

July 2023 Let's talk e-cigarettes

Transcript

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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 and might give you different advice.

NL

Hi, I'm Nicola Lindson.

JHB:

And I'm Jamie Hartmann-Boyce.

NL:

We're both researchers based at the University of Oxford, where we work with 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 search 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 have found that month and then go into more detail about a particular study or topic related to E cigarettes.

JHB

This month we ran our searches on the 1st of July and we found two new ongoing studies in a nutshell. The first of the ongoing studies is led by Professor Eleanor Levins at the University of Kansas Medical Center in the US. It's not clear on the clinical trial record who the study is funded by. The records don't have an obvious place to record this information. The study looks at the impact of e-cigarette nicotine concentration on compensation and what that means is that they want to test what happens when you give people e-cigarettes with different levels of nicotine, and that includes looking at whether they use the vape more when they have lower doses of nicotine and that can sometimes be referred to as compensatory puffing. In order to make up for the lower amount of nicotine they're getting with each puff, they're also going to be looking at a range of other outcomes and analyzing whether results differ between a group of white people who smoke and a group of African American people who smoke. Doctor Lindson is going to tell you more about our other ongoing study. In this month's deep dive.

NL

Thanks, Jamie. This month I had the pleasure of interviewing assistant Professor Joanna Streck, who is based in the Department of Psychiatry at Massachusetts General Hospital in the US. She chatted to me about her new study, which is looking at the feasibility, acceptability and preliminary effects of switching from combustible combustible cigarettes to e-cigarettes. Individuals in treatment for opioid use disorder. So first of all, it's really great to talk to you Joanna, could you tell us a little bit about yourself and what brought you to studying e-cigarettes?

JS

So I went to grad school and got my doctorate in clinical psychology at the University of Vermont. And while I was there, I worked primarily, and they they had a tobacco center on regulatory science, which was studying basically non cigarette tobacco products. So there I worked on different projects looking at cigarettes with less nicotine in them and that really sparked my interest in studying E cigarettes and alternative nicotine delivery systems that can potentially help people reduce their cigarette use.

NL

So, have you been involved in any cigarette research before this project that we're going to talk about today?

JS

Yes, we did. So a few years ago, I did a pilot study looking at people with substance use disorders and what were their kind of perceptions and risk perceptions of E cigarettes, whether they think they can E cigarettes are tools that can help people quit conventional cigarette smoking. And that data really helped us build the project that we're talking about today. That's a bigger study and trial.

NL

OK, So what is your role in this study now that you're currently working on investing cigarettes in people specifically with opioid use disorder?

JS

Yes, exactly. So I'm the principal investigator of that study, which means that I basically like over see and lead that study and it's actually a mentored career development grant. So it's meant to help people who are more junior to research launch into an independent career.

NL

Ohh amazing that sounds great. And can you tell us a bit about how that study has been designed and what it actually sets out to look at and where you're at with it, I suppose at the moment?

JS

Yes, I can. So essentially this study started July 1st. So it's very in the very, very early stages. So we are recruiting adults with opioid use disorder, which is a substance use disorder, who smoke cigarettes and we're looking at or recruiting specifically people who are receiving treatment for their opioid use disorder and generally stable in their treatment. And then we are asking people to switch from smoking

conventional cigarettes to vaping nicotine electronic cigarettes and the time frame that we would have them do that is for eight weeks. So we asked them to switch from cigarettes to E cigarettes around the first week and then for eight weeks. The goal is for them to vape E cigarettes instead of smoking their usual brand cigarettes, and it's a randomized study. So half of the participants will receive the E cigarettes immediately. And half of them will receive E cigarettes after an 8 week delay, which just allows us to have a control group. It's called a wait list control design, and then we're essentially studying whether people can make the switch and switch completely from cigarettes to E cigarettes and see if they can reduce their cigarette use, adhere to the E cigarettes. And then we collect different biomarkers to assess their tobacco exposure as well.

NL

So you mentioned that you're going to be encouraging people to switch after that first week. If people can't switch entirely then and say they are reducing their use over the eight week. If they've stopped smoking by the end of the eight weeks, would they still be counted as somebody who's switched?

JS

Such a good question. So yeah, we have been deciding what our definition of quote unquote successful switching is in terms of how the protocol is designed. We encourage them to switch by the 1st week, but a part of our outcome assessment is to look at when they switch and recognizing that they might not switch immediately, they might do it more gradually. And so we're texting patients or participants and asking them about their daily cigarette and e-cigarette so that we can get a very fine grained look at exactly what these patterns are, when and how they switch. So no one would be, you know, asked to leave the study we it's it's more us wanting to collect data on how it happens.

NL

Yeah, that sounds super interesting. You know, collecting all that information just as well as whether they switch, it gives you the opportunity to just understand the behaviour a little bit more, doesn't it?

JS

And one other thing I should have mentioned about this study design is that rather than using commercially available electronic cigarettes. In this study, we're using NIDA's standardized research electronic cigarette.

NL

NIDA is the acronym for the National Institute on Drug Abuse, which are a US based research funder.

JS

So the company Njoy produces a a pod mod e-cigarette device that NIDA which is part of the National Institute of Health, makes available to researchers in part because the constituents of the product are more well characterized and it's considered to be kind of more controlled and safe for a research setting. So it's different than in other studies. We've purchased E cigarettes, you know, from commercial, commercially available E cigarettes, I mean.

NL

So yeah, that's interesting and very different I suppose to if you're studying people who go out and source their E cigarettes themselves, where you don't know where they'll be coming from. So as we've already mentioned, your studies being carried out in this specific population of people who are in treatment for opioid use disorder. Why is it that you decided that this was a particularly relevant population for this kind of e-cigarette research?

JS

So for some context, people with opioid use disorder who are in treatment for their opioid use disorder luckily are much less likely to die of their opioid use. They're typically receiving a life saving medication, like methadone or suboxone, but they're very highly likely to continue to die from their tobacco use. So in the US general population, the smoking prevalence rate is something like 12%. Now it's really substantially reduced. The smoking prevalence rate in people with opioid use disorder is over 75%, with some estimates showing that nearly everyone with opioid use disorder smoked cigarettes and they really struggled to quit with existing tools like the patch, lozenge, etc. And part of that is because they have unique risk factors or vulnerabilities to tobacco use. So there are pharmacological interactions between opioids and nicotine where taking your opioid agonist dose can actually enhance your craving for nicotine, make you want to smoke more. They also really struggle to adhere to smoking cessation medication and counseling. So it's really a group that is in need of more novel smoking cessation tools to help them quit. Given we don't see that existing methods really help them, so we were really excited given the research that's available showing that E cigarettes can be helpful for adults in the general population to quit smoking we thought it was important to test that in this very vulnerable population who really struggles to quit.

NL

Again, really interesting. So you mentioned actually at the beginning that you did do some research kind of leading up to doing this study. Could you just give us a quick summary of that for us.

JS

Yes, yeah, absolutely. So we did a small survey study. It was a quantitative survey. So participants filled out a questionnaire and then we did a qualitative interview where we asked more unstructured open-ended questions about E cigarettes and we essentially asked adults with opioid use disorder who smoked cigarettes what they thought of E cigarettes, whether they thought they were harmful, how they thought their harms compared to conventional cigarettes, whether they'd be interested in using E cigarettes to quit or cut down on regular conventional cigarettes. And really tried to gather data on what we call the acceptability of E cigarettes, like how they like it, whether they expect it will help them quit smoking, etcetera. And we found that most of our participants with opioid use disorder did say that they thought E cigarettes could be a really helpful smoking cessation tool. Though some people were wary or concerned about the risks of E cigarettes and this I should say that we did this survey shortly after. This was like 3 years ago, around the time when there was more controversy around vaping and lung injury, and there were different bans in our state for vaping devices, which we now know that was attributed to illicitly obtained THC, but at the time, the general public and the state of Massachusetts and the United States were really concerned about E cigarettes. So I think part of that skewed our data towards people being concerned about their risk as well.

NL

Right. That makes sense. Has there been anything particularly surprising that you think has come up from the kind of research either that you've done preliminary to this or just to, you know, research that you've looked at yourself to try and design this study?

JS

Yeah, that's a really good question. I don't. So far, there's we're very early on in this study and so far there's, and I'm sure there will be many things that I'm surprised about down the road. I will say the the piece, I think that was honestly the most challenging was getting the study funded in light of what I just shared in that there was all this as you and this podcast I'm sure have covered a lot of controversy around E cigarettes, a lot of misconceptions around E cigarettes and when we first tried to get this funded it was in the midst of all of that controversy. At the height or peak of that controversy. So I think that that was a challenge that we faced. But so far, yeah, there's nothing really I can think of yet that have been has been surprising about the study.

NL

Yeah, it's great. And do you foresee that there might be any particular challenges about undertaking this study. Obviously you've already mentioned, I mean it's always challenging getting a study funded and it sounds like you've had particular challenges, but is there anything you're kind of, you've kind of designed things in a certain way because you think it might be a bit trickier.

JS

I think the piece that I was saying about how to collect the fine grained data on cigarette and e-cigarette patterns in this question of how do people switch? Do they do it immediately? Do they do it gradually? That was something that we were wondering how we could, how we could collect such fine grained data when we only see participants every few weeks. So to address that, in our design, we are having our software system basically send daily text messages to participants phones where we ask about every day's tobacco and e-cigarette use. So that was one one challenge that we were anticipating that we hoped would be addressed by basically collecting data every day, even when we don't see the participant.

NL

Don't worry if you can't answer this, but I've never done any kind of research in these kind of settings. You know, for example, an opioid treatment centre before. Is there any kind of particular challenges on kind of working within these particular settings?

JS

Yeah, I think that. So historically, one kind of systemic challenge has been that a lot of the addiction treatment centers, few of them offer tobacco cessation treatment and few view tobacco cessation treatment as a priority. Historically, it's been viewed that opioid use is in treating their opioid use is a much bigger priority. And so that's part of why we selected are planning to select individuals in treatment whose opioid use is stable and they're treated for it. But I do, I do anticipate that as we start recruitment and we haven't started it. Yet I do wonder if that will pose a challenge if we're trying to

recruit people for our study and wanting the clinics to refer us people potential, we could encounter some people who don't think that tobacco use is a priority or or are weary of E cigarettes. I think that could be another challenge we face from the clinic staff.

NL

And I guess part of the point of this study is to find out those kind of issues for future research. Do you know what your plan, I know it's a bit premature maybe to ask, cause you're only just starting out, but do you know what your plans might be afterwards?

JS

No, it's good. No, no. It's very good to plan like this. So what we proposed in the grant that was funded was that this is kind of, you know considered this is a mentored career development award. So it's a small randomized controlled trial. So we're proposing to recruit like 40 people, a single site on a single opioid treatment medicine, Suboxone. Future plans could include doing a larger multi site study, including people with any substance use disorder, making it a bit more broad and generalizable, assuming that we find that that people are reducing their conventional cigarette use and E cigarettes are helping them quit, then we would consider broadening the population and testing that approach, yeah.

NL

So again, this might be a bit too early to say, but do you have any idea at the moment about what advice should be given to people with an opioid use disorder who smoke about vaping?

JS

Yep, that's a really good question. Definitely part of this study is designed to answer that question as this type of study hasn't yet been conducted in people with opioid use disorder. So part of that I hope to answer with the research. In the United States, and I know that this is country specific, but in the United States E cigarettes are not an FDA approved smoking cessation tool. So they're not approved by our Food and Drug Administration to treat smoking. So generally all of our guidelines on smoking cessation, what clinicians are told to advise patients as to advise them to 1st use FDA approved cessation tools to quit like NRT, varenicline, et cetera, so. So that's kind of our policies in the US. In my personal opinion, based on my reading of the data, I think that the most important thing is to offer populations who struggle to quit with existing tools a big enough toolkit of options that they can choose what to use to help them quit. And we see that people with opioid and substance use disorders are interested in using E cigarettes to quit, and they struggle to use the FDA approved tools. So in my opinion participants or patients should be given a toolkit of a ton of options so that when they're ready to quit, they can try out options and see what works best for them. And I'm hoping that by running this study that we're talking about today that we'll get data, scientific data supporting that. It could be a useful strategy to recommend E cigarettes to people who smoke and want to quit.

NL

Amazing. So I think that's kind of everything I wanted to ask, is there anything that we haven't covered that you wanted to or anything you want to leave our listeners with?

JS

I think that one thing that's important to say is that historically people with substance use and psychiatric disorders have been excluded from research and excluded from these studies. So I think that it's super important that we are inclusive in our research and yeah, and take a more inclusive approach for people with psychiatric and substance use disorders and recognize that there's a ton of data showing that quitting smoking does not destabilize people's substance use or their psychiatric illness. And so I think as I mentioned, in addition to including them in research, I think a huge part of this is offering these individuals all of the tools that we have a diverse array of different cessation tools to allow them to choose what they want to use and how they want to use it to quit or reduce their tobacco use.

NL

That's great. Thank you so much. It's really interesting study. I'm really looking forward to seeing the results.

JS

Awesome. Thank you for having me.

NL

Great to speak to you. Thank you very much.

JHB

That's it from us this month. Thanks so much to Professor Streck for the interview and to all of you for listening. We're going to take our summer break next month, so we won't be doing an August episode, but do tune-in in September when we'll be back with our next episode. Please subscribe on iTunes or Spotify and stay tuned for our next episode.

Music

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 Livingston Banks for running searches to Elsa Butler for choosing 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 Cochrane Tobacco Addiction Group also receives core infrastructure funding from the National Institutes for Health Research. The views expressed in this podcast are those of Nicola and I and do not represent those of the funders.