Response to Physicians for Smoke-Free Canada's coverage of the Cochrane review of e-cigarettes for smoking cessation

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We are grateful to Physicians for a Smoke-Free Canada for covering our recent Cochrane review of e-cigarettes for smoking cessation in their 22 November blog. There are a few comments/elements in it that we felt a need to correct and/or reply to, on record, particularly as some of these have been raised by others in the last week.[1]

Below, we work through arguments made in the Physicians for a Smoke-Free Canada blog, one-by-one.

Firstly, the blog implies that we give this review more 'PR' effort than other projects, and that that is somehow problematic. Most of our outputs are volunteer efforts with no dedicated funding. We are grateful to our funders, Cancer Research UK, for supporting this work – their support means we can, and indeed as set out in our grant application are contracted to – dedicate time to sharing the messages from the review. As a parallel, the last externally-funded review from our group, funded by the National Institute for Health and Care Research (NIHR) investigated behavioural support for smoking cessation, and for that we shared findings via webinars, podcasts, blogs, conference presentations, a press briefing, a plain language summary, infographic, and work with stop smoking support training providers.

Given the widespread misunderstandings about e-cigarettes, we believe clear, unbiased communications about the evidence – without judgements or agendas – are critical. That's what we have endeavoured to do, and will continue to do. We will take this opportunity to point out that we are not "pro-e-cigarettes." We are pro-evidence, and we believe it is our moral duty to share the results of our publicly-funded research with the public, regardless of whether some may find them uncomfortable.

Secondly, it is misleading to say we have confirmed 'e-cigarettes are NOT very effective at helping smokers quit.' As is well-known amongst tobacco control researchers, clinicians, and people who smoke, stopping smoking is extremely difficult for many people. All known stop smoking therapies, even in the best supervised therapeutic conditions, on average are more likely to fail on any given quit attempt than to succeed. *This does not mean they are not effective.* It means that for many people, stopping smoking is extremely difficult. However, continuing to smoke is uniquely deadly.

If 100 people are in a room, and they all smoke, and are given an e-cigarette to help them quit, data show 10 might successfully quit smoking long term *during that one quit attempt*. 1 in 2 regular smokers die of smoking. So the best estimate from all the evidence we have is that offering those 100 people a nicotine e-cigarette will save five lives. Data from the studies in this review suggest that if you offered those 100 people nicotine replacement therapy, six people would quit as a result, and 3 lives would be saved. Those lives matter. That's why nicotine replacement therapy is considered an essential medicine by the World Health Organization. The authors cite Simon Chapman's blog, "Would you take a drug that failed with 90% of its users?" Many of us do it regularly. Take for example, statins. An independent review found that, "of 1000 people treated with a statin for five years, 18 would avoid a major CVD event"; authors conclude this "compares well with other treatments used for preventing cardiovascular disease."

Sadly, some still hold basic misunderstandings of the evidence for smoking cessation treatment, mistakenly believing that stopping cold turkey is the most effective method. Obviously finding a more effective treatment than those currently available for stopping smoking would be wonderful; however, in the absence of that it makes sense to promote the best currently available treatments.

Thirdly, it is misleading to say that "Cochrane has confirmed that in clinical trials, other stop-smoking medications… do better than e-cigarettes." The comparisons the blog presents are based on indirect data. It is inappropriate to take absolute quit rates from 'Summary of findings' tables across different reviews and compare them to each other (which is our best guess at how the authors derived their comparative data). These studies take place in different populations, and absolute numbers from across reviews do not and can never provide definitive evidence on comparative effects. Fortunately, we have a review underway which uses component network meta-analysis to provide evidence on comparative effectiveness. It's also externally-funded based on taxpayer funds, so we will be publicising its conclusions, too, regardless of what it finds, because we're contracted to do so, and again, because we believe it is the right thing to do.

The blog argues that randomised clinical trials are designed for therapeutic medication and are not the right yardstick to assess consumer product use. Many consumer products and policies have been tested in randomised controlled trials. They rule out confounding (if conducted well), and are widely considered one of, if not, the best way to assess the effects of any intervention, where feasible.

The authors go on to assert that "The Cochrane review is out of step with other scientific assessments" in this area. We agree, but we think that is because we are *a step ahead.* This is a living systematic review, which means we incorporate the most recent evidence. The other sources cited do not include recent trials (through no fault of their own, we hasten to add – this is innate to the systematic review process).

The authors state that we do not "address the non-clinical consequences of e-cigarette use." In particular they cite concerns over:

- dual use (which we do cover, here - these studies find that in people who smoke, giving them an e-cigarette reduces potential biomarkers of harm *even if they don't quit smoking entirely*);
- "increased health risks incurred by smokers who successfully quit with e-cigarettes" (we don't have enough data on this, as we state in our press release and throughout our review; in terms of how many people in these studies continue to vape after quitting smoking, we do cover that, here);
- initiation of nicotine use - we have a new review underway looking at potential 'gateway' effects of e-cigarettes. We do this work to be able to best inform policy makers to make difficult decisions about the availability and marketing of these products.
- and the role of the tobacco industry. We are really worried about the tobacco industry. We don't take funding from them. We test whether our conclusions are sensitive to inclusion of studies funded by the tobacco industry. If there are further ways that readers feel this could be incorporated into our Cochrane review, whilst still following the rigid (topic-agnostic) guidance set out in the Cochrane Handbook, we would welcome these.

The next point made in the blog relates to **Canadian-specific, observational evidence**. We believe Canadian policy makers– for whom we have nothing but the utmost respect – are best placed to make judgements about those data. That is outside the scope of our review.

The blog also notes that **some of our authors were involved with some of the trials included in our review.** This is not at all uncommon, and is allowed in Cochrane's strict conflict of interest guidelines. Authors of trials are not involved in decisions to include their studies, in data extraction from their studies, or in risk of bias assessments for their studies. Cochrane specifies this and thinks this is sufficient to guard against bias that could arise in these instances. We agree.

And finally, in the **'more about the Cochrane reviews'** section, the authors note we are being disbanded in March 2023. This is alas very true, as all UK Cochrane Groups have had their funding cut and all have been instructed to disband. These cuts were not caused by the work of the Cochrane Tobacco Addiction Group and do not reflect any kind of ill judgement on our work. However, they affect us deeply. Much of the otherwise unfunded work we do will not continue in its current form, and our colleagues' jobs are threatened at a time of unprecedented economic uncertainty in the UK. We feel the loss acutely and are thankful to all the previous and current members of the Cochrane Tobacco Addiction Group, who have contributed to our work; of which we are immensely proud.

We'd like to end with a reminder that deaths caused by smoking are preventable and devastating to people who smoke, to the people who love them, and to the communities around them, not to mention their population and economic impacts. Our passion for what we do is driven by the experiences of people we love. We share the same goal as Physicians for a Smoke-Free Canada, namely the reduction of tobacco-caused illness through reduced smoking and exposure to second-hand smoke. We always welcome constructive criticisms of our work, but are saddened that Physicians for a Smoke-Free Canada are dedicating their time and resources to undermining our work, including unnecessary ad hominem comments implying conflicts of interest and a pre-set agenda, rather than to our shared goals of a smoke-free society. Ideally as a tobacco control community we would all be working towards an endgame where no one dies of smoking-related disease, instead of being distracted by arguments about e-cigarettes. In the end, the biggest threat of vaping to tobacco control might be how it's managed to take us away from fighting together for what matters most, and instead made us fight each other.

Note: The opinions expressed here do not necessarily represent the views of our funders or organisations.