



Statewide Epidemiological Outcomes Workgroup:

**Quarterly Meeting
02/24/2021**

Supported by SAMHSA PFS Grant
#6H79SP080990-01M001



Today's Agenda

- Welcome
- Introductions/SEOW Mission (A. Oliveto)
- Snapshot of Arkansan Adult Use Relative to US (A. Oliveto)
- Potential Impacts of Medical Marijuana Availability (A. Oliveto)
- Update on Opioid Crisis (A. Oliveto)
- Alcohol Home Delivery Data Update (M. Bollinger)
- Update on Annual Report/Companion Guide/Intro to Young Adult State of Wellbeing (M. Bollinger)
- Data Gaps/Access Discussion (M. Bollinger)
- *Presentation: More APNA Survey Modeling of 30-day Use (J. Thostenson)*
 - Religiosity (Church Attendance) versus Moral Order questions
- APNA Survey Questions Discussion
- Action Plan/Wrap-Up/Next Meeting

SEOW Mission

SEOW's mission is to guide successful prevention efforts in the state of Arkansas by:

- Analyzing, monitoring and sharing data trends in substance use and other environmental, behavioral, and health-related factors.
- Informing data-driven policy and practice decision-making regarding prevention priorities at local and state levels.
- Disseminating evidence-based education and prevention materials to the larger public.

NSDUH 2018-2019 Adult Findings (18+ years)

Substance Use	% Arkansans	% US
Alcohol (past mo)	44.7	55.1
Tobacco Product (past mo)	31.6	23.1
Cigarettes (past mo)	24.6	18.4
Marijuana (past mo)	8.7	11.2
Marijuana (past yr)	13.8	17.1
Prescription opioids (past yr)	3.70*	3.69
Heroin (past yr)	0.23**	0.31
Cocaine (past yr)	1.2	2.2
Methamphetamine (past yr)	1.0	0.8
Prescription Opioid UD (past yr)	0.51***	0.57

* - Among AR aged 12-25 yrs use higher than US counterparts

** - Among AR aged 12-17 yrs use higher than US counterparts

*** - Among AR aged 12-17 yrs UD same as US; among AR aged 18-25 yrs UD higher than US

Medical Cannabis Updates



Impact of Medical Marijuana Law Enactment on Youth

- **Several retrospective studies have shown no increase in MJ use after MML:**
 - YRBS data from 1991 to 2011: 9th-12th graders (Choo et al., 2014)
 - MTF data from 1991 to 2014: 8th, 10th, 12th graders (Hasin, 2015)
 - Decreased use among 8th graders post-MML
 - Use was overall higher among youth in states that enacted MML
 - MTF data from 1991 to 2014: 8th, 10th, 12th graders (Cerda, 2018)
 - Decreased use of MJ, PDs, alcohol binging, and illicit drugs among 8th graders post-MML
 - No change in any substance use among 10th graders post-MML
 - Increase in PO and cigarette use among 12th graders post-MML
- **A systematic review of 11 studies confirmed (Sarvet et al., 2018):**
 - **No increases in adolescent but increases in adult (>21 yrs) use after MML enactment**
 - **Higher adolescent use generally prior to MML in these states**

Impact of Medical Marijuana Law Enactment on Youth

- YRBS data collected during 1991–2011 from 45 states (Johnson et al., 2017):
 - MML inclusion of more **liberalized provisions** slightly ↓ odds of past-30-day MJ use
 - **Higher possession limits** ↑ past-30-day marijuana use odds
 - **Voluntary patient registration** ↑ odds of past-30-day use and heavy use
- Retrospective review (2005-2015) of MJ-related ED visits for patients ≥ 13 and < 21 yrs old in Colorado (Wang et al, 2018):
 - **MJ-related ED visits significantly increased** from 1.8 per 1,000 visits (2009) to 4.9 (2015)
 - Co-Ingestants were common, including ethanol (12%).
 - Despite national survey data suggesting no appreciable difference in adolescent marijuana use, **significant increase in adolescent marijuana-associated emergency department and urgent care visits**

Impact of Medical Marijuana Legalization on Adults

Monitoring Health Concerns Related to Marijuana in Colorado: 2020 (CDPHE, 2021):

- **Past 30-day MJ use among Colorado adults ages 18 years and older significantly increased from 2017 to 2019**
 - In 2019, past 30-day marijuana use remained highest among younger Colorado adults ages 18 to 25 years (28.8%) and 26 to 34 years (29.4%).
 - Significant increases in MJ use among older CO adults ages 35 to 64 (12.8% in 2017 to 17.3% in 2019) and ages 65 years and older (5.6% in 2017 to 9.3% in 2019).

Impact of Medical Marijuana Legalization on Youth

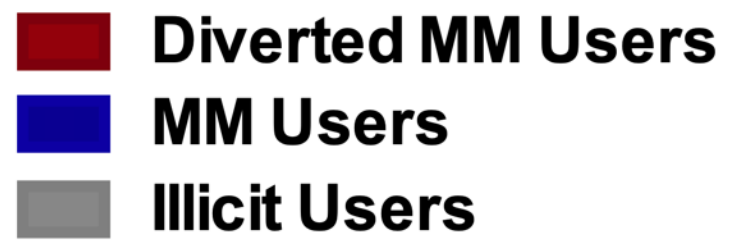
Monitoring Health Concerns Related to Marijuana in Colorado: 2020 (CDPHE, 2021):

- 30-day marijuana use among CO middle (5.2% in both 2017 and 2019) and high (19.4% in 2017 to 20.6% in 2019) school students remained stable.
- **Driving a vehicle after recently using marijuana significantly increased from 9.0% in 2017 to 11.2% in 2019 among Colorado high school students and remained significantly higher than driving after alcohol use (5.9%)**
- Significant shift from smoking to dabbing/vaporizing from 2017 to 2019, although smoking is still the most prevalent route of use.
- **Nearly one quarter (24.7%) of high school seniors in 2019 with lifetime marijuana use reported trying marijuana for the first time before age 15.**
- The majority of homes in Colorado with children do not have marijuana present or being used inside the home. Among homes that do have marijuana present, the majority of homes are storing marijuana safely.

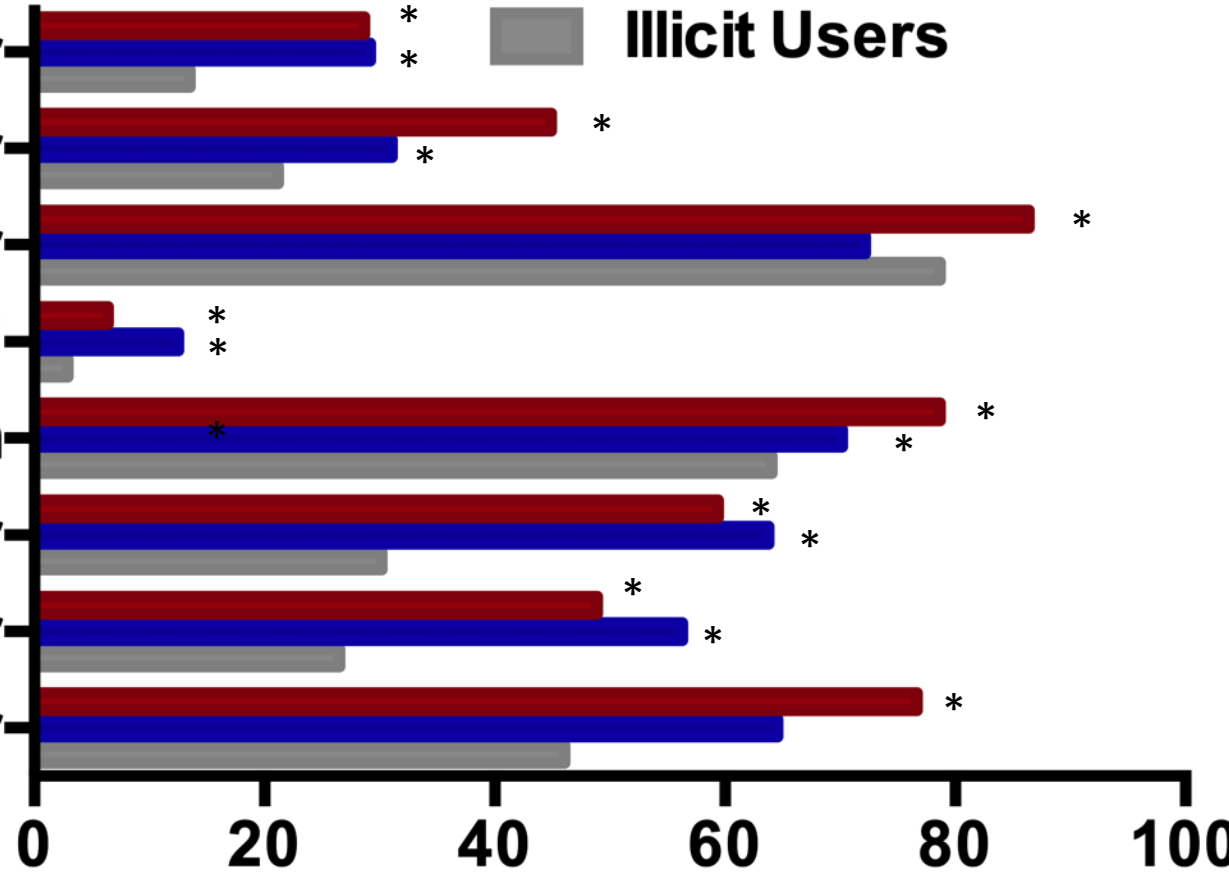
Secondary analysis of MTF 2012-2013

past year medical marijuana use among 12th graders (Boyd et al., 2015)

MTF Data 2012-2013



- Used Other Illicit Drugs 1+ Times in Past Yr**
- Used PDs 1+ Times in Past Year**
- Drunk 1+ Times in Past Yr**
- Used Because "Hooked"**
- Used to Get High**
- Daily Use for 1+ Mo in Past Year**
- Used 40+ Times in Past Year**
- Used 10+ Times in Past Yr**



Percent of Respondents



- 1.1% used MM with own card during the past Yr, 35% of which also used from someone else's prescription*
- 6.1% used MM from someone else's MM prescription during the past 12 months*

Conclusions

- These data indicate that:
 - those adolescents using diverted medical marijuana have higher odds of engaging in both marijuana and other types of substance use.
 - relatively few adolescents have medical papers to legally use medical marijuana
 - relatively few adolescents are obtaining their marijuana from “medical” sources
 - most adolescents continue to get their marijuana from illicit sources



Youth's Proximity to Marijuana Retailers and Advertisements: Factors Associated with Washington State Adolescents' Intentions to Use Marijuana

STACEY J.T. HUST , JESSICA FITTS WILLOUGHBY , JIAYU LI, and LETICIA COUTO

Edward R. Murrow College of Communication, Washington State University, Pullman, Washington, USA

- # of retailers not associated w/ adolescent MJ use intentions
- Perceived retailer proximity ↑ adolescent MJ use intentions
- Ad exposure ↑ MJ use intentions
- Positive outcome beliefs about MJ and perceived norms ↑, negative outcome beliefs and efficacy to refuse MJ ↓ with adolescent MJ use intentions
- More youth positive outcome beliefs about MJ + perceived close MJ retailer proximity ↑ MJ use intentions
- Adolescents who perceived great distance from retailers + positive outcome beliefs ↑ MJ use intentions



Summary and Discussion Points

- Cannabis use, per se, may not increase among youth after MML enactment and legalization, but likely will increase among adults (including young adults) as well as lead to risky behaviors, so need to monitor/address
- Provisions for MML enactment should be reviewed and adjusted to reduce likelihood of increased use
- Need to monitor ED visits (should check on clinical practices for toxicology screens and behavioral assessment)
- Monitor MJ use initiation, patterns, sources, and dispensary proximity - Consider APNA survey item adjustments?
- Consider unified messaging about dangers of Medical Marijuana Use

Arkansas Department of Health

Annual Report FY 2018: Total Approved Registry ID Cards since inception (2017): **5,517**

Annual Report FY 2019: Total Approved Registry ID Cards since inception (2017): **15,466**

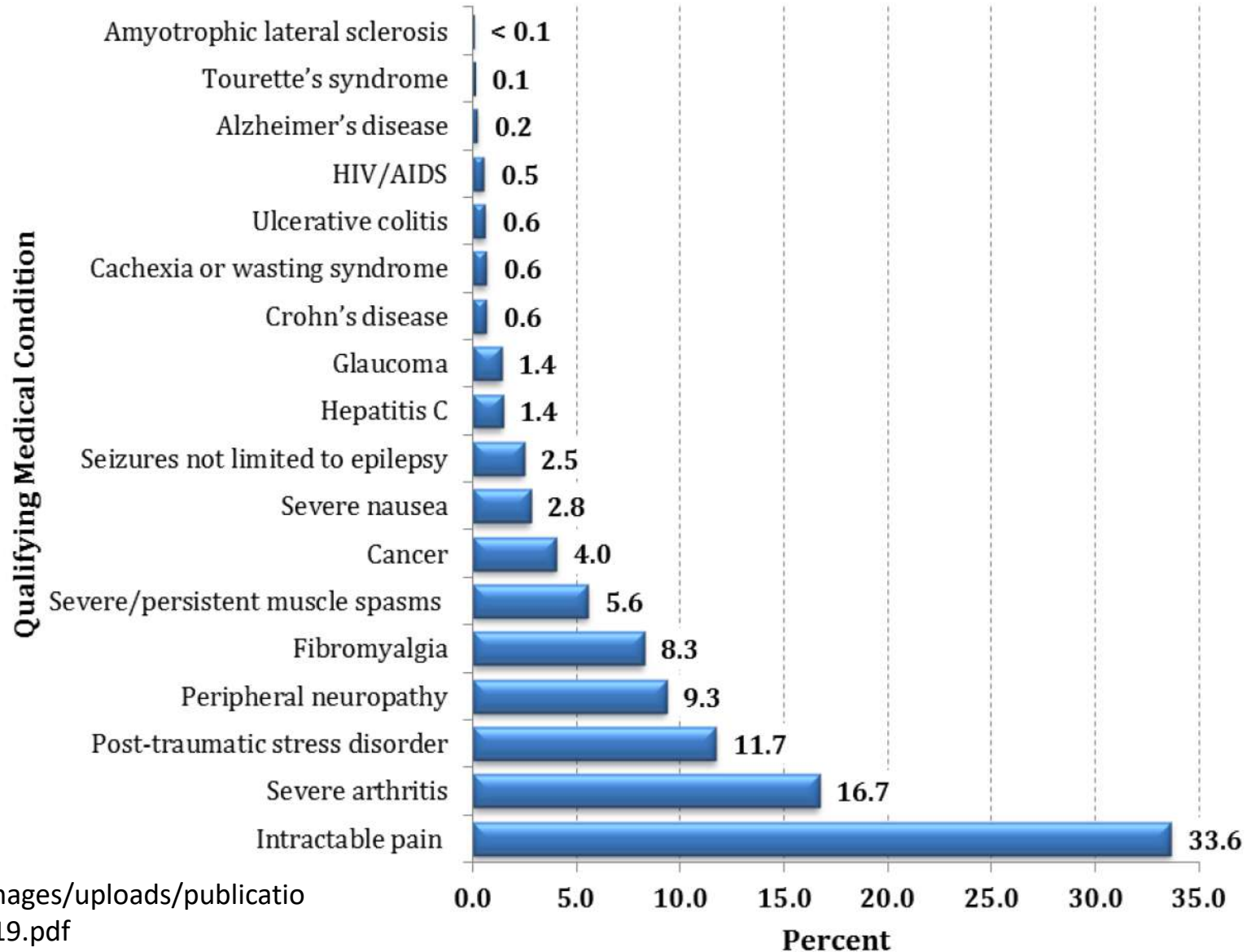
Number of active MM ID Cards as of 1/19/2021: **66,638**

Arkansas Department of Health Annual Report FY 2019

Male: 51.5%
Female: 48.5%

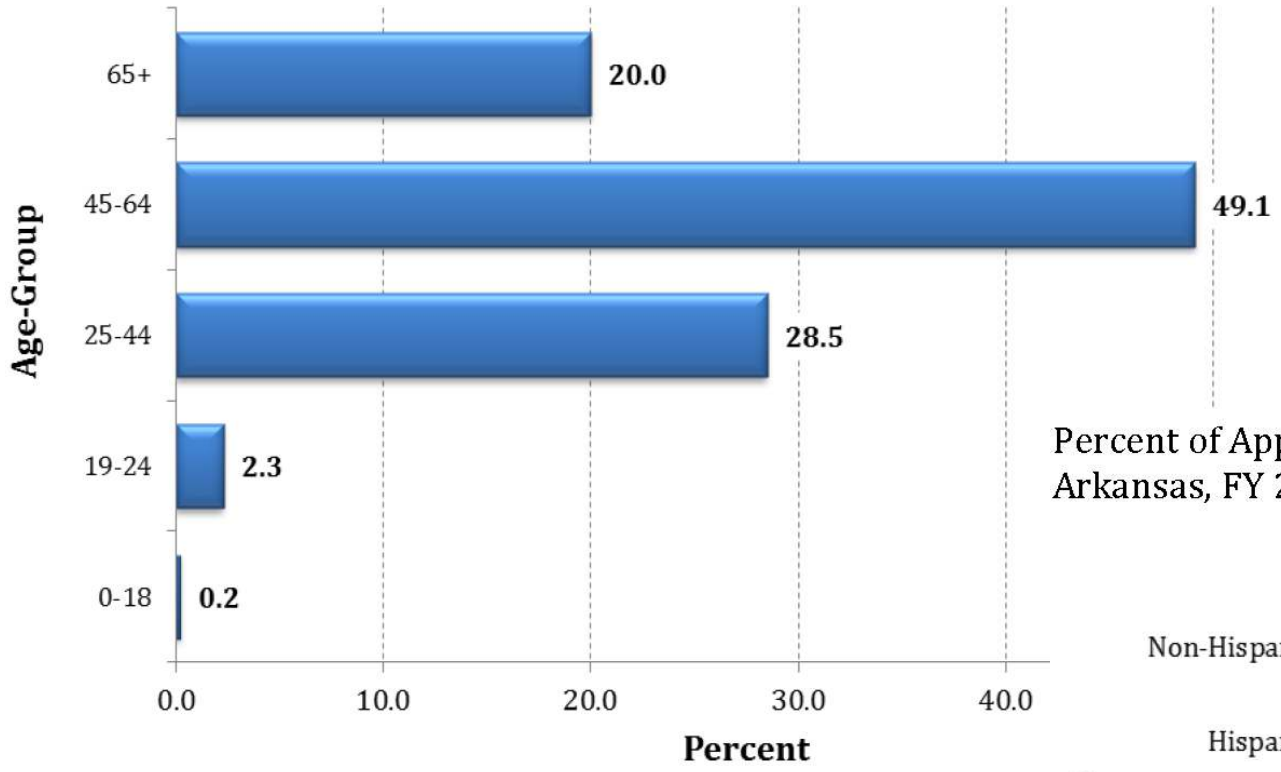
Patients' Qualifying Medical Conditions

Figure 1: Patients' Qualifying Medical Conditions, Arkansas, FY 2019

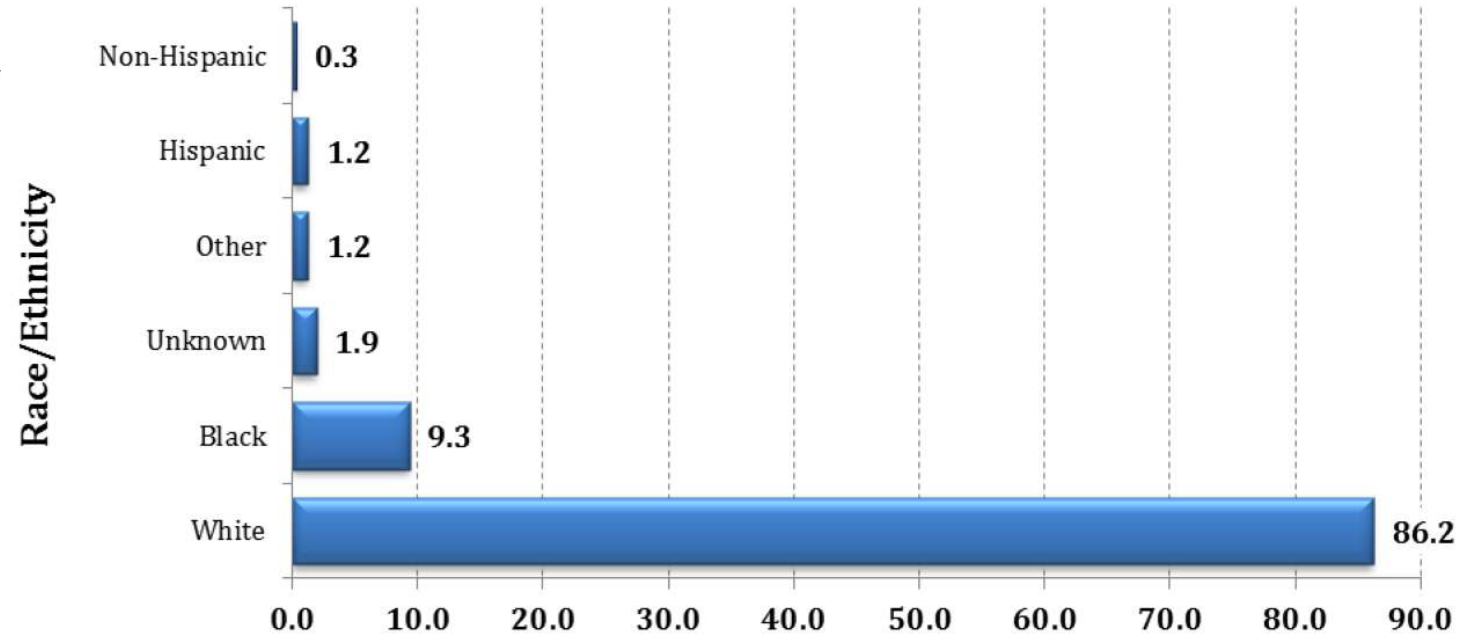


Arkansas Department of Health Annual Report FY 2019

Percent of Approved Patients with Medical Marijuana Registry ID Card by Age-Group, Arkansas, FY 2019



Percent of Approved Patients with Medical Marijuana Registry ID Card by Race/Ethnicity, Arkansas, FY 2019



https://www.healthy.arkansas.gov/images/uploads/publications/FY_2019_MMJ_Report_V.11.7.2019.pdf

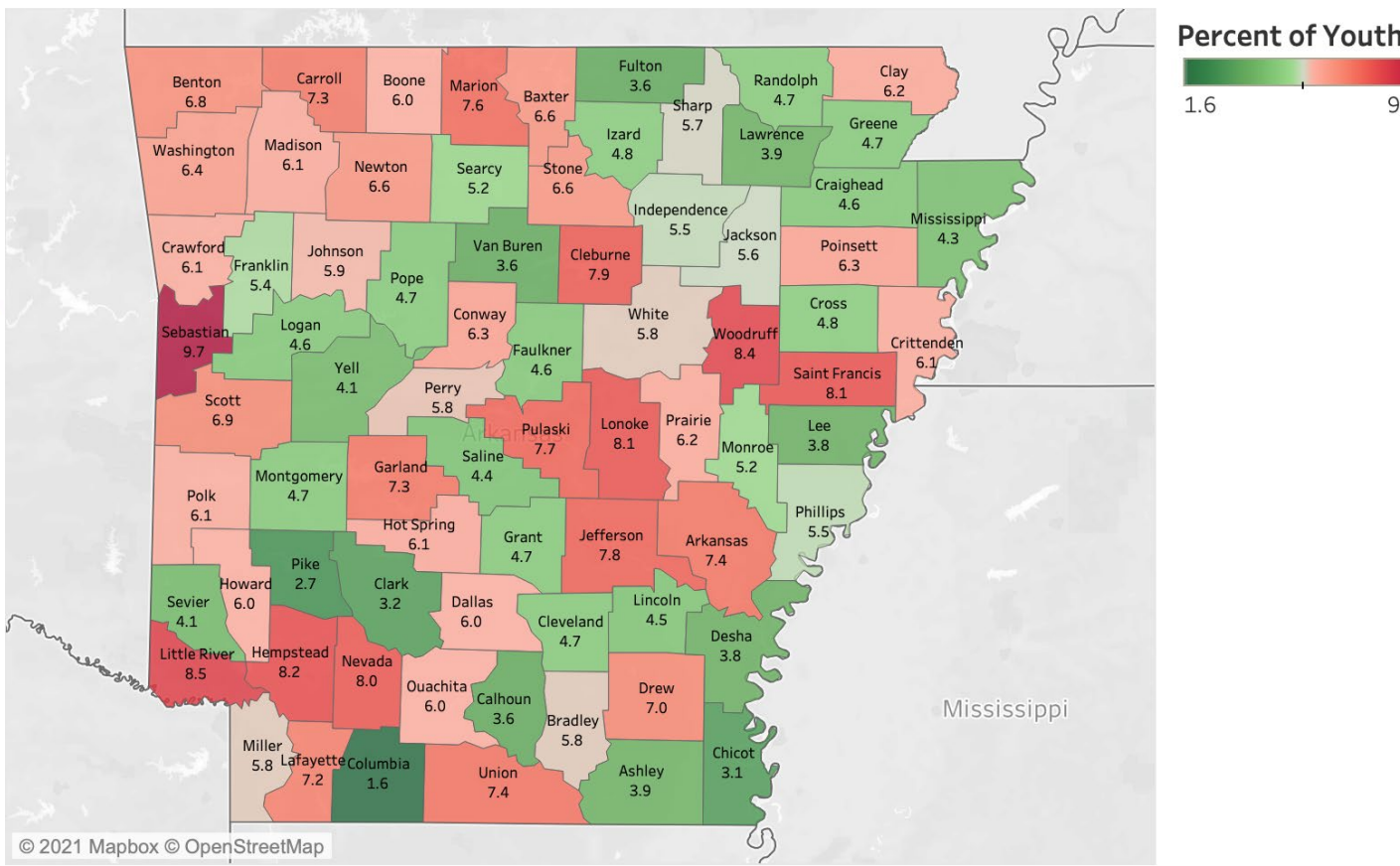
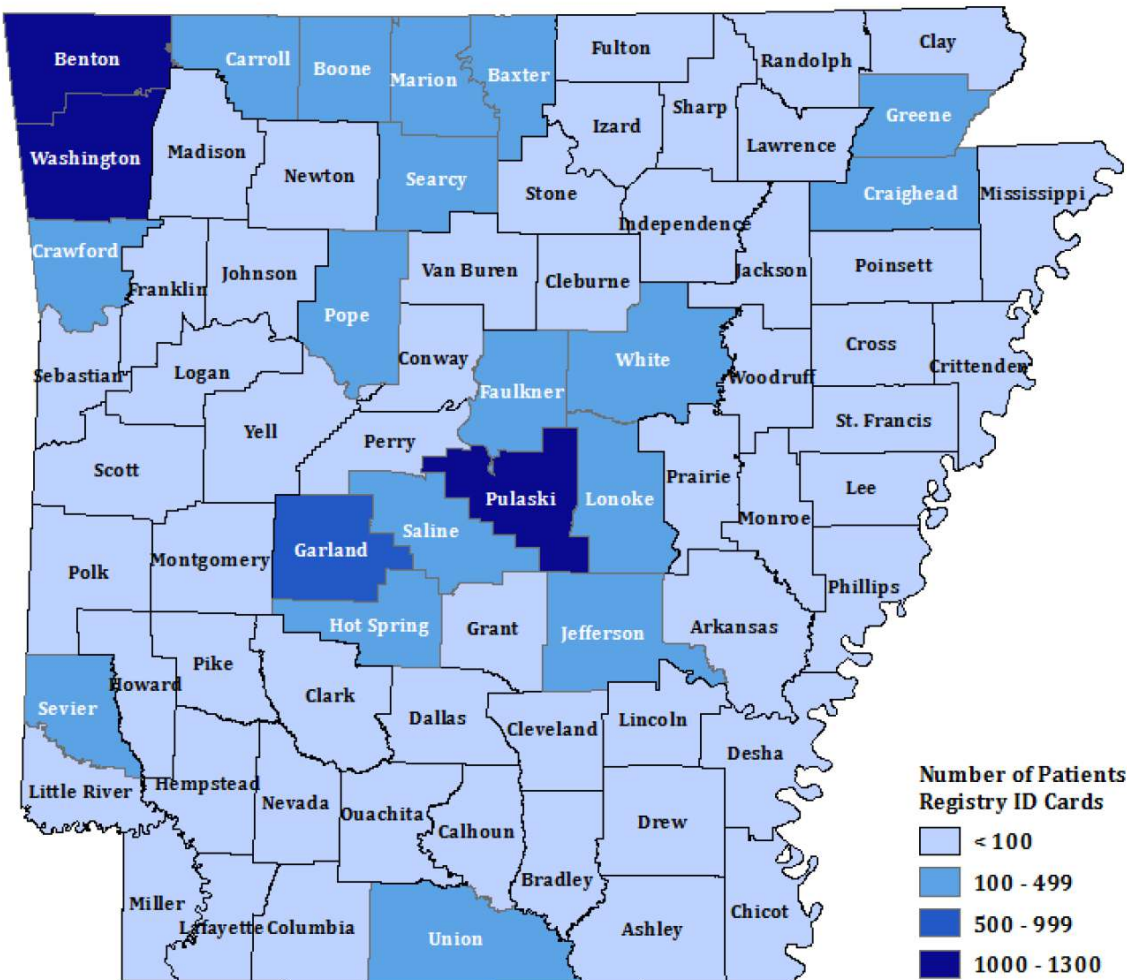


Arkansas Department of Health Annual Report FY 2019

Number of Approved Patients with Medical Marijuana Registry ID Card by County, Arkansas, FY 2019

2019 APNA Survey Data

Past 30-Day Marijuana Use



https://www.healthy.arkansas.gov/images/uploads/publications/FY_2019_MMJ_Report_V.11.7.2019.pdf



The South Dakota Department of Social Services, Division of Behavioral Health is seeking information about policies and prevention strategies related to marijuana legalization.

- **Does your state have an identified list and/or resource of best practices/policies related to marijuana use for your prevention providers/coalitions?** If yes, please provide additional information.
- **Has your state legalized medical marijuana or the retail sale of marijuana or both?**
 - If yes, **what policies at the state and/or local levels have been put in place to reduce youth access to marijuana?** For example: dispensary density, funding allocation for prevention programming, etc.
 - **If no, what prevention/educational efforts have you been conducting in your state on marijuana,** with the growing changes nationally and/or potential upcoming legislation to legalize marijuana use?

Does your state have an identified list and/or resource of best practices/policies related to marijuana use for your prevention providers/coalitions?

We have identified several resources to inform prevention efforts for youth:

- **MJ use Risk Factors:** <https://mnprc.org/wp-content/uploads/2019/01/preventing-youth-marijuana-use-factors-2017.pdf>
- **Evidence/Research-Based MJ Prevention Strategies for youth:**
 - McDowell Group. Youth Marijuana Prevention Strategies. Prepared for Thrive Mat-Su, June 2018: <https://www.mcdowellgroup.net/portfolio-posts/youth-marijuana-prevention-strategies/>
 - Preventing Youth Marijuana Use: Programs and Strategies. Developed under the Substance Abuse and Mental Health Services Administration's Center for the Application of Prevention Technologies task order. Reference #HHSS283201200024I/HHSS28342002T. Updated October 2017.

Does your state have an identified list and/or resource of best practices/policies related to marijuana use for your prevention providers/coalitions?

We have identified several resources to inform prevention efforts for young adults/college students:

- **Evidence/Research-Based MJ Prevention Strategies for young adults:**
 - Drug Enforcement Administration. (2020). Prevention with purpose: A strategic planning guide for preventing drug misuse among college students. Arlington, VA.
 - SAMHSA: Substance Misuse Prevention for Young Adults. Publication No. PEP19-PL-Guide-1 Rockville, MD: National Mental Health and Substance Use Policy Laboratory. Substance Abuse and Mental Health Services Administration, 2019.
 - https://www.naspa.org/images/uploads/events/Higher_Education_Cannabis_Toolkit.pdf

Medical Marijuana Informational Brochure: Providers

MEDICAL MARIJUANA WHAT ARKANSAS PHYSICIANS NEED TO KNOW



CANNABIS PLANT TYPES



- **THC**: Main psychoactive compound in marijuana that binds with cannabinoid 1 (CB1) receptors in the brain to produce high or sense of euphoria
- **CBD**: Non-psychoactive compound (with a molecular structure almost identical to THC) in marijuana that primarily binds with cannabinoid 2 (CB2) receptors

FDA-approved drugs that contain individual cannabinoids
Epidiolex: Purified form of cannabis-derived CBD approved to treat seizures associated with rare and severe forms

Marijuana: Plant products, primarily from Cannabis Sativa and/or Cannabis Indica, that contain large amounts of tetrahydrocannabinol (THC)

Industrial Hemp: Cannabis plants that contain minimal (<0.3%) THC; not considered "marijuana"

Medical Marijuana: Unprocessed marijuana plant or basic extracts (non-pharmaceutical grade) used to treat symptoms of illness and other conditions

US Food and Drug Administration (FDA) Stance on Medical Marijuana

Cannabis has not been approved by the FDA for any medical use

- Products containing THC or CBD cannot be sold legally as dietary supplements
- Whether or not medical cannabis or cannabinoids can be sold legally within a state depends on state-specific laws and regulations



Limited Evidence

- Loss of appetite/weight (HIV/AIDS)
- Symptoms of Tourette Syndrome
- Anxiety (social anxiety disorder)
- PTSD symptoms
- Glioma (early stage)

Insufficient Evidence

- Cancer
- Irritable Bowel Syndrome (IBS)
- Epilepsy (in adults)
- Amyotrophic Lateral Sclerosis (ALS)
- Motor system symptoms (Parkinson's Disease)
- Immune status (healthy HIV-HIV)

To date, an insufficient number of large-scale clinical trials have been conducted to determine whether or not the health and mental health benefits of medical marijuana (THC or CBD) outweigh its risks.

Severe or life-threatening symptoms

- Glaucoma (later stage)

Insufficient Evidence

- All-Cause Mortality
- Occupational Accidents
- Death by Overdose
- Asthma
- Myocardial infarction
- Stroke
- Peripheral Vascular Disease

Physician Certification of Qualifying Conditions in Arkansas

Concerns Requiring Further Research

Products
 Products that contain THC lead to serious lung injuries

When to Consider/Discuss Patient Use of Medical Marijuana

Physicians need to weigh the benefits versus risks associated with medical

Arkansas Medical Marijuana Act (AMMA)

- Passed on November 3, 2016
- Allows qualifying patients to purchase and use medical marijuana (**2.5 ounces (71 grams)**) from a licensed

Special Considerations for Children and Adolescents

Effects during and after pregnancy

- Low birth weight
- Increased risk of preterm birth
- Rich and behavioral problems in infants
- Attention, memory, and problem solving issues in children
- THC in breast milk may affect an infant's developing brain

Prolonged effects on child and adolescent brain development

- Childhood and adolescent marijuana use may:
 - Impair thinking, memory, and learning functions
 - Affect how the brain builds connections between the areas necessary for these functions
- People who begin using marijuana before age 18 are 4-7 times more likely than adults to develop a marijuana use disorder
- The short- and long-term effects of marijuana use are unknown

Increased risk for mental health problems among adolescents

- Depression
- Anxiety
- Suicidal thoughts

Increased risk for overdose

- Due to unintentional consumption of cannabis or its products

References

Journal of the American Medical Association
 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4811111/

Arkansas Medical Marijuana Resources & References

Arkansas Medical Marijuana Commission:
arkansas.gov

Arkansas Program, Arkansas Department of Health:
www.arkansas.gov/programs-services/medical-marijuana

Arkansas, Alcohol Beverage Control, Arkansas Department of Health:
www.arkansas.gov/alcohol-control/abc-med-cal-marijuana

Substance Abuse and Mental Health Services Administration:
www.samhsa.gov
1-888-644-6226
 If you are hard-of-hearing: **66-464-3615**
[cih.nih.gov](http://www.cih.nih.gov)
[nccih.nih.gov](http://www.nccih.nih.gov)

NIH Clinical Guidelines:
www.ncbi.nlm.nih.gov

NIH Clinical Guidelines:
 Do not offer any form of medical marijuana or other cannabis-derived products for medical purposes unless the physician is qualified to prescribe and monitor the use of such products. Do not offer any form of medical marijuana or other cannabis-derived products for medical purposes unless the physician is qualified to prescribe and monitor the use of such products.

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Brochures for adults, teens and children are forthcoming.



Discussion

What precisely should be monitored?

What projects would be beneficial?

What workgroups should be formed?

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Opioid Crisis Updates



How is Arkansas Faring?

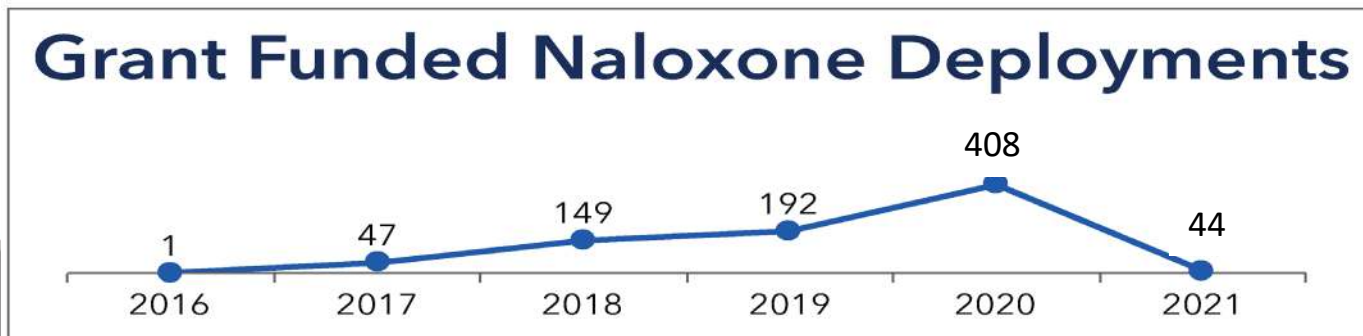
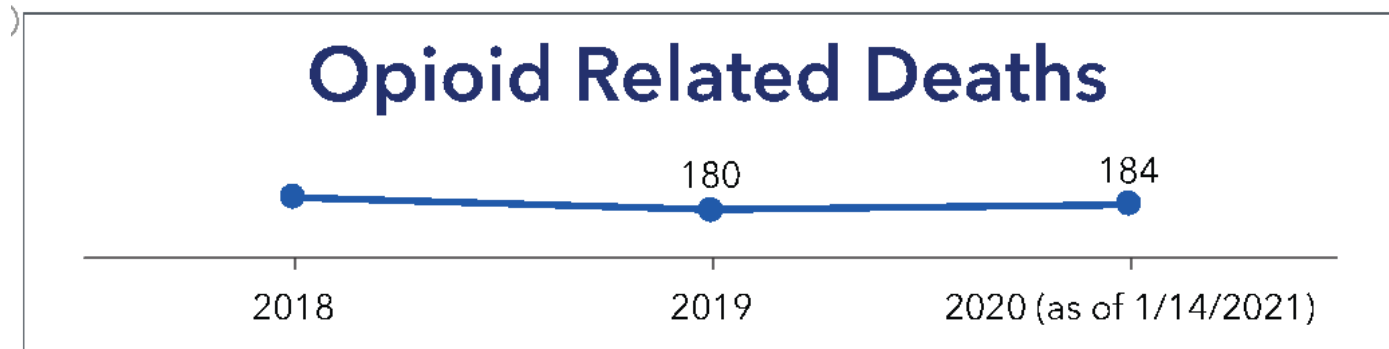
Good News

- % of AR adolescents reporting nonmedical use of pain relievers slowly but steadily declining over the last 5 years or so
- Lifetime and current usage of heroin among Arkansas youth has remained relatively stable since 2011
- Drug overdose mortality rate in Arkansas slightly lower than the national rate since 2012
- The 14th National Drug Take Back Event in AR in October of 2017 collected record-setting 14 tons of old or expired PDs

How is Arkansas faring?

Not so Good News

- In 2018, drug overdose deaths (322) surpassed homicides (285) for the first time



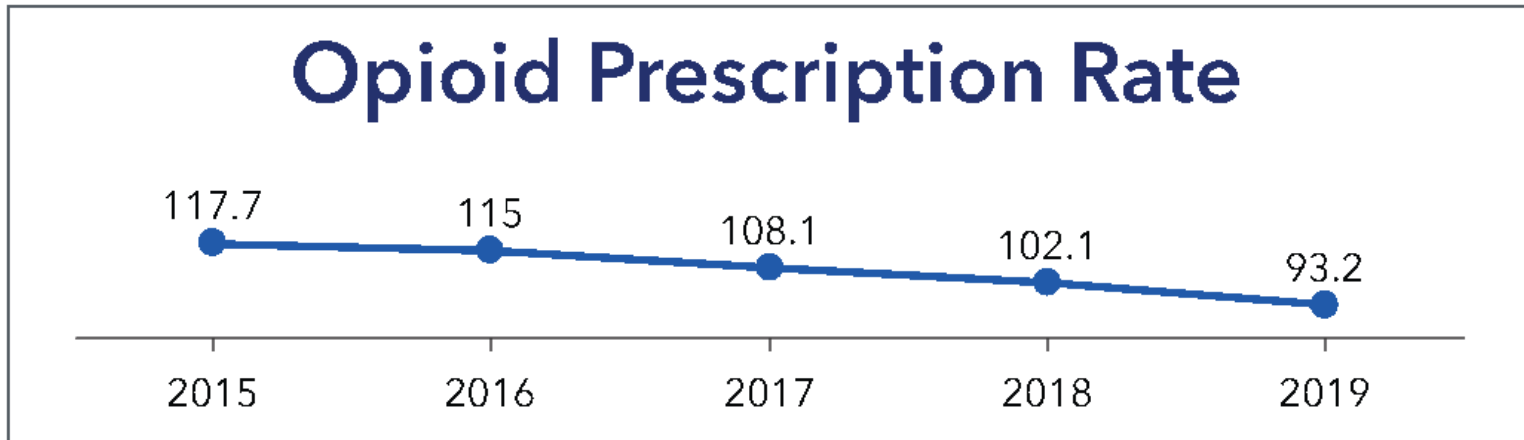
810 Grant Funded
Naloxone Saves



How is Arkansas faring?

Not so Good News

- Although prescribing rates have been decreasing, Arkansas is still ranked 2nd in the US for annual rate of opioid prescriptions dispensed by retail pharmacies
 - Since 2000, there has been > 10-fold increase in number of neonatal opioid withdrawal syndrome cases



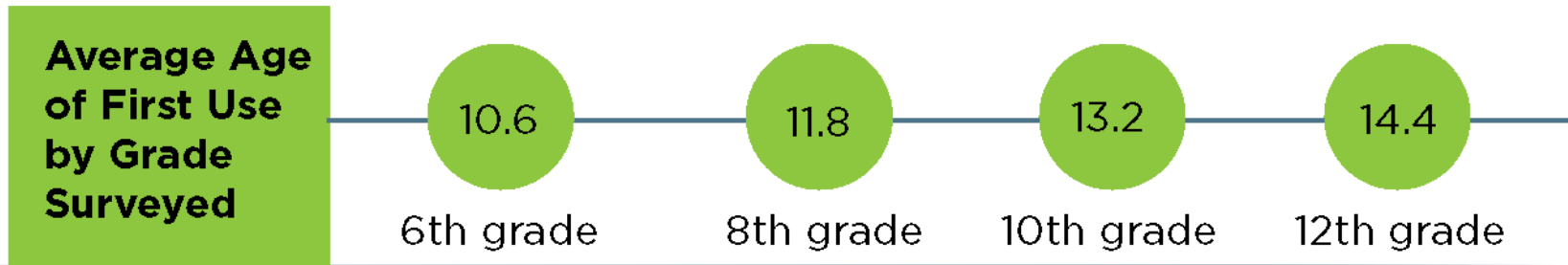
Arkansas Opioid Response Dashboard. Retrieved on 1/22/21 from <https://afmc-analytics.maps.arcgis.com/apps/MapSeries/index.html?appid=2977d338de974451af5ce8ff24d2a30c>




How is Arkansas faring?

Not so Good News

- Current Rx use increasing among AR 6th grade students and remaining stable among AR 8th grade students



Current Prescription Drug Misuse



	6th grade	8th grade	10th grade	12th grade
2014	0.9%	2.5%	5.1%	6.4%
2015	1.1%	2.3%	4.8%	5.8%
2016	1.1%	2.4%	4.0%	5.2%
2017	1.4%	2.7%	4.1%	4.3%
2018	1.3%	2.7%	3.3%	3.2%
2019	1.6%	2.4%	2.8%	2.8%

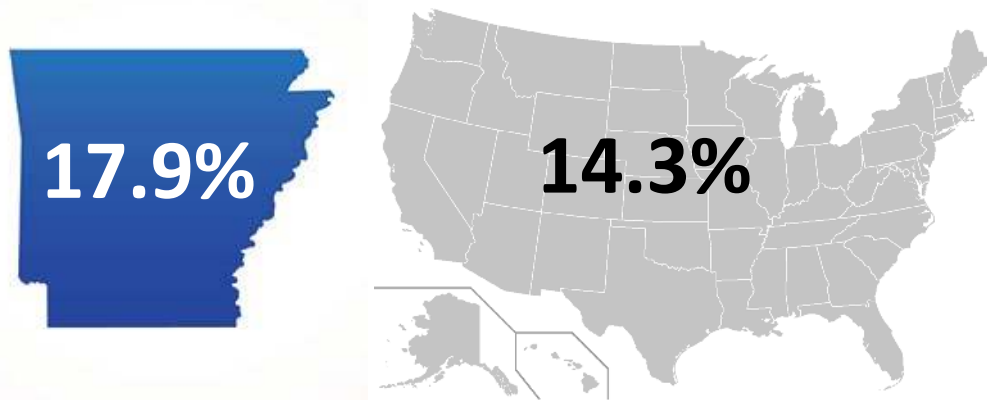


Source: APN.

How is Arkansas faring?

Not so Good News

- Higher lifetime PO misuse among AR high school students when compared to national average



Not so Good News

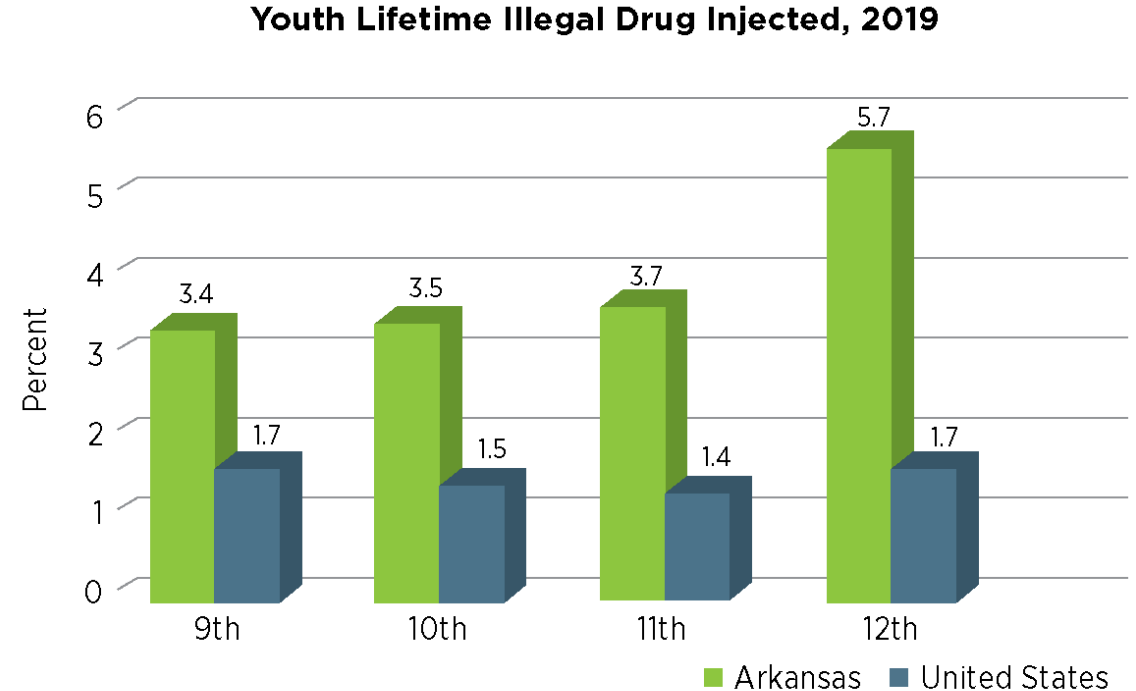
- Higher lifetime heroin use among AR high school students when compared to national average
- AR HS students ranked 5th in the US for lifetime heroin use



How is Arkansas faring?

Not so Good News

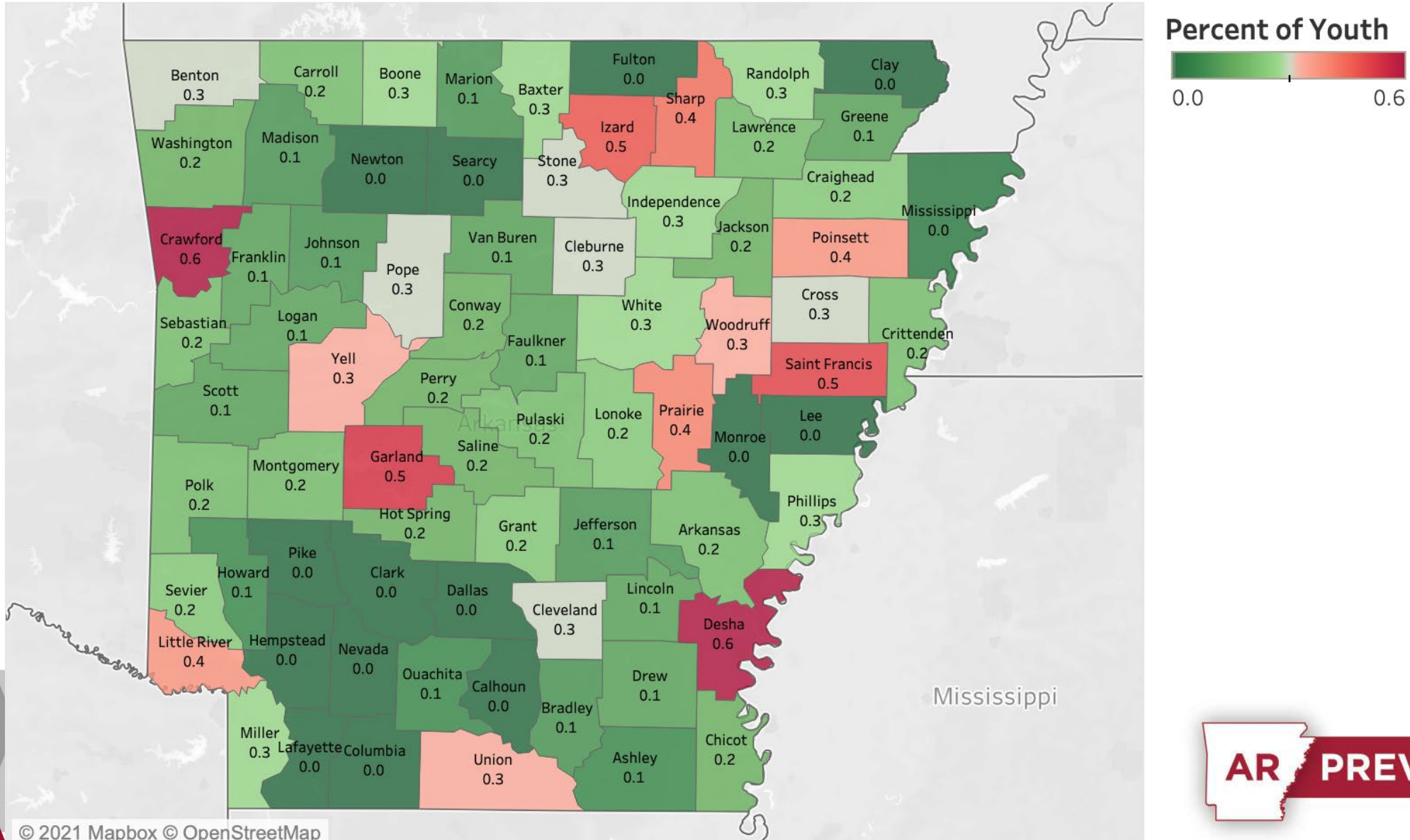
- Lifetime injection drug use nearly 3 times higher among AR high school students
- Proportion of AR 12th graders reporting injection drug use jumped from 3.7% in 2018 to 5.7% in 2019, while that for US students has remained stable



Source: Youth Risk Behavior Surveillance System, 2019

How is Arkansas faring?

Past 30-Day Heroin Use

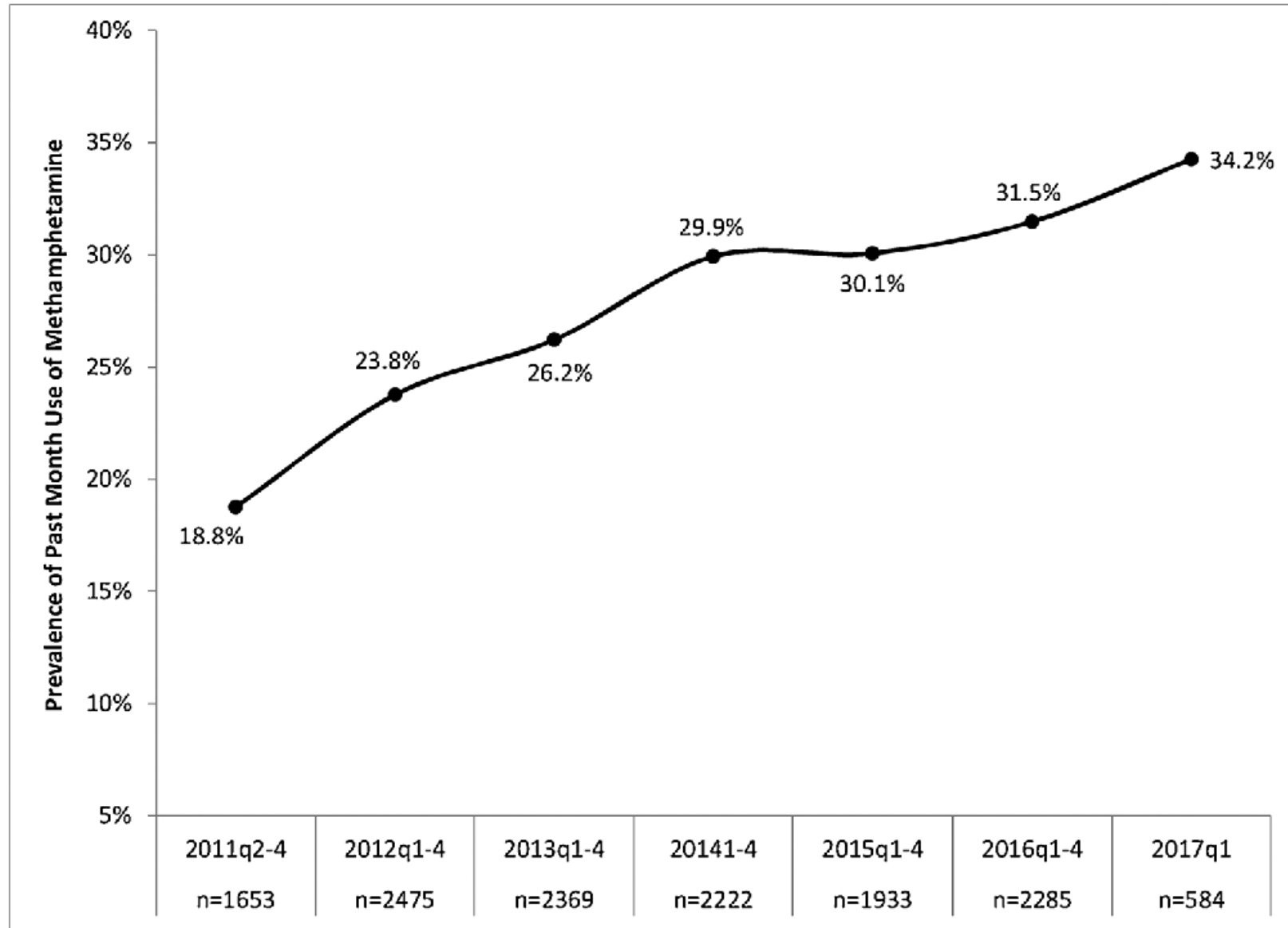


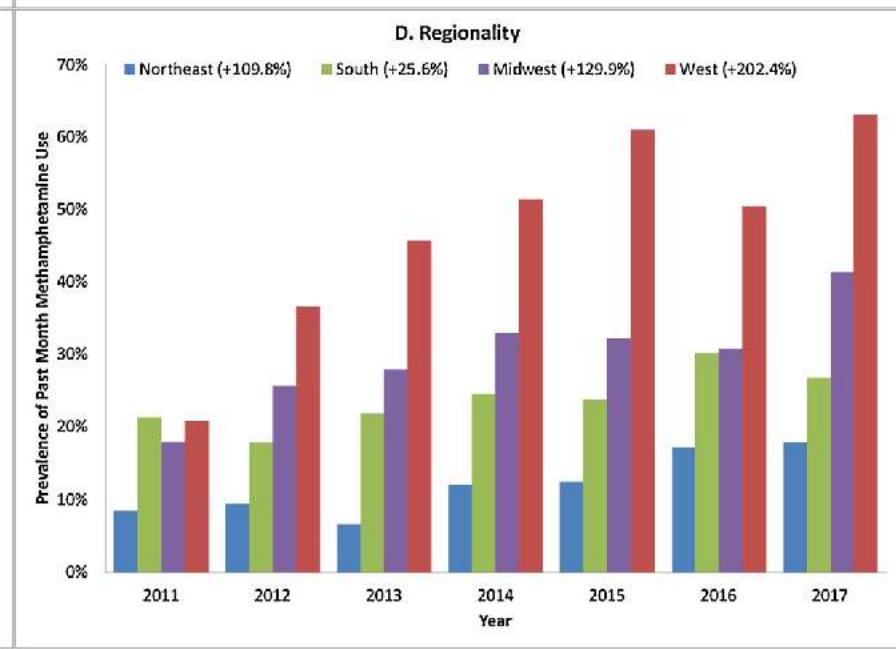
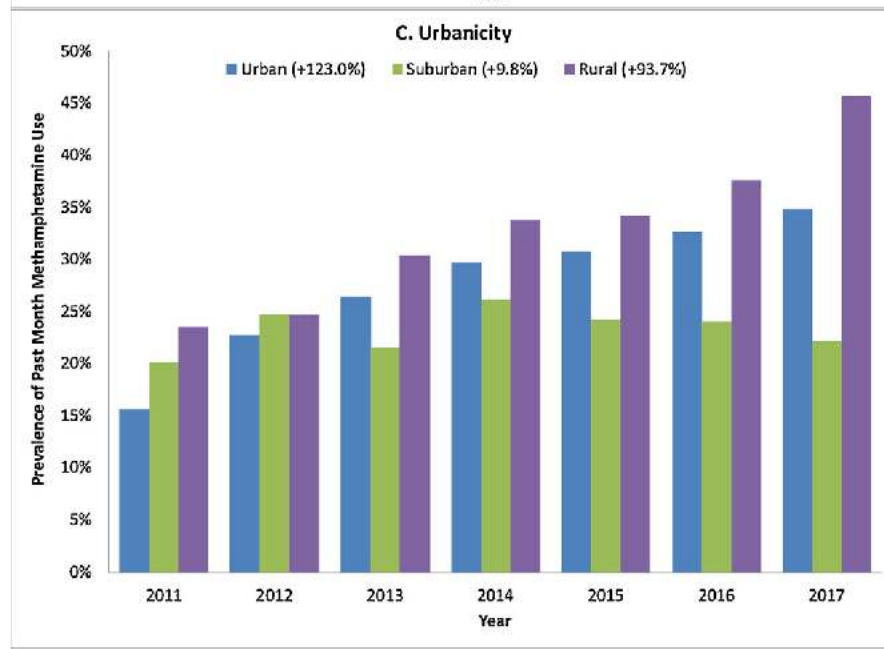
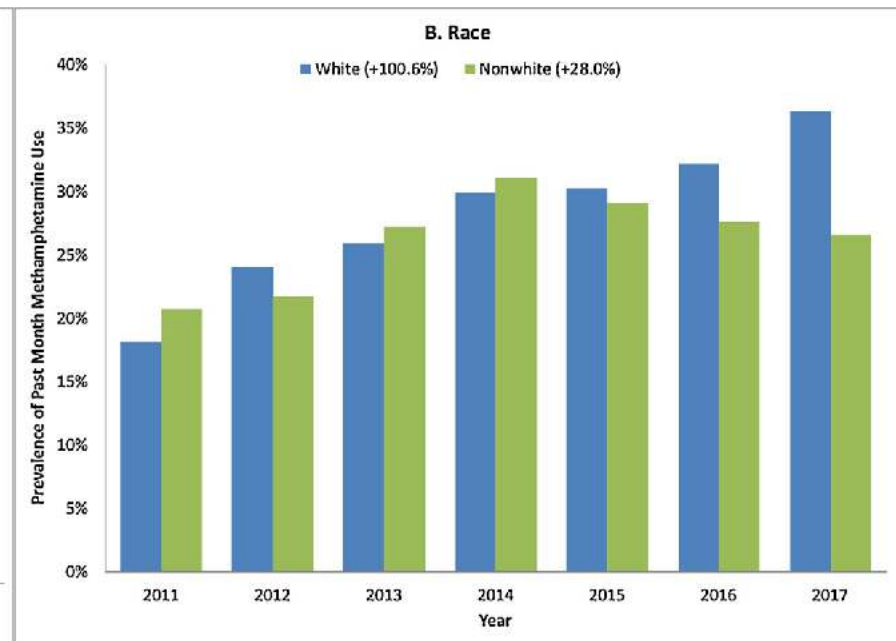
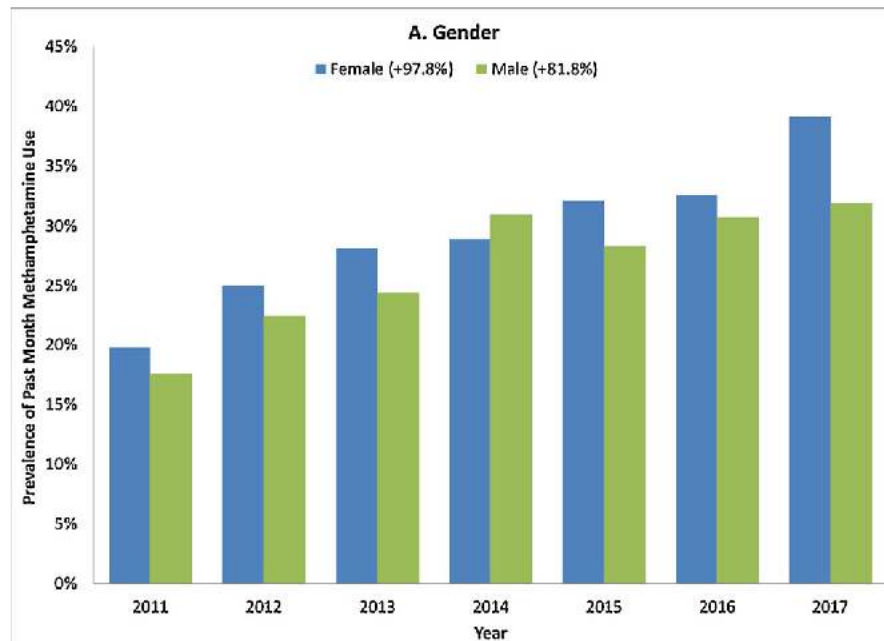
Dual Methamphetamine-Opioid Use Trends

Ellis MS, Kasper ZA, Cicero TJ. Twin epidemics: The surging rise of methamphetamine use in chronic opioid users. *Drug Alc Depend.* 2018 Dec 1;193:14-20.

• OUD patients (N=13,521) entering drug treatment programs across the United States completed an anonymous survey of drug use patterns from 2011 to 2017

- Recent Meth use almost doubled from 2011 to 2017





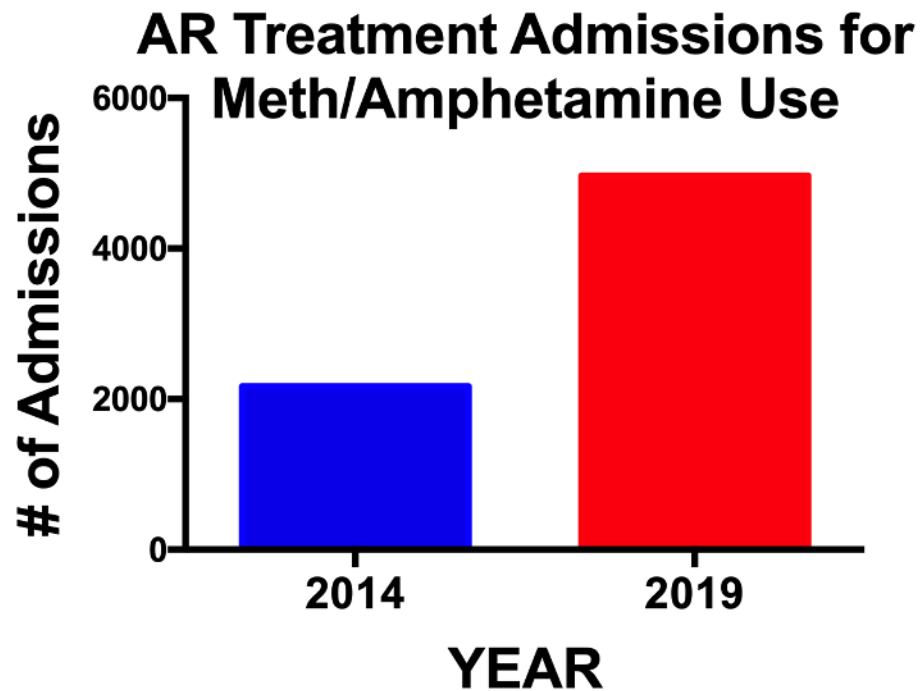
Meth use ↑ among:

- males & females
- whites
- urban and rural residents

Meth use ↑ the most in the Western region, which had the highest prevalence rate in 2017 (63.0%).

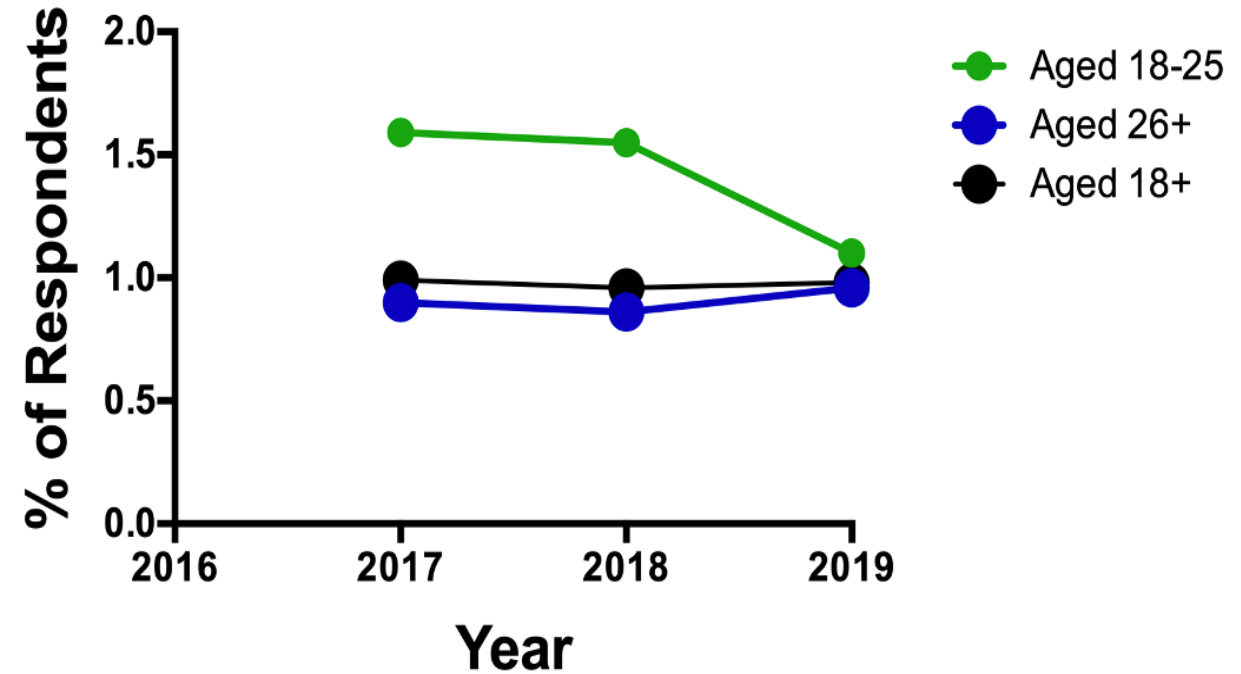
Why important?

- Significant ↑ in overdose deaths for psychostimulants (i.e., meth) in US
- US treatment admissions for methamphetamine ↑ since 2011



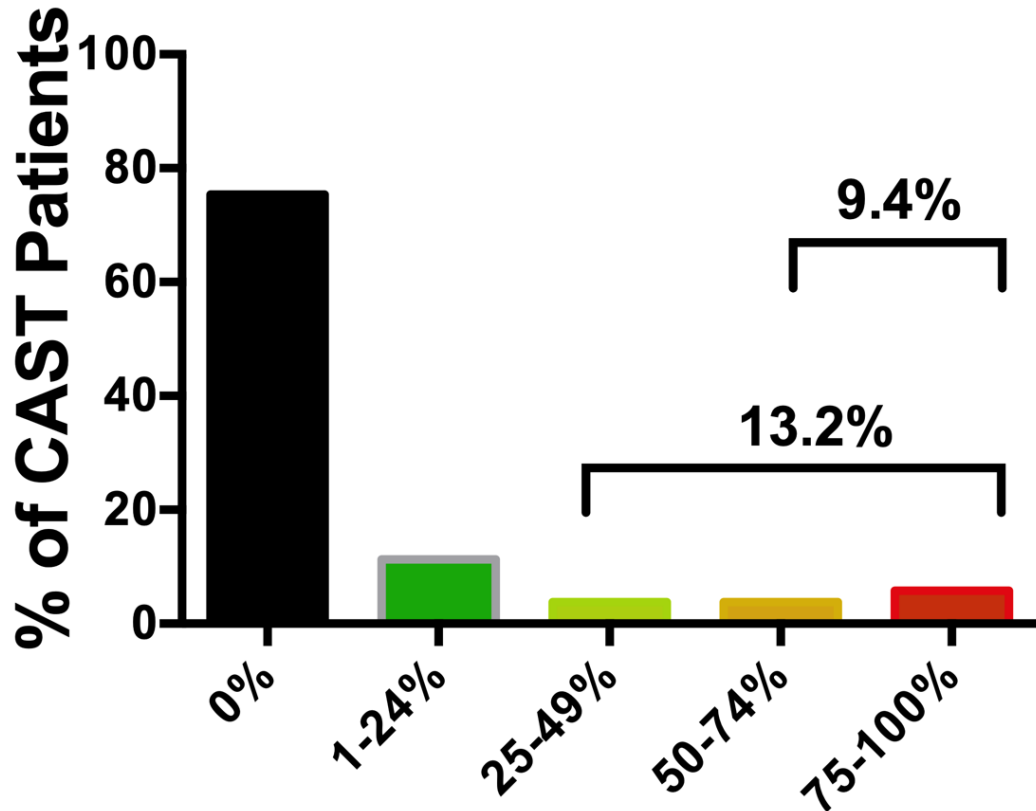
Arkansas NSDUH Results

Past Year Meth Use



Why important?

Meth/Amphetamine-Positive Urines



First 6-months of urine toxicology results for 53 OUD patients admitted to the CAST Suboxone Program during 2018.

- Dual use associated with poorer OUD treatment outcomes
- OUD treatment programs may be ill equipped to treat meth use disorder

% Positive During First 6 Months

Summary

- Although AR has made some gains in addressing opioid crisis, this work must continue
- Need to monitor/address heroin use and IDU among AR HS students in addition to PO misuse among middle schoolers
- Need to understand meth use trends alone and in conjunction with opioid use

Discussion

- Is there a way to monitor fentanyl use as well as fentanyl overdose deaths?
- How do we monitor IDU-related harms?
- How do we obtain primary, secondary and tertiary drugs of abuse among those entering treatment in order to monitor trends in dual use?
- ??

Alcohol Home Delivery Update



APNA Survey Questions Discussion

Arkansas State Epidemiological Outcomes Workgroup
Annual Profile of Substance Use



Companion
Guide in
production

Action Plan/Wrap-Up/Next Meeting





We CAN make a difference!

Thank you!

