Statewide Epidemiological Outcomes Workgroup

Quarterly Meeting
08/05/2020

UAMS
University of Arkansas for Medical Sciences

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Preliminary APNA Survey Data Models

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Preliminary APNA Survey Data Models

Statistical analyses
- Outcome variables analyzed:
  - Lifetime and past 30 days alcohol use and past 30 days binge drinking
  - Lifetime and past 30 days marijuana use
  - Lifetime and past 30 days cigarette use and lifetime e-Cig use
  - Lifetime and past 30 days smokeless tobacco use
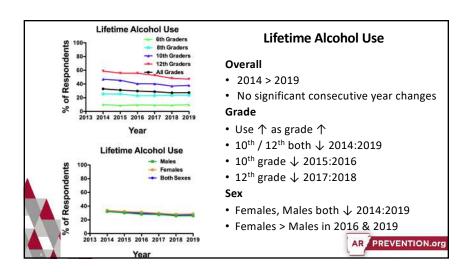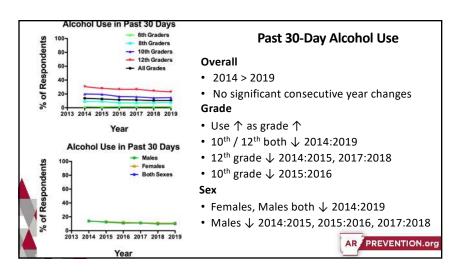- Rates of use were calculated for each county overall and by gender and grade level within each county

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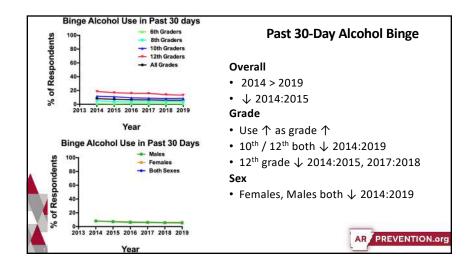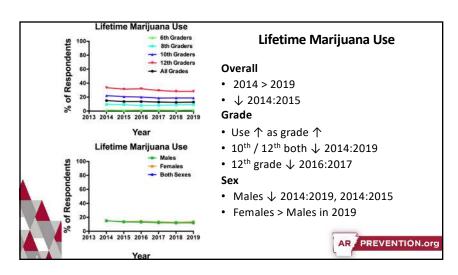**Statistical Analyses**
- Repeated Measures Mixed effects models estimated overall annual means and means by gender and grade level
- Differences between genders, consecutive grades, consecutive years, and 2014 vs. 2019 were estimated and tested for significance
- P-values were adjusted by the False Discovery Rate(FDR) procedure
- Significant changes reported when FDR p-value < 0.05

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Lifetime Alcohol Use

Overall
- 2014 > 2019
- No significant consecutive year changes

Grade
- Use ↑ as grade ↑
- 10th / 12th both ↓ 2014:2019
- 10th grade ↓ 2015:2016
- 12th grade ↓ 2017:2018

Sex
- Females, Males both ↓ 2014:2019
- Females > Males in 2016 & 2019

Past 30-Day Alcohol Use

Overall
- 2014 > 2019
- No significant consecutive year changes

Grade
- Use ↑ as grade ↑
- 10th / 12th both ↓ 2014:2019
- 12th grade ↓ 2014:2015, 2017:2018
- 10th grade ↓ 2015:2016

Sex
- Females, Males both ↓ 2014:2019
- Males ↓ 2014:2015, 2015:2016, 2017:2018

Past 30-Day Alcohol Binge

Overall
- 2014 > 2019
- ↓ 2014:2015

Grade
- Use ↑ as grade ↑
- 10th / 12th both ↓ 2014:2019
- 12th grade ↓ 2014:2015, 2017:2018

Sex
- Females, Males both ↓ 2014:2019

Lifetime Marijuana Use

Overall
- 2014 > 2019
- ↓ 2014:2015

Grade
- Use ↑ as grade ↑
- 10th / 12th both ↓ 2014:2019
- 12th grade ↓ 2016:2017

Sex
- Males ↓ 2014:2019, 2014:2015
- Females > Males in 2019

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30-Day Marijuana Use

Overall
- 2014 > 2019
- ↓ 2014:2015

Grade
- Use ↑ as grade ↑
- 10th grade ↓ 2014:2019

Sex
- Males ↓ 2014:2019, 2014:2015
- Females < Males in 2014

Lifetime Cigarette Use

Overall
- 2014 > 2019

Grade
- Use ↑ as grade ↑
- 8th, 10th, 12th grades ↓ 2014:2019
- 10th ↓ 2015:2016
- 12th ↓ 2017:2018, 2018:2019

Sex
- Females & Males ↓ 2014:2019
- Females ↓ 2016:2017

30-Day Cigarette Use

Overall
- 2014 > 2019, ↓ 2014:2015, 2017:2018

Grade
- Use ↑ as grade ↑
- 8th, 10th, 12th grades ↓ 2014:2019
- 10th ↓ 2015:2016
- 12th ↓ 2017:2018, 2018:2019

Sex
- Females & Males ↓ 2014:2019,
- Females < Males in 2014, 2017, 2019
- Females ↓ 2018:2019, Males ↓ 2014:2015, 2017:2016, 2017:2018

Lifetime eCigarette Use

Overall
- 2014 < 2019, ↑ 2016:2017, 2017:2018

Grade
- Use ↑ as grade ↑
- All 4 grades ↑ 2014:2019
- 8th, 10th, 12th ↑ 2016:2017, 2017:2018
- 10th ↓ 2015:2016

Sex
- Females & Males ↑ 2014:2019, 2016:2017, 2017:2018
- Females < Males in 2014-2017
- by 2018 Females 'caught up' to Males

Slide 13

Lifetime Smokeless Tobacco Use

Lifetime Smokeless Tobacco Use — 6th Graders, 8th Graders, 10th Graders, 12th Graders, All Grades; % of Respondents vs Year (2013–2019)

Lifetime Smokeless Tobacco Use — Males, Females, Both Sexes; % of Respondents vs Year (2013–2019)

Overall
- 2014 > 2019

Grade
- Use ↑ as grade ↑
- 8th, 10th 12th, grade ↓ 2014:2019

Sex
- Females < Males every year, from about 15% to about 10%
- Males ↓ 2014:2019
- Females appear steady, the decreasing gender difference is due to males decreasing.

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Slide 14

30-Day Smokeless Tobacco Use

Smokeless Tobacco Use in Past 30 days — 6th Graders, 8th Graders, 10th Graders, 12th Graders, All Grades; % of Respondents vs Year (2013–2019)

Smokeless Tobacco Use in Past 30 days — Males, Females, Both Sexes; % of Respondents vs Year (2013–2019)

Overall
- 2014 > 2019, also ↓ 2017:2018

Grade
- Use ↑ as grade ↑
- 8th, 10th 12th, grade ↓ 2014:2019
- 10th ↓ 2015:2016, 12th ↑ 2016:2017, ↓ 2017:2018

Sex
- Females < Males every year, from about 10% to about 5%
- Males ↓ 2014:2019, 2015:2016, 2017:2018
- Similar story
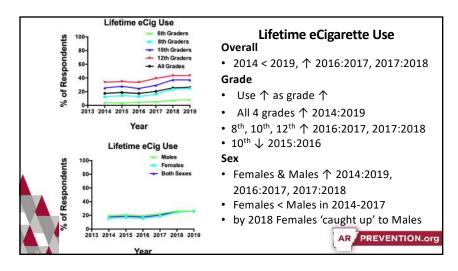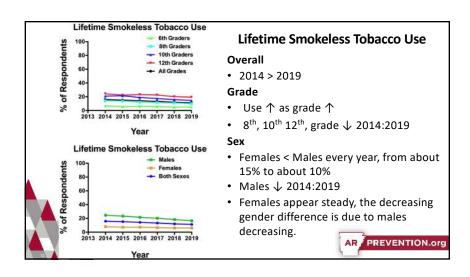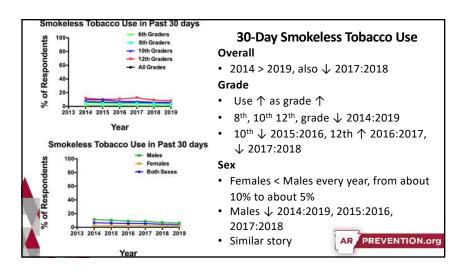
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Summary
- Virtually every substance used is ↓ 2014:2019: overall, within each grade(except 6th), and within each gender
- *Except* eCigs which are ↑, but the strong ↑ from 2016 to 2018 appears to have slowed in 2019
  - Females were lagging behind males in eCig use, but have 'caught up'
- ↑ grades have consistently ↑ use rates
- Males have ↑ smokeless tobacco use than Females, but male use is ↓ while female use is steady(but low)

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Discussion

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