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Update in Teen Substance Use Disorders

Nick Weiss, MD
Child and Adolescent Psychiatry

Objectives

- Participants will learn about the current prevalence and patterns of substance use and substance use disorders (SUDs) in adolescents
- Participants will become familiar with common screening and assessment tools of SUDs in adolescents
- Participants will be able to describe common treatment options for SUDs in adolescents

Disclosures

- I have no financial interests to disclose.
- I will be discussing non-FDA approved use of medications in this presentation, which will be so designated on these slides.

Overview

- New DSM Definitions
- Update on Prevalence: Focus on cannabis
- Screening and Assessment
- Treatment and Monitoring (including Utox)
- Co-Occurring Disorders
- Practical Tips
- Q and A

DSM V: Substance Use Disorder

- DSM no longer uses the distinction between Abuse and Dependence
- Overall definition:
  - “A problematic pattern of use leading to clinically significant impairment or distress.”

The 11 DSM V Criteria

- 1. Substance often taken in larger amounts or over a longer period than was intended
- 2. Persistent desire or unsuccessful efforts to cut down or control use
- 3. Great deal of time spent to obtain, use or recover
- 4. Craving
- 5. Failure to fulfill major obligations
- 6. Continued use despite recurrent problems
- 7. Important activities given up
- 8. Recurrent use in hazardous situations
- 9. Use despite knowledge of major associated problems
- 10. Tolerance
- 11. Withdrawal

PAST-YEAR MISUSE OF PRESCRIPTION/OVER-THE-COUNTER VS. ILLICIT DRUGS

VICODIN®

Past-year misuse of Vicodin among 12th graders has dropped dramatically in the past 15 years. Misuse of all Rx opioids among 12th graders has also dropped dramatically, despite high opioid overdose rates among adults.

PRESCRIPTION/OTC

ILLICIT DRUGS

Past-year use among 12th graders

STUDENTS REPORT LOWEST RATES SINCE START OF THE SURVEY

Across all grades, past-year use of heroin, methamphetamine, cigarettes, and synthetic cannabinoids* are at their lowest by many measures.

**Called "synthetic marijuana" in survey*

NIH National Institute on Drug Abuse

DRUGABUSE.GOV

Prevalence of Substance Use *Disorders*

2002

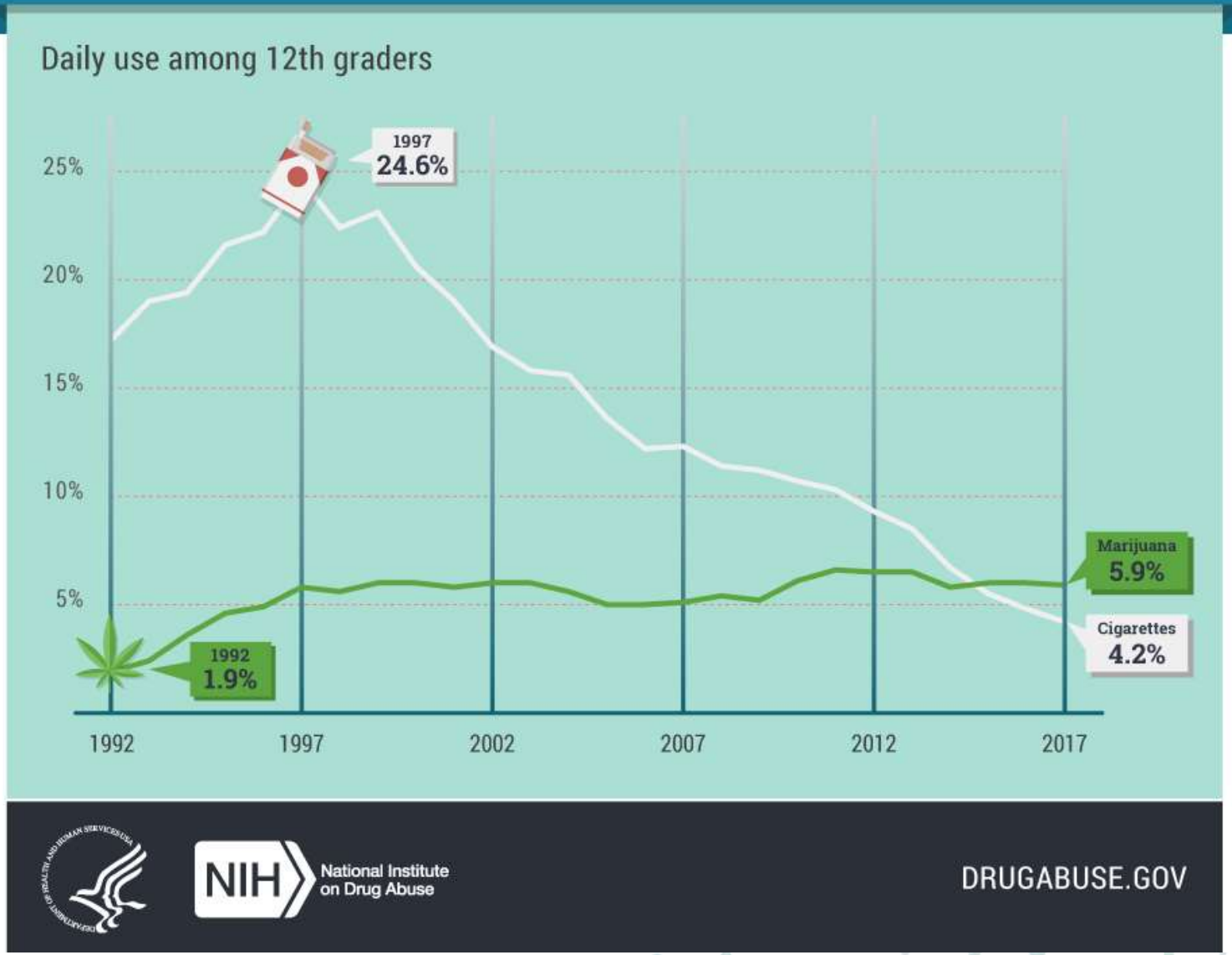
Any substance: 8.9%
Alcohol: 5.9%
Illicit drug: 5.6%
Marijuana: 4.3%
Pain Reliever: 1.0%
Cocaine: 0.4%
Heroin: 0.1%

2016

Any substance: 4.3%
Alcohol: 2.0%
Illicit drug: 3.2%
Marijuana: 2.3%
Pain Reliever: 0.5%
Cocaine: 0.1%
Heroin: 0.0%

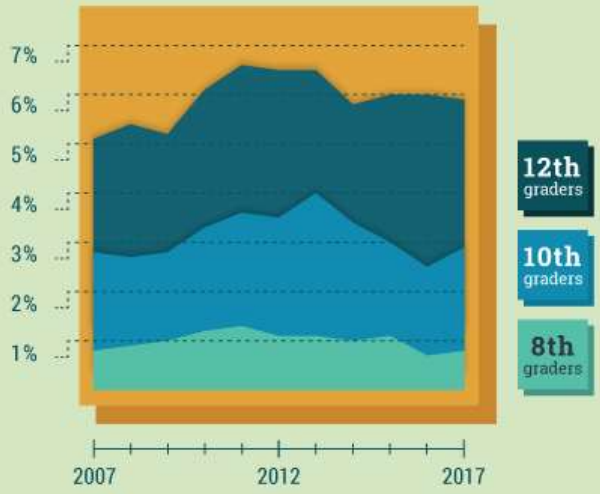
Past Month Use Disorder, NSDUH 2016

TEENS MORE LIKELY TO USE MARIJUANA THAN CIGARETTES



DAILY MARIJUANA USE MOSTLY STEADY

2007 – 2017



2017

8th graders	10th graders	12th graders
0.8%	**2.9%**	**5.9%**

71.0% OF HIGH SCHOOL SENIORS DO NOT VIEW REGULAR MARIJUANA SMOKING AS BEING VERY HARMFUL, BUT 64.7% SAY THEY DISAPPROVE OF REGULAR MARIJUANA SMOKING.

NIH National Institute on Drug Abuse

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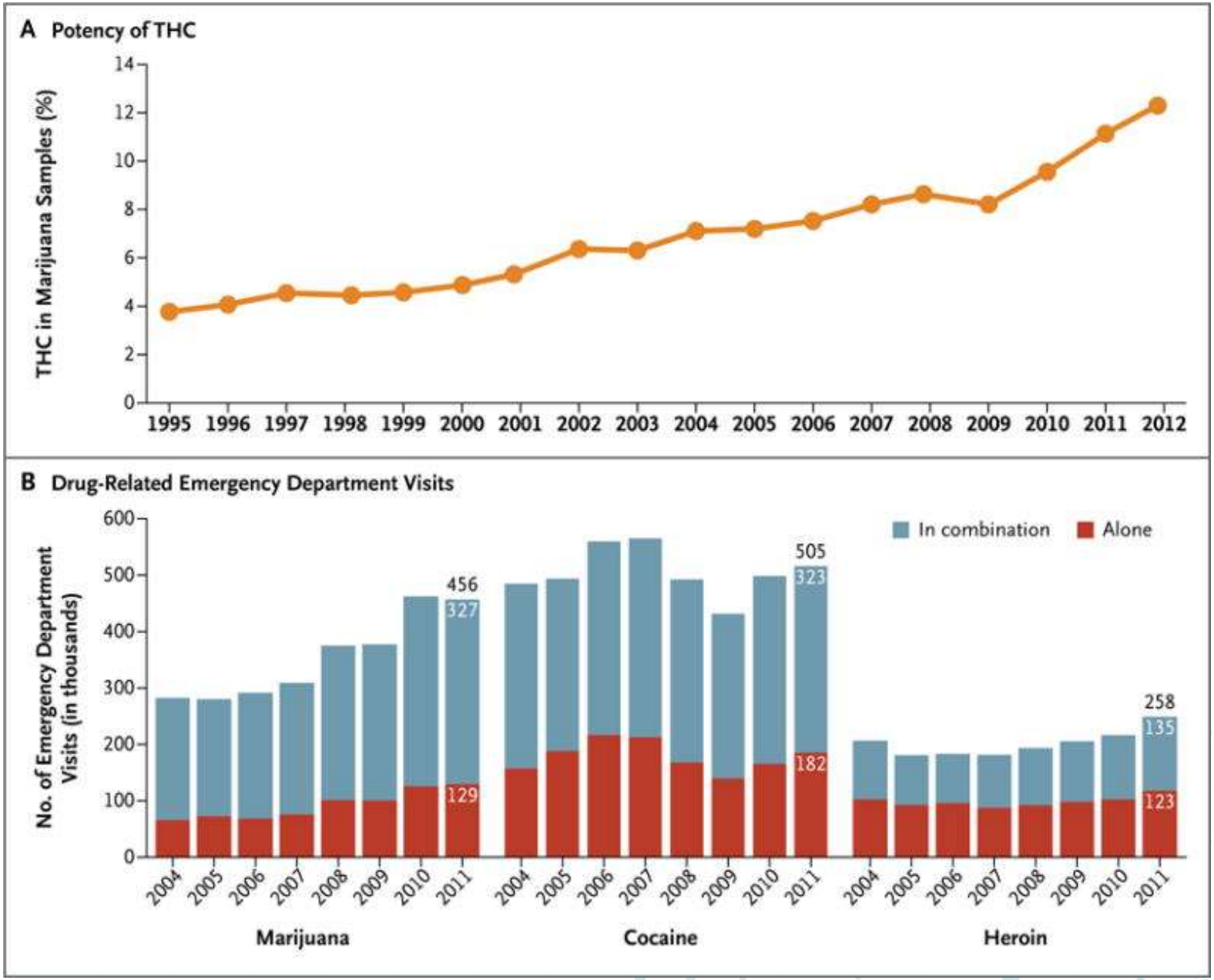
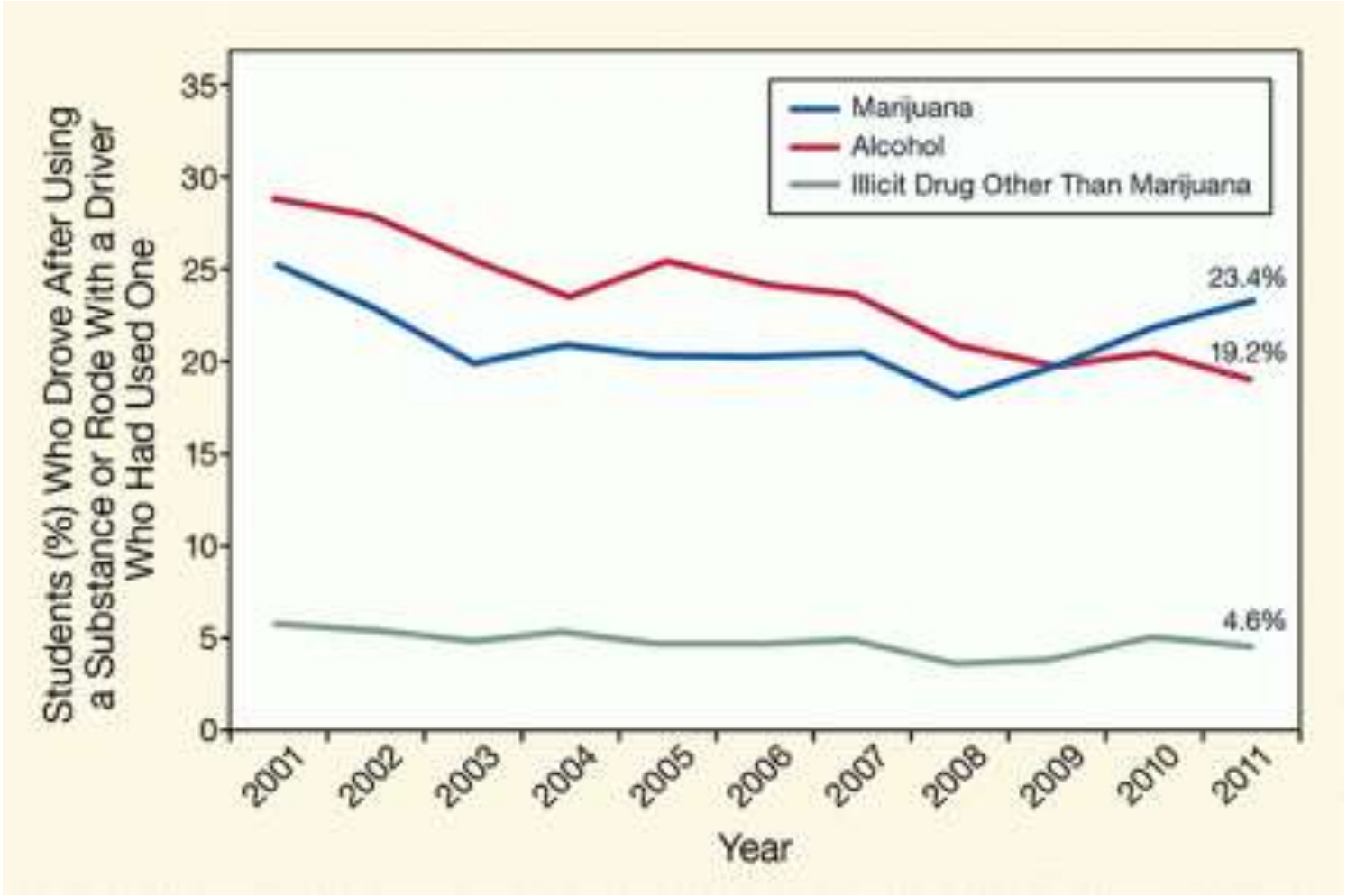


Driving After Marijuana Use Surpasses Drunk Driving



Source: MTF

Risk Factors: Early

- Genetic vulnerability
- Prenatal exposures
- Attachment/neglect
- Sensation-seeking temperament
- Traumatic exposure(s)
- Impulse control deficits
- Learning disorders

Risk Factors: Later

- Poor parental supervision and poor parenting skills
- Substance problems and conflict in family
- Heavy use in local community
- School failure
- Social skills deficits
- Using peer group (gang)
- Poor affect identification and regulation
- Conduct problems
- Mental health problems

Resilience Factors

- Female
- Hobbies
- Prosocial peer group
- Empathic caregiver
- Higher intellectual functioning
- Good academic performance

Summary: Epidemiological Findings

- Experimentation is normative but consequences can be severe and far-ranging
- Use *Disorder* is the exception.
- Look for
  - Risk factors
  - Early initiation
  - Heavy use

CRAFFT: 2 is Too Much

- Car
- Relax
- Alone
- Family/friends
- Forget
- Trouble

(Knight 2002)

When to UTOX

- In acute change in mental status: testing essential, but not fully reliable
- For outpatient assessment: *voluntary and confidential* urine drug testing may be useful
    - If there is concern that the patient's use puts him or her at immediate, significant risk, there may be grounds to break confidentiality
- For ongoing monitoring: testing may improve outcomes

EtG

- EtG positive in excess of the 500 ng/mL cutoff is consistent with the ingestion of alcohol-containing products 1-2 days prior to specimen collection)
- Studies examining “incidental” exposure widely conclude that results in excess of the 500 ng/mL cutoff are not associated with inadvertent or environment ethanol sources
- Advertised “80-hour” window of detection not “real-world” applicable

Cannabis Detection Window: Update

- 30+ day detection window often exaggerates duration of detection window
- Detection time: at 50 ng/mL cutoff
  - up to 3 days for single event/occasional use
  - up to 10 days for heavy chronic use
- Detection time: at 20 ng/mL cutoff
  - up to 7 days for single event/occasional use
  - up to 21 days for heavy chronic use

“Chemical Dependency” Assessment

- Usually performed by Chemical Dependency Professionals (CDPs)
- Assessment usually consists of a clinical interview that addresses the 6 dimensions of American Society of Addiction Medicine (ASAM) Patient Placement Criteria (PPC)

ASAM PPC Levels

- Level 0.5: Early Intervention
- Level I: Outpatient Services: <9hours/week
- Level II: Intensive outpatient (9-19 hours/week)/ Partial hospitalization (>20 hours/week)
- Level III: residential/inpatient services (e.g., imminent risk of relapse, continued use or poor recovery environment)
- Level IV: medically managed intensive inpatient services

Evidence Base: Psychosocial Treatments

Program	Level of Support
Multisystemic Therapy (MST)	Evidence-based
Adolescent Assertive Community Care	Research-based
Adolescent Community Reinforcement Approach (ACRA)	Research-based
MET/CBT-5 for youth MJ use	Research-based
Multidimensional Family Therapy	Research-based
Teen Marijuana Check Up	Research-based
Therapeutic Communities	Research-based
Matrix Model	Research-based
Dialectical Behavioral Therapy	Promising
Recovery Support Services	Promising
Seven Challenges	Promising

(Source: WSIPP)

Multisystemic Therapy

- Manualized approach addressing multiple determinants of substance use and antisocial behaviors
- Engages family members as collaborators
- Stresses the strength of youth and families
- Addresses barriers to treatment goals
- Therapists familiar with several therapies including CBT and structural family therapy
- Frequent home visits and on-call full time

Behavioral Therapy

- Contingency management: utilize reward systems
- Cash incentives reduced smoking
- Vouchers improved treatment retention

CBT

- Based on social learning theory
- Functional analysis of substance use
- Skills training and self-regulation strategies
- Supported by research
- Efficacy appears to be enhanced by a FAMILY component

Twelve-Step

- Alcoholics Anonymous (AA), Narcotics Anonymous (NA), and many other substance specific programs
  - Focus on building support network
  - Spiritually based and abstinence only
  - Most common but no true RCT

Harm Reduction

- Client centered approach applying readiness to change concept
- Focus is on reducing consequences of use, rather than demanding or promoting abstinence
- Develop strategies and skills

Motivational Approaches

- Motivational interviewing (MI)
  - Client-centered approach focusing on ambivalence
- MI Techniques
  - Open-ended Questions
  - Express Empathy, Listen Reflectively
  - Develop Discrepancy
  - Roll with Resistance
  - Summarize and Affirm
  - Elicit Self-motivational Statements

Medication Treatment

- Cannabis
  - NAC (1200mg BID)
- Alcohol
  - Naltrexone
  - Disulfiram
  - Ondansetron, Topiramate, Acamprosate
- Opiate
  - Methadone
  - Buprenorphine
  - Naltrexone

ALL OFF-LABEL

Summary: Treatment

- Treatment is better than no treatment
- Well-defined, structured approaches targeting broad dimensions work best
- Treatment completion --> better outcome
- Family-based treatments have strongest support
- Growing support for CBT, contingency management, motivational approaches

Co-Occurring Disorders

- COD is the Rule, Not the Exception
- Common Conditions
  - Disruptive Behavior Disorders (DBDs)
  - Depression & other mood disorders
  - Anxiety disorders
  - Attention-Deficit Hyperactivity Disorder (ADHD)
  - Learning disabilities & sensory problems
  - Others: Bulimia, Psychosis, Personality Disorders
- Increased Role for Medications

Integrated Treatment

- Combined Treatment of depression, conduct disorder and substance use disorder in 2007 RCT:
  - CBT/ Fluoxetine vs. CBT/Placebo
  - CBT/Fluoxetine →→ Greater Improvement in Depression
- Combined Treatment of ADHD and substance use disorder
  - Some support for treatment with long-acting methylphenidate or atomoxetine -- Caution advised

Overall Summary

- The sky is not falling *in general*, but there is a core group of very impaired teens
- Screening and detection are worth it
- There is a role for urine testing, and urine testing is evolving
- There are no magic bullets, but good treatment is better than no treatment
- There is a role for medications, but it is modest

Tips for Primary Care

- Use screening tools: when in doubt REFER!
- Gather collateral information (including drug testing) and educate parents on warning signs
- Know your local resources and assemble your own referral/treatment network
- Know the content of services
- Involve family
- Involve family
- Involve family

Tips for Primary Care II

- Encourage adolescents to engage in pro-social activities and recovery support
- Treat co-occurring disorders: consider medications for primary psychiatric disorders
- Consider training in Motivational Interviewing
- Consider training in Buprenorphine
- Judicious use of medications with addictive potentials when indicated

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