

## DATA RELEASE: UPDATED PRELIMINARY ANALYSIS ON 2016 HEALTH & LIFESTYLE SURVEY ELECTRONIC CIGARETTE QUESTIONS

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This briefing has been specifically prepared for the Ministry of Health to provide information from this survey on e-cigarette use. This analysis uses the 2016 Health and Lifestyles Survey (HLS) dataset. Publications for this survey, including the method report and questionnaire, are still in development and are not yet publically available.

These preliminary results should be treated with caution. Final results may differ slightly. A comprehensive analysis of the responses is underway and will include specific context significant to the interpretation of these results.

This survey has seven questions related to e-cigarette use. Responses are examined by sex and age. Statistical analyses have not been undertaken to compare differences between groups; that is, we are not yet able to state whether differences between groups are statistically significant.

The error bars represent 95% confidence intervals. Differential response patterns by sub-groups were compared using these confidence intervals. Where the confidence intervals do not overlap the difference between sub-groups is noted as “more likely”/“less likely”.

The data presented below are weighted. This means that the reported percentages are adjusted to account for each respondents' probability of selection, as well as benchmarked to the New Zealand population, to ensure that no population groups are under or over represented in estimates from the survey.

Method detail for the 2016 HLS is provided at the back of this briefing. Please note the preliminary analysis has not been externally reviewed.

## PRELIMINARY ANALYSIS OF E-CIGARETTE QUESTIONS FROM HLS 2016

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*The following summary section has been added to simplify minor points from the initial report.*

### **Summary:**

- One in six (17%) New Zealand adults have tried e-cigarettes.
- Three percent of adults currently use e-cigarettes.
- Out of those who had tried an e-cigarette before, 16% currently use them.
- The main reasons stated for e-cigarette use are:
  - To quit smoking cigarettes
  - E-cigarettes are less harmful than tobacco cigarettes
  - E-cigarettes are cheaper than tobacco cigarettes
  - E-cigarettes smell better than tobacco cigarettes
  - To reduce, but not quit completely, the number tobacco cigarettes smoked
- Almost two in five (38%) adults agreed that e-cigarettes are safer for your health than tobacco cigarettes.
- Forty-three percent of adults agreed that e-cigarettes can help people quit smoking tobacco cigarettes.

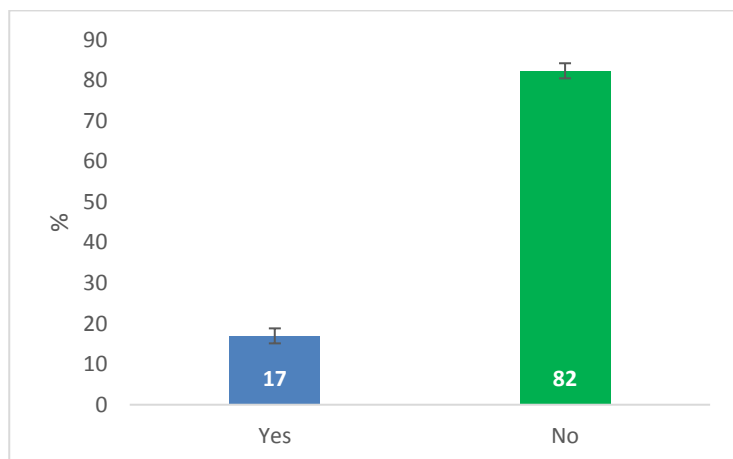
## Key Findings:

*The following section has been edited to simplify minor points from the initial report.*

### E-cigarette usage

All respondents (n = 3,854) were asked “Have you ever tried an electronic cigarette?” Key findings are:

- One in six (17%) people reported having tried e-cigarettes (see Figure 1).
- Males (20%) were more likely to reported having tried e-cigarettes when compared with females (14%) (see Figure 2).
- People aged 15 to 24 years (30%) and 25 to 34 years (27%) were more likely to report having tried e-cigarettes when compared with people aged 35 to 54 years (16%) and 55 years and over (6%). Those aged 35 to 54 years were more likely to report e-cigarettes usage when compared to those aged 55 years and over (see Figure 3).



*Figure 1: Proportion of respondents who have tried e-cigarettes.*

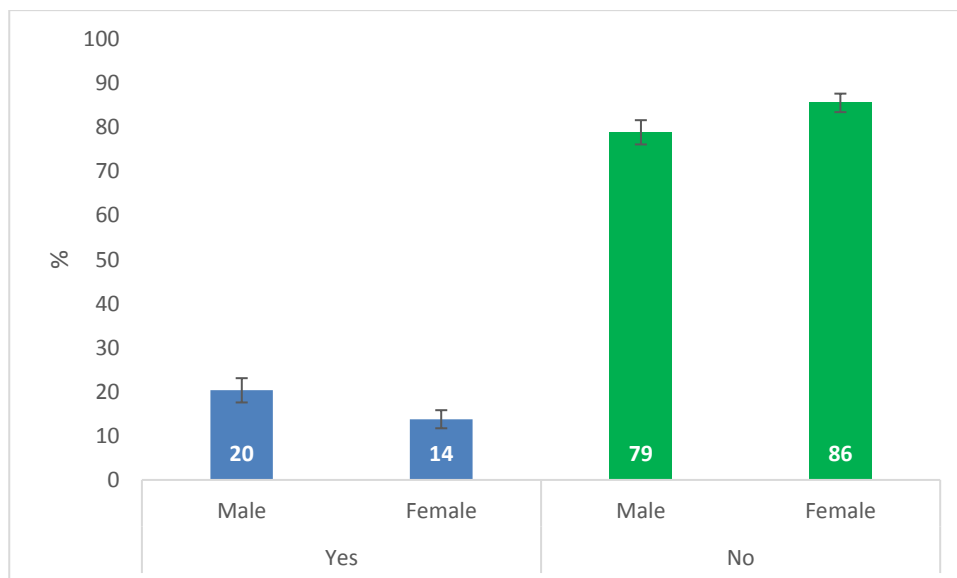


Figure 2: Proportion of respondents who have tried e-cigarettes, by sex.

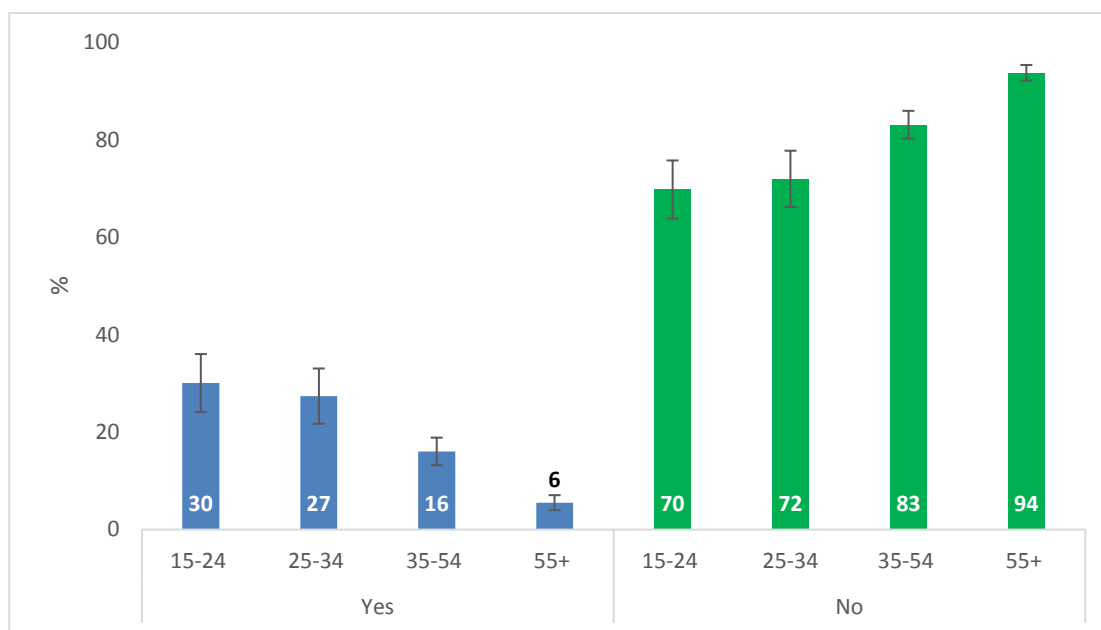


Figure 3: Proportion of respondents who have tried e-cigarettes, by age in years.

The following section has been added to simplify minor points from the initial report.

### Current e-cigarette use in the population

Respondents were asked about their current use of e-cigarettes. They were grouped into three groups: current users, those who do not use now, and those who had never used e-cigarettes (n=3,810). ‘Current users’ included those who responded that they use e-cigarettes either daily, weekly, monthly or less often than monthly.

Current e-cigarette users make up only 3% of the adult New Zealand population (see Figure 4).

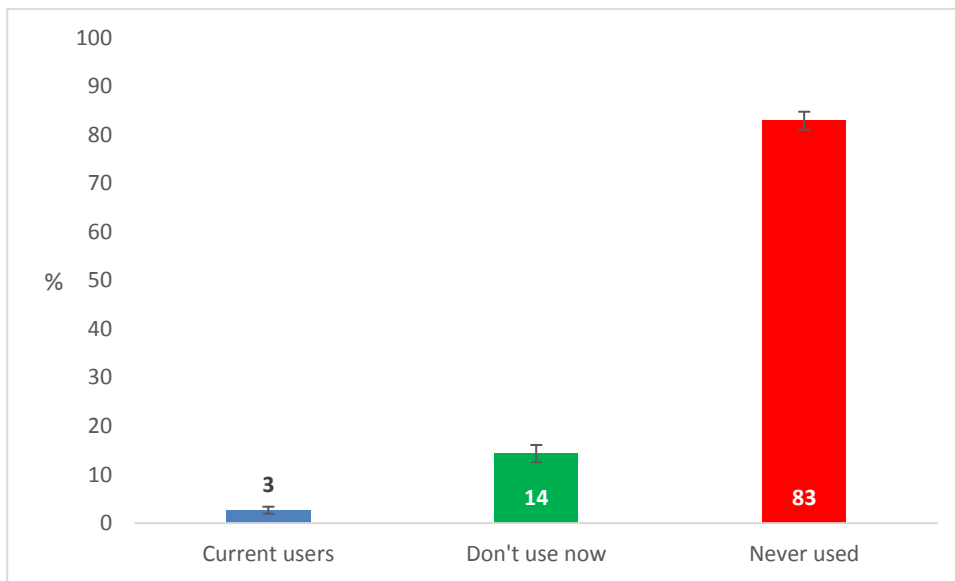


Figure 4: Use of e-cigarettes in the population.

Note: Those who responded 'don't know' or 'refused' were not included in the analysis (n=44), this differs from the other sections in this report where 'don't know' and 'refused' responses were included in the analysis.

Use of e-cigarettes was then compared across sub-groups. Key findings are:

- There were no differences observed by sex for current users of e-cigarettes, however; it is likely that more males (17%) than females (11%) have tried e-cigarettes and that more females (86%) than males (80%) have never used e-cigarettes (see Figure 5).
- Older people aged 55 years and over were more likely to report they had never used an e-cigarette (95%) when compared to all other age groups (see Figure 6).

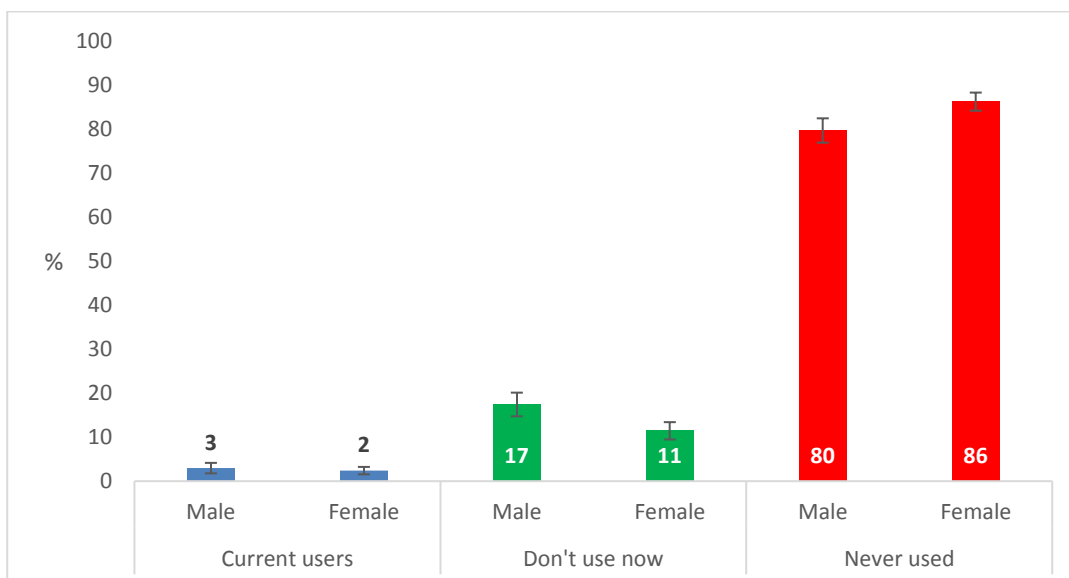


Figure 5: Use of e-cigarettes in the population by sex.

Note: Those who responded 'don't know' or 'refused' were not included in the analysis (n=44), this differs from the other sections in this report where 'don't know' and 'refused' responses were included in the analysis.

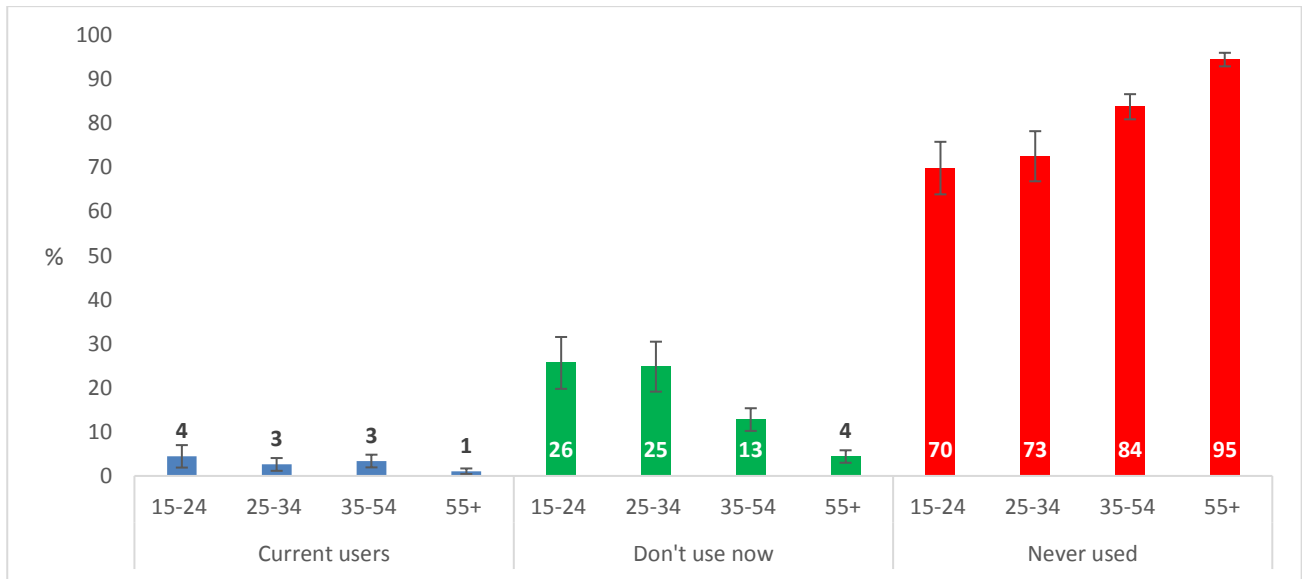


Figure 6: Use of e-cigarettes in the population by age group.

Note: Those who responded 'don't know' or 'refused' were not included in the analysis (n=44), this differs from the other sections in this report where 'don't know' and 'refused' responses were included in the analysis.

The following section has been edited to simplify minor points from the initial report.

### Frequency of e-cigarette use

Respondents who reported *having tried e-cigarettes* (n = 657) were then asked “Which best describes how often you use an electronic cigarette now?” Ungrouped responses can be seen in Figure . Most respondents (84%) reported that they do not use an e-cigarette now, with 6% reporting “at least once a day”, 3% “at least once a week”, 2% at least once a month” and 5% “less often than monthly” (see Figure 7).

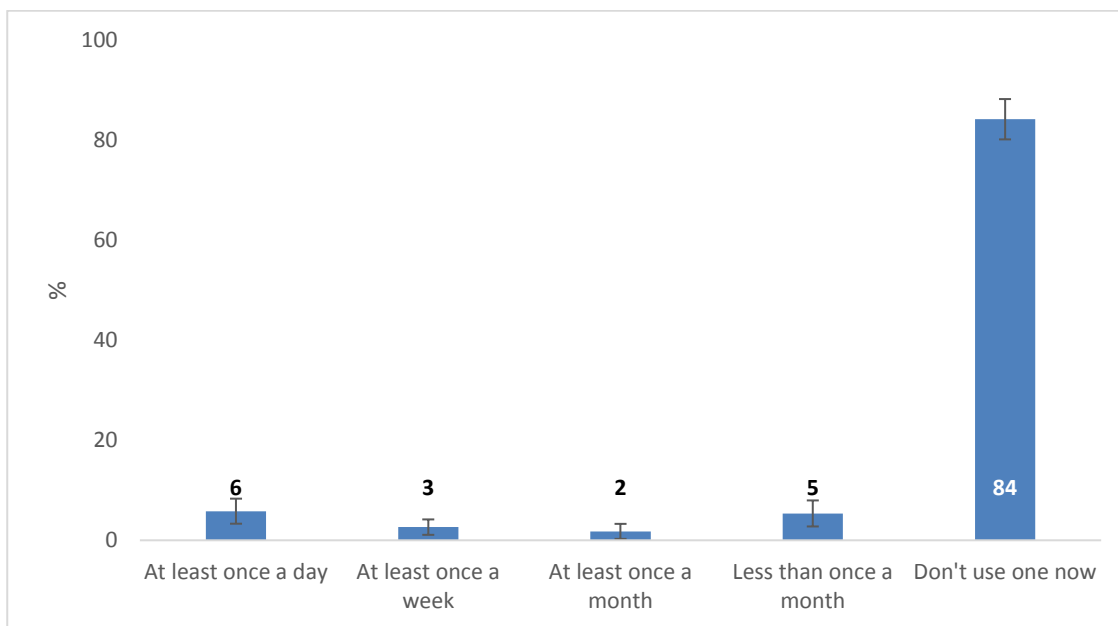
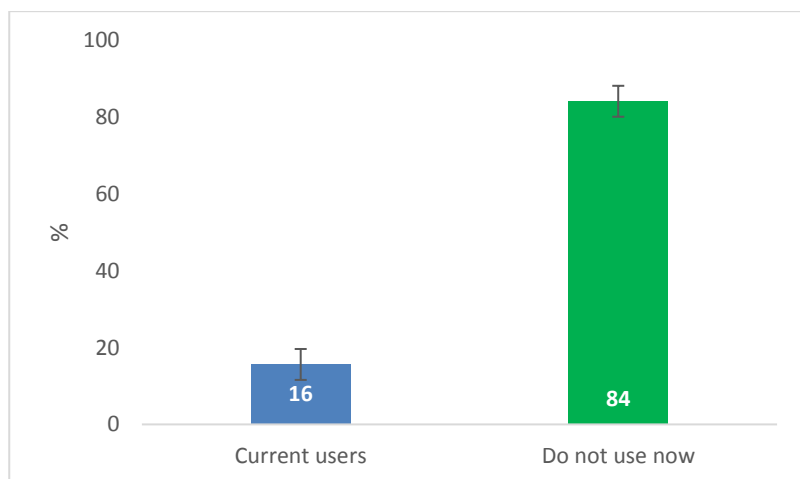


Figure 7: Frequency of e-cigarette use in those who have tried e-cigarettes.

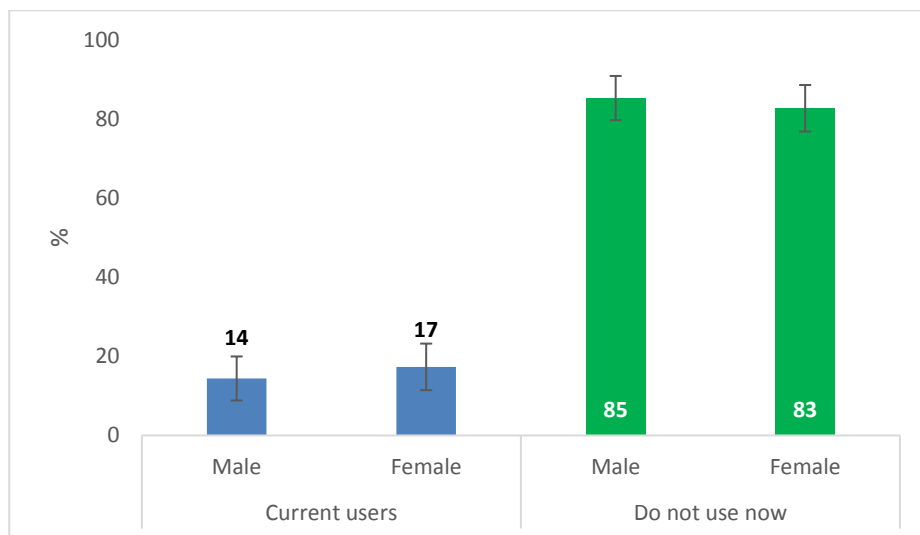
*Note: The categories are mutually exclusive. For example, the 'at least once a week' category does not include the 'at least once a day' category.*

Frequency of e-cigarette use by people who reported having tried e-cigarettes was then grouped to compare current and non-current use of e-cigarettes across sub-groups. Key findings are:

- One in six (16%) respondents who reported having tried e-cigarettes reported that they currently use an e-cigarette either daily, weekly, monthly or less often than monthly (see Figure 8).
- There were no differences observed by sex (see Figure 9) or by age (see Figure 1010)



*Figure 8: Current and non-current users of e-cigarettes, out of those who have tried e-cigarettes.*



*Figure 9: Current and non-current users of e-cigarettes, out of those who have tried e-cigarettes, by sex.*

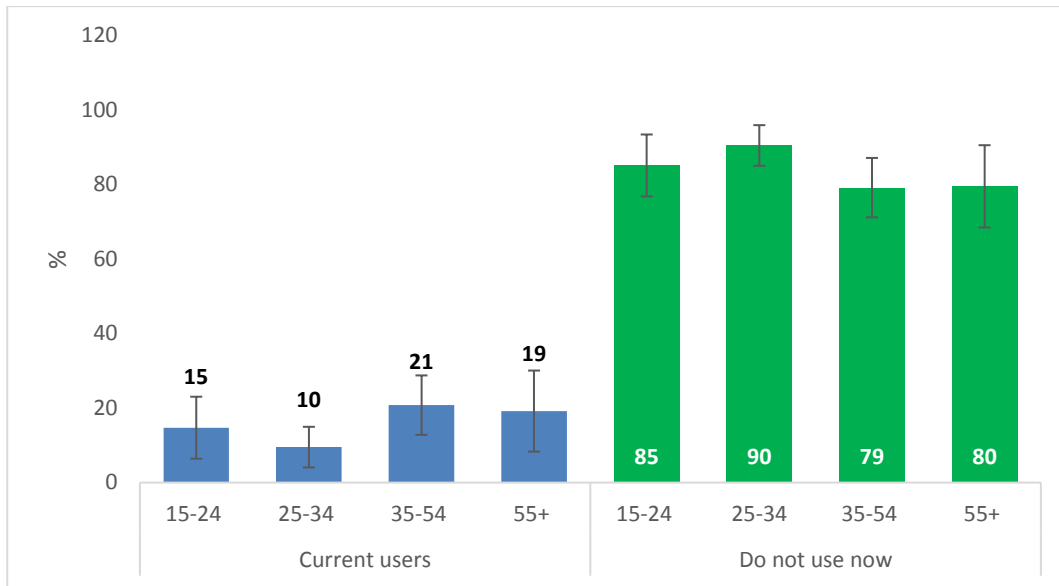


Figure 10: Current and non-current users of e-cigarettes, out of those who have tried e-cigarettes, by age.

### Reasons for e-cigarette use

Respondents who reported using e-cigarettes at least daily, weekly or monthly (n = 79) were asked “Why do you use electronic cigarettes now?” The top 5 responses are shown in Figure 11. Please note - multiple responses were allowed, therefore respondents may be represented in more than one category. Analysis by sex or age was not conducted due to small sub-sample sizes and size of error bars.

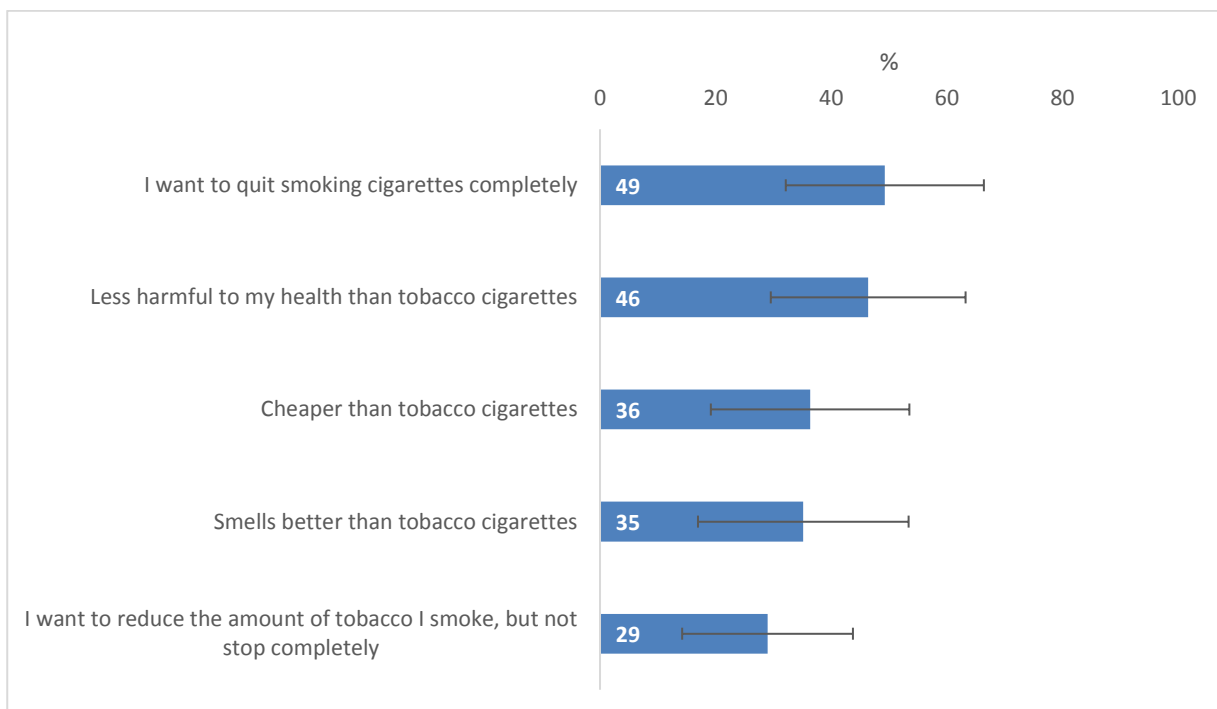


Figure 11: Top 5 reasons for e-cigarette use among frequent users.



## Nicotine content

Respondents who reported using e-cigarettes at least daily, weekly or monthly (n = 79) were asked “Thinking of the electronic cigarette you use now, does the vapour contain nicotine?” Most respondents (65%) reported that the vapour did contain nicotine (see Figure 12). Sub-group comparisons showed:

- There was no difference by sex observed in reported nicotine content of e-liquid vapour (see Figure 3).
- Younger people aged 15 to 24 years old (23%) were less likely to report that their e-liquid vapour contained nicotine when compared with those aged 25 to 34 years (84%) as well as those aged 35 to 44 years (79%) (see Figure 54).
- Note: the sub-categories for sex and age have small numbers, reflected in the size of the error bars. Caution should be exercised in interpreting Figures 13 and 14.

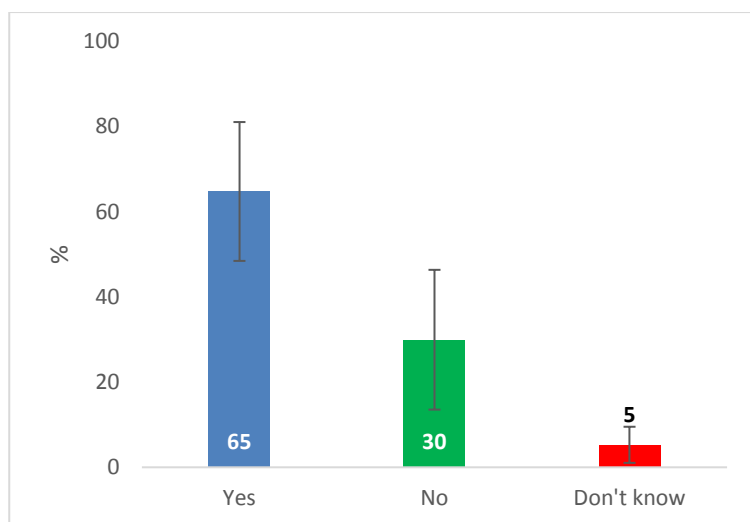


Figure 12: Reported nicotine content of e-liquid.

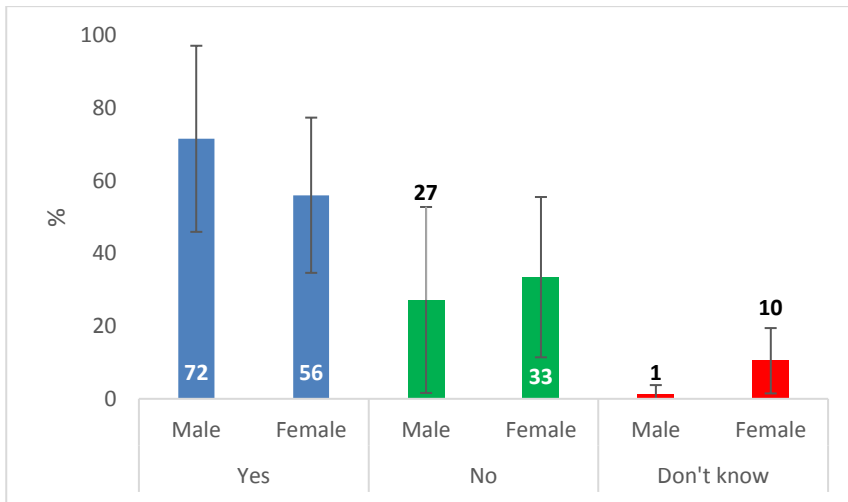


Figure 13. Reported nicotine content of e-liquid by sex.

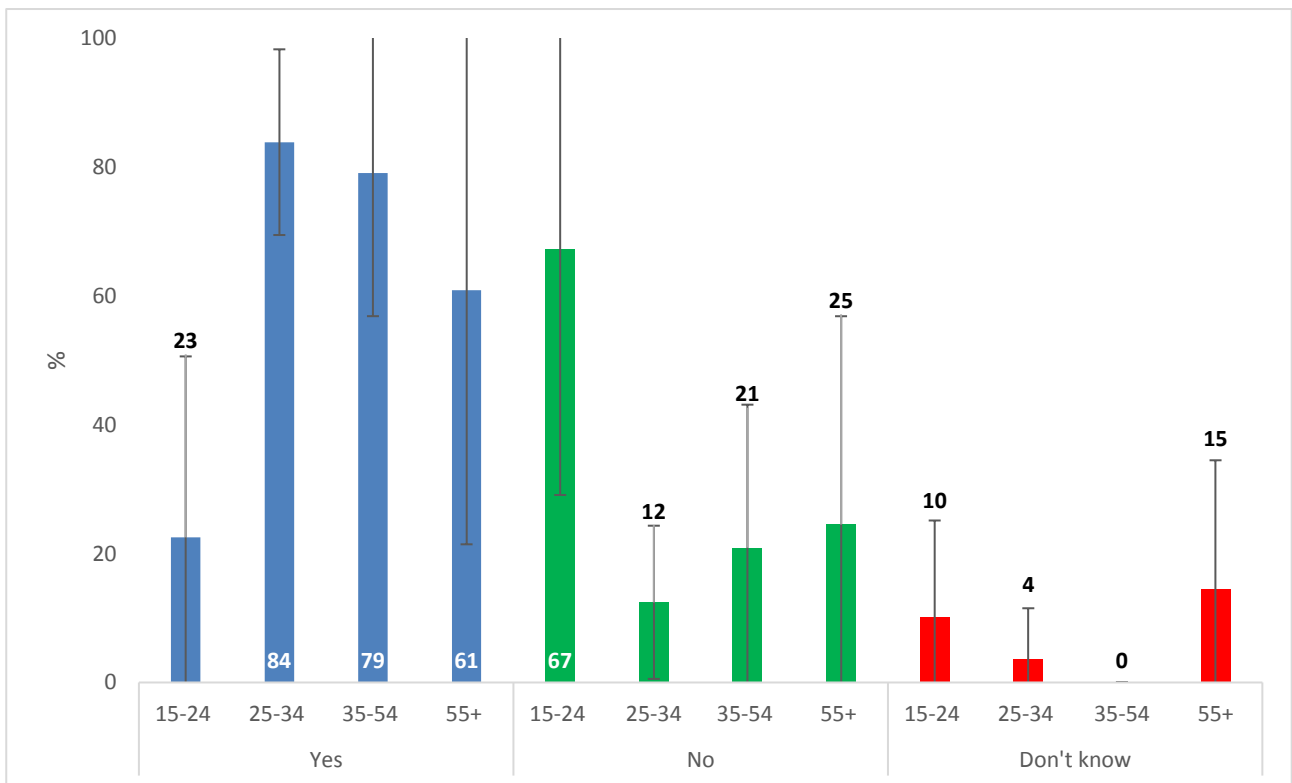


Figure 54. Reported nicotine content of e-liquid by age in years.

### Source of refill e-liquid

Respondents who reported using e-cigarettes at least daily, weekly or monthly (n = 79) were asked “Where did you get the refill e-liquid for the electronic cigarette that you are currently using most often?” The top three responses are shown in Figure 65. Please note - multiple responses were

allowed, therefore respondents may be represented in more than one category. Analysis by sex or age was not conducted due to small sub-sample sizes and size of error bars.

NB: An “other” response was the second most frequent response (26%; n = 15). Generally these free text responses were shosha/vapour shops, specialty shops, and bargain shops.

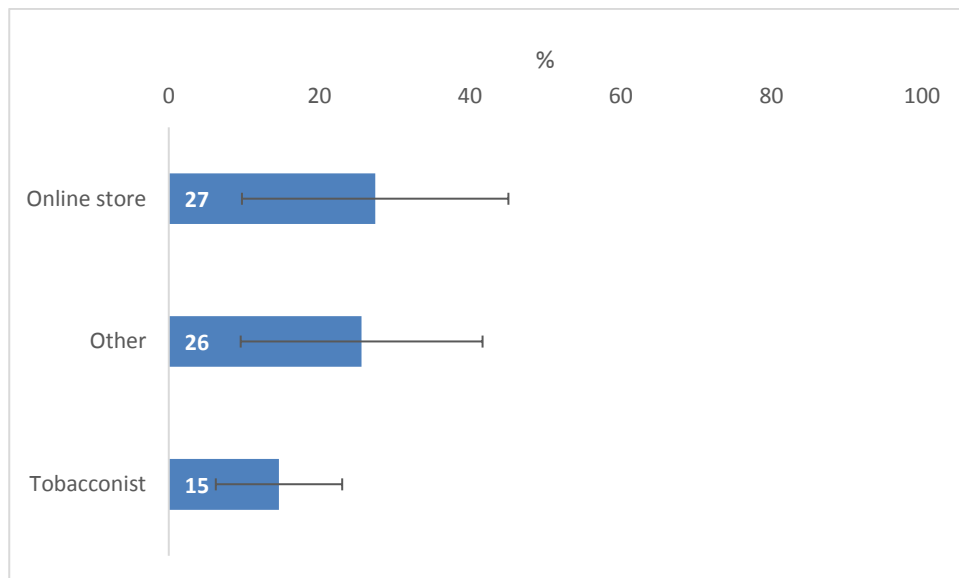


Figure 65: Sources of refill e-liquid.

### Perceived safety of e-cigarettes compared with tobacco

All respondents (n = 3,854) were asked “how much do you agree or disagree with the following – e-cigarettes are safer for your health than smoked cigarettes”. All responses can be seen in Figure 76.

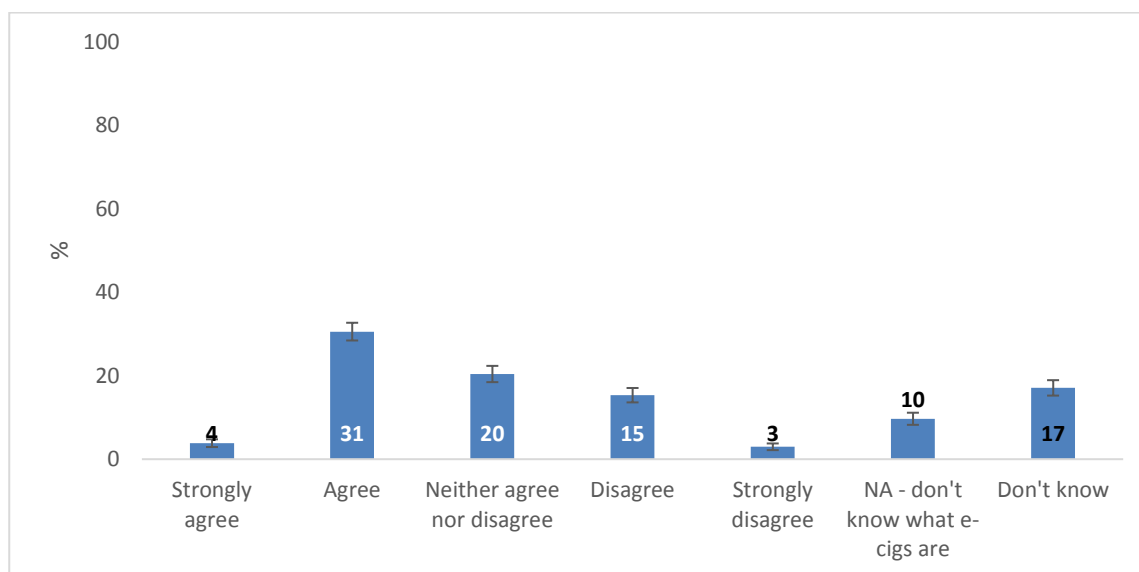


Figure 76: Agreement with the statement that e-cigarettes are safer than tobacco.

Responses were then grouped into “agree”, “neither agree nor disagree” and “disagree” for sub-group comparisons out of those who knew what an e-cigarette is. Key findings were:

- Almost two in five (38%) people agreed with the statement that e-cigarettes are safer for your health than tobacco, and 20% disagreed (see Figure 87).
- There were no differences observed by sex (see Figure 98).
- Those aged 15-24 years (45%) were more likely to agree with the statement that e-cigarettes are safer for your health than tobacco than those aged 55 years and over (34%) (see Figure 109).

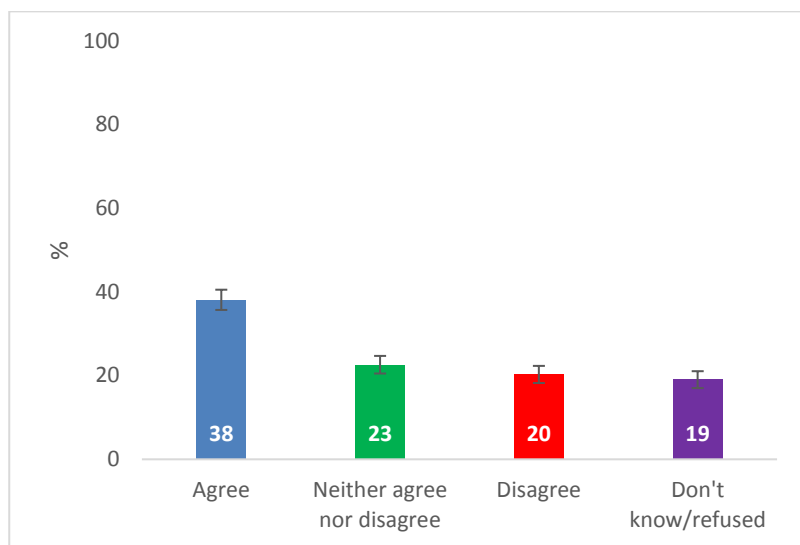


Figure 87: Agreement with the statement that e-cigarettes are safer than smoked tobacco.

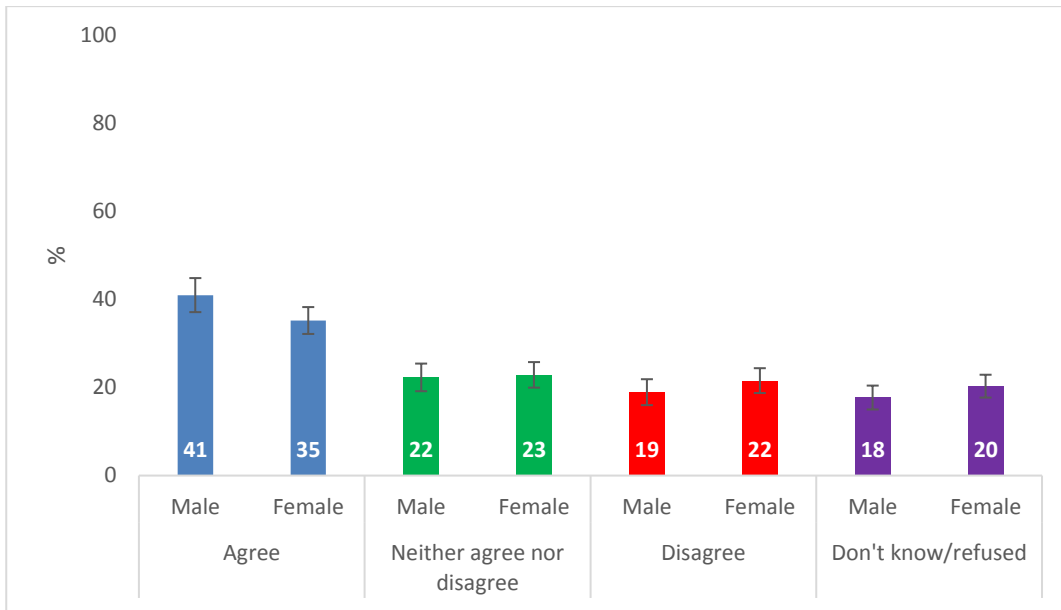


Figure 98: Agreement with the statement that e-cigarettes are safer than smoked tobacco, by sex.

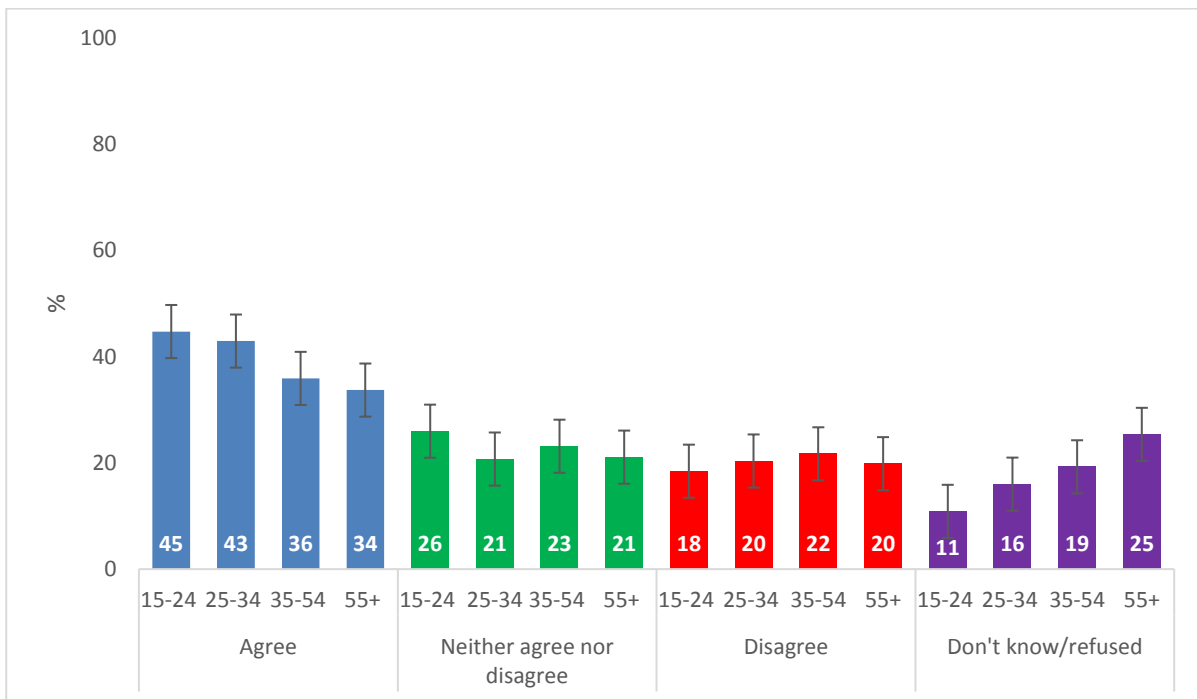


Figure 109: Agreement with the statement that e-cigarettes are safer than smoked tobacco, by age in years

### Perceived efficacy of e-cigarettes as a cessation tool

All respondents (n = 3,854) were asked “how much do you agree or disagree with the following – e-cigarettes can help people quit smoking tobacco.” All responses can be seen in Figure 201120.

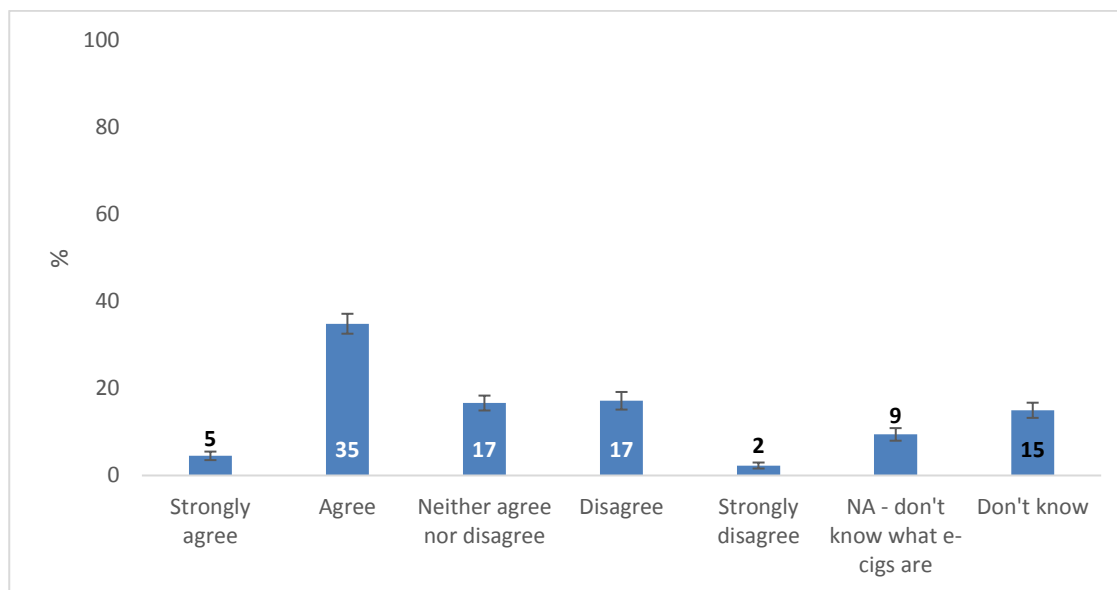


Figure 2011: Agreement with the statement that e-cigarettes can help people to quit smoking tobacco.

Responses were then grouped into “agree”, “neither agree nor disagree” and “disagree” for subgroup comparisons. Respondents who indicated that they did not know what e-cigarettes were (see Figure 21) were excluded. Key findings were:

- Forty-three percent of respondents agreed with the statement that e-cigarettes can help people quit smoking tobacco, and 21% disagreed (see Figure 212).
- No differences in agreement were observed by sex (see Figure 13).
- Respondents aged 25 to 34 years old (53%) were more likely to agree with the statement that e-cigarettes can help people quit smoking tobacco when compared with those aged 55 years and over (36%), see Figure 23.
- There was a trend whereby older respondents were more likely to report that they did not know whether e-cigarettes would help people to quit smoking tobacco compared with younger respondents.

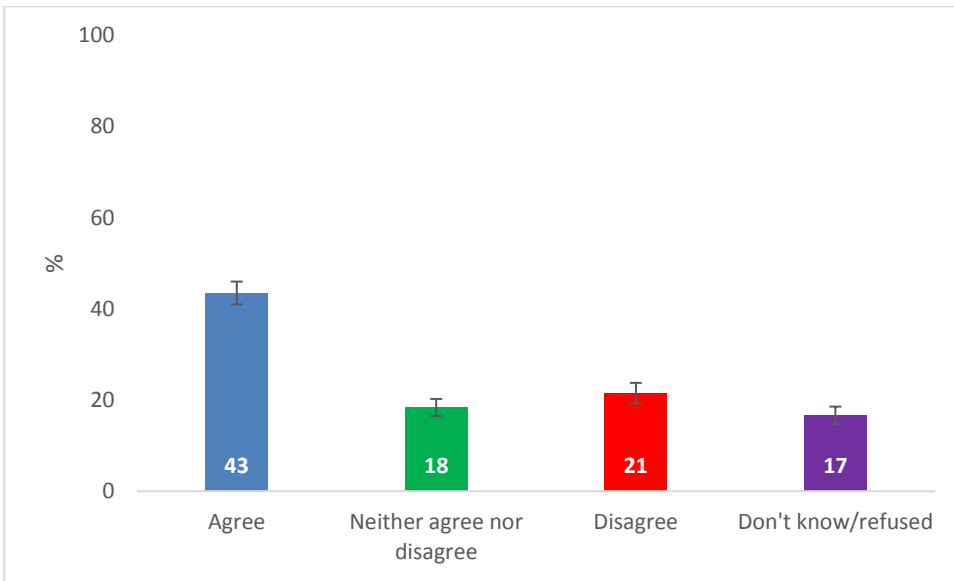


Figure 212: Agreement with the statement that e-cigarettes can help people to quit smoking tobacco.

Note: The 'NA – don't know what e-cigarettes are' category has been excluded.

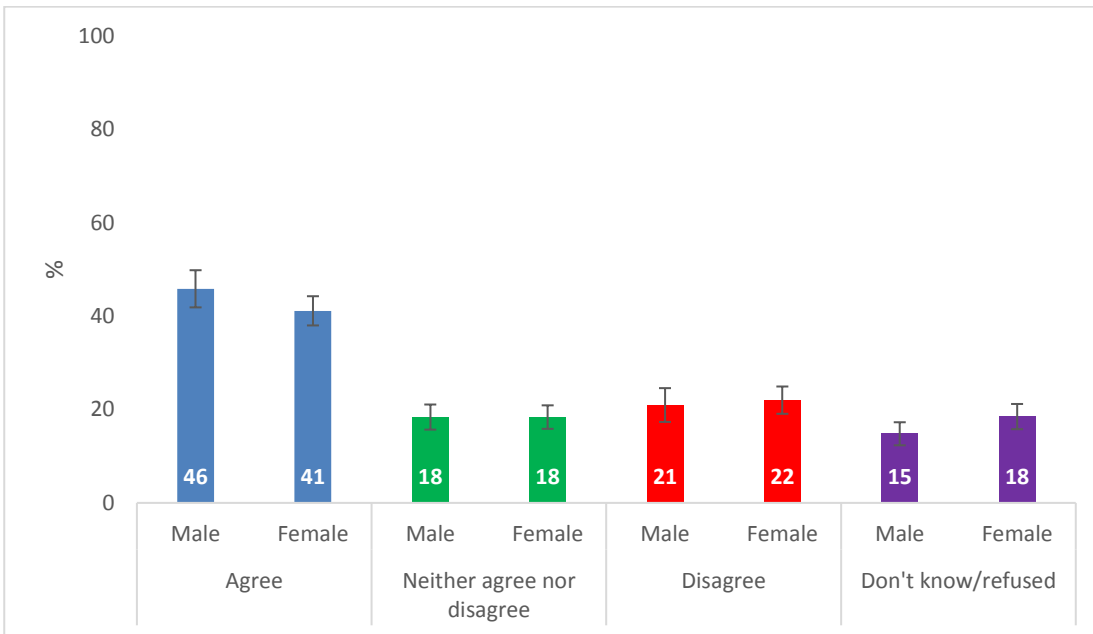


Figure 13: Agreement with the statement that e-cigarettes can help people to quit smoking tobacco, by sex.

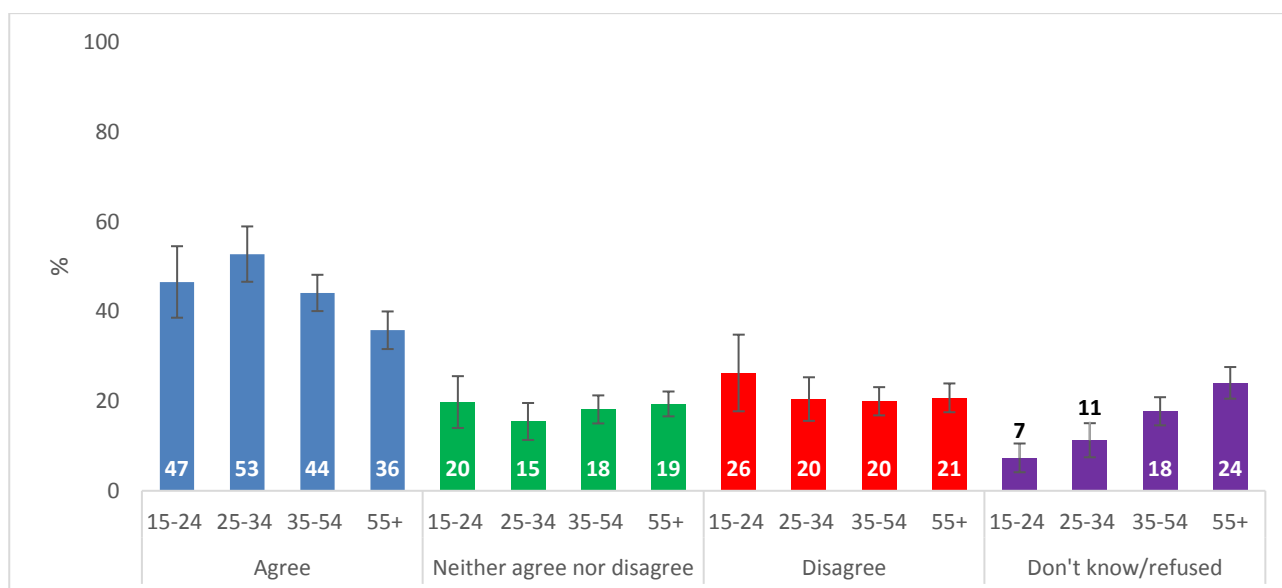


Figure 143: Agreement with the statement that e-cigarettes can help people to quit smoking tobacco, by age in years.

## Methodology

- The Health and Lifestyles Survey (HLS) is a nationally representative, face-to-face, in-home survey that monitors the health behaviours and attitudes of New Zealanders aged 15 years and over. The HLS is run every two years, with the 2016 survey being the 6<sup>th</sup> iteration of the survey. The HLS is managed by the Health Promotion Agency (HPA) and collects information relating to the programme areas HPA works in, including tobacco control. The 2016 HLS Questionnaire can be found on our website (<http://www.hpa.org.nz/research-library/research-publications/2016-health-and-lifestyles-survey-questionnaire>). In addition the 2016 HLS Methodology report can also be found on our website (<http://www.hpa.org.nz/research-library/research-publications/2016-health-and-lifestyles-survey-methodology-report>).
- The sample comprises
  - Total: (n= 3,854)
  - Sex: females (n = 2,279); males (n = 1,575)
  - Age groups: 15-24 years (n = 419); 25-34 years (n = 656); 35-54 years (1,332); 55+ years (n = 1,447).



- The 2016 HLS asked the following questions about electronic cigarettes:
  - T35: "Electronic cigarettes, also known as e-cigs, vapes or personal vaporizers are battery-powered devices that heat a liquid to release vapour as people inhale from them. The vapour may contain nicotine and may be flavoured. Have you ever tried electronic cigarettes?" (Yes; No; *Don't know*)
  - T36: "How often do you use an electronic cigarette now?" (*At least once a day; At least once a week; At least once a month; Less often than once a month; Do not use one now; Don't know*).
  - T38: "Why did you try using electronic cigarettes?" (*Multiple response: I want to quit smoking cigarettes completely; I want to reduce the amount of tobacco I smoke, but not stop smoking completely; I have made an attempt to quit smoking and I want a tool to help me stay smokefree; I want to use them in places where smoking cigarettes is not allowed; Cheaper than tobacco cigarettes; Less harmful to my health than tobacco cigarettes; To avoid putting those around me at risk due to second-hand smoke; I like the flavours / taste; Trendier than tobacco cigarettes; Smells better than tobacco cigarettes; More convenient than tobacco cigarettes; I like holding it / keeping my hands busy; I am curious about them; Other, Don't know*).
  - T39: "Thinking about the electronic cigarette that you are currently using most often, does the vapour contain nicotine?" (Yes; No; *Don't Know*).
  - T40: "Where did you get the refill e-liquid for the electronic cigarette that you are currently using most often?" (*From a friend / family; Online store; Dairy; Liquor store; Service station; Supermarket; Takeaway shop; Tobacconist; Other; Not applicable – not refillable; Don't know*).
  - T41: "E-cigarettes are safer for your health than smoked cigarettes" (*Strongly agree; Agree; Neither agree nor disagree; Disagree; Strongly disagree; Not applicable – don't know what an e-cigarette is; Don't know*).
  - T42: "E-cigarettes can help people quit smoking tobacco" (*Strongly agree; Agree; Neither agree nor disagree; Disagree; Strongly disagree; Not applicable – don't know what an e-cigarette is; Don't know*).