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Study ties Md. alcohol tax increase to decline in gonorrhea cases

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Researchers have found a surprising consequence to raising Maryland's alcohol tax: Fewer gonorrhea cases.

Sexually transmitted diseases didn't factor heavily into the debate when state lawmakers approved an increase in the sales tax on alcohol four years ago. But research published Wednesday suggests a surprising consequence to the levy: thousands of fewer cases of gonorrhea.

Maryland recorded 7,400 cases of the bacterial infection in 2010, when alcohol, like other goods, was taxed at 6 percent. But two years later, with a 9 percent levy tacked on to booze sales, gonorrhea cases in the state dropped below 5,700, even as infection rates grew nationally.

Researchers at the University of Florida say they can only find one explanation: the alcohol tax.

"We know increasing alcohol taxes decreases alcohol consumption," said Stephanie Staras, the lead author of the study, published in the *American Journal of Preventive Medicine*. "We also know that people who are using alcohol are more likely to have risky sexual behavior."

The study is the first to examine the consequences of Maryland's increase to alcohol taxes.

Health advocates, saying it backs up their arguments for the tax as a tool to broadly improve public health, plan to use it in a push to add another \$1 to the state's cigarette tax next year. Though one researcher acknowledged that the findings may seem like a stretch, they replicate evidence found linking alcohol taxes and STD rates in Illinois, Massachusetts and elsewhere.

"People do have a really hard time believing it," said David Jernigan, director of the Center on Alcohol Marketing and Youth at the Johns Hopkins Bloomberg School of Public Health. "The response there in the first place is alcohol really does impair judgment."

But the study did not find any significant effect of the tax increase on the incidences of chlamydia, another common STD.

Marc Kilmer, a health care policy analyst at the Maryland Public Policy Institute and a member of the Wicomico County Council, said the lack of a change in chlamydia rates suggested that researchers overstated the link between the tax and STD infection rates.

"To me, it seems clear this study was designed as a way to confirm this pre-conceived bias," Kilmer said.

Bruce Bereano, a lobbyist who represents the Licensed Beverage Distributors of Maryland, questioned how the study can make a connection between the tax and gonorrhea rates without data on alcohol consumption. That information is still under peer review, Jernigan said.

"I've had to make a lot of discussions and arguments about the alcohol tax," Bereano said. "This alleged correlation is new to me."

The researchers conducted what they called a natural experiment, treating the tax increase as an intervention whose effects on STD rates could be measured and compared with earlier statistics. Before 2011, alcohol was subject to excise taxes, which are levied at the wholesale level and factored into the price of alcohol, and the 6 percent sales tax, which is charged directly to consumers. The new law raised the sales tax on alcohol from 6 percent to 9 percent, the first increase in alcohol taxes since 1972.

To isolate the influence of the tax rate, the researchers examined 10 years of fluctuations in state STD rates to discount the possibility that the changes were simply due to chance. They also compared Maryland's statistics to those of other states, including states that had similar STD rates to Maryland's before 2011. They looked for similarities and differences between data from Maryland and Rhode Island to detect any regional trends that might be factors. They also talked with Maryland health officials to learn of any statewide initiatives or programs that could have contributed to the decline in gonorrhea cases.

None of those efforts explained the drop seen in Maryland, Staras said.

"It would have to be something we didn't find that was big and timed around the same time as the tax change," she said. "We're pretty confident in the findings."

The study estimated that the tax prevented nearly 1,600 cases annually, a more than 20 percent decline from levels before the tax increase. On average, monthly incidence of gonorrhea fell from 11 cases per 100,000 residents from January 2003 to June 2011 to nine cases per 100,000 residents from July 2011 to December 2012.

Researchers meanwhile found that chlamydia cases rose over the same period, with an average of 35 per 100,000 residents before the tax increase rising to 39 cases per 100,000 residents afterward. But the researchers said the change was statistically insignificant, meaning it could have occurred randomly.

Staras said the chlamydia statistics didn't discount the findings with gonorrhea because chlamydia is underreported, often presenting mild symptoms or none at all. Gonorrhea infections are also more likely to appear in clusters than are cases of chlamydia, meaning preventing a single gonorrhea infection can have larger effects on case counts, she said.

The findings suggest that alcohol taxes could also effectively prevent HIV, said Jernigan, who helped coordinate the study but was not one of its authors.

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researchers specialize in looking at the relationship between substance abuse and risky sexual behavior.

It's not the first time a link has been established between alcohol taxes and STDs. When Illinois nearly doubled excise taxes on wine and liquor in 2009, gonorrhea rates fell 21 percent statewide, while gonorrhea and chlamydia fell 25 percent and 15 percent, respectively, among the state's black residents, the University of Florida researchers found.

A 2004 research paper by the National Bureau of Economic Analysis found that a 10 percent increase in the average state excise tax rate on beer was associated with a 4.4 percent drop in gonorrhea infections among boys ages 15-19 and a 3.7 percent drop in men 20-24. A 2000 analysis of Centers for Disease Control and Prevention data suggested that a beer tax increase of 20 cents per six-pack reduced overall gonorrhea rates by 8.9 percent.

Vincent DeMarco, president of advocacy group Health Care for All, said the study backs up claims his organization made as it lobbied for the tax increase in Annapolis.

"We said it was going to be a public health plus for the state," DeMarco said. "This study is proof of that."

DeMarco said he hopes the study bolsters efforts to further raise the state tobacco tax rate. The Augustine Commission, a state panel studying ways to improve the state's business climate, is considering recommendations to increase taxes on both cigarettes and alcohol, but few in Annapolis believe there's an appetite for tax increases.

Kilmer said the study did not address issues more central to the debate over the tax. The Eastern Shore Republican said the research "is good at generating headlines but falls short of producing useful public policy information."

Kilmer said he routinely sees cars with Maryland tags flocking to a shop just over the Delaware line that is aptly named Tax Free Liquor.

"My objections to the alcohol tax were based far more on effects to the economy rather than on STD rates," he said. "It doesn't change my view of the alcohol tax any."

Del. Maggie McIntosh, a Baltimore Democrat who supported the tax increase, said lawmakers considered the economic impact of the tax hike and devoted significant time debating how to spend proceeds from the tax, settling on programs devoted to health, disabilities and education. She said she was glad to see the measure had a broader impact.

"Did we know that gonorrhea would be one of the areas that would see the most movement in public health issues?" she said. "I don't think we did know it, or even talk about it. That's the reason you have research that follows."

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