The Opioid Epidemic and Youth
National Trends and Evidence-Based Practice for Preventing Adolescent Misuse and Addiction

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Disclosures

I, Sharon Levy, have no relevant financial or commercial relationships to disclose.
Opiates

Opioids
Opioid pharmacology

Opioid μ-receptor and agonist
Opioid neurobiology

Prefrontal Cortex

Limbic System

Brain Stem

Spinal Cord
CIVIL WAR 1860s

VIETNAM WAR 1970s

“PAIN” AS THE 5TH VITAL SIGN 1999

1914

HARRISON DRUG ACT

1974

METHADONE

Increase in Opiate Rx, 1991-2013

The opioid reservoir
Adolescents are developmentally primed to use drugs
Brain weight by age


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Neuron growth in brain development

Image retrieved from: http://etec.ctlt.ubc.ca/510wiki/Brain-based_Learning

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Cerebellum
Cerebellum
Amygdala
Amygdala
Nucleus accumbens
Prefrontal cortex
Prefrontal cortex
Nucleus accumbens

Prefrontal cortex

Functional development

Age

Children, ages 7-11  Teens, ages 13-17  Adults, ages 23-29
Activation of the reward pathway by addictive drugs

- Alcohol
- Cocaine
- Heroin
- Nicotine
- Marijuana

Most drug use starts in adolescence

Percentage of Past-Year Initiates

Age Group | Percentage
----------|------------
12-13     | 2.9%       
14-15     | 8.0%       
16-17     | 11.2%      
18-20     | 10.4%      
21-25     | 4.5%       
26 or Older | 0.3%     

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2011 and 2012.
The opioid reservoir

84.2% of opioids obtained by adolescents were given by or taken from a family member or peer.

Opioid Prescriptions by proportion of 12th graders misusing of opioids

Adolescents are developmentally vulnerable to develop substance use disorders
Activation of the reward pathway by addictive drugs

- cocaine
- heroin
- nicotine
- alcohol
- marijuana
- heroin

Younger age*

*AOR decreases by 5% each year that non-medical use is delayed

(after one year, AOR: 0.95 with 95% CI 0.94-0.97)

Age of onset of non-medical use of prescription drugs

Gateway to opioid misuse
Exposure to marijuana
AOR: 3.67
(95% CI 1.02-13.14)

Cigarette smoking
AOR: 2.2
(95% CI 1.3-3.5)

Motivations for opioid misuse

48.1% Used to relieve pain

51.9% Used to get high/experiment

Recreational use
AOR: 3.42
(95% CI 1.45-8.07)

Unprescribed pain relief
AOR: 1.8
(95% CI 1.20-2.60)

Prescribed pain relief
AOR: 1.33
(95% CI 1.04-1.70)

Major depression, anxiety disorder, or panic disorder

AOR: 4.43
(95% CI 3.64-5.38)

Familial alcohol problem/drug use

AOR: 7.92

PTSD

Hard drug abuse/dependence

AOR: 8.68

Pediatricians **must** be part of the solution to the opioid crisis

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™

**POLICY STATEMENT** Organizational Principles to Guide and Define the Child Health Care System and/or Improve the Health of all Children

**Medication-Assisted Treatment of Adolescents With Opioid Use Disorders**

COMMITTEE ON SUBSTANCE USE AND PREVENTION
37,000 trained to prescribe addiction treatment.

Only half actually do.

750,000 can prescribe addictive pain meds

1% are pediatricians.
Pediatricians are treating opioid addicts, and it’s working

From left to right, Dr. Steven Mendes, substance abuse counselor Shannon Mountain-Ray, and Dr. Jason Reynolds have welcomed young patients with substance use problems to Wareham Pediatrics.
Buprenorphine Waiver Training
Confidentiality  Model of care  Neurobiology and the developing brain
Adolescent Substance use and Addiction Program
Integration Challenges

CFR 42, Part II
Integration Challenges

New clinical workflow

Prescribing Complaint

Patient Screened Using S2EI

Positive Screen

Negative Screen

Positive Reinforcement

Rescreen - Yearly/next visit

Referral to Substance Abuse Service

Initial Evaluation

First Follow-Up / Treatment Plan

Referral to HLOC

Outpatient Services Wareham Peds.

Outpatient Services Wareham Peds.

Outpatient Services Wareham Peds.

Individual Substance Abuse Counseling

Additional Community Resources

Caregiver Guidance

Medication-Assisted Treatment
Integration Challenges

Emergencies
Integration Challenges

Emergencies
Integration Challenges

Additional Training

Addiction Medicine 101
Integration Challenges
Connections to higher levels of care

Is the youth at risk for withdrawal and/or in need of inpatient detox or stabilization?

- NO
- YES

Willing to engage in services?

- NO
- YES

Refer to local outpatient provider, insurance carrier, or Youth Central Intake

If under 18, discuss with parent option of seeking support through the juvenile court and/or Department of Children and Families to obtain supervision from the court system and services by calling local police station

- NO
- YES

Willing to reduce substance use?

- NO
- YES

Is youth over 18?

- NO
- YES

Contact SAMHSA’s National Helpline/Treatment Referral Routing Service at 1-800-662-HELP (4357) or use SAMHSA’s online treatment locator (https://findtreatment.samhsa.gov/)

Options:
- Contact Department of Public Health for consultation
- Contact SAMHSA’s National Helpline/Treatment Referral Routing Service at 1-800-662-HELP (4357) or use SAMHSA’s online treatment locator (https://findtreatment.samhsa.gov/) to find a facility that fits the patient’s needs and is appropriate for adolescents.

• Monitor and follow up with youth
• Refer family to Youth Central Intake
• Suggest self-help groups for caregiver and for youth

Source: MCPAP Toolkit.
Will kids really come?
**Results: First 4 months**

- Patients ages 12-22 seen for primary care: **683**
- Expected number with SUD: **50**
- Actual number identified: **20**
- Number that kept at least one appointment: **13**

*Levy S, Mountain-Ray S, Reynolds J, Mendes SJ, Bromberg J. A Novel Approach to Treating Adolescents with Opioid Use Disorder in Pediatric Primary Care. Substance Abuse. 2018*
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**MH diagnoses**

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Notice of Award

Issue Date: 11/14/2018

SBIRT-18
Department of Health and Human Services
Substance Abuse and Mental Health Services Administration
Center for Substance Abuse Treatment

Grant Number: 1H79TI081137-01
FAIN: H79TI081137
Program Director: SHARON J LEVY MD

Project Title: Integrating SBIRT into Pediatric Primary Care

Organization Name: BOSTON CHILDREN'S HOSPITAL

Substance Abuse and Mental Health Services Administration
www.samhsa.gov
Pediatricians are treating opioid addicts, and it’s working

By Felice J. Freyer | GLOBE STAFF | JUNE 12, 2017

Dr. Jason Reynolds still thinks about the girl he could not save.

The teenager was homeless and shooting heroin. Once, she ended up in a hospital with a severe skin infection, a common consequence of injecting drugs. She received treatment for the infection, but not for her obvious addiction, and was referred to Reynolds, her Wareham pediatrician.

He could not find a treatment program for her. And the last he heard, the girl was roaming the shelters in Boston.
On TV

Boston 25

Today Show

Chronicle
Senator Warren
Acknowledgements

Co-principal investigator: Elissa Weitzman, ScD, MSc
Project Manager: Julie Lunstead, MPH

Clinicians
Diana Deister, MD, MS
Leslie Green, MSW
Julie Hansen, MSW
Shannon Mountain-Ray, MSW
Miriam Schizer, MD, MPH
Patricia Schram, MD

Research Assistants
Louise Breen
Molly Doernberg
Dylan Kaye
Maha Mian

Teaching Collaborators
Pamela Burke, PhD, RN,
Linda Malone, DNP, RN
Sarah Pitts, MD
Jennifer Putney, PhD

Research Collaborators
Elizabeth Harstad, MD, MPH
Sion Kim Harris, PhD
Lydia Shrier, MD, MPH
Lauren Wisk, PhD

Clinic Collaborators
Fatma Dedeoglu, MD
Katharine Garvey, MD, MPH
Laurie Fishman, MD
Paul Hammerness, MD
Andrew MacGinnitie, MD, PhD
Jonathan Gaffin, MD