

# Reasons for e-cigarette use and perceptions of harm in Brazil: Findings from the ITC Brazil Wave 2 (2012-13) and 3 (2016-17) Surveys

Cristina Perez<sup>1</sup>, Tania Cavalcante<sup>3,4</sup>, Felipe Mendes<sup>3,4</sup>, Andre Szklo<sup>4</sup>, Geoffrey T. Fong<sup>2,5</sup>, Lorraine Craig<sup>2</sup>,Mi Yan<sup>2</sup>, Grace Li<sup>2</sup>

International Tobacco Control Policy Evaluation Project

Control <sup>1</sup>Formerly at Fundacão do Câncer, <sup>2</sup>University of Waterloo, <sup>3</sup>Executive Secretariat of National Commission for Implementing oject WHO Framework Convention on Tobacco Control, <sup>4</sup>Brazilian National Cancer Institute, <sup>5</sup>Ontario Institute for Cancer Research

# BACKGROUND

- In Brazil, the sale, import, and advertising of e-cigarettes (ECs) has been banned since August 2009.
- Although the prevalence of ever use of ECs among Brazilian smokers is low (20% of smokers in 2016-17), the 5<sup>th</sup> lowest of 21 ITC countries, ITC data shows an upward trend in ever use between 2012 and 2017.
- Little is known about the reasons why Brazilian smokers try or use e-cigarettes (ECs) and how they perceive the harmfulness of these products compared to regular

### **OBJECTIVES**

- To identify reasons for using ECs among smokers who reported ever using ECs in Rio de Janeiro, São Paulo, and Porto Alegre in 2016-17.
- To measure changes in Brazilian smokers' perceptions of harms of ECs compared to harms of smoking regular cigarettes between 2012-13 and 2016-17.

### **METHODS AND MEASURES**

**DESIGN**: Data were analyzed from Waves 2 (2012-13) and 3 (2016-17) of the International Tobacco Control (ITC) Brazil Survey, a longitudinal cohort survey of representative samples of approximately 1200 adult smokers and 600 non-smokers (N=1826) in Rio de Janeiro, São Paulo, and Porto Alegre.

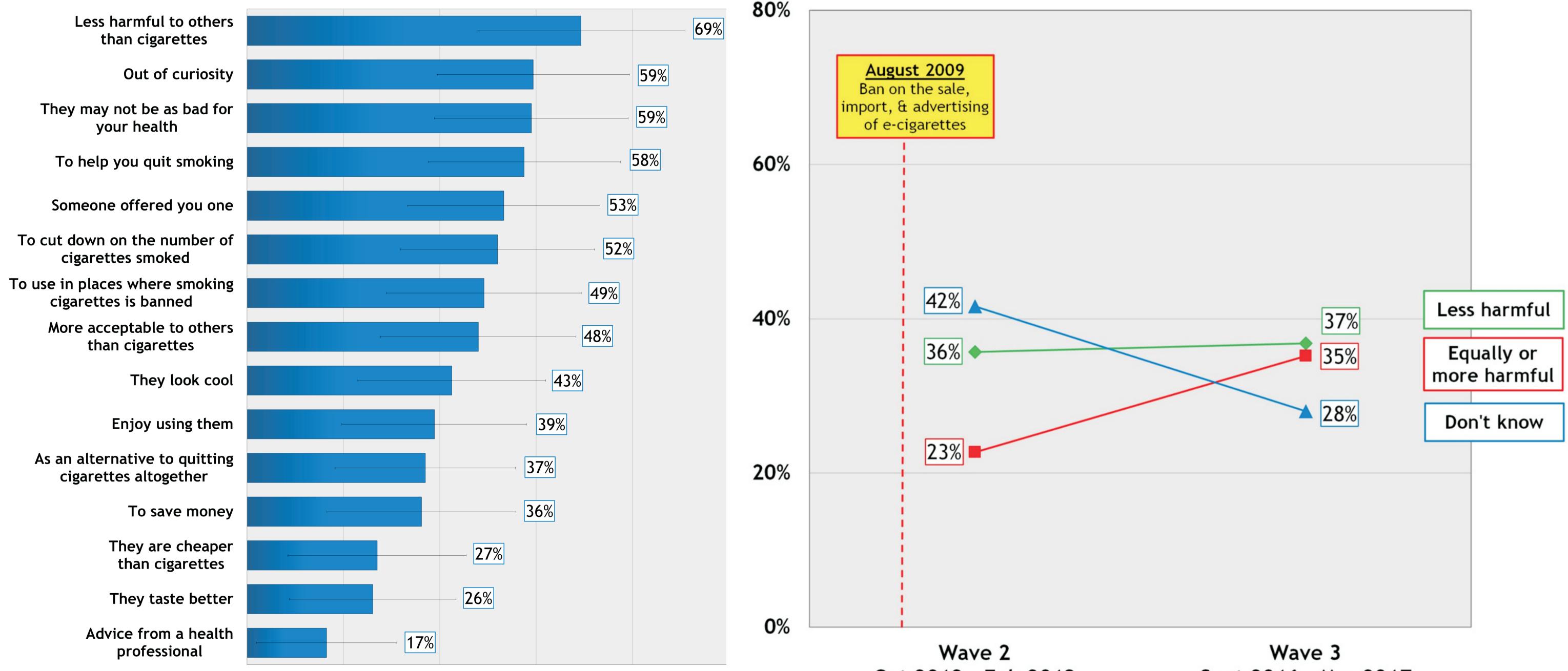
**MEASURES: Reasons for EC use** was measured at Wave 3 among smokers who reported currently using EC daily, weekly, monthly, and less than monthly (n=48). Users were asked *"Which of the following are reasons for your use of ECs or vaping devices"*. A list 15 possible reasons were provided (see Figure 1). Response options were *"Yes", "No", "Refused", "Don't know*".

**Perception of the harm of ECs compared to regular cigarettes** was measured at Waves 2 and 3 by asking smokers who had ever heard of ECs (n=392 at Wave 2; N=859 at Wave 3) "Do you think electronic cigarettes are more harmful than regular cigarettes, less harmful, or are they equally harmful to health?"

**ANALYSES:** Multivariable logistic regression analyses (GEE) adjusted for sex, age, smoking status, and time-in-sample were conducted to test for differences in beliefs about the harmfulness of ECs at Waves 2 and 3.

#### Figure 1. Percentage of smokers who reported various reasons for using ecigarettes at Wave 3

Figure 2. Percentage of smokers who believe that e-cigarettes are less harmful or equally/more harmful than regular cigarettes, by wave



RESULTS

 0%
 20%
 40%
 60%
 80%
 10

Oct 2012 - Feb 2013

Sept 2016 - Mar 2017

# **CONCLUSIONS AND IMPLICATIONS**

- Smokers who currently use ECs most commonly use them to reduce harm to others (69%), to reduce harm to their own health (59%), and to help them to quit smoking (58%) (see Figure 1).
- More smokers now have an opinion about the relative harmfulness of ECs. Between 2012-13 and 2016-17, there was a significant decrease in the percentage of smokers who "don't know" about the relative harmfulness of ECs (42% to 28%; p<.001). A greater percentage of smokers now incorrectly believe that ECs are equally or more harmful than cigarettes (23% to 35%; p<.001) (see Figure 2).</li>
- Evidence to date demonstrates that ECs are less harmful than cigarettes, but there is ongoing debate about whether ECs can play a role in harm reduction and what kind of regulatory measures are most beneficial.





All authors declare no conflict of interests

Poster presented at the 17<sup>th</sup> World Conference on Tobacco OR Health (WCTOH) 2018, Cape Town South África March 7-9, 2018 (Poster No.PS-666-4) Email: cristinadeabreuperez@gmail.com Core support provided by a Canadian Institutes of Health Research Foundation Grant

