



WELLINGTON

# Strategies: E-cigarettes

**Brent Caldwell**

The **19th Public Health**  
**SUMMERSCHOOL**

2 - 20 February 2015



[www.otago.ac.nz/uowsummerschool](http://www.otago.ac.nz/uowsummerschool)

# Outline

WELLINGTON

- What are they?
- Why are they controversial?
- Are they effective?

# What are they?

WELLINGTON

- Contain nicotine, flavourings, and either propylene glycol or glycerin
- E-liquid is heated when user inhales
- Heat causes vapour to be formed that can be inhaled

# Why are they controversial?

- Manufactured and marketed by Tobacco Industry
- Not made to pharmaceutical grade
  - Contain toxins, but much lower than cigarette smoke
- Uncertain efficacy
  - Only two trials have been done
- Uncertain effect at the population level
  - Gateway to smoking
  - Dual use instead of completely quitting smoking

# Toxins

WELLINGTON

- Toxic chemicals from heating of propylene glycol
- Heavy metals
- Levels are many times lower than smoking

# Effective?

WELLINGTON

- Cochrane Review
  - 2 clinical trials and 11 cohort studies
  - E-cigs are effective for cessation and reduction
  - E-cig users are not less likely to quit
- Auckland trial
  - Continuous 6 month quit rates similar between nicotine e-cig, placebo e-cig, and nicotine patch
  - Used old style e-cigs, technology has improved
- Italian trial
  - Only enrolled 100 smokers per group, and only those not motivated to quit
  - Quit rates similar between placebo e-cig and active e-cig

# E-cigs differ by brand and user

- Some e-cigs are better at nicotine delivery
  - New technology
  - njoy
  - Vype
- Must be puffed very frequently
  - Puff at least every 30 seconds
- Vapers swear that e-cigs saved their lives
  - What other NRT inspires people to promote it to friends?

# Conclusion

WELLINGTON

- Well designed clinical trials are needed to quantify their efficacy
- A research agenda has been published
- In the absence of more effective pharmaceutical grade NRT, do we have the right to deny smokers the chance to use e-cigs to quit smoking?