Transcript

Let’s talk e-cigarettes

Podcast 44, July 2025, Elias Klemperer

Speaker 1: Musical intro & outro

Speaker 2: Nicola Lindson, NL

Speaker 3: Jamie Hartmann-Boyce, JHB

Speaker 4: Elias Klemperer

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.

Speaker 2 NL

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

Speaker 3 JHB

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

Speaker 2

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 reviews 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 on July 1st, 2025, as well as 8 papers linked to studies we'd already identified in our reviews. We found one new study of an intervention for quitting vaping and one new ongoing study also of an intervention for quitting vaping. Nicola is going to tell you about that new ongoing study in a nutshell.

Speaker 2

Thanks, Jamie. So the one new ongoing study is called Assist Global and is being led by a team at the University of Glasgow in the UK. Their protocol was published in the BMJ Open Public Health Journal and they describe it as a randomised feasibility study. The study is taking place in schools in Indonesia, in the Philippines, and will test a peer-led smoking prevention intervention shown to be effective in the UK. This study may be eligible for this review because it will look at vaping alongside smoking, and it may also allow us to look at how many people who are already vaping went on to quit vaping. We will check this when the study is complete and we have some more information. The study is due to complete by the end of 2025 and is funded by the UK Medical Research Council.

Speaker 3

Thanks, Nicola. And now on to this month's new study, which is the focus of this episodes deep dive. I had the pleasure of speaking to Professor Eli Klemperer from the University of Vermont about a new paper of theirs published in Nicotine and Tobacco Research entitled A factorial randomized clinical trial of nicotine replacement therapy and treatment recommendations to quit versus continue cigarettes when quitting smoking in young adult users this study was funded by the National Institute of General Medical Sciences, the Food and Drug Administration, the National Institute on Drug Abuse, and the National Cancer Institute, all in the US. So to start with, can you tell us about your background and what got you into e-cigarette research?

Speaker 4

Yes. So I am a clinical psychologist by training and got interested in e-cigarette research in Graduate School getting my PhD, I did that with a man named John Hughes here and I was focused specifically on the treatment of cigarette smoking. During my education, the rise of JUUL occurred and the introduction of nicotine salt technology which changed the way that e-cigarettes are used. And as you know increased the popularity of JUUL but also made them more competitive to displace cigarettes. And around that time I started to get interested in e-cigarettes broadly, but also as a tool to help people quit smoking and then from there got really interested in those folks who, for whatever reason ended up using both products long term, we're establishing what people call dual use of cigarettes and e-cigarettes. And you know, like thinking these days is it's just such an interesting group of people or or behavioral pattern because you're you're taking the same drug nicotine you're delivering it in two different ways. Cigarettes, e-cigarettes. And I think most importantly, they have vastly different potential for health impact with of course, cigarettes being far more harmful. And e-cigarettes. And so I think it just leads to some really interesting basic behavioral questions. But also there's just a lot of potential for public health impact in that population.

Speaker 3

Yeah. Awesome. Absolutely. OK. And can you tell us on that note a bit about your new trial? What did you guys set out to look at? In what populations?

Speaker 4

Yeah, I'd be happy to. So this was a two by two randomized factorial trial.

Speaker 2

Obscure science term definition. A randomised factorial trial is a type of study where participants are randomly placed into different groups to test more than one treatment at the same time. It helps researchers see the effects of each treatment on its own and also how they might work together.

Speaker 4

And it was completely remote. So, we recruited 396 young adults, 18 to 30 who were dual users or dually used cigarettes and e-cigarettes regularly. So this was, you know, over a six month period, they had to have regular use of both products and we were interested in answering 2 questions primarily. The first is whether nicotine replacement therapy, combination patch and lozenge. So combination NRT, whether that's an effective treatment. To get people to quit smoking who are dually using cigarettes and cigarettes, so really focused on smoking cessation. And then the second is whether during smoking cessation treatment we should be recommending people quit both products simultaneously, or whether dual users should be quitting the most harmful products cigarettes and using the less harmful product. To aid in that cessation, to help them achieve and maintain abstinence from cigarettes. This is 12 weeks of treatment and the primary outcome was at the end of 12 weeks. But we also measured follow-ups at six months. We delivered the advice to quit or continue cigarettes through a baseline animated video that we developed in-house, which was a lot of fun.

Speaker 3

Cool.

Speaker 4

We also had written material and then we adapted to national U.S. National Cancer Institute smoke-free text intervention to investigate our independent variable of whether to quit or continue cigarettes and delivered that over the 12 week period as well. So, people were getting advice at baseline but then also daily in their pocket throughout the trial as with regard to what to quit versus continue.

Speaker 3

Awesome. It's such an interesting question. I'm so glad you guys did this study. Can I ask what made you decide to focus on young adults in this study?

Speaker 4

Yeah. So that is the population, or at least at the time of the outset was the population where dual use was. Most. Prevalent and simultaneously we were finding that there was a real lack of intervention specifically targeting this group for smoking cessation. And so got interested in this population both because there was a lack of treatment specifically for this population, and also because it seemed as though in this population there is a changing way in which people are using tobacco, changing from exclusive smoking to using both products simultaneously.

Speaker 3

Yeah. Fantastic. So what did you find? Can you talk us through the main? Means.

Speaker 4

Yeah. So before I do that, I should note that one important inclusion criteria that I'll get to in a second is that everyone had to be motivated to quit smoking at baseline.

Speaker

Mmmm.

Speaker 4

We had no criteria around what people needed to want to do around their e-cigarette use, say some people wanted to quit, some wanted to continue, some didn't care.

Speaker 3

OK. And what was the thinking behind that?

Speaker 4

Well, what was I thinking about? Well, is a treatment trial. So we wanted people to be willing to engage in treatment. So that was the motivation to quit smoking and the lack of criteria around motivation for e-cigarette use. Well, my post hoc explanation is that we didn't really know, you know, it's hard we just weren't sure what to do around this.

Speaker 3

Yeah. Yeah.

Speaker 4

And as I just mentioned, half the people were going to get advice to quit. Half were going to get advice to continue. And so we thought it was important to take all comers. And we planned to a moderator analysis to look at that.

Dog bark

Speaker 2

A moderator analysis provides a way to check if the effect of a treatment or program changes depending on certain factors. For example age, gender, or other characteristics. It helps understand for whom or under what conditions a treatment works best.

Speaker 4

And and that's what I'll talk about here.

Speaker 3

Yeah. OK, great. OK, tell us what you found.

Speaker 4

OK. So primary finding and I think most important is that we found combination nicotine replacement therapy was effective in promoting short term smoking cessation in this population. So that was our primary outcome at the three month follow up and I think that's important because this is a you know a medication that's effective for smoking cessation. It's highly available over the counter. So it can be used in this population at least in the short term. We're seeing effectiveness and then the second question, which was, you know, should we be telling people to continue versus quit their e-cigarettes when they quit smoking? We actually found an interaction where the most effective results were among people who got nicotine replacement therapy with advice to quit both products simultaneously. Yeah. And that was contrary to my hypothesis, which was that people would do best if we said go ahead and continue your e-cigarettes and just quit your cigarettes. So this was a little bit of a head scratcher for us, but nonetheless important to see in the data here. And so, you know, in in those planned moderator analysis.

Speaker 3

Interesting. Yeah.

Speaker 4

We went back and looked at whether baseline motivation for e-cigarette use versus quitting e-cigarettes moderated the effect of advice to quit or continue e-cigarettes, and it did. What we found was people who were at baseline motivated to quit e-cigarettes who got advice to quit both products simultaneously were the most likely to achieve smoking cessation. Have you got advice too that conflicted with your baseline motivation for e-cigarettes? Findings were a little bit mixed. It was a much smaller sample, so it was really hard to draw conclusions about that. But nonetheless, we think it might be a signal that there's more work needed in that area to understand how advice to quit versus continue cigarettes when quitting cigarettes should be tailored to these different folks.

Speaker 3

Yeah, really interesting. And you mentioned that the combined NRT showed it was effective in the short-term. Are you able to talk about what happened in the longer term?

Speaker 4

Yeah, we did not see significant effects at the six month follow up conditions looked fairly similar again need for more research to try to extend these effects further out.

Speaker 3

Yeah.

Speaker 4

And part of that might be that this was intentionally a light touch mobile intervention where we were mailing product to people. So, you know, I think another trial where we have a little bit more intensive counseling or keep people engaged, we might start to see those. Effects longer-term.

Speaker 3

That makes sense. Did anything you find surprise you in particular other than what we just spoke about?

Speaker 4

Yeah. Well, two things. One is that across the board, we had fairly high rates of cigarette abstinence, you know upwards of 40% in all conditions.

Speaker 3

Oh my gosh.

Speaker 4

If I'm remembering correctly, actually I should double check that, but they were higher than expected, upwards of 35% in all conditions, and one interpretation of that is that these folks who are dually using cigarettes and e-cigarettes already have one foot in the door in terms of, or maybe 1 foot out the door in terms of leaving their cigarettes, and so, you know, they were sort of again, we were recruiting people already motivated to quit, you know, seeking treatment. But these were folks who maybe were more treatment responsive than exclusive smokers. Of course, we didn't test that. And I think that's an important thing to test in the future.

Speaker 3

Yeah. Yeah.

Speaker 4

But that that was 1 surprising factor and the other which you know I mentioned earlier is that the interaction contradicted my prior hypothesis where and people who got advice to quit both products were most successful and. Yeah. If I'm interpreting that one explanation is that adults who are dually using cigarettes in e-cigarettes have a different relationship with their e-cigarettes than adults who are exclusive smokers who are newly introduced to e-cigarettes. And your review with Nicola clearly demonstrates e-cigarettes can be effective for smoking cessation, but here this is a different population. Different relationship to e-cigarettes and so we might need to rethink that in adults who are dual using.

Speaker 3

And did you find that also in the arm that wasn't receiving NRT or in the two arms that weren't receiving NRT, there was the advice to stop both also more effective than the advice to just stop one no.

Speaker 4

No. So I mean we didn't find any significant relationships there so the interaction was simply that the group that got NRT plus advice to quit both did the best.

Speaker 3

Yeah. OK.

Speaker 4

But there really wasn't even a signal in the lack of NRT conditions, so something about his medication with this advice seemed to be in this population, in this trial, the best treatment.

Speaker 3

Yeah, that's so interesting. It's yeah, unexpected and really, really interesting. So, what do you think, if anything, I hope something should be done next following these findings?

Speaker 4

Well, I think some important next steps would be trying to dig in deeper to this question about what advice should be given to adults who dually use regarding their e-cigarettes. And you know, we found an initial signal here, but I'll be the first to say, I think this is an important first step, but we need replication for their exploration, and there's some unanswered questions. For instance, you know we tested one form of advice on how to continue your e-cigarettes. We gave some very limited education at the beginning around the role of e-cigarettes versus cigarettes, and so perhaps the effect of recommendation to continue versus quit e-cigarettes when quitting cigarettes depends on how it's delivered or you know the person's understanding of the different products baseline motivation, their whole host of factors that I think could be explored with this question. So, I think that's one important next step.

Speaker 3

Hmm.

Speaker 4

And another I think is starting to understand the role of dual use more broadly and for whom and under what conditions is dual use a step toward and movement towards cessation compared to exclusive smoking. Yeah, versus for understanding what conditions might it be a barrier to cessation and how do we deal with that?

Speaker 3

Yeah, yeah, yeah. It's those quite rates are kind of fascinating to reflect on and surprising as someone who looks at a lot of trials with much lower court rates than that, right. Yeah. Yeah, yeah.

Speaker 4

Yeah, no, I agree. I agree.

Speaker 3

Well, thank you so much. Is there anything else you'd like to add?

Speaker 4

No, it's been a pleasure talking about it and thanks so much for having me on the podcast.

Speaker 3

Awesome. Awesome. Thank you.

Speaker 2

That was really good to hear, Jamie. And there was so many things that were interesting about it. One of the things that seemed particularly relevant to me and one that's relevant to all smoking cessation studies, not just those of e-cigarettes is the fact that they found this difference in successful quitting in the short-term, but that didn't translate into the long-term, so it was interesting to hear Eli talking about, you know, where they may go in future with this and looking into potentially how to make the intervention more intensive to help more people to retain their quit status because that's something that we're doing in a study here at the University of Oxford, where the original study didn't find great cessation rates when we went to longer follow-up. So now we are currently in the process of trying to develop this more intensive intervention, but getting the kind of balance between it being not too intensive so people actually are going to want to deliver it, but making it intensive enough that it's really gonna help people to stay quit in the long term. That's kind of really find trying to find that sweet spot is really interesting and really challenging so that really spoke to me in terms of the stuff we're doing here at the minute.

Speaker 3

Awesome. And I think the other thing that stood out to me, I mean, I loved this trial. So it was such a different design and a lot of what we've covered on this podcast in the past. But one of the things that Eli noted was that they kind of overall regardless of study arm had higher quit rates than we might expect to see or than we see in studies of smoking cessation in other populations. And I think the wording Eli used was that maybe because these were dual users of e-cigarettes and cigarettes they had I think he said one foot out the door, right it might have been that they are already motivated to quit, and their vaping meant that they've taken steps on that pathway. It would be really interesting to see if those patterns persist moving forward within dual users when offered cigarette cessation interventions.

Speaker 2

Yeah, it's it's really interesting and I'm glad that Eli and others are doing the work to look at this specific population. It can teach us a lot about e-cigarette use, I think.

Speaker 3

Absolutely. All right. Well, that is it from us this month. Thanks so much to Professor Klemperer and to all of you for listening. We will be taking a break next month for the summer holidays. I hope you all take some sort of vacation as well. So, join us again in September for the next episode of ‘Let's talk e-cigarettes’. Please subscribe on iTunes or Spotify and stay tuned for our next episode.

Thank you to Jonathan Livingstone-Banks for running searches to Ailsa Butler for producing this podcast and to all of you for tuning in. The 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.

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.