

# Does the regulatory environment for e-cigarettes influence the effectiveness of e-cigarettes for smoking cessation?: Longitudinal findings from the ITC Four Country Survey

Yong, H.H., Hitchman, S.C., Cummings, K.M., Borland, R., Gravely, S., McNeill, A., & Fong, G.T.

## Abstract

**INTRODUCTION:** To date, no studies have explored how different regulatory environments may influence the effectiveness of ECs as a smoking cessation aid.

**OBJECTIVE:** This study compares the real-world effectiveness of adult smokers using ECs for quitting compared with quitting unassisted or quitting with NRT and/or prescription medications in two countries with restrictive policies towards ECs (i.e., Canada and Australia) versus two countries with less restrictive policies (i.e., US and UK).

**METHODS:** Data were drawn from the International Tobacco Control Four Country surveys, from the US and Canada (2 waves, n=318 and 380, respectively), the UK (3 waves, n=439) and Australia (4 waves, n=662), collected 2010-2014. Smokers at baseline wave who reported making a quit attempt at follow-up were included. The primary outcome was self-reported abstinence for at least 30 days regardless of smoking status at follow-up assessment. Data across waves were combined and analysed using generalised estimating equations.

**RESULTS:** Compared to unassisted quitting (i.e. no medications or ECs), smokers who used ECs for quitting from countries with less restrictive EC policy environments were more likely (OR=1.95, 95%CI=1.19-3.20, p<0.01), whereas smokers who used ECs for quitting from countries with more restrictive EC policies were less likely (OR=0.36, 95%CI=0.18-0.72, p<0.01), to report sustained abstinence for at least 30 days.

**CONCLUSION:** Use of ECs in the real world during a quit attempt appears only effective for sustaining smoking abstinence in a less restrictive EC environment suggesting that the benefits of ECs for smoking cessation are likely highly dependent on the regulatory environment.

**IMPLICATIONS:** What this study adds: This is the first study to examine the impact of regulatory environment for electronic cigarettes (ECs) on their real-world effectiveness for smoking cessation. This study shows that in a less restrictive EC regulatory environment, use of ECs during a quit attempt facilitates, but in a more restrictive environment, it inhibits, short-term sustained abstinence. The findings underscore the need for careful consideration on how best to regulate this emerging product so that EC benefits for smoking cessation are maximised and its risks to public health are minimised.

## Recommended Citation

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