Why do people use drugs?
Why do so many people use drugs?

What should we do?

David Labby MD PhD
Health Share of Oregon -- May 17, 2018
Learning Objectives

1. To increase understanding of societal determinants of the current opioid epidemic

2. To demonstrate the importance of lived experience, of shifting from “what is wrong with them” to “what has happened to them” in responding at individual and system level

3. To encourage early identification and intervention for those at risk in medical practice, starting in early life.

4. To encourage partnerships between health care and other community institutions that are impacted by the opioid epidemic.

Disclosures: NONE

IMS Health, Vector One: National, Years 1991 to 2011, Data Extracted 2012
IMS Health, National Prescription Audit, Years 2012 & 2013, Data Extracted 2014
More Drug Overdoses Now Involve Heroin and Illegal Fentanyl than Prescription Opioids (E.g., Fentanyl)
Nonmedical use of Rx opioids is the strongest risk factor for heroin use\(^1\)

– People with prescription opioid abuse / dependence are 40X more likely to use heroin\(^3\)

Only a small percentage of non-medical Rx opioid users transition to heroin (approx 3-5%)\(^1\)

Majority of current heroin users initiated opioid use with Rx opioids for non-medical purposes (approx 75%)\(^2\)

2- Cicero et al. JAMA Psychiatry; 2014; 71(7):821-826  
3- Jones CM, et al MMWR 2015
Prescription Opioids In Oregon: Who Is Using Them For What?

Medical Use -- Pain Treatment (>900,000)

- ~20% of Oregonians have chronic pain (760,000)
- In 2016, almost 1 in 4 Oregonians received a prescription for opioid medications

Non-Medical Use: (212,000)

- Tied for 2nd in the nation in 2012-2013; 1st in 2010-2011.¹
- 5% of population
- Do the heroin transition math: 3-5% x 212,000 = 6-10,000 transition to heroin

¹ SAMHSA National Survey on Drug Use and Health, state level data
Where Do Non-Medical Users Get Rx Opioids?

Why do so many people use drugs?
What Is The Epidemic?

The emerging bigger picture...
US all-cause mortality rates, ages 45-54

Midlife mortality by all causes in the U.S.
Men and women ages 50-54, death by all causes

White non-Hispanic midlife mortality from “deaths of despair” in the U.S. by education

Ages 50-54, deaths by drugs, alcohol, and suicide

Midlife mortality from “deaths of despair” across countries

Men and women ages 50-54, deaths by drugs, alcohol, and suicide

“Deaths of Despair” for white non-Hispanics, Ages 45-54
“Deaths of Despair” for white non-Hispanics, Ages 45-54
Angus / Deaton hypothesis:

Why?

• Decline in blue collar jobs since 1970s, especially for those with less than a college degree
  – Major impact on white working class men
    • Fewer jobs, lower wages, lower returns on experience
    • Reduced marriage rates, higher divorce, worse family lives
    • Increases in reports of poor health
    • Increasing poor mental health
    • Increased incidence of chronic pain
      – Loss of economic supports
      – Loss of social supports
        » Increased suicide
        » Increasing substance use
          • Alcohol
          • Drugs

“This process was unfolding before heavy-duty prescription opioids flooded the market, but their presence has heightened its impact.”
What if we actually asked: “What happened to you?”

• What are the life experiences that lead to these bad outcomes?
  – Formal qualitative study of “Adverse Life Events”
  – Building on the “Adverse Childhood Experiences Study” (1998 Felitti / Anda)
**Adverse Childhood Experiences (ACE) Study**

- 1998 Kaiser Permanente & the Centers for Disease Control
  V. Fellitti and R. Anda

- **Demographics**
  - Average age 57
  - “Solidly middle class”
    - White
    - Attended college

- Surveyed experience up to 18 yo

- “ACE Score” Computed based on positive response to each domain

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**Adverse Childhood Events / Rate:**

- Substance Abuse 27%
- Parental Separation/Divorce 23%
- Mental Illness 17%
- Battered Mother 13%
- Criminal Behavior 6%
- Psychological Abuse 11%
- Physical Abuse 28%
- Sexual Abuse 21%
- Emotional Neglect 15%
- Physical Neglect 10%
Why do people use drugs ....

Strong Correlation Between ACEs and Substance Use

• Individuals with ACEs
  – Lifetime illicit drug use and self-reported addiction (Dube et al, 2003)
  – Prescription drug use (Anda et al, 2008)
  – Early initiation of alcohol use. (Dube et al, 2006)
  – Problem drinking behavior into adulthood (Dube et al, 2002)

• People with 4+ ACES:
  – 10x increase in use of IV drugs; for males with 6+ACEs 46x increase
  – 7x increase in alcoholism
  – Increased risk of liver, lung, heart disease
  – 3x increase in depression in men; 5x in women
  – 13x increase in the prevalence of attempted suicide
  – 4.5x increase in intimate partner violence; 5x increase in risk of rape; with ACE 5, 9x
  – Increased risk of teen pregnancy, prescription drug use, job loss, homelessness, high school non graduation, incarceration
  – 25 year early mortality

“High Utilizers:” Life stories with chain reactions of adversity

Miranda

Birth

- Tumultuous, violent relationship between parents, unstable housing
- Parents split, dad got “left behind”

5 yo

- Moves back in with mom, daily sexual abuse from stepfather

11 yo

- Lived with multiple caretakers in various locations

15 yo

- First pregnancy/birth, stepbrother is father

18 yo

- 3 children, still living in abusive household
- Drops out of school

21 yo

- Begins heavy drug use and selling
- Goes to prison on drug charges

27 yo

- Suicide attempt

47 yo

- Heavy alcohol use, drug relapses, cancer, car accidents

3 more children born

Age 47
6 children age 15-32
No GED/diploma, no employment
In recovery from severe substance use
Chronic pain, cancer, multiple surgeries, no teeth or dentures
Multiple psychiatric medications
Life Experience Health Study

• Survey of critical life experiences of Health Share members
  – 2 year study with Providence Center for Outcomes Research funded by Robert Wood Johnson Foundation

• 100 questions: experience from early family to present
  – 10,000 sent, 38% response rate after intensive follow up
  – Broad representative sample from healthy to complex health
What We Found: Hard Lives

- **Overall** Health Share Members
  - 43% had 4+ Adverse Childhood Experiences (National Average: 14%)
    - Highest (40+%): Physical abuse / neglect, household substance abuse, parental divorce
    - Only 20% reported NO ACEs; national average = 41%
  - Over half reported they struggled with school; 27% did not graduate High School or get a GED
  - 33% ran away from home
  - 39% reported substance abuse; 28% in childhood
  - 41% were homeless at sometime; 22% homeless in childhood
  - 40% struggled to find work
  - 56% reported verbal abuse by a loved one; 26%, physically abused
  - 36% had been in jail
# Higher Complexity = Higher Life Adversity

<table>
<thead>
<tr>
<th>Medical Complexity</th>
<th>Low</th>
<th>High</th>
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<tbody>
<tr>
<td>ACE score</td>
<td></td>
<td></td>
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<tr>
<td>ACEs=0</td>
<td>27.26</td>
<td>16.69</td>
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<tr>
<td>ACEs≥4</td>
<td>32.32</td>
<td>54.77</td>
</tr>
<tr>
<td>Struggle with schoolwork</td>
<td>43.32</td>
<td>62.42</td>
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<tr>
<td>Did not graduate high school</td>
<td>21.90</td>
<td>29.76</td>
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<tr>
<td>Substance abuse ever</td>
<td>27.60</td>
<td>59.22</td>
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<tr>
<td>Homeless ever</td>
<td>26.61</td>
<td>54.72</td>
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<tr>
<td>Ran away from home</td>
<td>17.84</td>
<td>40.80</td>
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<tr>
<td>Physical abuse from a loved one</td>
<td>21.93</td>
<td>37.22</td>
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<tr>
<td>Verbal abuse from a loved one</td>
<td>46.68</td>
<td>70.46</td>
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<tr>
<td>Jail</td>
<td>24.85</td>
<td>48.05</td>
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</table>
Highest Adversity Rates = 55% of Medically Complex With High ACEs

<table>
<thead>
<tr>
<th>Condition</th>
<th>Low</th>
<th>High</th>
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<tbody>
<tr>
<td>Struggle with schoolwork</td>
<td>64.86</td>
<td>69.16</td>
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<tr>
<td>Did not graduate high school</td>
<td>22.62</td>
<td>32.32</td>
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<tr>
<td>Substance abuse ever</td>
<td>47.5</td>
<td>75.88</td>
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<tr>
<td>Homeless ever</td>
<td>45.12</td>
<td>75.64</td>
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<tr>
<td>Ran away from home</td>
<td>36.52</td>
<td>57.81</td>
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<tr>
<td>Physical abuse from a loved one</td>
<td>46.67</td>
<td>52.19</td>
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<tr>
<td>Verbal abuse from a loved one</td>
<td>66.17</td>
<td>86.57</td>
</tr>
<tr>
<td>Jail</td>
<td>35.54</td>
<td>56.61</td>
</tr>
</tbody>
</table>

ACE≥4 (42.59%)
Why do some people with high ACEs have poor outcomes, but others do not?

- For 55% of members with complex health conditions the very high prevalence of sequential adversities suggests high ACEs can “set up” a cascade of risk multipliers
  - Stressed families (poverty)
  - Food, housing insecurity, high ACEs
  - Poor social / emotional / learning skills
  - School struggles, poor learning
  - Dropping out / alcohol, street drug use with peers, other health risk behaviors
  - High school non graduation, few employment options
  - Involvement with shadow economy, homelessness, addiction
  - Arrest / incarceration
  - Homelessness, addiction, poor health
What We Are Most Trying to Prevent:

- Cascading adverse life events that derail a healthy life
- Development of chronic conditions
- Multi-generational impacts

Chronic illness, Substance use, Mental illness, Criminality, Isolation, Disability

Unintended pregnancy

21 yo +

12-21 yo

6-12 yo

5 yo

3 yo

Birth

Pregnancy

Adult violence, SUD

Parents not able / ready to “parent”

Poor Attachment

Abuse Neglect

Behavioral Problems Skill Deficits

Kindergarten School Failure

Risk Behaviors

Social Deprivation

Housing Insecurity

Job Insecurity

Substance Use Unhealthy Relationships
Bad News / Good News

• Bad News: the opioid epidemic and its effects will likely be around long after we adopt optimal pain practices in health care
  – The effects are multi generational
  – Addiction is a chronic disease

• Good News: addressing the epidemic will help transform health care practice to be able to truly address “population health”
What Should We Do?

...as primary care, specialty, hospital, behavioral health, pharmacy health care providers?

“There are no simple solutions to ending this epidemic. Effective programs need to address 2 separate priorities:

1. Prevention of addiction among people not currently addicted, and
2. Treatment and risk reduction to prevent overdose and death among the millions of individuals in the United States now addicted.”

Andrew Kolodny, MD1; Thomas R. Frieden, MD, MPH2
Essential Elements to Stopping the Epidemic

PREVENT People From Starting Heroin

Reduce prescription opioid painkiller abuse.
Improve opioid painkiller prescribing practices and identify high-risk individuals early.

REDUCE Heroin Addiction

Ensure access to Medication-Assisted Treatment (MAT).
Treat people addicted to heroin or prescription opioid painkillers with MAT which combines the use of medications (methadone, buprenorphine, or naltrexone) with counseling and behavioral therapies.

REVERSE Heroin Overdose

Expand the use of naloxone.
Use naloxone, a life-saving drug that can reverse the effects of an opioid overdose when administered in time.
Rate of Past Year Opioid Abuse or Dependence and Rate of OA-MAT Capacity
(rate per 1,000 persons aged 12 years and older)

Source: Jones CM, Campopiano M, Baldwin G, McCance-Katz E. National and state treatment need and capacity for opioid agonist medication assisted treatment. AJPH. 2015
Practice Transformations?

• Integrated Behavioral Health
  – Support for MAT
  – Support for those at risk and in recovery

• Early Screening and Intervention
  – For children, families and adults at risk (ACEs, SBIRT…)
  – “Developmental Specialists” in primary care
  – “Social Determinants” screening and follow up

• Partnerships with community: integrated services
  – With EMS, Public Health, Pharmacies, Corrections
  – With Peer Recovery & Community Based Organizations
  – With Housing, Schools…
Our Goal:
A healthy, productive next generation of Oregonians

- **Pregnancy**
  - Wanted Pregnancy
  - Healthy Mom / Child
- **Birth**
- **3 yo**
  - Strong Attachments
- **5 yo**
  - Ready for kindergarten
- **6-12 yo**
  - Academic Success
- **12-21 yo**
- **21 yo +**
  - Healthy Lifestyle
  - Positive Relationships
- Healthy, productive adult