

WELCOME to the
Substance Use ECHO

Session will start in less than 15 minutes



For educational and quality improvement purposes, we will be recording this video-session

By participating in this clinic you are consenting to be recorded – we appreciate and value your participation

If you have questions or concerns, please email

ECHO@hitchcock.org




Attendance

- Spoke participants
- Hub participants

Please type your name, organization into chat

Please turn video on



Don't forget to submit your cases/questions for upcoming ECHO sessions!

Respect Private Health Information

To protect patient privacy, please only display or say information that doesn't identify a patient or that cannot be linked to a patient.

- **Names:** Please do not refer to a patient's first/middle/last name or use any initials, etc.
- **Locations:** Please do not identify a patient's county, city or town. Instead please use only the patient's state if you must.
- **Dates:** Please do not use any dates (like birthdates, etc) that are linked to a patient. Instead please use only the patient's age(unless > 89)
- **Employment:** Please do not identify a patient's employer, work location or occupation.
- **Other Common Identifiers:** Patient's family members, friends, co-workers, phone numbers, e-mails, etc.



Conflict of Interest Disclosure Statement

No Conflicts of Interest



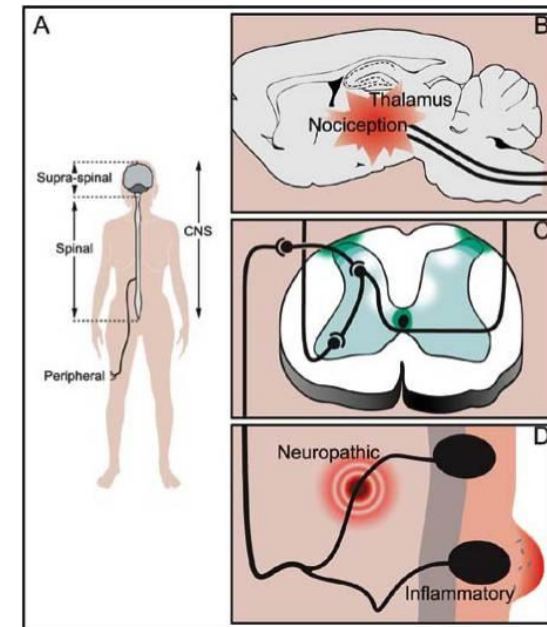
Cannabis – Historical context



- Ancient herbal remedy
 - For pain, insomnia, anxiety, cachexia, others
- In the U.S. pharmacopeia until 1942
 - Tinctures available, but no individual cannabinoids were commercialized prior to removal
 - AMA opposed its removal
- Clinical actions, but few FDA cannabinoid medications
 - THC analogues - nabilone/Cesamet[®], dronabinol/Marinol[®]
 - CBD – Epidiolex[®]
- Euphorogenic/mind altering > widespread non-clinical use

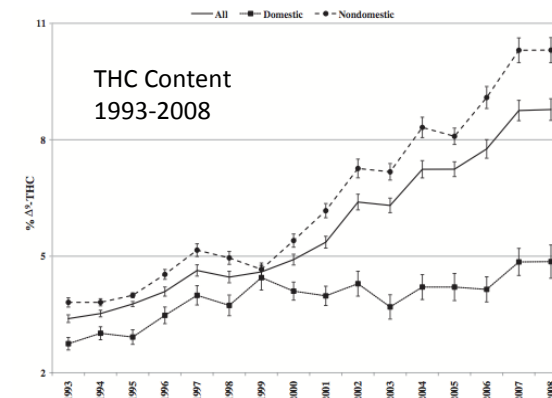
Endogenous Cannabinoid System

- CB1 receptors rich in CNS (densest in reward, nociception, appetite regulation), less in PNS
- CB2 primarily immune system, some CNS/PNS
- Endogenous cannabinoids
 - Anandimide (Sanskrit for bliss)
 - N-Arachidonyldopamine (NADA)
 - Many others, variable CB1/CB2 affinity
- Physiologic roles in neuromodulation
 - Nociception
 - Mood modulation including reward
 - Cognition, learning & memory
 - Energy balance, appetite



Cannabis - Botany

- >100 cannabinoids and over 500 chemical constituents in herbal cannabis
 - THC – analgesic, euphorigenic
 - CBD –anxiolytic, anti-inflammatory, no euphoria
 - Other cannabinoids, terpenes & constituents less studied
- Diverse strains bred with diverse content & effects
- Understanding of cannabinoid actions & interactions evolving. “Entourage” effects?
- Imprecise but potentially helpful in the absence of medications

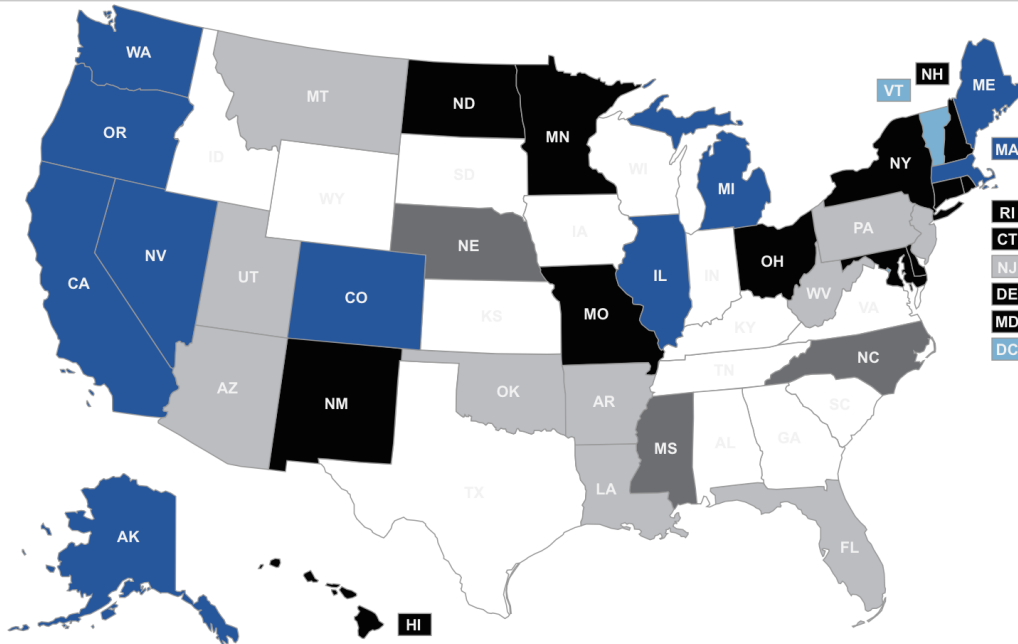


Cannabis - Delivery Systems

- Smoked
 - Rapid onset of action
 - Hazardous products of combustion
- Vaporization (extracts or dried herb)
 - Rapid onset of action
 - Reduced products of combustion
 - Metered dosing devices
- Oral products
 - Slower onset of action
 - Variable dosing, first pass effects
 - Potential misidentification
- Transdermal
 - Highly lipid soluble



Cannabis - Current Legal Status



State laws vary re: Therapeutic Cannabis

- Possession amounts
- Grow, sell, dispense
- Plants, herb, edibles
- Taxation
- Role of clinicians

Federal Law

- CS schedule 1: Illegal, no recognized medical use
- 2013 Fed Govt: no interference with use under state laws
- Current administration
 - Inconsistent

Cannabis & Cannabinoids- Clinical Actions

National Academy of Science, Engineering & Medicine Report, 2017

- Substantial or conclusive evidence
 - Chronic pain in adults, particularly neuropathic pain (cannabis)
 - Chemotherapy-induced nausea & vomiting (oral cannabinoids)
 - Subjective MS spasticity (oral cannabinoids)
- Moderate evidence
 - Short-term sleep (cannabinoids, primarily CBD)
- Limited evidence
 - Appetite & weight loss in HIV/AIDS (cannabis & oral cannabinoids)
 - Objective MS spasticity (oral cannabinoids)
 - Tourette's symptoms (THC capsules)
 - Anxiety symptoms in social anxiety (cannabidiol)
 - PTSD symptoms (nabilone; single, small fair-quality trial)
 - Improved TBI or CVA outcomes—statistical association

Cannabis - Side Effects & Risks

Neurobehavioral Side-Effects & Risks

- Cognitive & perceptual distortions, sedation, reward
 - Risk of MVAs, accidents and falls, particularly in elderly
 - Impairment in work & social performance
- Low birth weight, pregnancy complications, NICU stays, neurodevelopmental changes
- Developmental changes in adolescents
- Physiologic dependence & withdrawal
- Cannabis use disorder mod-severe (9-30% recreational users)
 - Intellectual, motivational, maturational
- Increased risk of psychotic disorders (5X), anxiety disorders
- Increased risk of SI, SA & completed suicide
- Increased BPD & mania/hypomania in BPD

Volkow et al, Adverse Health Effects of Marijuana, NEJM, 2014

Karila L, et al. Long-Term Effects of Cannabis Use : A Review. Curr Pharm Des. 2013

National Academies of Science, Engineering & Medicine, 2017 Report

Cannabis – Side Effects & Risks

Medical Side-Effects

Cardiopulmonary

- Mild tachycardia and orthostatic hypotension (& falls)
- Trigger of myocardial infarction with acute use (NASEM limited)
- CVA: Ischemic or hemorrhage (Limited)
- Exacerbation COPD/asthma with smoking (Limited)

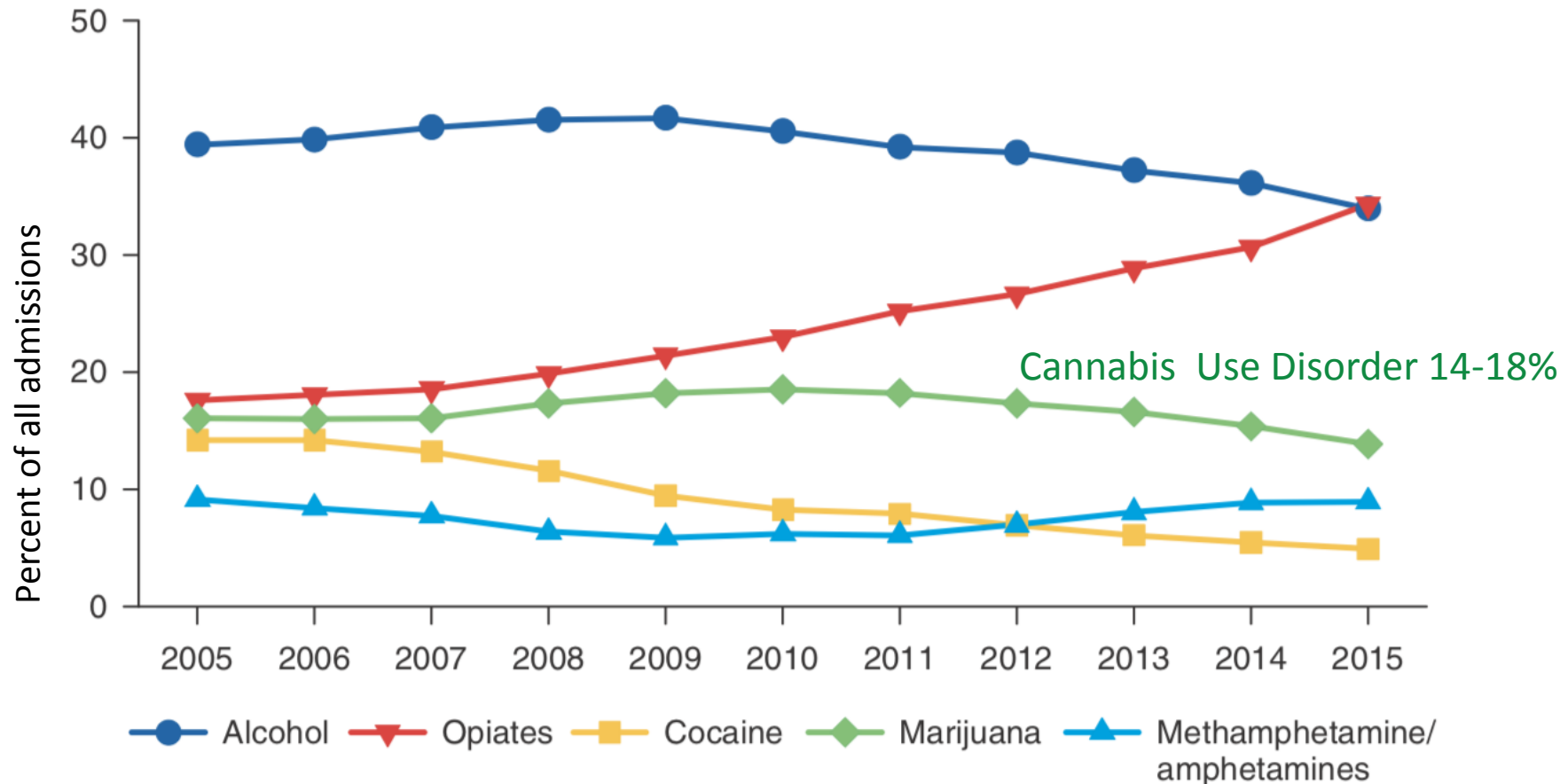
Other

- Cannabis hyperemesis syndrome
- Non-seminoma testicular germ cell tumors (limited)
- Decrease some inflammatory cytokines (limited)
- Mixed effects on Type 2 diabetes (limited)

Note: single drug overdoses exceptionally rare

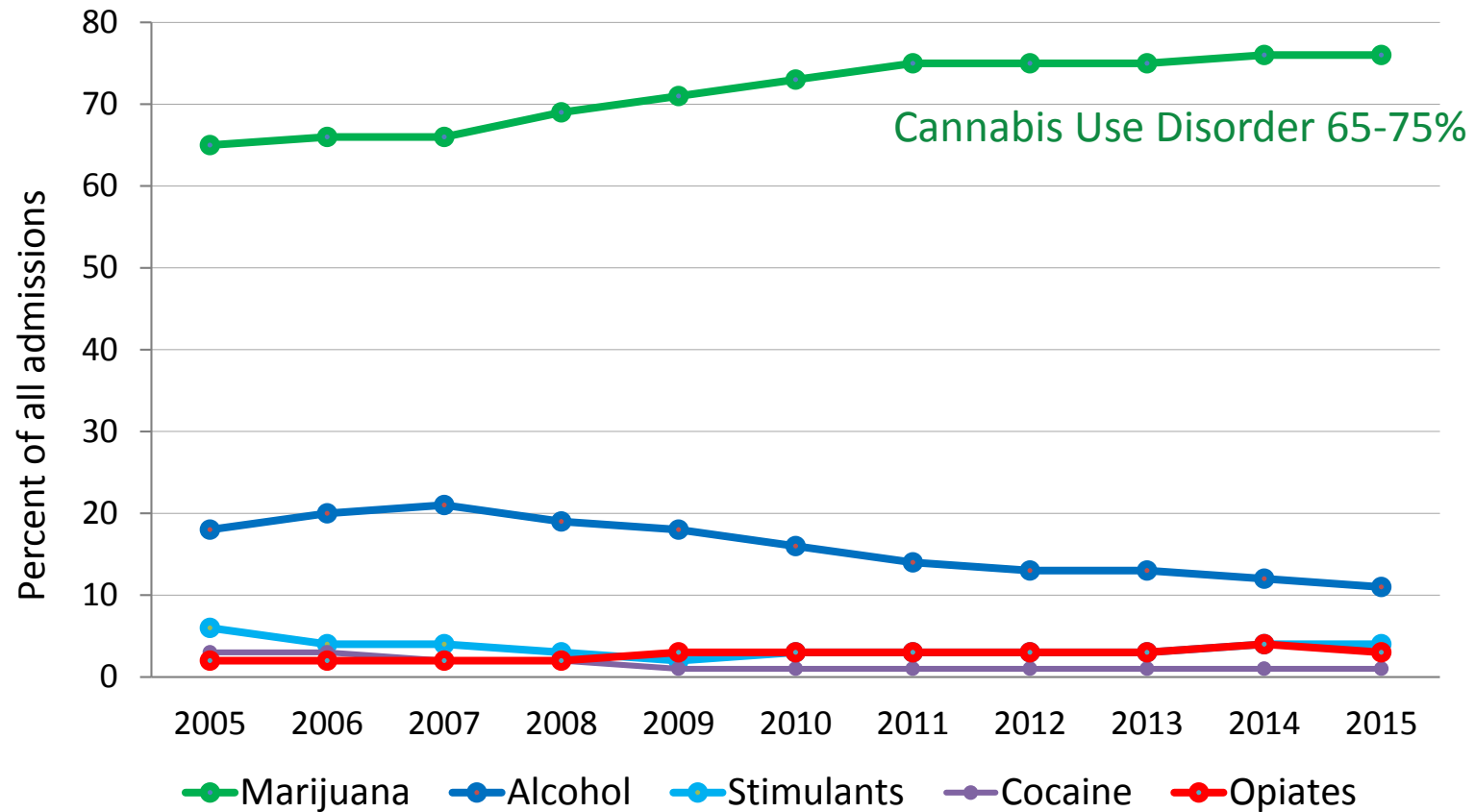
Addiction Treatment Diagnosis— All Ages

Treatment Episode Data System (TEDS) www.samhsa.gov



Addiction Treatment Diagnosis – Ages 12-17

Treatment Episode Data System (TEDS) – www.samhsa.gov



When does Cannabis Use Reflect a Cannabis Use Disorder?

- Loss of control over drug
- Continued use despite harm
- Physiologic impact

1. Use larger amounts or longer period of time than intended
2. Persistent desire or unsuccessful efforts to cut down or control
3. Great deal of time spent to obtain ,use, or recover from effects
4. Craving, or a strong desire to use
5. Failure to fulfill major role obligations at work, school or home
6. Persistent or recurrent social or interpersonal problems
7. Important social, work or recreational activities given up or reduced
8. Recurrent use in physically hazardous situations
9. Persistent or recurrent physical or psychological problems due to use
10. *Tolerance (increased amounts or diminished effects)
11. *Withdrawal (withdrawal symptoms or use to avoid)

**Criteria not met if taking solely under medical supervision*

Cannabis Use Disorder

Clinical issues

- Treatment seekers average:
 - 10 years of use
 - 6 attempts to quit
- Co-morbidity common including
 - Psychotic features, depression, anxiety, other SUDs
- Treatment
 - No EVB pharmacologic therapies
 - Psychosocial treatments
 - Cognitive behavioral therapy
 - Motivational enhancement therapy
 - Contingency management

Clinical Cannabis - Management

APS White Paper Clinical Recommendations Journal of Pain, 2016

Manage with paradigm similar to opioid universal precautions:

- Establish clear goals of treatment
- Screen for risk of misuse, addiction & diversion
- Counsel on individualized risks & benefits
- Consider written understanding & agreement
- Consider urine drug screens
- Monitor: symptoms, function, substance use
- Continue or discontinue based on outcomes
- Intervene in harmful use with appropriate referrals

Cannabis - helping or hurting?

- ✓ Progress towards therapeutic/use goals
 - ✓ Symptom control
 - ✓ Function
- ✓ Engagement in valued activities
- ✓ Mood
- ✓ Overall quality of life
- ✓ Side effects & adverse outcomes
- ✓ Risky or inappropriate use



Resources

- NH Therapeutic Cannabis program <https://www.dhhs.nh.gov/oos/tcp/index.htm>
- VT Medical Marijuana program <https://medicalmarijuana.vermont.gov>
- **The Answer Page.** A commercial vendor of therapeutic cannabis education that is used by many states. <https://theanswerpage.com/course-catalog/>
- **NIH Center for Complementary & Integrative Health**
<https://www.nccih.nih.gov/health/cannabis-marijuana-and-cannabinoids-what-you-need-to-know>
- **NIDA** <https://www.drugabuse.gov/drugs-abuse/marijuana>

Thank you all!

- Please type your name, organization, and email into chat
- Slides will be posted to the D-H ECHO Connect site

