

Let's talk e-cigarettes
Podcast 28, January 2024, Cara Murphy

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Speaker 3: Jamie Hartmann-Boyce, JHB
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Transcript

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 a different advice.

Speaker 2

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

Speaker 3

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 review of e-cigarettes for smoking cessation. This is called a living systematic review. In each episode, we start by going through the studies we've found that month and then go into more detail about a particular study or topic related to e-cigarettes.

Speaker 3

So, this month's podcast episode is actually covering both our December and January searches. We took a break over the winter holidays and are delighted to be back with you. Happy New Year everyone. So, what we're covering this month is everything that we found from December and up to our searches run on the 1st of January 2024. We found two new ongoing studies and one new included study, which Nicola will tell you about in a nutshell.

Speaker 2

Hi, Jamie. Yes. So, the new included study that we found was published by Xu. It was published in 2023 in the journal *Experimental and Clinical Psychopharmacology*. It was a randomised controlled trial that recruited 837 people in the USA. And the study was carried out and funded by JUUL Labs, so they are manufacturers of e-cigarettes. The study had three study arms. These were two where participants were given nicotine e-cigarettes. So, in one of the arms, people were only given tobacco e-cigarettes and in the other arm they were given a choice of e-cigarette flavours. In the third arm, participants didn't receive e-cigarettes. That were given some traditional smoking cessation materials. And they as an outcome, they looked at the number of people who'd quit smoking in the long term. So, we're super interested in that for our review. And it's the first study that we've seen that has compared different flavour conditions. Also looking at these long-term quit rates, what they found was that the tobacco flavour arm and the choice of flavours arm had very similar quit rates. That the groups that were only given the traditional quit advice had significantly lower quit rates than both the E-cigarette arms when they were combined together.

Speaker 3

Great. Thanks Nicola. So, in terms of our two new ongoing studies, the first one goes by the acronym ADAPT, it's led by Tracy Smith at the Medical University of South Carolina in the USA and it's funded by the National Cancer Institute. This is an interesting study design. It's an adaptive trial design, so they're aiming to recruit 544 people who smoke, and they're looking at completing this study in 2028 by adaptive trial design. What they mean is that participants will be randomized at different phases throughout the trial depending on their smoking status at those phases. So, at first, participants will be randomized to either varenicline or combination nicotine replacement therapy, by which they mean using a nicotine patch and a nicotine lozenge at the same time then they follow up with people four weeks later and if they've successfully not smoked in the last three days, then they'll keep on using the initial treatment they were assigned to. However, if they're still smoking at four weeks, they'll be randomized to either continue the same medication they were assigned to at the start of the study, or switch to the other option. So that would mean people on an NRT switching to varenicline people on varenicline switching to NRT, they're then followed up again in another four weeks. So, at 8 weeks from baseline and in that instance, people who haven't quit smoking at that point will be randomized to either continue the same medication they've been on or to switch to a nicotine e-cigarette. So, it's essentially at baseline and at four weeks e-cigarettes are not an option. But at eight weeks for people who haven't quit smoking at that point, e-cigarettes become an option to be randomized to. And the last new ongoing study is led by Cara Murphy, who's an assistant professor at Brown University. It's a trial for harm reduction with incentives and vaping e-cigarettes that's funded by the National Institute of General Medical Sciences. And I got the pleasure of talking to Cara about her study in more detail in this month's deep dive. So, could you start by telling us about your background and what got you into e-cigarettes research?

Speaker 4

Yeah. Thanks so much for having me, Jamie. So my background, I'm a clinical psychologist and I'm an assistant professor at Brown University. I'm in the school for public health there. So, I'm faculty in what's called the Center for Alcohol and Addiction. And I'm also part of the Center for Addiction and Disease Risk Exacerbation and are called cadre, which in NIH kind of COBRA center or Center for Biomedical research excellence and then in the school public health, I do some intervention work and some work, you know, helping people figure out and test what's going to be the most effective to help people make some changes. And my work really focuses on changes to behaviors related to obesity, as well as quitting smoking and to be honest, to answer your question of kind of what got me into the e-cigarette research, I think it was just this desire, you know, as a researcher and as a clinician to help really find something that would help people with quitting smoking. You know, I dabble a bit in behavioral economics, and this idea of kind of substitutability has always been really interesting to me of, you know, trying to find something that someone can actually substitute, you know, with success. And so, we know people use other forms of nicotine gum and patches, and that works for some people. But this idea of an e-cigarette really was one that kind of intrigued me as a way that maybe some people that more traditional methods had missed might benefit from and so yeah, kind of an area of research was kind of launched from there I think.

Speaker 3

OK, great. So, can you tell us a bit about your new study?

Speaker 4

Sure. Yeah. So my new study we call THRIVE, which see if I can remember what it stands for is a trial for harm reduction with incentives and vaping e-cigarette and so this is a small pilot study that's funded by that Center for Addiction and Disease Risk is as which I mentioned before. And so for this today, we're specifically recruiting individuals who smoke cigarettes and who have overweight or obesity and we're using a two by two design. And, so, what we're doing there is the participants are going to be given e-cigarettes and half are not given e-cigarettes and then half are given incentives. You know, small financial incentive, just a couple of dollars a day for four weeks for showing that they're not smoking cigarettes anymore based on a breath test and then other half also received

kind of small financial incentives. But this is not based on whether other smoking, so not contingent on anything. And so you know what we're interested in learning there is, you know, which intervention or combination of interventions is really going to make the biggest impact in helping people change their smoking behavior, you know, ideally getting them off cigarettes all together.

Speaker 3

OK.

Speaker 4

Yeah, and. And you know, with this group too, since there's overweight and obesity, you know, we're also interested in what happens to people's weight if they switch to e-cigarettes or if they are able to stop using e-cigarettes based on incentives. So, we are kind of really curious about those interventions both separately, but then in combination. And you're really wanting to see kind of if someone fully switches from combustible cigarettes to e-cigarettes, does that help maybe reduce some of the weight gain that we often see happens when people quit smoking and maybe might happen if they quit just based on you getting some incentives that didn't have another product like the E cigarettes to maybe help buffer some of that weight gain that can happen.

Speaker 3

Great. Can you tell us a little bit more background on weight gain and why we might think helping people quit with e-cigarettes might have a different effect on weight gain after quitting smoking than if they quit using a different intervention.

Speaker 4

Yeah, there's really not anything out there that we've seen has helped long-term prevent the weight gain that happens when people quit smoking cigarettes. And so we know nicotine has an effect on the body and has, you know, an effect on the metabolism and other things. And so oftentimes, when people quit smoking, they say, you know, I gained some weight. And for some people, right, this might not be a big deal. Well, but for other people it is a big deal. Both has health implications, but also has implications on how it impacts our kind of course of sticking with quitting smoking. And so, you know, one thing that I think was really interesting about e-cigarettes is that it could be a way to help people transition off e-cigarettes but still get that nicotine so they're not also based with a considerable weight gain when they're going through the process. And especially if it's something that someone likes and can you know, will use and will actually kind of swap for cigarettes versus maybe, maybe using a little bit more for begrudgingly. You know it might give them really what they're looking for of helping not only with the cessation but really preventing the weight gain that happens which you know on average we know people gain around 10 lbs when they quit. There's a big range and some people gain quite a bit more than that, and so anything that might help you know people who are really looking for something that might be effective in preventing that weight gain I think is a good option that we want to be aware of.

Speaker 3

Yeah, that makes sense. I don't know if you have looked into this or will look into this no problem if not, but I'm gonna ask while I'm thinking of it. I remember hearing back in the day some thoughts about E cigarettes helping with weight management as well, partly due to things like their flavors. Right. So I think there was some, like, qualitative evidence of people saying. Ohh you know I used to have a piece of cake, but now I've vaped something that's cake flavored instead. Is that something that you're aware of or that this research will touch on at all?

Speaker 4

Yeah, you're speaking to my heart because I wrote many grant proposals on this exact topic that we're never funded sadly, but yeah, you know, it is this really interesting thing kind of back to this idea of substitutability. If someone could have had chocolate cake flavored e-cigarette and that, can, you know, satiate a craving for chocolate cake when they're quitting smoking. That would be a really nice way to kind of prevent some of that, you know, extra caloric intake that often comes with quitting smoking. I think it's been tricky in the US with the approved per market products and really only being available in tobacco flavor. So, of course there are lots of other flavors out there, but not

approved ones. And so our study actually is with both tobacco and menthol. And so we'll, we will be able to see whether tobacco or menthol flavor had any difference in weight, although it's we're pretty small samples, so. Yeah, you won't be powered to find too much, but you know, again, I think at least anecdotally, we know that people are saying that e-cigarettes can help with their appetite. It can help kind of prevent the snacking or overeating and you know, again I think the flavors are really interesting part of it. But you know on the flip side, of course the flavors are being an interesting part and it makes them intriguing for other groups, too. So it's definitely tricky to say the least.

Speaker 3

Yeah, yeah, really it's such an interesting area. I used to work in overweight and obesity a bit more and also led to a Cochrane review a few years ago that looked at interventions to prevent weight gain after smoking cessation. So at least then there was nothing else that looked at e-cigarettes in this context. So I was so excited when I saw your study. Come up for that reason too I think we don't know enough about it at all. Yeah. So, best case scenario, what do you think your study will be able to tell us, you know, what are you setting out to evaluate as your endpoints and is this really a bridge to further research?

Speaker 4

Yeah, so this study will, because small will really only be able to tell us, you know, if we were able to do this, if people are at least interested, right, does this is this population one that we'll consider using e-cigarettes and, you know, we'll actually have pretty good uptake with them. And then again, is that even more effective by kind of incentivizing people not just smoke while they're using e-cigarettes. Really can we get this population to really fully switch when we combine these two interventions, or right maybe one or the other enough and maybe we don't need both. And so you know what we're hoping this will show us is what's the best either intervention or combination of interventions that we want to move forward with kind of testing on a larger scale. And when I say best, the two things we really want to see is, is it helping people reduce the harm from smoking cigarettes, right? Are they substantially reducing or stopping smoking cigarettes and are they also able to do that without us seeing, you know, this huge jump in their weight at the same time? And so we, we're really going to be looking at those as kind of endpoints, things like whether it's feasible and whether people liked it and would actually, you know use the products.

Speaker 3

Awesome. And did you encounter any challenges getting the study kind of up and running?

Speaker 4

Yeah. So I was fortunate in that I didn't encounter too many challenges. The biggest thing was actually there was a little bit of a delay between when and we learned we'd be able to have the project funded and when we actually received funding. And so we were planning to launch sometime in early spring and but when the funds actually dry. I was 8 months pregnant and so.

Speaker 3

Ah, congratulations.

Speaker 4

Thank you. So we had to make the tough decision of holding off, starting the study that you know, we're really excited to start and we're kind of ready to start. But I thought let's put a pause on it and so I took some parental leave, came back and we launched in the fall. And so now we've been kind of going strong since then and have a number of people in the protocol and who have completed the protocol too. So we're really excited to be able to start looking at results sometime, hopefully soon.

Speaker 3

That's really exciting. And do you know if anyone else is testing e-cigarettes in this population?

Speaker 4

You know the population of individuals with overweight or obesity who smoke cigarettes has fortunately got a lot of attention in the last five or ten years, I would say there's been a lot of interest in helping this group change their smoking behavior. And really. Thinking about, you know, the interactive risks of obesity and cigarette smoking, that it isn't just, you know, you have this one

risk and this other risk. So your health is impacted a little bit more, right. They're actually really interactive. And so oftentimes we see these kind of multiplicative effects where you know someone's risk for all kinds of different health conditions and right also death is pretty substantially increased by having overweight obesity and being a cigarette smoker or excuse me, and smoking cigarettes. And so there are more interventions out there. I don't know of anyone who has specifically used an e-cigarette intervention with this population. Now, that doesn't mean they're not out there and if one of your listeners saying I'm doing that, I'd love to hear and connect and collaborate with anyone doing this work, but you know one thing that I was really excited to was saying, you know, in this population more than others, right, this population really could benefit from something if it does help them transition off cigarettes?

Speaker 3

Absolutely. And for what it's worth, we search the literature really regularly, and this is certainly the first trial that we've come across, which is in people living with overweight, obesity who smoke. So, we were really excited to see it too, because it seems like an area where research is absolutely needed. That's it from me. Do you have anything else you want to add?

Speaker 4

Yeah, you know been thinking about this population and again, in interventions, some of the work that I've done when we ask about quitting, people will say, you know, no Cara I didn't gain the 10 lbs I gained, you know, 30 lbs. I gained weight really quickly and right for someone who maybe is already kind of pre-disposed to having a larger body or maybe who kind of struggles with their weight in a way that you know other people don't it can be really demoralizing, right. People think of weight gain as sometimes this kind of this superficial thing and it really isn't. Right, and especially if it's someone that it might kind of push you into, you know, worsening diabetes or going pre diabetic to diabetic. And so there was really this struggle there. You know, I gained weight really quickly. You know, it made quitting smoking more stressful for me, which is the last thing I needed when I was quitting smoking. And so, you know, it really is kind of this special population. And another thing that we hear a lot of is people saying, you know, people are judging me for my weight. People are judging me for my smoking. And, like, I don't know what to do because if I quit, my weight is going to go up, but if I keep smoking right people are looking down at me, not hiring me and all these things because there's so much stigma there. And so trying to think, OK, well if we could really give someone a tool that gets them off the cigarettes and they're not having to stress about this. Yeah, weight, and that happens. I really do think it could be revolutionary and really incredible. And so I hope you find some exciting stuff and that E cigarettes might be something that, you know, gets people over that hump and might be effective. Of course, the results will the data will tell us at some point.

Speaker 3

I'm so glad that that you are doing this study and thank you so much for coming on and talking. To us about it.

Speaker 4

Wonderful. Thank you so much for having me again. I really appreciate it.

Speaker 3

My pleasure.

Speaker 2

Thanks, Jamie. It's really nice to see a study taking place in this population, especially as there's reason to think that e-cigarettes might be particularly useful in this group. So, let's hope this is the first of more studies in this area.

Speaker 3

Agreed Nicola it's been kind of odd to me that we haven't seen these trials before, so it's great to see one finally popping up in our search and I'm really grateful to Professor Murphy that we got to hear more about the study. And we look forward to seeing its results. So that's it from us this month.

Thank you so much for listening. Thank you so much, Professor Murphy, for coming on and thank you to everyone who makes this podcast possible. Check in with us again next month
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.

Speaker 3

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 review is 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.