Ophthalmoplegia	A-Anterograde amnesia
A-Ataxia	C-Confabulation
T-Thiamine Deficiency	K-Korsakoff psychosis

Medical Maestro

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Alcohol

- Endocrine
 - Hypogonadism
 - Direct testicular effect
 - Hepatic dysfunction → reduction in gonadal hormones
 - Decreased fertility
 - Hyperlipidemia

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Tobacco

- Leading cause of preventable death
- CV
 - HTN
 - CAD (multifactorial)
 - Peripheral vascular disease
- GI
 - GERD/PUD
 - Pancreatitis
 - Inflammatory Bowel Disease
 - Malignancy



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Tobacco


- Respiratory
 - COPD
 - Malignancy
 - Asthma
 - PTX
 - Pulmonary HTN
 - Pneumonia/bronchitis



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Tobacco

- Heme/Onc
 - 49% of cancer deaths related to tobacco use
 - Oral, gastric, lung, breast, cervical, bladder, kidney
 - DVT/PE
- Neurological
- Infectious Disease
- Reproductive/Endocrinology
 - Grave's Disease/hypothyroidism
 - Erectile Dysfunction/infertility



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Tobacco Cessation and Recovery?

- Continued tobacco use predicted return to all substance use
- Should residential treatment programs allow nicotine use?
- Will patients leave prematurely?
- Philadelphia and NY experiences

Weinberger AH, Platt J, Esan H, Galea S, Erlich D, Goodwin RD. Cigarette Smoking Is Associated With Increased Risk of Substance Use Disorder Relapse: A Nationally Representative, Prospective Longitudinal Investigation. *J Clin Psychiatry*. 2017 Feb;78(2):e152-e160.

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Opioids

- ID
 - IVDA-endocarditis, osteomyelitis, Hep C and HIV
 - STD
- Respiratory-overdose, chest wall rigidity with FENT, pulmonary edema
- Endocrine-reduction in steroid hormones
- Trauma-rhabdomyolysis, compartment syndrome
- Respiratory-OSA,
- GI-constipation

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Opioid Induced Hypogonadism

- Low libido
- Muscle wasting
- Increased adiposity
- Depression
- Osteoporosis
- Treatment: Testosterone replacement

Mayo Clinic Proceedings: Innovations, Quality & Outcomes, ISSN: 2542-4548, Vol. 3, Issue: 3, Page: 276-284

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QT Prolongation

- Normal: <430 ms-men, <450 ms-women
- Medications: methadone, quinolones, ondansetron, macrolides, hydroxyzine, citalopram
- ↓ Mg²⁺, K⁺, Ca²⁺
- Screening:
 - Good family and medical history-look at all medicines
 - EKG at higher doses of methadone?
- Flockhart Table/APP-IUSOM

Trecece JM, Al Madani M, El Khoury G, Khraisha O, Martin JE, Baumrucker SJ, et al. Comprehensive review on methadone induced QT prolongation and torsades. J Pharmacol Pharmacother. 2018;9:66-75. doi:10.1016/j.jpp.2018.05.001

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Risk Factors for TdP

A CARLAT PSYCHIATRY REFERENCE TABLE

Nonmodifiable	Modifiable
Female sex	Multiple QT-prolonging medications
Older age	Drug toxicity
Structural or functional heart disease	Drug-drug interactions
Congenital long-QT syndrome	Severe acute illness
Personal history of drug-induced QT prolongation	Bradycardia
Family history of sudden (or aborted) cardiac death	Hyokalemia, hypomagnesemia, hypocalcemia
Poor metabolizer of CYP enzymes	Hepatic or renal impairment

44999 | J Fam Psych 2023; 37(1):273-279

From the Article: "Cardiovascular Psychiatry Part 1" with Nargis C. Fani, MD, MS, FACP, FRCPC The Cardiac Psychiatry Report, Volume 21, Number 483, April/May 2023 www.psychiatryonline.org

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LFT's and Naltrexone

- Indication OUD/AUD-baseline higher risk of hepatic disease
- No need to check LFT's prior to initiating treatment
- HCV, HBV not a contraindication
- Elevated LFT's no greater than placebo

Springer, Sandra A., "Monitoring of Liver Function Tests in Patients Receiving Naltrexone or Extended-Release Naltrexone," *PCSS clinical guidelines, Update 2022*

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Stimulants

- CNS
 - CVA-5X increased risk hemorrhagic (METH), also ischemic (COC)
 - No evidence cocaine associated with seizures
- CV
 - MI
 - HTN
 - Aortic dissection
 - Ventricular arrhythmia
 - Supportive treatment: β 1blocker not associated with unopposed α activity
- GI
 - Ischemic bowel
 - Colitis

Arenas DJ, Beltran S, Zhou S, Goldberg LR. Cocaine, cardiomyopathy, and heart failure: a systematic review and meta-analysis. *Sci Rep.* 2020 Nov 13;10(1):19795

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Do I get an EKG prior to starting a prescribed stimulant?

- Kids, young adults-no
 - Low pretest probability
 - Look at EKG if one is available
- Older Adults-poor data
 - Risk of RX stimulants is hypertension, tachycardia, vasospasm
 - BP and HR every 6 months
 - EKG annually? Look for QRS widening, ventricular conduction delay, arrhythmia

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Stimulants

Toxicity	Emergency Presentation	Cause of Death
VASCULAR	Cardiac, stroke	Cardio/cerebrovascular
PSYCHIATRIC	Trauma, psychosis	Traumatic

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- ### Medical Complications of IVDU
- HIV
 - PWID=10% of new HIV cases since 2012
 - Reduction:
 - SSP-reduction in HIV by 50%
 - PrEP, overdose prevention sites
 - Hepatitis
 - 65% PWID-->anti HCV +
 - SSP, MOUD-reduction in HCV
 - DAA regardless of stage of recovery
 - IVDU most common risk factor for new HBV
- Levitt A, Mermin J, Jones CM, See I, Butler JC. Infectious Diseases and Injection Drug Use: Public Health Burden and Response. J Infect Dis. 2020 Sep 2;222(Suppl 5)*

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- ### PrEP
- Public Health Goal: reduce new HIV infections by 75% by 2025 and 90% by 2030
 - CDC, FDA endorse PrEP as effective strategy to reduce new HIV infections among PWID
 - Fewer than 1/500 PWID filled RX for PrEP
 - LAI forms of PrEP on horizon?
- Streed CG, Morgan JR, Gai MJ, Larochelle MR, Paasche-Orlow MK, Taylor JL. Prevalence of HIV Preexposure Prophylaxis Prescribing Among Persons With Commercial Insurance and Likely Injection Drug Use. JAMA Netw Open. 2022;5(7):e2221346*

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Medical Complications of IVDU

- SBI
- Osteomyelitis
- Endocarditis
 - S. aureus (often methicillin resistant)
- Osler nodes, Roth spots, splinter hemorrhages

Survived U.S. cardiac surgeons (DBS Respondents)	Proportion of U.S. cardiac surgeons would operate given patient's characteristics	Surgeons' Limitations on No. of Operations in case of Recurrent Infection
85.6% male	63.0%	73.1%
87.8% non-Hispanic white	64.5%	83.5%
Participated from across US regions	93.1%	63.5%
Recurrence non-DBS	Recurrence DBS	
93.1%	26.4%	

Seminars in Thoracic and Cardiovascular Surgery, ISSN: 1043-0679, Vol: 33, Issue: 3, Page: 703-709 2021

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Medical Complications of Inhaling Drugs

- Inhalation and insufflation
- Shared equipment-->risks of ID
- Poor adherence to barriers during SI
- Trauma-burns, cuts
- Harm reduction

MOUTHPIECE
CRYSTAL METH PLACED IN BOWL
HOLE
MILKY WHITE RESIDUE FORMS ON INNER BOWL FOLLOWING FREQUENT USE
BOTTOM OF BOWL HEATED UNTIL METH TURNS TO GAS THEN INHALED

Best Practices Recommendations for Canadian Harm Reduction Programs-CATIE, 2020

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Cannabis


- Hyperemesis Syndrome
 - Downregulation of CNS CBD R and upregulation of gut CBD R
 - Chronic cannabis use
 - Relieved with hot showers
 - Resolved with cessation
- Medical Cannabis
 - Medical condition with RCT suggests responds to THC
 - Symptoms refractory to pharmacotherapy
 - No SUD/psychological morbidity

Hill KP. Medical Marijuana for Treatment of Chronic Pain and Other Medical and Psychiatric Problems: A Clinical Review. JAMA. 2015;313(24):2474-2483.


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Conclusion




- Targeted history and physical exam
- Physical health
- Teach patients to advocate for themselves
- Tobacco and alcohol most toxic substances
- Partnership with primary care colleagues



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