The effects of implementing the electronic cigarette in the standard quit-smoking treatment by tobacco counselors in Belgium
Declaration of interest

- I have received no funding, nor have competing financial interests
- I have no ties with the e-cigarette industry, nor with the tobacco industry, nor with pharma companies

- My PhD research focuses on:
  - Tobacco Harm Reduction (THR)
  - E-cigarette based THR
Overview

1. What do we know & research question?
2. What study design did we use?
3. Results pilot study
4. Preliminary results current study
5. Take home message
1. What do we know?

- Over half of current smokers tried to quit smoking in the past
  ⇒ Belgium: 64%

- Smoking cessation aid used:
  
  - Successful abstinence rates 6-12 months later ⇒ 3-5%
  
  - Doubling of success rates with most effective treatments

What are the quit rates when using e-cigs?

1. What do we know?

- Self-reported quit rates in *convenience samples* of vapers:
  - BE/NL: 83% (Van Gucht et al., 2017)
  - EU/USA: 81% (Farsalinos et al., 2014)

⇒ Selection bias + overestimation

- RCTs:
  - BE: 5 (8) month quit rate 37% (21%) (Adriaens et al., 2014)
  - Nicotine e-cig (9.3%) > patches (5.8%) > placebo e-cig (4.1%) (Bullen et al., 2013)
  - Overall quit rate with e-cig: 8.7% (Caponnetto et al., 2013)

⇒ Specific context + 1\textsuperscript{st} generation e-cigs
- Most recent RCT ⇒ e-cig (18.0%) > NRT (9.9%) (Hajek et al., 2019)
1. What do we know?

• **Prospective observational cohort studies:**
  - Overall quit rates: 20-52% (Biener et al., 2015; Giovenco et al., 2018; Hitchman et al., 2015; Zhuang et al., 2016)
  - In frequent, daily users trying to quit
  - Residual confounding?

• **Population data:**
  - UK: 52% (ASH, 2018)
  - France: 41% (Pasquereau et al., 2017)
  - EU: 35% (Farsalinos et al., 2016, 2017)
  - BE: 42% (Stichting tegen Kanker, 2018)
  - Complete smoking abstinence in current e-cig users
What is the effect of implementing the e-cig as a smoking cessation aid in the standard treatment of tobacco counselors?

Are smokers who choose an e-cig more successful in smoking cessation?
2. What study design did we use? Pilot study

**Intake**
Session 1
*Week 1*
- IC
- Questionnaires
- eCO
- $n = 69$

**Follow-up 1**
Session 5
*Week 6*
- Questionnaires
- eCO
- $n = 53$

**Follow-up 2**
Session 8
*Week 13*
- Questionnaires
- eCO
- $n = 35$

Own choice!

Adriaens, Boermans, Van Gucht, & Baeyens (2018)
2. What study design did we use? Current study

**Intake**
- Session 1
  - Week 1
  - IC
  - Questionnaires
  - eCO
  - \( n = 296 \)

**Follow-up 1**
- Session 5
  - Week 6
  - Questionnaires
  - eCO
  - \( n = 215 \)

**Follow-up 2**
- Session 8
  - Week 13
  - Questionnaires
  - eCO
  - \( n = 176 \)

**Follow-up 3**
- Add. session
  - Week 32
  - Questionnaires
  - eCO
  - \( n = 103 \)

- Own choice!

- E-cig (\( n = 70 \))
- NRT (\( n = 77 \))
- E-cig + NRT (\( n = 33 \))
- Medication (\( n = 33 \))
- No aid (\( n = 31 \))
- \( N = 244 \)
2. What study design did we use?

- Socio-demographics
- Smoking history & current smoking behavior
- Harm perceptions
- Quit smoking motivation

- Questions concerning smoking cessation aid
  e.g., nicotine concentration, experienced benefits
3. Results pilot study

Relative Risk ratio’s for successful quit attempt

<table>
<thead>
<tr>
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<th>FU2</th>
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<tbody>
<tr>
<td>E-cig vs. NRT</td>
<td>2.35* [1.13 – 4.91]</td>
</tr>
<tr>
<td>E-cig vs. other conditions</td>
<td>1.69* [1.03 – 2.78]</td>
</tr>
</tbody>
</table>

Adriaens, Boermans, Van Gucht, & Baeyens (2018)
4. Preliminary results current study

- 52 years
- 60% female
- High school degree (52%)
- Working full-time (45%) or retired (25%)
- Smoking for 31 years
- CPD = 16
- FTCD = 5 \( \Rightarrow \) Moderate dependent
- 83% tried to quit smoking, on average 4 times
4. Preliminary results current study

Differences between conditions at Intake?

• CPD ⇒ no aid users significantly ↓ (11 vs. 17 CPD)
• FTCD ⇒ combination users significantly ↑
• Harm perception e-cig ⇒ e-cig users significantly ↓

⇒ No differences in other baseline characteristics
4. Preliminary results current study

Relative Risk ratio’s for successful quit attempt

<table>
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<tbody>
<tr>
<td>E-cig vs. NRT</td>
<td>1.71* [1.04 – 2.81]</td>
</tr>
<tr>
<td>E-cig vs. other conditions</td>
<td>1.37 [0.95 – 1.97]</td>
</tr>
</tbody>
</table>

Relative Risk ratio's for successful quit attempt:

- * $p < 0.05$
- ** $p < 0.01$
- *** $p < 0.001$
5. Take home messages

1. **Pilot study**: e-cig users superior to those using other cessation aids

2. **Current study**:  
   1. Very **↑** success rates in e-cig users  
   2. E-cig users superior to NRT users *(in line with Hajek et al., 2019)*  
   3. Relapse rates in e-cig users is **↓** compared to other conditions

3. Results **confirm recent data** *(Jackson et al., 2019)*

⇒ **E-cig users** definitely better than NRT users  
⇒ **E-cig users** equally good, (if not better), as medication users
Thanks to

Tobacco counselors:
- Els Bosch
- Marouschka Beckers
- Kathleen Vanhove
- Ellen Van Wendt
- Els Verbelen

Students:
- Brent Boermans, MSc
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References


References


