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Dear Members of the Joint Committee on Public Health:

I am a Dermatologist and Pediatrician employed by the UMass Memorial Medical Group. I serve as a volunteer member of the Boards of Directors of both the Massachusetts Academy of Dermatology and the Melanoma Foundation of New England. I am writing to you to express my views and the views of the Boards that I serve about tanning beds in support of S. 903.

I have been a Dermatologist for more than 20 years. I live and practice Dermatology in Westboro, where I see about 40 adults and children each day. I, as well as many of my Pediatric and Dermatology colleagues, have cared for patients who have experienced a variety of problems associated with tanning beds. Although it would be my personal preference to see tanning beds banned altogether, I feel that many of my concerns about tanning beds are addressed in Senate Bill 903 and urge you to support the bill.

My first concern is that tanning beds can cause burns. More important than the pain they cause, every sunburn doubles a person's chance of developing skin cancer. Twenty to twenty-five % of Americans get skin cancer, and the major risk factor for getting skin cancer is having burns. We have no accurate data on how many people get burns from tanning booths, because there is no requirement to report tanning bed related burns or other side effects to the Dept of Public Health or any other safety organization. Two years ago, I surveyed members of the Massachusetts Academy of Pediatrics. Many Pediatricians had patients who were burned in a tanning booth in the previous year. One of the responding Pediatricians detailed severe, blistering burns covering 70% of a child's body after using a tanning bed.

People can burn in tanning booths for a variety of reasons:

- a. People with very fair skin may not have the ability to tan.
- b. The tanning bed lights emit primarily Ultraviolet A (known as UVA) light, which causes tanning of the skin. However, in recent years tanning bed salons choose bulbs that also emit Ultraviolet B (known as UVB) light in order to give the patron a more natural looking tan. UVB light causes burning.
- c. Some people stay in the tanning bed too long. This can happen when people fall asleep in the beds and no one else is monitoring them, when the timer that is set malfunctions, or when a person chooses to set the timer for too long.
- d. Some medications make people more sensitive to both UVA and UVB light. This increases their chances of burning in tanning beds. Virtually all of the antibiotic pills and some of the creams we use to treat teenage acne have this effect.

My second concern is that tanning beds can cause eye damage, including cataracts and macular degeneration, if a person does not shield their eyes properly. Goggles are supposed to be worn while a person tans in a tanning bed. However, many tanning bed clients don't wear goggles because they want their eyelids to be tanned. To avoid the problem of getting white lines, a few of my patients have told me that the operator of the tanning bed told them to just take the goggles off and keep their eyes closed. One of my patients, who used tanning booths extensively while in her twenties and thirties, described how she burned her eyelids several times a week to keep her tan even. Now in her forties, she has already been operated on for cataracts and has macular degeneration.

I have also treated her for precancerous growths near her eyes. The reality is that once a person is in a tanning bed it is impossible for the tanning bed operator to know whether or not the client is actually wearing goggles.

Teens in particular are more focused on what looks good to them now rather than on what could harm them later in life. Last year a Massachusetts Pediatrician reported to me that one of their patients had severe eye damage from exposure to 300 times the recommended dose of tanning bed light.

My third concern is infections: Epidemics of warts and herpes have been reported in tanning salons. Tanning beds are supposed to be cleaned between clients. However, this is not consistently done. One of my patients works in a hair salon with a tanning booth in the back. Her boss has told her that she should not stop cutting a person's hair when someone wants to use the tanning booth. She just hands clients the key to the booth, so they can let themselves in, set the booth to their own specifications, and let themselves out. When she takes a break from hair cutting, and also at the end of the day, she cleans the booth. Every day she cleans gum and variety of other partly eaten foods in the booth. People sweat in tanning booths. Should anyone, let alone your daughter, have to lay down or stand on a surface that has been touched by many other sweating bodies that day without being cleaned?

My fourth concern is that tanning is part of a risk-taking behavior pattern. Many people believe they look thinner when they are tan. Many studies as well as my own experience as a dermatologist tells me that even people who have had skin cancer and have given up tanning still feel they look better when they are tan. A number of studies have documented that teenagers who tan often engage in other risky behaviors such as smoking, binge drinking, and anorexic eating patterns. Some of my patients who previously used tanning beds have described how hard it was to give up the beds. They describe themselves as having been addicted to them. Both adults

and children who come to my office obviously tanned from regular tanning lie and say they have not been, or have not been there often. When tanning salons advertise unlimited tanning for a fixed price, especially prior to high school proms, it encourages people to feed their addiction in their quest for what they view as an ideal appearance.

My fifth concern about tanning beds relates to skin cancer. I diagnose somewhere between fifteen and thirty new skin cancers in my patients each week. More than one million new skin cancers are diagnosed each year in the US. The FDA labels ultraviolet light as a carcinogen. Several studies over the last few years have shown that the rates of certain types of skin cancer in patients who use tanning beds regularly are 2-3 times higher than age-matched controls who do not use tanning beds. Another study showed that women who use tanning beds once a month have 55% more melanomas, the deadliest form of skin cancer. The tanning bed industry argues that it could be outdoor tanning that is causing the skin cancers. The problem is that ultraviolet light damage is cumulative. This means that our skin remembers every time we damage it. It doesn't matter whether we damage it tanning outside or in a tanning booth. Ultraviolet A, the main kind of light emitted by tanning beds, damages the DNA at the base of the epidermis in our skin. This is where almost all melanomas begin. The UVB emitted by the bulbs causes DNA damage to the epidermis. Damaging DNA causes cancer, and children who damage their skin's DNA are especially susceptible to skin cancer later in life. The rate of skin cancer in children has quadrupled in the last five years. Melanoma rates are rising exponentially in the US, and Massachusetts now has the tenth highest rate of melanoma in the nation. A person dies of melanoma in the US every 55 minutes. According to the American Academy of Dermatology, the cost of treatment of nonmelanoma skin cancers in 2004 was 1.5 billion dollars. If we include treatment of melanomas and extrapolate to 2007 dollars, it is likely that we will spend close to 2 billion dollars treating skin cancer in the US this year.

Some may argue that tanning beds provide an easy way for New Englanders to get Vitamin D. Sunlight does help us to metabolize Vitamin D into a form that promotes the absorption of calcium into our bones to help prevent osteoporosis. However, it is only UVB light that does this. UVA light, the primary spectrum of light put out by tanning beds, does not help with Vitamin D deficiency or osteoporosis. Furthermore, exposing a small part of your body, such as your hands, to natural sunlight for 20-30 minutes a week will provide all of the vitamin D that your body can absorb through sun exposure. Exposing your body to more natural or artificial light will substantially increase your risk of skin cancer without providing any benefit.

According to the tanning bed industry, there are over 30 million tanning bed users in the US each year, and at least 25% of them are teenagers. This industry generates 6 billion dollars annually in the US. One of my patients, who owns a few tanning salons, boasted to me that he has made more than a million dollars profit from owning tanning salons over the last three years, and that he never even has to go into the salons himself. He just hires people at minimum wage to run the places for him while he works at a different job. His wife stopped using the tanning beds when she developed a 2 inch brown spot on her cheek, and he will not allow his children to tan in the beds. If the owners of tanning beds don't want their family members to use tanning beds, doesn't that tell you that they have concerns about their safety as well?

Please support Senate bill 903 to limit the use of tanning beds by teens and to impose greater safety regulations on tanning beds used in MA.

Thank you for taking the time to read this. Please feel free to contact me by phone (508)-870-0650 or by email [rothmank@ummhc.org](mailto:rothmank@ummhc.org) if you have any additional questions.

Sincerely,

Karen F. Rothman, MD