

REPORT OF THE INDOOR TANNING WORKING GROUP (ITWG)

December 9, 2011



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Executive Summary

This report summarizes the findings and details the recommended actions put forward by the Indoor Tanning Working Group (ITWG).

The ITWG was developed through direction from the Minister of Health that a working group be formed to provide the Minister with recommendations on a provincial approach to health protection by regulating the use of indoor tanning beds by minors. This followed the World Health Organization's identification of ultraviolet (UV) radiation from indoor tanning facilities as a known carcinogen.

The ITWG included representation from the:

- Joint Canadian Tanning Association (JCTA)
- BC Cancer Agency (BCCA)
- Canadian Cancer Society (CCS)
- Canadian Dermatology Association (CDA)
- BC Centre for Disease Control (BCCDC)
- Union of BC Municipalities (UBCM)
- Medical Consultant designated by the Provincial Health Officer (observer status)
- Ministry of Health:
 - Health Authorities Division
 - Population and Public Health Division, Health Protection Branch

Five in-person meetings were held during October and November 2011 to discuss medical research, jurisdictional best practices, potential regulatory actions, and to prepare this report. Guest speakers attended parts of the ITWG meetings.

The ITWG discussed 12 potential regulatory actions. The group agreed on the following:

- Controlling exposure during indoor tanning sessions through the presence of onsite and trained operators is essential, and self-serve unmanned machines should not be allowed.
- Truth in advertising is important.
- There are various additional regulatory actions that would help to protect minors, but there may be challenges with implementation for the government and, as such, require further analysis – for example, mandatory client record keeping, limits on exposure times and frequency, and operator licensing. Further work is also needed to ensure the training of operators is sufficient to enable enforcement of any regulatory measures.

The ITWG did not reach consensus on a ban versus parental consent. The group is putting forward the following two scenarios for the Minister's consideration:

Scenario 1: Ban youth under the age of 18 from using indoor tanning equipment without a medical prescription.

Supported by the BCCA, CCS, CDA, BCCDC and UBCM. Not supported by the JCTA.

In addition to the ban, the following actions are recommended:

- Require provincially approved training for all owners and operators of tanning equipment.
- Require tanning beds to be controlled by an onsite and trained operator; ban self-serve unmanned machines.
- Require UV-radiation warning signs to be posted in all tanning facilities and a health risk fact sheet to be distributed to all potential clients.
- Implement a provincial tanning-facility licensing framework, if it can be achieved with minimal cost to operators and government/health authorities.

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- Prohibit misleading medical and health claims, and advertising and promotion of UV indoor tanning to minors.

Scenario 2: Ban youth under the age of 14 from using indoor tanning equipment without a medical prescription. Require in-person written parental consent for youth between the ages of 14 and 18.

Supported by the JCTA. Not supported by the BCCA, CCS, CDA, BCCDC and UBCM.

In addition, the following actions are recommended:

- Require provincially approved training for all owners and operators of tanning equipment.
- Require tanning beds to be controlled by an onsite and trained operator; ban self-serve unmanned machines.
- Require UV radiation warning signs to be posted in all tanning facilities and a health risk fact sheet to be distributed to all potential clients.
- Implement a provincial tanning-facility licensing framework, if it can be achieved with minimal cost to operators and government/health authorities.
- Require tanning facilities to keep client records of minors (proof of skin typing, exposure schedule, and parental consent form).
- Regulate exposure limits.
- Prohibit misleading medical and health claims, and advertising and promotion of UV indoor tanning to minors.

These two options are put forward to the Minister of Health for his consideration. The ITWG stands prepared to complete further work as directed.

Introduction

The World Health Organization (WHO) has identified ultraviolet (UV) radiation from indoor tanning beds as a proven carcinogen.¹ The WHO also states that the risk of melanoma – the most serious form of skin cancer – increases by 75% when tanning bed use starts before 35 years of age.

Many jurisdictions in Canada, the United States and across the world have set health-protective limits on indoor tanning by minors. These include bans, requirement of parental consent forms, restrictions on advertising, mandatory health warnings and signage, restrictions on frequency of use, and tanning service taxes.

In 2011, the Capital Regional District (CRD) in Victoria, B.C., passed a bylaw (Tanning Facility Regulations Bylaw, Bylaw 3711) banning youth under the age of 18 from using commercial tanning beds. A number of organizations have requested that the B.C. Government implement a similar provincial ban for minors. These include the BC Cancer Agency (BCCA), Canadian Cancer Society (CCS), Canadian Dermatology Association (CDA), BC Medical Association (BCMA), Medical Health Officers of BC and the Public Health Association of BC (PHABC).

At the 2011 Union of BC Municipalities (UBCM) Convention, local governments from the Association of Vancouver Island and Coastal Communities presented a resolution calling for the provincial government to introduce legislation banning indoor tanning for youth under the age of 18. Delegates at the convention endorsed the resolution.² Initiatives are underway by medical health officers, the Canadian Cancer Society and others to encourage action by local governments in Vancouver and Surrey to introduce bylaws for restricting the use of commercial tanning beds by minors.

The Joint Canadian Tanning Association (JCTA) has indicated support for a provincial regulatory approach, provided they are allowed full input and are involved in developing legislation. The JCTA's recommended approach is not to ban minors, but, rather, to require written consent from parents, skin typing for all users, client record keeping, and mandatory training and certification for operators who control the equipment.

To ensure a consistent approach to health protection for all British Columbia's youth and a consistent framework for industry, the Minister of Health directed that a working group, called the "Indoor Tanning Working Group (ITWG)," be formed to provide recommendations on a provincial approach to regulating the use of indoor tanning beds by minors.

This report contains a summary of the information presented and discussed by the ITWG, and an analysis by the working group of potential actions for the Minister to consider. The report is not a complete overview or critique of all the research on the health impacts of indoor tanning.

¹ The WHO's International Agency for Research on Cancer (IARC) has raised UV radiation from indoor tanning facilities to the highest cancer-risk category: Group 1, "carcinogenic to humans."

² **UBCM Resolution 2011-B157: Age Restrictions on Indoor Tanning**

WHEREAS using indoor tanning devices is particularly damaging for youth and increases their risk of melanoma (the deadliest form of skin cancer);

AND WHEREAS the Medical Health Officers' Council of BC calls upon the Province of British Columbia to use its regulatory powers to restrict use of indoor tanning beds by persons under the age of 18;

THEREFORE BE IT RESOLVED that UBCM lobby the provincial government to introduce legislation to ban indoor tanning for youth under the age of 18.

Indoor Tanning Working Group Process

The objective of the Indoor Tanning Working Group (ITWG) was to share information, consider recent research and findings, discuss issues and develop recommendations for the Minister of Health to consider, with respect to potential regulatory actions to protect the health of minors from the harmful effects of UV radiation from indoor tanning beds.

Membership

The ITWG included representation from:

- Joint Canadian Tanning Association (JCTA)
- BC Cancer Agency (BCCA)
- Canadian Cancer Society (CCS)
- Canadian Dermatology Association (CDA)
- BC Centre for Disease Control (BCCDC)
- Union of BC Municipalities (UBCM)
- Provincial Health Officer (PHO) (observer status)
- Health Authorities Division, B.C. Ministry of Health

The Health Protection Branch of the Ministry of Health chaired the meetings and provided secretariat services for the working group. (See Appendix 1 for details on the ITWG membership.)

Terms of Reference

Appendix 2 provides the Terms of Reference of the Indoor Tanning Working Group.

Meetings

The group had five meetings in Vancouver between October 18 and November 29, 2011. A Microsoft Sharepoint site was used for filing and sharing documents.

The group heard presentations from:

- Dr. David McLean, Head, Cancer Prevention, BC Cancer Agency; and Representative, Canadian Dermatology Association
- Steven Gilroy, Executive Director, Joint Canadian Tanning Association
- Kathryn Seely, Public Issues Director, Canadian Cancer Society, B.C. and Yukon
- Donna Hill, Executive Director, Manitoba Health
- Senator Ted Lieu and Jeff Gozzo, State of California

ITWG Group Meeting Minutes

Appendix 3 provides minutes of the ITWG meetings.

Background

Getting a tan for cosmetic purposes (and other reasons, such as acquiring a protective base tan) has become increasingly popular since the 1980s, accompanied by a large rise in the use of indoor tanning. Indoor tanning equipment (e.g., beds, booths and lamps) emit ultraviolet (UV) radiation, which – like UV in sunlight – stimulates the skin to release melanin to absorb the UV, causing the skin to darken.

According to the National Sun Survey, “young adults are the most likely to try to get a tan, either from the sun or by using tanning equipment.”³ It adds that indoor tanning is more common among young women than young men and older adults, with 27% of young women (ages 16-24) using tanning equipment.⁴

Kinds of Tanning Beds

Indoor tanning equipment includes all artificial UV light sources, including beds, booths, lamps and bulbs. It falls into four categories:

Medical Units

UV light can be prescribed as a form of treatment for psoriasis (phototherapy) in a closely monitored medical environment, such as a hospital clinic.⁵ When the skin condition is stabilized, the exposure to UV radiation is stopped. Home medical units may also be sold to patients to use unsupervised at home without a doctor’s prescription.

Commercial/Industry Units

These are tanning beds offered to the public on a fee-for-service basis. Tanning beds, booths, etc., can be found in numerous establishments, including indoor tanning facilities, spas, hair salons, fitness centres, hotels and even laundromats.

Residential/Home Use Units

These units are owned and operated privately for personal use. They come in a variety of styles and prices, and are mainly available online from manufacturers. Second-hand units can also be bought through private or commercial sellers, ranging in cost from \$200 to \$5,000.

Self-Serve Units

These units are operated by the customer without supervision, merely by inserting money or swiping a pre-loaded card into the machine. They are mostly found in Europe. In Canada, self-serve units make up a small part of the commercial tanning industry and are mostly located in fitness centres and laundromats. They are legally allowed in British Columbia, but there is no record of their number or location.

In this report, the term “tanning beds” are used interchangeably to refer to indoor tanning equipment. (“Sunbeds” are also used in some quotations.)

³ Shirley Huchcroft, Erin Pichora and Greg Kennedy, “National Skin Survey Highlights Report,” Ontario Sun Safety Working Group, <http://www.uvnetwork.ca/NationalSunSurveyHighlightsReport20080710.pdf> (accessed November 24, 2011), 3.

⁴ Ibid.

⁵ Dr. David McLean “Third Indoor Tanning Working Group Meeting” (Indoor Tanning Working Group Presentation, Vancouver, Canada, November 16th, 2011) stated that 50,000 treatments are administered annually, and monitored by B.C. Medical Practice. The treatments are administered in Vancouver Hospital and Victoria General Hospital, usually by a nurse or physiotherapist.

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The Indoor Tanning Industry in Canada and British Columbia

In Canada, the commercial introduction of indoor tanning began in the early 1980s and is now a \$500 million industry. In British Columbia, there are about 550 tanning facilities, half of which are primarily tanning salons (tanning is their main source of business) and each with 7-8 beds, on average.⁶

The Joint Canadian Tanning Association (JCTA)

The Joint Canadian Tanning Association (JCTA) is “...a national non-profit organization created to increase understanding of the professional tanning industry’s scientifically supported position that regular moderate ultra-violet exposure from sunshine or sunbed in a non-burning fashion is part of a responsible lifestyle that recognizes both the inherent benefits and the manageable risks associated with ultraviolet light exposure.”⁷

The JCTA was founded in 2001 and represents about 1600 salons across Canada. In B.C., it represents about 30% of tanning facilities, which it defines as equivalent to 60% of total gross sales of indoor tanning services for the province. The JCTA has information on its own members’ facilities and has the ability to contact almost every facility in the province, including self-serve facilities, through existing member mailing lists.

The JCTA states the following about its UV tanning clients:

- About 75% are female, as compared to 85% in the 1990s.
- The average age is 30.
- Less than 10% are under 18 years. Most under-18 tanners are seasonal – tanning with families before taking family vacations or tanning for graduations and/or other special occasions.
- Less than 2% are under 16 and come mostly for medical reasons, referred by a physician.
- An estimated 20% of clients come in for therapeutic benefits from UV exposure as their primary reason for visiting a sunbed centre.

The JCTA estimates approximately 10%-12% of the population uses indoor tanning equipment.

The International Smart Tan Network – North America’s educational institute for professional indoor tanning facilities – is a member of the JCTA through its branch office in West Kelowna.⁸ JCTA guidelines require members to have all staff who operate the equipment to be trained and certified (Basic Technical Certification, updated this year to UV Tanning). There are also advanced courses, which include such topics as “Spray Tanning, Red Light Therapy, Customer Service, Sanitation, Sales, Tanning Truth and D-Angel.”

The JCTA promotes skin typing by using the Fitzpatrick classification system (see “Skin Types and UV Radiation” on page 11 for details). The JCTA says “Most indoor tanning clients are Skin Type III, which means skin tans easily but can still sunburn if overexposed.... Skin Type I, the fairest, sunburns easily and is unable to develop a tan.”⁹ Skin Type I individuals are to be excluded from using UV equipment and advised to use non-UV spray tanning.¹⁰

According to the JCTA, the indoor tanning industry is comprised mainly of small business owners. About 2,750 people are employed in rural and large communities across the province. The industry states it pays approximately \$15.3 million in municipal, provincial and federal taxes, and purchases an estimated \$22 million in goods and services from other B.C. companies. The industry predominantly employs women and accommodates a wide range of shifts for women who are mothers, going to school or working full time.

⁶ Canada and B.C. statistics for tanning salons are from Steve Gilroy, JCTA.

⁷ Joint Canadian Tanning Association, About the JCTA, <http://www.tanacanada.org/about.php>.

⁸ Steve Gilroy is Vice President of Smart Tan Canada.

⁹ “News Release: JCTA Launches Canadian ‘Skin Type’ Awareness Program,” *Canadian Newswire*, June 10, 2010, <http://www.newswire.ca/en/story/605169/jcta-launches-canadian-skin-type-awareness-program>

¹⁰ Ibid.

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Regulation, Guidelines and Inspection

Public Health Act¹¹ and Regulated Activities Regulation¹²

The legislative oversight of the tanning industry in B.C. falls under the *Public Health Act* and the Regulated Activities Regulation. The Regulated Activities Regulation establishes by definition that a facility with a tanning bed is a personal service and, as such, subject to the provisions of the *Public Health Act*. The *Public Health Act* places a duty upon operators of personal services such as tanning beds to take reasonable care to prevent health hazards from arising, and respond to health hazards that do arise, including mitigation of harmful effects.

B.C. Guidelines for Personal Service Establishments and Guidelines for Tanning Salon Operators¹³

The Guidelines for Personal Service Establishments have been developed to provide interpretation for the health authorities when implementing the *Public Health Act* and Regulated Activities Regulation.

The Guidelines for Tanning Salon Operators discuss the risks of tanning, provide information on certain cosmetic and medicinal products that increase UV effects, and include a list of general guidelines. The guidelines also recommend that each client sign a declaration of health risks, along with a consent form regarding being exposed to UV radiation. Although the guidelines do not prohibit minors from using tanning beds, they recommend that minors refrain from doing so. However, if a minor insists, the guidelines recommend that operators require minors to obtain written consent from parents. As stated, these are guidelines, not regulation and, therefore, parental consent is not a legal requirement – merely a recommendation.

Inspection

Tanning facilities are inspected by environmental health officers, mainly for health risks associated with infection and infectious disease; maintenance of the tanning beds; use and availability of protective eyewear; and appropriate health/injury warning signage.

Health Canada Guidelines for Tanning Salon Owners, Operators and Users¹⁴

These guidelines were prepared from similar documents published by British Columbia, Saskatchewan and Manitoba. They advise all clients of tanning facilities to discuss the health risks with their physician. In addition, they state that operators should advise clients with sensitive skin who always burn and never tan not to use the tanning equipment, and children under 16 should not use tanning equipment. As with the B.C. guidelines, these are not a legal requirement, merely recommendations.

Federal Radiation Emitting Devices Act and Regulations¹⁵

All brands and models of tanning lamps on the market in Canada must comply with federal regulations under the *Radiation Emitting Devices Act*. Owners and staff of tanning facilities must use equipment that complies with the Radiation Emitting Devices Regulations.¹⁶ The regulations cover a wide range of safety issues, including requirements for warning labels on tanning equipment. Warning labels list the recommended exposure times per session for different skin types, and contain other information that can help enhance safety during exposure to UV radiation.

¹¹ Canada, British Columbia, Ministry of Health, *Public Health Act* [Victoria, B.C.], 2011, http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/00_08028_01

¹² Canada, British Columbia, Ministry of Health, *Public Health Act: Regulated Activities Regulation* [Victoria, B.C.], 2011, http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/161_2011

¹³ Canada, British Columbia, Ministry of Health Services, *B.C. Guidelines for Tanning Salon Operators* [Victoria, B.C.], 2004, <http://www.health.gov.bc.ca/library/publications/year/2004/PHI080.pdf>

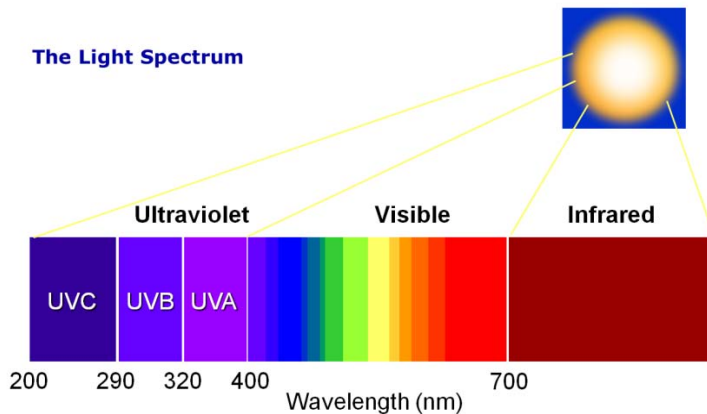
¹⁴ Canada, Health Canada, *Guidelines for Tanning Salon Owners, Operators and Users*, [Ottawa, Ont], 2005, <http://www.hc-sc.gc.ca/ewh-secmt/pubs/radiation/tan-bronzage/index-eng.php>

¹⁵ Canada, Department of Justice, *Radiation Emitting Devices Act*, [Ottawa, Ont], 2011, <http://laws-lois.justice.gc.ca/PDF/R-1.pdf>

¹⁶ Canada, Department of Justice, *Radiation Emitting Devices Regulations* [Ottawa, Ont], 2011, http://laws-lois.justice.gc.ca/eng/regulations/C.R.C.,_c._1370/

Health Impacts

Ultraviolet (UV) Radiation and Human Health



Kang K, et al. Pathophysiology of ultraviolet irradiation; AAD website.

Types of Ultraviolet Radiation

- **UVA** (longest wavelength); can penetrate the middle layer of the skin (dermis).
- **UVB** (shorter wavelength); can penetrate the outer layer of the skin (epidermis).
- **UVC** (shortest wavelength); blocked by the ozone layer and does not reach Earth's surface.
- **UVA** and **UVB** reach the Earth's surface in a ratio of about 95% to 5%.

Exposure to ultraviolet radiation (UV) – from any source – is a known cause of damage to body tissues through prolonged or intense exposure. Tanning is the body's protective response against injury to the skin from UV exposure. When exposed to UV radiation, skin cells in the top layer of skin (epidermis) work to repair the damage and protect the skin. The body produces and releases more melanin (a skin pigment) to absorb the UV, which causes the skin to darken.

UVA causes immediate, short-term tanning – a slight darkening of the melanin that is already in the skin. The amount of tanning increases according to the skin's natural darkness and previous amount of tanning. UVB causes delayed, but long-term,¹⁷ tanning by stimulating the production and distribution of more melanin. In recent years, tanning bed lamps have been produced that emit higher levels of UVB to mimic the solar spectrum and enhance the tanning process.

Both UVA and UVB can cause sunburn (erythema), an often painful inflammation caused by an increase in blood flow beneath the skin. There is evidence that this type of exposure, as well as long-term exposure, is linked to serious forms of skin cancer later in life.

Skin Cancer

UVA and UVB exposure can damage DNA, and both can contribute in different ways to suppression of the immune system, which interferes with the immune system's ability to protect the body against the development and spread of skin cancer. (For details on the types of skin cancer, see the following page.)

Increased Rate of Aging of the Skin

Repeated UVA exposure is known to lead to photoaging: premature skin damage similar to the aging process. This damage is irreversible and includes wrinkling, sagging, blemishes and age spots.

¹⁷ Immediate tanning begins during UV exposure and fades within hours or days, depending on natural skin colour and previous amount of tanning. Delayed tanning occurs two to three days after UV exposure, and lasts from several weeks to months. It is maintained by repeated UV exposure.

Skin Types and UV Radiation

Individual sensitivity to UV radiation varies according to the amount of pigment in the skin and the skin's ability to tan.

Skin type is often categorized according to the Fitzpatrick Skin-Typing Scale. Skin Types I and II are at the highest risk of skin cancer.

Still, skin cancers do occur with darker-skinned groups, and these are often detected at a later, more dangerous stage.

Fitzpatrick Skin-Typing Scale		
Skin Type	Skin Color	Characteristics
I	White, very fair / red or blond hair / blue eyes / freckles	Always burns, never tans
II	White, fair / red or blond hair / blue, hazel, or green eyes	Usually burns, tans with difficulty
III	Cream white, fair / any eye or hair color/ very common	Sometimes mild burn, gradually tans
IV	Brown, typical Mediterranean Caucasian skin	Rarely burns, tans with ease
V	Dark brown, Mid-Eastern skin types	Very rarely burns, tans very easily
VI	Black	Never burns, tans very easily

Skin Cancer

Skin cancer is the most common type of cancer in North America, including Canada. However, it is also one of the most preventable by avoiding exposure to ultraviolet radiation. There are three main types of UV-related skin cancer. **Basal cell carcinoma (BCC)** is the most common (80% of all skin cancers), but also the least serious kind of skin cancer, growing slowly and rarely spreading. **Squamous cell carcinoma (SCC)** (15% of all skin cancers) is more serious than BCC because it does spread to vital organs, albeit slowly. BCC and SCC are highly treatable, with high survival rates.

Malignant melanoma (5% of all skin cancers) is a less common but the most dangerous kind of skin cancer because it may spread quickly from the outer layer of the skin through the lymph nodes or blood to internal organs. About 5,500 Canadians (850 in B.C.) are expected to be diagnosed with melanoma in 2011 and 950 (130 in B.C.) will die of it.¹⁸

Melanoma skin cancer is the third most common form of cancer in Canadian women between the ages of 15-29.¹⁹ There is consistent research showing that exposure to UV radiation, especially in childhood and adolescence,²⁰ plays a key role in the development of melanoma.²¹ Unlike many cancers, the incidence of melanoma is still growing. The incidence of melanoma increased in both Canadian males and females by 1.4% per year between 1998 and 2007.²² In Canada, the lifetime risk of melanoma for men is now 1 in 74.²³ For women, it is 1 in 90.²⁴ In comparison, the lifetime risk of melanoma for North Americans in the 1930s, when having a tan was not fashionable, was 1 in 1,500.²⁵

¹⁸ Canadian Cancer Society, *Canadian Cancer Statistics 2011*, Toronto, Ontario: Canadian Cancer Society.

¹⁹ Canadian Cancer Society, Statistics Canada, *Canadian Cancer Statistics 2009*, Provincial/Territorial Cancer Registries, Toronto, Ontario: Canadian Cancer Society.

²⁰ Philippe Autier and Peter Boyle, "Artificial Ultraviolet Sources and Skin Cancers: Rationale for Restricting Access to Sunbed Use Before 18 Years of Age," *Natural Clinical Practice Oncology*, 5 no.4 (2008), 178. States: "Mitotic activity of melanocytes [proliferation/division of pigment-producing cells] is maximal during childhood and adolescence, because skin surface area increases with growth. A considerable body of...data supports the hypothesis that childhood and adolescence are the key periods of life for initiation of the mechanism involved in the genesis of adult melanoma."

²¹ Gruber and Armstrong, From "Cutaneous and Ocular Melanoma," in *Cancer Epidemiology and Prevention*, ed. Schottenfeld and Fraumeni (New York: Oxford University Press, 2006), 1196-1129.

²² Canadian Cancer Society, *Canadian Cancer Statistics 2011*, Table 4.5, 52.

²³ Canadian Cancer Society, Statistics Canada, *Canadian Cancer Statistics 2009*.

²⁴ Ibid.

²⁵ Ibid.

The Economic Burden of Skin Cancer

In 2004, the total economic burden of skin cancer in Canada was estimated to be \$532 million – the majority being attributable to melanoma (83.4%), and the balance distributed between basal cell carcinoma (9.1%) and squamous cell carcinoma (7.5%). Of the \$532 million, \$66 million (12.4%) is associated with direct costs and \$466 million (87.6%) with indirect costs. Direct costs include primary care, day surgery and hospital care. Indirect costs include lost productive time from mortality and morbidity.²⁶

Treatment costs will likely rise in the future. Five new biologic agents for skin cancer are being developed – four for melanoma, with two likely to be approved in Canada in the next six months. These treatments are very effective in reducing symptoms. A treatment course will likely cost from about \$30,000 to \$50,000 per patient. If there is a positive response – and most patients in the studies have responded positively – the treatment will probably need to be continued, at further cost.²⁷

No studies have been done estimating the economic burden of skin cancer in B.C. alone, nor the contribution of indoor tanning to these costs.

Report of the International Agency for Research on Cancer (IARC)

IARC 2006: Exposure to Artificial UV Radiation and Skin Cancer
“Epidemiologic studies to date give no consistent evidence that use of indoor tanning facilities in general is associated with the development of melanoma or skin cancer. However, there was a prominent and consistent increase in risk for melanoma in people who first used indoor tanning facilities in their twenties or teen years.”

The IARC’s conclusions and recommendations were based on its 2006 meta-analysis of 19 studies conducted over 25 years on the use of indoor tanning equipment. The review, entitled *Exposure to Artificial UV Radiation and Skin Cancer*,²⁸ found evidence of:

- Both UVA and UVB rays causing DNA damage, which can lead to skin cancer.
- An association between indoor tanning and both malignant melanoma and squamous cell carcinoma.
- The risk of melanoma of the skin increasing by 75% when tanning bed use started before age 35.

The IARC study found that getting a tan through indoor tanning provided “practically no photoprotection” from burning due to subsequent sun exposure.²⁹

Childhood exposure to UV and the number of times a child is burnt by UV increases the risk of developing melanoma and the other skin cancers later in life. Therefore, the IARC recommended a ban on tanning bed use by those younger than 18 years.

Intensity of UV Radiation

According to the IARC, “the UV intensity of powerful tanning units may be 10 to 14 times higher than that of the midday sun, leading to UVA doses per unit of time received by the skin during a typical tanning session well above those experienced during daily life or even sunbathing. As a result, the annual UVA doses received by frequent indoor tanners may be 1.2 to 4.7 times those received from the sun, in addition to those received from the sun.”³⁰

²⁶ Canadian Partnership Against Cancer, “The Economic Burden of Skin Cancer in Canada: Current and Projected,” *Canadian Skin Patient Alliance*, 2010.

²⁷ Dr. David McLean, email to Indoor Tanning Working Group, November 2, 2011.

²⁸ IARC Working Group, *Exposure to Artificial UV Radiation and Skin Cancer*, (Lyon, World Health Organization, 2006).

²⁹ IARC, “The Association of Use of Sunbeds with Cutaneous Malignant Melanoma and Other Skin Cancers: A Systematic Review,” *International Journal of Cancer* 120, no.5 (2006): 1116-22.

³⁰ IARC Working Group, *Exposure to Artificial UV Radiation and Skin Cancer*, 5.

The Current Debate over Indoor Tanning

IARC 2006: Exposure to Artificial UV Radiation and Skin Cancer

“Although the available findings are therefore not conclusive, the strength of the existing evidence suggests that policymakers should consider enacting measures, such as prohibiting minors and discouraging young adults from using indoor tanning facilities, to protect the general population from possible additional risk for melanoma and squamous cell carcinoma.”

Acknowledging that there is still more to learn, the major dermatological, cancer and pediatric organizations agree that there is a consistent and strong association between UV exposure and melanoma, and that a precautionary approach should be taken where there is doubt about potentially very serious risks.

The indoor tanning industry and other proponents of indoor tanning are not in agreement with the healthcare organizations on several key aspects of this issue. This includes:

- The extent of the cancer risks and IARC methodology.
- Interpretation of statistics on the incidence of cancer with respect to commercial indoor tanning.
- The health benefits of tanning.
- Teen behaviour and the effectiveness of public education, parental consent and bans.

The following reflects the ITWG’s discussion on these points:

Cancer Risks and IARC Methodology

JCTA Position

The JCTA questions the methodology and conclusions of the IARC study – in particular, the extent of risk associated with exposure to commercial tanning beds that are maintained and operated according to the industry’s best practices, and which take into account skin typing.

The IARC study predicts a 75% increase in incidence of melanoma for young adults under 35, due to tanning bed use. However, the JCTA says the finding is based on a data set from seven studies which, when separated by sunbed location, showed that commercial tanning units led to a nonstatistically significant increase in relative risk³¹ (RR 1.06), compared to home tanning units (RR 1.40) and medical use of sunbeds (RR 1.96).

The JCTA says these figures are within the WHO data, but were not reported by the IARC in its 2009 article in *The Lancet*.³² Additionally, Grant 2010 showed that removing cases from the WHO report with Skin Type I (who the JCTA recommends do not tan in Canadian tanning facilities, but were in the European studies used in this report) completely eliminated any increase in risk in the report.³³

Further information not reported in *The Lancet* article is as follows:

- Lifetime risk for melanoma for all sunbed users (15%) included Skin Type I subjects. Removing them from the data set removed the risk completely.³⁴
- The WHO report showed no increase in basal cell carcinoma risk attributed to sunbeds.
- There was no reference to dosage.

³¹ In this report, “relative risk (RR)” is the risk of developing a disease relative to that of an ambiently exposed group. A relative risk of 1 means there is no difference in risk between the two groups. An RR of more than 1 means the event is more likely to occur in the experimental group than in the control group.

³² F.E. Ghissassi et al., “A Review of Human Carcinogens – Part D: Radiation,” *The Lancet Oncology* 10, no. 8 (2009).

³³ William B. Grant, “Critique of the International Agency for Research on Cancer Meta-Analyses of the Association of Sunbed Use with Risk of Cutaneous Malignant Melanoma,” *Dermatoendocrinology* 1, no. 6 (2010): 294-300, <http://www.landesbioscience.com/journals/dermatoendocrinology/article/11461/>.

³⁴ Ibid.

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- The latest research in the IARC Report shows lower risks than older research for melanoma, other than one.³⁵
- Veierod research used in the IARC report reported that the relative risk (RR) for age 20-29 was 2.58.³⁶ That figure has been updated in a 2010 paper and is now reported as RR of –1.53. That has not been corrected by the IARC group. Also, if the Veierod research had reported all age groups in its data set (0-39), the risk would have been much lower in both years.
- The latest British study from Elliott showed no association between sunbed usage and melanoma.³⁷ The demographic for this paper would be similar to the B.C. population. As reported by Elliott 2011: Age at first use - <25 years - OR 1.16, Age at first use - >25 years - OR 0.98, Ever Use all ages combined - OR 1.06, Years since first use - >14 years - OR 0.9.

BCCA, CCS and CDA Response

Research shows that all types of UV radiation increase the risk of skin cancer. Both the National Toxicology Program and the IARC have concluded that tanning beds and solar radiation are cancer causing.

The IARC findings are based on a body of peer-reviewed evidence, not individual research. According to the IARC report, UV radiation is a known carcinogen, and risk increases with exposure. Tanning bed use increases a person's lifetime exposure to UV radiation and risk for skin cancer.

With respect to basal cell carcinoma, the IARC study did not support an association with the use of indoor tanning facilities. However, the IARC study pointed out that "... the fashion of indoor tanning is still very recent. Associations after long latency periods, such as may be expected for melanoma and basal cell carcinoma, may not yet be detectable."³⁸

While it is preferable that Skin Type I people do not use tanning equipment, there is no evidence in B.C. that they avoid indoor tanning. Also, fair-skinned people are more likely than darker-skinned people to seek a tan.³⁹ Since commercial tanning is mainly cosmetic, the benefit – considering the skin cancer risk – is nonexistent.

A 2008 audit of indoor tanning facilities in Toronto, undertaken by the Canadian Cancer Society, showed overwhelmingly that indoor tanning salons were not adhering to Health Canada's voluntary guidelines for youth.⁴⁰ For the survey, researchers visited 79 indoor tanning facilities across Toronto. Findings included:

- 60% of tanning facilities did not ask the age of minors.
- When the researcher's age was revealed, 51% of facilities would have let researchers under the age of 16 use the equipment.
- 60% of tanning facilities did not identify that the researcher had Type I skin that burns and never tans.
- 99% of tanning facilities did not recommend against tanning for Skin Type I researchers.
- Only 12% of facilities visited were reported to have the Health Canada voluntary guidelines posted in an area that could be seen by the researchers.
- 96% of personnel operating the tanning facilities did not communicate with the researchers about Health Canada's guidelines.
- 87% of facilities did not have the Health Canada Ultraviolet Radiation labels posted on their tanning equipment.

³⁵ Marit Bragelien Veierod et al., "A Prospective Study of Pigmentation, Sun Exposure, and Risk of Cutaneous Malignant Melanoma in Women," *Journal of the National Cancer Institute* 95, no. 20 (2003): 1530-1538.

³⁶ Ibid.

³⁷ Faye Elliott et al., "Letter to the Editor: Relationship between Sunbed use and Melanoma Risk in a Large Case-Control Study in the United Kingdom," *International Journal of Cancer*, August 30, 2011.

³⁸ IARC Working Group, *Exposure to Artificial UV Radiation and Skin Cancer*, 49.

³⁹ Joni A. Mayer et al., "Adolescents' Use of Indoor Tanning: A Large-Scale Evaluation of Psychosocial, Environmental and Policy-Level Correlates," *American Journal of Public Health* 101, no. 5 (2011): 930-938.

⁴⁰ The Toronto study of tanning facilities was conducted by the CCS Ontario Division in December 2007, with results analyzed during the first quarter of 2008. Three different types of researchers visited 79 indoor tanning facilities across Toronto: under-aged youth, and fair-skinned and olive-skinned youth. Researchers were not told the study was being conducted by the Canadian Cancer Society in order to keep results unbiased. At no point during the study were researchers exposed to ultraviolet radiation. The study, conducted by marketing research company Youthography, has a confidence interval of 95% (19 times out of 20).

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Cancer Statistics

JCTA Position

The JCTA questions the interpretation of the Canadian Cancer Society's statistics. Although the incidence of melanoma is still increasing in Canada,⁴¹ the rate of the increase has slowed. The JCTA's position is that if there were an increased risk of melanoma from indoor tanning, it would be reflected in the data.

CCS trends in incidence and mortality for Canadians before and after the establishment of indoor tanning facilities in Canada in the mid-1980s include:

- Between 1970-1986, annual increase in incidence: 6% males/4.6% females.⁴²
- Between 1989-1996, annual increase in incidence: 2.7% males/1.6% females.⁴³
- Between 1998-2007, annual increase in incidence: 1.4% males/1.4% females.⁴⁴

No data exists that shows a direct link between indoor UV tanning facilities and skin cancer rates in British Columbia.

The JCTA also points out the following statistics: While overexposure to UV radiation should be avoided, it should be noted that UV radiation exposure is a minor contributor to the world's disease burden, causing an estimated annual loss of 1.6 million DALYs (disability adjusted life years); i.e., 0.1% of the total global disease burden. A markedly larger annual disease burden, 3.3 billion DALYs, might result from reduction in global UV radiation exposure to very low levels.⁴⁵

BCCA, CCS and CDA Response

There are a number of possible explanations for the lower rate of increase in melanoma. These include sun safety education and a resulting change in sun-exposure behaviours (e.g., using sunscreens and covering up) and a changing demographic (i.e., a higher proportion of darker-skinned people in the B.C. population in recent years). At the same time, it should be reiterated that the incidence of melanoma is still increasing (as outlined in the Skin Cancer section on page 11) and this is of serious concern.

Also, skin cancer can take many years to develop. Basal cell carcinoma, for example, takes 40 years on average. Therefore, it is difficult to attribute the degree of risk posed by commercial tanning beds as they have only been in widespread use since the 1980s.

All developing countries do not collect broad health data; therefore, statistics and information on global disease burden do not exist. Oral vitamin D is recommended in situations where there is a lack of vitamin D production as a result of too little UV light exposure from the sun.

Health Benefits

Indoor Tanning: An Effective Way to Acquire a Healthy Tan?

JCTA Position

Members of the JCTA promote their services as a way to acquire and/or maintain a tan. Tanning equipment is in a controlled environment, whereas outdoor exposure is not. JCTA indoor tanning operators are trained to identify the client's skin type to determine if he/she can tan and, if so, what the incremental exposure times should be, based on the manufacturer's recommendation. Health Canada recommends that the first exposure be at 100 J/m² as a test session. This permits the delivery of consistent, nonburning dosages of UV radiation

⁴¹ Canadian Cancer Society, *Canadian Cancer Statistics 2011*, Table 4.5, 52, states: the incidence of melanoma has increased in both Canadian males and females by 1.4% per year in the past decade between 1998 and 2007. The incidence of melanoma has increased in both Canadian males and females by 1.4% per year in the past decade between 1998 and 2007.

⁴² Canadian Cancer Society, "Special Topics: Smoking and Lung Cancer, Cancer in Inuits and Indians," 1991, Toronto, Ontario: Canadian Cancer Society, 30.

⁴³ Canadian Cancer Society, *Canadian Cancer Statistics 2001*, 44.

⁴⁴ Canadian Cancer Society, *Canadian Cancer Statistics 2011*, Table 4.5, 52.

⁴⁵ Robyn M. Lucas et al., "Estimating the Global Disease Burden Due to Ultraviolet Radiation Exposure," *International Journal of Epidemiology* 37, no.3 (2008): 654-667, doi:10.1093/ije/dyn017.

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to allow the client to gradually build up a tan. The JCTA recommends that those who are Type I not use UV tanning equipment.

BCCA, CCS and CDA Response

The concern shared by the BCCA, CCS and CDA is that there is no safe way to get a tan. Tanned skin is damaged skin. Besides the risk of skin cancer, indoor tanning can contribute to photoaging. In addition, the UV intensity of powerful tanning units may be 10 to 14 times higher than that of the midday sun.⁴⁶

Indoor Tanning: Provides a Protective Base Tan?

JCTA Position

The indoor tanning industry states that acquiring a base tan by indoor tanning can offer natural protection from the sun's ultraviolet radiation. A self-published study⁴⁷ suggests that by exposing people to the maximum intensity recommended by Health Canada and the U.S. Food and Drug Administration (FDA), the sun protection factor (SPF) of a base tan acquired through indoor tanning rises to 6.

BCCA, CCS and CDA Response

Although a base tan may produce some natural protection against the sun's UV radiation, it has been estimated that an indoor tan offers the same sun protection factor (SPF) of only 2-3, which is not adequate sun protection.⁴⁸ In addition, a base tan is created only at the expense of further skin damage, some of which will be permanent and additive damage to DNA. The protection thus created is mainly an illusion of protection, at a cost of permanent damage. An SPF of 30 is the minimum sunscreen recommended, and most dermatologists recommend even higher SPFs.

Indoor Tanning: A Healthy and Effective Way to Produce Vitamin D?

JCTA Position

The JCTA position is that "Vitamin D production is one of the benefits that has been associated with human exposure to ultraviolet-B (UVB) emitted in sunlight and by an estimated 90% of commercial indoor tanning equipment. While the North American indoor tanning industry conducts indoor tanning as a cosmetic service, an undeniable physiological side-effect of this service is that indoor tanning clients manufacture sufficient levels of vitamin D as a result of indoor tanning sessions. Because there is mounting evidence that vitamin D deficiency is prevalent in Canadian society, and because of Canada's northerly latitude which makes natural vitamin D production outdoors impossible six months of the year, the benefit of this side-effect from cosmetic tanning deserves due consideration." For more information, see Mason 2010.⁴⁹

The JCTA has provided studies stating that indoor tanning is the best possible surrogate for sun exposure and the natural, biologically intended way to develop vitamin D. Also, studies have shown a link between higher levels of Vitamin D and a reduced cancer risk.⁵⁰

BCCA, CCS and CDA Response

It is agreed that Canadians need vitamin D supplementation for bone health. Other health benefits often touted by tanning advocates, including the reduction of the risk of various cancers, are unproven. Due to lack of outdoor UV exposure, the body cannot manufacture vitamin D for more than half of the year. Health Canada recommends a daily intake of 600 IU of vitamin D for people from nine to 70 years of age. Milk has 100 IU of vitamin D per glass, salmon 400 IU per 4 oz, and cod liver oil 1300 IU per tbsp.

⁴⁶ IARC Working Group, *Exposure to Artificial UV Radiation and Skin Cancer*, 5.

⁴⁷ Don L. Smith, "Skin Damage Prevention: (Artificial) Sunscreen vs. (Natural) Facultative Pigmentation," Self-Published Article, July 14th, 2011.

⁴⁸ European Commission, Health and Consumer Protection Directorate-General, Scientific Committee on Consumer Products, Opinion on Biological Effects of Ultraviolet Radiation Relevant to Health with Particular Reference to Sunbeds for Cosmetic Purposes (2006), 6.

⁴⁹ Joint Canadian Tanning Association, Ultra-Violet Introduction, <http://www.tancanada.org/info.php>

⁵⁰ R.S. Mason et al., "Photoprotection by 1 α ,25-Dihydroxy Vitamin D and Analogs: Further Studies on Mechanisms and Implications for UV-Damage," *The Journal of Steroid Biochemistry and Molecular Biology* 121, no. 1-2 (2010): 164-168.

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A 1000 IU vitamin D3 tablet costs less than 1 cent per day. If people need more vitamin D than the sun can provide (e.g., because they live in northern regions) this should be supplemented through diet rather than indoor tanning. There are safer ways to get vitamin D. The Mason study referenced above by the JCTA did not recommend indoor tanning as a way to increase vitamin D levels.

Indoor Tanning: A Way to Help People Suffering from Seasonal Affective Disorder (SAD)?

JCTA Position

The JCTA emphasizes that some practitioners have found positive results between indoor tanning and SAD treatment. It adds that the positive results are due to UV exposure (which triggers endorphin production in the skin), rather than ocular exposure to white light, as many in the dermatology industry state.⁵¹ Many tanning clients in Canada visit salons for this reason. But as indoor tanning is a cosmetic service, the tanning facility promotes itself as a cosmetic industry and sets its exposure protocol based on cosmetic tanning.

BCCA, CCS and CDA Response

Light therapy can be effective in treating Seasonal Affective Disorder (SAD). However, SAD treatment requires either bright-white light with various visible-light wavelengths or blue light with a wavelength of about 460 nm – not UV light with wavelengths of 400 nm and below, as found in tanning beds. Unlike UV exposure from tanning beds, the bright visible light needed to treat SAD is not cancer causing. Tanning beds are a high-risk way to treat SAD.

Teen Behaviour

The mass media has a powerful influence on youth and the choices they make. Tanned skin, often called “a healthy glow,” is widely accepted as an attribute of health and beauty. Using UV indoor tanning equipment to tan artificially during months of the year when natural sunlight is not strong enough to darken skin has become popular.

Public education campaigns, such as Sun Smart, have been broadly implemented to raise awareness about the risks of UV exposure. Although this has been effective for many age groups, research shows that the message has not reached everyone, such as younger females who are particularly concerned about their body image. For example, one study stated that “although intellectually, young people (particularly females) realize that tanning may not be healthy for them, they continue to expose themselves to dangerous ultraviolet rays.”⁵²

Youth are heavily influenced by their peers in the choices and decisions they make. Peer pressure to fit into a clique or group of friends is heavily based on how they dress, act and look, which may include going to an indoor tanning facility.

Youth may not always have the experience and judgment to make decisions in their own health interest – especially when the adverse health impacts, such as skin cancer, may not show up for years. This is one of the reasons that society has restricted minors’ access to cigarettes and alcohol. Tobacco smoke and UV radiation from indoor tanning are both classified by the IARC as known carcinogens.

The effectiveness of parental consent as a deterrent has been reported by several studies as low because minors may find ways to get what they want through forged signatures or other means.⁵³ Also, it may be easier to obtain parental consent from mothers who indoor tan themselves. Research has shown that mothers may be the first to introduce their children to indoor tanning.⁵⁴

⁵¹ Dr. Norman Rosenthal, “NIH Research Workshop on Risks and Benefits of Exposure to Ultraviolet Radiation and Tanning,” Workshop, Bethesda, Maryland, September 16 to 18, 1998.

⁵² R Ashinoff et al., “Teens and Tanning Knowledge and Attitudes,” *Journal of Clinical and Aesthetic Dermatology*, 2, no. 2 (2009): 48-50, <http://www.ncbi.nlm.nih.gov/pubmed/20967182>

⁵³ Z Bagdasarov et al. “Indoor Tanning and Problem Behavior,” *Journal of American College Health* 56, no.5 (2008): 555-561, <http://www.ncbi.nlm.nih.gov/pubmed/18400668>

⁵⁴ Mary Kate Baker et al., “The Effect of Initial Indoor Tanning with Mother on Current Tanning Patterns,” *Archives of Dermatology* 146, no.12 (2010): 1427-1428.

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It also should be noted that in our society many parents find it challenging to say “no” to their children’s requests, especially when the parents are unaware of the risks themselves and subject to the same media influences.⁵⁵ Research has shown little difference in the tanning behaviour of teens in states with parental consent laws compared to those without.⁵⁶

Jurisdictional Review

Many jurisdictions in Canada and across the world have set limits on indoor tanning by minors. These include bans, parental consent forms; mandatory operator training; licensing and registration of tanning beds; restrictions on advertising, tanning sales; types of equipment; frequency of use; mandatory health warnings and signage; and the imposition of tanning service taxes.

Canada

In Canada, commercial indoor tanning has been banned in Nova Scotia for minors under 19 and in the Capital Regional District (Greater Victoria) for those under 18. Manitoba recently introduced legislation to require parental consent for minors under 18.

Manitoba’s regulation for parental consent under 18 will come into force after a working group completes the parental consent form and warning signs. This should be completed by the end of 2011. Parental presence and consent will be required for each tanning session for minors under the age of 16. Parental consent for individuals between 16 and 17 will be valid for a specific number of sessions. The consent form will also include a fact sheet to educate clients on indoor tanning. This was prompted after the WHO reclassified indoor tanning as a Group 1 carcinogen.

Other Jurisdictions

Numerous European jurisdictions have banned indoor tanning for minors under 18 including Austria, Belgium, Germany, Ireland, the United Kingdom, Finland, Portugal, Norway, Scotland, Spain, Sweden and France. France also regulates the type of tanning equipment that is available publicly (outlawing coin-operated beds) and requires that tanning beds be registered with its national health authorities. Australia has banned people under 18 and those with Skin Type I from indoor tanning, while Brazil has banned all indoor tanning services and equipment.

In the United States, a number of jurisdictions have limited indoor tanning bed access. Most recently, California has moved from parental consent to banning minors under 18 years from indoor tanning. This was prompted after the WHO reclassified indoor tanning as a group 1 carcinogen.

Penalties include fines up to \$2,500 per day and criminal misdemeanor for more grievous offences. Six states ban minors under the age of 14, two states ban minors under 16, while Texas has banned tanning for minors under 16.5 years. An additional 30 states require parental consent for minors under 18 and 16. The United States recently implemented a 10% tax on all tanning services.

For more details see Appendix 4: Jurisdictional Scan.

⁵⁵ Dr. David McLean (BCCA/CDA) noted in the ITWG meeting of Nov. 7, 2011 that he has had parents bring their teens to him to try and talk the teens out of tanning.

⁵⁶ Joni A. Mayer et al., “Adolescents’ Use of Indoor Tanning: A Large-Scale Evaluation of Psychosocial, Environmental and Policy-Level Correlates.”

Potential Regulatory Actions

The ITWG discussed a number of potential actions to protect minors:

1. Age Ban
2. Mandatory In-Person Parental Consent Forms (Only Relevant if a Ban Is Not Implemented)
3. Provincially Approved Mandatory Operator Training
4. Require Tanning Beds to Be Controlled by an Onsite Trained Operator; Ban Self-Serve Unmanned Machines
5. Additional Signage and Mandatory Health Risk Fact Sheet/Informed Consent
6. Tanning Equipment Registry
7. Licence to Operate
8. Mandatory Client Record Keeping for Minors (Only Relevant if a Ban Is Not Implemented)
9. Regulation of Exposure Times and Frequency (Only Relevant if a Ban Is Not Implemented)
10. Tanning Service Tax
11. Restrictions on Advertising and Promotion of UV Indoor Tanning to Minors
12. Prohibit Misleading Medical and Health Claims

1. Age Ban

Youth are legally banned from a number of activities in B.C. because of the activities' negative impact on human health. These include driving, smoking and drinking. The rationale is either that the activity is more harmful to youth because they are more susceptible to the harm (e.g., because their growth process has not been completed) or it is believed that youth do not possess the judgment and experience necessary to make an informed choice – and to understand the long-term health outcomes of their decisions.

There is some debate over the most appropriate age to apply youth bans. Other jurisdictions that have banned youth from using indoor tanning have selected several ages, such as 14, 16, 18 and 19. The CRD bylaw bans minors under the age of 18. The UBCM resolution – as well as the policy positions of the BC Cancer Agency, Canadian Cancer Society, Canadian Dermatology Association, BC Medical Association and Medical Health Officers of BC – calls for a ban for minors under the age of 18.

For certain medical conditions, such as psoriasis, doctors may prescribe UV treatment for youth, if there are no alternative, cost-effective treatments available and the benefits of UV treatment outweigh the risks. Generally, this treatment is performed by medical staff in an approved medical setting. However, in certain regions that do not have ready access to medical treatment, independent tanning facilities may be the only option. A medical exemption would be required with a youth ban.

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Advantages

- Simplest and most cost-effective action to protect minors.
- Research has shown bans to be the most effective deterrent.
- Experience in other jurisdictions (e.g., California), has shown high rates of industry compliance with the law, with minimal on-the-ground compliance and enforcement required.
- A ban would emphasize the seriousness of unnecessary UV exposure and possibly result in a cultural shift and change long-term behaviour

Disadvantages

- Some reports suggest that bans have resulted in increased use of home tanning equipment, which has no operator supervision or controls on exposure times.
- Industry support is minimal. JCTA is only supportive of an age ban under the age of 14.
- Industry has indicated that employees under 18 may lose/quit jobs.

ITWG RECOMMENDATION: Consensus not reached.

2. Mandatory In-Person Parental Consent Forms (Only Relevant if a Ban Is Not Implemented)

The B.C. Guidelines for Tanning Salon Operators recommend that operators require minors to obtain written parental consent. As this is not a legal requirement, there is no monitoring, and it is not known how many facilities require parental consent.

This guideline could become a regulatory requirement. Manitoba is in the process of implementing a regulation requiring parental consent for minors under 18, which will come into force once the working group completes the parental consent form and warning signs. Parental presence will be required only for youth tanning under the age of 16.

In-person parental consent requirements would require that tanning facilities keep client records for minors, with the documented parental consent. Auditing the client records of tanning facilities and relying on a complaint-driven process could be utilized for compliance.

Advantages

- Would ensure parents are aware of and supportive of their children's activities.
- Would place the onus of limiting teen tanning on the parents and operators.
- Youth exposure to UV radiation from tanning beds remains a family issue and decision. Preserves public's right to choose.

Disadvantages

- Research shows no difference in tanning behaviour of teens in states with parental consent laws.
- Might not be effective, as some research suggests many teens are introduced to tanning by their parents.
- Parents might feel pressured by their teens to provide permission.
- Enforcement could be onerous.
- Groups currently calling for a ban will continue to pressure the government to do so.

ITWG RECOMMENDATION: Consensus not reached.

3. Provincially Approved Mandatory Operator Training

There is currently no government-required training for operators of tanning equipment. Industry-sponsored Smart Tan training is widely available and can be done in-person or online. The JCTA encourages its members to take the Smart Tan training. Completing the training is also a requirement for obtaining insurance coverage. The National Tanning Training Institute (NTTI) also offers training in Canada.

A provincially approved operator-training course (for indoor tanning equipment) could be developed that would build on existing industry training programs. The course would deal with health impacts from indoor tanning, as well as sanitation. All owners and operators of tanning equipment could be required to complete this course. Industry is fully supportive of this action.

Advantages

- Consistent training would ensure a base level of knowledge for all operators, and protection for users of tanning equipment.
- The requirement of time and effort might dissuade small, “problem” operators from continuing.
- All age groups – not just minors – would benefit, as this requirement is not specific to minors.
- Industry could work with government to convert existing industry-certification program.

Disadvantages

- Could be costly and time consuming to develop and implement the provincially approved training program.
- Additional training costs (probably minimal) for tanning facility owners and operators.

ITWG RECOMMENDATION: Require provincially approved training for all owners and operators of tanning equipment.

4. Require Tanning Beds to Be Controlled by an Onsite Trained Operator; Ban Self-Serve Unmanned Machines

Self-serve units are operated by the customer without supervision, merely by inserting money or swiping a pre-loaded card into the machine. They are mostly found in Europe. In Canada, self-serve units make up a small part of the commercial tanning industry and are mostly located in fitness centres and laundromats. They are legally allowed in British Columbia, but there is no official record of their number or location. In most cases, the self-serve machines currently in B.C. are a secondary source of limited income for the business owner.

Since staff are not present at the site operating the equipment, there is no ability to control who uses the equipment or exposure times, and no information is provided on safety measures and recommended precautions.

For approximately \$500, self-serve machines can be retrofitted to be controlled by the operator. Owners of self-serve machines may need to be identified and consulted.

Self-serve units could be banned in B.C., and it could be mandatory that all tanning beds be controlled by onsite trained operators. The required training would need to be provincially approved.

Advantages

- Would allow for access and exposure times to be controlled.
- All age groups – not just minors – would benefit, as this requirement is not specific to minors.

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- Would remove public health risk regarding absence of sanitation process between each individual use.

Disadvantages

- Businesses currently providing this self-serve equipment could be negatively impacted financially.
- Would require the development of a provincially approved operator-training program.

ITWG RECOMMENDATION: Require tanning beds to be controlled by an onsite trained operator; ban self-serve unmanned machines.

5. Additional Signage and Mandatory Health Risk Fact Sheet/Informed Consent

Current B.C. guidelines recommend that tanning facilities post UV-radiation warning signs approved by the local medical health officer in the tanning bed area and client reception area. This recommended guideline could be made mandatory in a regulation.

Additional health risk information in a one-page fact sheet could be produced by the Ministry of Health with the involvement of the Canadian Cancer Society, BC Cancer Agency, Canadian Dermatology Association and the indoor tanning industry. This fact sheet would provide basic information on the health risks associated with UV exposure from using indoor tanning equipment. It could be mandatory that all tanning facilities distribute this fact sheet to clients. The fact sheet could require clients to sign that they have received and read the information, providing an informed consent.

Advantages

- Additional information on the risks might motivate people to limit their exposure to all forms of UV radiation – both from indoor tanning equipment and the sun.
- Relatively inexpensive and easy to implement.
- All age groups – not just minors – would benefit, as this requirement is not specific to minors.

Disadvantages

- Might not provide additional benefits. Some evidence suggests that knowledge of risks does not necessarily affect teen behaviour with regard to tanning.⁵⁷
- Additional costs (probably minimal) for tanning facility owners and/or the Ministry of Health associated with production and distribution of the fact sheets and signs.

ITWG RECOMMENDATION: Require UV-radiation warning signs to be posted in all tanning facilities and a health risk fact sheet distributed to all potential clients.

6. Tanning Equipment Registry

There is no official provincial registry of tanning equipment in the province. The JCTA has information on the majority of equipment/facilities in the province. The health authorities, through their inspection responsibilities, have visited or have information on most facilities.

If all owners of commercial tanning equipment were required to register their equipment with a provincial registry, it would be possible to know where equipment is located, and target education and enforcement actions more appropriately. This would also serve to regulate the use of tanning equipment that does not meet government standards.

⁵⁷ J. Matthew Knight et al., "Awareness of the Risks of Tanning Lamps does not Influence Behaviour among College Students," *Archives of Dermatology* 138, no. 10 (2002): 1311-1315, <http://archderm.ama-assn.org/cgi/content/full/138/10/1311>

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Advantages

- Would provide information that could enable better enforcement.
- All age groups – not just minors – would benefit, as this requirement is not specific to minors.

Disadvantages

- Could be costly and time consuming to implement.
- Other registries have had difficulties keeping information up to date.

ITWG RECOMMENDATION: More analysis needed. Not supported at this time.

7. Licence to Operate

Health authorities inspect tanning facilities for compliance with the *Public Health Act* and Regulated Activities Regulation, but do not license them. Business licences are obtained from the local government in which the tanning facility is located. Some municipalities have robust licence-application referral systems, whereby local health officials are notified of tanning facility licence applications. However, this is not a consistent or mandatory process.

A licensing system could be established whereby health authorities would license tanning facilities, similar to their licensing of restaurants and abattoirs. This would likely be in addition to the business-licensing process of local governments. The system could be based on a cost-recovery model, and a condition of licensing could be that owners and operators complete provincially approved training. The indoor tanning industry would support this if costs were minimal.

Advantages

- All facilities would be known to the health authority, making enforcement easier.
- Could provide a mechanism to ensure owners and operators were trained.
- Expectations regarding protection for minors could be clearly laid out in the conditions of licence.
- All age groups – not just minors – would benefit, as this requirement is not specific to minors.
- The industry would to some extent self regulate, as unlicensed facilities would likely be reported by competitors.

Disadvantages

- Could be costly and cumbersome to implement for government/health authorities. Staffing resources to review and inspect new facilities could be significant.
- Could be difficult to identify and license all existing facilities.

ITWG RECOMMENDATION: Implement a provincial tanning-equipment licensing framework, if it can be achieved with minimal cost to operators and the B.C. Government/health authorities.

8. Mandatory Client Record Keeping for Minors (Only Relevant if a Ban Is Not Implemented)

Generally, client record keeping by personal service establishments is useful when invasive services are performed, as individuals who may have been exposed to infection can be contacted directly. The JCTA recommends its members keep records on all clients, not just minors. These records are the property of the business owner, but not passed on to the B.C. Government or health authorities for review or inspection.

The ITWG only addressed client record keeping for minors because client record keeping for all clients was viewed as outside its mandate.

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Client record keeping for minors could become a regulatory requirement, with the B.C. Government /health authorities able to access and review all records on demand. These records would document parental consent and the UV-exposure dose (frequency and intensity). The client records would be a tool in enforcing indoor tanning facility compliance with potential parental consent or exposure-limit requirements.

Advantages

- Would assist enforcement.

Disadvantages

- There might be privacy concerns.
- Time consuming and costly to maintain, review and inspect client records.

ITWG RECOMMENDATION: Mandatory client record keeping for minors – if a ban is not implemented.

9. Regulation of Exposure Times and Frequency (Only Relevant if a Ban Is Not Implemented)

Skin cancer risk increases with exposure to UV radiation. Limiting potential damage requires restricting exposure. Health Canada guidelines state that all pieces of tanning equipment are required to carry specific information about first and maximum exposure times, based on the client's skin type.

The exposure a client faces outside an individual facility is impossible for a tanning facility operator to know or control. However, there could be regulatory restrictions on the time between tanning sessions for each client at a particular facility, thereby limiting exposure. This would also serve to educate the client that further exposure (e.g., outdoor tanning or using another indoor tanning facility) would be unhealthy. For example, tanning sessions must be at least 48 hours apart. Client record keeping would be required to monitor compliance with the regulatory exposure limits.

Advantages

- Might educate the client that UV exposure has real potential health risks.
- Would create a benchmark maximum-exposure limit for all facilities, potentially reducing the amount of skin damage created industry-wide.

Disadvantages

- It would be impossible to monitor exposure times if a client was using more than one tanning facility without disclosing this information.
- Would create a requirement for record keeping that could be onerous.

ITWG RECOMMENDATION: Regulate exposure limits and include with mandatory record keeping – if a ban is not implemented.

10. Tanning Service Tax

In the United States, under the *Affordable Care Act*, a 10% tax on tanning services was enacted in July 2010. The tax is collected from tanning service providers on a quarterly basis and is applied on purchases of tanning services. The principle behind the tax is deterring the public from purchasing such a service for the purpose of vanity. The service is exempt from the indoor tanning services tax if performed by a licensed medical professional on the medical professional's premises.

B.C. could select a similar option in an attempt to deter minors and/or the general public from purchasing tanning services.

