Transcript

Let’s talk e-cigarettes

Podcast 39, February 2025, Olivier Drouin, University of Montreal

Speaker 1: Musical intro & outro

Speaker 2: Nicola Lindson, NL

Speaker 3: Jamie Hartmann-Boyce, JHB

Speaker 4: Olivier Drouin

Musical intro

If asking your mate down the pub about vaping is what they probably say, no one agrees if it's safer or not, so you might as well smoke anyway. Now what your mate needs is a Cochrane review. All the facts have been checked at least twice. They find there's a lot that the experts agree on might give you different advice.

NL

Hi, my name is Nicola and I'm a researcher based at the University of Oxford in the UK.

JHB

And I'm Jamie and I'm a researcher based at the University of Massachusetts Amherst in the United States.

NL

We are both members of the Cochrane Tobacco Addiction Group. Welcome to this edition of let's talk e-cigarettes. This podcast is a companion to a research project being carried out at the University of Oxford, where every month we research the e-cigarette research literature to find new studies. We then use these studies to update our Cochrane Systematic review of e-cigarettes for smoking cessation and interventions for quitting vaping. This type of review is called a living systematic review, and in each episode we start by going through the studies we found that month and then go into more detail about a particular study or topic related to E cigarettes.

Speaker 3

This month we ran our searches at the beginning of February for a review of e-cigarettes for smoking cessation we found six papers linked to studies already in our review and two new included studies which we're going to tell you about in a nutshell.

The first of these two new included studies is by Kouroutzoglou and colleagues, based at the University of Athens. It's a published conference abstract, meaning we don't have a lot of detail on it at that moment, including not knowing who funded it. It's a randomized trial in which 57 people who smoked and were living with obesity were randomized to nicotine replacement therapy, combined nicotine replacement therapy and the medication bupropion or to nicotine e-cigarettes. They measured smoking abstinence at six months and display these data graphically in their abstract. Cessation rates were not statistically significantly different between the -e-cigarette arm and the combined bupropion, and NRT arm, but both of those arms had statistically significantly higher quit rates than the NRT only arm. They also report that blood pressure was similar between all at follow up, I'll hand over to Nicola to tell you about the second new included study.

Speaker 2

So, the second new study we found is another conference abstract out of the University of Athens, with Professor Ikonomidis as the lead author. The main aim was to look at the differing effects of heat not burn tobacco, electronic cigarettes and conventional cigarettes on endothelial glycocalyx. Endothelial glycocalyx is a gel-like coating on the inside of blood vessels that controls how easily substances pass through the blood vessel walls. This is important because damage could lead to problems with vascular health. Now 100 people took part and they were randomised to either the heat not burn, e-cigarette or continued conventional cigarette use and monitored for a month. Now they measured a number of outcomes, but for the purposes of our review, what we're interested in is their exhaled carbon monoxide. And what they found was compared to baseline exhaled carbon monoxide decreased in heat not burn, and e-cigarette users and remained unchanged in the people who were smoking conventional cigarettes. And the people smoking conventional cigarettes had higher carbon monoxide than those who switched to the heat not burn, or e-cigarettes after one month. And they haven't given any funding acknowledgments in this abstract. As Jamie said, conference abstracts usually have much less information than papers.

Speaker 3

That's right Nicola. We look forward to those hopefully eventually being published with more detail as full papers.

So, this month, for the first time, we also searched in our update searches for studies of interventions for quitting vaping. We didn't find any new included studies, but we did find 7 new ongoing studies and in this month's deep dive I'm going to tell you about one of our ongoing studies that we're anxiously awaiting results for our interventions for quitting vaping review. So, I had the pleasure of speaking to Doctor Olivier Drouin from the University of Montreal about his currently ongoing pilot randomized trial of a brief digital screening and intervention tool for parental and adolescent tobacco and electronic cigarette use. And this study takes place in pediatric medical care settings in Canada. It's funded by the Canadian Institutes of Health Research.

Thank you so much for coming on. I was hoping you could first tell us about your background and what got you into e-cigarette research.

Speaker 4

Yes pleasure. So just for background some. I'm a pediatrician and I also have a Masters in public health as well as a fellowship in health services research, and all of this is pretty complicated, but will get together and actually explain the type of research I'm doing now. So, I guess early on in my medical training, I was starting to realize the importance of health behaviors on overall health, so disease prevention. So, we all know about, you know, physical activity, nutrition, smoking obviously. It struck me how much it was important, yet how little we spent in medical school really understanding how to change this from the patient perspective and when we did talk about it, how disconnected it was from like, what resonated to me and what resonated with people around me. We were told, well, just tell people that you know, it's so terrible and they're going to get, like, a heart attack in their 50s. And it doesn't really do super well to 13 year olds and 15 year olds to talk about a heart attack of uncle Joe. Actually, the more I continued my training, the more I realized that everyone had the same lingo. They were just drinking from the same kool-aid. Yet nobody was realizing how completely off they were. I had a Masters in public health and it was a very similar approach. You know, it was a lot of, you know, increased taxes, ban something or tell people to change and hope that they would actually do. And I think the real breakthrough came when I got accustomed to a field called behavioral science, which is really using scientific method to understand behaviours. And not just the rational part of it that was taught in medical school, in school, public health, but also did a less rational as part of it, like how habits are formed, how / why is it difficult to quit something the peer pressure and the social norms that exist? All those very powerful influences that were completely absent from my formal training and that got me thinking about OK. How do we scale this up? How do we make this happen at the health system level, the population level? And so that intersect between, you know, health system thinking, public health and clinical medicine is really where I'm sitting. And as a pediatrician, obviously, I became really interested into what are the approaches we can develop to help address some of our more problematic health behaviors. And your podcast listeners will know very much that e-cigarette has been on the rise dramatically, especially for adults and young adults. And so with a colleague of mine who's a, you know, addiction specialist physician we paired together with our joint expertise to develop a line of research around e-cigarette use for kids and how we can leverage behavioural science and take a health services approach, health system approach to tackle this problem.

Speaker 3

Awesome. I love how like all of those things are intersecting. I think it's so important to have those different perspectives in there. So, you're the first interview from Canada that we've had on for quite a while. We've had Canadians before, but not for a little while. And I wondered before we kind of launched into your study, if there's any Canada specific context you think it might be useful for our listeners to have in mind?

Speaker 4

S, you know the province of E-cigarette is fairly similar. Our laws became just a bit stricter with regards to use of flavors in e-cigarette products. E-cigarettes are not legal. Cannot legally be sold to teenagers. Although access is quite easy. So that’s from the e-cigarette perspective and I think from the health system perspective, needless to say that the structure of our healthcare system is quite different than south of the border to being a public single payer public mostly public system means that at the health system level we have a bit less revenue a bit less resources to tackle some of those interventions, but we do have slightly stronger public health infrastructure. So, we you know, access to resources to help families quit or kids quit is slightly better in the average. So if we look at classic tobacco, which there's some, there's some parallels to be made with e-cigarette in the US, for example it Can be difficult to have nicotine replacement therapy covered or access is a bit difficult. It is very easily accessible in Canada. You can get it from your pharmacist. Can get free quote unquote, supply. And so yeah, so I think the resources at a public health level are probably better at the health system level or probably slightly lower than some place in the US.

Speaker 3

So can you tell us a bit about your new study? Are you setting out to look at?

Speaker 4

Yeah. So. What we just wrapped up was a pilot study, so mainly for those who are not familiar pilot studies are, you know, smaller studies that are designed to be as rigorous as a randomized control trial, which is the gold standard that we have to say that the intervention caused this, rather than being related to it, and so we looked at the feasibility of conducting a larger trial on smoking and vaping cessation in adolescents and adults, and we can get a bit more in details later on as to why we did what we did. But basically we aimed to adapt a program that was developed in the US for parental smoking cessation and then adapted to the Canadian context and extended to adults, youth and extended it to e-cigarette users.

Speaker 3

Will you tell us a little bit more about a very brief summary of that intervention as it existed in the US and then how you guys adapted it and how you went about that?

Speaker 4

Yeah. So the the CEASE intervention is an intervention that was developed at the Mass General Hospital. Under the guidance of Jonathan Winickoff, I did train under Winickoff’s supervision during my fellowship. And so the CEASE team really developed this health system approach to systemically screening parents who come for a medical appointment with their child in pediatric clinics. So screening everyone and already independent of the clinician asking whether their interest in quitting if they are, linking them directly to cessation resources. So quit lines, text messaging system to help them quit and providing them with nicotine replacement therapy. And so they've shown that this model actually helped decrease prevalence of smoking among parents in pediatric clinic that use the CEASE program versus not at a cost that was fairly low for the benefits of quitting smoking, so I was involved in some of that prior work.

Speaker 3

Awesome.

Speaker 4

So can we replicate those findings in Canada given that the nature of care is slightly different the provision as I mentioned earlier, the provision of some of those cessation resources is also different and you know given the decreasing prevalence of smoking the increasing prevalence of e-cigarette we were also looking to see whether we could eventually apply similar model to e-cigarette use.

Speaker 3

Super interesting. So, one of the things that struck me when I was, like, reading your study description is something that was slightly unusual in this space, right? But also kind of impressive is that you're approaching two different populations in your study, so both parents and adolescents, and you're also approaching cessation of two different products, right? Cigarettes and E cigarettes. Were there challenges in that? Were there any opportunities or efficiencies that came with that approach?

Speaker 4

So, it was definitely a gamble, I think. I think I'll speak to the rationale and speak about the challenges. So, the rationale for it was that as your listeners probably know, there are people who smoke, there are people who use e-cigarrete, and there's a lot of people do both. And so we wanted to try to take advantage of this population, in which there is a fair bit of overlap and try to tackle two different problems, but very related and interconnected with a single intervention. It was rational number one. And rationale number two was that, at least in Canada a lot of the resources to help E-cigarrete users quit are still very much based, if not copy-pasted from what is offered for tobacco cessation. And so the resources, the links we would send them to, the assessment would be very similar. And so that's also part of the thinking. And the third one is that so that the extension to adults since were coming from well, both that’s our population of interest, that's the patient that we see day in day out. It felt somewhat wrong to offer something to parents of teenagers who were using a cigarette but not offer the adolescent users anything. Realising that they would probably need a different approach, but that was part of the rationale for the pilot study rather than doing the efficacy study to start with.

Speaker 3

Yeah.

Speaker 4

So just seeing could we actually get teenagers to engage with us? Would they be interested at all in enrolling in a study on e-cig cessation? Or would as some you know, cynical people told us before we started, would they just see us as adults trying to tell them what to do, like their parents and their school teachers and actually like not engage at all. And there's definitely been, you know, some other researchers who've seen challenges in engaging with teenagers and that's partly what we wanted to ensure we could do.

Speaker 3

Yeah, that makes sense. I'm imagining that you can't yet tell us any of your findings. Is that right?

Speaker 4

It's being written.

Speaker 3

Yeah. OK. OK. Well, I can't wait to see like.

Speaker 4

I can. I can hint to some of the things we found, but I cannot actually be like definitive about it.

Speaker 3

OK.

Speaker 3

So if you feel like comfortable talking about any of the challenges that you faced, for example, without kind of going into the details of what you found that. Be really interesting.

Speaker 4

Yeah. So, a few kind of broad strokes, we were able to show that parents were interested in participating. We were successful in recruitment and we were actually surprisingly successful in getting adolescents to at least show interest in participating in the study, which was already something given that some other groups had not managed to do so, and we did so in a variety of different clinics. So, in that sense, people are willing to engage. People are willing to be part of this study. Follow-up was a challenge, as one can imagine, especially when we talk to teenagers or parents of young children responding to follow up surveys, even just finding out whether or not they had quit smoking and getting a bit more information was a bit of a challenge. It was expected. In the pilot study, we saw that we needed probably a different approach for teenagers and parents, which we kind of knew, but that that work laid the foundation for what will probably be two sets of interventions, So one  targeting adults parents and one targeting adolescents.

Speaker 3

Awesome. Thank you for sharing that. And I think you might be the first pediatrician we've ever had on this podcast.

Speaker 4

OK. I'm honored.

Speaker 3

Yeah, there you go. So I'm also just curious if there are considerations that are unique to studies in this setting, right? Particularly around smoking and vaping, when you're in a pediatric medical setting, are there specific things that you might be considering there that you wouldn't necessarily consider, like an intervention delivered in general practice.

Speaker 4

Yeah. So part of the reason why we did go down that route apart the fact from the fact that we're pediatricians.  So, there's been an interesting set of research showing that even if you quote un quote care only about adults, you know the 20, 30 and 40 year olds who smoke and who vape don't really interact with the healthcare system almost at all. You know there's no routine checkup they are typically fairly healthy. They haven't developed. Most of them haven't developed any serious complication from their bad habits, and as such, you know pediatric clinical care is actually one of the few places that they will go to and so that offers a real opportunity in terms of access to this population. And the other thing that's interesting is it is a bit of a teachable moment. You know, a lot of people care about their kids more than they care about themselves. I see that every day when you know parents on their bikes and they don't have a helmet on and they have a helmet on their kids, you know, they see the risk differently. And so therefore I think we can leverage it to the benefit. And obviously when we talk about the adolescent population, if we can act early on in their consumption journey, it's more likely that we'll be able to move the needle than if you're trying to speak to a smoker or e-cig users and you know 30 year old adult who's been using and vaping for 15 years. There are different challenges to speaking to adolescents but the habits are a bit less ingrained.  Yeah, I would say those are the big positives of working in a pediatric environment. And there's also very little known even to this day around the second hand smoke of e-cig products, especially on on kids and their development. There are some research showing that combustible tobacco increases the risk that a child starts smoking, whether that is true of e-cig products. Still, the jury is still out there and I think being in contact with children of e-cig users also allows us to pursue that line of work independent of our work.

Speaker 3

Yeah. Absolutely. That’s awesome. Thank you so. So my last question for you. What would you most like to see be done next in this research space? If, like funding wasn't an issue and you could design any study you wanted, what would be the thing that you'd like to see done?

Speaker 4

Yes. So, two different things. I think we need a better understanding of what will move the needle for adolescents. I think a lot of the resources that have been developed are not very, you know, adolescent focused they’re general population focused and obviously you know I spoke to behavioural science a bit earlier. We know that the time horizon of an adolescents is very different than the time horizon of an adult. Talk about long term consequences of e-cig use goes like 10 feet above their head.

Speaker 3

Yeah.

Speaker 4

They're much more in the present and therefore you know the means of communication with them is also different. Instantaneity is key you cannot reach them by giving them a phone call or emailing them. We need real research into what's most effective? What's the best way to reach them? What's the best way to talk to them in a way that resonates with their reality. And I think the other piece that we're looking into at the moment and we got funding for is this last segment of the population that is heavy tobacco and e-cig users like the low-income population. In Canada, we did a fair bit of impressive work trying to reduce the prevalence of smoking around high-income population and middle income population. It is still stubbornly stuck at around 50% smoking rates and e-cig use actually increasing. It is concentrated in that pocket of population. Why is that? There's definitely a social effect. We’re looking into, with some of your colleagues at UMass actually, working on unmet social needs and other social determinants of health. You know our intuition and what we're testing now is maybe they're just too busy with the rest of their lives and their other struggles. And for them, like their e-cig use or cigarette use is just not a priority. It’s not on their radar. So even though, like quote un quote, rationally would make sense for them to quit and save that money. They're really more focused on, you know, not losing their jobs and making sure they have food to put on the table and therefore like coming in and not addressing, not acknowledging those other difficulties and trying to hammer down on the point that they need to quit using e-cigarettes. This probably doesn't resonate to them. Yeah. That way we think it. So, I think we need to be very humble in the way that we talk to this population. Think we need. We need to put ourselves in their shoes. Yeah. Talk to them, frankly, to try to crack that nut because I think we've been, you know, somewhat patronizing to this population. I think it's to the detriment of the health of the population.

Speaker 3

Yeah, that's it. Thank you so. I also really hope we see those things studied in the future. Great.

Speaker 2

One of the things that I found really interesting about that Jamie, was this idea of using that contact with parents at their children's hospital appointments as a way to kind of intervene. The idea that, you know, people at the age that they're recruiting there, they may not be engaging with health care that much themselves. They may not be experiencing any health problems due to their tobacco use so they're not seeing a doctor, they're very busy, but it seemed like a great idea to be able to kind of intervene with those people when their children are accessing healthcare. And you know a lot of what we try and do in the work that we do is think of ways to access people. Because we know that if you raise that issue of smoking with people, for example, that they are more likely to go on to, you know, make a quit attempt. You know, a lot of people also they may decide to quit smoking, but they do so without any support. If there are healthcare professionals that can intervene, they may be able to give people assistance, you know, for example, an e-cigarette to quit smoking or nicotine replacement therapy or whatever it may be that will enhance the likelihood that they're going to quit. This seemed like a really great idea from that, you know, outreach to people, perspective, who may otherwise not have sought help for their tobacco and e-cigarette use.

Speaker 3

Yeah, I thought it was a really interesting study overall and you know one of the reasons why we chose to interview them was partly to hear the pediatrician voice on this podcast, which we haven't had on before, as far as I can remember, we've done a lot of episodes now, but also I thought it was really interesting that they were combining parental and adolescent as groups to intervene on as well as combining smoking and vaping, right. And I think he spoke really convincingly about why they're taking that approach and also about some of the challenges there, which I could easily imagine. And it's a good example of why we do these pilot trials to see if it is really feasible to combine these groups and what happens moving forward so it’ll be interesting seeing those results when they come out and I'm very grateful for him finding the time to talk to us.

OK, so that is it from us this month. Thank you so much for listening, and please join us again next month for more on the latest e-cigarette research.

Please subscribe on iTunes or Spotify and stay tuned for our next episode.

Musical outro

Vaping is safer than smoking may help you quit in the end. But remember to mention the findings we have can't tell us what will happen long term, even though we know vaping is safer than smoking, we may still find cause for concern, if you're thinking about switching to vaping do it. That's what the experts agree. Smoking so bad for you they all concur that vaping beats burning there's much to learn of effect long term yet to be seen.

JHB

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