

# Should Clinicians Recommend E-cigarettes to Their Patients Who Smoke? Yes.

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Cigarette smoking is uniquely dangerous, with over 70 identified carcinogens and thousands of other toxins identified in cigarette smoke.<sup>1</sup> On average, each cigarette smoked cuts someone's life by 11 minutes<sup>2</sup> and stopping smoking is arguably the single most important change that smokers can make to improve their health. As smoking is concentrated among the poor and disadvantaged in western societies,<sup>3</sup> urgent action is needed to hasten all smokers' ability to quit, in order to reduce growing health inequalities as a result of smoking.

Doctors are credible sources of advice and support, so they play an important role in triggering quit attempts among smokers. Doctor's advice to quit smoking is an important reason why smokers think about quitting.<sup>4</sup> Delivering very brief advice to quit takes less than a minute, and can save lives.

In England, general population surveys have shown that electronic cigarettes (e-cigarettes) are now the most popular source of support for a smoker trying to quit. The second most popular method—going without any support (“cold turkey”)—has the lowest success rates. E-cigarettes are about 10 times more popular than the most effective smoking cessation method, a combination of support and treatment from local stop-smoking services.<sup>5</sup> Precisely what is driving smokers to using e-cigarettes is unclear. Possible reasons to prefer e-cigarettes over other nicotine replacement therapies, such as the gum or patch, include the

behavioral action of e-cigarettes being similar to that of smoking, speed and dose of nicotine delivery, ability to inhale, packaging and marketing (not as licensed medicines), and word of mouth. Also, because many smokers have tried to stop several times before, often with proven effective treatments, and still failed, a novel method such as e-cigarettes is welcome.

Although we still need more evidence on their effectiveness for quitting, a Cochrane review published in 2015 indicated that e-cigarettes with nicotine were significantly more likely to help smokers to stop than placebo e-cigarettes.<sup>6</sup> E-cigarettes produce nicotine in a much less harmful way than do tobacco cigarettes. Nicotine is the reason most people continue to smoke, but it is not the nicotine that kills. Nicotine is most addictive when delivered quickly and in high doses, as with cigarette smoking. Other forms of nicotine substitution, including e-cigarettes, have not yet been shown to be so addictive. It is possible this lower addictiveness might change as e-cigarette technology advances in an effort to improve nicotine delivery. So for smokers who are struggling to quit or who do not want to quit, e-cigarettes, like other nicotine replacement therapies, offer a way of continuing to use nicotine but in a much less harmful way.<sup>7</sup>

Doctors might prefer their patients not to use any nicotine, although the long-term use of nicotine has not been shown to have any appreciable negative health outcomes.<sup>7</sup> E-cigarettes are not lit, they do not burn, and do not produce cigarette smoke. Long-term studies of e-cigarettes are not yet possible, but the relative risk of e-cigarettes, allowing for residual long-term effects, is likely to be in the order of 5% of those of tobacco cigarettes.<sup>7,8</sup> Smokers are confused, however, about the relative harmfulness of nicotine, electronic, and tobacco cigarettes. Smokers worldwide misinterpret the harm that nicotine causes in comparison with smoking<sup>9</sup> and a recent study in Great Britain showed that smokers were increasingly misunderstanding the relative harms of electronic, compared with tobacco, cigarettes.<sup>10</sup> While such misperceptions exist, smokers

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will either not try e-cigarettes, not use them in sufficient quantity or frequency, or they will use them alongside smoking if quitting smoking is too difficult.

Additionally, as with all interactions with patients, clinicians need to avoid stigmatizing patients, and to be mindful of smokers' own efforts and desires with respect to their nicotine use. Clinicians need to articulate clearly the difference between nicotine and smoking, relative risks of e-cigarettes and smoking, possible long-term effects of e-cigarettes (but in comparison with continued smoking), the array of treatments accessible to smokers, but overall the urgent need to stop smoking as soon as possible using whatever tools they find helpful. New regulations being introduced in Europe and the United States, while controversial, should provide additional reassurance to clinicians about the quality and safety of e-cigarettes left on the market.

Issues surrounding e-cigarettes were discussed in detail in 2 recent reports from the United Kingdom. Among key messages from the Public Health England report<sup>8</sup> were that: (1) smokers who have tried other methods of quitting without success could be encouraged to try e-cigarettes to stop smoking; (2) stop-smoking services should support smokers using e-cigarettes to quit by offering them behavioral support (the combination of behavioral and pharmacological support, including with e-cigarettes, maximizes chances of successful quitting); and (3) encouraging smokers who cannot or do not want to stop smoking to switch to e-cigarettes could help reduce smoking-related disease, death, and health inequalities. The Royal College of Physicians report<sup>7</sup> concluded that in the interest of public health, it is important to promote the use of e-cigarettes, nicotine replacement therapies, and other non-tobacco nicotine products as widely as possible as a substitute for smoking in the United Kingdom. Detailed guidance that any clinician can use, including what to say about e-cigarettes, is available online.<sup>11</sup>

Smokers need encouragement, hope, and guidance if they are to stop smoking. In England, an estimated 2.8 million people are using e-cigarettes, split nearly equally between smokers and ex-smokers.<sup>12</sup> It would be foolish for clinicians to ignore this new technology. By encouraging smokers to use whatever support that is available to stop smoking, including e-cigarettes, clini-

cians will be helping to ensure that tobacco cigarettes and smoking and the associated massive mortality and morbidity burden become obsolete within our lifetime.

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