

Smoking prevalence in the South Canterbury District Health Board region

Data trends 1999-2013



Canterbury
District Health Board
Te Poari Hauora o Waitaha

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Executive summary

This report summarises recently published data on the prevalence of smoking in different population groups in New Zealand and the South Canterbury District Health Board (SCDHB) region. It will provide supporting data to assess current cessation provision and guide future planning.

Methodology

Data were sourced from the New Zealand Census, New Zealand Health Survey, National Maternity Collection, and Year 10 Snapshot Survey.

Prevalence estimates and accompanying 95% confidence intervals are presented in tables and figures. Where possible, data have been disaggregated by age group, ethnicity, neighbourhood deprivation, and year.

In many instances for the SCDHB region, the total number of responses in a category was small (e.g. for specific ethnic or age groups). Estimates are less reliable when the sample is too small to adequately represent the population from which it has been drawn. Therefore, these data should be reported, and interpreted, with caution.

Smoking prevalence in the South Canterbury District Health Board region

Some consistent themes emerged from the data. In brief, smoking prevalence:

- has decreased in all age groups between 1999 and 2014, accompanied by a corresponding increase in the prevalence of ex- and never smoking
- is consistently higher for Māori and Pacific ethnic groups
- increases with increasing neighbourhood deprivation
- increases rapidly in late adolescence and peaks in those aged 20-29. From here, there is a steady decline over the lifespan, and
- tends to be higher in the SCDHB region than in New Zealand as a whole.

This recent evidence illustrates that progress has been made in decreasing the prevalence of smoking in the SCDHB region. However, there remains a significant number of smokers and specific population groups (including Māori, Pacific, young people, and those living in areas of high deprivation) who continue to experience persistent smoking-related inequities.

Table of contents

Methodology.....	1
Data sources and analyses.....	1
Limitations.....	5
Smoking prevalence in the South Canterbury District Health Board region	7
Adults (New Zealand Census).....	7
Adults (New Zealand Health Survey).....	22
Pregnant women (National Maternity Collection).....	24
Adolescents (Year 10 Snapshot Survey)	25
Summary.....	27
Appendix A: Data tables.....	28
Adults (New Zealand Census).....	29
Adults (New Zealand Health Survey).....	41
Pregnant women (National Maternity Collection).....	42
Adolescents (Year 10 Snapshot Survey)	43
Appendix B: Data maps.....	44
References	49

Methodology

Since the publication of data from the 2013 New Zealand Census¹, the 2012/2013 New Zealand Health Survey (NZHS)², and the 2013 Year 10 Snapshot Survey³, updated data on smoking prevalence in New Zealand are now available.

This report presents the most recent data on the prevalence of smoking in New Zealand and the South Canterbury District Health Board (SCDHB) region. This information will provide supporting data to assess current cessation provision and guide future planning.

Specifically, the report will:

1. summarise the prevalence of current, former and never-smoking
2. describe the prevalence in different population groups (e.g. by ethnicity and age) over time, and
3. present the data in graph and tabular form, so that it can be used consistently in various reports, plans and presentations.

Data sources and analyses

Smoking-related data from the New Zealand Census (Statistics New Zealand), the NZHS (Ministry of Health), National Maternity Collection (Ministry of Health), and the Year 10 Snapshot Survey (Action on Smoking in Health, ASH) were used.

Data are presented in tables as percentages along with the total number of responses (where provided) for each category, in Appendix A. Unless stated otherwise, crude (i.e. unadjusted) percentages were calculated using the total number of valid responses as the denominator (i.e. excluding missing responses, or responses that were inconsistent or illegible). Statistical comparisons between groups or time points have not been analysed.

To represent the sample error for percentage estimates, 95% confidence intervals were calculated using the Wilson score interval method (Brown, Cai, & DasGupta, 2001). The 95% confidence intervals have been presented in tabular form for reference, and where possible, with the graphed data. A 95% confidence interval indicates there is a 95% probability that the true value of the estimate (if the whole population were surveyed) falls between the lower and upper confidence interval values. Differences between estimates are said to be statistically significant when the confidence intervals for each estimate do not overlap. However, the difference between the groups

¹ <http://www.stats.govt.nz/Census/2013-census.aspx>

² <http://www.health.govt.nz/nz-health-statistics/national-collections-and-surveys/surveys/current-recent-surveys/new-zealand-health-survey>

³ <http://www.ash.org.nz/research-and-information/ash-research/ash-year-10-snapshot-survey/>

can sometimes be statistically significant, even when the confidence intervals overlap (Ministry of Health, 2013).

Where practicable, data are presented in graphs as well as in tables. Graphs have been colour-coded to allow for clear differentiation, and data comparisons between:

- the SCDHB and New Zealand are presented in blue, and
- years are presented in green.

New Zealand Census

The most recent census of New Zealanders was conducted in March 2013, and before that, in March 2006. Adults (aged ≥ 15) were asked whether they smoked cigarettes⁴ regularly (i.e. one or more a day), and could respond either “yes” or “no” (Statistics New Zealand, 2013). If the response was “no”, adults were asked whether they have ever been a regular smoker of one or more cigarettes a day (and could respond either “yes” or “no”). From these questions, respondents were defined as regular, ex-, or never smokers⁵:

- Regular smokers were defined as those who reported smoking one or more cigarettes per day.
- Ex-smokers were defined as those who reported previously having been a regular smoker (of one or more cigarettes a day).
- Those who have never been a regular smoker were defined as those who reported that they did not currently smoke, and had not previously been a regular smoker (of one or more cigarettes a day).

Data disaggregated by DHB, age group, ethnicity, neighbourhood deprivation, and year were used. These data were requested from Statistics New Zealand by CPH and/or other organisations.

The number of respondents in a category may not sum exactly to the total due to missing responses in some categories (e.g. age, ethnicity) and/or the method of rounding used by Statistics New Zealand when presenting data.

⁴ Cigarette smoking refers to the active smoking of one or more manufactured or hand-rolled tobacco cigarettes, from purchased or home-grown tobacco. The term “smoking” refers to active smoking behaviour, that is, the intentional inhalation of tobacco smoke. Smoking does not refer to, or include, passive smoking (the unintentional inhalation of tobacco smoke). Cigarette smoking does not include smoking of tobacco in cigars, pipes, and cigarillos, smoking of any other substances such as herbal cigarettes or marijuana, or consumption of tobacco products by other means, such as chewing (<http://www.stats.govt.nz/Census/2013-census/info-about-2013-census-data/2013-census-definitions-forms/definitions/personal.aspx>)

⁵ <http://www.stats.govt.nz/Census/2013-census/info-about-2013-census-data/information-by-variable/cigarette-smoking-behaviour.aspx>

As recommended by Statistics New Zealand (2005), total response ethnicity is used, where people who reported more than one ethnic group are counted once in each group reported. This means that the total number of responses for all ethnic groups can be greater than the total number of people who stated their ethnicities (and therefore, percentages may not sum to 100)⁶. In tables, data for all “Level 1” ethnic groups are presented (i.e. Māori, Pacific, Asian, European, Middle Eastern/Latin American/African, and Other), however, in graphs four major ethnic groups are presented (i.e. Māori, Pacific, Asian, and European).

An indicator of neighbourhood deprivation (NZDep2013) is also presented. NZDep is a small-area-based relative deprivation index based on socioeconomic variables from the Census (Atkinson, Salmond, & Crampton, 2014). NZDep scores can be categorised into tenths (deciles), numbered from 1 (least deprived) to 10 (most deprived), and have been presented in this report as quintiles. NZDep describes the deprivation experienced by groups of people in small areas and describes the general socioeconomic deprivation of an area. It does not describe the deprivation of an individual.

Some people in New Zealand did not complete the censuses, and in 2013 the national net undercount is estimated to be 2.4% (103,800 people)⁷. Certain population groups (e.g. Māori, Pacific and young people aged 15-29) are more likely to be missed in the Census. Therefore, the number of smokers in these groups may be underestimated to a small degree.

Maps using data from the 2013 Census were generated using Map Machine (Community & Public Health, CDHB, 2014). Data on the proportion of the population who are regular and ex-smokers are presented in Appendix B, however, Map Machine did not include data on people who have never been regular smokers, so maps of this data cannot be presented.

New Zealand Health Survey

The NZHS is a national health survey conducted annually by the Ministry of Health. The adult survey involves interviewing approximately 13,000 randomly-selected adults (aged ≥15), and includes several questions related to tobacco smoking (Ministry of Health, 2013). From these questions, those respondents who had ever smoked were defined as current, daily or ex-smokers (Ministry of Health, 2012a):

- Current smokers were defined as those who reported smoking at least monthly, and have ever smoked more than 100 cigarettes.
- Daily smokers were defined as those who reported smoking daily, and have ever smoked more than 100 cigarettes.
- Ex-smokers were defined as those who reported that they used to be a smoker, but who do not currently smoke.

⁶ <http://www.stats.govt.nz/Census/2013-census/info-about-2013-census-data/2013-census-definitions-forms/definitions/e.aspx>

⁷ http://www.stats.govt.nz/browse_for_stats/population/census_counts/PostEnumerationSurvey_MR13.aspx

The weighted response rates for the 2012/2013 adult surveys were 80% in 2012/2013, and 79% in 2011/2012. The coverage rate (the extent to which a population has been involved in a survey) was 59% in 2012/2013 and 54% in 2011/2012 (Ministry of Health, 2013). The weighted response rate for the 2006/2007 adult survey was 68%, and the coverage rate was 59% (Ministry of Health, 2008).

Raw numbers were not provided, and instead, pre-calculated age-standardised prevalence estimates and confidence intervals (published by the Ministry of Health) are presented here. The proportion of the population who belong to a particular group (e.g. the proportion of the population who are daily smokers) was estimated by calculating the sum of the weights for the respondents in the group divided by the sum of the weights of all respondents. Differences between two variables were tested using a t-test (Ministry of Health, 2013). Where a p-value is below 0.05, the difference between the two estimates is said to be statistically significant. When a p-value is 0.05 or above, there is an absence of evidence of a difference.

Populations with different age structures may have different smoking rates due to these age differences (Ministry of Health, 2013). Therefore, age-standardised data are presented here to allow comparisons between groups and over time.

The Korn and Graubard method was used to calculate confidence intervals in some circumstances (i.e. when the numerator was <30, the lower confidence interval was <0, and/or the upper confidence interval was >100) (Korn & Graubard, 1998). The 95% confidence intervals have been presented in graph and tabular form for reference. More information on the methods that were used for analysing these data are described in the survey's methodology report (Ministry of Health, 2013).

National Maternity Collection

The Ministry of Health operates the National Maternity Collection (MAT), which integrates maternity-related data from the National Minimum Dataset and Lead Maternity Carer (LMC) claim forms. It provides statistical, demographic and clinical information about selected publicly-funded maternity services up to nine months before and three months after a known birth (Ministry of Health, 2014a). Data presented here are sourced from information for all women registered with a LMC who gave birth between 2008 and 2012. Not all pregnant women in New Zealand are registered with a LMC, but the proportion who are registered is substantial (e.g. 85.7% of all women giving birth in 2010 were registered with a LMC (Ministry of Health, 2012b)).

Maternal smoking status is recorded at the time of registration with a LMC and two weeks after birth (Ministry of Health, 2012b). However, the estimates provided in this paper are likely to be an underestimate as the smoking status of some women was not recorded, and they are sometimes coded as "non-smoker" as a default. The majority of women registered with a LMC were assigned a smoking status at registration (e.g. 55,240 out of 55,254 registered women for New Zealand in 2010 (Ministry of Health, 2012b)).

The LMC coverage rates of some population groups may not necessarily be representative of all women in that group giving birth, as they are relatively low. For example, in 2010 data were unavailable for over one third of Pacific women due to a low LMC coverage rate (Ministry of Health,

2012b). Therefore, the rates derived from this population may not be representative of all Pacific women giving birth.

Data have not been presented by age group, ethnicity or neighbourhood deprivation due to small sample sizes.

Year 10 Snapshot Survey

ASH conducts an annual survey of approximately 30,000 Year 10 students (who were aged 14-15 at the time of the survey) in New Zealand (ASH, 2012). Each year, all schools with Year 10 students are invited to participate, and approximately half agree and return completed questionnaires. This survey has been running since 1999 and includes questions relating to student demographics, smoking behaviour, smoking status of family and friends, exposure to secondhand smoke, and beliefs about tobacco control issues.

To investigate smoking status, students were asked “Have you ever smoked a cigarette, even just a few puffs?” The response options were either “yes” or “no”. To measure smoking frequency, students were asked “How often do you smoke now?” The response options included: “I have never smoked/I am not a smoker now”, “At least once a day”, “At least once a week”, “At least once a month”, or “Less often than once a month”. From these questions, respondents were defined as daily, regular or never smokers:

- Daily smokers were defined as those students who reported smoking at least once a day.
- Regular smokers were defined as those students who reported smoking daily, weekly or monthly.
- Those who have never been a smoker were defined as students who answered no to the initial question “Have you ever smoked a cigarette, even just a few puffs?”

Data disaggregated by DHB, ethnicity, and year were provided by ASH on request. Further data on school decile and participation rates were requested, but were not available. Data has not been presented by ethnicity due to small sample sizes.

Limitations

The data in this report are presented as percentages with the accompanying 95% confidence interval, and the total number of responses (where provided) for each category. Unless stated, data have not been adjusted for any other variable (e.g. age). No statistical analyses have been conducted to determine the effects of, and/or interrelationships between, any of the variables and smoking prevalence. It is acknowledged that many variables (such as ethnicity and neighbourhood deprivation) are interrelated.

In many instances, the total number of responses in a category was small (e.g. for specific ethnic or age groups), and the accompanying 95% confidence intervals wide. Estimates are less reliable when the sample is too small to adequately represent the population from which it has been drawn (e.g. older age groups, Pacific people). Therefore, these data should be reported, and interpreted, with caution.

Comparing prevalence estimates between surveys/data sources should also be done with caution as they can vary depending on the data collection methods, age of respondents, and any statistical adjustments used. In addition, the definitions for the categories of smoking (e.g. "Regular smoker") differ between each data source, despite similar/identical category names being used. Also, ethnicity is sometimes categorised differently between each data source.

The limitations of the individual surveys and data sources need to be kept in mind when comparing data between them, and when drawing conclusions about the data presented.

Smoking prevalence in the South Canterbury District Health Board region

This section summarises smoking prevalence estimates for adults and adolescents in the SCDHB region, and data are also presented for New Zealand as a whole, for comparison.

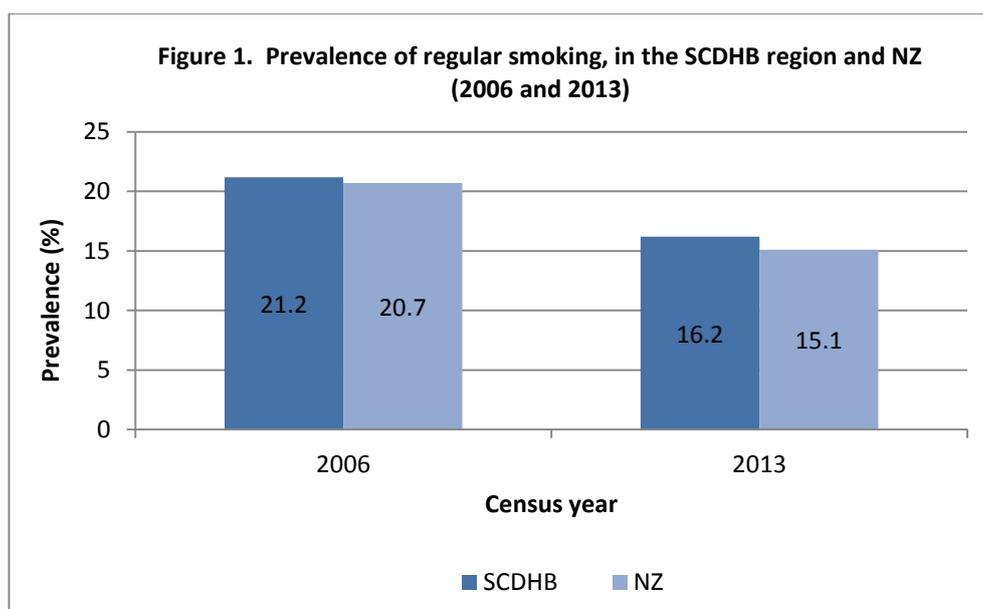
Adults (New Zealand Census)

The following sections present data from the 2006 and 2013 censuses.

Regular smoker

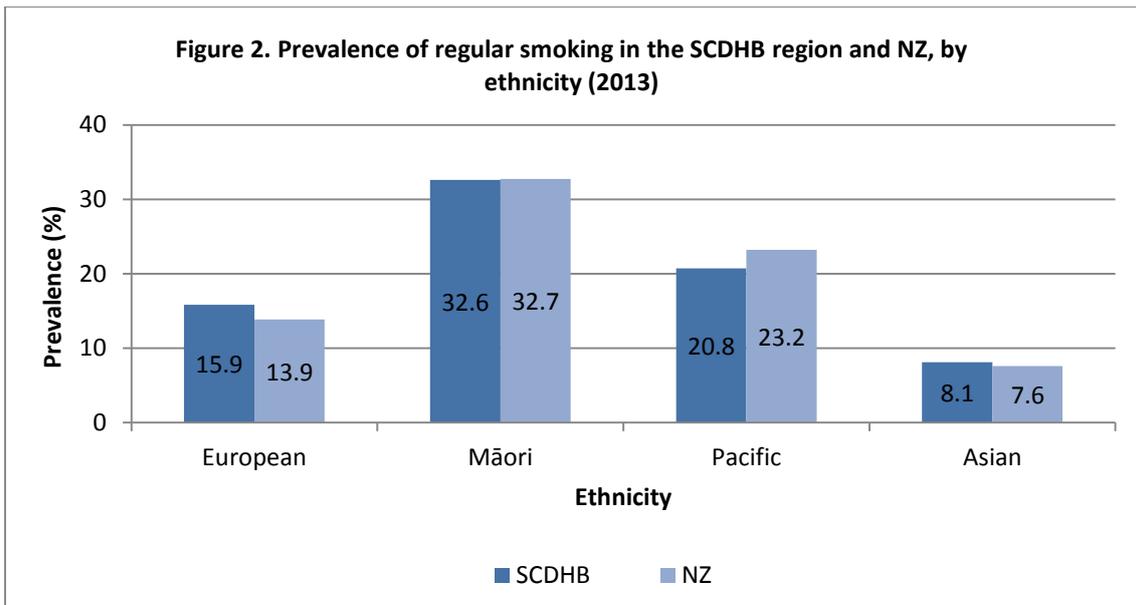
Regular smokers were defined as those who reported smoking one or more cigarettes per day.

Between the 2006 and 2013 censuses, the total prevalence of regular smoking decreased in both the SCDHB region and New Zealand (Figure 1, Table A1). The prevalence was slightly higher in the SCDHB region than nationally.

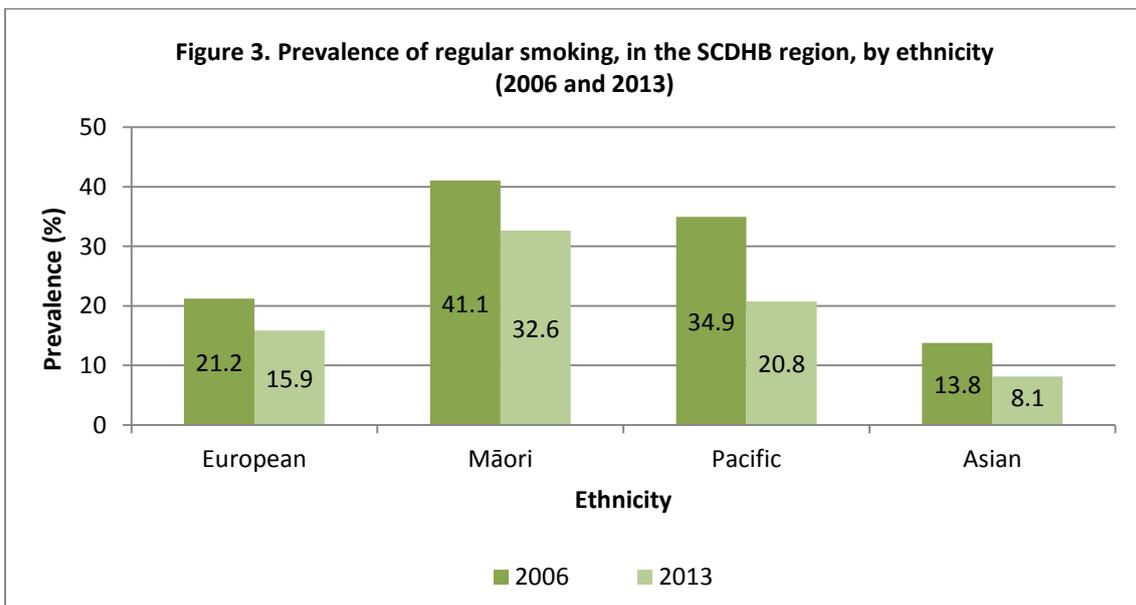


Prevalence of regular smoking in adults, by ethnicity

In 2013, the lowest prevalence of regular smoking was among Asian people, followed by European, Pacific and Māori ethnic groups (Figure 2). This is the case for the SCDHB region, and nationally (Table A2).

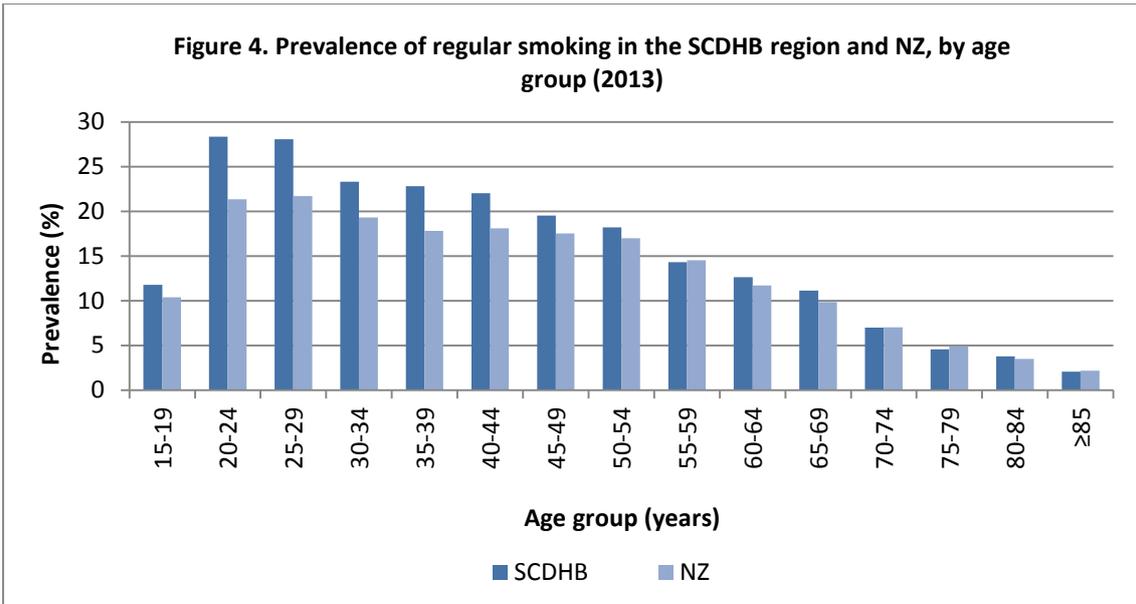


In the SCDHB, the pattern of regular smoking by ethnicity (lowest prevalence in Asian people, followed by European, Pacific and Māori ethnic groups) in the 2013 Census was similar to that in the 2006 Census (Figure 3, Table A2). The greatest decreases in regular smoking between 2006 and 2013 appear to be for Pacific and Māori ethnic groups (approximately 14% and 9%, respectively). This pattern of findings is similar for national data (Table A2).

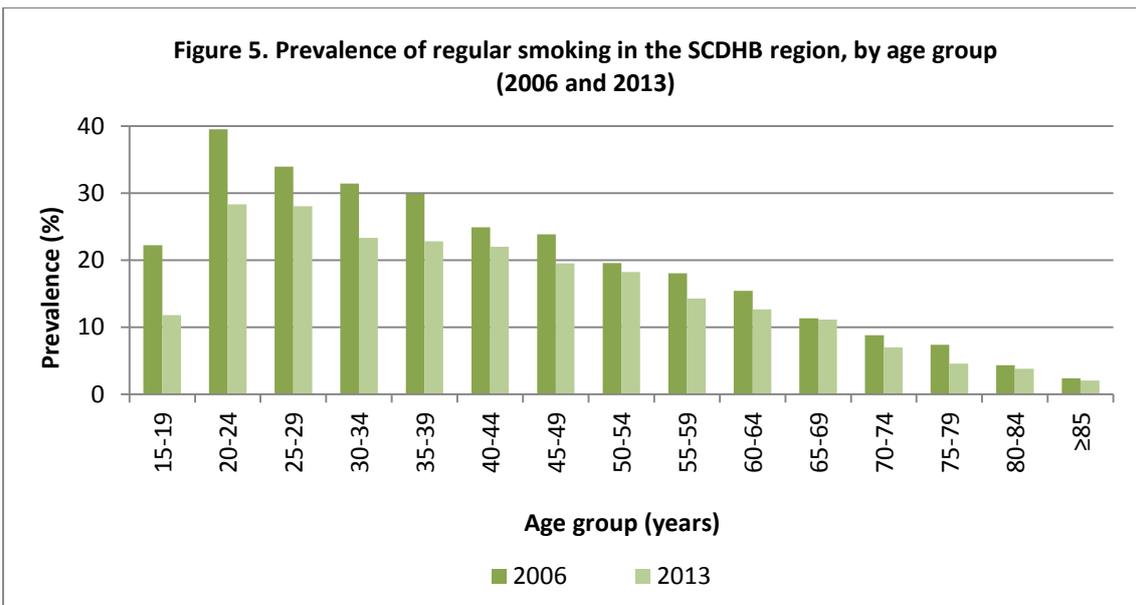


Prevalence of regular smoking in adults, by age

In the 2013 Census, the prevalence of regular smoking peaks for young people aged 20-29, and decreases with increasing age for both the SCDHB region and New Zealand as a whole (Figure 4). The pattern was also similar in 2006 (Table A1). Figure 4 (below) shows the age pattern for all ethnic groups combined, however the pattern was similar for Māori and European ethnic groups separately (data not shown). There are too few people in each age group for Pacific and Asian groups to be able to observe any reliable pattern.



In the SCDHB region, the prevalence of regular smoking decreased between 2006 and 2013 for all age groups (Figure 5). The largest decreases in prevalence between 2006 and 2013 appear to be in those aged less than 50. The pattern is similar nationally (Table A1).



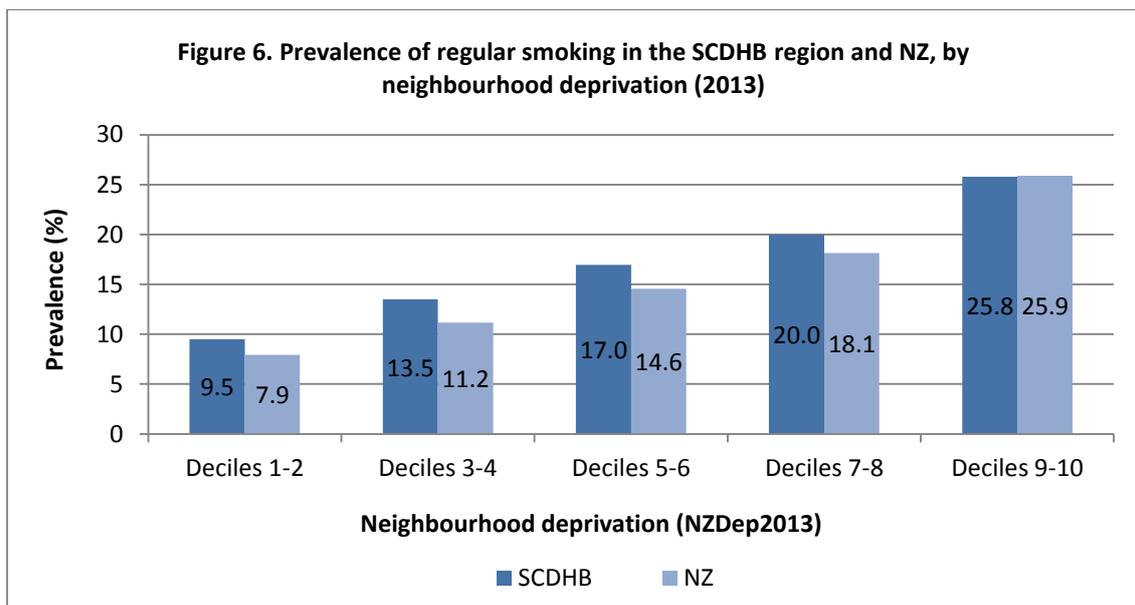
Prevalence of regular smoking in adults, by geographical location

The overall prevalence of regular smoking in the SCDHB region in 2013 can be viewed in Figure B1 (Appendix B). The specific areas with the highest prevalence of regular smoking (20-25% and 27-31%, shown in light and dark orange, respectively) include Timaru, Temuka and Pareora.

Prevalence of regular smoking in adults, by neighbourhood deprivation

In the 2013 Census, the prevalence of regular smoking in the SCDHB region and New Zealand increased with increasing neighbourhood deprivation score (Figure 6, Table A3). The prevalence of

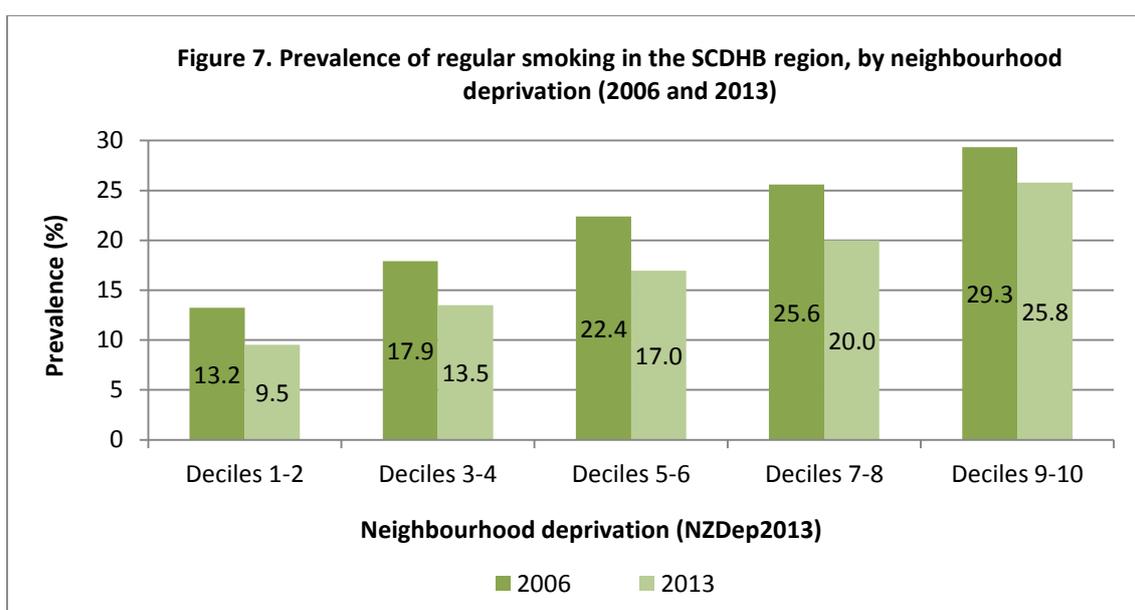
regular smoking in the SCDHB region was higher than New Zealand for all deprivation quintiles, except the highest. These patterns were also similar in 2006 (Table A3).



In the Timaru area, neighbourhoods that have higher deprivation scores (shown in darker orange in Figure B2) tend to have a higher prevalence of regular smoking (shown as larger blue circles).

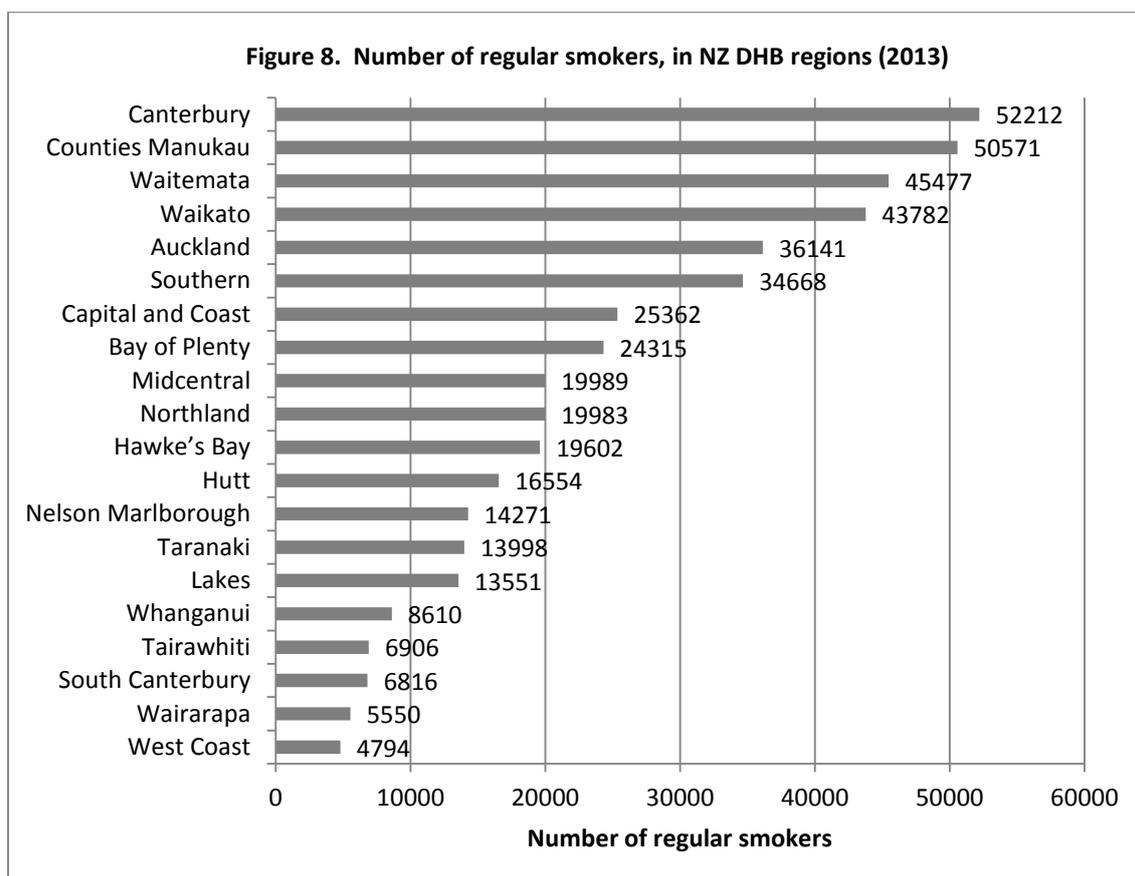
Figure 6 (above) shows the pattern of regular smoking prevalence by neighbourhood deprivation for all ethnic groups combined in 2013. The pattern is also similar for Māori and European ethnic groups separately (i.e. the prevalence of regular smoking increases with increasing neighbourhood deprivation; data not shown). There are too few people in each quintile for Pacific and Asian groups to be able to observe any reliable pattern.

The prevalence of regular smoking was lower in 2013 than in 2006 for all quintiles of neighbourhood deprivation in the SCDHB region (Figure 7, Table A3). The pattern is similar nationally (Table A3).



Prevalence of regular smoking in adults, in New Zealand DHB regions

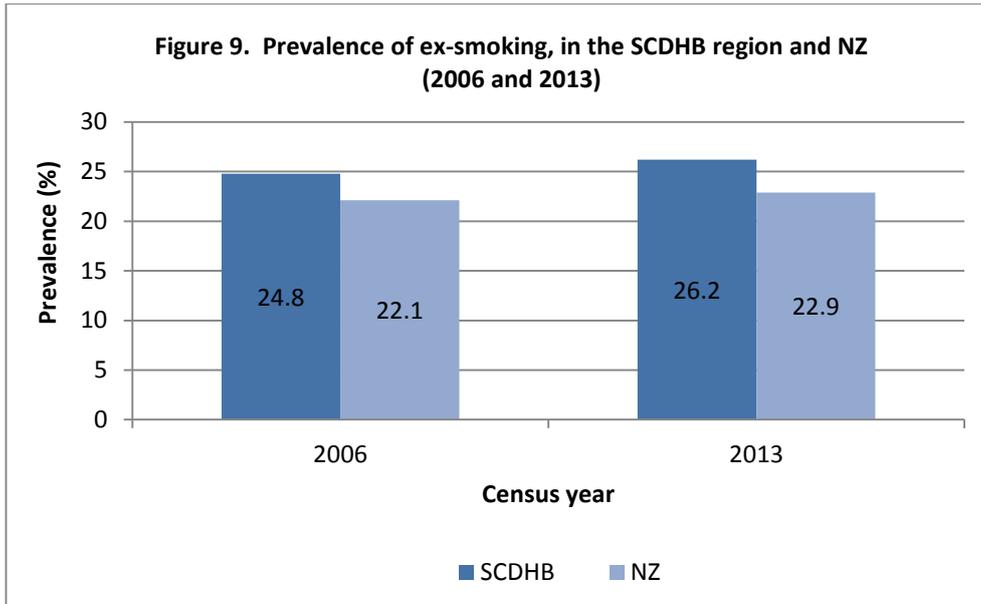
In both the 2006 and 2013 censuses, the prevalence of regular smoking in all New Zealand DHB regions was lowest in Auckland and highest in Tairāwhiti (Table A4). In 2013, the SCDHB region had the eighth lowest prevalence of regular smoking out of all 20 DHBs. In absolute terms, the SCDHB region had the third lowest total number of regular smokers (6,816 people in 2013), due to its relatively small population size (Figure 8).



Ex-smoker

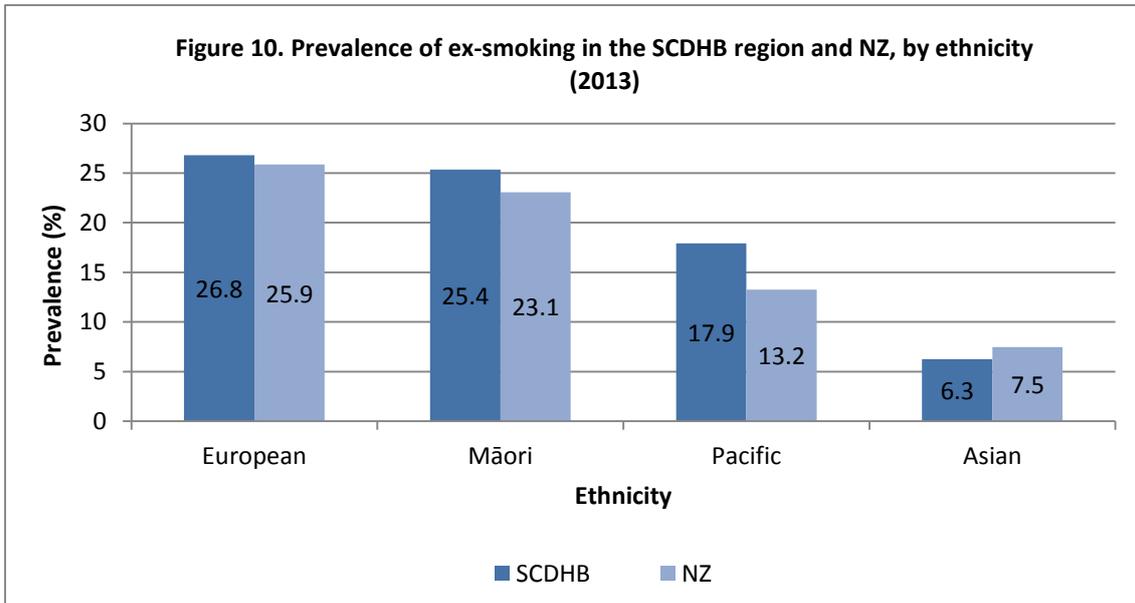
Ex-smokers were defined as those who reported previously having been a regular smoker (of one or more cigarettes a day).

Between the 2006 and 2013 censuses, the total prevalence of ex-smoking increased slightly in both the SCDHB region and New Zealand (Figure 9, Table A5). The prevalence was higher in the SCDHB region than nationally.

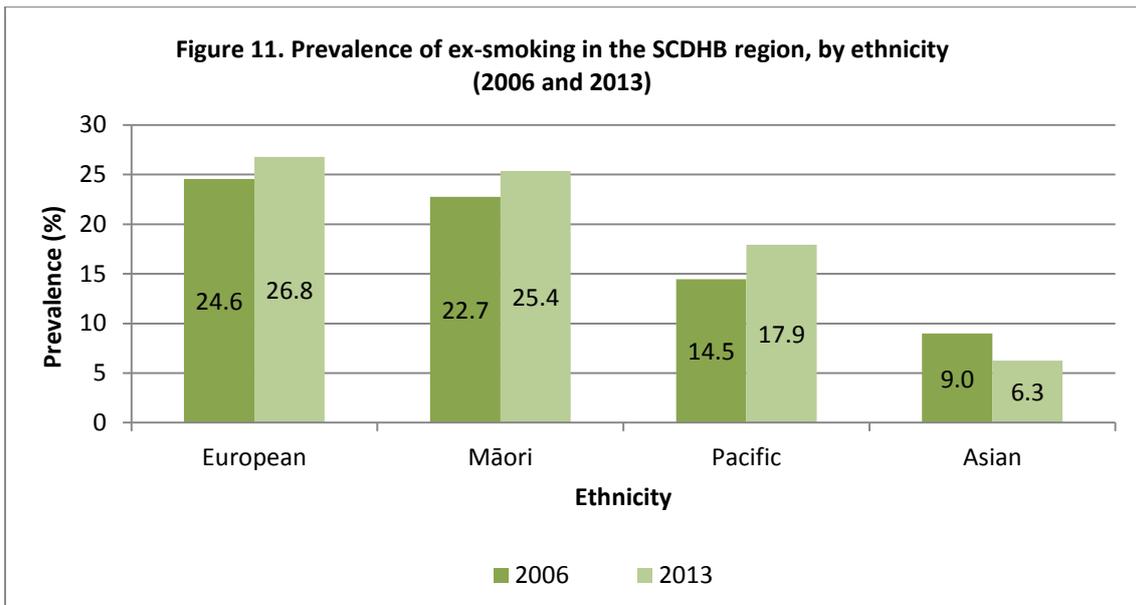


Prevalence of ex-smoking in adults, by ethnicity

In 2013, the lowest prevalence of ex-smoking was among Asian people, followed by Pacific, Māori and European ethnic groups (Figure 10). This was the case for the SCDHB region, and nationally (Table A6).

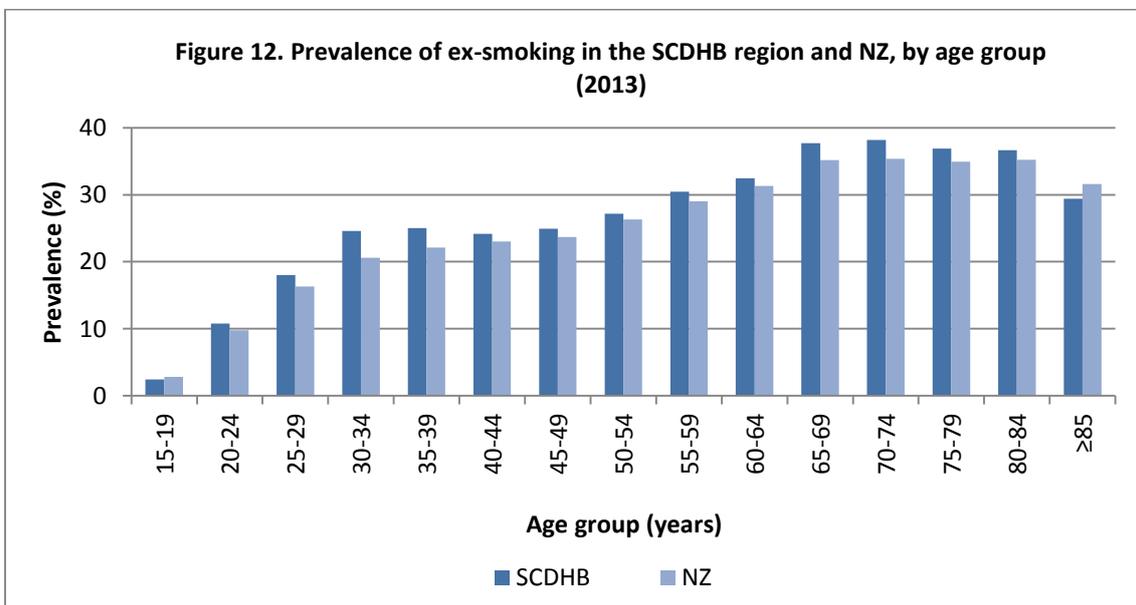


In the SCDHB region, the pattern of ex-smoking by ethnicity (lowest prevalence among Asian people, followed by Pacific, Māori and European ethnic groups) in the 2013 Census was similar to that in the 2006 Census (Figure 11, Table A6). This pattern of findings was similar for national data (Table A6). The greatest increase in the prevalence of ex-smoking between 2006 and 2013 in the SCDHB region appears to be for people of Pacific ethnicity (approximately 3%).

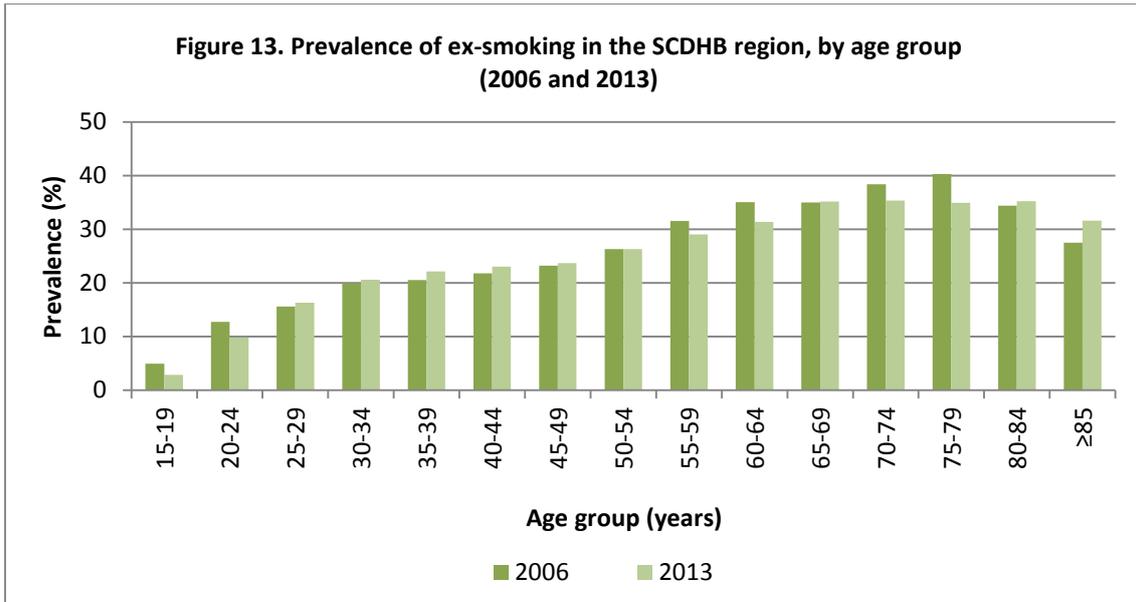


Prevalence of ex-smoking in adults, by age

In the 2013 Census, the prevalence of ex-smoking tended to increase with increasing age before declining among older age groups (aged ≥ 75), for both the SCDHB region and New Zealand as a whole (Figure 12, Table A5). The pattern was similar in 2006 (Table A5). Figure 12 (below) shows the age pattern for all ethnic groups combined, however the pattern was similar for Māori and European ethnic groups separately (data not shown). There are too few people in each age group for people of Pacific and Asian ethnicities to be able to observe any reliable pattern.



In the SCDHB region, there was no consistent pattern between the 2006 and 2013 censuses in the prevalence of ex-smoking by age group (Figure 13). The prevalence decreased slightly between 2006 and 2013 for younger age groups (aged 15-24) and among those aged 55-64 and 70-79. The prevalence appears to have increased slightly in those aged 25-49, and 80 years and older. The pattern nationally is also variable (Table A5).

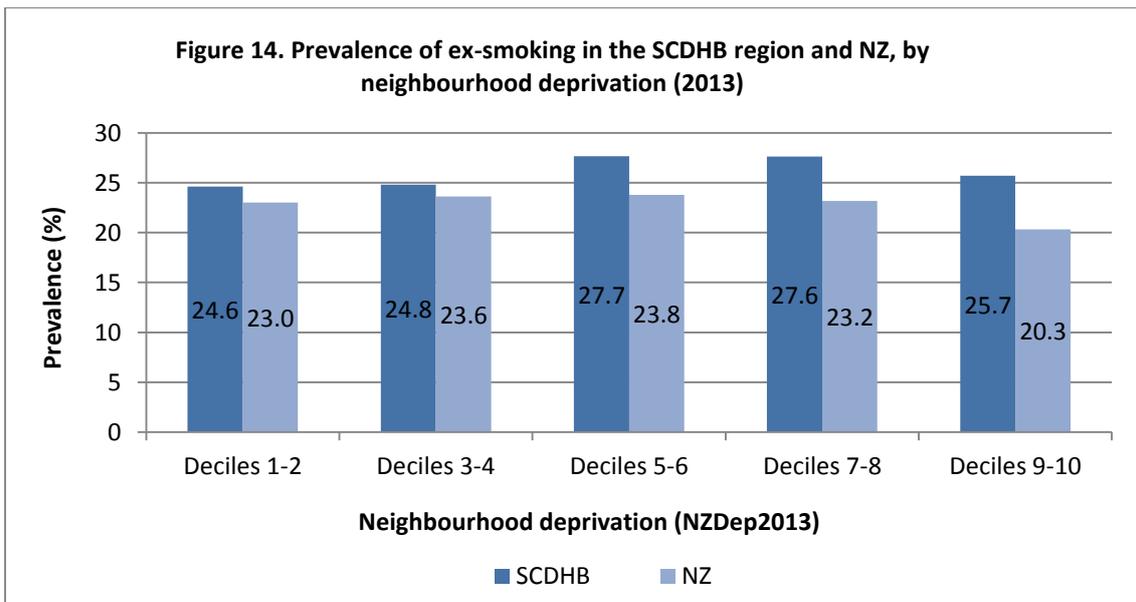


Prevalence of ex-smoking in adults, by geographical location

The overall prevalence of ex-smoking in the SCDHB region can be viewed in Figure B4 (Appendix B). The specific areas with the highest prevalence of ex-smoking (29-32%, shown in dark orange) include Timaru, Geraldine, Pareora and Temuka.

Prevalence of ex-smoking in adults, by neighbourhood deprivation

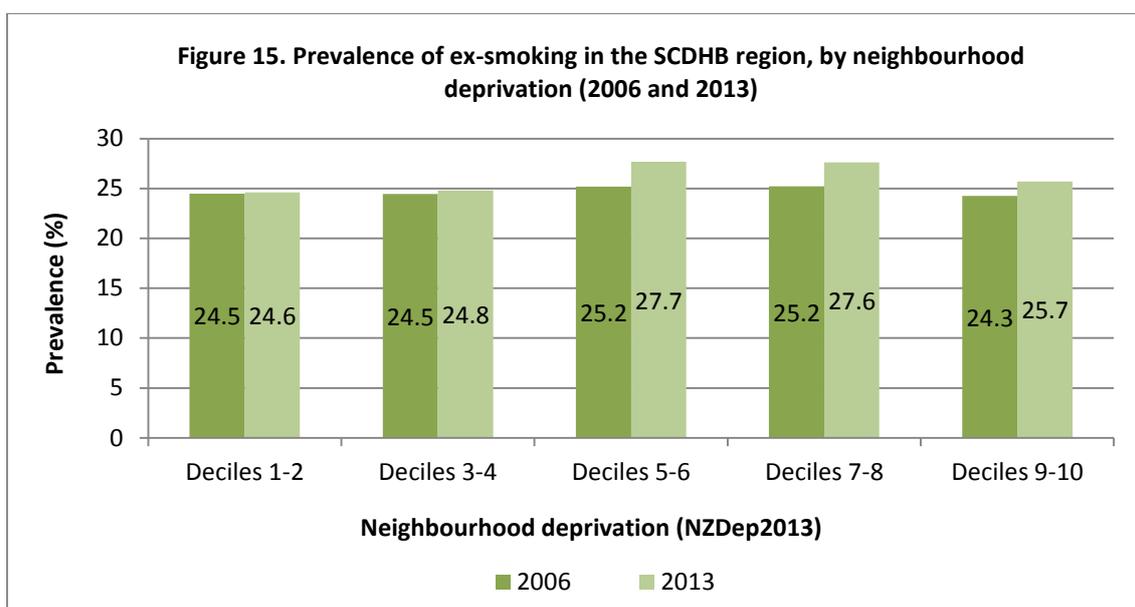
In the 2013 Census, the prevalence of ex-smoking in the SCDHB region and New Zealand increased slightly with increasing neighbourhood deprivation (for deciles 1-8 and deciles 1-6, respectively), then decreased for neighbourhoods with higher deprivation scores (Figure 14, Table A7). The prevalence of ex-smoking in the SCDHB region was higher than New Zealand. These patterns were also similar in 2006 (Table A7).



In Timaru, neighbourhoods that have higher deprivation scores (shown in darker orange in Figure B4) tend to have a higher prevalence of ex-smoking (shown as larger blue circles).

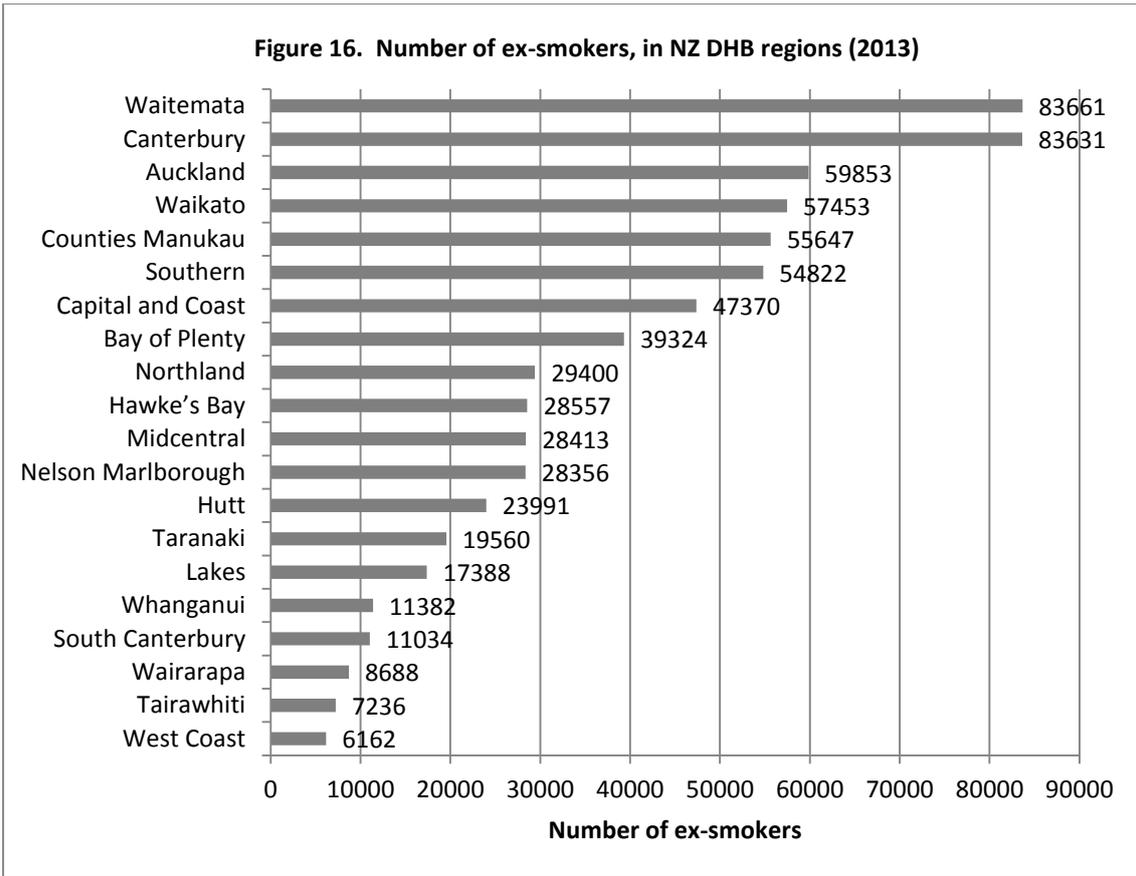
Figure 14 (above) shows the pattern of ex-smoking prevalence by neighbourhood deprivation for all ethnic groups combined in 2013. In the SCDHB, the pattern is also similar for Māori and European ethnic groups separately (data not shown). There are too few people in each quintile for Pacific and Asian groups to be able to observe any reliable pattern.

The prevalence of ex-smoking was similar between 2006 and 2013 for neighbourhoods with the lowest and highest deprivation scores (deciles 1-4 and 9-10), and slightly higher in 2013 compared to 2006 for all other quintiles of neighbourhood deprivation (deciles 5-8) (Figure 15, Table A7). Nationally, the pattern was similar (Table A7).



Prevalence of ex-smoking in adults, in New Zealand DHB regions

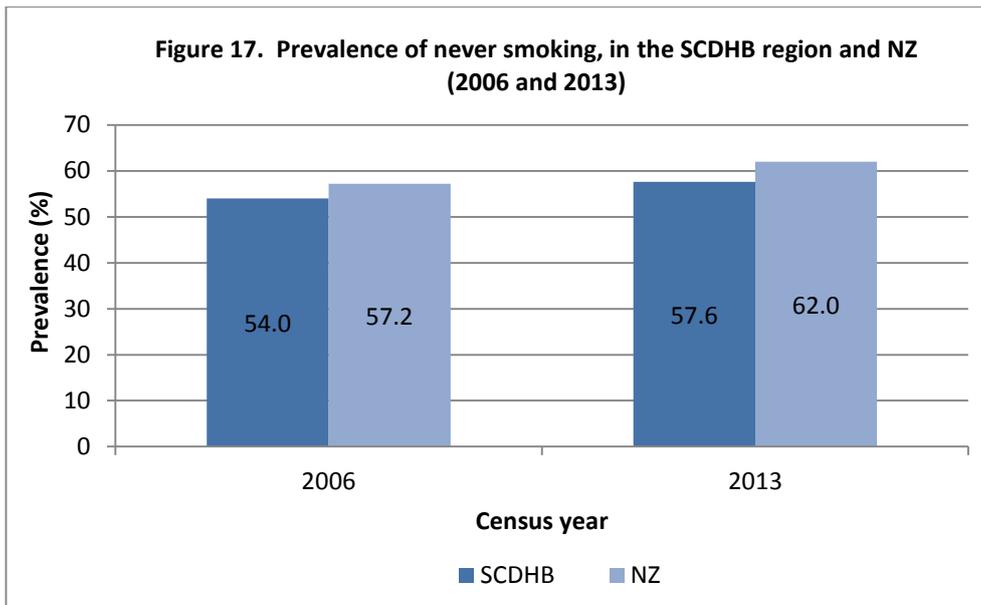
In both the 2006 and 2013 censuses, the prevalence of ex-smoking in all New Zealand DHB regions was lowest in Counties Manukau and highest in Wairarapa (Table A8). In 2013, the SCDHB region had the eighth highest prevalence of ex-smoking out of all 20 DHBs. However, in absolute terms, the SCDHB region had the fourth lowest total number of ex-smokers (11,034 people in 2013) (Figure 16).



Never been a regular smoker

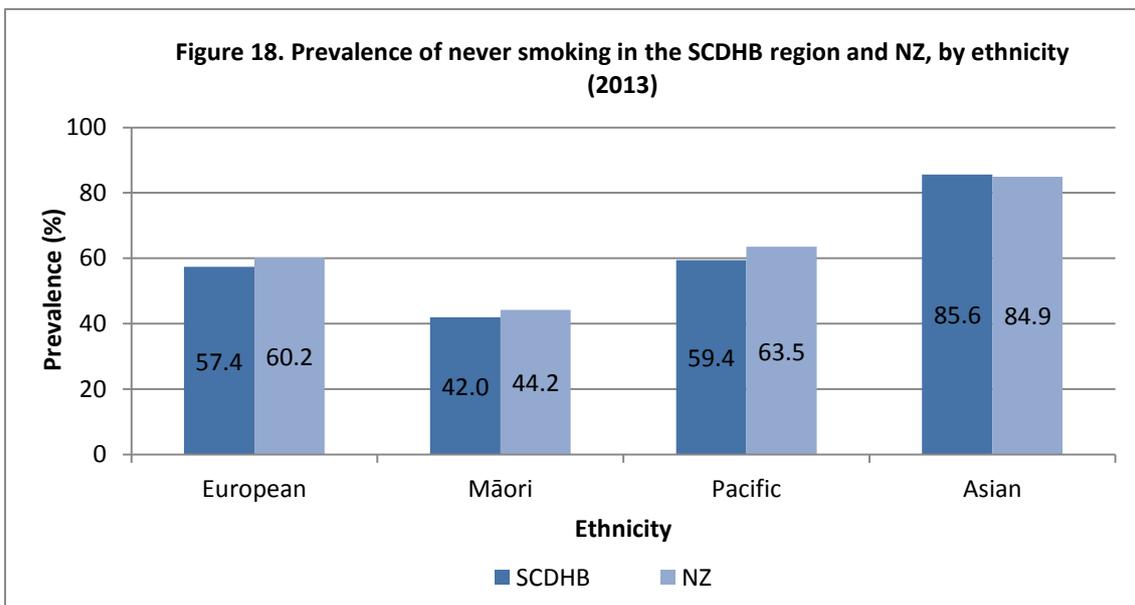
People who have never been a regular smoker were defined as those who reported that they did not currently smoke, and had not previously been a regular smoker (of one or more cigarettes a day).

Between the 2006 and 2013 censuses, the total prevalence of never smoking increased in both the SCDHB region and New Zealand (Figure 17, Table A9). The prevalence was lower in the SCDHB region than nationally.

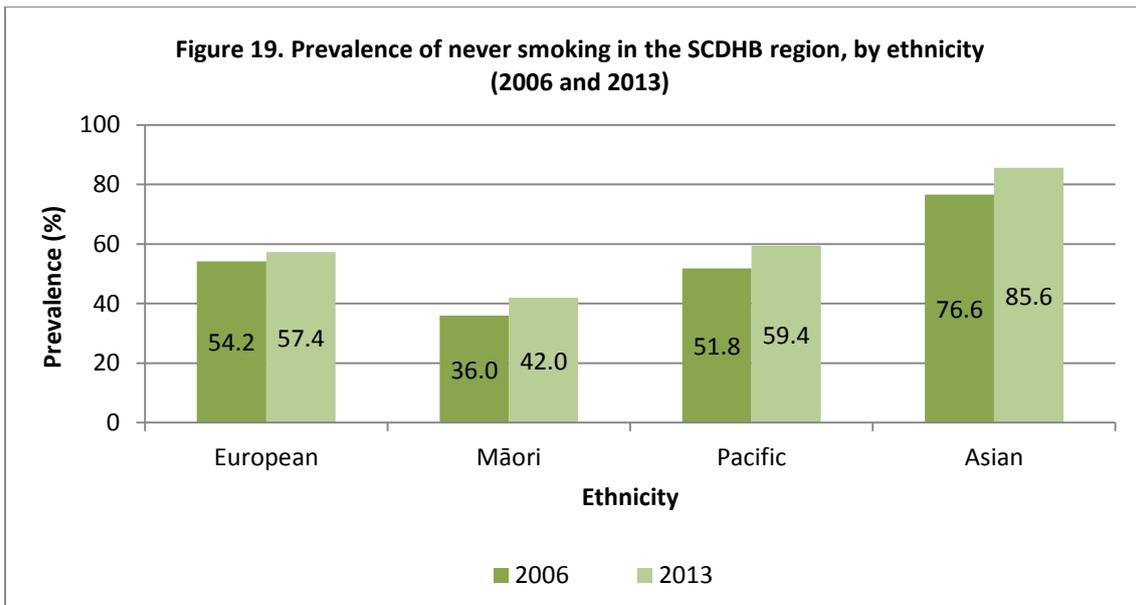


Prevalence of never smoking in adults, by ethnicity

In the SCDHB region in 2013, the highest prevalence of never smoking was among Asian people, followed by Pacific, European, and Māori ethnic groups (Figure 18, Table A10). Findings were similar nationally, and in the 2006 Census (Table A10).

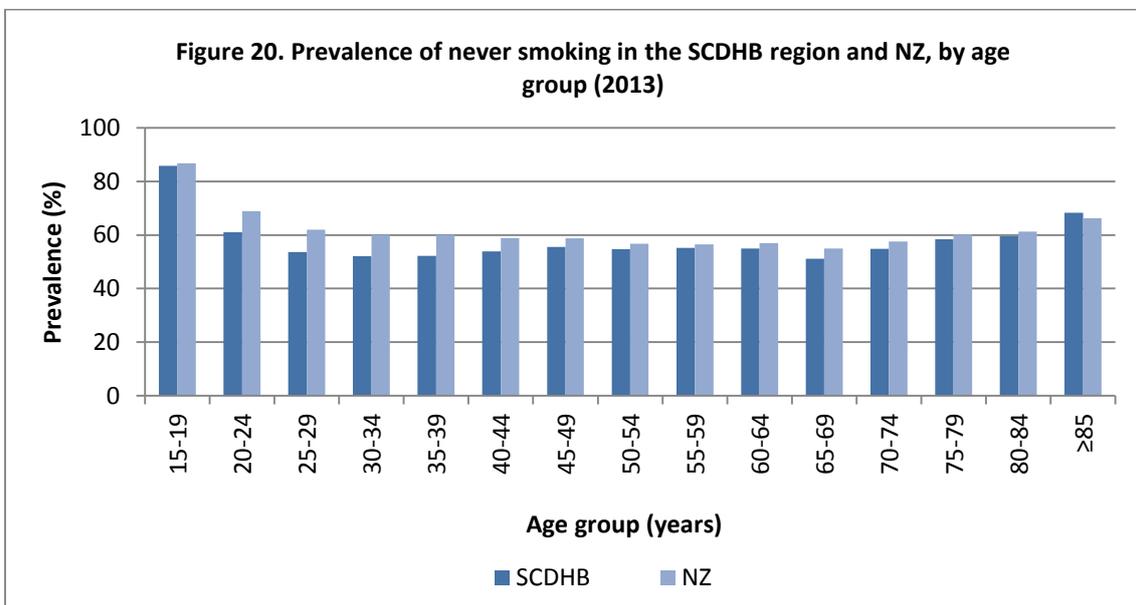


In the SCDHB, the pattern of never smoking by ethnicity (highest prevalence in Asian people, followed by Pacific, European, and Māori ethnic groups) in the 2013 Census was similar to that in the 2006 Census (Figure 19, Table A10). The greatest increase in the prevalence of never smoking between 2006 and 2013 appears to be for people of Pacific ethnicity (approximately 8%). This pattern of findings is similar for national data (Table A10).

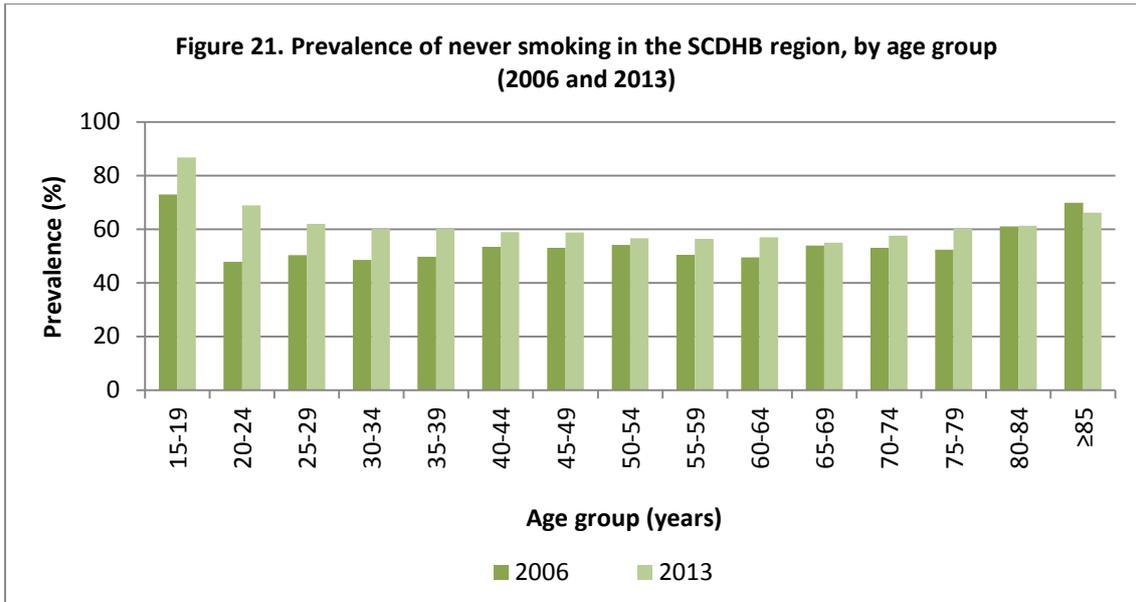


Prevalence of never smoking in adults, by age

In 2013, the highest prevalence of never smoking is among the youngest age groups, aged 15-24 (Figure 20). After that, the prevalence remains relatively stable ($\leq 60\%$), and starts to increase again in older age groups. Figure 20 (below) shows the age pattern for all ethnic groups combined, however the pattern is similar for Māori and European ethnic groups separately (data not shown). There are too few people in each age group for people of Pacific and Asian ethnicities to be able to observe any reliable pattern. The pattern is similar in 2006 (Table A9).



In the SCDHB region, the prevalence of never smoking increased between 2006 and 2013 for almost all age groups (Figure 21). The largest decreases in prevalence between 2006 and 2013 appear to be in the younger age groups. The pattern is similar nationally (Table A9).



Prevalence of never smoking in adults, by neighbourhood deprivation

In the 2013 Census, the prevalence of never smoking in the SCDHB region and New Zealand decreased with increasing neighbourhood deprivation score, and is lowest for those who reside in neighbourhoods with the highest deprivation scores (Figure 22, Table A11). The prevalence in the SCDHB region was lower than New Zealand for all levels of neighbourhood deprivation. These patterns were also similar in 2006 (Table A11).

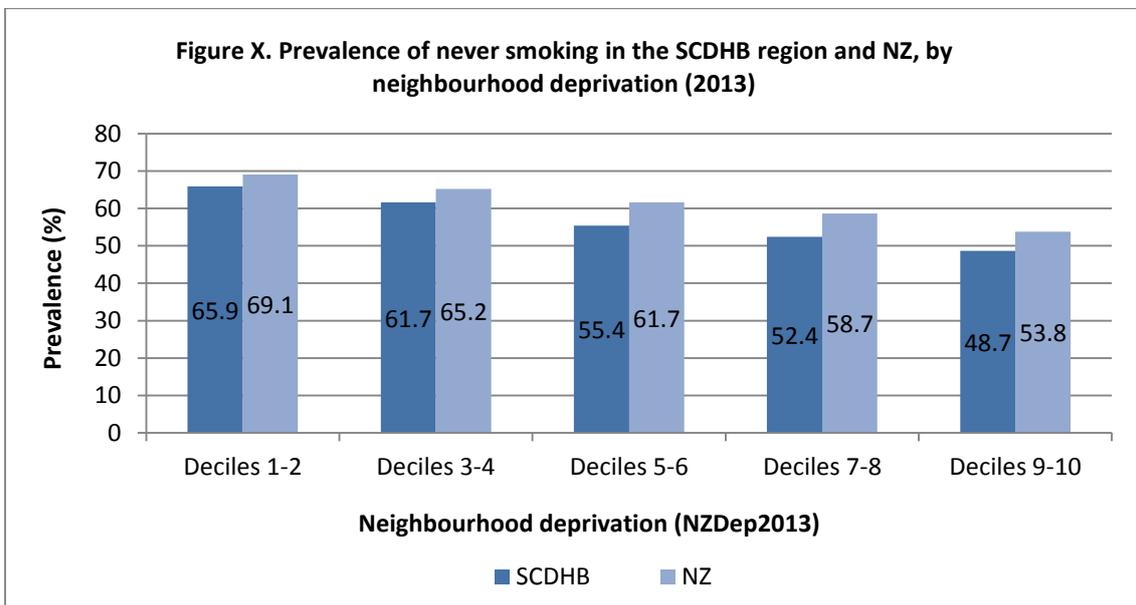
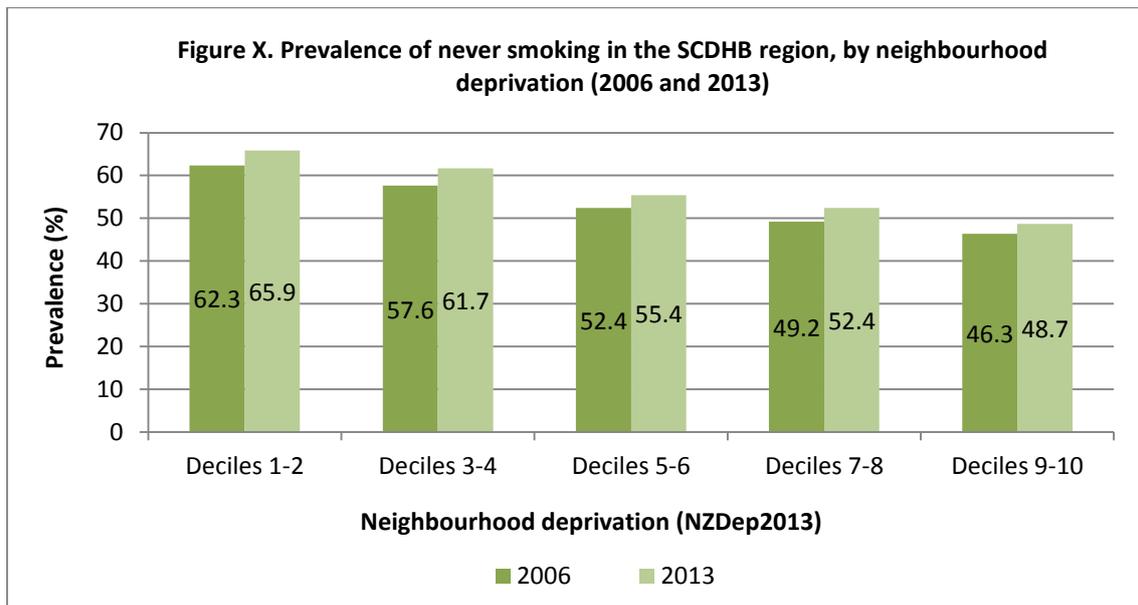


Figure 22 (above) shows the pattern of the prevalence of never smoking, by neighbourhood deprivation for all ethnic groups combined in 2013. In the SCDHB, the pattern was also similar for Māori and European ethnic groups separately (data not shown). There are too few people in each quintile for Pacific and Asian groups to be able to observe any reliable pattern. The pattern was similar nationally.

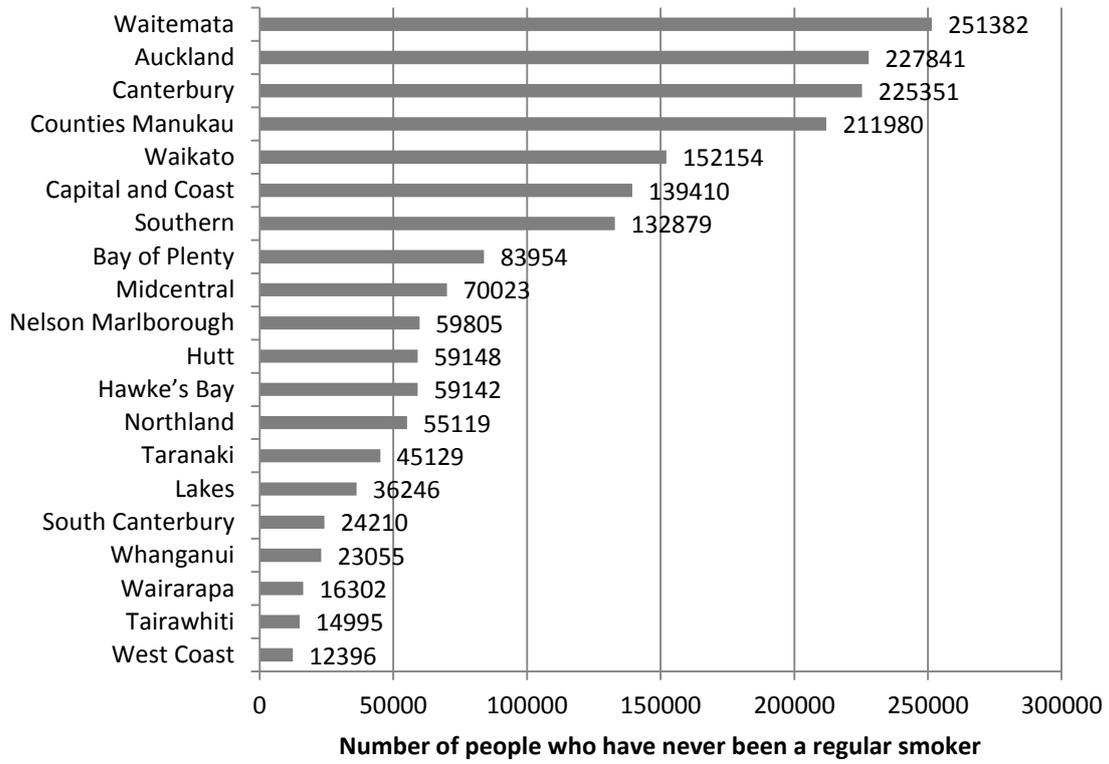
The prevalence of never smoking appears slightly lower in 2006 compared to 2013 for all quintiles of neighbourhood deprivation (Figure 23, Table A11). The pattern is similar nationally (Table A14).



Prevalence of never smoking in adults, in New Zealand DHB regions

In both the 2006 and 2013 censuses, the prevalence of never smoking in all New Zealand DHB regions was lowest in Tairāwhiti and highest in Auckland, and the SCDHB region was in the middle of all 20 DHBs (Table A12). In absolute terms, the SCDHB region has the fifth lowest total number of people who have never been a regular smoker (24,210 people in 2013) (Figure 24).

Figure 24. Number of people who have never been a regular smoker, in NZ DHB regions (2013)



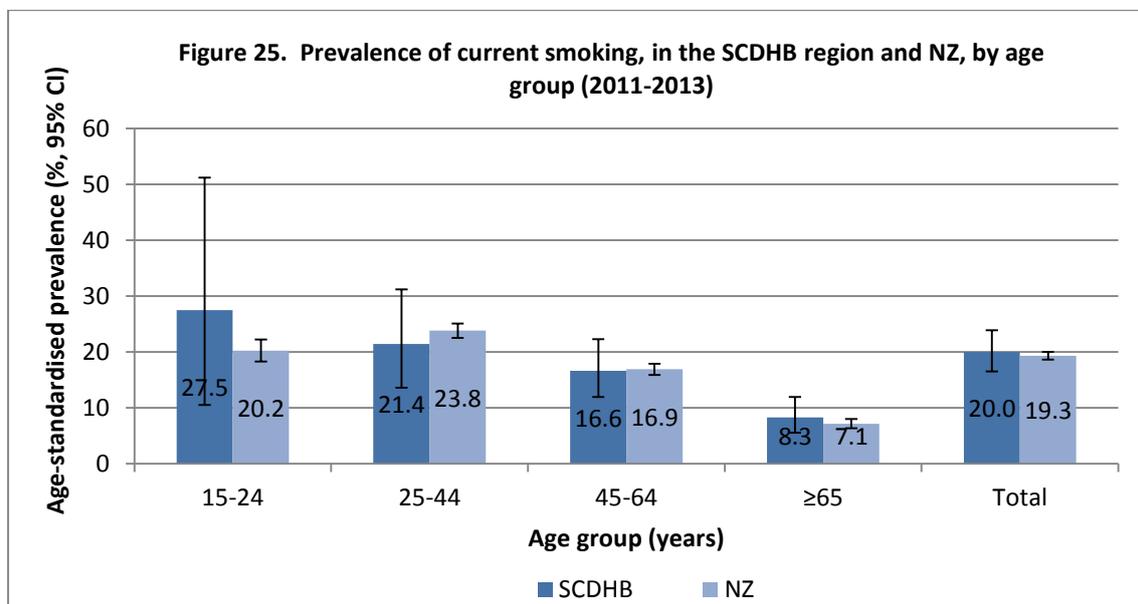
Adults (New Zealand Health Survey)

The following sections present combined data from the 2011/2012 and 2012/2013 (i.e. 2011-2013) NZHS (Ministry of Health, 2014b).

Current smoker

Current smokers were defined as those who reported smoking at least monthly, and had ever smoked more than 100 cigarettes.

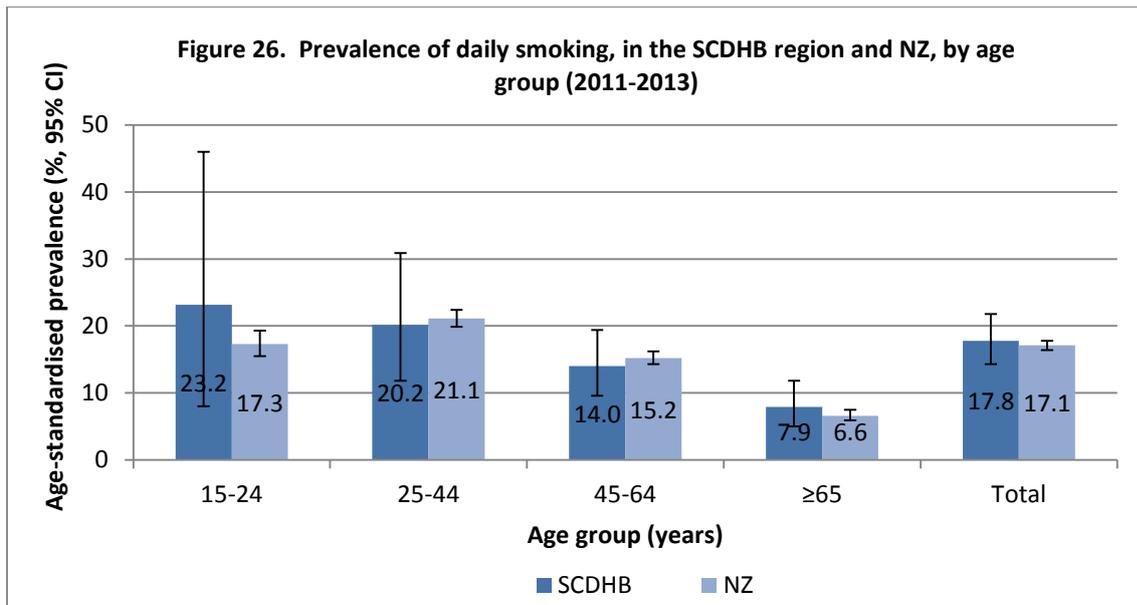
The prevalence of current smoking among adults aged 15 years and over in New Zealand was highest in those aged 15-44 and lowest in those aged 65 years and older (Figure 25, Table A13). In the SCDHB region, the prevalence of current smoking followed a similar trend, however was highly variable for each age group. There was no statistically significant difference in the total prevalence (of all age groups combined) of current smoking between the SCDHB region and New Zealand ($p=0.78$).



Daily smoker

Daily smokers were defined as those who reported smoking daily, and had ever smoked more than 100 cigarettes.

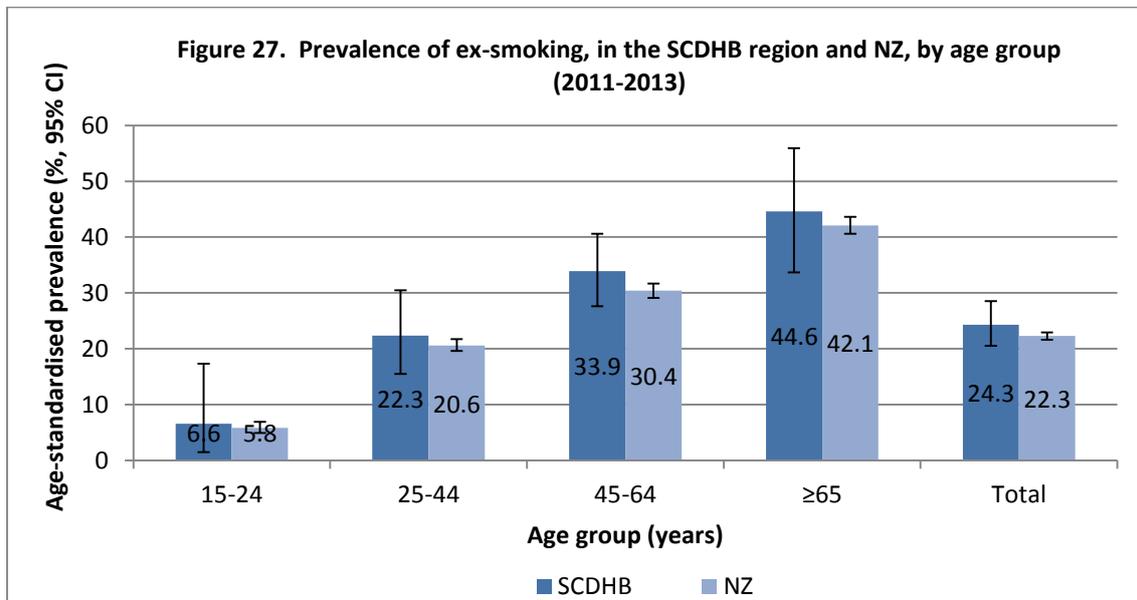
The prevalence of daily smoking among adults aged 15 years and over in New Zealand was highest in those aged 25-44 and lowest in those aged 65 years and older (Figure 26, Table A13). In the SCDHB region, the prevalence of daily smoking followed a somewhat similar trend, however was highly variable for each age group. There was no statistically significant difference in the total prevalence (of all age groups combined) of daily smoking between the SCDHB region and New Zealand ($p=0.77$).



Ex-smoker

Ex-smokers were defined as those who reported that they used to be a smoker, but who do not currently smoke.

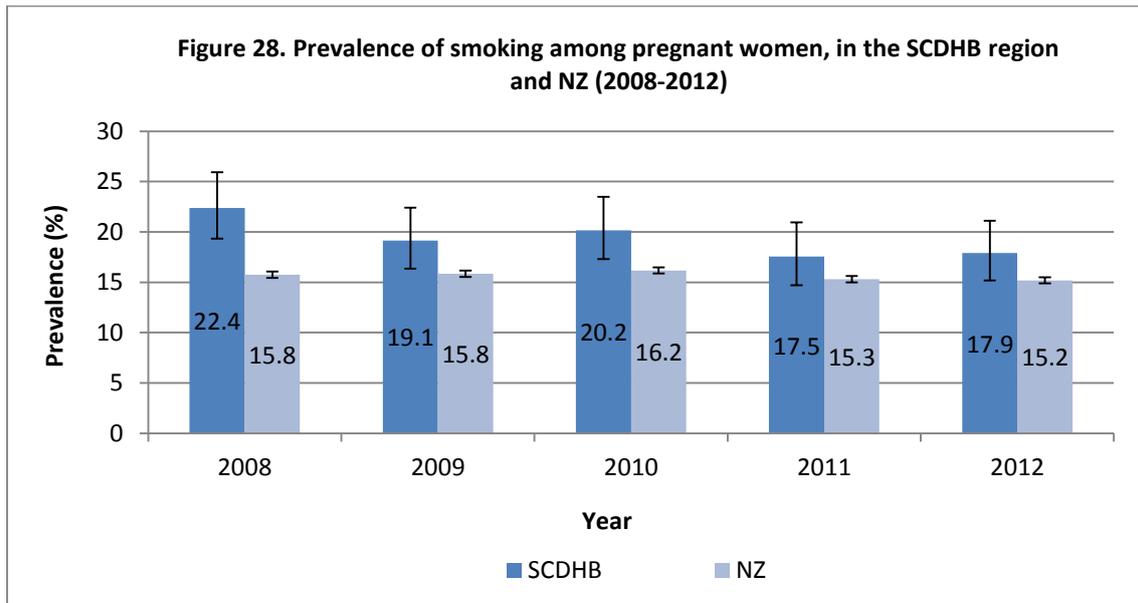
The prevalence of ex-smoking among adults aged 15 years and over in New Zealand was highest in those aged 65 years and older (Figure 26, Table A13). In the SCDHB region, the prevalence of ex-smoking followed a similar trend, however was highly variable for each age group. There was no statistically significant difference in the total prevalence (of all age groups combined) of ex-smoking between the SCDHB region and New Zealand ($p=0.31$).



Pregnant women (National Maternity Collection)

The following section presents data for all women registered with a LMC with a known birth between 2008 and 2012.

In New Zealand between 2008 and 2012, the prevalence of smoking among pregnant women has remained relatively constant (approximately 15-16%) (Figure 28, Table A14). In the SCDHB region, a slight decrease over time might be apparent, however, the prevalence is variable due to small sample size.



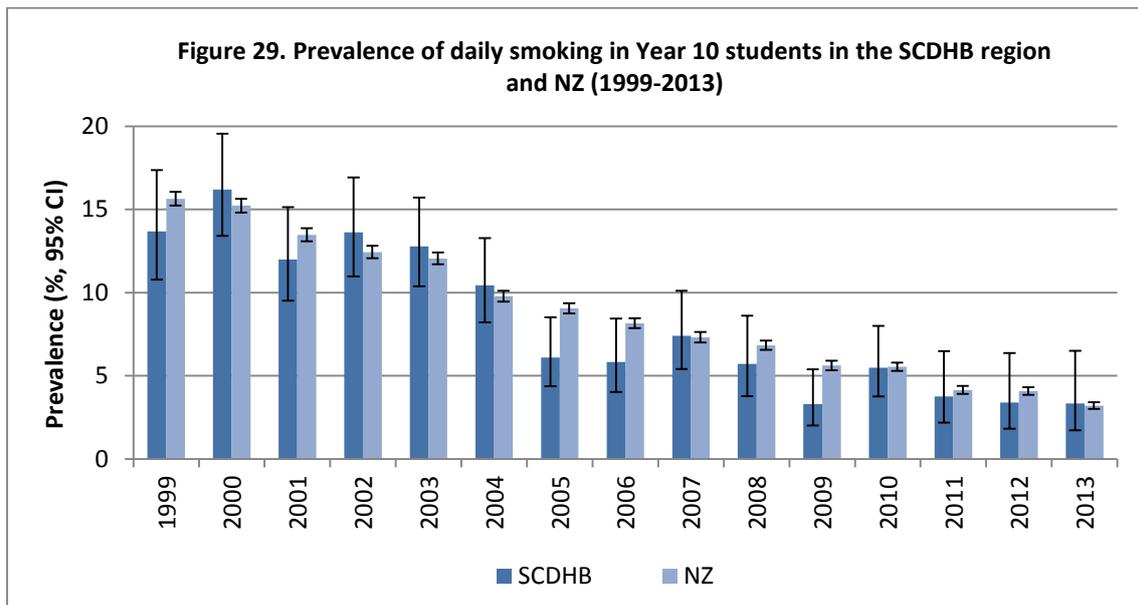
Adolescents (Year 10 Snapshot Survey)

The following sections present data from the annual Year 10 Snapshot Survey conducted over the last 15 years (1999-2013).

Daily smoker

Daily smokers were defined as those students who reported smoking at least once a day.

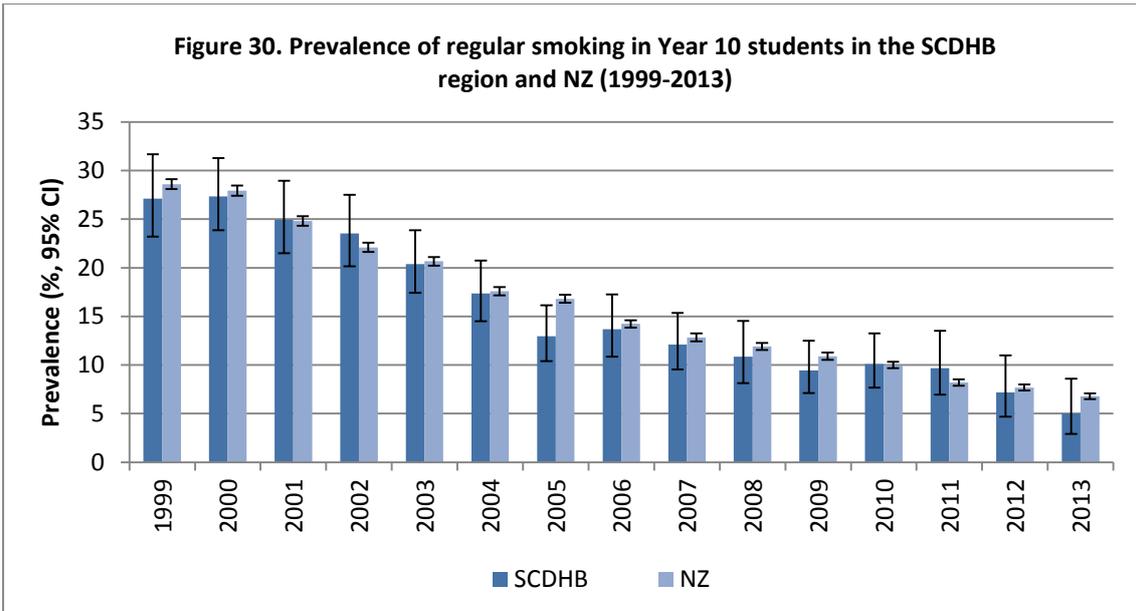
Over the last 15 years, the prevalence of daily smoking among Year 10 students has decreased to approximately 3% in New Zealand (Figure 29, Table A15). In the SCDHB region a similar downward trend is apparent, however the prevalence is variable.



Regular smoker

Regular smokers were defined as those students who reported smoking daily, weekly or monthly.

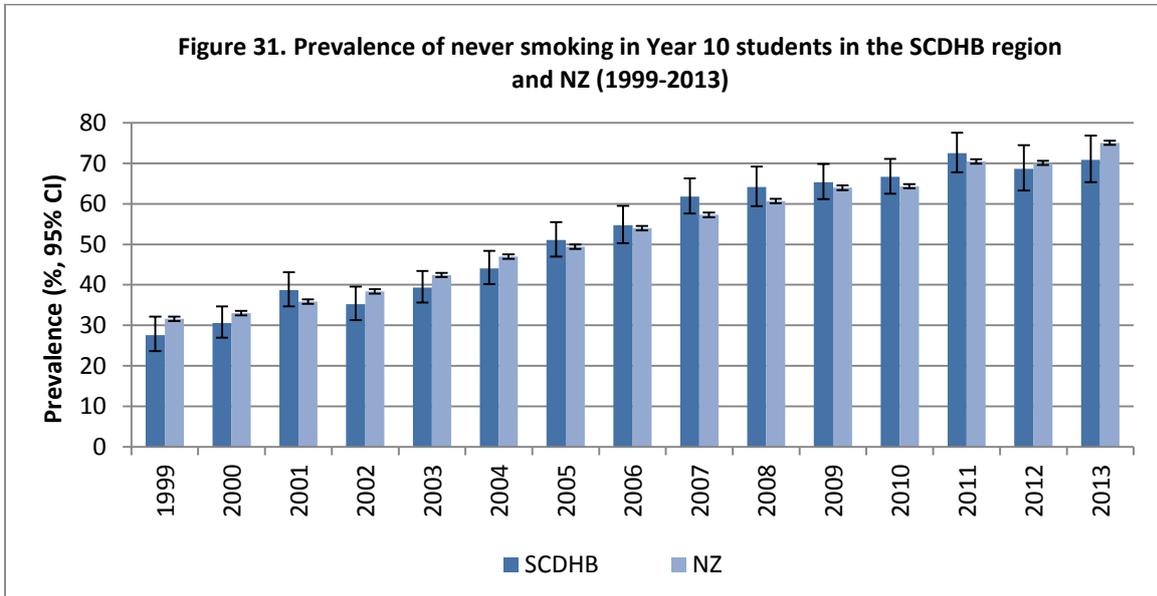
Over the last 15 years, the prevalence of regular smoking in students has decreased to approximately 7% in New Zealand (Figure 30, Table A15). In the SCDHB region a similar downward trend is apparent, however the prevalence is variable.



Never smoker

Never smokers were defined as those students who answered no to the initial question “Have you ever smoked a cigarette, even just a few puffs?”

Over the last 15 years, the percentage of never smoking in students has steadily increased to approximately 75% in New Zealand (Figure 31, Table A15). In the SCDHB region a similar upward trend is apparent, however the prevalence is variable.



Summary

This report presents the most recently published data on the prevalence of smoking in different population groups in the SCDHB region and New Zealand, and examines trends in reported prevalence in recent years.

Smoking prevalence has decreased between 1999 and 2013, and a corresponding increase in the prevalence of ex- and never smoking is apparent. This tends to be the case across population sub-groups based on age and ethnicity. The decrease in prevalence over time has been greater in some particular population groups, including those aged less than 50, and among Māori and Pacific groups. Despite greater decreases in smoking prevalence in some instances among Māori and Pacific people, smoking prevalence is still consistently highest for these ethnic groups.

Smoking prevalence increases with increasing neighbourhood deprivation in the SCDHB region, with the highest prevalence observed in neighbourhoods with the highest deprivation scores.

Although the prevalence of smoking in Year 10 students continues to decrease, smoking prevalence increases rapidly in late adolescence and peaks in those aged 20-29. From here, there is a steady decline in smoking prevalence over the lifespan.

In New Zealand, the prevalence of smoking among pregnant women has remained relatively constant (approximately 15-16%) in recent years. In the SCDHB region, a slight decrease over time might be apparent, however, the prevalence is variable due to small sample size.

There tends to be a slightly higher prevalence of smoking in the SCDHB region than in New Zealand as a whole. This may be due, at least in part, to demographic differences between the SCDHB region and total New Zealand populations. The SCDHB region has a moderate prevalence of smoking compared to other New Zealand DHB regions.

Comparing prevalence estimates between data sources/surveys is difficult, however, the data presented here from various population groups indicate comparable patterns by age, ethnicity, neighbourhood deprivation, and time. For example, compared to prevalence estimates from the censuses, the NZHS appears to overestimate the prevalence of smoking in the SCDHB and New Zealand adult populations. However, data from the NZHS mimics the general age-related trends of smoking prevalence seen in the census data.

This recent evidence shows that progress has been made in decreasing the prevalence of smoking in the SCDHB region, however, there remains a significant number of smokers and persistent inequities in smoking prevalence. These data highlight particular areas of focus for the planning and provision of cessation services, in particular: young people, and Māori and Pacific groups.

Appendix A: Data tables

Adults (New Zealand Census)

Regular smoker

Table A1. Percentage of people in the SCDHB region and New Zealand who are regular smokers^a, by age (2006 and 2013)

Region	Age group (years)	SCDHB % ^b (95% CI), n	
		2006	2013
SCDHB			
	15-19	22.2 (20.9-23.7), 744	11.8 (10.7-13.0), 363
	20-24	39.5 (37.5-41.7), 831	28.3 (26.6-30.2), 693
	25-29	33.9 (32.0-36.0), 732	28.1 (26.3-30.0), 645
	30-34	31.4 (29.7-33.2), 885	23.3 (21.7-25.1), 549
	35-39	29.9 (28.4-31.5), 996	22.8 (21.3-24.4), 651
	40-44	24.9 (23.6-26.3), 954	22.0 (20.7-23.4), 774
	45-49	23.9 (22.6-25.2), 939	19.5 (18.3-20.8), 726
	50-54	19.6 (18.3-20.9), 714	18.2 (17.1-19.4), 738
	55-59	18.1 (16.8-19.4), 651	14.3 (13.2-15.5), 525
	60-64	15.4 (14.1-16.8), 426	12.6 (11.6-13.8), 459
	65-69	11.3 (10.2-12.6), 291	11.1 (10.1-12.3), 348
	70-74	8.8 (7.7-10.1), 189	7.0 (6.1-8.0), 180
	75-79	7.4 (6.3-8.6), 141	4.6 (3.7-5.6), 87
	80-84	4.3 (3.4-5.6), 57	3.8 (2.9-4.9), 57
	≥85	2.4 (1.6-3.5), 24	2.1 (1.4-3.0), 27
	Total	21.2 (20.8-21.6), 8568	16.2 (15.9-16.6), 6816
NZ			
	15-19	18.8 (18.6-18.9), 51168	10.4 (10.3-10.5), 27495
	20-24	29.8 (29.7-30.0), 73176	21.4 (21.2-21.5), 55401
	25-29	28.6 (28.4-28.8), 63117	21.7 (21.6-21.9), 50427
	30-34	26.1 (26.0-26.3), 66294	19.3 (19.2-19.5), 45114
	35-39	25.1 (24.9-25.2), 69501	17.8 (17.7-18.0), 43674
	40-44	23.9 (23.7-24.0), 69006	18.1 (18.0-18.3), 50703
	45-49	22.6 (22.4-22.7), 61026	17.5 (17.4-17.7), 48336
	50-54	19.9 (19.7-20.1), 46251	17.0 (16.9-17.1), 46605
	55-59	17.4 (17.2-17.6), 37383	14.5 (14.4-14.7), 34545
	60-64	15.2 (15.1-15.4), 25137	11.7 (11.6-11.8), 24921
	65-69	11.6 (11.5-11.8), 15840	9.8 (9.7-10.0), 17667
	70-74	8.6 (8.4-8.8), 9168	7.0 (6.9-7.2), 9645
	75-79	6.7 (6.5-6.8), 6108	4.9 (4.8-5.0), 4737
	80-84	4.8 (4.7-5.0), 3126	3.5 (3.4-3.6), 2541
	≥85	3.0 (2.9-3.2), 1479	2.2 (2.1-2.3), 1389
	Total	20.7 (20.6-20.7), 597792	15.1 (15.1-15.1), 463194

^a Regular smokers were defined as those who reported smoking one or more cigarettes per day.

^b Calculated as a percentage of the total people stated (i.e. the denominator excludes "Don't know", unidentifiable responses and those not stated).

CI, confidence interval; n, number of people; NZ, New Zealand; SCDHB, South Canterbury District Health Board.

Table A2. Percentage of people in the SCDHB region and New Zealand who are regular smokers^a, by ethnicity (2006 and 2013)

Region	Ethnicity ^b	Census year % ^c (95% CI), n	
		2006	2013
SCDHB			
	Māori	41.1 (38.9-43.3), 780	32.6 (30.8-34.6), 753
	Pacific	34.9 (29.5-41.4), 87	20.8 (16.8-25.7), 66
	Asian	13.8 (11.1-17.1), 69	8.1 (6.6-10.0), 78
	MELAA	28.6 (19.5-41.9), 18	20.8 (15.4-28.0), 33
	European	21.2 (20.8-21.7), 6897	15.9 (15.5-16.2), 6152
	Other	17.6 (16.7-18.5), 1218	18.4 (16.0-21.0), 168
NZ			
	Māori	42.2 (42.1-42.2), 144483	32.7 (32.6-32.9), 122553
	Pacific	30.3 (30.0-30.5), 46170	23.2 (23.0-23.4), 41139
	Asian	11.1 (10.9-11.2), 28674	7.6 (7.5-7.7), 26988
	MELAA	15.1 (14.7-15.6), 3537	11.2 (10.9-11.6), 3684
	European	19.4 (19.3-19.4), 383457	13.9 (13.8-13.9), 318612
	Other	16.6 (16.5-16.7), 55299	14.4 (14.1-14.7), 7539

^a Regular smokers were defined as those who reported smoking one or more cigarettes per day.

^b People who reported more than one ethnic group are counted once in each group reported. This means that the total number of responses for all ethnic groups can be greater than the total number of people who stated their ethnicities (and therefore, percentages may not sum to 100). "Other" group includes all other ethnic groups except those listed.

^c Calculated as a percentage of the total people stated (i.e. the denominator excludes "Don't know", unidentifiable responses and those not stated).

CI, confidence interval; MELAA, Middle Eastern/Latin American/African; n, number of people; NZ, New Zealand; SCDHB, South Canterbury District Health Board.

Table A3. Percentage of people in the SCDHB region and New Zealand who are regular smokers^a, by neighbourhood deprivation (2006 and 2013)

Region	Neighbourhood deprivation score ^b	Census year % ^c (95% CI), n	
		2006	2013
SCDHB			
	1-2	13.2 (12.5-14.1), 903	9.5 (8.9-10.2), 723
	3-4	17.9 (17.2-18.7), 1710	13.5 (12.8-14.2), 1368
	5-6	22.4 (21.6-23.2), 2379	17.0 (16.3-17.7), 1848
	7-8	25.6 (24.7-26.5), 2403	20.0 (19.2-20.8), 1890
	9-10	29.3 (27.9-30.8), 1164	25.8 (24.4-27.2), 990
NZ			
	1-2	12.0 (11.9-12.1), 68586	7.9 (7.9-8.0), 51663
	3-4	16.0 (15.9-16.0), 95139	11.2 (11.1-11.2), 71016
	5-6	19.9 (19.8-20.0), 117294	14.6 (14.5-14.6), 89958
	7-8	24.0 (23.9-24.1), 139584	18.1 (18.0-18.2), 108927
	9-10	32.6 (32.5-32.8), 175794	25.9 (25.8-26.0), 141135

^a Regular smokers were defined as those who reported smoking one or more cigarettes per day.

^b Neighbourhood deprivation is estimated using NZDep2013, small-area-based relative deprivation index based on socioeconomic variables from the 2013 Census (Atkinson, et al., 2014). NZDep scores can be categorised into tenths (deciles), numbered from 1 (least deprived) to 10 (most deprived), and have been presented here as quintiles.

^c Calculated as a percentage of the total people stated (i.e. the denominator excludes "Don't know", unidentifiable responses and those not stated).

CI, confidence interval; n, number of people; NZ, New Zealand; SCDHB, South Canterbury District Health Board.

Table A4. Percentage of people in each DHB region who are regular smokers^a (2006 and 2013)

DHB region ^b	Census year % ^c (95% CI), n	
	2006	2013
Canterbury	18.8 (18.6-18.9), 65403	14.5 (14.3-14.6), 52212
Counties Manukau	22.1 (22.0-22.3), 63603	15.9 (15.8-16.0), 50571
Waitemata	17.4 (17.3-17.5), 60207	12.0 (11.8-12.1), 45477
Waikato	22.6 (22.5-22.8), 54072	17.7 (17.0-17.3), 43782
Auckland	16.5 (16.4-16.6), 48702	11.2 (11.1-11.4), 36141
Southern	21.0 (20.8-21.2), 45084	15.6 (15.4-15.7), 34668
Capital and Coast	17.3 (17.2-17.5), 34380	12.0 (11.8-12.1), 25362
Bay of Plenty	22.3 (22.1-22.6), 30879	16.5 (16.3-16.7), 24315
Midcentral	22.7 (22.4-22.9), 26332	16.9 (16.7-17.1), 19989
Northland	25.7 (25.4-26.0), 25833	19.1 (18.9-19.4), 19983
Hawke's Bay	24.8 (24.6-25.1), 25932	18.3 (18.0-18.5), 19602
Hutt	22.9 (22.7-23.2), 22536	16.6 (16.4-16.8), 16554
Nelson Marlborough	19.3 (19.1-19.6), 18618	13.9 (13.7-14.1), 14271
Taranaki	22.4 (22.1-22.7), 16602	17.8 (17.5-18.1), 13998
Lakes	27.2 (26.9-27.6), 18258	20.2 (19.9-20.5), 13551
Whanganui	26.3 (25.8-26.7), 11562	20.0 (19.6-20.4), 8610
Tairāwhiti	29.7 (29.2-30.2), 8721	23.7 (23.3-24.2), 6906
South Canterbury	21.2 (20.8-21.6), 8571	16.2 (15.9-16.6), 6816
Wairarapa	23.5 (23.0-24.0), 6627	18.2 (17.7-18.6), 5550
West Coast	25.7 (25.1-26.3), 5826	20.5 (20.0-21.1), 4794
Total New Zealand	20.7 (20.6-20.7), 597792	15.1 (15.1-15.1), 463194

^a Regular smokers were defined as those who reported smoking one or more cigarettes per day.

^b District health board regions are ordered from those with the highest total number of regular smokers in 2013, to those with the lowest total number of regular smokers in 2013.

^c Calculated as a percentage of the total people stated (i.e. the denominator excludes "Don't know", unidentifiable responses and those not stated).

CI, confidence interval; DHB, district health board; n, number of people.

Ex-smoker

Table A5. Percentage of people in the SCDHB region and New Zealand who are ex-smokers^a, by age (2006 and 2013)

Region	Age group (years)	Census year % ^b (95% CI), n	
		2006	2013
SCDHB			
	15-19	4.9 (4.3-5.7), 165	2.4 (1.9-3.0), 75
	20-24	12.7 (11.4-14.2), 267	10.8 (9.6-12.1), 264
	25-29	15.6 (14.1-17.2), 336	18.0 (16.5-19.7), 414
	30-34	19.9 (18.5-21.4), 561	24.6 (22.9-26.4), 579
	35-39	20.5 (19.2-21.9), 684	25.0 (23.5-26.7), 714
	40-44	21.8 (20.5-23.1), 834	24.1 (22.8-25.6), 849
	45-49	23.2 (21.9-24.5), 912	24.9 (23.6-26.4), 927
	50-54	26.3 (24.9-27.8), 960	27.2 (25.8-28.6), 1101
	55-59	31.5 (30.1-33.1), 1137	30.5 (29.0-32.0), 1119
	60-64	35.1 (33.3-36.9), 969	32.5 (31.0-34.0), 1179
	65-69	35.0 (33.2-36.9), 900	37.7 (36.1-39.5), 1179
	70-74	38.4 (36.4-40.5), 825	38.2 (36.4-40.1), 984
	75-79	40.3 (38.1-42.5), 771	36.9 (34.8-39.1), 705
	80-84	34.4 (31.9-37.1), 453	36.7 (34.3-39.2), 552
	≥85	27.5 (24.8-30.4), 276	29.4 (27.0-31.9), 387
	Total	24.8 (24.4-25.2), 10050	26.2 (25.8-26.7), 11034
NZ			
	15-19	4.6 (4.5-4.6), 12411	2.8 (2.8-2.9), 7506
	20-24	11.3 (11.2-11.4), 27771	9.8 (9.7-9.9), 25380
	25-29	16.2 (16.0-16.3), 35676	16.3 (16.1-16.4), 37824
	30-34	18.4 (18.2-18.5), 46596	20.6 (20.4-20.7), 48057
	35-39	19.8 (19.7-20.0), 54882	22.1 (22.0-22.3), 54177
	40-44	20.8 (20.6-20.9), 59973	23.0 (22.9-23.2), 64470
	45-49	23.9 (23.7-24.1), 64569	23.7 (23.5-23.9), 65388
	50-54	26.1 (25.9-26.3), 60609	26.3 (26.2-26.5), 72156
	55-59	29.2 (29.1-29.4), 62817	29.0 (28.9-29.2), 69048
	60-64	32.9 (32.7-33.2), 54372	31.3 (31.1-31.5), 66804
	65-69	33.3 (33.0-33.5), 45282	35.2 (35.0-35.4), 63177
	70-74	36.3 (36.1-36.6), 38826	35.4 (35.1-35.6), 48465
	75-79	38.1 (37.7-38.4), 34932	34.9 (34.6-35.2), 33828
	80-84	37.0 (36.6-37.3), 23931	35.2 (34.9-35.6), 25626
	≥85	29.8 (29.4-30.3), 14655	31.6 (31.2-32.0), 20106
	Total	22.1 (22.0-22.1), 637293	22.9 (22.9-22.9), 702012

^a Ex-smokers were defined as those who reported previously having been a regular smoker (of one or more cigarettes a day).

^b Calculated as a percentage of the total people stated (i.e. the denominator excludes "Don't know", unidentifiable responses and those not stated).

CI, confidence interval; n, number of people; NZ, New Zealand; SCDHB, South Canterbury District Health Board.

Table A6. Percentage of people in the SCDHB region and New Zealand who are ex-smokers^a, by ethnicity (2006 and 2013)

Region	Ethnicity ^b	Census year % ^c (95% CI), n	
		2006	2013
SCDHB			
	Māori	22.7 (20.9-24.7), 432	25.4 (23.6-27.2), 585
	Pacific	14.5 (10.7-19.5), 36	17.9 (14.2-22.7), 57
	Asian	9.0 (6.8-11.9), 45	6.3 (4.9-8.0), 60
	MELAA	19.0 (11.6-31.3), 12	13.2 (8.9-19.6), 21
	European	24.6 (24.1-25.0), 7992	26.8 (26.4-27.2), 10401
	Other	27.8 (26.8-28.9), 1929	26.9 (24.2-29.9), 246
NZ			
	Māori	19.1 (18.9-19.2), 65184	23.1 (22.9-23.2), 86421
	Pacific	10.8 (10.6-10.9), 16470	13.2 (13.1-13.4), 23469
	Asian	7.2 (7.1-7.3), 18765	7.5 (7.4-7.5), 26457
	MELAA	12.8 (12.4-13.2), 2991	14.0 (13.6-14.4), 4599
	European	24.5 (24.5-24.6), 485460	25.9 (25.8-25.9), 594510
	Other	26.5 (26.3-26.6), 88281	27.5 (27.1-27.9), 14424

^a Ex-smokers were defined as those who reported previously having been a regular smoker (of one or more cigarettes a day).

^b People who reported more than one ethnic group are counted once in each group reported. This means that the total number of responses for all ethnic groups can be greater than the total number of people who stated their ethnicities (and therefore, percentages may not sum to 100). "Other" group includes all other ethnic groups except those listed.

^c Calculated as a percentage of the total people stated (i.e. the denominator excludes "Don't know", unidentifiable responses and those not stated).

CI, confidence interval; MELAA, Middle Eastern/Latin American/African; n, number of people; NZ, New Zealand; SCDHB, South Canterbury District Health Board.

Table A7. Percentage of people in the SCDHB region and New Zealand who are ex-smokers^a, by neighbourhood deprivation (2006 and 2013)

Region	Neighbourhood deprivation score ^b	Census year % ^c (95% CI), n	
		2006	2013
SCDHB			
	1-2	24.5 (23.5-25.5), 1671	24.6 (23.7-25.6), 1872
	3-4	24.5 (23.6-25.3), 2334	24.8 (24.0-25.7), 2514
	5-6	25.2 (24.4-26.0), 2676	27.7 (26.8-28.5), 3015
	7-8	25.2 (24.4-26.1), 2367	27.6 (26.7-28.5), 2613
	9-10	24.3 (23.0-25.6), 963	25.7 (24.4-27.1), 987
NZ			
	1-2	23.3 (23.2-23.4), 132936	23.0 (22.9-23.1), 150279
	3-4	23.2 (23.1-23.3), 138240	23.6 (23.5-23.7), 150423
	5-6	22.9 (22.7-23.0), 134760	23.8 (23.7-23.9), 147111
	7-8	22.0 (21.9-22.1), 127683	23.2 (23.1-23.3), 139254
	9-10	18.5 (18.4-18.6), 99864	20.3 (20.2-20.4), 110913

^a Ex-smokers were defined as those who reported previously having been a regular smoker (of one or more cigarettes a day).

^b Neighbourhood deprivation is estimated using NZDep2013, small-area-based relative deprivation index based on socioeconomic variables from the 2013 Census (Atkinson, et al., 2014). NZDep scores can be categorised into tenths (deciles), numbered from 1 (least deprived) to 10 (most deprived), and have been presented here as quintiles.

^c Calculated as a percentage of the total people stated (i.e. the denominator excludes "Don't know", unidentifiable responses and those not stated).

CI, confidence interval; n, number of people; NZ, New Zealand; SCDHB, South Canterbury District Health Board.

Table A8. Percentage of people in each DHB region who are ex-smokers^a (2006 and 2013)

DHB region ^b	Census year % ^c (95% CI), n	
	2006	2013
Waitemata	21.8 (21.6-21.9), 75336	22.0 (21.9-22.1), 83661
Canterbury	22.8 (22.6-22.9), 79392	23.2 (23.0-23.3), 83631
Auckland	18.4 (18.2-18.5), 54282	17.9 (17.7-18.0), 57453
Waikato	22.1 (21.9-22.2), 52743	23.4 (23.2-23.6), 59853
Counties Manukau	17.0 (16.9-17.2), 48939	17.5 (17.4-17.6), 55647
Southern	23.4 (23.2-23.6), 50238	24.7 (24.5-24.8), 54822
Capital and Coast	22.2 (22.0-22.4), 43962	22.3 (22.2-22.5), 47370
Bay of Plenty	25.4 (25.1-25.6), 35079	26.6 (26.4-26.9), 39324
Northland	25.6 (25.3-25.9), 25728	28.1 (27.9-28.4), 29400
Hawke's Bay	24.2 (23.9-24.5), 25284	26.6 (26.4-26.9), 28557
Midcentral	22.2 (21.9-22.4), 25737	24.0 (23.8-24.2), 28413
Nelson Marlborough	26.3 (26.0-26.6), 25326	27.7 (27.4-28.0), 28356
Hutt	22.4 (22.1-22.6), 21954	24.1 (23.8-24.3), 23991
Taranaki	23.5 (23.2-23.8), 17424	24.9 (24.6-25.2), 19560
Lakes	23.8 (23.4-24.1), 15936	25.9 (25.5-26.2), 17388
Whanganui	23.3 (22.9-23.7), 10272	26.4 (26.0-26.9), 11382
South Canterbury	24.8 (24.4-25.2), 10050	26.2 (25.8-26.7), 11034
Wairarapa	26.4 (25.9-26.9), 7464	28.5 (27.9-29.0), 8688
Tairāwhiti	22.3 (21.8-22.8), 6549	24.9 (24.4-25.4), 7236
West Coast	24.3 (23.7-24.8), 5502	26.4 (25.8-27.0), 6162
Total New Zealand	22.1 (22.0-22.1), 637293	22.9 (22.9-22.9), 702015

^a Ex-smokers were defined as those who reported previously having been a regular smoker (of one or more cigarettes a day).

^b District health boards are ordered from those with the highest total number of ex-smokers in 2013, to those with the lowest total number of ex-smokers in 2013.

^c Calculated as a percentage of the total people stated (i.e. the denominator excludes "Don't know", unidentifiable responses and those not stated).

DHB, district health board; CI, confidence interval; n, number of people.

Never been a regular smoker

Table A9. Percentage of people in the SCDHB region and New Zealand who have never been regular smokers^a, by age (2006 and 2013)

Region	Age group (years)	Census year % ^b (95% CI), n	
		2006	2013
SCDHB			
	15-19	72.9 (71.4-74.4), 2349	60.0 (54.3-66.3), 153
	20-24	47.8 (45.7-50.0), 1005	85.8 (84.6-87.0), 2643
	25-29	50.3 (48.3-52.5), 1086	61.0 (59.1-62.9), 1491
	30-34	48.6 (46.8-50.4), 1368	53.7 (51.7-55.7), 1233
	35-39	49.7 (48.0-51.4), 1656	52.1 (50.1-54.2), 1227
	40-44	53.4 (51.9-55.0), 2046	52.3 (50.5-54.1), 1491
	45-49	53.0 (51.5-54.6), 2085	53.9 (52.3-55.6), 1896
	50-54	54.2 (52.6-55.8), 1977	55.5 (54.0-57.1), 2064
	55-59	50.4 (48.8-52.1), 1818	54.7 (53.2-56.3), 2217
	60-64	49.5 (47.7-51.4), 1368	55.2 (53.6-56.9), 2028
	65-69	53.9 (52.0-55.9), 1386	55.0 (53.4-56.6), 1998
	70-74	53.1 (51.0-55.2), 1140	51.2 (49.4-52.9), 1599
	75-79	52.4 (50.2-54.6), 1002	54.8 (52.9-56.8), 1413
	80-84	61.0 (58.5-63.7), 804	59.6 (57.1-62.1), 897
	≥85	69.9 (67.1-72.7), 702	68.3 (65.9-70.9), 900
	Total	54.0 (53.5-54.5), 21879	57.6 (57.1-58.0), 24210
NZ			
	15-19	76.7 (76.5-76.8), 208968	86.8 (86.7-86.9), 229758
	20-24	58.8 (58.7-59.0), 144531	68.9 (68.7-69.0), 178668
	25-29	55.2 (55.0-55.4), 121620	62.0 (61.8-62.2), 143907
	30-34	55.5 (55.3-55.7), 140892	60.1 (59.9-60.3), 140418
	35-39	55.1 (54.9-55.3), 152724	60.1 (59.9-60.2), 147090
	40-44	55.4 (55.2-55.5), 159900	58.9 (58.7-59.0), 164757
	45-49	53.5 (53.3-53.7), 144561	58.8 (58.6-59.0), 162270
	50-54	54.0 (53.8-54.2), 125559	56.7 (56.5-56.9), 155412
	55-59	53.4 (53.1-53.6), 114597	56.4 (56.2-56.6), 134241
	60-64	51.8 (51.6-52.1), 85578	57.0 (56.8-57.2), 121491
	65-69	55.1 (54.8-55.3), 74931	55.0 (54.7-55.2), 98709
	70-74	55.1 (54.8-55.4), 58821	57.6 (57.3-57.9), 78909
	75-79	55.3 (55.0-55.6), 50760	60.2 (59.9-60.5), 58248
	80-84	58.2 (57.8-58.6), 37677	61.3 (60.9-61.7), 44610
	≥85	67.1 (66.7-67.6), 32970	66.2 (65.9-66.6), 42129
	Total	57.2 (57.2-57.3), 1653924	62.0 (61.9-62.0), 1900617

^a People who never smoked regularly were defined as those who reported that they did not currently smoke, or had not previously been a regular smoker (of one or more cigarettes a day).

^b Calculated as a percentage of the total people stated (i.e. the denominator excludes "Don't know", unidentifiable responses and those not stated).

CI, confidence interval; n, number of people; NZ, New Zealand; SCDHB, South Canterbury District Health Board.

Table A10. Percentage of people in the SCDHB region and New Zealand who have never been regular smokers^a, by ethnicity (2006 and 2013)

Region	Ethnicity ^b	Census year % ^c (95% CI), n	
		2006	2013
SCDHB			
	Māori	36.0 (33.9-38.2), 684	42.0 (40.0-44.1), 969
	Pacific	51.8 (46.0-58.4), 129	59.4 (54.3-65.1), 189
	Asian	76.6 (73.0-80.4), 384	85.6 (83.4-87.9), 822
	MELAA	47.6 (36.8-61.5), 30	66.0 (59.1-73.8), 105
	European	54.2 (53.7-54.8), 17634	57.4 (56.9-57.9), 22266
	Other	54.5 (53.4-55.7), 3777	55.1 (52.0-58.4), 504
NZ			
	Māori	38.7 (38.5-38.9), 132351	44.2 (44.0-44.4), 165471
	Pacific	59.0 (58.7-59.2), 89982	63.5 (63.3-63.8), 112524
	Asian	81.7 (81.5-81.8), 211659	84.9 (84.8-85.0), 301224
	MELAA	72.1 (71.5-72.6), 16836	74.8 (74.3-75.3), 24570
	European	56.1 (56.0-56.2), 1109814	60.2 (60.2-60.3), 1383828
	Other	56.9 (56.7-57.1), 189684	58.1 (57.7-58.5), 30444

^a People who never smoked regularly were defined as those who reported that they did not currently smoke, or had not previously been a regular smoker (of one or more cigarettes a day).

^b People who reported more than one ethnic group are counted once in each group reported. This means that the total number of responses for all ethnic groups can be greater than the total number of people who stated their ethnicities (and therefore, percentages may not sum to 100). "Other" group includes all other ethnic groups except those listed.

^c Calculated as a percentage of the total people stated (i.e. the denominator excludes "Don't know", unidentifiable responses and those not stated).

CI, confidence interval; MELAA, Middle Eastern/Latin American/African; n, number of people; NZ, New Zealand; SCDHB, South Canterbury District Health Board.

Table A11. Percentage of people in the SCDHB region and New Zealand who have never been regular smokers^a, by neighbourhood deprivation (2006 and 2013)

Region	Neighbourhood deprivation score ^b	Census year % ^c (95% CI), n	
		2006	2013
SCDHB			
	1-2	62.3 (61.2-63.5), 4251	65.9 (64.8-66.9), 5007
	3-4	57.6 (56.6-58.6), 5499	61.7 (60.7-62.6), 6252
	5-6	52.4 (51.5-53.4), 5568	55.4 (54.5-56.3), 6036
	7-8	49.2 (48.2-50.2), 4617	52.4 (51.4-53.4), 4956
	9-10	46.3 (44.8-47.9), 1839	48.7 (47.1-50.3), 1869
NZ			
	1-2	64.7 (64.6-64.8), 369327	69.1 (68.9-69.2), 450555
	3-4	60.9 (60.7-61.0), 363060	65.2 (65.1-65.3), 415443
	5-6	57.3 (57.1-57.4), 337638	61.7 (61.5-61.8), 381168
	7-8	54.0 (53.9-54.1), 313659	58.7 (58.6-58.8), 352602
	9-10	48.8 (48.7-49.0), 262983	53.8 (53.7-53.9), 293340

^a People who never smoked regularly were defined as those who reported that they did not currently smoke, or had not previously been a regular smoker (of one or more cigarettes a day).

^b Neighbourhood deprivation is estimated using NZDep2013, a small-area-based relative deprivation index based on socioeconomic variables from the 2013 Census (Atkinson, et al., 2014). NZDep scores can be categorised into tenths (deciles), numbered from 1 (least deprived) to 10 (most deprived), and have been presented here as quintiles.

^c Calculated as a percentage of the total people stated (i.e. the denominator excludes "Don't know", unidentifiable responses and those not stated).

CI, confidence interval; n, number of people; NZ, New Zealand; SCDHB, South Canterbury District Health Board.

Table A12. Percentage of people in each DHB region who have never been regular smokers^a (2006 and 2013)

DHB region ^b	Census year % ^c (95% CI), n	
	2006	2013
Waitemata	60.8 (60.7-61.0), 210363	66.1 (65.9-66.2), 251382
Auckland	65.1 (65.0-65.3), 192396	70.9 (70.7-71.0), 227841
Canterbury	58.4 (58.3-58.6), 203601	62.4 (62.2-62.5), 225351
Counties Manukau	60.8 (60.7-61.0), 174879	66.6 (66.5-66.8), 211980
Waikato	55.3 (55.1-55.5), 132051	59.5 (59.3-59.7), 152154
Capital and Coast	60.5 (60.3-60.7), 119847	65.7 (65.5-65.9), 139410
Southern	55.6 (55.4-55.8), 119310	59.8 (59.6-60.0), 132879
Bay of Plenty	52.3 (52.0-52.6), 72294	56.9 (56.6-57.1), 83954
Midcentral	55.2 (54.9-55.4), 64017	59.1 (58.8-59.4), 70023
Nelson Marlborough	54.4 (54.0-54.7), 52341	58.4 (58.1-58.7), 59805
Hutt	54.7 (54.4-55.0), 53724	59.3 (59.0-59.6), 59148
Hawke's Bay	51.0 (50.7-51.3), 53289	55.1 (54.8-55.4), 59142
Northland	48.7 (48.4-49.0), 49014	52.7 (52.4-53.0), 55119
Taranaki	54.1 (53.7-54.5), 40089	57.4 (57.0-57.7), 45129
Lakes	49.0 (48.6-49.4), 32868	53.9 (53.6-54.3), 36246
South Canterbury	54.0 (53.5-54.5), 21879	57.6 (57.1-58.0), 24210
Whanganui	50.4 (49.9-50.9), 22197	53.6 (53.1-54.0), 23055
Wairarapa	50.1 (49.5-50.7), 14157	53.4 (52.8-53.9), 16302
Tairāwhiti	48.0 (47.5-48.6), 14118	51.4 (50.8-52.0), 14995
West Coast	50.0 (49.4-50.7), 11346	53.1 (52.4-53.7), 12396
Total New Zealand	57.2 (57.2-57.3), 1653924	62.0 (61.9-62.0), 1900617

^a People who have never smoked regularly were defined as those who reported that they did not currently smoke, or had not previously been a regular smoker (of one or more cigarettes a day).

^b District health boards are ordered from those with the highest total number of people who never smoked regularly in 2013, to those with the lowest total number.

^c Calculated as a percentage of the total people stated (i.e. the denominator excludes "Don't know", unidentifiable responses and those not stated).

DHB, district health board; CI, confidence interval; n, number of people.

Adults (New Zealand Health Survey)

Table A13. Percentage of people in the SCDHB region and New Zealand who are current, daily and ex-smokers, by age (2011-2013 survey years)

Region	Age group (years)	Smoking status % ^a (95% CI)		
		Current smoker ^b	Daily smoker ^c	Ex-smoker ^d
SCDHB				
	15-24	27.5 (10.5-51.2)	23.2 (8.0-46.0)	6.6 (1.5-17.3)
	25-44	21.4 (13.6-31.2)	20.2 (11.8-30.9)	22.3 (15.5-30.5)
	45-64	16.6 (11.9-22.3)	14.0 (9.6-19.4)	33.9 (27.6-40.6)
	≥65	8.3 (5.5-11.9)	7.9 (5.0-11.8)	44.6 (33.7-55.9)
	Total	20.0 (16.5-23.9)	17.8 (14.3-21.8)	24.3 (20.5-28.5)
NZ				
	15-24	20.2 (18.3-22.2)	17.3 (15.5-19.3)	5.8 (4.9-6.9)
	25-44	23.8 (22.5-25.1)	21.1 (19.9-22.4)	20.6 (19.6-21.7)
	45-64	16.9 (15.9-17.9)	15.2 (14.3-16.2)	30.4 (29.1-31.7)
	≥65	7.1 (6.3-8.0)	6.6 (5.9-7.5)	42.1 (40.6-43.6)
	Total	19.3 (18.6-20.0)	17.1 (16.4-17.8)	22.3 (21.6-22.9)

^a Age-standardised prevalence and 95% confidence intervals calculated according to survey methodology (Ministry of Health, 2013)

^b Current smokers were defined as those who reported smoking at least monthly, and has ever smoked more than 100 cigarettes.

^c Daily smokers were defined as those who reported smoking daily, and has ever smoked more than 100 cigarettes.

^d Ex-smokers were defined as those who reported that they used to be a smoker, but don't currently smoke.

CI, confidence interval; NZ, New Zealand; SCDHB, South Canterbury District Health Board.

Pregnant women (National Maternity Collection)

Table A14. Percentage of pregnant women in the SCDHB region and New Zealand who are smokers^a (2008-2012)

Year	Region % ^b (95% CI), n	
	SCDHB	NZ
2008	22.4 (19.3-25.9), 137	15.8 (15.5-16.1), 8369
2009	19.1 (16.3-22.4), 124	15.9 (15.5-16.2), 8526
2010	20.2 (17.3-23.5), 131	16.2 (15.9-16.5), 8920
2011	17.5 (14.7-21.0), 100	15.3 (15.0-15.6), 8332
2012	17.9 (15.2-21.1), 116	15.2 (14.9-15.5), 8390

^a Smokers were defined as pregnant women who identified as a smoker at the time of registration with a Lead Maternity Carer.

^b Calculated as a percentage of the total people stated (i.e. excludes missing responses).

CI, confidence interval; n, number of people; NZ, New Zealand; SCDHB, South Canterbury District Health Board.

Adolescents (Year 10 Snapshot Survey)

Table A15. Percentage of Year 10 students in the SCDHB region and New Zealand who are daily smokers, regular smokers, and who have never been a smoker (1999-2013)

Region	Year	Smoking status % ^a (95% CI), n		
		Daily smoker ^b	Regular smoker ^c	Never smoker ^d
SCDHB				
	1999	13.7 (10.8-17.4), 58	27.1 (23.2-31.7), 115	27.6 (23.7-32.2), 177
	2000	16.2 (13.4-19.5), 90	27.3 (23.9-31.3), 152	30.6 (27.0-34.6), 170
	2001	12.0 (9.5-15.1), 62	25.0 (21.5-29.0), 129	38.7 (34.7-43.1), 200
	2002	13.6 (11.0-16.9), 70	23.5 (20.2-27.5), 121	35.2 (31.3-39.6), 181
	2003	12.8 (10.4-15.7), 77	20.4 (17.4-23.9), 123	39.3 (35.6-43.4), 237
	2004	10.4 (8.2-13.3), 59	17.3 (14.5-20.8), 98	44.1 (40.2-48.4), 249
	2005	6.1 (4.4-8.5), 32	13.0 (10.4-16.2), 68	51.0 (46.9-55.5), 268
	2006	5.8 (4.0-8.4), 26	13.7 (10.8-17.3), 61	54.7 (50.3-59.5), 244
	2007	7.4 (5.4-10.1), 36	12.1 (9.5-15.4), 59	61.8 (57.6-66.3), 301
	2008	5.7 (3.8-8.6), 21	10.9 (8.1-14.5), 40	64.1 (59.4-69.2), 236
	2009	3.3 (2.0-5.4), 15	9.4 (7.1-12.5), 43	65.4 (61.1-69.9), 298
	2010	5.5 (3.8-8.0), 25	10.1 (7.7-13.2), 46	66.7 (62.5-71.1), 304
	2011	3.8 (2.2-6.5), 12	9.7 (7.0-13.5), 31	72.5 (67.8-77.6), 232
	2012	3.4 (1.8-6.4), 9	7.2 (4.7-11.0), 19	68.7 (63.3-74.5), 182
	2013	3.3 (1.7-6.5), 8	5.0 (2.9-8.6), 12	70.8 (65.3-76.8), 170
NZ				
	1999	15.6 (15.2-16.1), 4520	28.6 (28.1-29.1), 8265	31.6 (31.1-32.1), 9129
	2000	15.2 (14.8-15.6), 4446	27.9 (27.4-28.5), 8157	33.0 (32.5-33.6), 9644
	2001	13.5 (13.1-13.9), 3936	24.8 (24.3-25.3), 7247	35.9 (35.3-36.4), 10482
	2002	12.4 (12.1-12.8), 3629	22.1 (21.6-22.6), 6449	38.4 (37.8-38.9), 11193
	2003	12.1 (11.7-12.4), 3943	20.7 (20.2-21.1), 6759	42.4 (41.9-43.0), 13879
	2004	9.8 (9.5-10.1), 3092	17.6 (17.2-18.0), 5565	47.0 (46.4-47.5), 14859
	2005	9.0 (8.7-9.4), 2945	16.8 (16.4-17.2), 5472	49.4 (48.9-49.9), 16085
	2006	8.2 (7.9-8.4), 2675	14.2 (13.9-14.6), 4671	54.0 (53.4-54.5), 17720
	2007	7.3 (7.0-7.6), 1898	12.8 (12.4-13.3), 3335	57.3 (56.7-57.9), 14880
	2008	6.8 (6.6-7.1), 2109	11.9 (11.5-12.3), 3674	60.7 (60.2-61.3), 18744
	2009	5.6 (5.3-5.9), 1445	10.9 (10.5-11.3), 2806	64.0 (63.4-64.6), 16481
	2010	5.5 (5.3-5.8), 1803	10.0 (9.7-10.3), 3256	64.3 (63.8-64.9), 20981
	2011	4.1 (3.9-4.4), 1104	8.2 (7.9-8.5), 2184	70.4 (69.9-71.0), 18769
	2012	4.1 (3.9-4.3), 1159	7.7 (7.4-8.0), 2185	70.1 (69.6-70.6), 19941
	2013	3.2 (3.0-3.4), 886	6.8 (6.5-7.1), 1878	75.1 (74.6-75.6), 20956

^a Calculated as a percentage of the total number of people who responded to the question (i.e. the denominator excludes missing responses).

^b Daily smokers were defined as those students who reported that they smoke at least once a day.

^c Regular smokers were defined as those students who reported that they smoke daily, weekly or monthly.

^d Never smokers were defined as those students who reported that they had not ever smoked a cigarette.

CI, confidence interval; n, number of people; NZ, New Zealand; in the SCDHB region and New Zealand.

Appendix B: Data maps

Regular smoker

Figure B1. Proportion of regular smokers in the SCDHB region (2013)

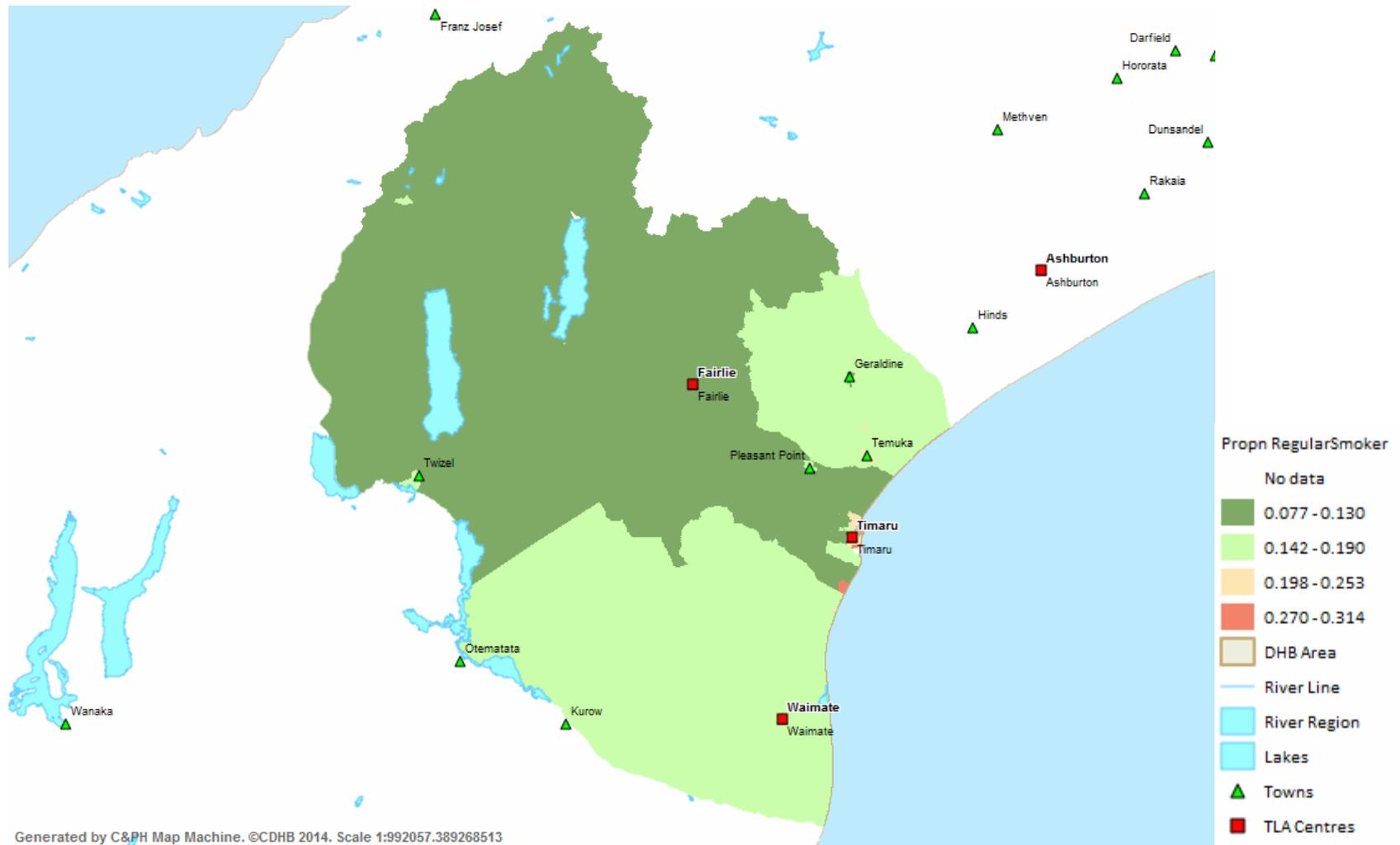
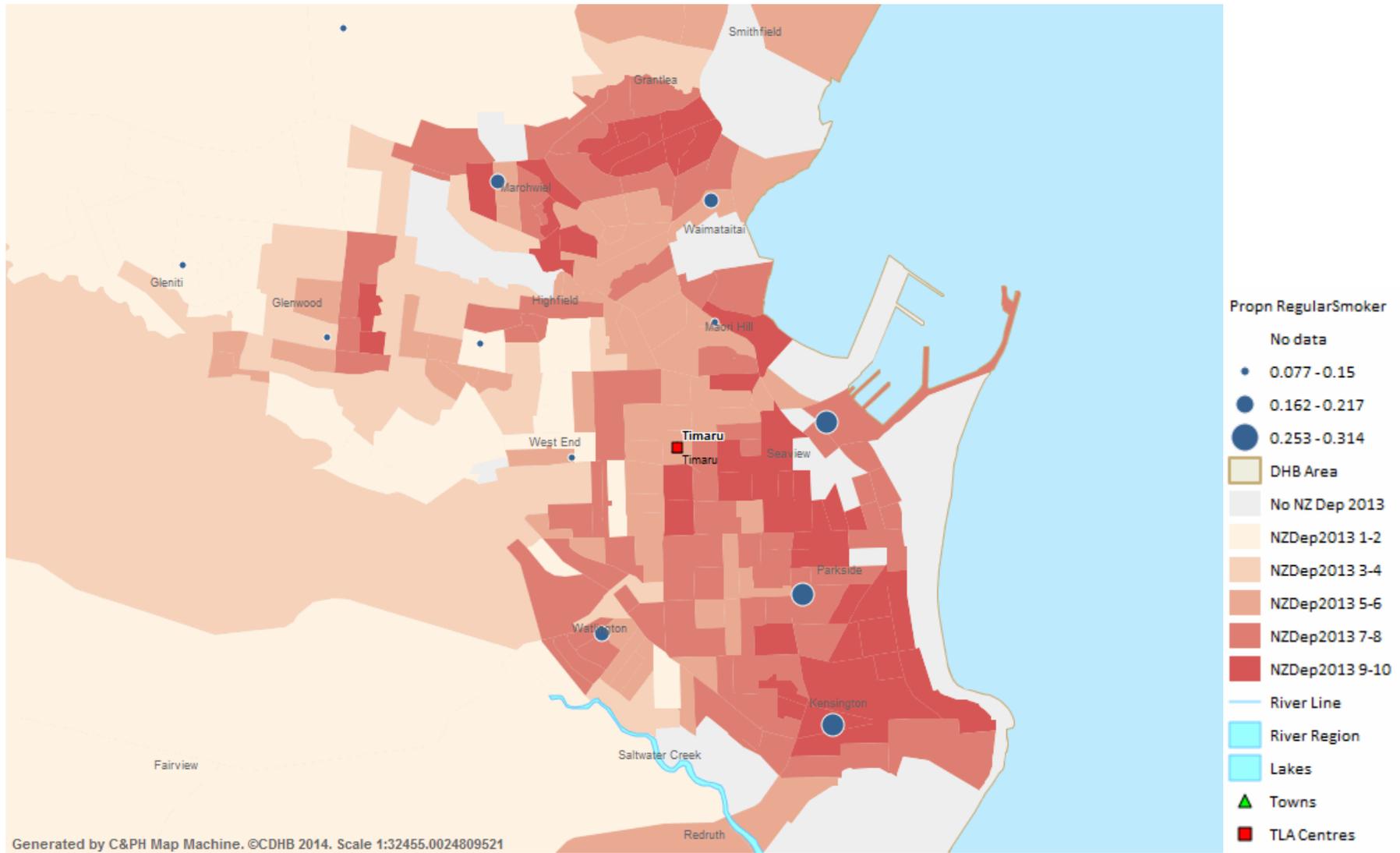


Figure B2. Proportion of regular smokers in the Timaru area, by neighbourhood deprivation (2013)

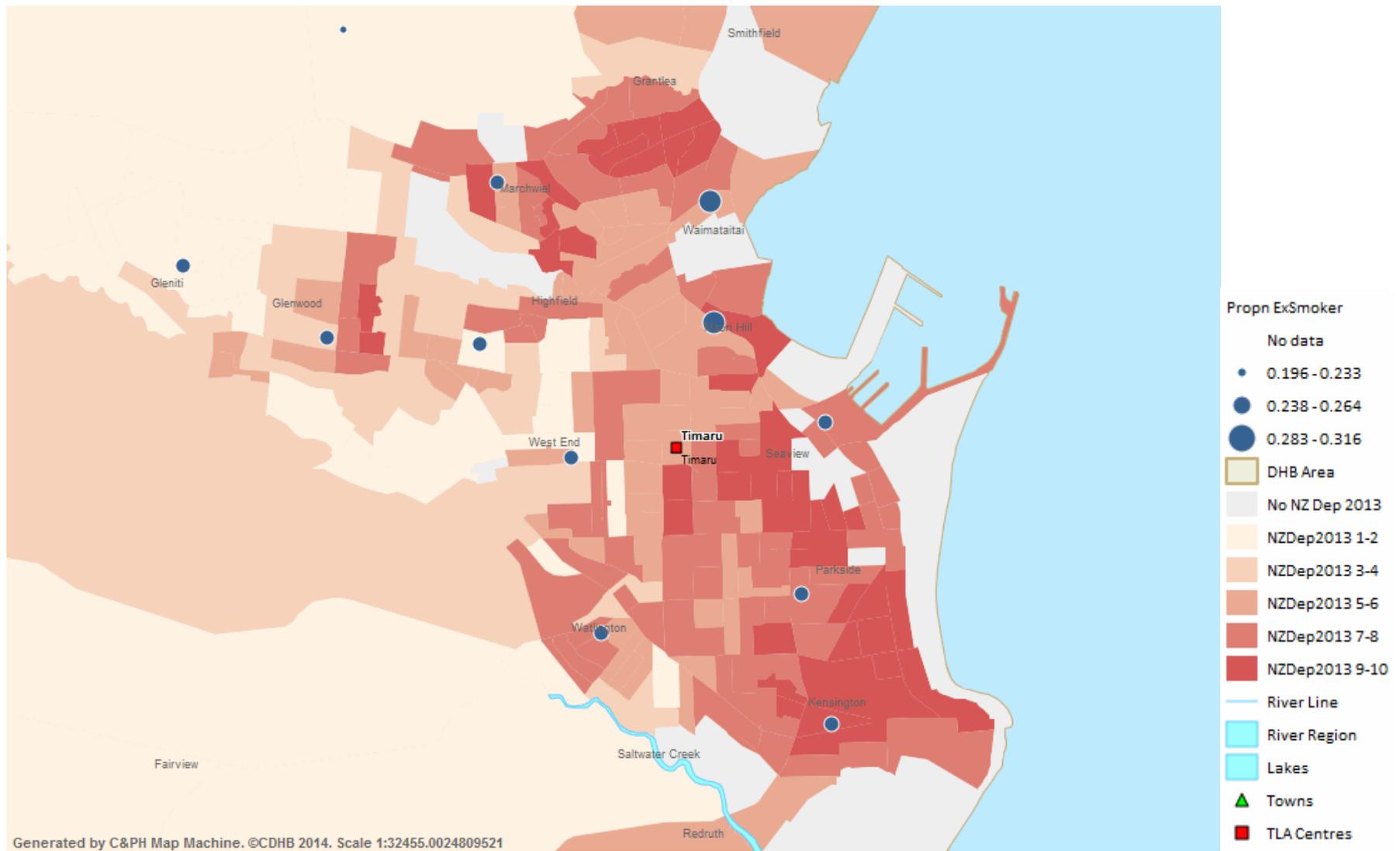


Ex-smoker

Figure B3. Proportion of ex-smokers in the SCDHB region (2013)



Figure B4. Proportion of ex-smokers in the Timaru area, by neighbourhood deprivation (2013)



References

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