

# **Age Restrictions for Tanning Bed Use**

Joint Commission on Health Care

Healthy Living/Health Services Subcommittee

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## **Study Mandate**

- Senator George Barker requested that the Commission study whether Virginia should enact age restrictions on tanning bed use
- The study was agreed to by JCHC members at the May 21, 2013 work plan meeting

## Background

- The Virginia Code does not place age restrictions on tanning bed use, but does require a salon to obtain, every 6 months, written consent from a parent or legal guardian for persons under the age of 15 and not emancipated
- During the 2013 General Assembly Session, Senator Barker introduced SB 1274 to:
  - Restrict tanning bed use to persons 15 years of age or older
  - Require a parent or legal guardian of unemancipated persons 15-17 years of age to provide written consent prior to allowing the minor to use a tanning device
- SB 1274 passed the Senate (34 to 5), but was passed by indefinitely in House Commerce and Labor Committee

3

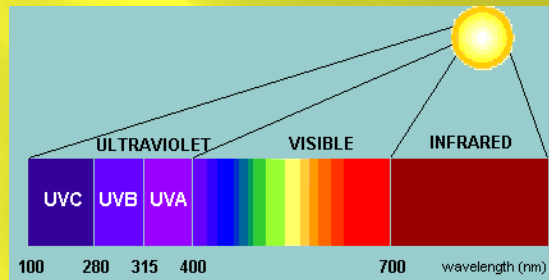
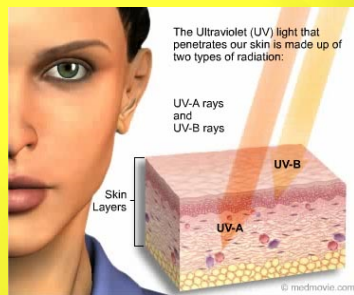
## Tanning Devices



4

## FDA Tanning Device Definition

- A sunlamp product is “an electronic product that includes one or more UV lamps and a fixture intended for irradiation of any part of the living human body, by UV radiation with wavelengths in air between 200 and 400 nanometers, to induce skin tanning.”



5

## Indoor Tanning Industry

- Indoor tanning began in the 1970s and grew rapidly
  - According to the Indoor Tanning Association, the industry is comprised of 19,000 businesses employing 160,000 individuals nationwide, and total annual sales in the U.S. are more than \$5 billion
- The average American city has 41 tanning salons<sup>1</sup>
- There are a large number of tanning salons in Virginia
  - Chesapeake, VA: 40 salons
  - Norfolk, VA: 26 salons
  - Richmond, VA: 26 salons
  - Virginia Beach, VA: 50 salons
- In addition, tanning devices are located in some apartments, beauty salons, and fitness centers
  - Age restrictions do not apply to these sites

6

## Indoor Tanning Industry

- More than 1 million people in the U.S. tan in tanning salons each day, and 30 million visit each year<sup>2</sup>
- The use of tanning beds/booths is increasing at 3%-5% per year in the U.S.; and approximately 3%-10% of salon revenue is from clients under the age of 18\*
- According to the 2011 Youth Risk Behavior Survey and the 2010 National Health Interview Survey, both nationally representative samples<sup>3</sup>
  - Among non-Hispanic white female high school students, 29.3% engaged in indoor tanning and 16.7% engaged in frequent (>10 times) indoor tanning during the previous 12 months
    - The prevalence and frequency of indoor tanning increased with age
  - Among non-Hispanic white women ages 18-34 years, 25% engaged in indoor tanning and 15% engaged in frequent (>10 times) indoor tanning during the previous 12 months
    - The prevalence and frequency of indoor tanning decreased with age

\*Sources: Indoor Tanning Association and the American Suntanning Association

7

### Prevalence of Indoor Tanning Among Non-Hispanic White Female High-School Students (2011) and Women ages 18-34 years (2010)<sup>3</sup>

Age	IT ≥1 Time in Previous 12 Months	IT ≥10 Times in Previous 12 Months	Frequency Among Those Engaging in IT*
≤14	14.2%	6.2%	43.5%
15	17.8%	9.0%	50.6%
16	31.1%	15.7%	50.6%
17	39.3%	24.2%	61.6%
≥18	43.8%	29.9%	68.2
Total	29.3%	16.7%	57.0%
18-21	31.8%	21.3%	67.6%
22-25	29.6%	16.5%	56.3%
26-29	22.1%	13.1%	59.2%
30-34	17.4%	10.5%	60.6%
Total	24.9%	15.1%	61.0%

IT=Indoor Tanning. \*Percent of respondents who tan indoors that did so at least 10 times in the previous 12 months

8

## Tanning Device Regulations

- The FDA regulates the manufacturers of tanning devices
- Manufacturers must adhere to FDA requirements for sunlamp specifications, posting of warning labels, and provision of eye protection
  - They must provide an exposure schedule in the product warning label and the FDA recommends that the exposure schedule for users be based on the user's skin type
    - The FDA recommends, but does not require or enforce, an exposure schedule not exceeding a 0.75 minimal erythral dose (defined as a dose resulting in minimal pinkness) 3 times during the first week of tanning, gradually increasing the exposure the following weeks until maximum tanning has occurred (approximately 4 weeks total) and then provide for maintenance of a tan by biweekly or weekly exposures of up to 4 minimal erythral doses
- FDA limits the amount of UVC emitted, but does not regulate the amount of UVA and UVB
  - Because the proportion varies, consumers may not be able to predict the outcome of a particular tanning session

9

## Proposed FDA Reclassification of Tanning Devices

- Due to new scientific evidence, the FDA is proposing to reclassify tanning devices from class I (general controls/low risk) to class II (special controls/moderate risk)
  - The FDA panel reviewed all of the evidence of an association between UV radiation and skin cancer, including evidence specifically linking tanning devices and skin cancer, and unanimously agreed that sunlamps should not be classified as low risk
  - Some panel members wanted to reclassify tanning devices as class III (high-risk) and/or restrict sunlamp usage to persons 18 years of age or older
  - The majority of public comments were in support of strengthening FDA regulations (133 of 139 comments submitted)
- If reclassified, manufacturers would have to submit a Section 510(k) pre-market notification to the FDA for these devices, which are currently exempt from any pre-market review

10



## Proposed FDA Reclassification of Tanning Devices

- Under new classification, manufacturers would be required to:
  - Show the product meets appropriate output performance specifications such as wavelengths, energy density, and lamp life
  - Demonstrate safety features, such as timers to limit UV exposure and alarms, function properly
  - Demonstrate other product design requirements have been met (i.e. mechanical and electrical safety, software verification, etc.)
  - Permanently affix the warning statement: "Attention: This sunlamp product should not be used on persons under the age of 18 years."
  - Provide warning statements in the user manual, including
    - "Warning: Persons repeatedly exposed to ultraviolet sunlamp products should be regularly evaluated for skin cancer."

11

## Virginia Tanning Law and Regulations\*

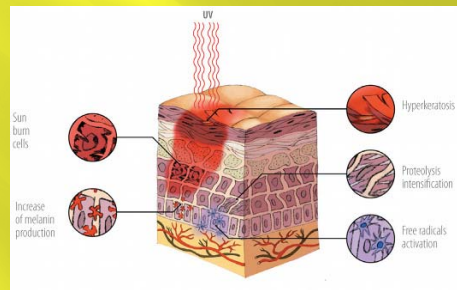
- A tanning device utilized by a tanning facility in Virginia must comply with all applicable federal laws and regulations
- No state tanning regulations have been promulgated
  - "The state tanning law is specific enough that there is no need for more detailed regulations."
  - "There is no specific program for either the regulation of tanning facilities or enforcement of the tanning law. The local Commonwealth's Attorney is responsible for enforcement of any alleged violations of this law that may occur in his respective jurisdiction."
- The state does not license tanning bed operators
- Tanning salon owners and employees can voluntarily take a class on proper tanning device operation
  - According to the American Suntanning Association, 75% of salon owners in Virginia have completed the training

\*A complete listing of Virginia's tanning law is available at <https://www.vdh.virginia.gov/epidemiology/radiologicalhealth/tanning/law.htm>

12

## Risks Posed by Tanning Device Use

- Increased risk of skin damage and cancer
- Burns to the skin
- Eye injury
- Transmission of infectious diseases
- Electrical shock
- Mechanical injury



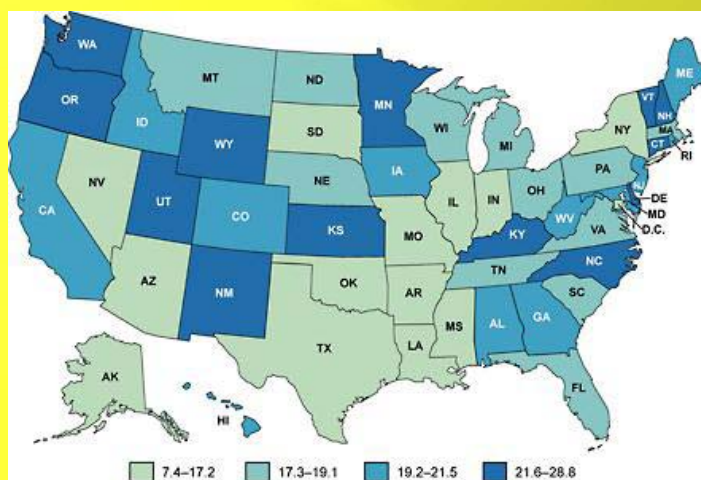
13

## Skin Cancer in the U.S.

- According to the National Cancer Institute (NCI), more than 68,000 people in the U.S. are diagnosed with melanoma each year, and 1 out of 8 persons will die from this type of cancer
- Melanoma rates have been increasing by 3% per year in whites since 2004<sup>4</sup>
- For individuals 20-29 years old, melanoma is the second most common cancer in women, and third most common cancer in men
- U.S. incidence rates for melanoma have been rising in all age groups since first recorded in 1973<sup>5</sup>
  - Incidence rates for women, age 15-39, have increased from 5.5 per 100,000 in 1973 to 13.9 per 100,000 in 2004 (SEER data)

14

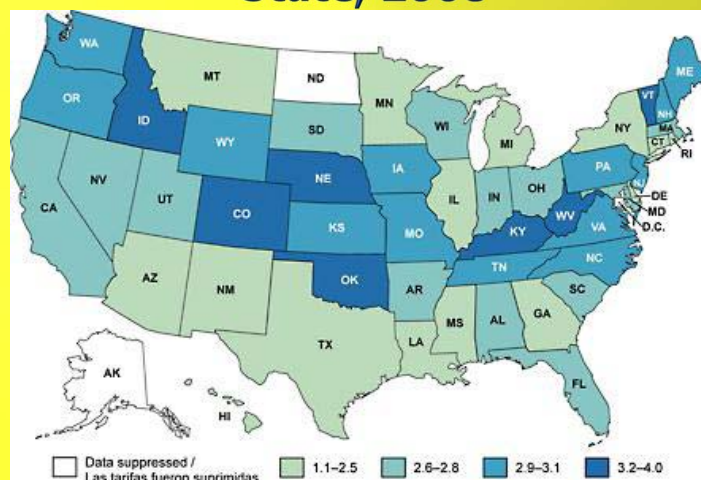
## Melanoma of the Skin Incidence Rates by State, 2008



\*Rates are per 100,000 and are age-adjusted to the 2000 U.S. standard population. †Source: U.S. Cancer Statistics Working Group. *United States Cancer Statistics: 1999–2008 Incidence and Mortality Web-based Report*. Atlanta (GA): Department of Health and Human Services, Centers for Disease Control and Prevention, and National Cancer Institute; 2012. Available at: <http://www.cdc.gov/uscs>.

15

## Melanoma of the Skin Death Rates by State, 2008



\*Rates are per 100,000 and are age-adjusted to the 2000 U.S. standard population. Rates are suppressed if fewer than 16 cases were reported in a state.

Source: U.S. Cancer Statistics Working Group. *United States Cancer Statistics: 1999–2008 Incidence and Mortality Web-based Report*. Atlanta (GA): Department of Health and Human Services, Centers for Disease Control and Prevention, and National Cancer Institute; 2012. Available at: <http://www.cdc.gov/uscs>.

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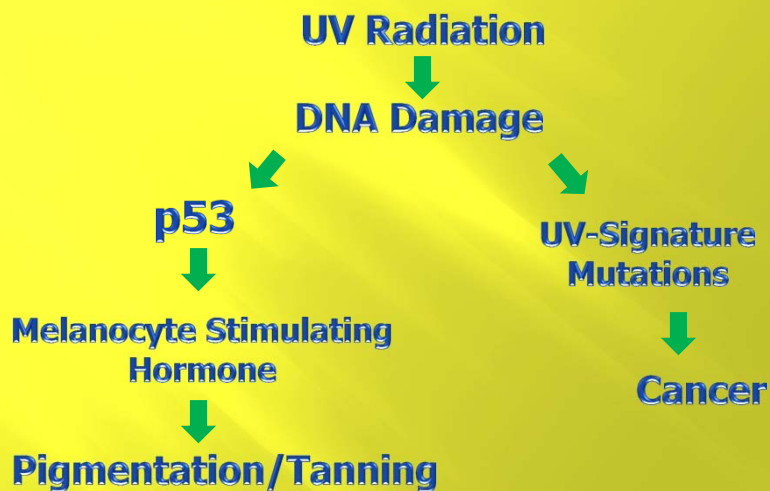


## Skin Cancer and UV Exposure

- Cumulative repeated UV exposure, regardless of whether skin burning occurs, increases the risk of skin cancer<sup>6</sup>
  - “There are strong epidemiologic and molecular data linking all forms of skin cancer to UV exposure; and it is estimated that UV is causative for nearly 65% of melanoma and 90% of non-melanoma skin cancers.”<sup>7</sup>
  - It is the process of UV radiation causing DNA damage in skin cells that elicits the “tanning response.” This same process also elevates carcinogenic risk.<sup>7</sup>
  - Burning, via the sun or tanning devices, further increases the risk of skin cancer

17

### Schematic of molecular steps in the tanning and UV-carcinogenesis pathways<sup>8</sup>



18

## Skin Cancer and Tanning Device Use

- In 2009, based on the growing body of research linking the use of tanning devices to skin cancer, the International Agency for Research on Cancer (part of the World Health Organization) classified UV radiation from tanning devices as a class I carcinogen and recommended that minors not use indoor tanning devices<sup>9</sup>
- Tanning beds are now rated in the same group as tobacco and asbestos<sup>9</sup>
- Since the IARC's reclassification of tanning devices, additional research has resulted in even stronger evidence of the relationship between tanning device use and all forms of skin cancer<sup>3,7,8,11-21</sup>

19

## Skin Cancer and Tanning Device Use

- Tanning devices can be more dangerous than the sun because they can be used year round, adding to a person's cumulative UV exposure<sup>22-25</sup>
- Frequent indoor tanners may receive 1.2-4.7 times the yearly dose of UVA received from sunlight, in addition to doses from sun exposure<sup>41</sup>
- In 2012, a meta-analysis of 27 observational studies showed<sup>13</sup>
  - The risk of cancer increased 20% for persons who have ever used a tanning device
  - The rate increases to 36%-85% if indoor tanning started prior to age 35
  - The risk of melanoma increases by 1.8% for each additional tanning bed session
- Use of a tanning device before age 25 increases the risk of nonmelanoma skin cancer by 40%-102%<sup>20</sup>

20

## Skin Cancer and Tanning Device Use

- FDA/NCI study found that UV exposure typically provided by tanning devices is excessive. The same cosmetic effects could be achieved with one-third to one-fourth the amount of UV radiation.\*
- Tanning units can emit UVA doses that are 5-15 times greater than that of the midday Mediterranean sun<sup>13,16,27</sup>
  - "Repeated exposure to large amounts of UVA delivered to the skin in relatively short periods (10-20 minutes) constitutes a new experience for humans."<sup>13</sup>

\*Also see citation 26

21

## Skin Burns, Eye Injury, and Premature Aging

UV exposure can result in:

- Skin burns
  - A 2009 study of tanning device use among adolescents in the U.S. found that 58% experienced at least one skin burn within the previous year<sup>14</sup>
  - Approximately 1,800 hospital emergency department cases per year are a result of tanning device usage<sup>28</sup>
    - Actual number of injuries likely is higher because the estimate does not include cases treated in outpatient clinics, physician's offices, or at home
  - A meta-analysis of 57 studies and another analysis of 15 studies found strong associations between skin burns and melanoma<sup>29,30</sup>
- Eye injury
  - UV radiation from tanning devices can cause damage to eyes if protective eyewear is not worn, including cataract formation and ocular melanoma<sup>11,31</sup>
- Premature aging of the skin due to DNA and skin cell damage<sup>11,22,23,32,33</sup>

22

## Suggested Benefits of Tanning Devices

- Treatment of seasonal affective disorder (SAD)
  - Visible light has been found to have an effect on SAD; however, there is no definitive evidence that UV radiation is effective in the treatment of SAD<sup>34-36</sup>
- Vitamin D
  - Some tanning devices can produce vitamin D; however, it is much safer to obtain it through foods and dietary supplements<sup>37-39</sup>
- It is a widely held belief that tanning at a salon before a vacation can provide a protective base tan
  - However, a base tan provides minimal protection against burning (SPF 2-4) and does not provide any protection against premature aging or reduce the risk of skin cancer<sup>16,40</sup>

23

## Restrictions on Tanning Device Use

24

## Age Restrictions for Tanning Salons in the U.S.

- 35 states have some kind of legislation regarding minors' use of tanning salons
- 6 states have banned the use of tanning salons by persons under 18
  - California (2011), Vermont (2012), Illinois, (2013), Oregon (2013), Nevada (2013), and Texas (2013)
- In 2009, Howard County, Maryland was the first U.S. jurisdiction to ban tanning for minors under 18
- Chicago and Springfield, IL passed under 18 bans in 2012

25

## Indoor Tanning Restrictions for Minors in the U.S., August 2013

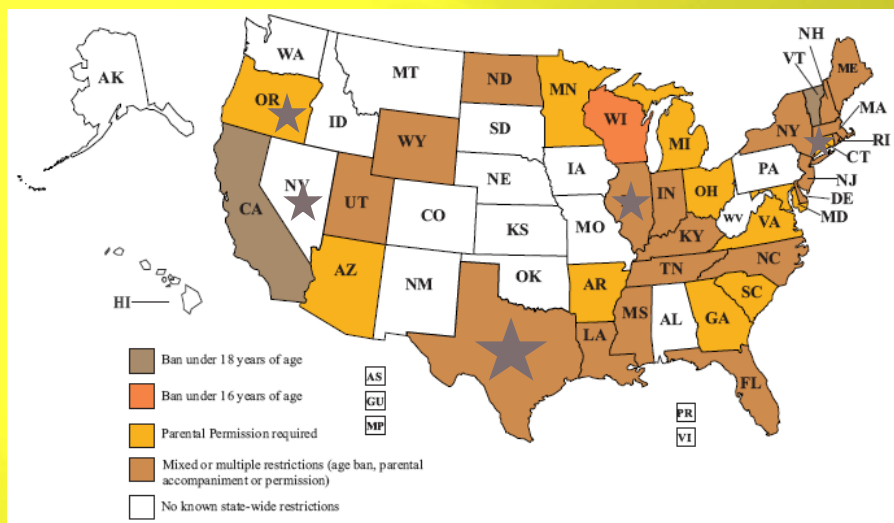
Legislation Introduced	States
Under 18 Ban	Alabama, Arizona, Delaware, Florida, Hawaii, Indiana, Iowa, Maryland, Massachusetts, Michigan, Minnesota, Nebraska, North Carolina, Ohio, Oklahoma, Pennsylvania, Washington
Law	States
Under 18 Ban	California, Connecticut, Illinois, Nevada, Oregon, Texas, Vermont
Under 17 Ban	New Jersey, New York, Wisconsin (15)
Under 14 Ban	Delaware, D.C., Georgia, Maine, New Hampshire, North Carolina, North Dakota, West Virginia
Parental Accompaniment Required	Florida (13), Indiana (15), Kentucky (13), Louisiana (13), Massachusetts (13), Mississippi (13), Tennessee (13), Utah (17), Wyoming (14)
Parental Consent Required	Arizona (17)(IP), Arkansas (17)(IP), Maryland (17)(IP), Michigan (17)(IP), Minnesota (15)(IP), Ohio (17)(IP), Rhode Island (17)(IP), South Carolina (17)(IP), Virginia (14)

Note: ( ) = oldest age to which the restriction applies; (IP) = parental consent required in person  
 Source: [www.ncsl.org/issues-research/health/indoor-tanning-restrictions.aspx](http://www.ncsl.org/issues-research/health/indoor-tanning-restrictions.aspx)

26



## State Indoor Tanning Laws for Minors, 2013



<http://www.ncsl.org/issues-research/health/indoor-tanning-restrictions.aspx>

27

## Under Age 18 Bans for Tanning Salons in Other Countries

- Australia (New South Wales, South Australia)
- Austria
- Belgium
- Brazil (All ages)
- Canadian Provinces: British Columbia, Labrador, Newfoundland, Nova Scotia, Ontario, Prince Edward Island, Quebec
- Finland
- France
- Germany
- Iceland
- Lithuania
- Netherlands
- Norway
- Portugal
- Spain
- United Kingdom

28

## Support for Under 18 Age Restriction on Tanning Salon Use

- World Health Organization
- The International Commission of Non-ionizing Radiation Protection
- National Radiological Protection Board (UK)
- National Health and Medical Research Council (Australia)
- U.S. National Toxicology Program
- U.S. Food and Drug Administration
- American Academy of Pediatrics and its Virginia Chapter
- American Academy of Dermatology and its Virginia Chapter
- American Medical Association and the Medical Society of Virginia
- Society of Surgical Oncology

29

## Policy Options

**Option 1:** Take no action.

**Option 2:** Introduce legislation prohibiting persons under the age of 15 years from using tanning devices at tanning facilities; and requiring a parent or legal guardian of unemancipated persons 15-17 years of age to provide written consent prior to allowing the minor to use a tanning device at a tanning facility.

**Option 3:** Introduce legislation prohibiting unemancipated persons under the age of 18 years from using a tanning device at tanning facility.

30

## Public Comments

- Written public comments on the proposed options may be submitted to JCHC by close of business on November 12, 2013. Comments may be submitted via:
  - E-mail: [sreid@jchc.virginia.gov](mailto:sreid@jchc.virginia.gov)
  - Facsimile: 804-786-5538 or
  - Mail to: Joint Commission on Health Care  
P.O. Box 1322  
Richmond, Virginia 23218
- Comments will be summarized and included in the Decision Matrix which will be considered during the JCHC meeting on November 18<sup>th</sup>.

31

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34

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35

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36



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37

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38

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39

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40