

# Nicotine

## ADDICTION

# and Intensity OF E-CIGARETTE USE BY ADOLESCENTS

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### { BACKGROUND/PURPOSE }

Research published in Substance Use and Addiction reported findings from the National Youth Tobacco Survey (NYTS). The NYTS is an annual cross-sectional survey administered to a national sample of US students in grades 6-12. Researchers sought to measure the intensity in which youth use e-cigarettes and nicotine addiction. Findings indicated that between 2014 and 2021, days of e-cigarette use per month shifted from infrequent to frequent use. The increase in e-cigarette use intensity suggests more adolescents are developing an addiction to nicotine. The current study sought to replicate the findings with the Mississippi Youth Tobacco Survey (MSYTS).

### { METHODS }

Mississippi has administered the MSYTS since 1998. The purpose of the MSYTS is to provide the state with information on many tobacco-related indicators as well as allow the state to measure progress towards tobacco-related goals and objectives. The MSYTS collects data from youth in grades 6 through 12. A multi-stage sample design was utilized with public high schools selected randomly with probability proportional to enrollment size. Classrooms were selected randomly within the chosen schools and all students in the selected classes were eligible to participate. The anonymous survey was self-administered during one school class period. The current study focused on high school students (i.e., grades 9-12) from 1998 through 2021. Respondents were asked about their past 30-day cigarette use and past 30-day e-cigarette use. Analyses focused on responses that consisted of 1 or more days within the last 30 days.

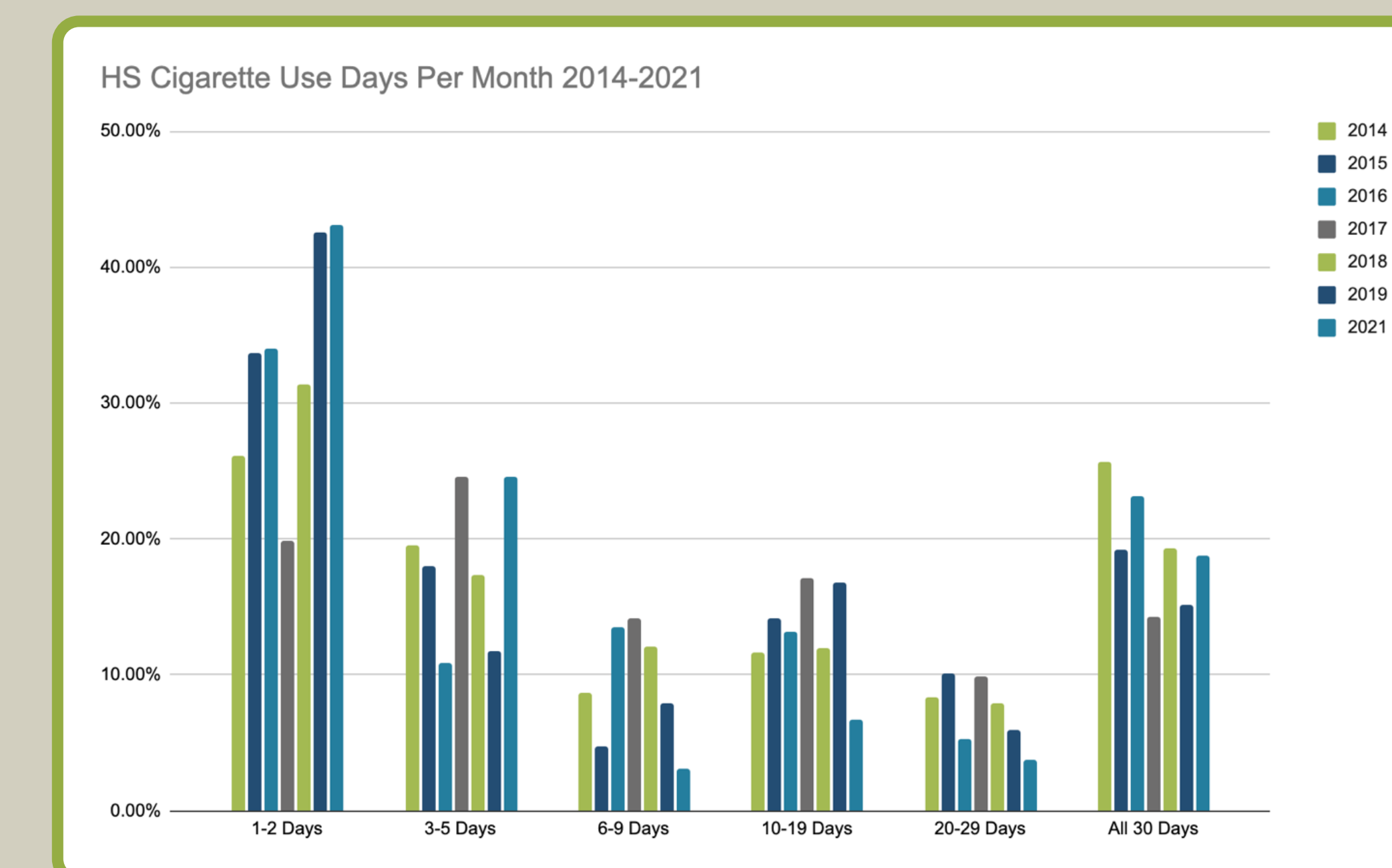
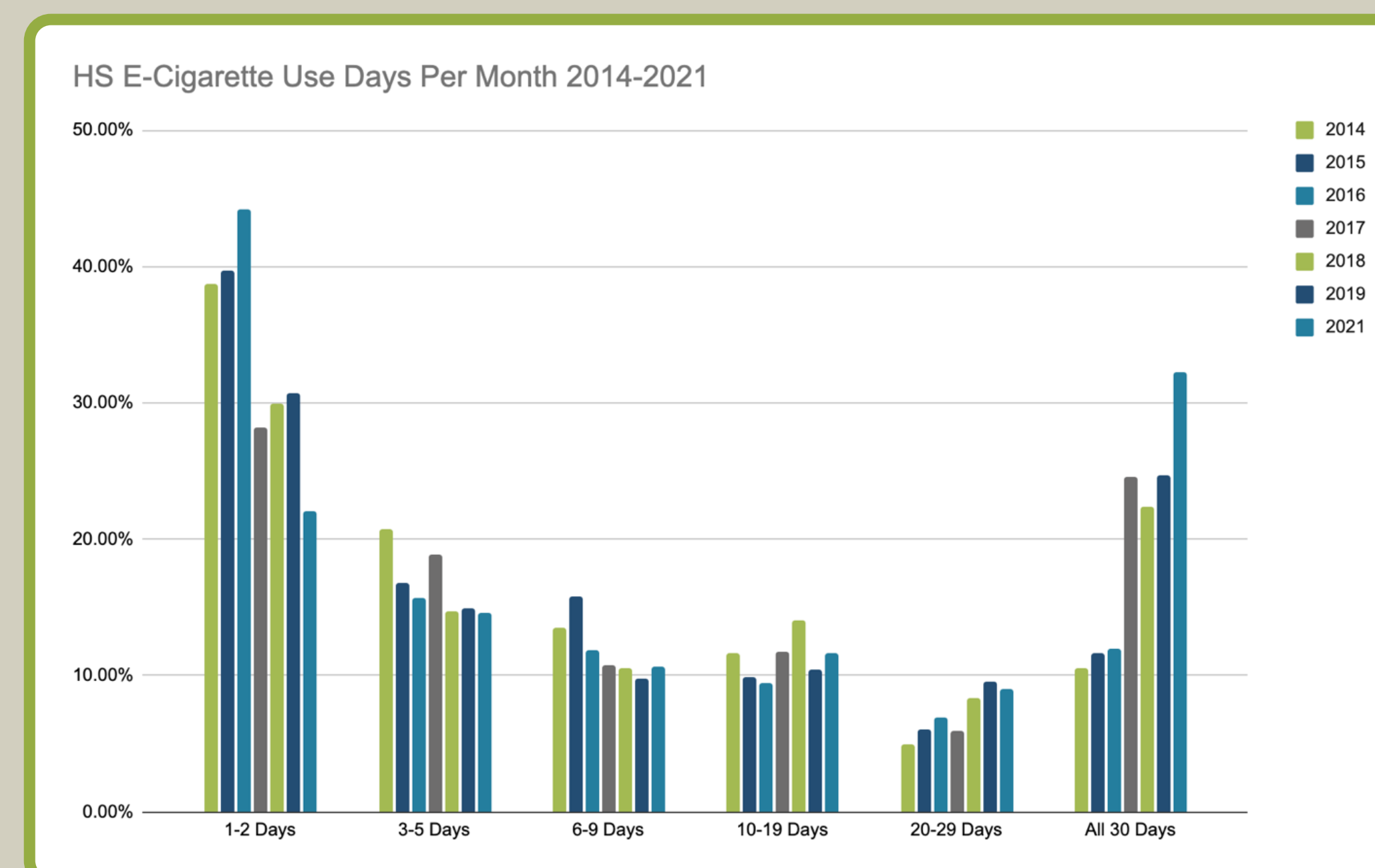
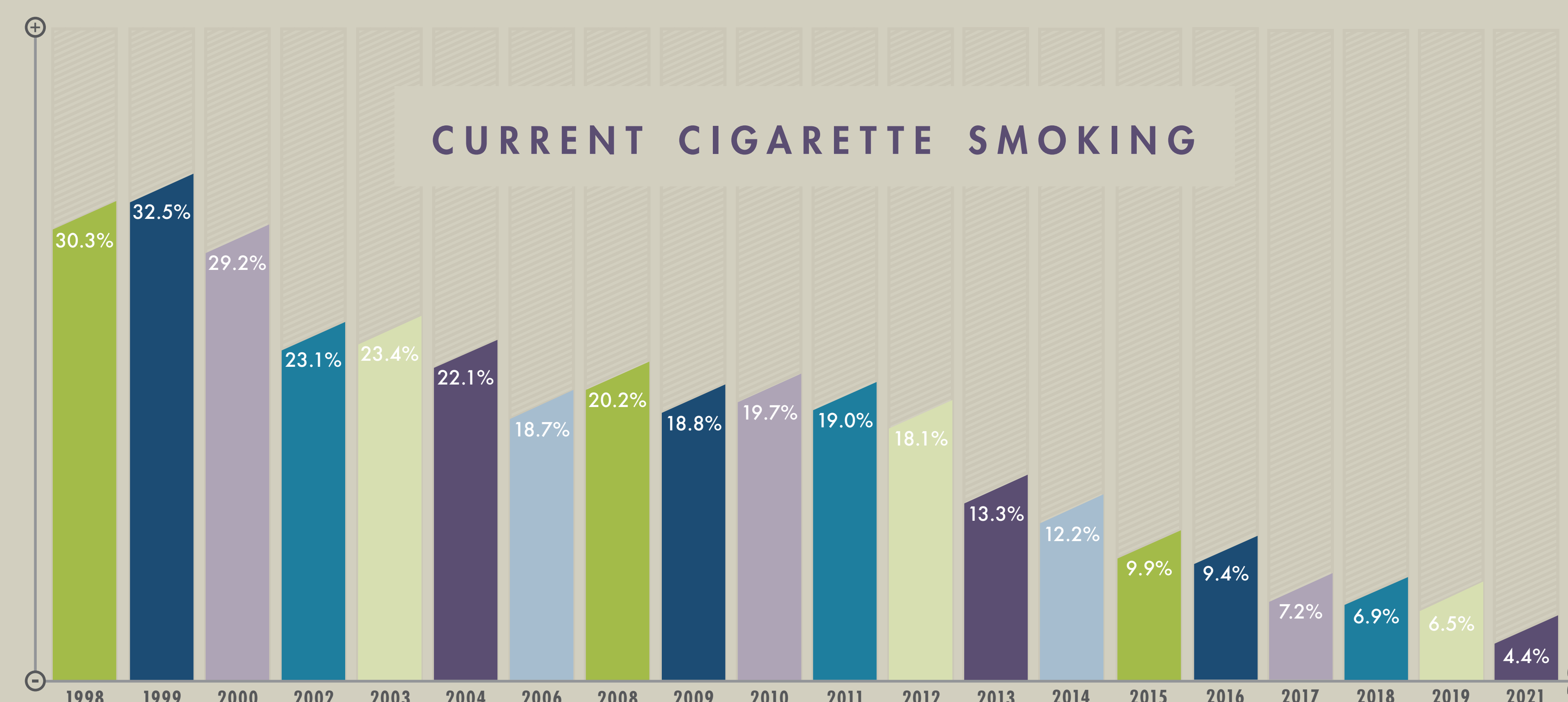
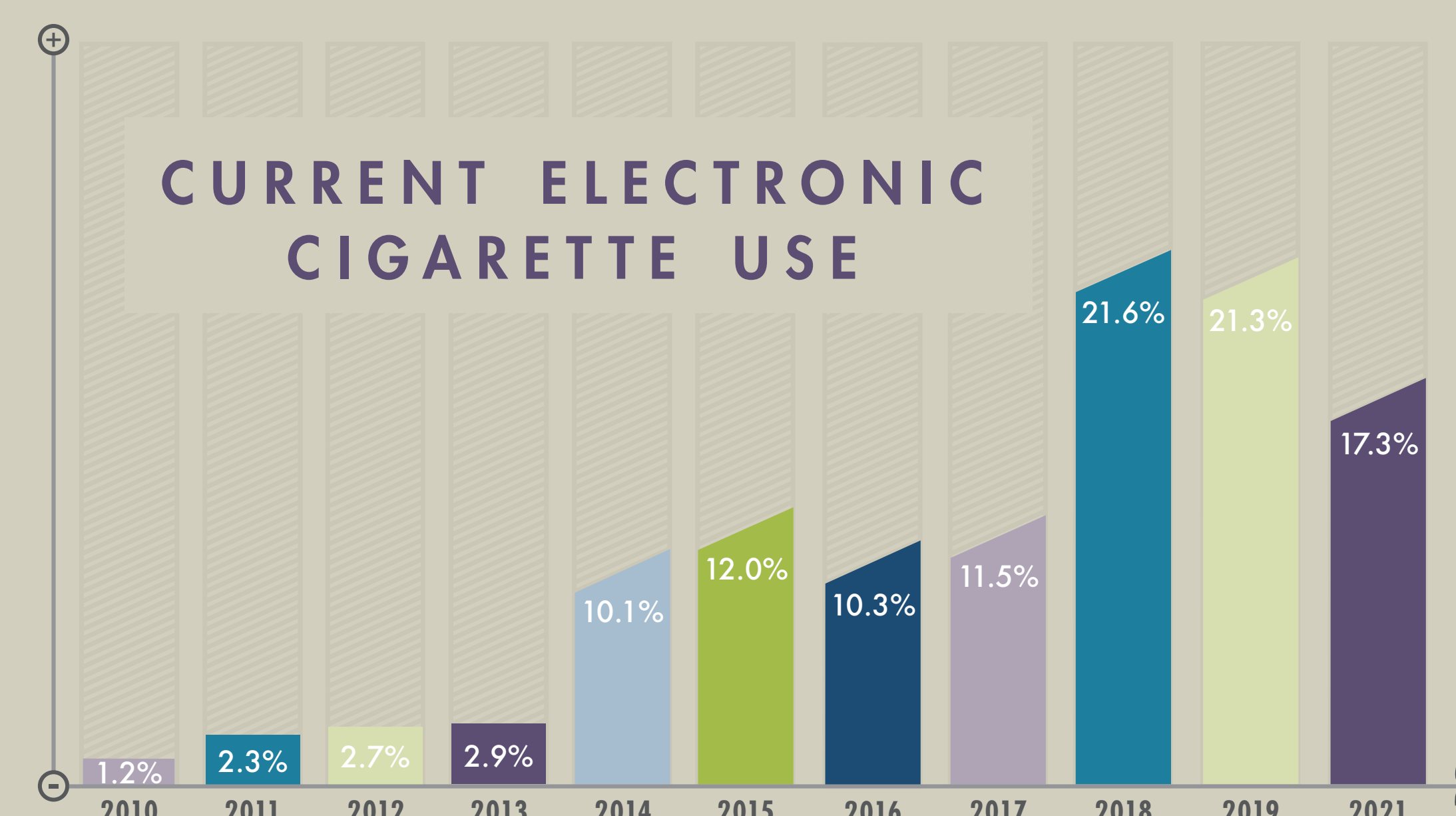
### { RESULTS }

Overall response rates for all years was greater than 60%. Since the implementation of tobacco control programs in 1998, Mississippi has had great success in the reduction of cigarette smoking among high school students. Past 30-day cigarette use decreased from 30.3% in 1998 to 4.4% in 2021. However, past 30-day e-cigarette use increased from 1.2% in 2010 to 21.6% in 2018. Following a sharp increase in use in 2018, the prevalence of past 30-day e-cigarette use appears to have plateaued in 2019 and 2021.

Intensity of e-cigarette use in the past 30 days increased sharply among Mississippi high school students from 2014 to 2021. This shift in e-cigarette use intensity is reflected in median number of days used, which increased from 1 to 2 days per month in 2014 to all 30 days in 2021. Students have more than tripled their use of e-cigarettes on all 30 days from 2014 (10.5%) to 2021 (32.2%). Intensity of use of cigarettes did not change during this time frame.

## Mississippi Public High Schools

“Youth ‘follow the flavors’.”



### { IMPLICATIONS FOR PUBLIC HEALTH }

Increases in frequent e-cigarette use suggests more adolescents are developing an addiction to nicotine. Devices can administer nicotine more quickly and at stronger levels than traditional tobacco products. The influence of flavors increases the appeal among youth. Public health officials should be aware that adolescents need education on nicotine and addiction. Working with school officials to provide a program for students caught vaping could assist in public health efforts. Further, parents and clinicians need additional resources and education on vaping and e-cigarettes to both assist those who are using e-cigarettes and prevent those who could initiate use. Policy measures to eliminate flavored tobacco products would also be beneficial given research shows youth “follow the flavors”.



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