# SEOW Symposium

## AGENDA

**May 18th, 2018**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>08:00 – 08:30</td>
<td>Registration and breakfast</td>
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<tr>
<td>08:30 – 08:40</td>
<td>Opening remarks</td>
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<tr>
<td></td>
<td>Joshua Vest, PhD, MPH</td>
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<tr>
<td>08:40 – 09:00</td>
<td>Key findings from the 2017 SEOW report</td>
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<tr>
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<td>Marion Greene, MPH, PhD(c)</td>
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<tr>
<td>09:00 – 09:20</td>
<td>Tableau website presentation</td>
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<tr>
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<td>Harold Kooiman, MA, MSW</td>
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<td>09:20 – 09:40</td>
<td>ACE’s and their impact on substance use</td>
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<td>Casey Balio, BA</td>
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<tr>
<td>09:40 – 10:00</td>
<td>Substance use among young adults</td>
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<td>Tamara Leech, PhD</td>
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<td>10:00 – 10:20</td>
<td>Break</td>
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<td>10:20 – 10:40</td>
<td>Opioid-related ED visits</td>
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<td>Kevin Wiley, Jr., MPH</td>
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<td></td>
<td>Casey Balio, BA</td>
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<td>10:40 – 11:00</td>
<td>Enhanced State Opioid Overdose Surveillance</td>
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<td>Raven Helmick, MPH, CPH</td>
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<td>11:00 – 11:20</td>
<td>State-level evaluation findings for DMHA grantees</td>
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<td>Hope McMickle, BA</td>
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<td>11:20 – 11:40</td>
<td>Division of Mental Health &amp; Addiction</td>
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<td>Julie Gries, MS</td>
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<td>11:40 – 12:00</td>
<td>Substance use in Indiana (panel discussion)</td>
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<td>Facilitator: Joshua Vest, PhD, MPH</td>
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<td>Panelists: Joan Duwve, MD, MPH</td>
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<td>Dennis Watson, PhD</td>
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<td>Ben Gonzales</td>
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Welcome to the SEOW Symposium
Opening Remarks

Joshua Vest, PhD, MPH
Director, Center for Health Policy
Associate Professor, Health Policy & Management
IU Richard M. Fairbanks School of Public Health
Research Scientist, Regenstrief Institute
joshvest@iu.edu
Alcohol, Tobacco, and Other Drugs in Indiana
(Key Findings from the 2017 SEOW Report)

Marion S. Greene
Chair, State Epidemiological Outcomes Workgroup
SEOW Symposium
May 18, 2018
Who is the State Epidemiological Outcomes Workgroup (SEOW)?

- Collaboration of representatives from various state agencies
- Established in 2006
- Primary objectives
  - Monitor substance use and its consequences in Indiana; expanded to include mental health indicators
  - Identify statewide prevention priorities
  - Disseminate findings to legislators, prevention planners, and community organizations to encourage data-driven decision-making
SEOW Publications

• Publishing annual epidemiological reports since 2006
• 2017 Report soon to be released
• Additional publications
  ➢ Drug fact sheets
  ➢ Prevention priorities
  ➢ Behavioral health issue briefs
• Available on our website
  https://fsph.iupui.edu/research-centers.centers/health-policy
This year’s SEOW line-up

• Table of contents
  ➢ Alcohol
  ➢ Tobacco
  ➢ Marijuana
  ➢ Opioids
  ➢ Stimulants
  ➢ Mental health and suicide

• Interactive online data tool
  ➢ Tableau website (Harold)
KEY FINDINGS
ALCOHOL

- Most widely used and abused substance
- 52.0% of Indiana adults consumed alcohol in the past month and 17.5% engaged in binge drinking [5]
  - Binge drinking most prevalent among males and younger adults
- *Underage drinking:* 30.5% of high school students drank in past month and engaged in 17.4% binge drinking [2]
- An estimated 5.3% of Hoosiers ages 12 and older suffered from an alcohol use disorder in the past year [1]
TOBACCO

• Leading cause of preventable death in U.S.
• 28.7% of Hoosiers ages 12+ currently use a tobacco product, mostly cigarettes [1]
• Adult smoking prevalence in Indiana is 21.1% [5]
  ➢ Significantly higher among people with lower educational attainment and income
• Current use of cigarettes & e-cigs in middle and high school students has decreased from 2014 to 2016
  ➢ Cigarettes: 1.8% of MS students and 8.7% of HS students
  ➢ E-cigs 2.8% of MS students and 10.5% of HS students [6]
MARIJUANA

• Most widely used illicit drug
• Current use among Hoosiers ages 12+ was 8.8% [1]
  ➢ Highest among young adults ages 18-25 (19.6%)
• About 16% of Indiana high school students currently use marijuana [2]
• Marijuana use reported in nearly half (47.7%) of Indiana’s treatment admissions [7]
  ➢ Highest among males, blacks, and those under 18
STIMULANTS - COCAINE

• 1.3% of Hoosiers ages 12+ reported past-year cocaine use [1]
  ➢ Rates were highest among 18- to 25-year-olds (3.9%)
• In 11% of Indiana treatment admissions cocaine use was reported [7]
  ➢ Highest among blacks and adults over 45
STIMULANTS - METHAMPHETAMINE

• No state-level estimates for general population
• In nearly 18% of Indiana treatment admissions meth use was reported [7]
  ➢ Meth use in treatment population is on the rise
  ➢ Highest among females, whites, and people ages 25-44
• Indiana State Police seized 387 clandestine meth labs in 2017 [8]
  • Significant decrease from its peak in 2013 (1,721 lab seizures)
OPIOIDS – Prescription Opioids

• Pain relievers are the most commonly abused type of prescription drug

• 4.9% of Hoosiers ages 12+ reported misusing pain relievers in the past year [1]
  ➢ Highest rate among 18-25 year-olds (9.9%)

• In nearly 22% of Indiana treatment admissions Rx pain reliever misuse was reported [7]
  ➢ Highest use among females, whites, and 25-34 year olds
OPIOIDS – HEROIN

• Past-year use among Hoosiers ages 12+ was 0.4% [1]
• In about one in five Indiana treatment admissions heroin use was reported [7]
  ➢ Still below U.S. percentage, but has increased significantly over the years
  ➢ Highest use among females, whites, and 18- to 34-year-olds
• 13,697 unique patients were served in opioid treatment programs in 2017
POLYSUBSTANCE ABUSE

• Among those in treatment, more than two-thirds report using 2 or more drugs [7]
• Most polysubstance abuse involved either alcohol and some other drug or marijuana and methamphetamine [7]
Mental Health

- 20.0% of Indiana adults had a mental illness and 4.9% had a serious mental illness in the past year [1]
- 15.9% of Indiana adults experienced depression in their lifetime [5]
  - Rates higher for females (20.5%) than males (11.0%)
- 9.9% of Indiana high school students attempted suicide in the past year [2]
- Suicide mortality has increased significantly, from 10.4 per 100,000 in 1999 to 15.4 per 100,000 in 2016 [11]
Reviewing our Statewide Priorities

Tobacco (3 priorities)
Alcohol (2 priorities)
Opioids (2 priorities)
Mental health (1 priority)
General recommendations (2)
TOBACCO (NICOTINE)

Youth tobacco use
Reduce past-month use of any tobacco product, including e-cigarettes, in middle school students from 8.2% to 5.0% and in high school students from 26.9% to 20.0%.
Data source: IYTS, 2014
Target setting method: TPC recommendation and SEOW consent

Smoking during pregnancy
Reduce smoking in pregnant women from 14.3% to 8.0%.
Data source: Natality Report, 2015
Target setting method: TPC, 2020 Strategic Plan (p. 25)

Adult smoking
Reduce smoking among all adults from 20.6% to 18.0%.
Data source: BRFSS, 2015
Target setting method: TPC, 2020 Strategic Plan (p. 33)

Current Estimates

Youth tobacco use
Middle school: 4.9%
High school: 20.3%

Smoking during pregnancy
13.5%

Adult smoking
21.1%
**Current Estimates**

*Underage drinking*

Reduce past-month alcohol use in 12- to 20-year-olds from 21.0% to 18.9%.

Data source: NSDUH, 2014-2015

Target setting method: 10% improvement (modified from Healthy People 2020, objective SA-13.1)

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*Binge drinking in young adults*

Reduce past-month binge drinking in young adults ages 18 to 24 from 28.7% to 25.8%.

Data source: BRFSS, 2015

Target setting method: 10% improvement (Healthy People 2020, objective SA-14.3)

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*Underage drinking*

20.9% 🤞يدة

*Binge drinking in young adults*

26.5% 👍
Drug overdose mortality
Reduce fatal drug overdoses from 1,236 deaths to 927 deaths.
Data source: ISDH, 2015
Target setting method: 25% improvement (SEOW consent)

Prescription opioid misuse
Prescription opioid misuse is still a public health concern. Due to changes in the design of the National Survey on Drug Use and Health (NSDUH), state-level estimates were not available this year and future estimates will not be comparable to prior years. Therefore, we recommend re-evaluating next year’s rate of prescription opioid misuse for inclusion in next year’s priorities.

Current Estimates

Drug overdose mortality
1,518 deaths

Prescription opioid misuse
4.9% Hoosiers ages 12+ (2016 NSDUH)
### Current Estimates

**Suicide attempts in youth**

Reduce the percentage of high school students who attempted suicide in the past year from 9.9% to not more than 8.9%.

Data source: YRBS, 2015

Target setting method: 10% improvement (SEOW consent)
GENERAL RECOMMENDATIONS

There has been a recent upward trend in marijuana use. Given the expanding legalization of marijuana (as of 2016, 28 U.S. states have legalized marijuana for medical/recreational purposes), the SEOW recommends to monitor its use in the general population and to consider its inclusion in the Prevention Priorities in future years.

The SEOW acknowledges the importance of consistent data collection, especially at the state and sub-state level. We recommend the state maintain and improve its efforts to collect relevant data on behavioral health indicators and to expand collecting information from special populations, including the LGBTQ community; racial/ethnic minorities such as African Americans, Latinos, and Native Americans/Indian Tribes; people involved with the criminal justice system; veterans and military families; people who live in rural areas; and people experiencing homelessness.
Alcohol & tobacco continue to have the greatest impact; i.e., they affect the largest number of people.

Marijuana use is on the rise.

Opioids continue to be a public health concern.
  - Addiction, overdose, transmission of HIV/AIDS and hepatitis B & C through IDU.

*Take home message*
Center for Health Policy

The Center for Health Policy collaborates with state and local government, as well as public and private healthcare organizations in health policy and program development to conduct high quality program evaluation and applied research on critical health policy-related issues.

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References


Tableau Website Presentation

Harold Kooreman, MA, MSW
Policy Analyst, Center for Health Policy
IU Richard M. Fairbanks School of Public Health
hkoorema@iu.edu
The Relationship between Adverse Childhood Experiences, Substance Misuse, & Future Health

Casey Balio
PhD Student, Department of Health Policy & Management
Richard M. Fairbanks School of Public health
ACE Issue Brief

ADVERSE CHILDHOOD EXPERIENCES (ACEs) AND THEIR IMPACT ON SUBSTANCE MISUSE & OVERALL HEALTH

**Introduction**

Adverse childhood experiences (ACEs) encompass a wide variety of distressing events during a child’s life. Originally, ACEs included emotional, sexual, and physical abuse; parental alcoholism or drug addiction; living in a household with domestic violence; and witnessing domestic violence. More recent studies have expanded the definition of ACEs, including factors such as chronic family stress, family members incarcerated, and parents who were not employed.

**Background on ACEs Research**

ACEs came to prominence in 1995, when Kaiser

**SUMMARY**

- Adverse Childhood Experiences (ACEs) include emotional, physical, or sexual abuse; witnessing maternal domestic violence; or living with a household member who has a substance use disorder, is mentally ill or suicidal, or is currently or was ever incarcerated during the first 18 years of a child’s life.
- Most recent estimates sug
Agenda

- What are ACEs?
- The Kaiser Study
- Prevalence of ACEs
- ACEs and Substance use
- ACEs and Health
- Causality
- Recommendations
- Questions
ACE Definition

Occurrence of any of the following during childhood:

- Emotional, physical, or sexual abuse
- Witnessing maternal domestic violence
- Living with a household member who has a substance use disorder or mental illness, is suicidal, or who is currently or was ever incarcerated

1
Expanded ACE Definition

More recent definitions include:
- Living with a household member who smokes\(^2\)
- witnessing any inter-partner violence in the household
- having parents who are separated or divorced
- withstanding physical or emotional neglect\(^4,5\)
- experiencing parent or guardian death\(^6,7\)
- Witnessing neighborhood violence\(^6,7\)
- enduring socioeconomic hardship\(^6,7\)
- experiencing racial discrimination
The CDC-Kaiser ACE Study ¹,⁸

- Commissioned by the CDC, began in 1995
- Surveyed 9,500 adults from Kaiser’s HMO population
- Having experienced each type of ACE
- Subsequent and current health status and behaviors
- Since then, have continued to monitor, complete additional studies with the same and different populations
- Kaiser has also implemented screening/addressing ACEs in primary care visits
Early Findings from the CDC-Kaiser Study

- 52% of the adult population has experienced at least one ACE
- ACEs are often experienced in “clusters”
- A dose-response relationship exists with future mental & physical health status

Source: CDC Adverse Childhood Experiences Presentation Graphics
https://www.cdc.gov/violenceprevention/acestudy/ACE_graphics.html
ACE Pyramid

- Early death
- Disease, disability, and social problems
- Adoption of health-risk behaviors
- Social, emotional, and cognitive impairment
- Disrupted neurodevelopment
- Adverse childhood experiences

Conception → Death
## Current Prevalence

<table>
<thead>
<tr>
<th></th>
<th>2011-2012</th>
<th></th>
<th>2016</th>
<th></th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Indiana</td>
<td>US</td>
<td>Indiana</td>
<td>US</td>
</tr>
<tr>
<td>Any ACE</td>
<td>52.3</td>
<td>47.9</td>
<td>47.3</td>
<td>46.3</td>
</tr>
<tr>
<td>1 ACE</td>
<td>25.3</td>
<td>25.3</td>
<td>23.1</td>
<td>24.6</td>
</tr>
<tr>
<td>2 or more ACEs</td>
<td>27.0</td>
<td>22.6</td>
<td>24.2</td>
<td>21.7</td>
</tr>
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</table>

Source: National Survey of Children’s Health
ACEs & Substance Use
Alcohol
- Early initiation of alcohol use
- Heavy drinking
- Self-reported alcoholism
- Marrying an alcoholic

Illicit Substances
- Lifetime drug use
- Lifetime injection drug use
- Early initiation of drug use
- Drug addiction

Tobacco
- Current smoking status
- Frequent tobacco use

56% of prevalence of lifetime drug use attributable to ACEs

\[\text{IUPUI}\]
Other Risk Behaviors

- Anger control
- Interpartner violence
- Sexual risk behaviors
- Early & unintended pregnancy
ACEs & Health
Mental Health

- Antisocial behavior
- Depressive symptoms
- Mood & anxiety disorders
- Perceived stress
- Disrupted sleep
- Suicidal thoughts & attempts
  - mediated
Mental Health

- Antisocial behavior
- Depressive symptoms
- Mood & anxiety disorders
- Perceived stress
- Disrupted sleep
- Suicidal thoughts & attempts
  - mediated

ACE

- Alcohol use
- Depressed affect
- Illicit drug use

Suicide attempt
Mental Health

- Antisocial behavior
- Depressive symptoms
- Mood & anxiety disorders
- Perceived stress
- Disrupted sleep
- Suicidal thoughts & attempts
  - mediated

An estimated 80% of childhood/adolescent suicide attempts attributable to ACEs while 67% of lifetime attempts & 64% of adult attempts are attributable to ACEs\textsuperscript{14}
Physical Health

- Self-rated general health status
- Mortality (although mediated by other factors)*
- Prescription drug utilization

On average, individuals with 2 ACE categories die 2 years earlier than those with none, while individuals with 6+ ACE categories died nearly 20 years earlier.
ACEs & Causality

- Correlation ≠ causation
- Hill Criteria for assessing causality when randomization isn’t possible
  - Strong correlation
  - Biological plausibility
  - Temporality
  - Graded relationship
- CDC-Kaiser study has established several of these \(^\text{11}\)
Summary

ACEs are associated with future physical, mental, and general health as well as substance use, risk behaviors, healthcare spending, and mortality.

&

Rigorous evidence that these relationships may be causal.

What now???
Policy Recommendation 1: Increase data collection in Indiana

- BRFSS has an ACE module, 32 states have participated at least once but Indiana has not
- Questions that reflect current ACE definitions
- Ideally obtained from children and young adults for better reliability
- Indiana Youth Survey

Source: CDC Adverse Childhood Experiences Presentation Graphics
https://www.cdc.gov/violenceprevention/acestudy/ACE_graphics.html
Policy Recommendation 2:
Increase screening for ACEs in clinical settings

- Kaiser has implemented a screening for adults in primary care \(^{12}\)
  - Took substantial effort to implement, both cost and provider support
  - Associated with reductions in ED visits and hospitalizations, suggested possibly because of an improved relationship and trust between the patient and provider
- Suggested to be implemented in both pediatric and adult settings
  - Pediatricians already include a variety of familial/household conditions during well-child visits
  - American Academy of Pediatrics endorses this but only 4% ask about all ACEs while 32% ask about none \(^{13}\)
Full issue brief at: bit.ly/SEOWissuebriefs

SAMHSA Webinar: Trauma & Adverse Childhood Experiences: Implications for Preventing Substance Misuse

Contact Information: Casey Balio cbalio@iu.edu


Binge Drinking among Young Adults: Two Distinct Phases

Tamara G.J. Leech, PhD
Associate Professor
Department of Public Health
Montclair State University
Aging out in 1996

Prevalence of binge drinking by age, according to the NSDUH

~1 in 5
~1 in 3
~1 in 4

20% 23% 27% 30% 26% 24% 24%
Overall increase by 2006, & less aging out

Prevalence of binge drinking by age, according to the NSDUH

14% decline

20% decline
Decrease in early ages by 2016, no aging out

**Prevalence of binge drinking by age, according to the NSDUH**

<table>
<thead>
<tr>
<th>Year</th>
<th>1996</th>
<th>2006</th>
<th>2016</th>
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<tbody>
<tr>
<td>18</td>
<td>18%</td>
<td>34%</td>
<td>18%</td>
</tr>
<tr>
<td>19</td>
<td>23%</td>
<td>37%</td>
<td>29%</td>
</tr>
<tr>
<td>20</td>
<td>23%</td>
<td>41%</td>
<td>32%</td>
</tr>
<tr>
<td>21</td>
<td>27%</td>
<td>47%</td>
<td>47%</td>
</tr>
<tr>
<td>22</td>
<td>30%</td>
<td>47%</td>
<td>45%</td>
</tr>
<tr>
<td>23</td>
<td>26%</td>
<td>47%</td>
<td>46%</td>
</tr>
<tr>
<td>24</td>
<td>24%</td>
<td>44%</td>
<td>42%</td>
</tr>
<tr>
<td>25</td>
<td>24%</td>
<td>42%</td>
<td>42%</td>
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</table>
Our Data on Young Adults in Indiana Match the Broader National Trend

Prevalence of Binge Drinking by Age

18% 19% 20% 21% 22% 23% 24% 25%

18% 28% 37% 45% 50% 49% 44% 46%

NSDUH 2016 Indiana 2016
Extended Adolescence vs. Emerging Adulthood

Two distinct phases in “young adulthood”: Ages 18-21 vs. ages 22-25
Description of Partnership for Success (PFS) Survey

- Survey of young adults in 10 Indiana counties: Cass, Clark, Floyd, Knox, Lake, Madison, Marion, Porter, Scott, and Vanderburgh.

- Identified by Indiana’s Division of Mental Health and Addiction (DMHA) in collaboration with the State Epidemiological Outcomes Workgroup as having high rates of underage drinking and/or prescription drug misuse.

- Funded through the U.S. Substance Abuse and Mental Health Services Administration’s (PFS) grant.

- Stratified sampling relative to the proportion of young adults in each county. Young adults aged 18 to 25 with a current cell phone number were recruited via text messaging.

- Data collected November through December 2016. These analyses use information from 1,097 respondents.
## Our Respondents in 10 Indiana Counties

<table>
<thead>
<tr>
<th></th>
<th>Overall (n=1,097)</th>
<th>Extended Adolescents: 18-21yrs (n=410)</th>
<th>Emerging Adults: 22-25yrs (n=687)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>31%</td>
<td>38%</td>
<td>37%</td>
</tr>
<tr>
<td>Female</td>
<td>63%</td>
<td>62%</td>
<td>63%</td>
</tr>
<tr>
<td><strong>Race</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>68%</td>
<td>64%</td>
<td>71%</td>
</tr>
<tr>
<td>Black</td>
<td>19%</td>
<td>23%</td>
<td>17%</td>
</tr>
<tr>
<td>Other</td>
<td>12%</td>
<td>13%</td>
<td>11%</td>
</tr>
<tr>
<td><strong>Enrolled in College</strong></td>
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</tr>
<tr>
<td></td>
<td>45%</td>
<td>63%</td>
<td>34%</td>
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<tr>
<td><strong>Binge drinking in past 30 days</strong></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>42%</td>
<td>33%</td>
<td>46%</td>
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During Extended Adolescence...

College Enrollment and Financial Stress are related to Binge Drinking
College Enrollment Matters among 18-21 year olds

Percentage of Respondents Who Engaged in Binge Drinking in Past 30 Days

- 18-21 YEARS:
  - In College: 39%
  - Not In College: 24%

- 22-24 YEARS:
  - In College: 45%
  - Not In College: 47%
Even after adjusting for other factors, younger adults attending college are 77% more likely to binge drink than other 18-21 year olds.
Financial Stress Seems to be a Trigger specific to Extended Adolescence

More than 4 out of 5 in both age groups reported that money is a significant source of stress.
During Emerging Adulthood...

Financially supporting someone and stress from both work and relationships are related to binge drinking.
Emerging adults who financially support others are 51% less likely to binge drink

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Financially Supporting Someone</th>
<th>Not Providing Financial Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-21 YEARS</td>
<td>28%</td>
<td>34%</td>
</tr>
<tr>
<td>22-24 YEARS</td>
<td>34%</td>
<td>53%</td>
</tr>
</tbody>
</table>

Being self-sufficient (never receiving financial support from parents) is NOT significantly correlated. (p=.94)
Work and Relationships Stress is Related to Binge Drinking (Job stability is marginal)

Binge Drinking by Source of Stress among 22-25 Year Olds

- Work Stress: 50% Yes, 38% No
- Relationship Stress: 49% Yes, 42% No
- Job Stability Stress: 49% Yes, 45% No
Living with Roommates Poses a Risk to Everyone

But the association between Binge Drinking and other living situations differs in important ways.
Likelihood of Binge Drinking among 18-21 year olds, by Living Situation

<table>
<thead>
<tr>
<th>Living Situation</th>
<th>7% of Respondents</th>
<th>9% of Respondents</th>
<th>53% of Respondents</th>
<th>24% of Respondents</th>
<th>5% of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>With Spouse</td>
<td>-120%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cohabiting</td>
<td></td>
<td>-62%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With Parents</td>
<td></td>
<td></td>
<td>-88%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roommate(s)</td>
<td>194%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alone</td>
<td>113%</td>
<td></td>
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</tr>
</tbody>
</table>
Likelihood of Binge Drinking among 22-25 year olds, by Living Situation

<table>
<thead>
<tr>
<th>Living Situation</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>With Spouse</td>
<td>-70%</td>
</tr>
<tr>
<td>Cohabiting</td>
<td>-9%</td>
</tr>
<tr>
<td>With Parents</td>
<td>-58%</td>
</tr>
<tr>
<td>With Roommate(s)</td>
<td>148%</td>
</tr>
<tr>
<td>Alone</td>
<td>79%</td>
</tr>
</tbody>
</table>

Table:

- 31% of Respondents
- 19% of Respondents
- 16% of Respondents
- 15% of Respondents
- 16% of Respondents
Implications

1. If there is one thing to focus on for all young adults, it is the roommate environment.

2. For the younger cohort (18-21 year olds), focusing on the campus environment and financial stress (perhaps from college fees?) may be appropriate.

3. For the older cohort (22-25), the typical transition into adulthood (marriage, the responsibility to financially support others) is still protective.
   • But it is less common at these ages than it used to be, and the cohabitation replacing it is not protective.

4. It may be more feasible and fruitful to focus on dealing with stress from relationships characteristic of this transition.
Time for a break!
Structured vs. Unstructured Data: Working towards a better estimate of opioid-related emergency department visits

Casey Balio
Marion Greene, MPH
Joshua Vest, PhD, MPH
Kevin Wiley, Jr., MPH
Overview

- Background
- Research Question
- Methods
- Results
- Policy/Informatics Implications
- CDC: 15.7 per 10,000 ED visits suspected opioid-involved overdoses \(^1\)
- Highest rates among large metropolitan areas (up to 40 per 10,000 ED visits) \(^1\)
- Inpatient stays are more frequent, but ED are increasing more rapidly \(^2\)
- Indiana estimates just below the national average at 15.2 per 10,000 (national 17.8) \(^2\)
Current estimates rely on structured data which may underestimate the true prevalence.

- Previous research analyzed structured (ICD-9/10-CM) data for prevalence estimates which may underestimate the extent of the opioid crisis.

- Researchers hypothesize that clinicians may not always code opioid misuse for the following reasons:
  - Stigma
  - Privacy
  - Not completely consistent over providers.
Pairing unstructured data to achieve better prevalence estimates.

- Clinicians may include information about opioid-misuse in the unstructured, clinical note

- **Natural language processing (NLP) applications** may improve opioid-misuse prevalence estimates\(^3\),\(^4\)
  - Abstracts data from free-text clinical notes in the EHR
  - Used for risk prediction for future misuse
  - Often in primary care setting
Research Question

What is the prevalence of emergency department visits attributable to opioid misuse as identified via structured and unstructured EHR information?
Methods

1. Data:
   a. EHR data from 2 large, urban hospitals in Indianapolis from 2012-2017
   b. Patient demographic, encounter, diagnoses, and unstructured clinical notes

2. Sample: Adult, ED encounters

3. Measurement:
   a. Identify cases that were:
      i. Structured (ICD-positive)
      ii. Unstructured (NLP-positive)
      iii. Structured + Unstructured (NLP+ & ICD+)

4. Analysis:
   c. All trends for years 2012-2017
What are we looking for in the unstructured data?

Term groups:

- Opioid (e.g., Hydrocodone)
- Antagonists (e.g., Naloxone)
- Problem Use Terms
- Response Terms
- Treatment Terms

Grouped into rules:

- Ex. [opioid term] + [problem use term]
  - Note could include “opioid dependent” or “over use of pain medications”
ED Encounters 2012-2017

- Identify opioid (+) encounters via structured codes
- Identify opioid (+) encounters via unstructured data using clinical notes
- Extract patient and encounter information
- Extract patient and encounter information
- Deduplicate encounters → Prevalence and trends
- Compare cases identified via structured clinical data and unstructured clinical data
Methods

ED Encounters 2012-2017

Identify opioid(+) encounters via structured codes

Extract patient and encounter information

Identify opioid (+) encounters via unstructured data using clinical notes

Extract patient and encounter information

Deduplicate encounters → Prevalence and trends

Compare cases identified via structured clinical data and unstructured clinical data
ED Encounters 2012-2017

Identify opioid(+) encounters via structured codes

Extract patient and encounter information

Deduplicate encounters → Prevalence and trends

Identify opioid (+) encounters via unstructured data using clinical notes

Extract patient and encounter information

Compare cases identified via structured clinical data and unstructured clinical data
ED Encounters 2012-2017

- Identify opioid (+) encounters via structured codes
- Extract patient and encounter information
- Deduplicate encounters → Prevalence and trends
  - Compare cases identified via structured clinical data and unstructured clinical data

- Identify opioid (+) encounters via unstructured data using clinical notes
- Extract patient and encounter information
Identify opioid(+) encounters via structured codes

Extract patient and encounter information

Deduplicate encounters → Prevalence and trends

Compare cases identified via structured clinical data and unstructured clinical data

Identify opioid (+) encounters via unstructured data using clinical notes

Extract patient and encounter information
Results

- 13,352 total opioid-positive encounters across 6,207 patients
- 38.9% of patients had multiple encounters
- Max 25 encounters
- Average age: 36.1
- [Heroin] + [Problem Use] & [Opioid] + [Problem Use] most common rule groups
- 91 encounters identified as naloxone-related from unstructured notes would not have been found without NLP
## PRELIMINARY FINDINGS

<table>
<thead>
<tr>
<th></th>
<th>Structured (%)</th>
<th>Unstructured (%)</th>
<th>Total Sample (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ICD-only</td>
<td>NLP-Only</td>
<td></td>
</tr>
<tr>
<td><strong>Patient Characteristics</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>4,364 (58.3)</td>
<td>3,087 (52.7)</td>
<td>7,451 (55.8)</td>
</tr>
<tr>
<td>White</td>
<td>5,576 (85.6)</td>
<td>4,527 (87.5)</td>
<td>10,103 (86.5)</td>
</tr>
<tr>
<td>Black</td>
<td>768 (11.1)</td>
<td>527 (10.2)</td>
<td>1,295 (11.8)</td>
</tr>
<tr>
<td>Hispanic ethnicity</td>
<td>118 (1.7)</td>
<td>100 (1.8)</td>
<td>218 (1.8)</td>
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<tr>
<td><strong>Encounter Characteristics</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Day encounter</td>
<td>3,729 (49.8)</td>
<td>3,209 (54.7)</td>
<td>6,938 (52.0)</td>
</tr>
<tr>
<td>Fall</td>
<td>2,095 (24.8)</td>
<td>1,997 (34.1)</td>
<td>3,855 (28.9)</td>
</tr>
<tr>
<td>Weekend</td>
<td>2,095 (28.0)</td>
<td>1,662 (28.3)</td>
<td>3,757 (28.1)</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>7,490 (56.1)</td>
<td>5,862 (43.9)</td>
<td>13,352</td>
</tr>
</tbody>
</table>

Note: Race % out of those with coded race, n=11,687 / 13,352
PRELIMINARY FINDINGS

AHRQ estimates
IN: 15.2
US: 17.8
PRELIMINARY FINDINGS

*Unstructured = only those encounters that otherwise would not have been accounted for if only used structured information
PRELIMINARY FINDINGS
Potential Policy and Informatics Implications

- Most of our estimates until this point are probably underestimates
- Misuse seems generally to span patient characteristics, but less so encounter characteristics
- Replication across healthcare organizations with disparate reporting/record maintenance: community health, primary care centers
- Better understand clinician processes for documentation
- Improve clinician training regarding ICD-9/10 transition
- Self-report data may be more accurate than clinician entry
Current estimates of opioid-related ED encounters are likely underestimates, and the magnitude appears to be growing.

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References


Enhanced State Opioid Overdose Surveillance (ESOOS)

Raven Helmick, MPH, CPH
Prescription Drug Overdose Epidemiologist, Indiana State Department of Health, Division of Trauma and Injury Prevention
Purpose of ESOOS

• Supports states with a high burden of drug overdoses to improve the timeliness of fatal and nonfatal opioid overdose surveillance.

• Efforts to control the epidemic are plagued with data limitations, and time lags in current surveillance systems limit the ability to respond quickly and appropriately.

• Accurate and timely data on overdose rates and risk factors are essential in responding to opioid overdoses at the local level, but data quality varies greatly across the regions and communities of the state.
Key Strategies

1. Increase the timeliness of aggregate emergency department opioid overdose reporting
2. Increase the timeliness of fatal opioid overdose and associated risk factor reporting
3. Disseminate surveillance findings to key stakeholders working to prevent or respond to opioid overdose
4. Develop an economically feasible and standardized toxicology panel for coroner testing of suspected drug intoxication deaths
5. Assist in educating coroners about using INSPECT data during investigations
Implementing the Strategies

1. Increase the timeliness of aggregate emergency department opioid overdose reporting
   - Use the Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE) Emergency Department (ED) visit data to track opioid-involved overdoses for 1) suspected drug overdoses; 2) suspected overdoses involving any opioid, including opioid pain relievers (OPRs); 3) suspected overdoses involving heroin or illicitly made fentanyl
   - Consistently collect feedback, share methodology, and validate and revise case definitions as needed
   - Analyze data for dissemination
2. Increase the timeliness of fatal opioid overdose and associated risk factor reporting

- Collect death certificates from ISDH Vital Records and coroner reports from the 92 county coroners (82 so far) into the CDC Secure Access Management Service web-based system for data analysis to develop a comprehensive fatal opioid overdose surveillance system
- Collect and abstract data on all opioid-involved overdose deaths within eight months of the date of death
- Analyze comprehensive fatal opioid overdose and associated risk factor surveillance data for dissemination
3. Disseminate surveillance findings to key stakeholders working to prevent or respond to opioid overdose

- Stakeholders and the public receive timely geographically specific trends in ED overdoses to assist in prevention planning and receive timely data on fatal opioid overdoses and risk factors to assist in targeted prevention planning.
- Morbidity reports will be released on a quarterly basis.
- Mortality reports will be released 3 times in the next 2 years.
- Released on Stats Explorer and Overdose Prevention website.
Implementing the Strategies

4. Develop an economically feasible and standardized toxicology panel for coroner testing of suspected drug intoxication deaths

- Established a web-based database for coroners to upload toxicology results.
- Expanded the current capabilities of toxicology panel.
- Expedited surveillance in response to mortality trends in toxicology across Indiana jurisdictions.
- Include full funding of enhanced toxicology screening for all 92 Indiana counties by July 1, 2018. This expansion comes via a state legislative mandate and will come in three distinct roll-out periods (blocks).
- Considering a monthly report for this data.
Implementing the Strategies

5. Assist in educating Indiana coroners about using INSPECT data during investigations

- Success in reducing Rx opiates with funding for INSPECT, which allows prescribers, dispensers, and law enforcement to access prescribing history. Additional changes allow county coroners conducting drug investigations to access the INSPECT program.

- The Indiana Professional Licensing Agency (IPLA) has identified the need to educate coroners and provide investigation tools to address fatal drug-related data quality issues stemming from coroner investigations.

- IPLA will educate through the Continuing Education (CE) Program on PDMPs on the availability and use of INSPECT during overdose investigations.
ISDH Data Visualizations

• Stats Explorer
  - https://gis.in.gov/apps/isdh/meta/stats_layers.htm

• Trauma and Injury Prevention Overdose Prevention Website
  - https://secure.in.gov/isdh/27393.htm
Contact Information

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Jeremy Funk, MPH
Injury Prevention Epidemiologist
jfunk1@isdh.in.gov
STATE-LEVEL EVALUATION FINDINGS SFY17

DMHA GRANTEES

Hope McMickle, BA
Program Evaluator, Indiana Prevention Resource Center
OVERVIEW

- Technical & Evaluation Assistance provided to:
  - 14 SAPT BG grantees

- Used tiered evaluation approach to evaluate at the program level, community level, and state level
  - Full report available at www.drugs.indiana.edu/spf
DMHA GRANTEE

<table>
<thead>
<tr>
<th>County</th>
<th>Contact Name</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allen</td>
<td>Jerri Lench</td>
<td><a href="mailto:jelli@deac.org">jelli@deac.org</a></td>
</tr>
<tr>
<td>Bartholomew</td>
<td>Andrea Vogel</td>
<td><a href="mailto:andrea@foundationforyouth.com">andrea@foundationforyouth.com</a></td>
</tr>
<tr>
<td>Clark</td>
<td>Connie Minich</td>
<td><a href="mailto:clerk@kentuckycook.coop">clerk@kentuckycook.coop</a></td>
</tr>
<tr>
<td>Delaware</td>
<td>Patricia Hart</td>
<td><a href="mailto:phart@sbi.net">phart@sbi.net</a></td>
</tr>
<tr>
<td>Fayette</td>
<td>Sarah Ramsden</td>
<td><a href="mailto:sramsden@fhp.org">sramsden@fhp.org</a></td>
</tr>
<tr>
<td>Floyd</td>
<td>Marsha Casey</td>
<td><a href="mailto:mbcasey@fdm.org">mbcasey@fdm.org</a></td>
</tr>
<tr>
<td>Kosciusko</td>
<td>Eric Evans</td>
<td><a href="mailto:Eric.evans@kenosha.org">Eric.evans@kenosha.org</a></td>
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<tr>
<td>Lake</td>
<td>Karen Knight-Wilkinson</td>
<td><a href="mailto:karen.knight-wilkinson@gmail.com">karen.knight-wilkinson@gmail.com</a></td>
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<tr>
<td>Madison</td>
<td>Jen Yates</td>
<td><a href="mailto:jenyates@yahoo.com">jenyates@yahoo.com</a></td>
</tr>
<tr>
<td>Marion</td>
<td>Kristin Love</td>
<td><a href="mailto:kristinlove@gmail.com">kristinlove@gmail.com</a></td>
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<tr>
<td>St. Joseph</td>
<td>Sharon Burden</td>
<td><a href="mailto:sharon.burden@marion.edu">sharon.burden@marion.edu</a></td>
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<tr>
<td>Vanderburgh</td>
<td>Laura Westrich</td>
<td><a href="mailto:lwestrich@youthfirstinc.org">lwestrich@youthfirstinc.org</a></td>
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<tr>
<td>Wayne</td>
<td>Stacey Steele</td>
<td><a href="mailto:ststeel@hgrichmond.org">ststeel@hgrichmond.org</a></td>
</tr>
</tbody>
</table>
RISK AND PROTECTIVE FACTORS

**Peer/Individual**
- Early Initiation of Drug Use (R)
- Interaction with Antisocial Peers (R)
- Favorable attitudes toward Antisocial behavior (R)
- Perceived Risk of Drug Use (R)
- Rewards for Antisocial Involvement (R)
- Interaction with Prosocial Peers (P)

**Family:**
- Family Conflict (R)
- Family Management (R)
- Parental Attitudes Favor Drug Use/Antisocial Behavior (R)
- Family Opportunities for Prosocial Involvement (P)

**School:**
- Lack of Commitment to School (R)
- Academic Failure (R)
- Opportunities for Prosocial Involvement (P)
- Rewards for Prosocial Involvement (P)

**Community:**
- Availability of Drugs (R)
- Community Laws/Norms Favorable Toward Drug Use (R)
- Rewards for Prosocial Involvement (P)
STRATEGIES

Al’s Pals
Footprints for Life
Guiding Good Choices
Project Alert
Positive Action
Strengthening Families Program
LifeSkills Training
Parents Who Host Lose The Most
Talk, They Hear You
Positive Culture Framework
Social Host Ordinance

Over 543,000 served!
STATEWIDE CHANGES IN RISK & PROTECTIVE FACTORS

COMPARISONS BETWEEN FUNDED COMMUNITIES ACROSS TIME

Source: Indiana Youth Survey (INYS)
## RISK FACTORS

<table>
<thead>
<tr>
<th>Risk Factor (Percentage at High Risk)</th>
<th>2016 CPF Funded Communities n=28,592</th>
<th>2017 CPF Funded Communities n=23,140</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Perceived Availability of Drugs (percentages)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8th Grade</td>
<td>20.6</td>
<td>20.4</td>
</tr>
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<td>10th Grade</td>
<td>27.6</td>
<td>26.6</td>
</tr>
<tr>
<td>12th Grade</td>
<td>37.4</td>
<td>35.2</td>
</tr>
<tr>
<td><strong>Peer/Individual Interaction with Antisocial Peers (percentages)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8th Grade</td>
<td>29.9</td>
<td>32.9</td>
</tr>
<tr>
<td>10th Grade</td>
<td>30.0</td>
<td>33.5</td>
</tr>
<tr>
<td>12th Grade</td>
<td>33.2</td>
<td>33.1</td>
</tr>
</tbody>
</table>

Data from the Annual Indiana Youth Survey (INYS)  
(Gassman, et al., 2016; Gassman, et al., 2017)
## DECREASED RISK

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<th>Risk Factor (Percentage at High Risk)</th>
<th>2016 CPF Funded Communities n=28,592</th>
<th>2017 CPF Funded Communities n=23,140</th>
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</thead>
<tbody>
<tr>
<td>Poor Family Management (percentages)</td>
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<td></td>
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<tr>
<td>8th Grade</td>
<td>23.6</td>
<td>23.6</td>
</tr>
<tr>
<td>10th Grade</td>
<td>21.3</td>
<td>22.3</td>
</tr>
<tr>
<td>12th Grade</td>
<td>26.4</td>
<td>24.6</td>
</tr>
<tr>
<td>Laws and Norms Favorable to Drug Use (percentages)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8th Grade</td>
<td>29.9</td>
<td>29.6</td>
</tr>
<tr>
<td>10th Grade</td>
<td>40.0</td>
<td>40.0</td>
</tr>
<tr>
<td>12th Grade</td>
<td>38.2</td>
<td>37.0</td>
</tr>
</tbody>
</table>

Data from the Annual Indiana Youth Survey (INYS)  
(Gassman, et al., 2016; Gassman, et al., 2017)
YOUTH USE

INDIANA’S SEOW HAS IDENTIFIED PRIORITY SUBSTANCES:

- Alcohol
- Marijuana
- Tobacco
- Prescription Drugs (used without a prescription)

COMPARED RATES (2016—2017)
IN DMHA FUNDED COMMUNITIES

Source: Indiana Youth Survey (INYS)
## USE RATE COMPARISONS
### 2016-2017

<table>
<thead>
<tr>
<th>Priority Substance</th>
<th>2016 CPF Funded Communities n=28,592</th>
<th>2017 CPF Funded Communities n=23,140</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>30-Day Alcohol Use (percentages)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8th Grade</td>
<td>13.8</td>
<td>13.4*</td>
</tr>
<tr>
<td>10th Grade</td>
<td>24.0</td>
<td>24.4**</td>
</tr>
<tr>
<td>12th Grade</td>
<td>34.6</td>
<td>33.7*</td>
</tr>
<tr>
<td>Overall</td>
<td>22.5</td>
<td>22.9**</td>
</tr>
<tr>
<td><strong>30-Day Cigarette Use (percentages)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8th Grade</td>
<td>5.3</td>
<td>4.5*</td>
</tr>
<tr>
<td>10th Grade</td>
<td>8.5</td>
<td>7.2*</td>
</tr>
<tr>
<td>12th Grade</td>
<td>14.5</td>
<td>11.8*</td>
</tr>
<tr>
<td>Overall</td>
<td>8.7</td>
<td>7.5*</td>
</tr>
</tbody>
</table>

* indicates p<0.05 one-tailed significance in the expected direction
**indicates p<0.05 two tailed significance

Data from the Annual Indiana Youth Survey (INYS) (Gassman, et al., 2016; Gassman, et al., 2017)
## USE RATE COMPARISONS
### 2016-2017

<table>
<thead>
<tr>
<th>Priority Substance</th>
<th>2016 CPF Funded Communities n=28,592</th>
<th>2017 CPF Funded Communities n=23,140</th>
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</thead>
<tbody>
<tr>
<td><strong>30-Day Marijuana Use (percentages)</strong></td>
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<td></td>
</tr>
<tr>
<td>8&lt;sup&gt;th&lt;/sup&gt; Grade</td>
<td>7.4</td>
<td>8.4**</td>
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<tr>
<td>10&lt;sup&gt;th&lt;/sup&gt; Grade</td>
<td>14.8</td>
<td>17.5</td>
</tr>
<tr>
<td>12&lt;sup&gt;th&lt;/sup&gt; Grade</td>
<td>21.8</td>
<td>23.2**</td>
</tr>
<tr>
<td>Overall</td>
<td>13.6</td>
<td>15.7**</td>
</tr>
<tr>
<td><strong>30-Day Rx Use (percentages)</strong></td>
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<tr>
<td>8&lt;sup&gt;th&lt;/sup&gt; Grade</td>
<td>2.6</td>
<td>2.9</td>
</tr>
<tr>
<td>10&lt;sup&gt;th&lt;/sup&gt; Grade</td>
<td>4.5</td>
<td>4.0*</td>
</tr>
<tr>
<td>12&lt;sup&gt;th&lt;/sup&gt; Grade</td>
<td>6.5</td>
<td>5.4*</td>
</tr>
<tr>
<td>Overall</td>
<td>4.2</td>
<td>4.0*</td>
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</tbody>
</table>

* indicates p<0.05 one-tailed significance in the expected direction
** indicates p<0.05 two-tailed significance

Data from the Annual Indiana Youth Survey (INYS) (Gassman, et al., 2016; Gassman, et al., 2017)
STATE WIDE YOUTH RATE OF USE

STATE WIDE, FUNDED, AND UNFUNDED COMMUNITIES

Source: Indiana Youth Survey (INYS)
STATEWIDE YOUTH RATES OF USE

- Statewide Rates
- Rates in Unfunded Communities
- Rates in Funded Communities
## 2017 USE RATES

<table>
<thead>
<tr>
<th>Priority Substance</th>
<th>2017 Statewide n=54,651</th>
<th>2017 Non-Funded Communities n=31,511</th>
<th>2017 CPF Funded Communities n=23,410</th>
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</thead>
</table>

### 30-Day Alcohol Use (percentages)

<table>
<thead>
<tr>
<th>Grade</th>
<th>2017 Statewide</th>
<th>2017 Non-Funded Communities</th>
<th>2017 CPF Funded Communities</th>
</tr>
</thead>
<tbody>
<tr>
<td>8th</td>
<td>13.0</td>
<td>12.8</td>
<td>13.4</td>
</tr>
<tr>
<td>10th</td>
<td>22.4</td>
<td>20.9</td>
<td>24.4*</td>
</tr>
<tr>
<td>12th</td>
<td>32.2</td>
<td>30.8</td>
<td>33.7*</td>
</tr>
<tr>
<td>Overall</td>
<td>20.9</td>
<td>19.5</td>
<td>22.9*</td>
</tr>
</tbody>
</table>

### 30-Day Cigarette Use (percentages)

<table>
<thead>
<tr>
<th>Grade</th>
<th>2017 Statewide</th>
<th>2017 Non-Funded Communities</th>
<th>2017 CPF Funded Communities</th>
</tr>
</thead>
<tbody>
<tr>
<td>8th</td>
<td>4.8</td>
<td>5.0</td>
<td>4.5</td>
</tr>
<tr>
<td>10th</td>
<td>8.0</td>
<td>8.5</td>
<td>7.2*</td>
</tr>
<tr>
<td>12th</td>
<td>12.8</td>
<td>13.6</td>
<td>11.8*</td>
</tr>
<tr>
<td>Overall</td>
<td>7.8</td>
<td>8.1</td>
<td>7.5*</td>
</tr>
</tbody>
</table>

* indicates p<0.05

Data from the Annual Indiana Youth Survey (INYS) (Gassman, et al., 2017)
## 2017 USE RATES

### 30-Day Marijuana Use (percentages)

<table>
<thead>
<tr>
<th>Priority Substance</th>
<th>2017 Statewide n=54,651</th>
<th>2017 Non-Funded Communities n=31,511</th>
<th>2017 CPF Funded Communities n=23,140</th>
</tr>
</thead>
<tbody>
<tr>
<td>8th Grade</td>
<td>6.4</td>
<td>5.2</td>
<td>8.4*</td>
</tr>
<tr>
<td>10th Grade</td>
<td>14.1</td>
<td>11.5</td>
<td>17.5*</td>
</tr>
<tr>
<td>12th Grade</td>
<td>19.5</td>
<td>16.2</td>
<td>23.2*</td>
</tr>
<tr>
<td>Overall</td>
<td>12.3</td>
<td>9.8</td>
<td>15.7*</td>
</tr>
</tbody>
</table>

### 30-Day Rx Use (percentages)

<table>
<thead>
<tr>
<th>Priority Substance</th>
<th>2017 Statewide n=54,651</th>
<th>2017 Non-Funded Communities n=31,511</th>
<th>2017 CPF Funded Communities n=23,140</th>
</tr>
</thead>
<tbody>
<tr>
<td>8th Grade</td>
<td>2.5</td>
<td>2.2</td>
<td>2.9*</td>
</tr>
<tr>
<td>10th Grade</td>
<td>3.5</td>
<td>3.0</td>
<td>4.0*</td>
</tr>
<tr>
<td>12th Grade</td>
<td>4.6</td>
<td>4.0</td>
<td>5.4*</td>
</tr>
<tr>
<td>Overall</td>
<td>3.3</td>
<td>2.9</td>
<td>4.0*</td>
</tr>
</tbody>
</table>

* indicates p<0.05

Data from the Annual Indiana Youth Survey (INYS)
(Gassman, et al., 2017)
30 DAY USE
Comparisons between funded and unfunded communities across time

Trend of Total Cigarette 30-Day Use

Coming Next Year!
QUESTIONS & COMMENTS
Division of Mental Health and Addiction (DMHA)

Julie Gries, MS
Assistant Deputy Director
Substance Abuse Prevention and Mental Health Promotion
Division of Mental Health and Addiction
DMHA

“To ensure that Indiana citizens have access to quality mental health and addiction services that promote individual, family and community resiliency and recovery.”
Bureau of Addiction Prevention and Mental Health Promotion

Mission: To reduce substance use and abuse and promote behavioral health across the lifespan of Indiana citizens by maintaining a coordinated, effective, and accountable system of prevention and behavioral health promotion services.
Bureau of Addiction Prevention and Mental Health Promotion

Vision: Sustainable environments that nurture, assist, and empower all Indiana citizens to access and experience optimum physical, emotional, and mental health.
Prevention utilizes elements of the public health model for planning and service delivery and consists of inclusive practices, policies and programs which provide individuals, families, and communities with necessary support to minimize the misuse of alcohol, tobacco and other drugs and maximize overall well-being.
Funding Sources for Prevention at DMHA
Substance Abuse Block Grant
SFY18

- 14 county level communities (Allen, Bartholomew, Clark, Delaware, Fayette, Floyd, Kosciusko, Lake, Madison, Miami, Morgan, St. Joseph, Vanderburgh, Wayne)
- Project LEAD
- Indiana prevention resource center
- State epidemiological outcomes workgroup
- Indiana NOFAS
- Collegiate needs assessment
- Baby and me tobacco free
- Indiana coalition to reduce underage drinking
- Intuitive Synergies
Partnerships for Success

• 10 counties (Cass, Clark, Floyd, Knox, Lake, Madison, Marion, Porter, Scott, Vanderburgh)

• Data collection

• Evaluation and capacity building for 10 counties
Synar

• Retailer Violation Program
• 14.6% rate reported in Annual Synar Report for 2018
State Targeted Response

• Anti stigma campaign during SFY18
• Naloxone/Narcan support
Strategic Planning Process
Data Collection Key Informant Interviews, Listening Sessions and Prevention Congress
Common Themes from Key Informant Interviews

- Duplication of effort
- Funding availability
- Largely political
- Not allowing needed time to make change
- Too many hoops to jump through
- Understaffed/ Not enough professional staff and volunteer support
Common themes from Listening Sessions

• A stronger focus on long-term effective solutions that would create a decrease in adverse childhood experiences.

• Communities become more connected with each other and their shared outcomes, ensuring that youth and families were reaching their full potential.
Common themes from Listening Sessions

• Substance abuse prevention efforts that lead individuals/citizens/Indiana youth to develop greater self-worth and the ability to employ coping skills.

• State and community leaders must be a part of an overall strategic plan

• Limited funding remains an issue

• Need to focus on communication modalities and community/social norms
Common themes from Listening Sessions

• Need to strengthen the present training and technical assistance capacity to reach beyond the current providers and develop multiple platforms for the process of technical assistance and training regarding environmental strategies

• Request to: “Work with us, inform us of the issues, what the state is thinking and get the local input.”
Common Themes from Listening Sessions

• A road map to build stakeholder support for prevention
• A plan to engage stakeholders for prevention efforts for the next five years.
• Proposed solutions to the communication issues that focus on the environment and community norms.
Common Themes from the Prevention Congress

• A road map to build stakeholder support for prevention
• A plan to engage stakeholders for prevention efforts for the next five years.
• Proposed solutions to the communication issues that focus on the environment and community norms.
Data collection efforts

- Strategic Prevention Framework

- Regional Support
A call to action and application
Substance Use in Indiana: Panel Discussion

Facilitator: Joshua Vest, PhD, MPH

Panelists: Joan Duwve, MD, MPH
              Dennis Watson, PhD
              Ben Gonzales
Thank you for your attendance.

Please complete the evaluation form.