

**Opioid Addiction:  
A Pediatric Illness**

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Progress in Pediatrics Meeting

20 April 2017

  
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- I have no relevant financial relationships with the manufacturer(s) of any commercial product(s) and/or provider of commercial services discussed in this CME activity
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**Objectives**

As a result of this activity, participants will

- Be able to identify major risk factors for initiating opioid use
- Increase screening of mental health and substance use in their pediatric patients
- Understand the role of medication as part of adolescent opioid use disorder treatment

  
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## Today I hope to convince you that

- Opioid use disorder is an illness that arises in youth
- Physician opioid prescribing IS a risk factor
- Cannabis and other substance use ARE risk factors
- Pediatricians invaluable role in screening, prevention, and treatment




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## Children do not recreate the way adults do!

### re·cre·a·tion

noun: recreation; activity done for enjoyment when one is not working

"areas used for recreation such as hiking or biking"

late Middle English (also in the sense '*mental or spiritual consolation*'): via Old French from Latin recreatio(n-), from recreare 'create again, renew.'

Oxford Dictionary online




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## This is youth recreation




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**Youth drug use is NOT!**

"Heroin is a **recreational** drug that is also an opioid"

*Adolescent Opioid Abuse: Advice for Patients* Moreno MA, Furtner F, Rivara FP (2012). *Arch Pediatr Adolesc Med* 166(9): 880




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**Removing "Abuse" from Our Vocabulary**

"A patient with diabetes has 'an elevated glucose' level. A patient with cardiovascular disease has 'a positive exercise tolerance test' result. A clinician within the health care setting addresses the results. An 'addict' is not 'clean'—he has been 'abusing' drugs and has a 'dirty' urine sample. Someone outside the system that cares for all other health conditions addresses the results. In the worst case, the drug use is addressed by incarceration."

Kelly JF, Wakeman SE, and Saitz R (2015) *Stop Talking 'Dirty': Clinicians, Language, and Quality of Care for the Leading Cause of Preventable Death in the United States*. *Am J Med* 128 (1): 8–9




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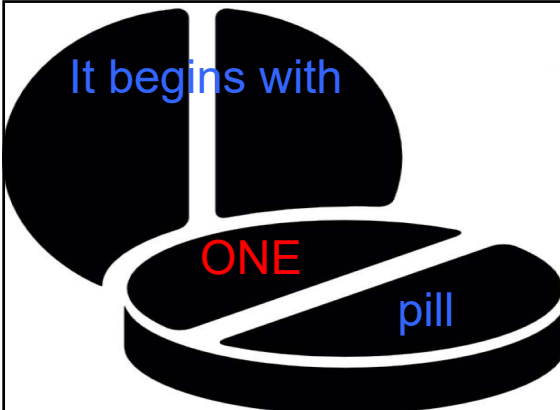
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**It begins with**




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“Among persons who began their opioid use in the 1960s, more than 80% reported that their first opioid was heroin; conversely, in the 2000s, a total of 75% of users initiated opioid use with prescription opioids”

Cicero TJ, Ellis MS, Surratt HL, Kurtz SP. The changing face of heroin use in the United States: a retrospective analysis of the past 50 years. JAMA Psychiatry 2014;71:821-826




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There is plenty of heroin when the pills run out




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In 2014

An estimated 467,000 youth (1.9 %) aged 12 to 17 were current nonmedical users of pain relievers, and 16,000 youth were currently using heroin.

**16,000 of our children using heroin**

Center for Behavioral Health Statistics and Quality. (2015). Behavioral health trends in the United States: Results from the 2014 National Survey on Drug Use and Health (HHS Publication No. SMA 15-4927, NSDUH Series H-50). Retrieved from <http://www.samhsa.gov/data/>




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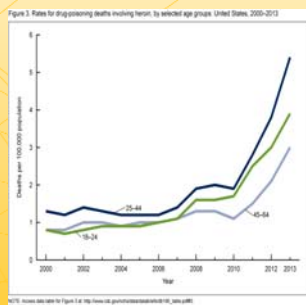
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## Young Deaths Lost in the Noise



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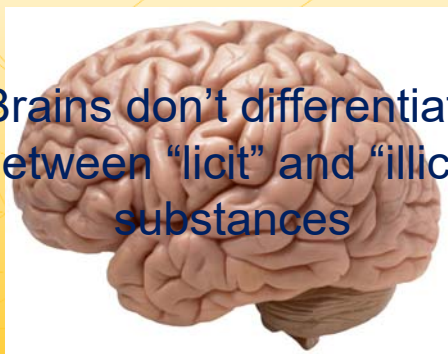
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Brains don't differentiate  
between "licit" and "illicit"  
substances



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People with **cannabis use disorder** are  
**3 times** more likely to have **heroin**  
use disorder

SOURCE: CDC VitalSigns, July 2015

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## Patients at higher risk for substance use disorder may be more likely to receive chronic opioid therapy

Richardson LP et al. (2012). *Mental health disorders and chronic opioid use among adolescents and young adults with chronic pain*. J Adolesc Health 50(6): 553–558.




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## Cannabis IS addictive

8000 subjects, age 15-64 years

Of those who endorsed at least one time cannabis use, about **9 percent** eventually developed dependence

Compared to                      alcohol 15 percent  
                                                 cocaine 17 percent  
                                                 heroin 23 percent

Anthony JC, Warner LA, and Kessler RC (1994). Comparative Epidemiology of Dependence on Tobacco, Alcohol, Controlled Substances, and Inhalants: Basic Findings from the National Comorbidity Survey. Exp. and Clin. Psychopharmacol 2(3): 244–268




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## Major Risk Factors for Heroin Addiction

Opioid use disorder involving pills  
Cannabis, alcohol, or cocaine use disorder  
Uninsured status and poverty  
Being male and young (18 to 25 year-old)  
Lack of attachment and nurturing by caregivers  
Ineffective parenting  
Caregiver substance use  
Poor classroom behavior or social skills  
Academic failure  
*Association with substance using peers*




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### Co-morbid Psychiatric Illness

Co-morbidity prevalence as high as 75%

- Conduct disorder
- Oppositional defiant disorder
- Depression
- Posttraumatic stress disorder
- Anxiety (especially panic)
- ADHD

Kandel DB, Johnson JG, Bird HR, Canino G, Goodman SH, Lahey BB, Regier DA, SchwabStone M (1997). *Psychiatric disorders associated with substance use among children and adolescents: Findings from the Methods for the Epidemiology of Child and Adolescent Mental Disorders (MECA) Study*. *Journal of Abnormal Child Psychology*, 25, 121-132.




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### What is protective?

- Preventing/delaying other substance use
- Strengthening parent-child bond
- Parental involvement in the child's life
- Clear limits and consistent enforcement of discipline




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### Therapeutic Use Is Still Exposure

Any legitimate opioid use prior to 12th grade confers:

- one-third higher risk of non-medical use in emerging adulthood (19-23 years)
- 2.7 fold higher risk of nonmedical use for the purpose of "getting high"

Miech R et al. (2015). *Prescription Opioids in Adolescence and Future Opioid Misuse*. *Pediatrics* 136 (5): e1169




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## Exposure Alone Not Enough

2178 S.E. McCabe et al. • 107 (2016) 2173-2178 PAIN®

**Prevalence estimates of nonmedical use of prescription opioids and substance use disorder symptoms at age 35 as a function of medical and nonmedical use of prescription opioids at age 18.**

Baseline context of lifetime prescription opioid exposure at age 18	Post-year nonmedical use of prescription opioids at age 35, %	Alcohol use disorder symptoms at age 35, 2+ symptoms %	Marijuana use disorder symptoms at age 35, 2+ symptoms %	Other drug use disorder symptoms at age 35, 2+ symptoms %	Any substance use disorder symptoms at age 35, 2+ symptoms %
No medical or nonmedical use (n = 320.5)	2.4	24.6	4.9	2.7	25.7
Medical use only (n = 527)	4.4	26.2	5.1	3.4	29.7
Medical and nonmedical use (n = 225)	8.4	31.8	8.9	8.9	38.3
Nonmedical use only (n = 116)	9.8	44.7	18.8	13.0	52.6
Sample size*	n = 3547*	n = 3768*	n = 3817*	n = 3831*	n = 3849*

\*Sample size only for 6 missing data on the dependent measure (i.e., substance use disorder symptoms at age 35).

McCabe SE, Veliz P, Schulenberg JE. Adolescent context of exposure to prescription opioids and substance use disorder symptoms at age 35: a national longitudinal study. *Pain*. 2016;157(10):2173-8



## Treatment Works

Secondary analyses of data from 15-21 years olds randomly assigned to 12 versus 2 weeks Buprenorphine/Naloxone therapy plus counseling  
Less opioid (+) urine at week 12 in

- Early opioid abstinence
- Previous 30-day injection drug use
- More active medical/psychiatric problems
- Ancillary psychosocial treatments

Subramaniam GA, Warden D, Minhajuddin A, Fishman MJ, Stitzer ML, Adinoff B, Trivedi M, Weiss R, Potter J, Poole SA, and Woody GE (2011). Predictors of abstinence: National Institute of Drug Abuse multisite buprenorphine/naloxone treatment trial in opioid-dependent youth. *J Am Acad Child Adolesc Psychiatry* (11): 1120-8.



## Identifying misuse risk is not enough

Thienprayoon R, Porter K, Tate M, et al. (2017)  
*Risk Stratification for Opioid Misuse in Children, Adolescents, and Young Adults: A Quality Improvement Project*. *Pediatrics* 139(1): e20160258





### What is enough?

- Screen for **mental health** symptoms at every pediatric visit at least beginning by age 11
- Screen for **substance use** at least yearly, beginning by age 11, including visits where opioids are being prescribed
- Identify groups at **enhanced risk** (eg, Heme/Onc, Pain Management)
- Develop **prevention/intervention** strategies that work
- Enhance **communication** between pediatric and adult disciplines




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### Get substance use out of social history

**Social history** familial, occupational, and *recreational* aspects of the patient's life that have the *potential to be clinically significant*

- Placing in social history is invitation to not ask
- By definition, youth substance use is clinically significant, and belongs in its own category




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### Medication Assisted Treatment is Effectively Unavailable!

- **Less than half** of US counties have at least one waived prescriber
- Concentrated in Metro areas

Rosenblatt RA, Andrilla HA, Catlin M, and Larson EH (2015) *Geographic and Specialty Distribution of US Physicians Trained to Treat Opioid Use Disorder. Ann Fam Med 13(1): 23–26.*




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## No excuses

### *Online Training for Waiver to Prescribe Buprenorphine*

This 8-hour *online* course is **free to AAP members** and will allow them to apply for a waiver to prescribe buprenorphine as part of treatment of young people with opioid use disorder and learn about the use of naltrexone.

The course can be accessed at:

[www.aap.org/mat](http://www.aap.org/mat)




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## Additional resources

### *Provider Clinical Support Services*

*Opioid Therapies* ([pcss-o.org](http://pcss-o.org))

*Medication Assisted Treatment* ([pcssmat.org](http://pcssmat.org))

### *Buprenorphine in adolescents*

<http://pcssmat.org/wp-content/uploads/2014/03/PCSS-MATGuidanceTreatmentofOpioidDependantAdolescent-buprenorphine.SubramaniamLevy1.pdf>

### *Adolescent Screening Brief Intervention and Referral to Treatment:*

<http://massclearinghouse.ehs.state.ma.us/BSASSBIRTPROG/SA1099.html>




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