March 12, 2017

Shaila Anwar - clerk
Standing Senate Committee on Social Affairs, Science and Technology
The Senate of Canada
Ottawa, Ontario
Canada, K1A 0A4

Re: Submission to address An Act to amend the Tobacco Act

Dear Committee Members:

I would like to submit this information to the Standing Committee as they discuss Bill S-5. I have had the opportunity to review Bill S-5, An Act to amend the Tobacco Act, and while it acknowledges that smokers could benefit from e-cigarettes and vaping products, it does not facilitate an environment where cigarette smokers are likely to switch. The purpose of this submission is to assist in understanding the harms related to tobacco use, the strategies to reduce tobacco use, the role of vaping in reducing the harms, and the role of access and accurate information in helping smokers transition to vaping.

I have training in internal medicine (McMaster University), infectious diseases (University of Manitoba), and public health (Harvard University). My current position (2014-present) is the Executive Director of the BC Centre for Disease Control and Deputy Provincial Health Officer for the province of British Columbia. My research has focused on HIV transmission, addiction and health care to marginalized populations. Although not specifically working in tobacco control, my work over the past 18 years has focused on harm reduction and this has direct relevance to the current debates around e-cigarettes and vaping devices. I have seen first-hand the devastating impact of cigarette smoking and most of my HIV positive patients are now dying of tobacco related disease and not AIDS.

Tobacco remains the single biggest cause of preventable disease in the world. In Canada it is estimated that 4.5 million people are regular smokers and over half will die as a direct consequence of their smoking. Smoking cigarettes drives a large part of the health care industry and is associated with many chronic diseases that account for a large proportion of tertiary medical care. The staggering statistics around heart disease, chronic lung disease, and cancers fail to capture the more subtle impacts of smoking on general health and wellbeing. As respiratory capacity and basic lung health gradually deteriorates, a domino effect of inactivity, chronic bronchitis, diabetes, muscle wasting, bone fractures, and social isolation result.

Even if the slow declines in smoking rates in Canada were maintained, smoking would be with us for decades to come. Although it can be argued that further progress can be made with optimizing standard approaches to reducing smoking –
taxation, graphic pictures on packages, plain packaging, no smoking areas, restrictive advertising, public anti-smoking campaigns, etc. - these interventions may be reaching a saturation level. Smokers need access to and encouragement to use safer alternatives to tobacco in order to reduce the harms associated with tobacco use.

The economic costs of smoking are staggering. In 2002 it was estimated that when health care, law enforcement, and loss of productivity from disability and premature death were added up, smoking cost Canadians $17 billion. Spending on tobacco control and prevention makes up a small amount of the money that governments generate through tobacco taxation. Taxation can only go so far. As with other forms of prohibition, there is a point where illegal activities emerge to get around a reduced supply of products. This is most evident with the emergence of bootleg cigarettes, the importation of foreign cigarettes, and the sale of loose tobacco.

One of the reasons why delivering nicotine through e-cigarettes and vaping products is more acceptable to smokers is the fact that it simulates actual smoking. There is rapid delivery of nicotine through inhalation, there is a similar hand to mouth behavior pattern, and there is an exhalation of vapor that is much like exhaling cigarette smoke. The nicotine is also delivered in satisfying bursts of intensity that also mimics the type of sensation given through cigarette smoking. Nicotine patches in comparison do not attempt to simulate cigarette smoking. There is no vapor produced, the nicotine is slowly delivered with no peaks or valleys, and the behavioral components of smoking are eliminated. Ironically, this is the very reason why public health practitioners, policy makers and the public are skeptical about the safety of the products and the potential to normalize or enable a behavioral pattern that we have been so determined to eliminate. There is a prevalent misconception that people using vaping products pose the same risk to themselves and the public when compared to tobacco smokers.

The approach to smoking has traditionally focused on cessation. There has really been no middle ground. Many smokers have spent years attempting to quit and find themselves in an increasingly frustrating place. Even people with the best of intentions have reached a place where they no longer even bother to try to quit despite deteriorating health and social isolation. The medical community has really no response for failed attempts to quit other than well-intentioned encouragement to keep trying and more medical interventions to deal with the increasing health consequences.

The introduction of e-cigarettes and vaping products has completely changed the discussion around tobacco control. E-cigarettes have been referred to as a disruptive technology and they open up a new way of thinking about how to reduce the adverse effects of cigarette smoking. E-cigarettes or vaping devices deliver nicotine without the toxins that are inhaled with combustible tobacco. Researchers around the world have made careers out of discovering and understanding the damaging effects of combustible tobacco smoke right down to a molecular level. The
National Cancer Institute estimates that there are over 7000 chemicals released in tobacco smoke and over 250 are harmful to humans and 69 have been directly linked to cancer. The chemicals include cyanide, ammonia, carbon monoxide and a range of toxic metals and hazardous gases. It should be noted that all of these chemicals result from burning tobacco. Today, it is not seriously in dispute that if you could separate the addictive component – nicotine – from these deadly components you would eliminate or greatly reduce the health risks. It is critical that both the public and the policy makers understand this important distinction.

Although it has been said many times before, it deserves repeating - nicotine causes the addiction and the tobacco smoke causes the deaths and disease.

E-cigarettes and vaping products are not without some risk. It is entirely true that smokers would be better off simply quitting. However, if this is not happening, it is important to evaluate what is the exposure to toxic substances. Without question, the boldest endorsement of e-cigarettes has come from the Royal College of Physicians in the UK. This 201 page comprehensive evaluation of e-cigarettes and vaping products entitled “Nicotine without Smoking: tobacco harm reduction” attracted international attention when it was published in April 2016. The statement that generated the most attention was a quote from Professor John Britton, an author on the report when he said, “Although it is not possible to precisely quantify the long-term health risks associated with e-cigarettes, the available data suggest that they are unlikely to exceed 5% of those associated with smoked tobacco products, and may well be substantially lower than this figure”.

The stance by the Royal College propelled the uptake of vaping products in the UK and it was estimated that 2.8 million people in the UK used vaping products in 2015.

It is also possible to further decrease the risk of toxins through vaping by eliminating poorly manufactured vaping devices, accessories and liquids. The number of devices available is truly remarkable. The industry has grown quickly with few regulations led by small independent operators. There have been highly publicized cases of batteries blowing up and infants ingesting nicotine liquids due to poor packaging. A rational approach would be to address these issues through regulation, rather than to restrict access to vaping as a whole.

Perhaps the biggest concern around promoting vaping as a safer method to deliver nicotine is the unintended consequences on youth. The trends in youth smoking rates are encouraging – at least in North America. Public health practitioners are cautious of anything that could disrupt this trend. There are two main arguments that are used to restrict vaping products for smokers because of the unintended consequences on youth. Firstly, the risk of re-normalizing tobacco smoking by introducing a “cool” new way to use nicotine. As e-cigarettes are designed to emulate cigarettes, with inhalation and blowing out “smoke”, then the concern is that youth would start viewing them interchangeably. The argument breaks down however when you are dealing with a youth culture that does not view cigarette smoking favorably and has some understanding around the serious health risks of smoking. It would therefore be very unlikely to view cigarette smoking and vaping
interchangeably. This would especially be unlikely if clear and truthful messages were given out around vaping that could help address the current confusion.

The other main concern is the “gateway” effect, whereby once addicted to nicotine through the use of e-cigarettes youth may start using combustible tobacco. To date there is no evidence that this occurring. The CDC recently produced a report of “tobacco” product use among youth. If this were truly a gateway then it would be expected that the sharp increase in e-cigarette use would also drive an increase in smoking. This was not seen. The best way to have youth avoid smoking is to get their parents, family members, and other adult role models to stop smoking. Instead of increasing youth smoking, a wider uptake of vaping among adult smokers would give a strong message that tobacco smoking is an unwise choice.

If smoking combustible tobacco could be eliminated, improvements in quality of life, increased life expectancy, and massive savings to the health care system would be seen. Further, cities would be healthier places, the hazards of second hand smoke would be largely eliminated, and the social stigma and isolation experienced by smokers would be reduced. Vaping has the potential to eliminate, if not drastically reduce, the use of combustible tobacco. Unfortunately, this is unlikely in the current environment. While there should be no real debate around the health benefits of vaping as compared to smoking, the powers that control the international tobacco industry, the massive taxes generated by tobacco sales, and the medical incentives to treat rather than prevent disease, have overshadowed the underlying basic issue of access to a healthier, and potentially life-saving alternative.

We have experienced similar challenges with harm reduction efforts as they pertain to “harder” drugs, such as heroin and cocaine, which have a far smaller toll on public health. The familiar arguments against harm reduction in this context include “enabling drug users”, “decreasing the opportunity to quit”, “giving the wrong message to youth”, and “wasting resources on interventions that allow drug use to continue”. These are the same arguments put forward against e-cigarettes and vaping. Yet, the public health community has largely gotten behind harm reduction for other addiction problems.

One of the most powerful approaches to generating a change in attitudes towards harm reduction in general is to listen to the voice of those impacted by drugs. At the core of the debate is a simple question: “Do people living in Canada have the right to access a safer product that could potentially save their life?” For any other health intervention the answer would be “yes”.

The role out of vaping in Canada has been mainly been a grass roots efforts to offer alternatives to cigarette smoking. There has also been an effort to improve the nicotine experience through multiple delivery devices, different nicotine concentrations and the explosion of flavoring – apparently exceeding 4000 different flavors. This has progressed largely without a regulatory framework or a standard way to educate smokers or the general public about vaping. Since vaping has
emerged in a public health environment that has targeted tobacco smoking as enemy number one, the reaction to any new practice that is even remotely similar to cigarette smoking has been met with extreme negativity.

One of the main reasons for the proliferation of vaping and e-cigarette shops is the desire to supply safer nicotine delivery for people who are unable or unwilling to give up smoking. The clientele of the shops are primarily there to replace cigarettes with vaping in order to improve their health. Not only do most people who have switched feel that their health has improved but they are also hopeful that the risk of smoking-related illnesses will be greatly reduced. The more evidence that can be generated through clinical trials to show these benefits the better, but smokers cannot afford to wait.

In order to increase the uptake of e-cigarettes and vaping devices among smokers, the places where these products are sold should be welcoming and provide a high level of customer service. With so many products to choose from it is important that people understand how to use the devices properly. Instruction and demonstrations around e-liquids, coils and batteries are very helpful as with any new electronic device. Learning to inhale effectively and how to control the vapor is part of the required learning in order to use e-cigarettes effectively.

E-cigarettes and vaping products have great potential to reduce the myriad of smoking related diseases and increase life expectancy in Canada and globally. The history of tobacco control has been dominated by smoking cessation and consistently any interventions that fell short of quitting were not supported. This entrenched approach has persisted despite irrefutable evidence that habitual smokers find it extremely difficult to quit, require multiple attempts, and in most cases ultimately fail. While it is important to do everything possible to prevent youth smoking, this should not prevent us from offering safer nicotine delivery to those who are dependent on nicotine and want to stop smoking combustible cigarettes.

Sincerely,

Mark Tyndall MD ScD FRCPC
Executive Director
BC Centre for Disease Control
655 West 12th Avenue
Vancouver, BC, Canada, V5Z 4R4
Tele: 604-707-2405