

Indoor Tanning among Youth – Data Brief

Youth Risk Behavior Survey (2011 and 2015)

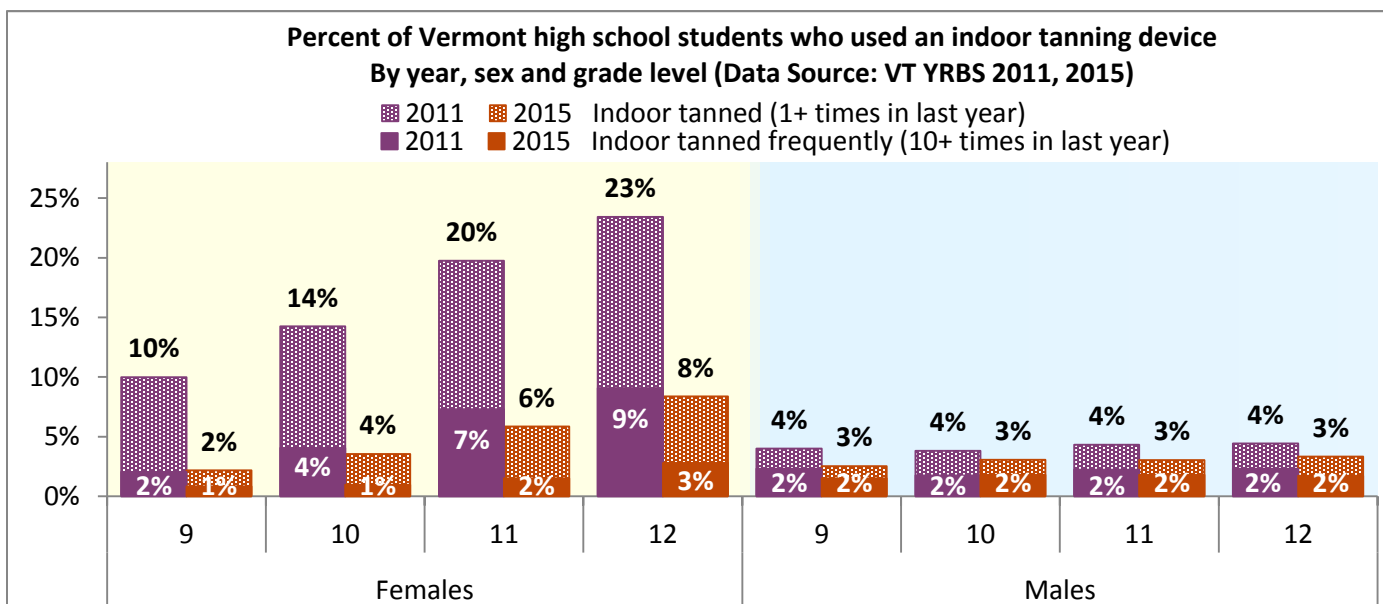
Background

Use of indoor tanning devices such as tanning beds and sun lamps is known to increase the risk of the most deadly form of skin cancer, melanoma. This risk increases with each indoor tanning session and is highest among people who start tanning at a young age.^{1,2} Vermont has one of the highest rates of melanoma incidence in the U.S.

In 2012, Vermont became the second state (after California) to fully prohibit the use of commercial indoor tanning facilities by youth under the age of 18. To evaluate the effect of the Vermont legislation on youth indoor tanning rates, data from the Vermont Youth Risk Behavior Survey (YRBS) were analyzed to measure differences in use of indoor tanning devices among high school students before and after the law passed. Results were compared to changes in indoor tanning use among youth in New Hampshire, a neighboring state with similar demographics. Although New Hampshire passed similar legislation in 2015, YRBS data were collected before the law went into effect.

Changes in indoor tanning among VT youth – 2011 to 2015

In 2011 and 2015 the Vermont Youth Risk Behavior Survey (YRBS) included the following question on the high school questionnaire: “During the past 12 months, how many times did you use an indoor tanning device such as a sunlamp, sunbed, or tanning booth? (Do not include getting a spray-on tan.)” The 2011 survey found that 4% of male high school students and 17% of female high school students reported using an indoor tanning device one or more times in the past year.



The 2015 survey found significant decreases in the use of indoor tanning from 2011 among both male and female high school students. In 2015, 3% of male high school students reported indoor tanning in the last year, a 25% decrease. Five percent of female students reported indoor tanning in 2015, a 66% decrease. In addition, there was a significant decrease (from 6% in 2011 to 2% in 2015) in the percentage of female students that used indoor tanning devices frequently (10 or more times in the past year).

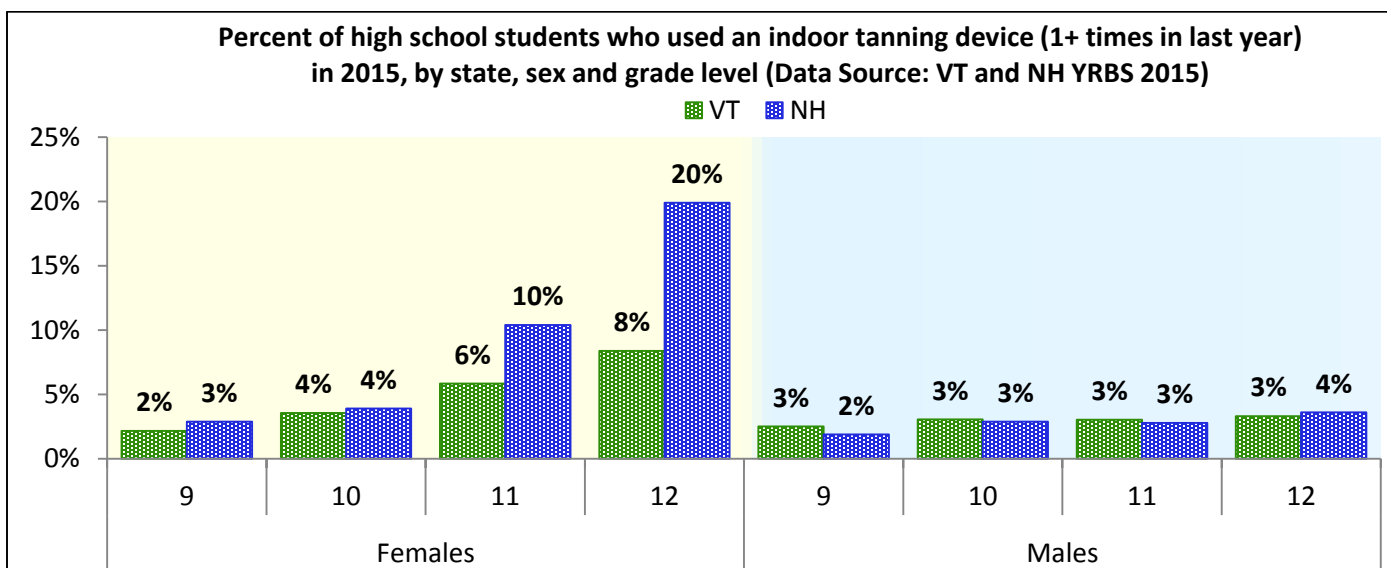
¹ Boniol M, Autier P, Boyle P, Gandini S. [Cutaneous melanoma attributable to sunbed use: systematic review and meta-analysis.](#) *BMJ* 2012;345:e4757.

² Wehner MR, Shive ML, Chren MM, Han J, Qureshi AA, Linos E. [Indoor tanning and non-melanoma skin cancer: systematic review and meta-analysis.](#) *BMJ* 2012;345:e5909.

Indoor tanning among youth in Vermont and New Hampshire

New Hampshire's 2015 legislation prohibiting indoor tanning among minors did not go into effect until after YRBS data were collected that year. By comparing changes in indoor tanning behavior among New Hampshire youth to the changes seen in Vermont, it is possible to estimate how much of the decrease in indoor tanning might have happened in Vermont without the legislation, and how much - if any - of the decrease in use could be attributed to the new law.

In 2011, 10% of high school students in both VT and NH³ reported using indoor tanning devices in the last year. In 2015, 4% of VT high school students reported indoor tanning, while a significantly higher percentage, (6%) reported tanning in New Hampshire. The biggest differences between VT and NH⁴ students were among females in grades 11 and 12, as demonstrated in the chart below.



These results suggest that the VT tanning bed legislation (and/or the media attention surrounding it) contributed to discouraging one-third of VT youth who might have used indoor tanning facilities from doing so (an absolute decrease of 2%). The comparison of VT and NH data suggest that the greatest impact of the tanning bed legislation (and/or associated media attention) was among female students in grades 11 and 12.

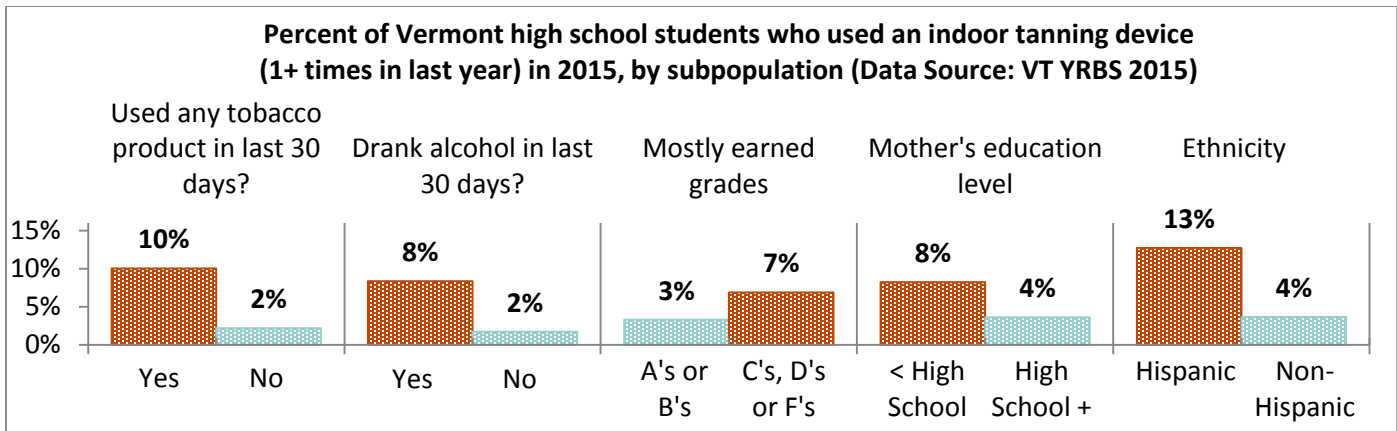
Reducing indoor tanning among all Vermont youth

Although the overall decrease in indoor tanning by Vermont youth is remarkable, the 2015 YRBS data indicate that specific subpopulations of high school students report using indoor tanning devices at higher rates than their peers. The use of indoor tanning devices, both any use in the last year and frequent use (10+ times), were significantly more common among females and males who reported using alcohol, using tobacco (cigarettes, cigars, cigarillos, chewing tobacco, snus, or electronic vapor products such as e-cigarettes), earning grades C or lower, mother did not complete high school⁵ (a proxy for low socio-economic status), or were Hispanic. Hispanic students had the highest rate of frequent (10+ times) use of indoor tanning devices in the last year, 10%.

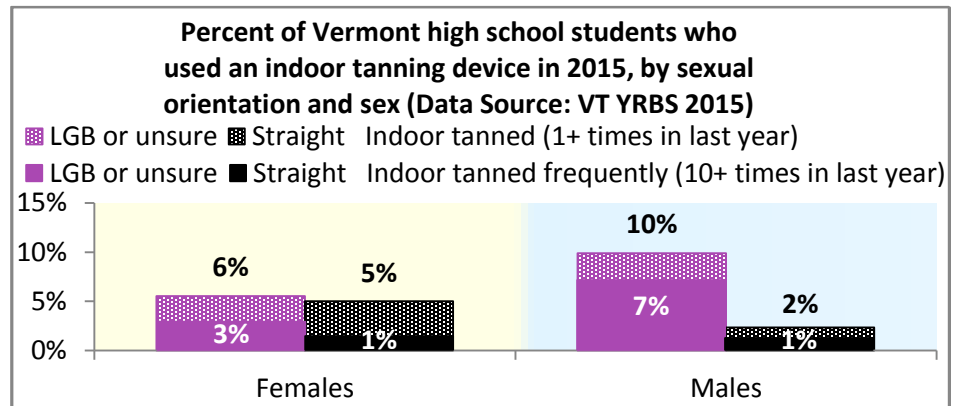
³ 2015 Your Risk Behavior Survey Results: New Hampshire High School Survey Trend Analysis Report. http://education.nh.gov/instruction/school_health/documents/nhhtrendanalysisrept.pdf Accessed 4/19/16.

⁴ 2015 Your Risk Behavior Survey Results: New Hampshire High School Survey Summary Tables. <http://www.dhhs.nh.gov/dphs/hsdm/documents/high-school-summary-tables.pdf> Accessed 4/19/16.

⁵ Note: many students were unsure of their mothers' education level and were therefore not included in this measure.



Male students who described themselves as lesbian/gay, bisexual or unsure of their sexuality (LGB or unsure) were more likely to report using an indoor tanning device in the past 12 months than male students who described themselves as heterosexual/straight. Both male and female students who described themselves as LGB or unsure were more likely to report frequent indoor tanning past 12 months than their heterosexual/straight peers.



National efforts to reduce youth indoor tanning

The U.S. federal government has taken action in recent years to regulate and curb use of indoor tanning devices. In 2014 the U.S. Surgeon General published a call to action to prevent skin cancer, which included recommendations on reducing use of indoor tanning devices.⁶ Also in 2014, the U.S. Food and Drug Administration reclassified sunlamp products (tanning beds and booths) from low risk (Class I) to moderate risk (Class II) devices. This step allows for more regulatory control, including requiring devices to include a “black-box warning” stating that it should not be used by persons under the age of 18 years. In December 2015 the FDA proposed a rule that would restrict indoor tanning to adults 18 and older, require users to sign a risk acknowledgment certification, and require the tanning facility to provide user manuals upon request. As of publication, June 2016, this rule has not been adopted.

This publication was supported by the Grant or Cooperative Agreement Number, DP003911, funded by the Centers for Disease Control and Prevention. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention or the Department of Health and Human Services.

⁶ U.S. Department of Health and Human Services. *The Surgeon General’s Call to Action to Prevent Skin Cancer*. Washington, DC: U.S. Dept of Health and Human Services, Office of the Surgeon General; 2014.