Transcript

Let’s talk e-cigarettes

Podcast 40, March 2025, Dr Monserrat Conde, University of Oxford

Speaker 1: Musical intro & outro

Speaker 2: Nicola Lindson, NL

Speaker 3: Jamie Hartmann-Boyce, JHB

Speaker 4: Monserrat Conde, MC

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.

JHB

So for our March 2025 episode, we are coming to you from New Orleans. We are in a hotel room overlooking the beautiful Mississippi River at the Society for Research on Nicotine and Tobacco's annual meeting. We are loving seeing so many of the investigators whose work we so appreciate. A lot of our team is here as well, presenting many of the reviews and evidence and gap maps we've been conducting. So I should say this is slightly less polished than usual. There might be noises in the background and that's because we are at a conference right now.

Speaker 2

You might even hear a boat going past on the Mississippi River because they're horns are quite marked.

Speaker 3

Ohh is that that what that foghorn Sound I heard earlier. Yeah. Ohh my gosh.

Speaker 2

Yes. So, and it's also worth saying that one of the exciting things about being here is that me and Jamie get to do this in person actually for the second month in a row because last time you were visiting the UK.

Speaker 3

Ohh my gosh. Very lucky. I need to figure out a way to see you in person in April

Speaker 2

Every month, you've gotta travel all the way over the Atlantic to record the podcast.

Speaker 3

If you don't get eaten by crocodiles tomorrow because Nicola is going on a Bayou tour, so wish her luck.

Speaker 2

Brief interruption for a correction. I will not be going to see crocodiles tomorrow. I will be going to see alligators.

Speaker 3

But I hope she doesn't get me eaten by those either.

Right. So this month we're covering both our e-cigarettes for smoking cessation review and our interventions for quitting vaping review. For our interventions for quitting vaping review, in a nutshell, we found two new ongoing studies and four papers linked to studies we'd already identified in our review. In our review of e-cigarettes for smoking cessation, we found one new study, one new ongoing study and two papers linked to other papers we'd already been aware of in our review. I'm going to hand over to Nicola to tell you about those.

Speaker 2

The only new included study we found this week is eligible for our review of e-cigarettes for smoking cessation, so it is an abstract from the 2024 annual meeting of the College on Problems of Drug Dependence and was led by Brian Katz at the University of Vermont, it is a study comparing cardiopulmonary effects of cigarettes and E cigarettes in individuals with chronic obstructive pulmonary disease, which is most commonly known as COPD. 21 individuals at least 40 years old were randomly assigned to all smoke as normal during one phase and to use nicotine E cigarettes in another but in a different order to one another and each phase lasted 2 weeks. Diastolic blood pressure was the only cardiac measure that significantly changed across phases and was statistically significantly lower after the e-cigarette phase than after the cigarette phase and that study was funded by the National Institute on Drug Abuse and Food and Drug Administration.  We found one ongoing study related to the e-cigarette for smoking cessation review. It's a trial registry entry and called the ‘Puff versus pill break the habit study’. It plans to look at the effect of nicotine vaping products versus varenicline on smoking cessation among people experiencing social disadvantage and it's being run by Ryan Courtney at the University of New South Wales aims to recruit 872 participants and is funded by the National Health and Medical Research Council.

Speaker 3

That is super exciting. I'm so glad we're getting another nicotine e-cigarettes versus varenicline study. We know we need those. So moving on to the new ongoing studies that we identified that will be eligible for our interventions for quitting vaping review the first of those is a clinicaltrials.gov study record investigating a combination of nicotine gum and nicotine mouth spray compared to nicotine reduction for vaping cessation. The studies being conducted at the University of Auckland in New Zealand, they aim to recruit over 700 people who vape and they estimate the study will be completed in 2027. So unfortunately we have a little while to wait. Their primary outcome is being vape and tobacco free at six months, and the study funding wasn't immediately obvious from the trial record.

The second new ongoing study is registered on the Australia and New Zealand Clinical Trials Registry. And it's testing the ‘Our Futures vaping program’. They're trying to replicate results from another study of this program and the our Futures Vaping program is a school based intervention. In this study. They are delivering it to students aged between 11 and 15. The primary focus of that intervention is on vaping prevention, but as it might also include people who vape at baseline, we consider it eligible as an intervention like this could also contribute to vaping cessation. The study is being run out of the University of Sydney. It uses a cluster randomized design, so they'll randomize schools and they'll aim to recruit over 1200 participants. Recruitment is yet to start, so again it will be a little while before we see results and that's funded by the National Health and Medical Research Council.

So lots of new research in this field that's ongoing. We hope one day to see it presented possibly at this very conference we're at today and I'll then move on to this month's deep dive.

So as we mentioned for this month's deep dive, we have the pleasure of coming to you live from New Orleans, and I have the pleasure of interviewing Dr. Monserrat Conde from the University of Oxford about a program of work we worked on together over the last few years, funded by Cancer Research UK investigating the trajectories and pathways when it comes to youth vaping and subsequent smoking, in other words, and in shorthand investigating whether or not there is evidence of a gateway effect. So Monserrat, do you want to kind of give us an overview of the research program and anything that was surprising to you?

Speaker 4 MC

Sure. First of all, thank you very much for having me here. So as Jamie mentioned, we were trying to look at transitions between vaping and later smoking in young people. In this case, we actually framed young people as anyone aged less than 30 years of age and basically we've actually conducted 3 different pieces of work within this program. So an evidence and gap map. Which was then linked to our systematic review and this is basically offering an interactive visualization of the existing evidence and different gaps in it. Then obviously the systematic review which I imagine will go a little bit more into detail trying to bring together 123 studies in in this space. And finally based on both of those. And also some consultation exercises that we've run with stakeholders, experts in the field. We were then able to come up with a set of 23 recommendations basically to try to inform future research in this space and all of these three works are now published in Addiction.

Speaker 3

Yeah, yeah, which is awesome. Them. So I happen to know from also being involved in this review that it was a bit of a challenge.

Speaker 4

It was.

Speaker 3

One of the challenges is that this is not something we can randomize to. It would be obviously very unethical to randomize young people who don't smoke to vape and see what happens next. So what are the types of study designs we can look to if we're interested in this?

Speaker 4

So we were looking at what we then classified into two different types of studies, so the so-called population level studies, which were basically looking at trends across population, and then we were also looking at individual level studies which were you know your sort of cohort longitudinal studies. So those were basically the proxy studies we've used to try to ascertain any sort of relationship between these two events of vaping and then what's happening in terms of combustible tobacco use later on.

Speaker 3

And do you want to tell us all what you found?

Speaker 4

So yes, so that was also one of the interesting aspects of this review again the evidence overall it's a bit mixed because one of the interesting facts is that we saw differences between what the individual level studies were telling us in comparison to what the population level studies. Which again could be potentially, you know, expected to to an extent. So whereas the population levels that seem to to show that there might be some low, the level evidence pointing towards the sort of an inverse association between later smoking and vaping. We weren't able to you know precise that, in terms of the individual level studies, so, so that was also one of the challenges we had in this particular systematic review. With also how to deal with such heterogeneous different studies in terms of also reporting and all of that and try them to to bring them together and do the sort of analysis between the two and bring them together in terms of some sort of cohesive conclusions and again some potential implications for practice and future research.

Speaker 3

So I suppose we know that regardless of the study designer question, context matters. But it strikes me that in this review context might matter even more.

Speaker 2

Yes.

Speaker 3

And this kind of ties into the evidence and gap map. Were there any particular areas where these studies tended to be conducted or tended not to be conducted?

Speaker 4

Yes. So again, there's definitely a pattern here where we see that the clusters of evidence are are basically concentrated in high income countries and in particular the US, right. Then obviously then we also have some evidence coming from the United Kingdom from countries such as Australia, Canada, but definitely the US is sort of leading the existing evidence in this space. And that does have an explanation, right? Because we do know, there's amazing, you know, amazing data sets available in in the US which, which also then offer themselves to conduct this sort of of primary studies. But then in the end, considering all of the differences in terms of regulatory environments, because one of the things we were interested in terms of our primary outcomes was actually looking not only at e-cigarrete use, but especially in terms of the population level studies at e-cigarrete availability, and that's directly linked with the regulatory environment. So that then makes it hard to try to transfer that conclusions to other contexts, and also considering the global burden of tobacco. And how prevalent it is in low and middle income countries, there's definitely an absolute gap regarding that. So we have great evidence coming from the US from some other countries, but unfortunately there's still a huge question mark regarding what's happening around the world.

Speaker 3

And you mentioned that even though there were so many studies in this review, the certainty of the evidence still pretty low. What do you think we could do to move the needle on it? What studies would you like to see conducted next? How would they be designed to help us get a clearer answer on this, if indeed ones out there?

Speaker 4

So that was also part of our recommendations work and there's definitely again, I think we do need some better definite limitation in terms of of the variables being studied because we actually saw a bit of variation within different studies that were looking at the same waves of data sets, right, and there were sometimes obtaining slightly different findings. So I think it's very important to get some sort of consensus in terms of what are the outcomes we are looking for when the measurements should sort of like take place or at least what sort of timeline we're looking at. And also in terms of follow-up. Then obviously, but that's not my area of expertise. But then you also can apply certain statistical analysis. Things such as Mendelian randomization would also be important,

Dog bark

Speaker 2

Obscure science term definition. Mendelian randomisation studies use genetic differences as a natural experiment to determine cause and effect relationships, helping researchers study health risks without bias from lifestyle factors.

Speaker 4

But one of the things that was quite striking, which normally doesn't happen in the more sort of RCT worlds or such is actually this, lack of consensus regarding the reporting, which then makes our work quite challenging, right? So following something such as the STROBE guidelines, which is, you know, known in sort of the medical science world would be potentially useful.

Dog bark

Speaker 2

STROBE guidelines help researchers report observational studies clearly and transparently. It includes a checklist of key items that should be included in the study report.

Speaker 4

And then again we also need to keep in mind that in this field we have also a lot of evidence coming from economic studies which again they have their own set of reporting and content guidelines. So I think that perhaps working together to get sort of a more of a of a bridge between those two words would be quite interesting, and I invite everyone to read our recommendations work.

Speaker 3

Awesome. Well, that is it for me. Is there anything else you'd like to add?

Speaker 4

Well, I'm looking forward to see new research coming up in this field and thank you very much for having me here.

Speaker 3

Thank you so much Montserrat.

Speaker 2

Great to hear Montserrat talking about that project, which I know has had its challenges and everybody has worked really hard on it and it's been amazing and especially following a great talk by Monserrat at today's conference where she was talking about our evidence gap map of the studies in our interventions for quitting vaping review, so busy day. I think what is really interesting about that review is we're just hearing so much in the media from other research about how there is this evidence of a gateway effect from vaping to smoking in young people. And obviously this is a review that's looked at the entirety of the literature out there. And although it can feel disappointing to say, ohh we don't, you know, we don't know anything for definite. We can't see a definite effect here. What it is telling us is there's just still so much considerable uncertainty that we can't definitely say anything. And that's a really important point to make. Because I think there's a lot of fear out there and really at the moment we just don't know and hopefully more research will become available that will give us more certainty.

Speaker 3

Absolutely. And I think we really hope that that new research might follow some of the recommendations that came out in our paper. It was a lot of work to do and a lot of studies to end up with an uncertain answer, but I think that does reflect the state of the evidence right now, we have to be honest about that.

Speaker 2

Yeah, very true.

Speaker 4

It was a lot of work but again, like you said, it's important just to point out what's still ahead of us. So yeah, looking forward to the next research coming up.

Speaker 3

Exactly. Yeah, exactly. And right now I say the only thing we can say with certainty about the gateway effect is that we don't know, we don't know. The evidence is uncertain. At a population level there is some evidence, as you mentioned, of an inverse association, right.

Dog bark

Speaker 2

In this case, an inverse association refers to the possibility. That as more young people vape, fewer smoke and vice versa.

 And we know here in the US it's a wonderful thing that youth smoking rates have gone down really markedly. The decline in youth smoking is really accelerated. Which is something we should all be celebrating and I'm reasonably confident it's not down to any one thing, but there are certainly people who think vaping has played a role there and it'll be interesting to see how that pans out over the years, but also, just as you mentioned. Unsurprising, but disappointing how much of the research was centered on a few countries, and so we really can't say anything about the relationship between vaping and subsequent smoking and different regulatory environments because the price of cigarettes, the ease of which one can access cigarettes.

Speaker 4

The type of bans.

Speaker 3

Exactly all this will really affect the outcomes. All right. Well, that is it. From us this month, we're off to another session of our brilliant conference and then we're going to go see some live music. I'm happy to say. So, thanks so much for listening and we will talk to you again on next month’s episode.

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

Thank you to Jonathan Livingstone-Banks for running searches to Ailsa Butler for producing this podcast and to all of you for tuning. In music is written with Jonny Berliner and I and performed by Johnny. Our living systematic reviews are supported by funding from Cancer Research UK. The views expressed in this podcast are those of Nicola and I and do not represent those of the funders.