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BRIEF19

A daily review of covid-19 research and policy

RESEARCH BRIEFING

Teen vaping use, already on decline, stayed lower during pandemic. No change in teen tobacco and alcohol use, study finds.

While severe disease and poor outcomes from covid-19 among children and adolescents have remained [rare](#) in kids and teens, the pandemic has not completely spared them. Children and adolescents have suffered from [MIS-C](#), loss of family members and [parents](#), and a disruption of their social and educational lives as a result of school closures that were hoped would mitigate disease spread. Quantifying how the pandemic has affected American youth is a daunting task, and there are seemingly innumerable ways to measure this.

A new article in [JAMA Pediatrics](#) assessed whether teenagers in particular were affected by stay-at-home orders and the relentless isolation of covid-19. What makes this study particularly interesting, is it was already attempting to define adolescent behaviors in Northern California before anyone had heard of covid-19. In March 2019, a group of researchers started the complex task of surveying teens about their tobacco, cannabis, and alcohol use as well as their physical activity. Surveys began with in-school in-person recruitment. It then shifted to follow-up questionnaires taken online much later. Incentives were given to participate—what adolescent doesn't love a \$10 gift card? The study aimed to gather follow-up surveys 6 and 12 months after the initial data collection in order to monitor behaviors over time. But in March 2020, when American life drastically changed, these scientists stumbled upon a very interesting social situation. Because they had already been gathering behavioral information before the pandemic, they had a built-in pre-covid-19 baseline that they could later use to compare behaviors during the pandemic. In essence, they lucked into an important before-after study of adolescent behavior during the covid-19 era.

What was uncovered was both complex and noteworthy. With respect to substance use, the assumption going in was that teens would likely mirror adults. This meant that the hypothesis was that teens substance use would go up during the covid-19 pandemic. The data, however, do not show that this occurred. Prior to the pandemic, a drop in e-cigarette use was noted among teens, a change which seems to have coincided with the concerns about vaping-associated lung injury, a rare but deadly condition primarily caused by vaping devices that had adulterants designed to make it possible to vape cannabis. Those lower rates persisted during the covid-19 pandemic. There was no increase in tobacco or alcohol use during the pandemic. A less surprising finding was that physical activity was down. With the cancelation of group sports and orders to remain in the house for during the early shelter-in-place period, this makes sense.

This study is reassuring in many ways, and troubling in others. On one hand, substance did not increase among adolescents during the covid-19 pandemic. In fact, decreases in vaping were apparently consolidated during the pandemic. On the other, rates of nicotine and alcohol use remain high. Nearly 20 percent of teens surveyed said they had used e-cigarettes in the past (though under 7 percent used other more dangerous forms of tobacco). Around 10-13 percent of the teens stated cannabis use in the previous 5 days alone, and around 18-20 percent said they drank alcohol in the past 30 days. Meanwhile, physical activity was down during the pandemic which could raise obesity rates, which are already high among American children.

—*Joanna Parga-Belinkie, MD*

executive summary of covid-19-related medical research, news, and public policy. It was founded and created by frontline emergency medicine physicians with expertise in medical research critique, health and public policy.