Letter

Interest in Quitting E-cigarettes Among Adults in the United States

Rachel L. Rosen BS^{1,✉} and Marc L. Steinberg PhD²

¹Department of Psychology, Rutgers, State University of New Jersey, Piscataway, NJ; ²Department of Psychiatry, Rutgers Robert Wood Johnson Medical School, New Brunswick, NJ

Corresponding Author: Rachel L. Rosen, BS, Department of Psychology, Rutgers, State University of New Jersey, Piscataway, NJ 08854, USA. E-mail: r.rosen@rutgers.edu

The current literature on electronic cigarettes (e-cigarettes) thus far has focused on their harm reduction potential,¹ use as a combustible cigarette cessation aid,² toxicology profile,³ and concerns regarding uptake among youth.⁴ When e-cigarettes are used as a cessation aid, they are generally used for longer than the timeframe recommended for cessation aids approved by the US Food and Drug Administration (FDA), such as nicotine replacement therapies, bupropion, or varenicline.⁵

Nevertheless, the harm reduction and cessation potential of e-cigarettes does not negate the need to address long-term e-cigarette use. Although e-cigarettes may be associated with reduced harm as compared to combustible cigarettes,¹ measurable toxic substances and addiction potential remain,³ and assisting long-term e-cigarette users in quit attempts may soon be a priority. To date, there is limited attention to e-cigarette users' intention to, interest in, or attempts to stop or reduce e-cigarette use. We therefore sought to assess past e-cigarette quit attempts and future interest in stopping or reducing e-cigarette use by evaluating data from the Population Assessment of Tobacco and Health (PATH) Study. We are aware of three studies in which plans for quitting e-cigarettes was assessed,^{6–8} however, to the best of our knowledge, this is the first report of past attempts and the timing and intensity of current intentions to quit e-cigarettes as assessed in a representative US sample of current adult e-cigarette users.

We examined data from the PATH Public Use Adult Files at Wave 3 (2015–2016). Recruitment of the original nationally (United States) representative sample is described elsewhere.⁹ The subset of Wave 3 participants examined here includes only current, established users of e-cigarettes (ie, those who reported ever using e-cigarettes regularly and currently using e-cigarettes daily or some days). All analyses were conducted with replicate weights and balanced repeated replication methods, using SAS (version 9.4). Unweighted sample sizes and weighted percentage estimates, with 95% confidence intervals, are reported throughout. Missing data across survey questions were addressed using listwise deletion.

In the current sample ($N = 1771$), the majority of current e-cigarette users were 18–34 years old (50.94%, 95% CI = 48.13% to 53.74%), male (56.65%, 95% CI = 53.80% to 59.46%), white

(82.22%, 95% CI = 79.85% to 84.36%), and non-Hispanic (89.28%, 95% CI = 87.75% to 90.65%). More than half of current e-cigarette users were also current combustible cigarette users (54.97%, 95% CI = 52.06% to 57.86%).

Nearly two-thirds of e-cigarette users (62.38%, 95% CI = 59.46% to 65.21%) reported plans to quit e-cigarettes for good, with 7.98% (95% CI = 6.43% to 9.86%) reporting plans to quit within the next 7 days, 7.74% (95% CI = 5.84% to 10.19%) reporting plans to quit in the next month (but not in the next 7 days), 12.95% (95% CI = 10.64% to 15.68%) reporting plans to quit in the next 6 months, and the rest reporting plans to quit in the next year (32.98%, 95% CI = 29.69% to 36.45%) or longer (38.35%, 95% CI = 34.98% to 41.82%). When asked about their interest in quitting e-cigarettes in the future on a scale of 1–10, the majority of current e-cigarette users reported at least some interest (ie, >1) in quitting e-cigarettes (65.27%, 95% CI = 62.50% to 67.95%) and 38.37% (95% CI = 35.91% to 40.89%) endorsed at least a 5 of 10 rating.

More than 25% of adult e-cigarette users reported an attempt to quit e-cigarettes in the past year, either by trying to quit all at once (12.81%, 95% CI = 11.15% to 14.68%) or by cutting down as a means toward quitting e-cigarettes (13.53%, 95% CI = 11.60% to 15.71). Of the e-cigarette users reporting an attempt to quit e-cigarettes all at once in the past year ($n = 177$), 25.02% (95% CI = 18.30% to 33.21%) reported seeking support from family and friends and 10.89% (95% CI = 6.52% to 17.64%) reported seeking counseling or self-help materials to help them quit e-cigarettes. E-cigarette users who reported use of nicotine replacement therapy (NRT; $n = 42$) or an FDA-approved cessation medication ($n = 28$) in the past year were subsequently asked about use of these formal cessation strategies during their most recent attempt to quit using e-cigarettes. The majority of e-cigarette users who endorsed use of an FDA-approved cessation aid in the past year, endorsed using those cessation aids (NRT: 74.20%, 95% CI = 57.21% to 86.08%; FDA-approved cessation medication: 66.85%, 95% CI = 48.34% to 81.29) during their most recent e-cigarette (rather than combustible cigarette) quit attempt.

To date, research on e-cigarettes has focused on issues related to whether e-cigarettes are effective in assisting combustible cigarette

smokers who wish to quit, the relative safety of e-cigarettes, and what the appropriate safety comparator should be (ie, combustible cigarettes or established, empirically supported cessation aids). The current letter is the first to report on the past attempts and current desire and intentions to quit e-cigarettes in a representative sample of US adult e-cigarette users. This study highlights that not only do most e-cigarette users want to quit using e-cigarettes (more than 60% plan to quit someday and almost 16% plan on quitting in the next month), but also that more than a quarter of e-cigarette users have already made attempts to quit. Further, like those trying to quit combustible cigarettes, some e-cigarette users are attempting to quit using e-cigarettes all at once whereas others are trying to cut down as a means toward complete cessation. Similarly, e-cigarette users wishing to quit are seeking social support and using FDA-approved cessation aids to assist in their attempts to quit e-cigarettes. Our data regarding past quit attempts and use of cessation aids should be interpreted with caution given that relatively large confidence intervals were associated with these weighted estimates, thus suggesting less stable population estimates in these subgroups. Nevertheless, future studies will need to determine if these approaches with empirical support for quitting combustible cigarettes are equally effective for quitting e-cigarettes. As e-cigarette use continues to increase, and as more e-cigarette users want to quit, it will be important for the field to be ready to help e-cigarette users who may have difficulty stopping on their own.

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Declaration of Interests

None declared.

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