

Role of e-cigarettes and pharmacotherapy during attempts to quit cigarette smoking: The PATH Study 2013-16

Pierce, J., Benmarhnia, T., Chen, R., White, M., Abrams, D.B., Ambrose, B.K., Blanco, C., Borek, N., Choi, K., Coleman, B., Compton, W., Cummings, K.M., Delnevo, C.D., Elton-Marshall, T., Goniewicz, M., Gravely, S., Fong, G.T., Hatsukami, D., Henrie, J., Kasza, K.A., Kealey, S., Kimmel, H., Limpert, J., Niaura, R., Ramôa, C., Sharma, E., Silveira, M., Stanton, C., Steinberg, M.B., Taylor, E., Bansal-Travers, M., Trinidad, D.R., Gardner, L.D., Hyland, A., Soneji, S., & Messer, K.

Abstract

Background: More smokers report using e-cigarettes to help them quit than FDA-approved pharmacotherapy. **Objective:** To assess the association of e-cigarettes with future abstinence from cigarette and tobacco use. **Design:** Cohort study of US sample, with annual follow-up. **Participants:** US adult (ages 18+) daily cigarette smokers identified at Wave 1 (W1; 2013-14) of the PATH Study, who reported a quit attempt before W2 and completed W3 (n = 2443). **Exposures:** Use of e-cigarettes, pharmacotherapy (including nicotine replacement therapy), or no product for last quit attempt (LQA), and current daily e-cigarette use at W2. **Analysis:** Propensity score matching (PSM) of groups using different methods to quit. **Outcome measures:** 12+ months abstinence at W3 from cigarettes and from all tobacco (including e-cigarettes). 30+ days abstinence at W3 was a secondary outcome. **Results:** Among daily smokers with an LQA, 23.5% used e-cigarettes, 19.3% used pharmacotherapy only (including NRT) and 57.2% used no product. Cigarette abstinence for 12+ months at W3 was ~10% in each group. Half of the cigarette abstainers in the e-cigarette group were using e-cigarettes at W3. Different methods to help quitting had statistically comparable 12+ month cigarette abstinence at W3 (e-cigarettes vs no product: Risk Difference (RD) = 0.01, 95% CI: -0.04 to 0.06; e-cigarettes vs pharmacotherapy: RD = 0.02, 95% CI: -0.04 to 0.09). Likewise, daily e-cigarette users at W2 did not show a cessation benefit over comparable no-e-cigarette users and this finding was robust to sensitivity analyses. Abstinence for 30+ days at W3 was also similar across products. **Limitations:** The frequency of e-cigarette use during the LQA was not assessed, nor was it possible to assess continuous abstinence from the LQA. **Conclusion:** Among US daily smokers who quit cigarettes in 2014-15, use of e-cigarettes in that attempt compared to approved cessation aids or no products showed similar abstinence rates 1-2 years later.

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