

Unanswered Questions from Lunch & Learn January 28, 2015
Electronic Cigarettes: Implications of Regulation on Harm Reduction
Dr. Peter Selby & David Sweanor

*Please note, the responses to these questions represent the views of the presenter(s) and not necessarily the views of CAMH. Additionally, the Nicotine Dependence Services - CAMH do not advise our clients to use the e-cigarette if they want to quit. If a client shows interest in using the e-cigarette, we will discuss with them the lack of evidence regarding their safety and efficacy. Additionally, clients are not permitted to use e-cigarettes in our groups.

1. Is there a movement to regulate ENDS to the level of a consumer product where the labelled contents must match the real contents?

David Sweanor: Yes. There are various efforts to move to what could best be called fit-for-purpose regulation, i.e. regulation directly tied to achieving the best overall health outcome, as opposed to doing things that could exacerbate health problems. A very good example of this sort of reasoning is found in the submission that Clive Bates made to our federal parliamentary committee hearings on electronic cigarettes. A copy of his testimony is attached.

2. Can you give us an idea about the cost of e-cigs?

David Sweanor: What we call 'e-cigs' is actually a range of quite different products. The types of products that were first on the market were ones that looked like cigarettes (commonly called cig-a-likes). These seem to work out to roughly half the price of cigarettes on an 'equivalency' basis (but this obviously varies depending on how intensely the product is used). The market has recently moved far more into the sorts of refillable devices that are sold in vape shops, and these products are considerably less expensive. In Canada it appears that a smoker can reduce their costs by at least 80% by moving to vape shop products, and often by 90%, although there is the up-front cost of buying a vaporizer (which can cost in the range of \$100 for a good quality model). In the United States, where we have much better data, the vape shop type products, after than initial device outlay) have been estimated to work out to roughly 60 cents for the equivalent of a pack of cigarettes. For many low income smokers the cost saving appears to be a huge motivator for switching from smoking.

3. Can you use NRT patch with e-cig as short acting for cravings?

Dr. Peter Selby: There have been no clinical trials on the use of e-cigarettes in combination with any form of NRT. We are currently conducting a lab study with non-nicotine containing e-cigarettes and nicotine lozenges. Too early to say if this is recommended. Officially not indicated.

4. Could e-cigs with nicotine help Parkinson's clients?

Dr. Peter Selby: No known studies with Parkinson's clients.

5. Are there any longitudinal studies ongoing now for the long term effects of e-cigarettes?

David Swenor: The products have not existed long enough for such studies. However, there is broad experience with the various ingredients in the vapor, and extremely strong science on the likely relative risks of vaping compared to cigarette smoking. One of the challenges with long term studies is that the marketplace for alternative nicotine products is changing rapidly due to the pace of innovation - spurred by the goal of capturing some of the approximately US\$700 billion spent globally on cigarettes each year. So a product used today is very different than then ones a few years ago, and if innovation is allowed to continue the products used today will soon be replaced with better technology. Much as has happened with mobile phones.

Dr. Peter Selby: There is a move to study e-cigarette users longitudinally in Ontario by OTRU and CTADs- Health Canada surveys use of e-cigarettes, but this is not a longitudinal study.

6. Do you know any particular brands of e-cigarettes that are safer than others?

David Swenor: The key point is that based on everything we know about cigarettes, virtually any e-cig will be virtually certain to be dramatically less risky than smoking. But between types and brands of e-cigs/vaporizers it is hard to know of risk differentials. A decent rule of thumb is that the products marketed by larger players are least likely to have controllable risks. That is because they have the resources to act on quality control, the knowledge that their resources also make them a target for lawsuits should they be found to be negligent (compare the money one could get suing a chain of shops or a big manufacturer like NJOY or Logic to a guy with a booth of do-it-yourself products at a flea market). One of the problems with the current regulatory impasse in Canada is that the major players (like NJOY and Logic) are not selling nicotine containing e-cigs in Canada.

Dr. Peter Selby: None that I know of or can endorse in anyway at this time for widespread use. It's "buyers beware" as it stands now. Also, consider if it is refillable and if the e-juice is produced with any standards. The labels rarely match the content and may vary from batch to batch.

7. Have you heard of any issues with diabetics using e-cigs? I.e. issues with blood sugar regulation from the nicotine content.

Dr. Peter Selby: No, we haven't. When clients with diabetes quit smoking regardless of method, they should monitor their blood sugars to make sure they stay under control. Sugars can go up or down. Nicotine is associated with insulin resistance, so this continues when the smoker switches to NRT or any nicotine delivery system. It reverses within days after stopping nicotine exposure completely.

8. Is second hand smoke from e-cigarettes dangerous?

David Swenor: Perhaps the best overview on this comes from Professor Igor Burstyn at Drexel University and the paper is available here (<http://www.biomedcentral.com/1471-2458/14/18/abstract>). That research found very little concern for bystanders. The same sort of evidence has led ASH UK to not support bans on public vaping. But there is still an issue of inconvenience/nuisance, and some lingering concerns of potential risks. While the risks are dramatically less than with second hand smoke from combustion cigarettes, there are still reasons why some people would wish to prohibit their use in specific places. However, widespread prohibitions on use similar to what we have achieved with cigarette smoking in efforts to protect others could be counterproductive. Doctors who use e-cigarettes to help clients quit smoking point out that bans on use of these products in their clinics would prevent such interventions. Just as bans on vaping (or displays of product) in vape shops would deter quitting.

Dr. Peter Selby: Compared to combustible smoke, vapor is less likely to be harmful except for those sensitive to the ingredients and scents therein. The social exposure to the act of vaping presents a unique challenge when both combustibles and vaping devices are on the market. The effects on modeling behaviour are still unknown and not quantified.

9. If we wanted to give the message that e-cigarettes could be helpful to quit smoking how do we insure that the safest e-cigarette is what people use?

David Swenor: I am not sure that we can do that in the absence of helpful oversight by regulation or some sort of independent evaluation structure. But another key issue is whether we should focus solely on 'safest' rather than the equation I used in my presentation – that the reduction in harm is a combination of how safe a product is and how many smokers find it acceptable as a replacement for their cigarettes. A product that is 99% safer but has no consumer appeal would, for instance, be a poor alternative to one that is 97% safer and has great acceptability among smokers. With the near certainty that the range of products currently available are dramatically less hazardous than smoking, and the importance of getting off combustion products as soon as possible, my view is that the best route to take now is to encourage the use of any of a broad range of non-combustion products that appeal to the smoker. Without effective oversight there can be no absolute certainty as to risks, and as we see with pharmaceutical products risks exist with even heavily regulated products. In policy terms, and on ethical principles, the question is usually one of whether we have sufficient information to warrant making a recommendation based on what would be a reasonable view of the current state of knowledge on the relative risks of smoking and vaping.

Dr. Peter Selby: At the present time, there is no practical way for practitioners to know which product is the safest to use. There is a strong need for standards and regulations to ensure people can make an informed choice, so that what they think they are getting is what they are actually getting. Unfortunately, it is currently “buyers beware.”

10. I have had a few people tell me they are vaping for cannabis not nicotine. How is that being addressed?

David Swenor: Health organizations, including within government, have been recommending vaping rather than smoking marijuana as a way to reduce the risks associated with using that drug. With the rapid rise of medical marijuana, and increasing moves toward total decriminalization, there will be increasing focus on this issue. In fact it has been pointed out that there is irony in Health Canada appearing to recommend vaping by those using marijuana but seeking to discourage it among those seeking nicotine.

Dr. Peter Selby: There has been no systematic approach to this. For medicinal purposes, there is an oral spray that is indicated for pain but not maintenance. It is being studied as a clean alternative to vaping/smoking THC as a medicinal product.

11. Is it true that some e-cigs manufacturers are owned by the same tobacco companies that sell cigarettes?

David Swenor: There is much confusion on this point, largely due to US-based attacks on alternative nicotine. The market in Canada is divided between the e-cigs that are mass manufactured and look like cigarettes, and the vape shop sorts of products. One of the cigarette company owned e-cig companies (Lorillard's blu) had looked at marketing a no-nicotine version of their product in Canada, but decided against this. So the market in Canada is entirely independent of, and a competitor to, the tobacco companies. The persistence of the rumor that Big Tobacco somehow controls the Canadian e-cigarette market is one of the 'modern myths' in this field. Even in the United States, the largest part of the market is in the vape shop types of products. The sales of these products are estimated by Wells Fargo to be outselling the cig-a-like products in dollar figures (which, given the 'equivalency' cost differential means they are likely around 4 or 5 times the market share on a 'cigarette-equivalent' basis) and these sales are growing at three times the rate of the cig-a-like products. The tobacco companies cannot compete in this market in part because the retail cost, at around 60 cents per pack-equivalent, would destroy their current profitability (they make about twice that in profit alone from selling a pack of cigarettes). So we have efforts by Big Tobacco to try to close down these shops through regulatory measures.

Dr. Peter Selby: Ownership by tobacco companies or not, we need to understand how corporations big or small operate in the market place and the need for regulation to ensure that profit does not trump safety. Our food is regulated as are cars, fabrics used in furniture etc. So, there is no reason to give e-cigarettes a pass or combustible products a free pass. Historical exemptions are not an excuse for Health Canada not to better regulate combustible cigarettes now that a potential reduced risk product is available in the market.

12. What are your thoughts on tobacco companies buying e-cig companies? How might this affect the uptake and marketing of e-cigarettes?

David Swenor: There are various aspects to this issue. First, tobacco companies cannot get control of this emerging sector without getting helped by regulations that restrict the ability of other players to be in the market. For instance, there are now many thousands of vape shops in North America (with estimates of 8,500 to 15,000 in the US alone, and with it now being unusual to find any reasonably sized town in Canada without at least one). Tobacco companies cannot buy up such businesses, in part because there is nothing stopping people from simply opening more, and in part because these companies have no reasonable business case for being able to be successful in what is a low cost retail (rather than high margin mass market manufactured consumer products) market. Tobacco companies were also late entrants into this market, and got in largely for defensive reasons. If the market was going to go through a major transition caused by innovative technology they needed to avoid 'doing a Kodak'. They were well aware of the ability of new technology to kill off incumbent players. If they could somehow close down innovation on alternative nicotine they would preserve their incredibly lucrative cigarette business. But they have significant tort law risks if they were seen to have killed off far less hazardous alternatives. So it would be best for them if others killed the competition through regulatory barriers, or at least raised barriers so high that tobacco companies would face far less competition from innovative products. I think we should expect to see more actions by these companies aimed at restricting the market, especially looking for plausible regulatory mechanisms that could kill off vape shops. Or at least to silently enjoy watching others do it.

Dr. Peter Selby: It makes it harder to recognize the intentions. Are they buying the companies to try and kill the technology or as a way to create and promote dual use? As above, regardless of ownership, we need to make sure that combustible products become obsolete.