



COLLEGE  
OF HEALTH  
TE KURA HAUORA TANGATA



# Supplementary Report:

## Analyses of New Zealand Health Survey and B4 School Check data by Healthy Families NZ location

To accompany the Interim Evaluation Report: Healthy Families NZ

# July 2017

Massey University Healthy Families NZ Evaluation Team

# Supplementary Report

This report presents detailed findings from analyses of the New Zealand Health Survey (NZHS) for adults and children, and the B4 School Check for four-year-old children, comparing each Healthy Families NZ location with the overall New Zealand population.

## New Zealand Health Survey results

Detailed findings are presented from analyses of the New Zealand Health Survey for adults and children, and the B4 School Check for four-year-old children, comparing each Healthy Families NZ location with the overall New Zealand population.

## How are the results presented?

For each New Zealand Health Survey indicator, crude (or unadjusted) prevalence rates are presented for each of the Healthy Family NZ locations, and for total New Zealand. Unadjusted results are presented to show the actual health status of the population in each Healthy Families NZ location and for all New Zealand. The results take into account survey weights and are based on four years of pooled data from the 2011/12 - 2014/15 NZHS. The annual data collection runs from July to June.

Healthy Families NZ location results are compared in the text to the total New Zealand result using unadjusted percentages to describe differences in the health burden/experience between the location and total New Zealand.

A full set of results including age-adjusted results and confidence intervals for all results can be found in the results tables immediately following the graphs and discussion. Age-standardisation adjusts for differences in the age distribution of the populations being compared. Age is an important determinant of health, so populations with different age structures may have different results due simply to these demographic age differences.

The results presented in this report have 95% confidence intervals. A confidence interval is a range around an estimate that tells us how precise it is. It indicates the level of uncertainty in a measurement that occurs due to taking a sample. If we selected many samples, the 95% confidence interval would enclose the 'true' value for the population 95% of the time. The sample size of the

group influences the size of the confidence interval. When the sample size is small, the confidence interval is typically wide and the estimate is less precise (Ministry of Health, 2012)<sup>1</sup>.

The difference between two groups is statistically significant if their confidence intervals do not overlap. Sometimes, even when two confidence intervals overlap, the difference between these groups can be statistically significant (Ministry of Health, 2012). The text only reports differences where the confidence intervals do not overlap.

More detailed explanations of what was measured to give the results presented here can be found in the glossary (see Appendix 6). Further information about the NZHS can be found

<http://www.health.govt.nz/publication/annual-update-key-results-2014-15-new-zealand-health-survey>

## **New Zealand Health Survey: Adults**

### ***Additional methodological notes***

Table 5 shows the number of adults from each Healthy Families NZ location who answered the NZHS during the four-year period 2011/12 to 2014/15. The number of adults for whom data was available ranged from 1,958 in Manukau to 502 in Spreydon-Heathcote.

Unadjusted results were suppressed when the number of survey respondents with a particular risk factor or condition was less than five.

Age-standardisation was done using the direct method and the World Health Organisation (WHO) standard population. Age-standardised results with less than 20 people with a particular risk factor or condition were considered unreliable and suppressed

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<sup>1</sup> Ministry of Health. 2012. The Health of New Zealand Adults 2011/12: Key findings of the New Zealand Health Survey. Wellington: Ministry of Health

(Australian Institute of Health and Welfare, 2011)<sup>2</sup>. Adjusted results were also checked to ensure that the total respondents in each age group was greater than 30.

Results with a relative standard error over 50% have not been presented as these results are considered too unreliable for use, while results with a relative standard error between 30% and 50% should be used with caution (Ministry of Health, 2016)<sup>3</sup>.

**Table 5. Number of adults in survey, Healthy Families NZ location, 2011/12 – 2014/15**

Healthy Families NZ Locations	Number of Adults Surveyed
Far North	1188
Waitakere	1415
Manukau	1958
Manurewa-Papakura	1229
East Cape	1310
Rotorua	1373
Whanganui Rangitikei Ruapehu	1232
Lower Hutt	1511
Spreydon-Heathcote	502
Invercargill	983
Rest of NZ	39710
<b>New Zealand</b>	<b>52411</b>

N.B. Missing data (e.g. who either refused to say, or didn't know) are excluded

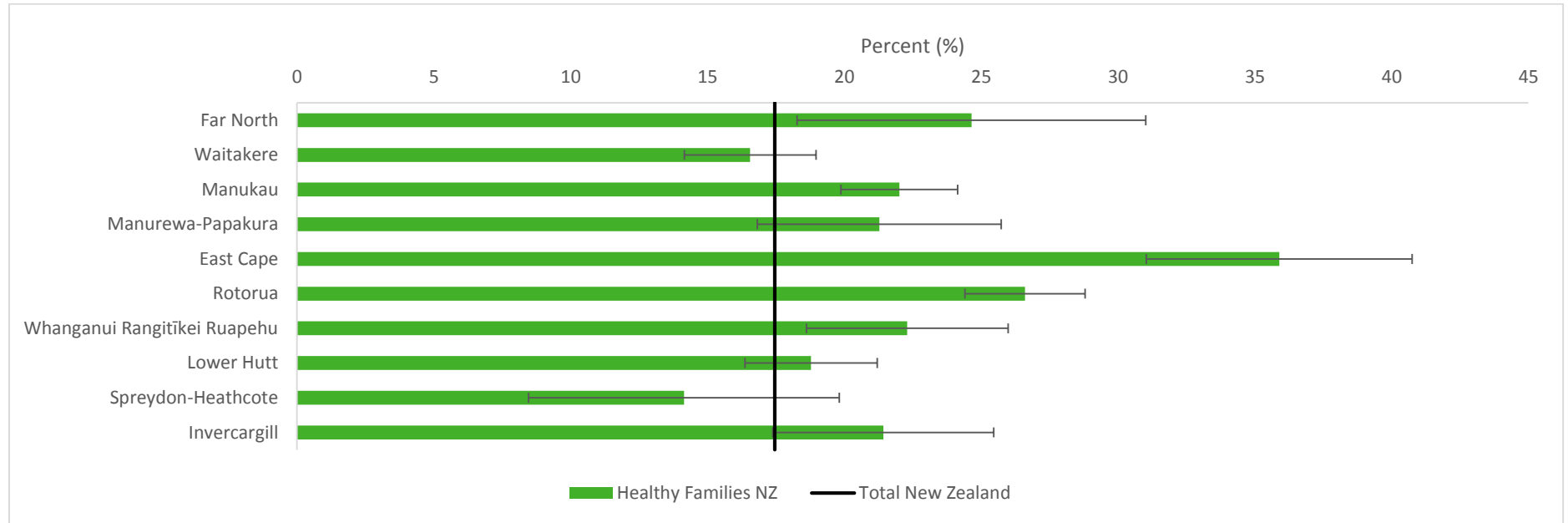
<sup>2</sup> Australian Institute of Health and Welfare. (2011). Principles on the use of direct age-standardisation in administrative data collections: for measuring the gap between Indigenous and non-Indigenous Australians. Canberra: Australian Institute of Health and Welfare

<sup>3</sup> Ministry of Health. (2016). 2014/15 (Year 4) New Zealand Health Survey: Confidentialised Unit Record File (CURF) User Document V1. Wellington: Ministry of Health

**Findings**

Current smoking and hazardous drinking

**Figure 2. Current smokers, among adults over 15 years, NZHS 2011/12 – 2014/15, unadjusted**



Adults from five of the locations are **more** likely to be current smokers than total New Zealand adults, namely Far North, Manukau, East Cape, Rotorua, and Whanganui Rangitīkei Ruapehu.

Adults from the remaining five locations have similar rates of current smoking to total New Zealand adults.

**Current smokers**

**Adult - New Zealand Health Survey, 2011/12 - 2014/15**

	Number	Total Respondents	Unadjusted Percent <sup>‡</sup>	Unadjusted 95% Confidence Interval		Adjusted Percent <sup>‡</sup>	Adjusted 95% Confidence Interval	
Far North	327	1185	24.6	18.3	31.0	29.1	22.7	35.4
Waitakere	283	1412	16.6	14.2	19.0	17.2	14.8	19.6
Manukau	508	1954	22.0	19.9	24.1	22.1	20.0	24.3
Manurewa-Papakura	330	1225	21.3	16.8	25.7	22.1	17.7	26.6
East Cape	471	1309	35.9	31.0	40.8	38.7	33.8	43.6
Rotorua	411	1368	26.6	24.4	28.8	28.3	26.1	30.5
Whanganui Rangitikei Ruapehu	316	1229	22.3	18.6	26.0	25.7	22.0	29.4
Lower Hutt	359	1498	18.8	16.4	21.2	19.8	17.4	22.2
Spreydon-Heathcote	89	500	14.1	8.5	19.8	15.4	9.7	21.0
Invercargill	231	982	21.4	17.4	25.5	24.0	19.9	28.0
NZ	11317	52247	17.5	17.0	17.9	18.8	18.3	19.3

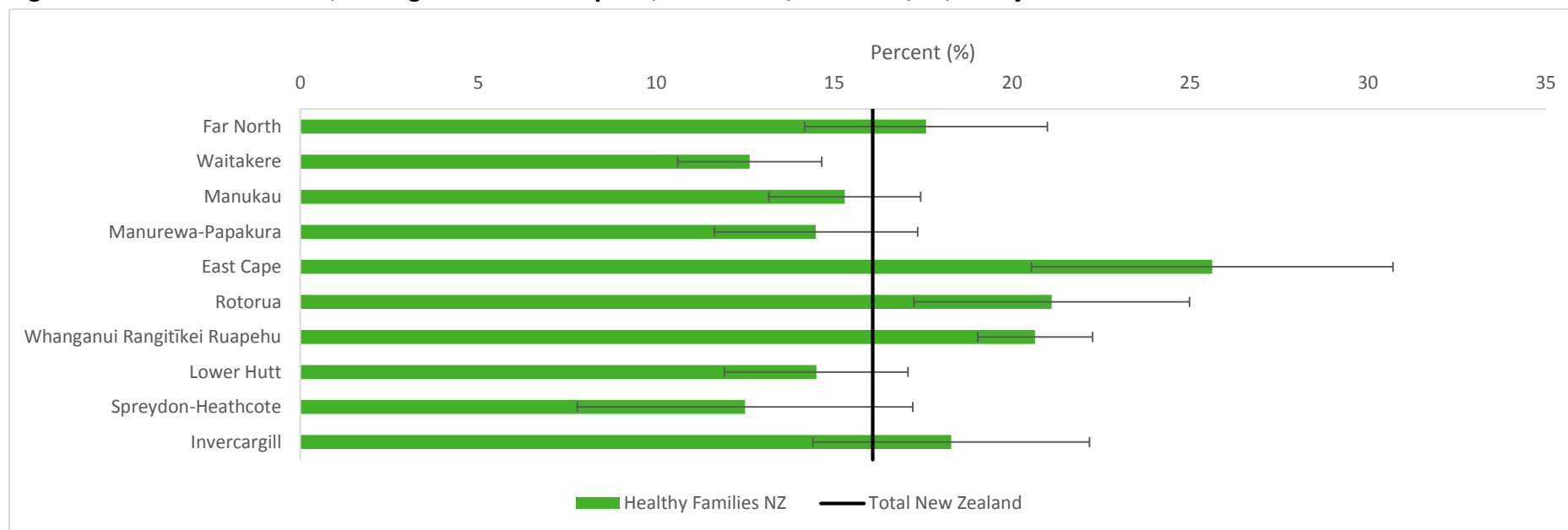
N.B. Missing data (e.g. who either refused to say, or didn't know) are excluded

N.B. Unadjusted results with counts <5, Adjusted results with counts <20, and Results with Relative Standard Errors >50% are suppressed

<sup>‡</sup> Calculation takes into account survey weights

\* Results with Relative Standard Errors between 30%-50% should be used with caution

**Figure 3. Hazardous Drinkers, among adults over 15 years, NZHS 2011/12 – 2014/15, unadjusted**



Adults from one of the locations are **less** likely to drink alcohol in a manner that is hazardous to their health than total New Zealand adults, namely Waitakere.

Adults from three of the locations are **more** likely to drink alcohol in a manner that is hazardous to their health than total New Zealand adults, namely East Cape, Rotorua, and Whanganui Rangitīkei Ruapehu.

Adults from the remaining six locations have similar rates of drinking alcohol in a manner that is hazardous to their health to total New Zealand adults.



**Hazardous drinkers**

**Adult - New Zealand Health Survey, 2011/12 - 2014/15**

	Number	Total Respondents	Unadjusted Percent <sup>‡</sup>	Unadjusted 95% Confidence Interval		Adjusted Percent <sup>‡</sup>	Adjusted 95% Confidence Interval	
Far North	206	1159	17.6	14.2	21.0	22.2	18.8	25.6
Waitakere	193	1405	12.6	10.6	14.7	13.7	11.7	15.7
Manukau	299	1915	15.3	13.2	17.4	15.2	13.1	17.3
Manurewa-Papakura	180	1203	14.5	11.6	17.3	15.2	12.3	18.0
East Cape	317	1307	25.6	20.5	30.7	29.0	23.9	34.1
Rotorua	257	1348	21.1	17.2	25.0	23.2	19.3	27.1
Whanganui Rangitikei Ruapehu	243	1224	20.6	19.0	22.3	24.6	23.0	26.3
Lower Hutt	227	1480	14.5	11.9	17.1	15.6	13.1	18.2
Spreydon-Heathcote	62	498	12.5	7.8	17.2	14.5	9.8	19.3
Invercargill	158	973	18.3	14.4	22.2	21.9	18.0	25.8
NZ	8425	51780	16.1	15.5	16.7	18.0	17.4	18.6

N.B. Missing data (e.g. who either refused to say, or didn't know) are excluded

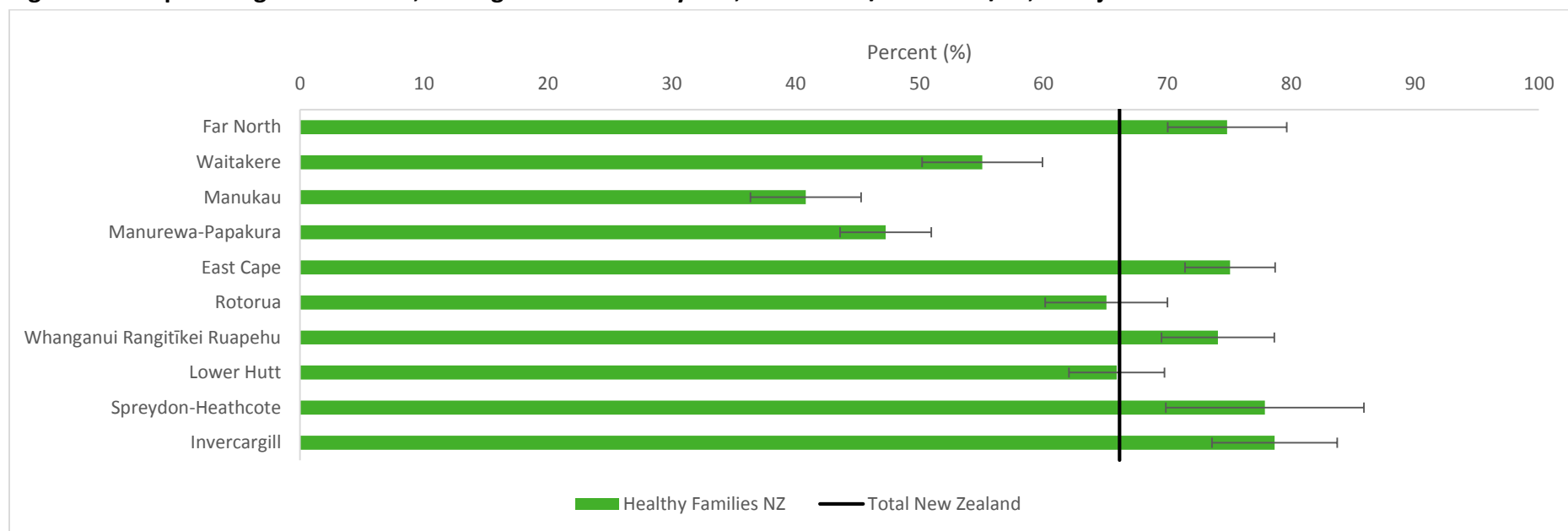
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<sup>‡</sup> Calculation takes into account survey weights

\* Results with Relative Standard Errors between 30%-50% should be used with caution

## Adequate vegetable and fruit intake

**Figure 4. Adequate vegetable intake, among adults over 15 years, NZHS 2011/12 – 2014/15, unadjusted**



Adults from five of the locations are **more** likely to eat at least three servings of vegetables each day than total New Zealand adults, namely Far North, East Cape, Whanganui Rangitikei Ruapehu, Spreydon-Heathcote, and Invercargill.

Adults from three of the locations are **less** likely to eat at least three servings of vegetables each day than total New Zealand adults, namely Waitakere, Manukau, and Manurewa-Papakura.

Adults from the remaining two locations have similar rates of eating at least three servings of vegetables each day to total New Zealand adults.

**Adequate vegetable intake**

**Adult - New Zealand Health Survey, 2011/12 - 2014/15**

	Number	Total Respondents	Unadjusted Percent <sup>‡</sup>	Unadjusted 95% Confidence Interval		Adjusted Percent <sup>‡</sup>	Adjusted 95% Confidence Interval	
Far North	863	1186	74.8	70.0	79.6	71.2	66.4	76.0
Waitakere	758	1415	55.1	50.2	59.9	54.4	49.5	59.3
Manukau	814	1955	40.8	36.3	45.3	41.0	36.6	45.5
Manurewa-Papakura	590	1226	47.3	43.6	50.9	46.2	42.5	49.9
East Cape	940	1310	75.1	71.4	78.7	73.8	70.2	77.4
Rotorua	890	1373	65.1	60.2	70.0	64.0	59.1	69.0
Whanganui Rangitikei Ruapehu	895	1231	74.1	69.5	78.6	72.1	67.5	76.6
Lower Hutt	962	1507	65.9	62.1	69.8	65.2	61.3	69.0
Spreydon-Heathcote	387	502	77.9	69.9	85.9	76.1	68.1	84.1
Invercargill	761	983	78.7	73.6	83.7	76.6	71.6	81.7
NZ	34480	52349	66.1	65.0	67.3	64.5	63.3	65.7

N.B. Missing data (e.g. who either refused to say, or didn't know) are excluded

N.B. Unadjusted results with counts <5, Adjusted results with counts <20, and Results with Relative Standard Errors >50% are suppressed

<sup>‡</sup> Calculation takes into account survey weights

\* Results with Relative Standard Errors between 30%-50% should be used with caution

**Figure 5. Adequate fruit intake, among adults over 15 years, NZHS 2011/12 – 2014/15, unadjusted**



Adults from four of the locations are **less** likely to eat at least two servings of fruit each day than total New Zealand adults, namely Manukau, Manurewa-Papakura, East Cape, and Whanganui Rangitīkei Ruapehu.

Adults from the remaining six locations have similar rates of eating at least two servings of fruit each day to total New Zealand adults.

**Adequate fruit intake**

**Adult - New Zealand Health Survey, 2011/12 - 2014/15**

	Number	Total Respondents	Unadjusted Percent <sup>‡</sup>	Unadjusted 95% Confidence Interval		Adjusted Percent <sup>‡</sup>	Adjusted 95% Confidence Interval	
Far North	684	1184	60.5	55.3	65.7	56.9	51.7	62.2
Waitakere	788	1415	56.5	52.8	60.3	56.5	52.7	60.2
Manukau	933	1956	48.3	44.1	52.5	48.5	44.3	52.7
Manurewa-Papakura	640	1226	50.8	46.7	54.9	50.6	46.5	54.7
East Cape	641	1310	48.4	43.9	52.9	48.2	43.7	52.7
Rotorua	766	1371	53.7	50.0	57.5	53.1	49.3	56.9
Whanganui Rangitikei Ruapehu	585	1231	48.0	43.0	53.0	44.3	39.3	49.3
Lower Hutt	816	1505	56.7	53.3	60.0	56.2	52.8	59.5
Spreydon-Heathcote	318	502	62.7	54.3	71.1	61.2	52.8	69.7
Invercargill	527	983	53.9	49.2	58.6	52.9	48.2	57.6
NZ	29328	52353	57.2	56.6	57.9	56.0	55.4	56.7

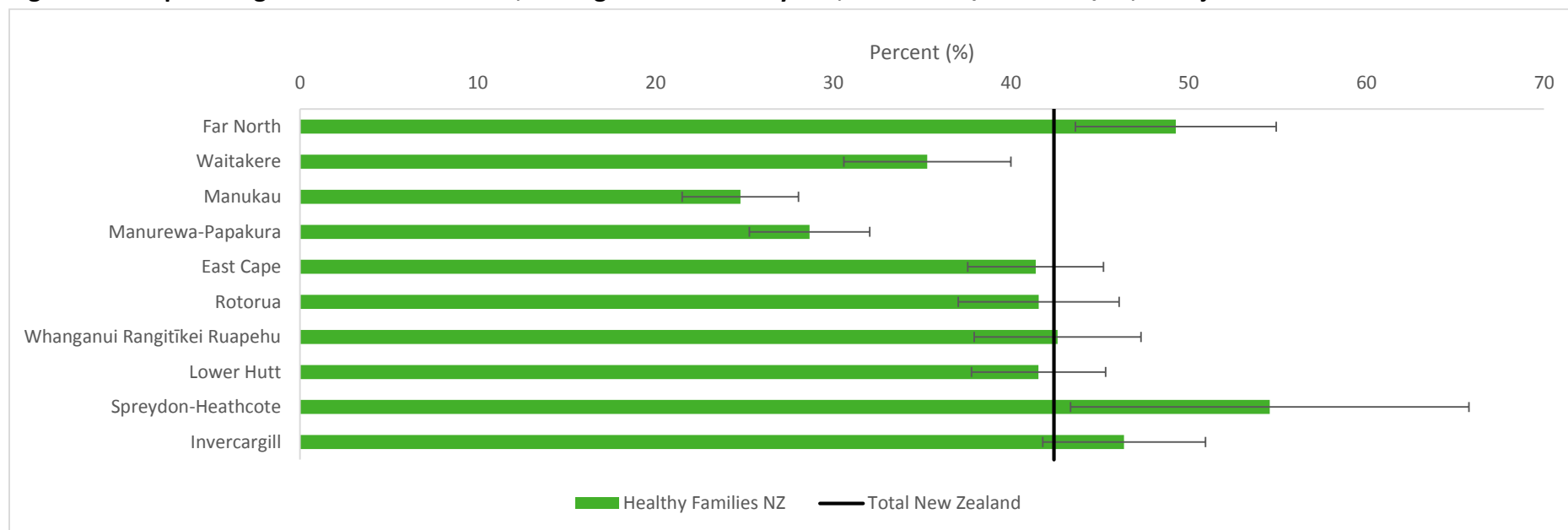
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\* Results with Relative Standard Errors between 30%-50% should be used with caution

**Figure 6. Adequate vegetable and fruit intake, among adults over 15 years, NZHS 2011/12 – 2014/15, unadjusted**



Adults from one of the locations are **more** likely to meet both the vegetable and fruit intake guidelines than total New Zealand adults, namely Far North.

Adults from three of the locations are **less** likely to meet both the vegetable and fruit intake guidelines than total New Zealand adults, namely Waitakere, Manukau, and Manurewa-Papakura.

Adults from the remaining six locations have similar rates of meeting both the vegetable and fruit intake guidelines to total New Zealand adults.

**Adequate vegetable & fruit intake**

**Adult - New Zealand Health Survey, 2011/12 - 2014/15**

	Number	Total Respondents	Unadjusted Percent <sup>‡</sup>	Unadjusted 95% Confidence Interval		Adjusted Percent <sup>‡</sup>	Adjusted 95% Confidence Interval	
Far North	554	1184	49.3	43.6	54.9	44.4	38.7	50.0
Waitakere	494	1415	35.3	30.6	40.0	34.4	29.7	39.1
Manukau	498	1955	24.8	21.5	28.0	24.9	21.6	28.2
Manurewa-Papakura	368	1224	28.7	25.3	32.1	28.1	24.7	31.5
East Cape	524	1310	41.4	37.6	45.2	40.9	37.1	44.7
Rotorua	581	1371	41.6	37.0	46.1	40.6	36.1	45.2
Whanganui Rangitikei Ruapehu	509	1231	42.6	37.9	47.3	39.1	34.4	43.8
Lower Hutt	598	1502	41.6	37.8	45.3	40.7	36.9	44.5
Spreydon-Heathcote	272	502	54.6	43.4	65.8	52.6	41.4	63.8
Invercargill	449	983	46.4	41.8	50.9	44.8	40.2	49.4
NZ	21859	52316	42.4	41.5	43.4	40.7	39.8	41.7

N.B. Missing data (e.g. who either refused to say, or didn't know) are excluded

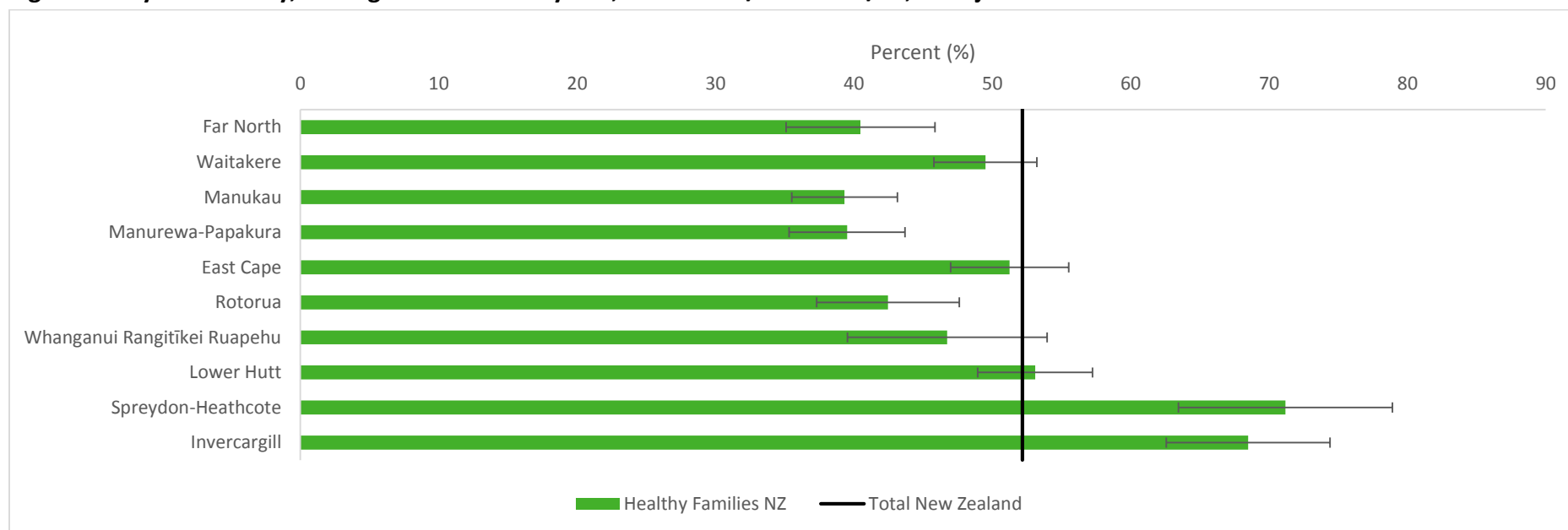
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## Physical activity

**Figure 7. Physical activity, among adults over 15 years, NZHS 2011/12 – 2014/15, unadjusted**



Adults from two of the locations are **more** likely to do at least 30 minutes of moderate-intensity physical activity at least five days a week than total New Zealand adults, namely Spreydon-Heathcote and Invercargill.

Adults from four of the locations are **less** likely to do at least 30 minutes of moderate-intensity physical activity at least five days a week than total New Zealand adults, namely Far North, Manukau, Manurewa-Papakura, and Rotorua.

Adults from the remaining four locations have similar rates of doing at least 30 minutes of moderate-intensity physical activity at least five days a week to total New Zealand adults.



**Physical activity**

**Adult - New Zealand Health Survey, 2011/12 - 2014/15**

	Number	Total Respondents	Unadjusted Percent <sup>‡</sup>	Unadjusted 95% Confidence Interval		Adjusted Percent <sup>‡</sup>	Adjusted 95% Confidence Interval	
Far North	461	1174	40.5	35.1	45.9	41.0	35.6	46.4
Waitakere	662	1404	49.5	45.8	53.2	50.6	46.9	54.3
Manukau	735	1940	39.3	35.5	43.1	39.2	35.4	43.0
Manurewa-Papakura	468	1210	39.5	35.3	43.7	39.5	35.4	43.7
East Cape	675	1309	51.3	47.0	55.5	52.4	48.1	56.7
Rotorua	572	1357	42.5	37.3	47.6	43.4	38.3	48.6
Whanganui Rangitikei Ruapehu	581	1226	46.8	39.5	54.0	47.0	39.8	54.2
Lower Hutt	765	1485	53.1	49.0	57.3	53.5	49.4	57.7
Spreydon-Heathcote	359	499	71.2	63.5	78.9	71.7	64.0	79.4
Invercargill	659	973	68.5	62.6	74.4	69.0	63.1	74.9
NZ	26132	51790	52.2	50.8	53.6	52.9	51.5	54.3

N.B. Missing data (e.g. who either refused to say, or didn't know) are excluded

N.B. Unadjusted results with counts <5, Adjusted results with counts <20, and Results with Relative Standard Errors >50% are suppressed

<sup>‡</sup> Calculation takes into account survey weights

\* Results with Relative Standard Errors between 30%-50% should be used with caution

**Figure 8. Little or no physical activity, among adults over 15 years, NZHS 2011/12 – 2014/15, unadjusted**



Adults from three of the locations are **less** likely to do little or no physical activity than total New Zealand adults, namely Lower Hutt, Spreydon-Heathcote, and Invercargill.

Adults from four of the locations are **more** likely to do little or no physical activity than total New Zealand adults, namely Manukau, Manurewa-Papakura, East Cape, and Whanganui Rangitīkei Ruapehu.

Adults from the remaining three locations have similar rates of doing little or no physical activity to total New Zealand adults.

**Little or no physical activity**

**Adult - New Zealand Health Survey, 2011/12 - 2014/15**

	Number	Total Respondents	Unadjusted Percent <sup>‡</sup>	Unadjusted 95% Confidence Interval		Adjusted Percent <sup>‡</sup>	Adjusted 95% Confidence Interval	
Far North	196	1175	15.7	11.5	20.0	12.9	8.7	17.2
Waitakere	209	1404	13.0	10.1	16.0	12.7	9.8	15.7
Manukau	458	1943	22.7	19.6	25.8	22.8	19.7	25.9
Manurewa-Papakura	260	1213	20.4	16.6	24.1	20.3	16.6	24.1
East Cape	333	1309	25.3	21.4	29.2	23.4	19.5	27.3
Rotorua	231	1358	16.9	13.8	20.1	15.8	12.7	18.9
Whanganui Rangitikei Ruapehu	295	1226	21.4	16.7	26.0	20.4	15.8	25.0
Lower Hutt	193	1492	10.3	8.4	12.1	9.7	7.9	11.6
Spreydon-Heathcote	29	499	3.7	1.8	6.8	-	-	-
Invercargill	79	974	5.9	3.1	8.7	5.3	2.5	8.1
NZ	8361	51836	13.7	13.1	14.3	12.8	12.2	13.4

N.B. Missing data (e.g. who either refused to say, or didn't know) are excluded

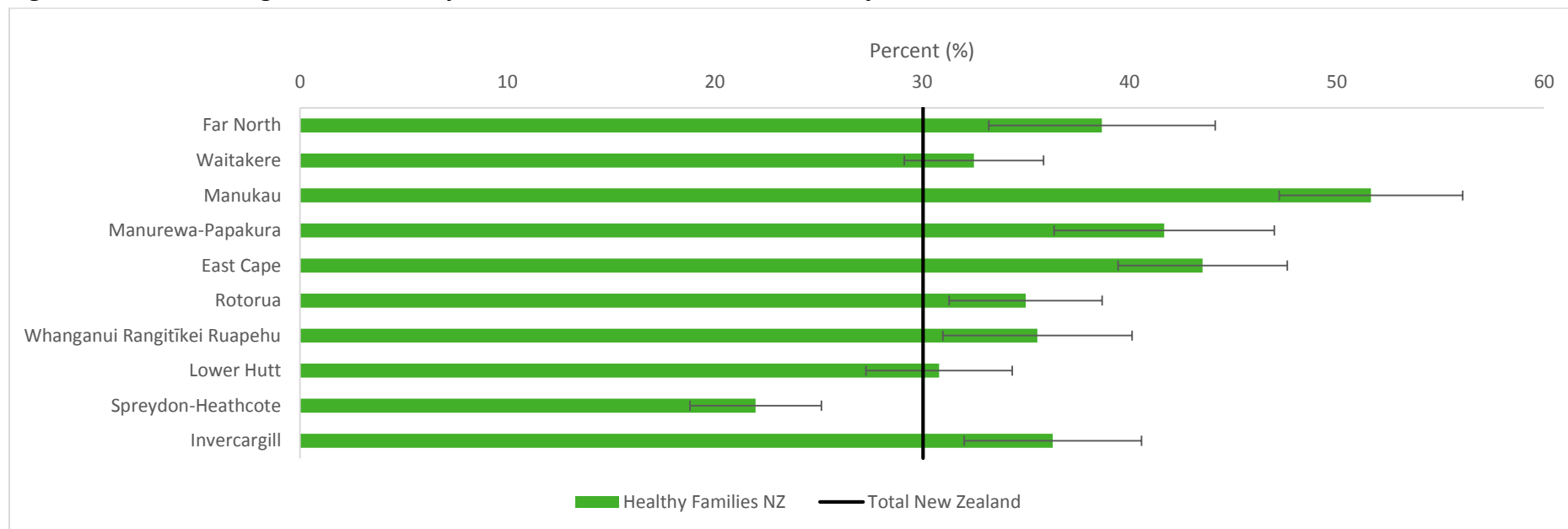
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<sup>‡</sup> Calculation takes into account survey weights

\* Results with Relative Standard Errors between 30%-50% should be used with caution

Body mass index

**Figure 9. Obese, among adults over 15 years, NZHS 2011/12 – 2014/15, unadjusted**



Adults from one of the locations are **less** likely to be obese than total New Zealand adults, namely Spreydon-Heathcote.

Adults from seven of the locations are **more** likely to be obese than total New Zealand adults, namely Far North, Manukau, Manurewa-Papakura, East Cape, Rotorua, Whanganui Rangitikei Ruapehu, and Invercargill.

Adults from the remaining two locations have similar rates of obesity to total New Zealand adults.

**Obese**

**Adult - New Zealand Health Survey, 2011/12 - 2014/15**

	Number	Total Respondents	Unadjusted Percent <sup>‡</sup>	Unadjusted 95% Confidence Interval		Adjusted Percent <sup>‡</sup>	Adjusted 95% Confidence Interval	
Far North	476	1109	38.7	33.2	44.1	38.1	32.6	43.5
Waitakere	475	1314	32.5	29.1	35.9	30.3	26.9	33.7
Manukau	982	1727	51.7	47.2	56.1	52.7	48.3	57.2
Manurewa-Papakura	518	1115	41.7	36.4	47.0	42.4	37.1	47.7
East Cape	491	1101	43.5	39.5	47.6	42.2	38.1	46.3
Rotorua	481	1233	35.0	31.3	38.7	35.1	31.4	38.8
Whanganui Rangitikei Ruapehu	434	1145	35.6	31.0	40.1	34.1	29.6	38.7
Lower Hutt	471	1333	30.8	27.3	34.3	30.1	26.6	33.6
Spreydon-Heathcote	121	471	22.0	18.8	25.1	21.6	18.4	24.8
Invercargill	367	923	36.3	32.0	40.6	35.7	31.4	40.0
NZ	16807	47997	30.0	29.4	30.7	29.1	28.4	29.7

N.B. Missing data (e.g. who either refused to say, or didn't know) are excluded

N.B. Unadjusted results with counts <5, Adjusted results with counts <20, and Results with Relative Standard Errors >50% are suppressed

<sup>‡</sup> Calculation takes into account survey weights

\* Results with Relative Standard Errors between 30%-50% should be used with caution

**Figure 10. Overweight, among adults over 15 years, NZHS 2011/12 – 2014/15, unadjusted**



Adults from two of the locations are **less** likely to be overweight than total New Zealand adults, namely Manukau and East Cape.

Adults from one of the locations are **more** likely to be overweight than total New Zealand adults, namely Spreydon-Heathcote.

Adults from the remaining seven locations have similar rates of being overweight to total New Zealand adults.

## Overweight

### Adult - New Zealand Health Survey, 2011/12 - 2014/15

	Number	Total Respondents	Unadjusted Percent <sup>‡</sup>	Unadjusted 95% Confidence Interval		Adjusted Percent <sup>‡</sup>	Adjusted 95% Confidence Interval	
Far North	369	1109	34.6	31.1	38.1	31.9	28.4	35.4
Waitakere	449	1314	34.9	31.6	38.2	34.8	31.5	38.1
Manukau	428	1727	25.6	22.7	28.5	25.7	22.8	28.6
Manurewa-Papakura	339	1115	31.9	27.6	36.2	31.2	26.9	35.6
East Cape	339	1101	30.0	26.2	33.9	30.0	26.2	33.9
Rotorua	398	1233	34.4	32.4	36.4	33.9	31.9	35.9
Whanganui Rangitikei Ruapehu	404	1145	35.6	30.9	40.4	34.5	29.8	39.2
Lower Hutt	455	1333	35.3	30.6	39.9	34.7	30.1	39.3
Spreydon-Heathcote	191	471	42.8	38.1	47.4	41.6	36.9	46.2
Invercargill	300	923	33.3	28.8	37.8	33.0	28.5	37.6
NZ	16340	47997	34.9	34.3	35.5	33.9	33.3	34.5

N.B. Missing data (e.g. who either refused to say, or didn't know) are excluded

N.B. Unadjusted results with counts <5, Adjusted results with counts <20, and Results with Relative Standard Errors >50% are suppressed

<sup>‡</sup> Calculation takes into account survey weights

\* Results with Relative Standard Errors between 30%-50% should be used with caution

**Figure 11. Overweight or obese, among adults over 15 years, NZHS 2011/12 – 2014/15, unadjusted**



Adults from five of the locations are **more** likely to be either overweight or obese than total New Zealand adults, namely Far North, Manukau, Manurewa-Papakura, East Cape, and Whanganui Rangitīkei Ruapehu.

Adults from the remaining five locations have similar rates of being either overweight or obese to total New Zealand adults.



**Overweight/Obese**

**Adult - New Zealand Health Survey, 2011/12 - 2014/15**

	Number	Total Respondents	Unadjusted Percent <sup>‡</sup>	Unadjusted 95% Confidence Interval		Adjusted Percent <sup>‡</sup>	Adjusted 95% Confidence Interval	
Far North	845	1109	73.3	68.0	78.6	70.0	64.7	75.3
Waitakere	924	1314	67.4	64.2	70.7	65.1	61.9	68.4
Manukau	1410	1727	77.3	73.5	81.0	78.4	74.6	82.2
Manurewa-Papakura	857	1115	73.6	70.8	76.5	73.6	70.8	76.5
East Cape	830	1101	73.6	70.7	76.5	72.2	69.3	75.1
Rotorua	879	1233	69.4	65.4	73.4	69.0	65.0	73.0
Whanganui Rangitikei Ruapehu	838	1145	71.2	67.8	74.6	68.7	65.2	72.1
Lower Hutt	926	1333	66.1	61.1	71.1	64.8	59.8	69.8
Spreydon-Heathcote	312	471	64.7	59.1	70.4	63.2	57.6	68.8
Invercargill	667	923	69.6	64.4	74.8	68.7	63.5	74.0
NZ	33147	47997	65.0	64.3	65.7	62.9	62.2	63.6

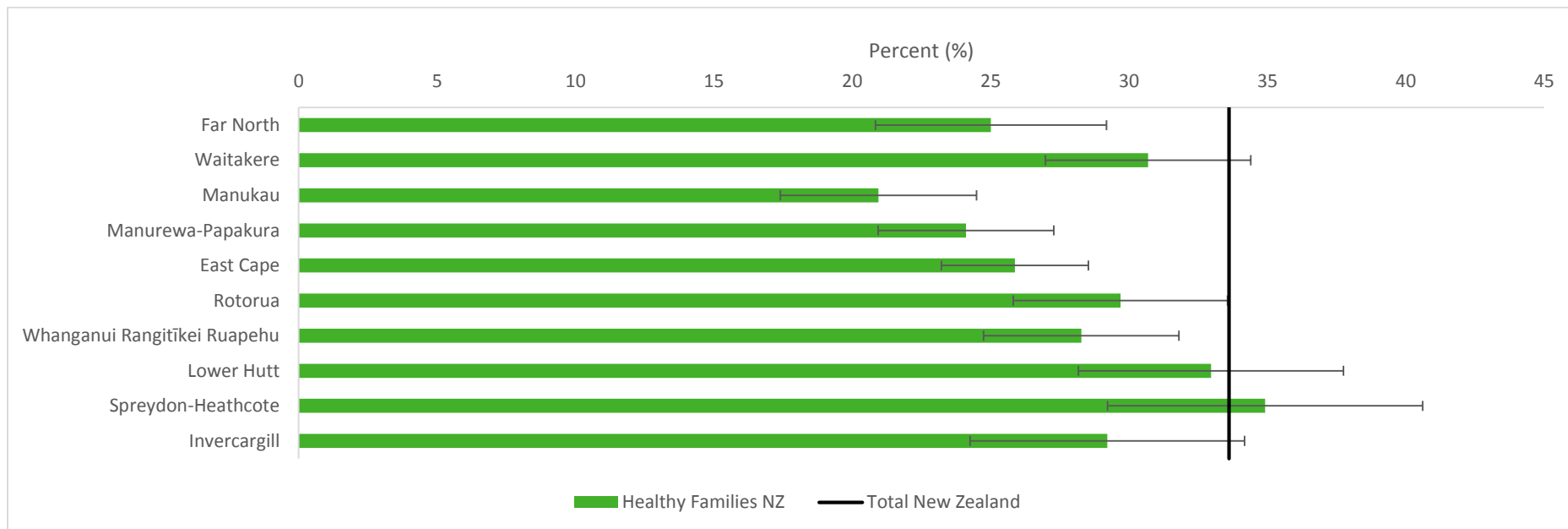
N.B. Missing data (e.g. who either refused to say, or didn't know) are excluded

N.B. Unadjusted results with counts <5, Adjusted results with counts <20, and Results with Relative Standard Errors >50% are suppressed

<sup>‡</sup> Calculation takes into account survey weights

\* Results with Relative Standard Errors between 30%-50% should be used with caution

**Figure 12. Healthy weight, among adults over 15 years, NZHS 2011/12 – 2014/15, unadjusted**



Adults from five of the locations are **less** likely to be a healthy weight than total New Zealand adults, namely Far North, Manukau, Manurewa-Papakura, East Cape, and Whanganui Rangitīkei Ruapehu.

Adults from the remaining five locations have similar rates of being a healthy weight to total New Zealand adults.

## Healthy weight

### Adult - New Zealand Health Survey, 2011/12 - 2014/15

	Number	Total Respondents	Unadjusted Percent <sup>‡</sup>	Unadjusted 95% Confidence Interval		Adjusted Percent <sup>‡</sup>	Adjusted 95% Confidence Interval	
Far North	255	1109	25.0	20.8	29.2	27.6	23.5	31.8
Waitakere	369	1314	30.7	27.0	34.4	32.6	28.8	36.3
Manukau	296	1727	21.0	17.4	24.5	20.0	16.4	23.5
Manurewa-Papakura	240	1115	24.1	20.9	27.3	24.1	21.0	27.3
East Cape	265	1101	25.9	23.2	28.5	27.2	24.5	29.8
Rotorua	344	1233	29.7	25.8	33.6	30.0	26.1	33.9
Whanganui Rangitikei Ruapehu	302	1145	28.3	24.8	31.8	30.9	27.3	34.4
Lower Hutt	395	1333	33.0	28.2	37.8	34.1	29.3	38.9
Spreydon-Heathcote	156	471	34.9	29.2	40.6	36.4	30.7	42.1
Invercargill	246	923	29.2	24.3	34.2	30.2	25.2	35.1
NZ	14268	47997	33.6	32.9	34.3	35.5	34.8	36.2

N.B. Missing data (e.g. who either refused to say, or didn't know) are excluded

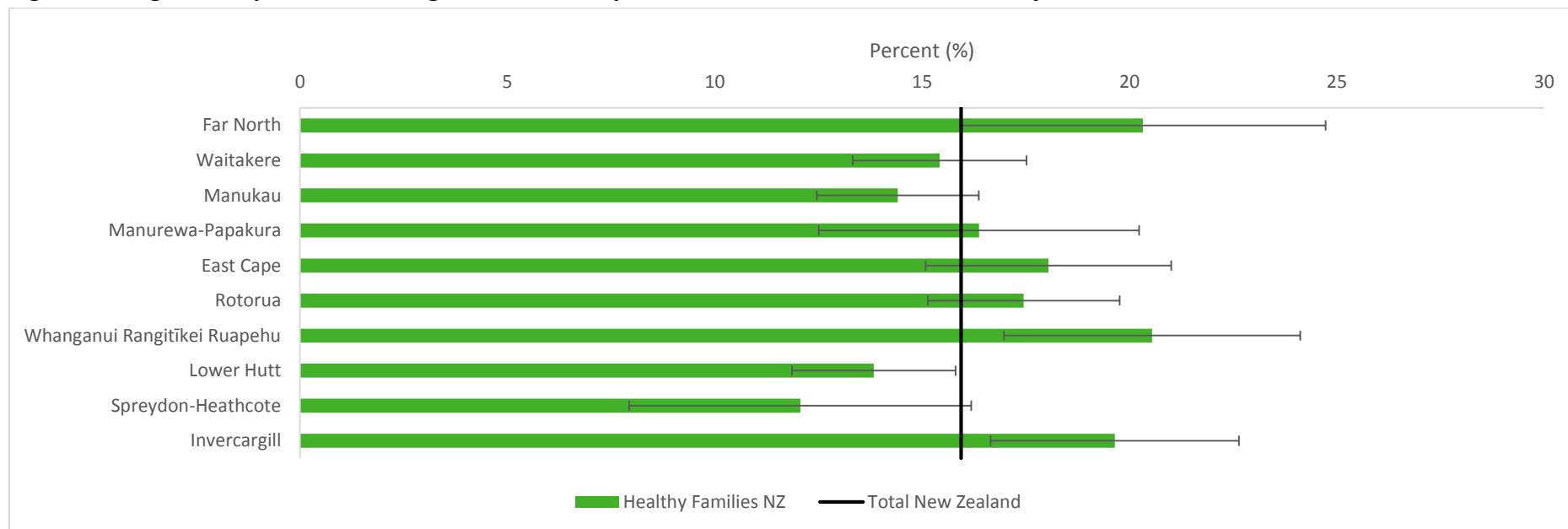
N.B. Unadjusted results with counts <5, Adjusted results with counts <20, and Results with Relative Standard Errors >50% are suppressed

<sup>‡</sup> Calculation takes into account survey weights

\* Results with Relative Standard Errors between 30%-50% should be used with caution

Health conditions

**Figure 13. High blood pressure, among adults over 15 years, NZHS 2011/12 – 2014/15, unadjusted**



Adults from two of the locations are **more** likely to take medication for high blood pressure than total New Zealand adults, namely Whanganui Rangitikei Ruapehu and Invercargill.

Adults from the remaining eight locations have similar rates of taking medication for high blood pressure to total New Zealand adults.

**High blood pressure (medicated)**

**Adult - New Zealand Health Survey, 2011/12 - 2014/15**

	Number	Total Respondents	Unadjusted Percent <sup>‡</sup>	Unadjusted 95% Confidence Interval		Adjusted Percent <sup>‡</sup>	Adjusted 95% Confidence Interval	
Far North	304	1184	20.3	15.9	24.7	12.5	8.1	16.9
Waitakere	242	1414	15.4	13.3	17.5	12.5	10.4	14.6
Manukau	336	1945	14.4	12.5	16.4	14.8	12.8	16.7
Manurewa-Papakura	213	1225	16.4	12.5	20.2	14.5	10.6	18.4
East Cape	262	1309	18.0	15.1	21.0	13.8	10.9	16.8
Rotorua	295	1357	17.5	15.1	19.8	13.9	11.6	16.2
Whanganui Rangitikei Ruapehu	306	1227	20.5	17.0	24.1	13.5	9.9	17.0
Lower Hutt	259	1504	13.8	11.9	15.8	11.0	9.0	13.0
Spreydon-Heathcote	85	500	12.1	7.9	16.2	8.5	4.4	12.6
Invercargill	220	981	19.6	16.7	22.6	13.6	10.6	16.6
NZ	10259	52095	15.9	15.5	16.3	11.7	11.3	12.1

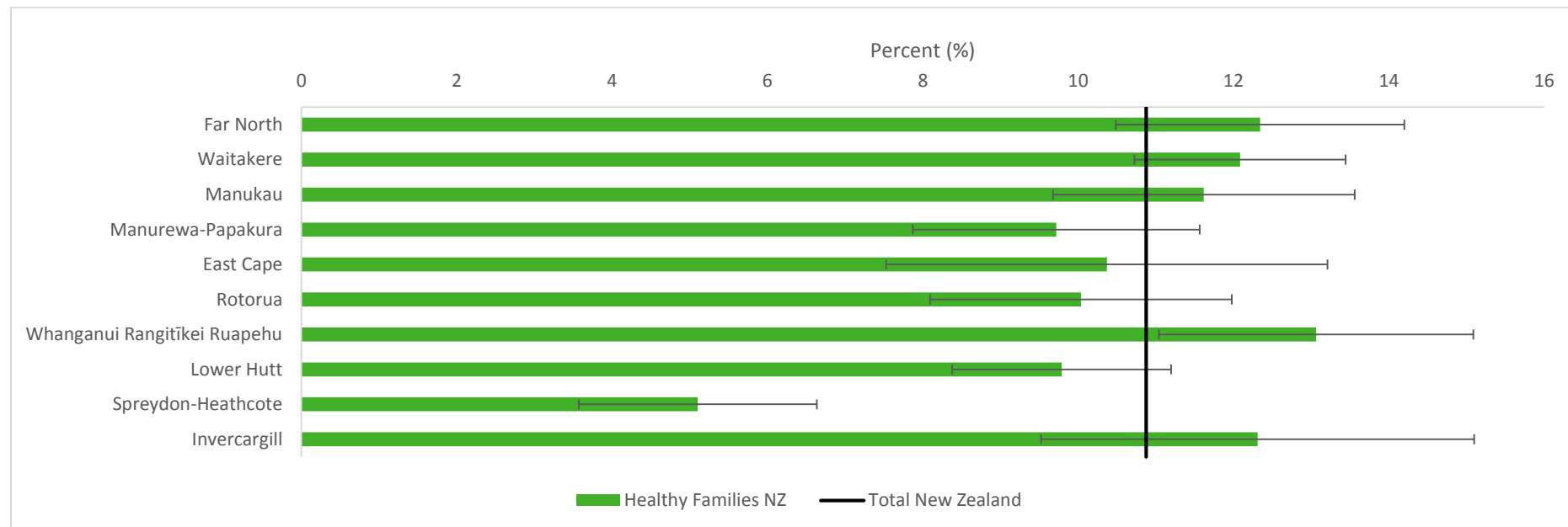
N.B. Missing data (e.g. who either refused to say, or didn't know) are excluded

N.B. Unadjusted results with counts <5, Adjusted results with counts <20, and Results with Relative Standard Errors >50% are suppressed

<sup>‡</sup> Calculation takes into account survey weights

\* Results with Relative Standard Errors between 30%-50% should be used with caution

**Figure 14. High cholesterol, among adults over 15 years, NZHS 2011/12 – 2014/15, unadjusted**



Adults from one of the locations are **less** likely to take medication for high cholesterol than total New Zealand adults, namely Spreydon-Heathcote.

Adults from the remaining nine locations have similar rates of taking medication for high cholesterol to total New Zealand adults.

**High cholesterol (medicated)**

**Adult - New Zealand Health Survey, 2011/12 - 2014/15**

	Number	Total Respondents	Unadjusted Percent <sup>‡</sup>	Unadjusted 95% Confidence Interval		Adjusted Percent <sup>‡</sup>	Adjusted 95% Confidence Interval	
Far North	196	1166	12.3	10.5	14.2	7.0	5.1	8.9
Waitakere	183	1412	12.1	10.7	13.4	9.7	8.4	11.1
Manukau	259	1934	11.6	9.7	13.6	12.0	10.1	14.0
Manurewa-Papakura	136	1215	9.7	7.9	11.6	8.6	6.7	10.4
East Cape	166	1309	10.4	7.5	13.2	7.9	5.1	10.8
Rotorua	170	1345	10.0	8.1	12.0	7.8	5.9	9.7
Whanganui Rangitikei Ruapehu	183	1202	13.1	11.0	15.1	8.8	6.8	10.8
Lower Hutt	168	1474	9.8	8.4	11.2	7.8	6.4	9.2
Spreydon-Heathcote	32	493	5.1	3.6	6.6	3.9	2.3	5.4
Invercargill	132	974	12.3	9.5	15.1	8.8	6.0	11.6
NZ	6781	51739	10.9	10.6	11.2	8.0	7.7	8.3

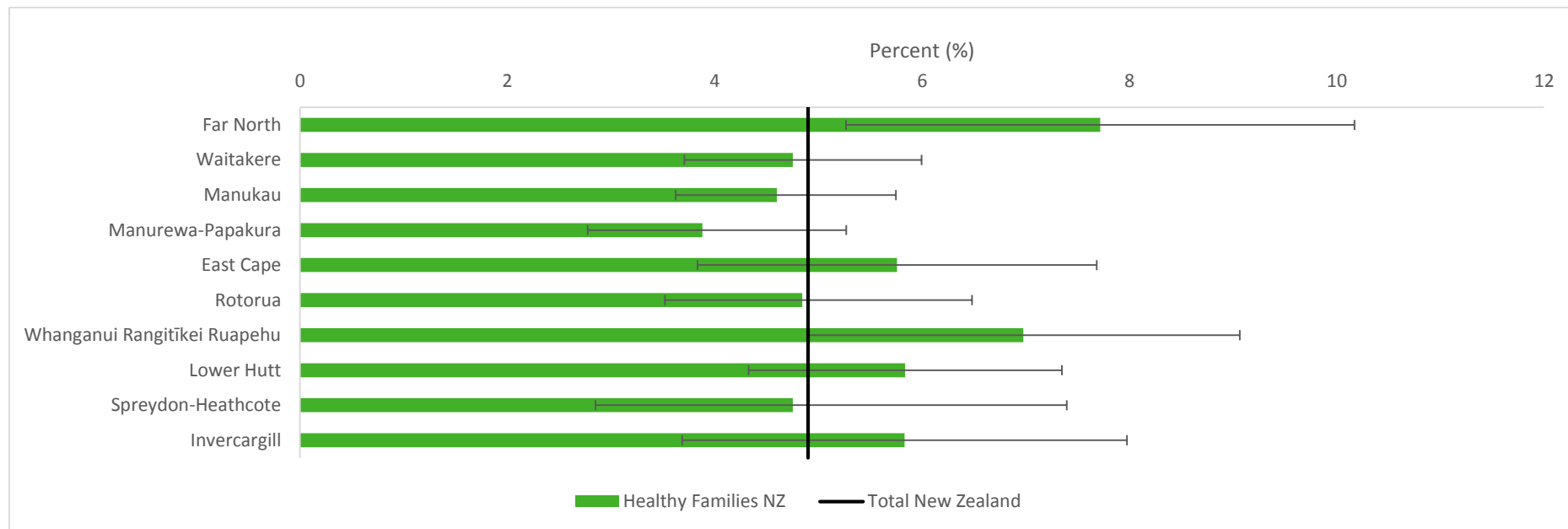
N.B. Missing data (e.g. who either refused to say, or didn't know) are excluded

N.B. Unadjusted results with counts <5, Adjusted results with counts <20, and Results with Relative Standard Errors >50% are suppressed

<sup>‡</sup> Calculation takes into account survey weights

\* Results with Relative Standard Errors between 30%-50% should be used with caution

**Figure 15. Ischaemic heart disease, among adults over 15 years, NZHS 2011/12 – 2014/15, unadjusted**



Adults from one of the locations are **more** likely to have been diagnosed with ischaemic heart disease than total New Zealand adults, namely Far North.

Adults from the remaining nine locations have similar rates of being diagnosed with ischaemic heart disease to total New Zealand adults.



**Ischaemic heart disease (diagnosed)**

**Adult - New Zealand Health Survey, 2011/12 - 2014/15**

	Number	Total Respondents	Unadjusted Percent <sup>‡</sup>	Unadjusted 95% Confidence Interval		Adjusted Percent <sup>‡</sup>	Adjusted 95% Confidence Interval	
Far North	110	1188	7.7	5.3	10.2	4.5	2.1	7.0
Waitakere	80	1415	4.8	3.7	6.0	3.9	2.9	5.2
Manukau	111	1953	4.6	3.6	5.7	4.6	3.6	5.8
Manurewa-Papakura	58	1226	3.9	2.8	5.3	3.4	2.3	4.8
East Cape	91	1310	5.8	3.8	7.7	4.3	2.3	6.2
Rotorua	93	1370	4.8	3.5	6.5	3.6	2.3	5.3
Whanganui Rangitikei Ruapehu	99	1229	7.0	4.9	9.1	4.5	2.4	6.6
Lower Hutt	118	1508	5.8	4.3	7.3	4.4	2.9	5.9
Spreydon-Heathcote	29	501	4.8	2.8	7.4	3.2	1.3	5.9
Invercargill	68	980	5.8	3.7	8.0	3.9	1.8	6.1
NZ	3367	52308	4.9	4.7	5.1	3.4	3.2	3.6

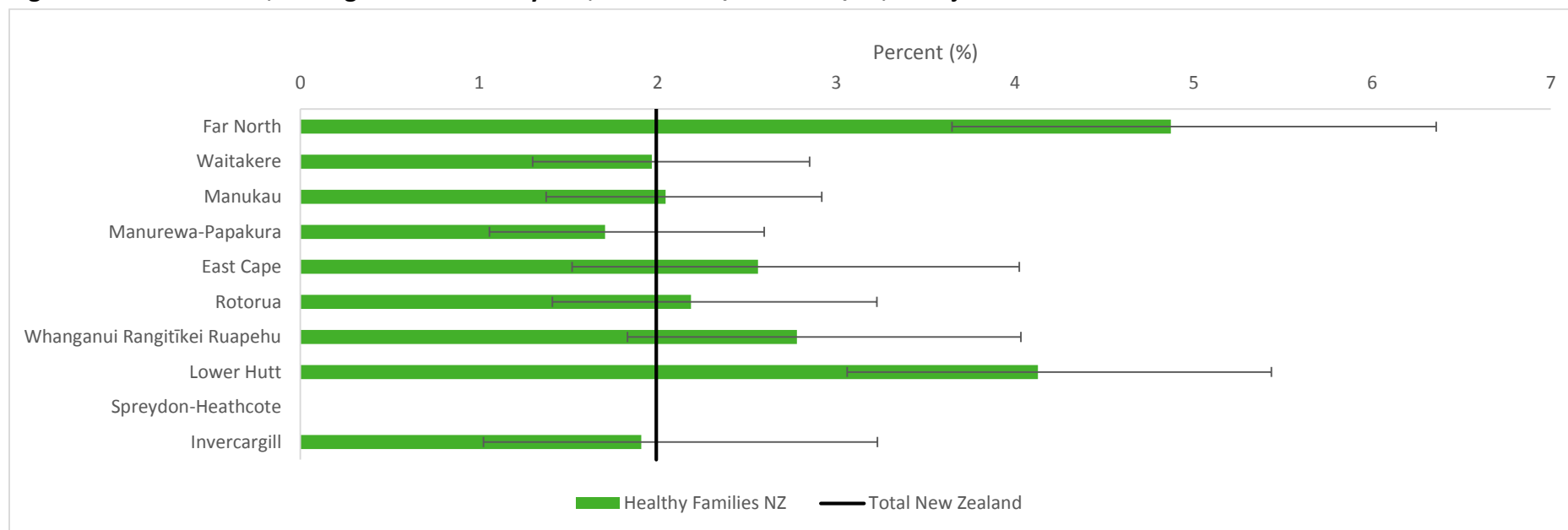
N.B. Missing data (e.g. who either refused to say, or didn't know) are excluded

N.B. Unadjusted results with counts <5, Adjusted results with counts <20, and Results with Relative Standard Errors >50% are suppressed

<sup>‡</sup> Calculation takes into account survey weights

\* Results with Relative Standard Errors between 30%-50% should be used with caution

**Figure 16. Heart failure, among adults over 15 years, NZHS 2011/12 – 2014/15, unadjusted**



Adults from two of the locations are **more** likely to have been diagnosed with heart failure than total New Zealand adults, namely Far North and Lower Hutt.

Adults from the remaining seven<sup>4</sup> locations have similar rates of being diagnosed with heart failure to total New Zealand adults.

<sup>4</sup> Results for one location (i.e. Spreydon-Heathcote) is considered unreliable and has been suppressed.

**Heart failure (diagnosed)**

**Adult - New Zealand Health Survey, 2011/12 - 2014/15**

	Number	Total Respondents	Unadjusted Percent <sup>‡</sup>	Unadjusted 95% Confidence Interval		Adjusted Percent <sup>‡</sup>	Adjusted 95% Confidence Interval		
Far North	64	1185	4.9	3.6	6.4	2.8	1.6	4.3	
Waitakere	35	1415	2.0	1.3	2.8	1.7	1.0	2.6	
Manukau	44	1955	2.0	1.4	2.9	2.1	1.4	2.9	
Manurewa-Papakura	30	1228	1.7	1.1	2.6	1.5	0.9	2.4	
East Cape	39	1310	2.6	1.5	4.0	1.9	0.9	3.4	*
Rotorua	34	1370	2.2	1.4	3.2	1.6	0.9	2.7	*
Whanganui Rangitikei Ruapehu	38	1230	2.8	1.8	4.0	1.7	0.7	2.9	*
Lower Hutt	78	1507	4.1	3.1	5.4	3.4	2.3	4.7	
Spreydon-Heathcote	7	501	-	-	-	-	-	-	
Invercargill	27	983	1.9	1.0	3.2	-	-	-	*
NZ	1375	52296	2.0	1.8	2.1	1.4	1.3	1.6	

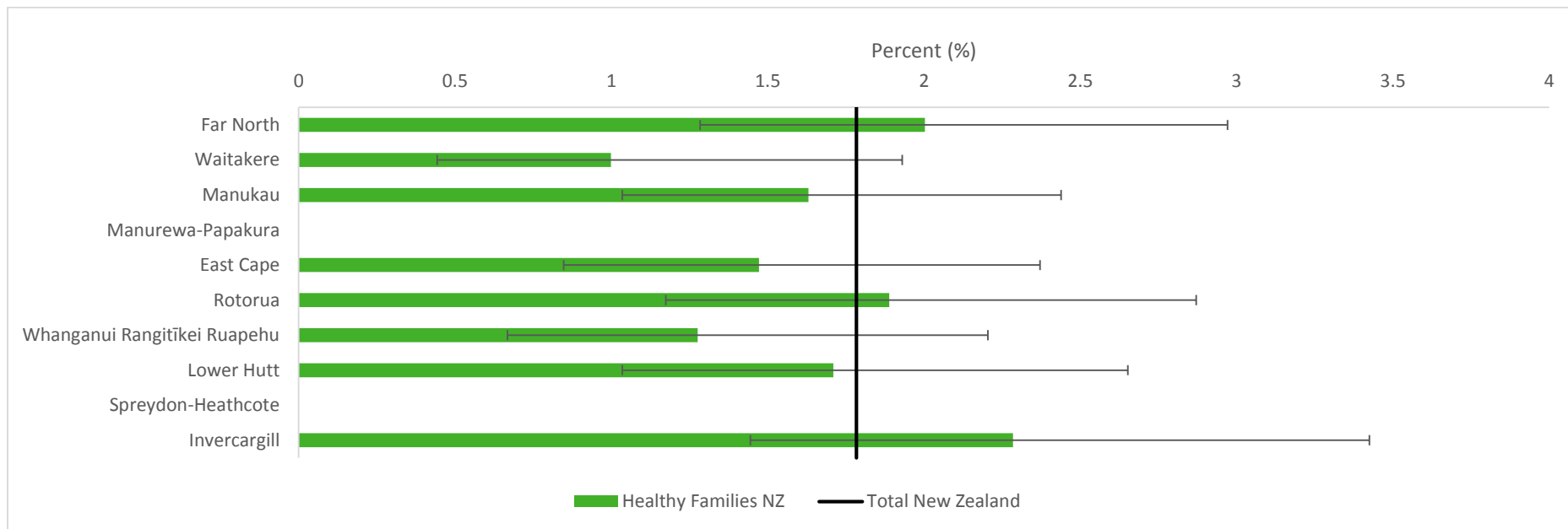
N.B. Missing data (e.g. who either refused to say, or didn't know) are excluded

N.B. Unadjusted results with counts <5, Adjusted results with counts <20, and Results with Relative Standard Errors >50% are suppressed

<sup>‡</sup> Calculation takes into account survey weights

\* Results with Relative Standard Errors between 30%-50% should be used with caution

**Figure 17. Stroke, among adults over 15 years, NZHS 2011/12 – 2014/15, unadjusted**



Adults from eight<sup>5</sup> of the locations have similar rates of having had a stroke during their lifetime to total New Zealand adults.

<sup>5</sup> Results for two locations (i.e. Manurewa-Papakura and Spreydon-Heathcote) are considered unreliable and have been suppressed.

**Stroke (diagnosed)**

**Adult - New Zealand Health Survey, 2011/12 - 2014/15**

	Number	Total Respondents	Unadjusted Percent <sup>‡</sup>	Unadjusted 95% Confidence Interval			Adjusted Percent <sup>‡</sup>	Adjusted 95% Confidence Interval		
Far North	35	1186	2.0	1.3	3.0		1.2	0.5	2.1	*
Waitakere	18	1414	1.0	0.4	1.9	*	-	-	-	
Manukau	37	1957	1.6	1.0	2.4		1.6	1.0	2.4	
Manurewa-Papakura	25	1228	-	-	-		-	-	-	
East Cape	24	1310	1.5	0.8	2.4	*	1.1	0.5	2.0	*
Rotorua	40	1371	1.9	1.2	2.9		1.3	0.6	2.3	*
Whanganui Rangitikei Ruapehu	19	1231	1.3	0.7	2.2	*	-	-	-	
Lower Hutt	39	1510	1.7	1.0	2.7		1.3	0.6	2.2	*
Spreydon-Heathcote	9	501	-	-	-		-	-	-	
Invercargill	33	983	2.3	1.4	3.4		1.5	0.6	2.6	*
NZ	1217	52344	1.8	1.7	1.9		1.3	1.1	1.4	

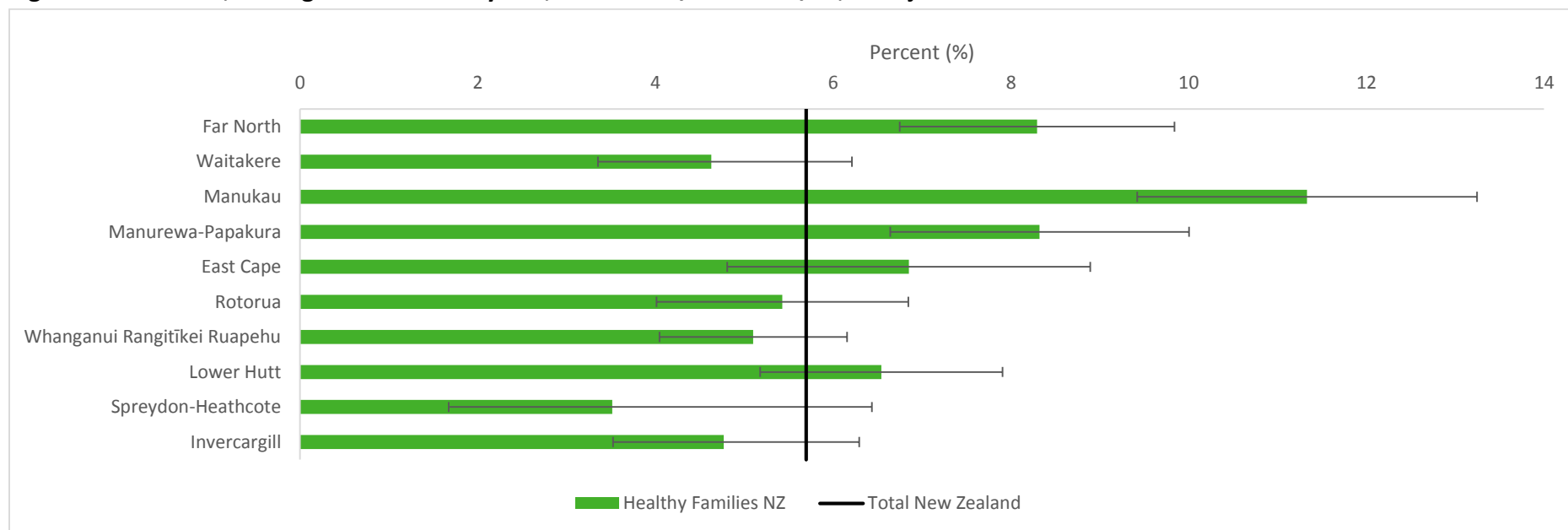
N.B. Missing data (e.g. who either refused to say, or didn't know) are excluded

N.B. Unadjusted results with counts <5, Adjusted results with counts <20, and Results with Relative Standard Errors >50% are suppressed

<sup>‡</sup> Calculation takes into account survey weights

\* Results with Relative Standard Errors between 30%-50% should be used with caution

**Figure 18. Diabetes, among adults over 15 years, NZHS 2011/12 – 2014/15, unadjusted**



Adults from three of the locations are **more** likely to be have been diagnosed with diabetes (type 1 or type 2 diabetes) than total New Zealand adults, namely Far North, Manukau, and Manurewa-Papakura.

Adults from the remaining seven locations have similar rates of being diagnosed with diabetes (type 1 or type 2 diabetes) to total New Zealand adults.

**Diabetes (diagnosed)**

**Adult - New Zealand Health Survey, 2011/12 - 2014/15**

	Number	Total Respondents	Unadjusted Percent <sup>‡</sup>	Unadjusted 95% Confidence Interval		Adjusted Percent <sup>‡</sup>	Adjusted 95% Confidence Interval	
Far North	110	1188	8.3	6.7	9.8	6.3	4.8	7.9
Waitakere	74	1413	4.6	3.4	6.2	3.8	2.6	5.4
Manukau	253	1952	11.3	9.4	13.2	11.6	9.7	13.5
Manurewa-Papakura	115	1229	8.3	6.6	10.0	7.6	5.9	9.3
East Cape	93	1309	6.9	4.8	8.9	5.8	3.8	7.9
Rotorua	103	1371	5.4	4.0	6.8	4.4	3.0	5.9
Whanganui Rangitikei Ruapehu	87	1230	5.1	4.0	6.2	3.6	2.6	4.7
Lower Hutt	122	1505	6.5	5.2	7.9	5.4	4.1	6.8
Spreydon-Heathcote	31	501	3.5	1.7	6.4	3.1	1.2	6.0
Invercargill	67	983	4.8	3.5	6.3	3.4	2.2	5.0
NZ	3825	52341	5.7	5.5	5.9	4.4	4.2	4.7

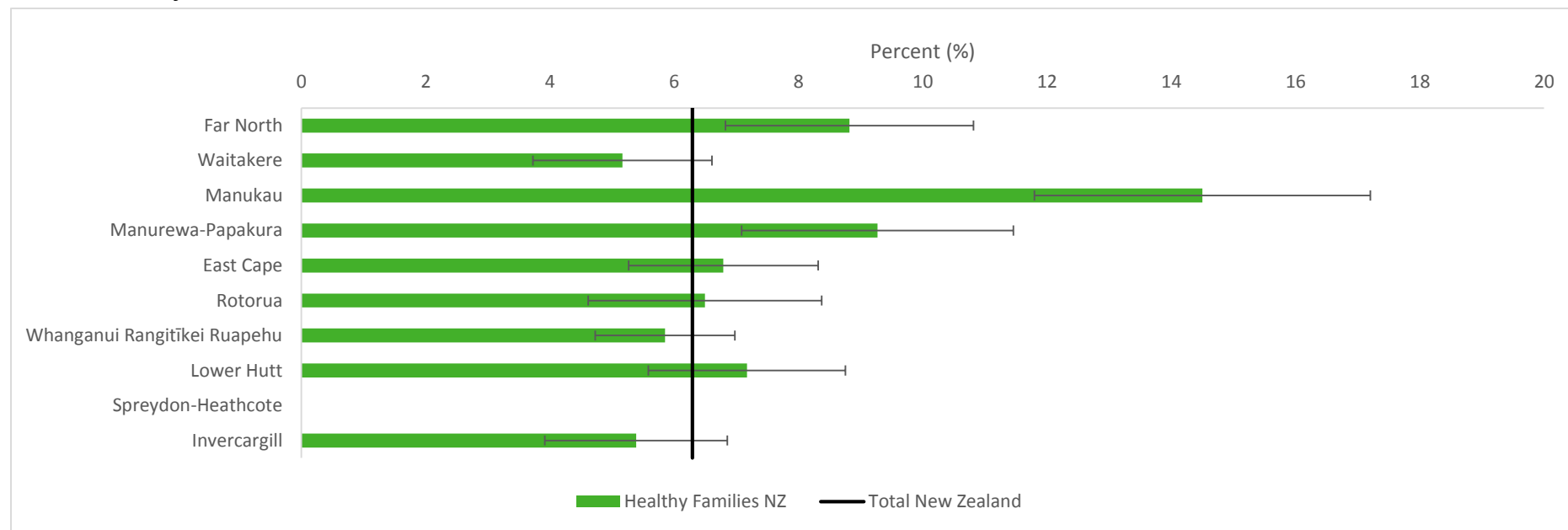
N.B. Missing data (e.g. who either refused to say, or didn't know) are excluded

N.B. Unadjusted results with counts <5, Adjusted results with counts <20, and Results with Relative Standard Errors >50% are suppressed

<sup>‡</sup> Calculation takes into account survey weights

\* Results with Relative Standard Errors between 30%-50% should be used with caution

**Figure 19. Diagnosed with diabetes at 25 years or older (type 2 diabetes proxy), among adults over 25 years, NZHS 2011/12 – 2014/15, unadjusted**



Among adults 25 years and over, adults from three of the locations are **more** likely have been diagnosed as having diabetes when they were 25 years or older than total New Zealand adults, namely Far North, Manukau, and Manurewa-Papakura. This provides a proxy estimate of type 2 diabetes.

Adults from the remaining six<sup>6</sup> locations have similar rates of being diagnosed as having diabetes when they were 25 years or older to total New Zealand adults.

<sup>6</sup> Results for one location (i.e. Spreydon-Heathcote) is considered unreliable and has been suppressed.



**Type 2 diabetes (proxy)**

**Adult - New Zealand Health Survey, 2011/12 - 2014/15**

	Number	Total Respondents	Unadjusted Percent <sup>‡</sup>	Unadjusted 95% Confidence Interval		Adjusted Percent <sup>‡</sup>	Adjusted 95% Confidence Interval	
Far North	101	1085	8.8	6.8	10.8	5.6	3.6	7.6
Waitakere	69	1262	5.2	3.7	6.6	3.5	2.1	5.0
Manukau	233	1588	14.5	11.8	17.2	10.9	8.2	13.6
Manurewa-Papakura	98	1012	9.3	7.1	11.5	6.4	4.2	8.5
East Cape	85	1128	6.8	5.3	8.3	4.2	2.7	5.7
Rotorua	94	1155	6.5	4.6	8.4	4.1	2.2	6.0
Whanganui Rangitikei Ruapehu	82	1106	5.9	4.7	7.0	3.4	2.3	4.5
Lower Hutt	110	1318	7.2	5.6	8.8	4.7	3.1	6.2
Spreydon-Heathcote	28	453	-	-	-	-	-	-
Invercargill	59	855	5.4	3.9	6.9	3.1	1.6	4.5
NZ	3482	45867	6.3	6.0	6.6	3.9	3.6	4.2

N.B. Missing data (e.g. who either refused to say, or didn't know) are excluded

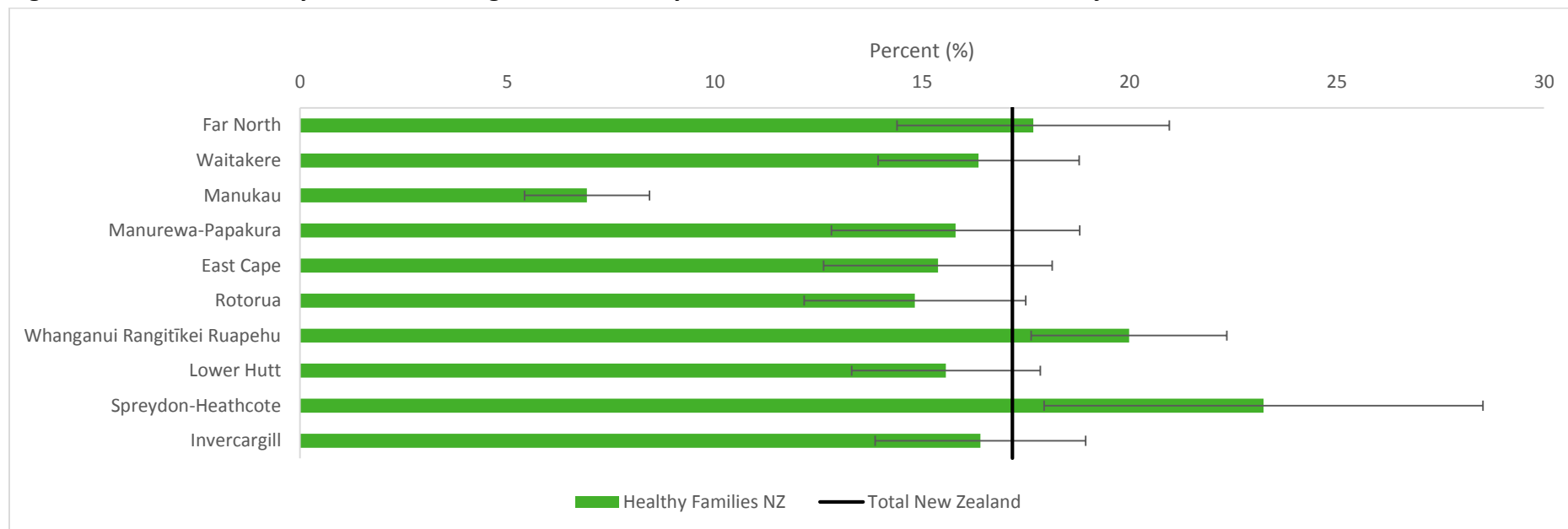
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<sup>‡</sup> Calculation takes into account survey weights

\* Results with Relative Standard Errors between 30%-50% should be used with caution

Mental health

**Figure 20. Mood or anxiety disorder, among adults over 15 years, NZHS 2011/12 – 2014/15, unadjusted**



Adults from one of the locations are **less** likely to be diagnosed with a mood disorder (depression or bipolar disorder), and/or an anxiety disorder, than total New Zealand adults, namely Manukau.

Adults from one of the locations are **more** likely to be diagnosed with a mood disorder (depression or bipolar disorder), and/or an anxiety disorder, than total New Zealand adults, namely Spreydon-Heathcote.

Adults from the remaining eight locations have similar rates of being diagnosed with a mood disorder (depression or bipolar disorder), and/or an anxiety disorder, to total New Zealand adults.

**Mood or anxiety disorder (diagnosed)**

**Adult - New Zealand Health Survey, 2011/12 - 2014/15**

	Number	Total Respondents	Unadjusted Percent <sup>‡</sup>	Unadjusted 95% Confidence Interval		Adjusted Percent <sup>‡</sup>	Adjusted 95% Confidence Interval	
Far North	233	1187	17.7	14.4	21.0	17.5	14.2	20.8
Waitakere	261	1413	16.4	13.9	18.8	15.0	12.6	17.4
Manukau	175	1945	6.9	5.4	8.4	7.1	5.5	8.6
Manurewa-Papakura	208	1224	15.8	12.8	18.8	15.4	12.4	18.4
East Cape	207	1310	15.4	12.6	18.1	15.2	12.5	18.0
Rotorua	249	1369	14.8	12.2	17.5	15.0	12.4	17.7
Whanganui Rangitikei Ruapehu	295	1227	20.0	17.6	22.4	20.1	17.8	22.5
Lower Hutt	284	1505	15.6	13.3	17.9	15.2	12.9	17.5
Spreydon-Heathcote	133	499	23.2	17.9	28.5	22.5	17.2	27.8
Invercargill	192	982	16.4	13.9	18.9	16.5	14.0	19.1
NZ	10225	52226	17.2	16.7	17.6	16.9	16.4	17.3

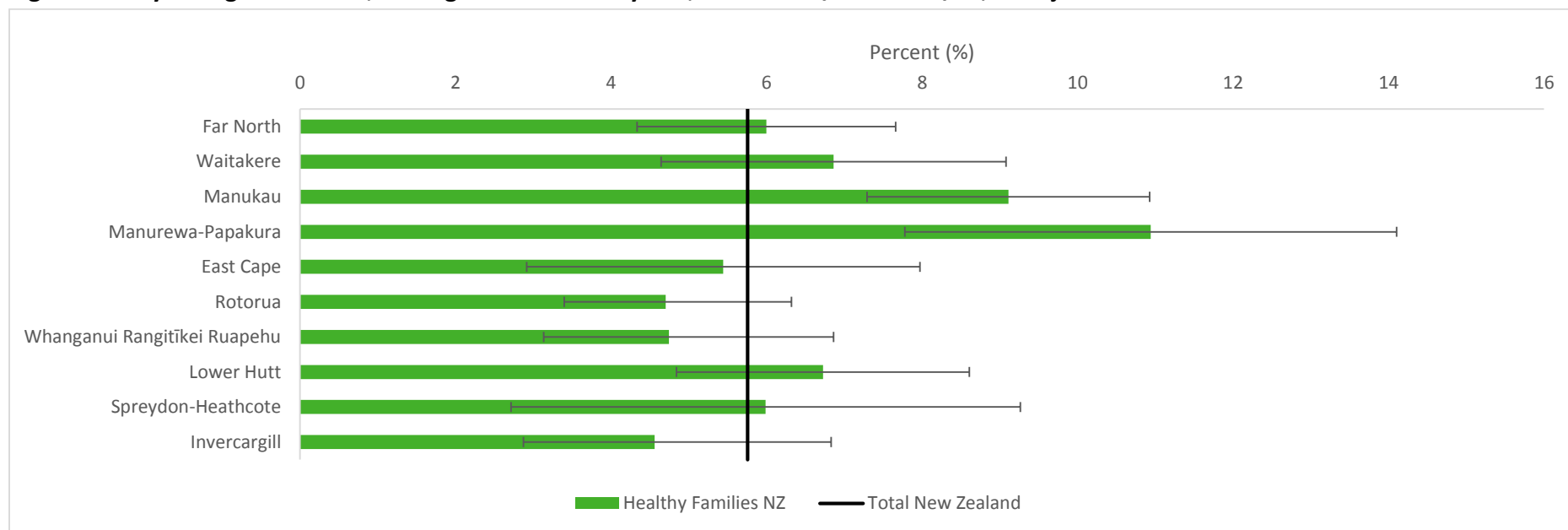
N.B. Missing data (e.g. who either refused to say, or didn't know) are excluded

N.B. Unadjusted results with counts <5, Adjusted results with counts <20, and Results with Relative Standard Errors >50% are suppressed

<sup>‡</sup> Calculation takes into account survey weights

\* Results with Relative Standard Errors between 30%-50% should be used with caution

**Figure 21. Psychological distress, among adults over 15 years, NZHS 2011/12 – 2014/15, unadjusted**



Adults from two of the locations are **more** likely to have experienced psychological distress in the previous four weeks than total New Zealand adults, namely Manukau and Manurewa-Papakura.

Adults from the remaining eight locations have similar rates of having experienced psychological distress in the previous four weeks to total New Zealand adults.

**Psychological distress**

**Adult - New Zealand Health Survey, 2011/12 - 2014/15**

	Number	Total Respondents	Unadjusted Percent <sup>‡</sup>	Unadjusted 95% Confidence Interval		Adjusted Percent <sup>‡</sup>	Adjusted 95% Confidence Interval	
Far North	80	1178	6.0	4.3	7.7	6.5	4.8	8.1
Waitakere	118	1401	6.9	4.6	9.1	7.1	4.8	9.3
Manukau	178	1921	9.1	7.3	10.9	9.2	7.4	11.0
Manurewa-Papakura	137	1207	10.9	7.8	14.1	11.0	7.8	14.2
East Cape	69	1303	5.4	2.9	8.0	5.6	3.1	8.2
Rotorua	68	1363	4.7	3.4	6.3	4.9	3.6	6.5
Whanganui Rangitikei Ruapehu	74	1226	4.7	3.1	6.9	4.7	3.1	6.9
Lower Hutt	123	1491	6.7	4.8	8.6	6.8	4.9	8.7
Spreydon-Heathcote	41	496	6.0	2.7	9.3	5.7	2.4	9.0
Invercargill	60	981	4.6	2.9	6.8	4.8	3.1	7.0
NZ	3498	51902	5.8	5.4	6.1	6.0	5.7	6.3

N.B. Missing data (e.g. who either refused to say, or didn't know) are excluded

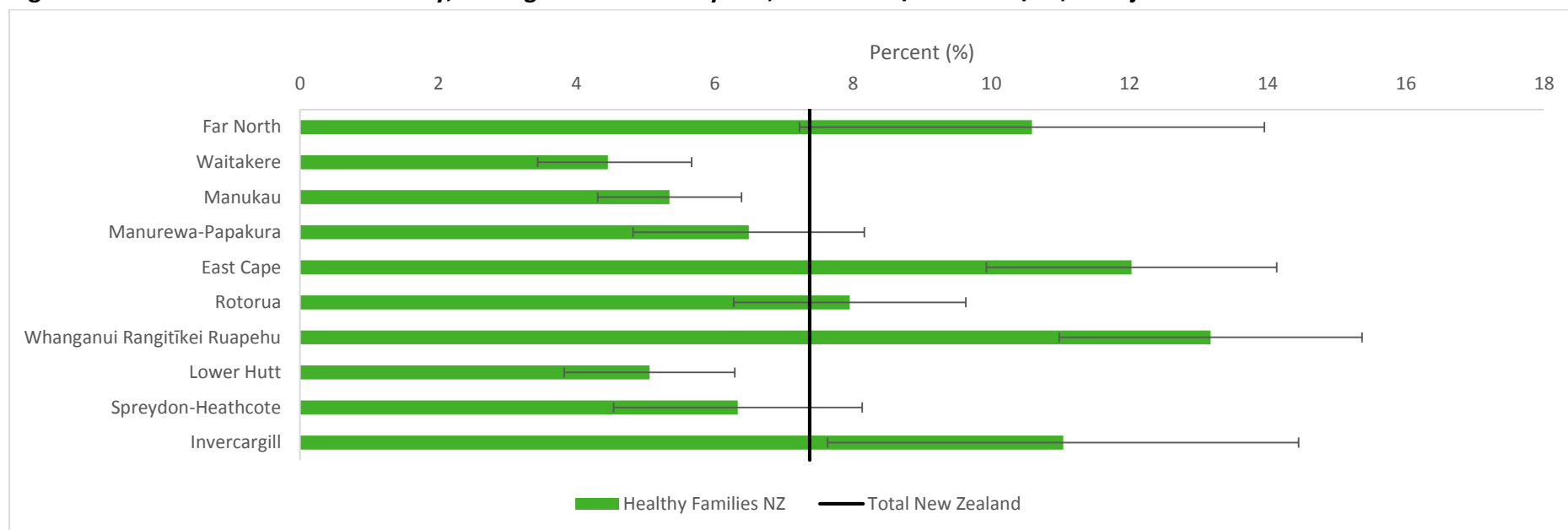
N.B. Unadjusted results with counts <5, Adjusted results with counts <20, and Results with Relative Standard Errors >50% are suppressed

<sup>‡</sup> Calculation takes into account survey weights

\* Results with Relative Standard Errors between 30%-50% should be used with caution

## Oral health

**Figure 22. Teeth removed due to decay, among adults over 15 years, NZHS 2011/12 – 2014/15, unadjusted**



Adults from three of the locations are **less** likely to have had one or more teeth removed in the past 12 months due to decay, infection or gum disease than total New Zealand adults, namely Waitakere, Manukau, and Lower Hutt.

Adults from two of the locations are **more** likely to have had one or more teeth removed in the past 12 months due to decay, infection or gum disease than total New Zealand adults, namely East Cape and Whanganui Rangitikei Ruapehu.

Adults from the remaining five locations have similar rates of having had one or more teeth removed in the past 12 months due to decay, infection or gum disease to total New Zealand adults.

**Teeth removed due to decay**

**Adult - New Zealand Health Survey, 2011/12 - 2014/15**

	Number	Total Respondents	Unadjusted Percent <sup>‡</sup>	Unadjusted 95% Confidence Interval		Adjusted Percent <sup>‡</sup>	Adjusted 95% Confidence Interval	
Far North	182	1184	10.6	7.2	14.0	5.5	2.2	8.9
Waitakere	89	1411	4.5	3.4	5.7	3.6	2.6	4.8
Manukau	145	1942	5.3	4.3	6.4	5.2	4.2	6.3
Manurewa-Papakura	99	1208	6.5	4.8	8.2	5.7	4.0	7.4
East Cape	187	1309	12.0	9.9	14.1	8.7	6.6	10.8
Rotorua	150	1355	8.0	6.3	9.6	6.1	4.4	7.8
Whanganui Rangitikei Ruapehu	208	1224	13.2	11.0	15.4	8.3	6.2	10.5
Lower Hutt	115	1457	5.1	3.8	6.3	3.9	2.6	5.1
Spreydon-Heathcote	43	498	6.3	4.5	8.1	4.0	2.2	5.8
Invercargill	145	978	11.0	7.6	14.4	7.4	4.0	10.8
NZ	5581	51815	7.4	7.0	7.8	5.1	4.7	5.5

N.B. Missing data (e.g. who either refused to say, or didn't know) are excluded

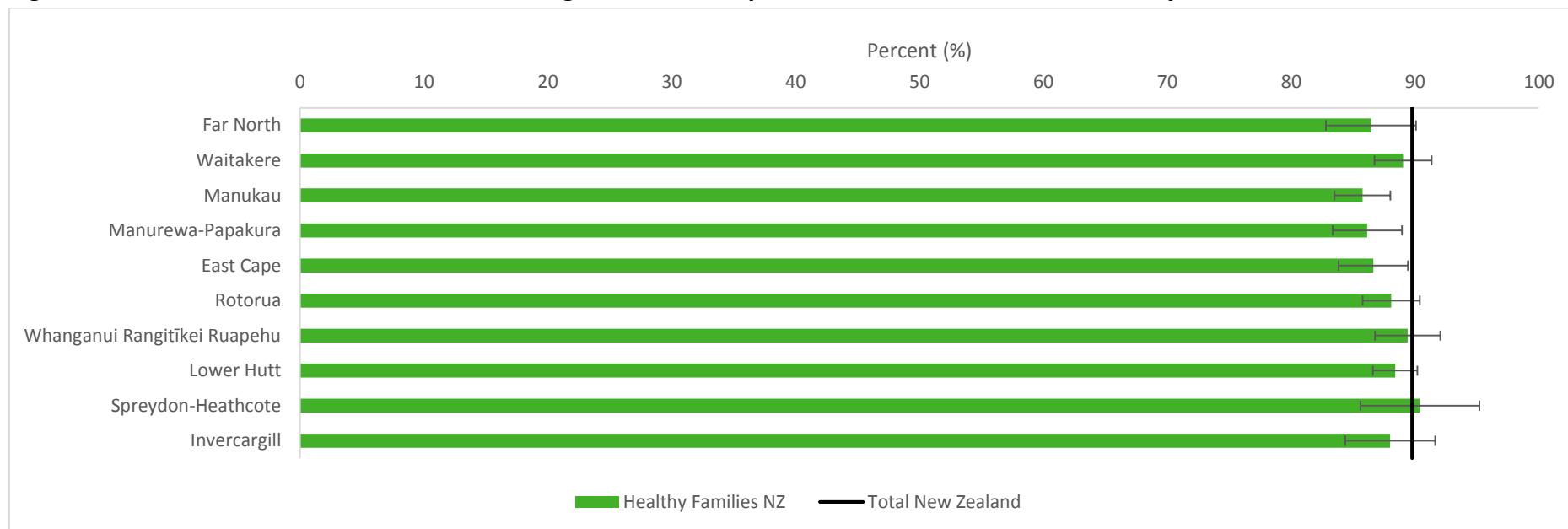
N.B. Unadjusted results with counts <5, Adjusted results with counts <20, and Results with Relative Standard Errors >50% are suppressed

<sup>‡</sup> Calculation takes into account survey weights

\* Results with Relative Standard Errors between 30%-50% should be used with caution

Health status

**Figure 23. Good or better self-rated health, among adults over 15 years, NZHS 2011/12 – 2014/15, unadjusted**



Adults from two of the locations are **less** likely to rate their health as excellent, very good or good than total New Zealand adults, namely Manukau and Manurewa-Papakura.

Adults from the remaining eight locations have similar rates of self-reported excellent, very good or good health to total New Zealand adults.



**Good or better self-rated health**

**Adult - New Zealand Health Survey, 2011/12 - 2014/15**

	Number	Total Respondents	Unadjusted Percent <sup>‡</sup>	Unadjusted 95% Confidence Interval		Adjusted Percent <sup>‡</sup>	Adjusted 95% Confidence Interval	
Far North	1006	1186	86.4	82.8	90.1	87.4	83.7	91.0
Waitakere	1228	1414	89.0	86.7	91.4	89.2	86.9	91.5
Manukau	1673	1956	85.8	83.5	88.0	85.5	83.3	87.8
Manurewa-Papakura	1033	1228	86.1	83.4	88.9	86.4	83.6	89.2
East Cape	1126	1310	86.6	83.8	89.4	87.4	84.6	90.2
Rotorua	1176	1370	88.1	85.8	90.4	88.9	86.6	91.2
Whanganui Rangitikei Ruapehu	1093	1229	89.4	86.8	92.0	90.8	88.2	93.5
Lower Hutt	1295	1497	88.4	86.6	90.2	88.9	87.1	90.7
Spreydon-Heathcote	442	501	90.4	85.6	95.2	91.1	86.3	95.9
Invercargill	843	982	88.0	84.4	91.6	88.7	85.1	92.3
NZ	45844	52312	89.8	89.4	90.1	90.3	90.0	90.7

N.B. Missing data (e.g. who either refused to say, or didn't know) are excluded

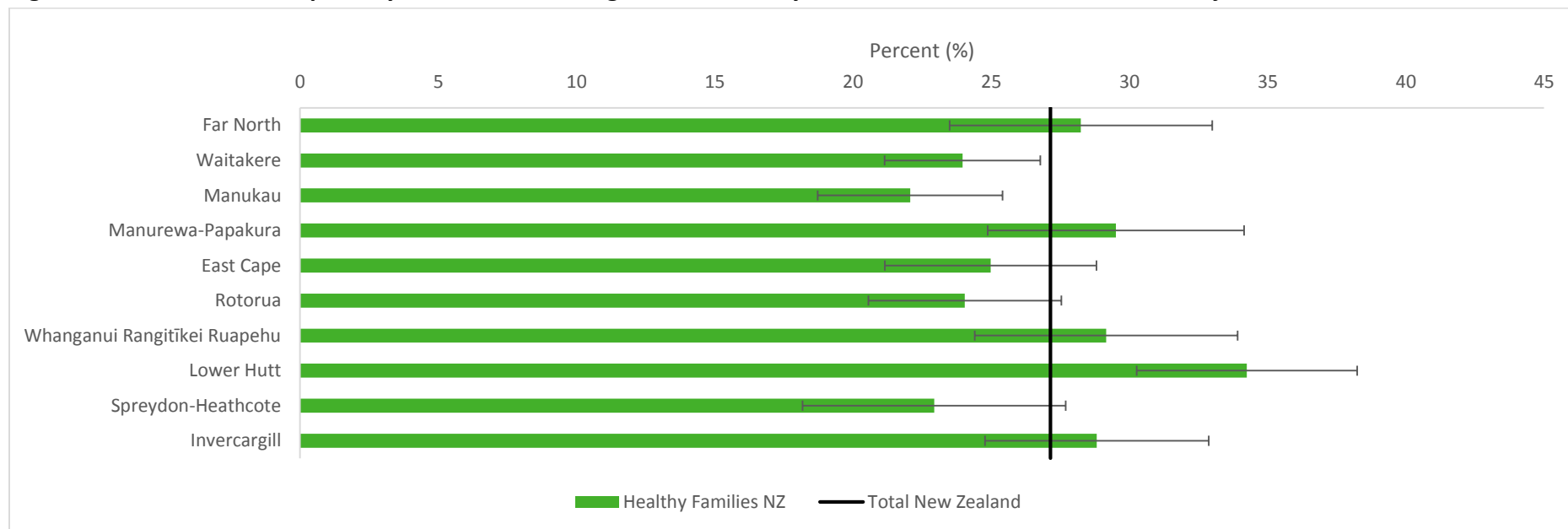
N.B. Unadjusted results with counts <5, Adjusted results with counts <20, and Results with Relative Standard Errors >50% are suppressed

<sup>‡</sup> Calculation takes into account survey weights

\* Results with Relative Standard Errors between 30%-50% should be used with caution

Access to primary health care

**Figure 24. Unmet need for primary health care, among adults over 15 years, NZHS 2011/12 – 2014/15, unadjusted**



Adults from one of the locations are **less** likely to have an unmet need for primary health care than total New Zealand adults, namely Manukau.

Adults from one of the locations are **more** likely to have an unmet need for primary health care than total New Zealand adults, namely Lower Hutt.

Adults from the remaining eight locations have similar rates of having an unmet need for primary health care to total New Zealand adults.

**Unmet need for primary health care**

**Adult - New Zealand Health Survey, 2011/12 - 2014/15**

	Number	Total Respondents	Unadjusted Percent <sup>‡</sup>	Unadjusted 95% Confidence Interval		Adjusted Percent <sup>‡</sup>	Adjusted 95% Confidence Interval	
Far North	393	1184	28.2	23.5	33.0	30.3	25.6	35.1
Waitakere	390	1414	24.0	21.1	26.8	23.5	20.6	26.3
Manukau	478	1946	22.1	18.7	25.4	22.7	19.4	26.0
Manurewa-Papakura	398	1220	29.5	24.9	34.1	29.9	25.3	34.5
East Cape	361	1310	25.0	21.2	28.8	25.9	22.1	29.7
Rotorua	351	1369	24.0	20.6	27.5	25.0	21.5	28.5
Whanganui Rangitikei Ruapehu	379	1227	29.2	24.4	33.9	31.1	26.4	35.9
Lower Hutt	598	1498	34.3	30.3	38.2	34.3	30.4	38.3
Spreydon-Heathcote	133	499	22.9	18.2	27.7	24.3	19.5	29.1
Invercargill	308	982	28.8	24.8	32.9	30.4	26.3	34.4
NZ	15870	52161	27.1	26.5	27.8	28.0	27.4	28.6

N.B. Missing data (e.g. who either refused to say, or didn't know) are excluded

N.B. Unadjusted results with counts <5, Adjusted results with counts <20, and Results with Relative Standard Errors >50% are suppressed

<sup>‡</sup> Calculation takes into account survey weights

\* Results with Relative Standard Errors between 30%-50% should be used with caution

## New Zealand Health Survey: Children

### *Additional methodological notes*

Table 6 shows the number of children from each Healthy Families NZ location who answered the NZHS during the four-year period 2011/12 to 2014/15. The number of children for whom data was available ranged from 995 in Manukau to 131 in Spreydon-Heathcote.

Unadjusted results were suppressed when the number of survey respondents with a particular risk factor or condition was less than five.

Age-standardisation was done using the direct method and the World Health Organisation (WHO) standard population. Age-standardised results with less than 20 people with a particular risk factor or condition were considered unreliable and suppressed (Australian Institute of Health and Welfare 2011). Adjusted results were also checked to ensure that the total respondents in each age group was greater than 30.

Results with a relative standard error over 50% have not been presented as these results are considered too unreliable for use, while results with a relative standard error between 30% and 50% should be used with caution (Ministry of Health 2016).

**Table 6. Number of children in survey, Healthy Families NZ location, 2011/12 – 2014/15**

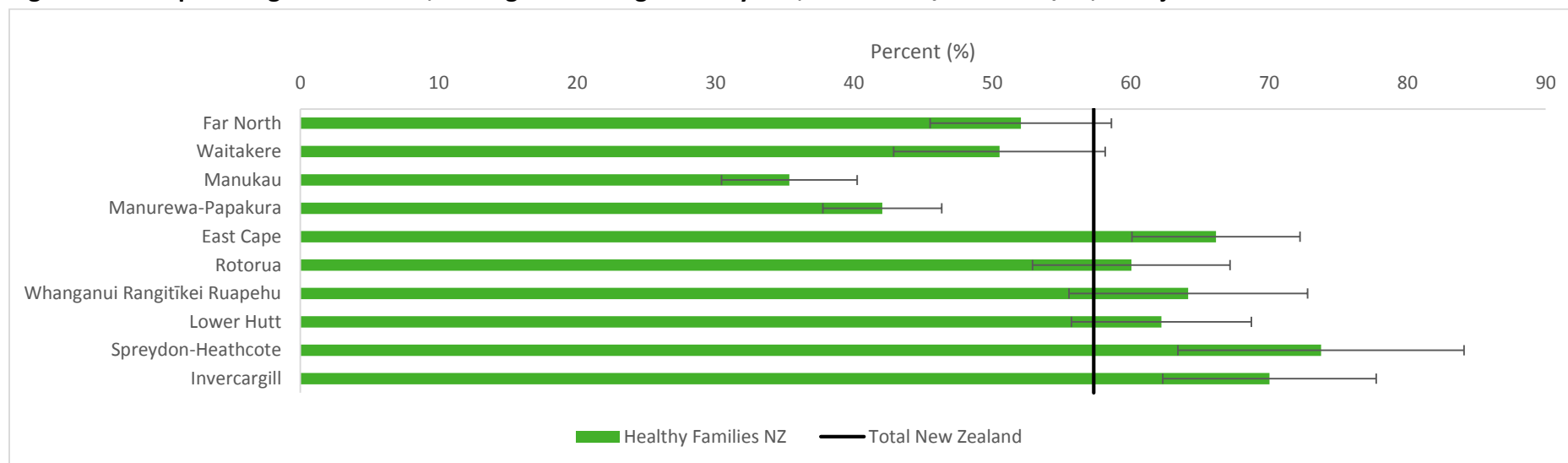
Healthy Families NZ Locations	Number of Children Surveyed
Far North	399
Waitakere	606
Manukau	995
Manurewa-Papakura	586
East Cape	544
Rotorua	470
Whanganui Rangitīkei Ruapehu	404
Lower Hutt	583
Spreydon-Heathcote	131
Invercargill	299
Rest of NZ	12573
<b>New Zealand</b>	<b>17590</b>

N.B. Missing data (e.g. who either refused to say, or didn't know) are excluded

## Findings

### Healthy eating

**Figure 25. Adequate vegetable intake, among children aged 2-14 years, NZHS 2011/12 – 2014/15, unadjusted**



Children from three of the locations are **more** likely to eat the recommended number of servings of vegetables for their age each day than total New Zealand children, namely East Cape, Spreydon-Heathcote, and Invercargill.

Children from two of the locations are **less** likely to eat the recommended number of servings of vegetables for their age each day than total New Zealand children, namely Manukau and Manurewa-Papakura.

Children from the remaining five locations have similar rates of eating the recommended number of servings of vegetables for their age each day to total New Zealand children.

**Adequate vegetable intake (2-14 years)**

**Child - New Zealand Health Survey, 2011/12 - 2014/15**

	Number	Total Respondents	Unadjusted Percent <sup>‡</sup>	Unadjusted 95% Confidence Interval		Adjusted Percent <sup>‡</sup>	Adjusted 95% Confidence Interval	
Far North	171	352	52.1	45.5	58.6	57.4	50.9	64.0
Waitakere	238	497	50.5	42.9	58.2	53.2	45.6	60.9
Manukau	292	816	35.3	30.4	40.2	37.6	32.7	42.5
Manurewa-Papakura	207	486	42.0	37.8	46.3	42.7	38.4	47.0
East Cape	281	434	66.2	60.1	72.3	67.9	61.8	74.0
Rotorua	233	399	60.1	52.9	67.2	62.6	55.4	69.7
Whanganui Rangitikei Ruapehu	206	342	64.2	55.5	72.8	65.6	57.0	74.2
Lower Hutt	285	483	62.2	55.7	68.7	63.7	57.2	70.2
Spreydon-Heathcote	80	110	73.8	63.4	84.1	74.0	63.7	84.4
Invercargill	176	245	70.0	62.3	77.8	72.4	64.6	80.1
<b>NZ</b>	<b>8144</b>	<b>14512</b>	<b>57.3</b>	<b>55.6</b>	<b>59.0</b>	<b>59.7</b>	<b>58.0</b>	<b>61.4</b>

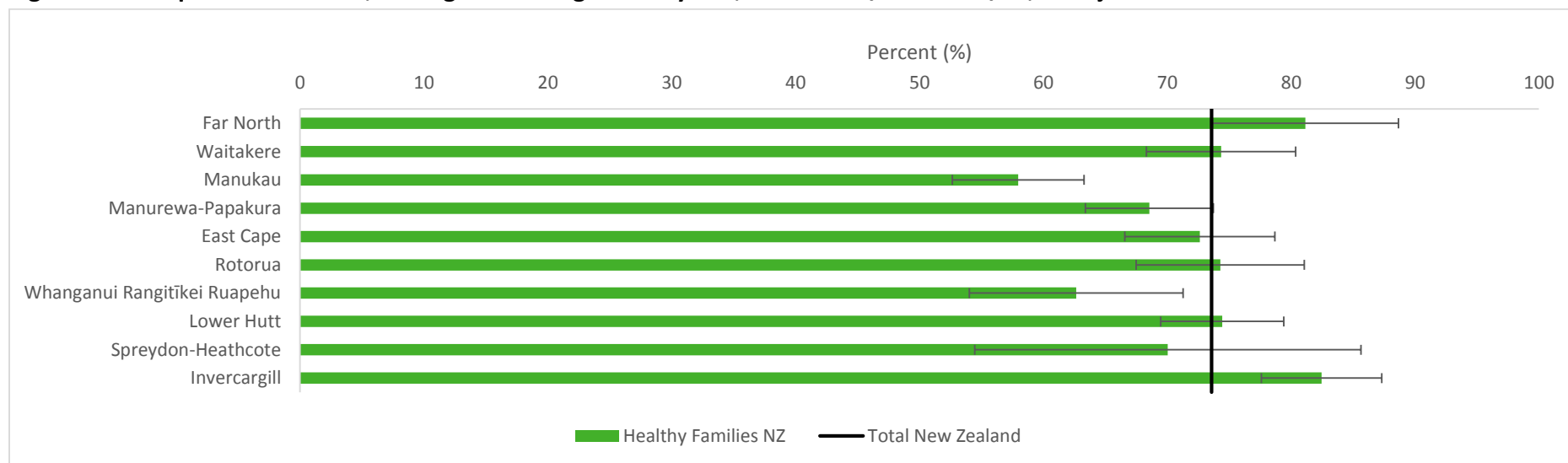
N.B. Missing data (e.g. who either refused to say, or didn't know) are excluded

N.B. Unadjusted results with counts <5, Adjusted results with counts <20, and Results with Relative Standard Errors >50% are suppressed

<sup>‡</sup> Calculation takes into account survey weights

\* Results with Relative Standard Errors between 30%-50% should be used with caution

**Figure 26. Adequate fruit intake, among children aged 2-14 years, NZHS 2011/12 – 2014/15, unadjusted**



Children from one of the locations are **more** likely to eat at least two servings of fruit each day than total New Zealand children, namely Invercargill.

Children from two of the locations are **less** likely to eat at least two servings of fruit each day than total New Zealand children, namely Manukau and Whanganui Rangitikei Ruapehu.

Children from the remaining seven locations have similar rates of eating at least two servings of fruit each day to total New Zealand children.



**Adequate fruit intake (2-14 years)**

**Child - New Zealand Health Survey, 2011/12 - 2014/15**

	Number	Total Respondents	Unadjusted Percent <sup>‡</sup>	Unadjusted 95% Confidence Interval		Adjusted Percent <sup>‡</sup>	Adjusted 95% Confidence Interval	
Far North	276	352	81.2	73.6	88.7	82.3	74.8	89.9
Waitakere	363	496	74.3	68.3	80.4	74.7	68.6	80.7
Manukau	483	821	58.0	52.6	63.3	57.9	52.5	63.2
Manurewa-Papakura	330	488	68.6	63.4	73.7	68.6	63.4	73.8
East Cape	311	435	72.6	66.6	78.7	72.9	66.9	79.0
Rotorua	298	400	74.3	67.5	81.1	74.1	67.3	80.9
Whanganui Rangitikei Ruapehu	218	342	62.6	54.0	71.3	61.4	52.8	70.0
Lower Hutt	346	487	74.4	69.5	79.4	75.5	70.5	80.5
Spreydon-Heathcote	71	109	70.0	54.5	85.6	70.2	54.6	85.8
Invercargill	194	248	82.5	77.6	87.3	82.3	77.4	87.1
NZ	10418	14534	73.6	72.5	74.7	74.1	73.0	75.1

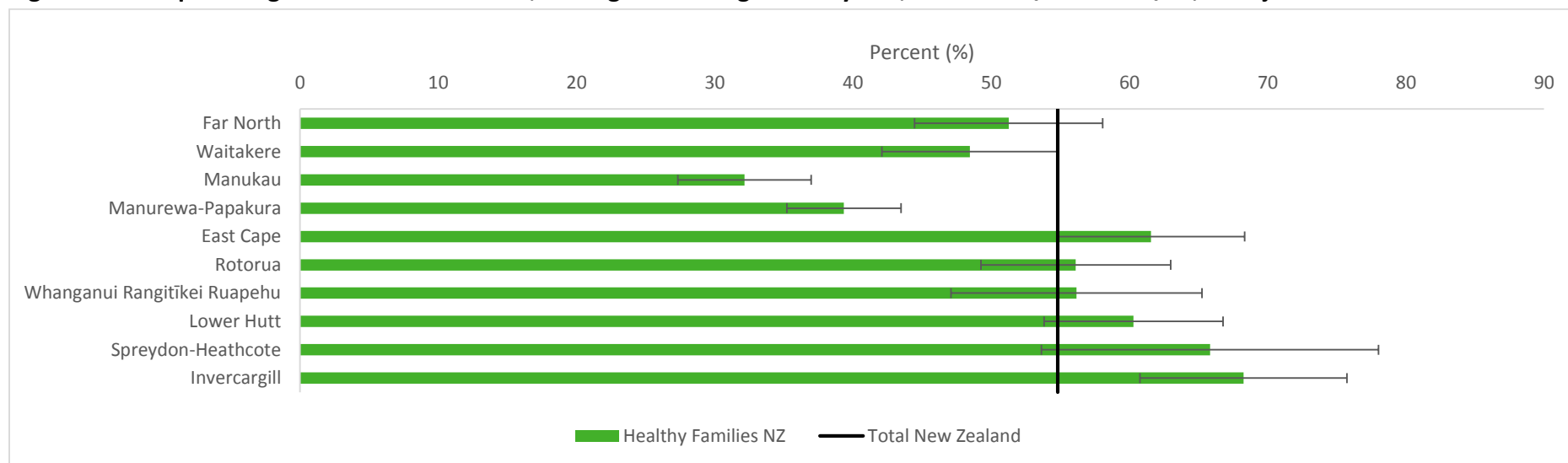
N.B. Missing data (e.g. who either refused to say, or didn't know) are excluded

N.B. Unadjusted results with counts <5, Adjusted results with counts <20, and Results with Relative Standard Errors >50% are suppressed

<sup>‡</sup> Calculation takes into account survey weights

\* Results with Relative Standard Errors between 30%-50% should be used with caution

**Figure 27. Adequate vegetable and fruit intake, among children aged 2-14 years, NZHS 2011/12 – 2014/15, unadjusted**



Children from one of the locations are **more** likely to meet both the vegetable and fruit intake guidelines than total New Zealand children, namely Invercargill.

Children from two of the locations are **less** likely to meet both the vegetable and fruit intake guidelines than total New Zealand children, namely Manukau and Manurewa-Papakura.

Children from the remaining seven locations have similar rates of meeting both the vegetable and fruit intake guidelines to total New Zealand.

**Adequate vegetable & fruit intake (2-14 years)**

**Child - New Zealand Health Survey, 2011/12 - 2014/15**

	Number	Total Respondents	Unadjusted Percent <sup>‡</sup>	Unadjusted 95% Confidence Interval		Adjusted Percent <sup>‡</sup>	Adjusted 95% Confidence Interval	
Far North	167	352	51.3	44.4	58.1	55.6	48.8	62.4
Waitakere	229	496	48.5	42.1	54.8	50.5	44.1	56.9
Manukau	265	815	32.2	27.3	37.0	33.5	28.6	38.3
Manurewa-Papakura	194	485	39.3	35.2	43.5	39.7	35.6	43.8
East Cape	261	434	61.6	54.8	68.3	61.9	55.1	68.7
Rotorua	222	399	56.1	49.3	63.0	57.3	50.4	64.2
Whanganui Rangitikei Ruapehu	185	342	56.2	47.1	65.2	55.2	46.1	64.3
Lower Hutt	273	483	60.3	53.8	66.8	61.1	54.6	67.5
Spreydon-Heathcote	71	109	65.8	53.6	78.0	65.3	53.1	77.5
Invercargill	169	245	68.3	60.8	75.7	69.5	62.0	77.0
NZ	7710	14487	54.8	53.2	56.4	56.0	54.3	57.6

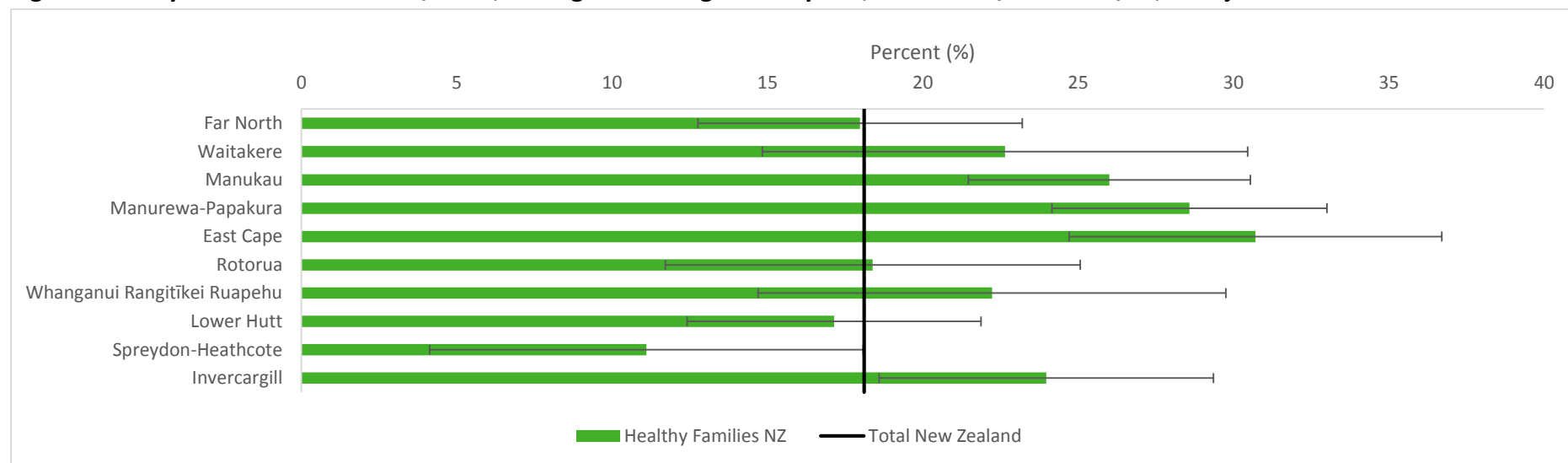
N.B. Missing data (e.g. who either refused to say, or didn't know) are excluded

N.B. Unadjusted results with counts <5, Adjusted results with counts <20, and Results with Relative Standard Errors >50% are suppressed

<sup>‡</sup> Calculation takes into account survey weights

\* Results with Relative Standard Errors between 30%-50% should be used with caution

**Figure 28. Fizzy drink intake 3+ times/week, among children aged 2-14 years, NZHS 2011/12 – 2014/15, unadjusted**



Children from three of the locations are **more** likely to have drunk ‘fizzy drink’ three or more times in the past week than total New Zealand children, namely Manukau, Manurewa-Papakura, and East Cape.

Children from the remaining seven locations have similar rates of having drunk ‘fizzy drink’ three or more times in the past week to total New Zealand children.

**Fizzy drink intake 3+ times/week (2-14 years)**

**Child - New Zealand Health Survey, 2011/12 - 2014/15**

	Number	Total Respondents	Unadjusted Percent <sup>‡</sup>	Unadjusted 95% Confidence Interval		Adjusted Percent <sup>‡</sup>	Adjusted 95% Confidence Interval	
Far North	78	353	18.0	12.8	23.2	17.1	11.9	22.4
Waitakere	109	497	22.6	14.8	30.5	21.4	13.6	29.2
Manukau	220	815	26.0	21.5	30.6	25.7	21.2	30.3
Manurewa-Papakura	139	484	28.6	24.2	33.0	28.2	23.7	32.6
East Cape	141	427	30.7	24.7	36.7	30.1	24.1	36.1
Rotorua	80	392	18.4	11.7	25.1	17.9	11.2	24.6
Whanganui Rangitikei Ruapehu	74	340	22.2	14.7	29.8	23.2	15.6	30.7
Lower Hutt	94	481	17.1	12.4	21.9	16.0	11.3	20.8
Spreydon-Heathcote	11	110	11.1	4.1	18.1	-	-	-
Invercargill	66	248	24.0	18.6	29.4	24.3	19.0	29.7
NZ	3014	14458	18.1	17.3	19.0	17.1	16.2	17.9

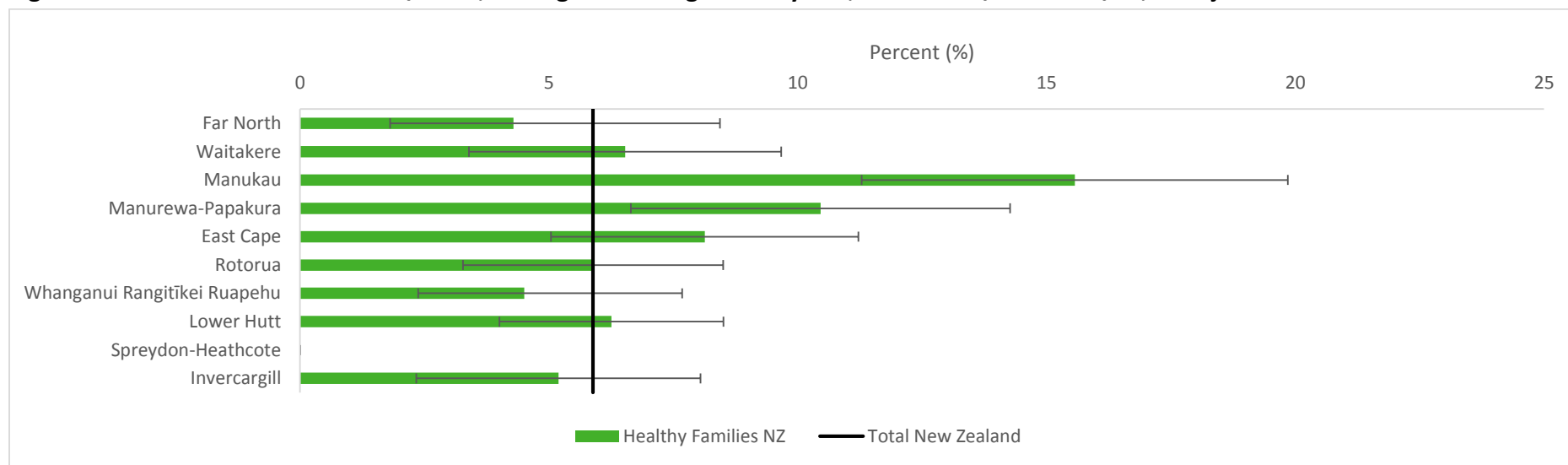
N.B. Missing data (e.g. who either refused to say, or didn't know) are excluded

N.B. Unadjusted results with counts <5, Adjusted results with counts <20, and Results with Relative Standard Errors >50% are suppressed

<sup>‡</sup> Calculation takes into account survey weights

\* Results with Relative Standard Errors between 30%-50% should be used with caution

**Figure 29. Fast food intake 3+ times/week, among children aged 2-14 years, NZHS 2011/12 – 2014/15, unadjusted**



Children from two of the locations are **more** likely to have eaten fast food three or more times in the past week than total New Zealand children, namely Manukau and Manurewa-Papakura.

Children from the remaining seven<sup>7</sup> locations have similar rates of having eaten fast food three or more times in the past week to total New Zealand children.

<sup>7</sup> Results for one location (i.e. Spreydon-Heathcote) is considered unreliable and has been suppressed.

**Fast food intake 3+ times/week (2-14 years)**

**Child - New Zealand Health Survey, 2011/12 - 2014/15**

	Number	Total Respondents	Unadjusted Percent <sup>‡</sup>	Unadjusted 95% Confidence Interval			Adjusted Percent <sup>‡</sup>	Adjusted 95% Confidence Interval		
Far North	20	353	4.3	1.8	8.4	*	5.1	2.7	9.3	*
Waitakere	43	498	6.5	3.4	9.7		6.4	3.2	9.5	
Manukau	133	819	15.6	11.3	19.9		15.5	11.2	19.8	
Manurewa-Papakura	63	486	10.5	6.6	14.3		10.5	6.7	14.4	
East Cape	38	430	8.1	5.0	11.2		8.0	4.9	11.1	
Rotorua	29	394	5.9	3.3	8.5		5.7	3.0	8.3	
Whanganui Rangitikei Ruapehu	19	340	4.5	2.4	7.7	*	-	-	-	
Lower Hutt	35	485	6.3	4.0	8.5		6.2	3.9	8.5	
Spreydon-Heathcote	<5	109	-	-	-		-	-	-	
Invercargill	17	248	5.2	2.3	8.0		-	-	-	
NZ	1035	14498	5.9	5.2	6.6		5.7	5.0	6.4	

N.B. Missing data (e.g. who either refused to say, or didn't know) are excluded

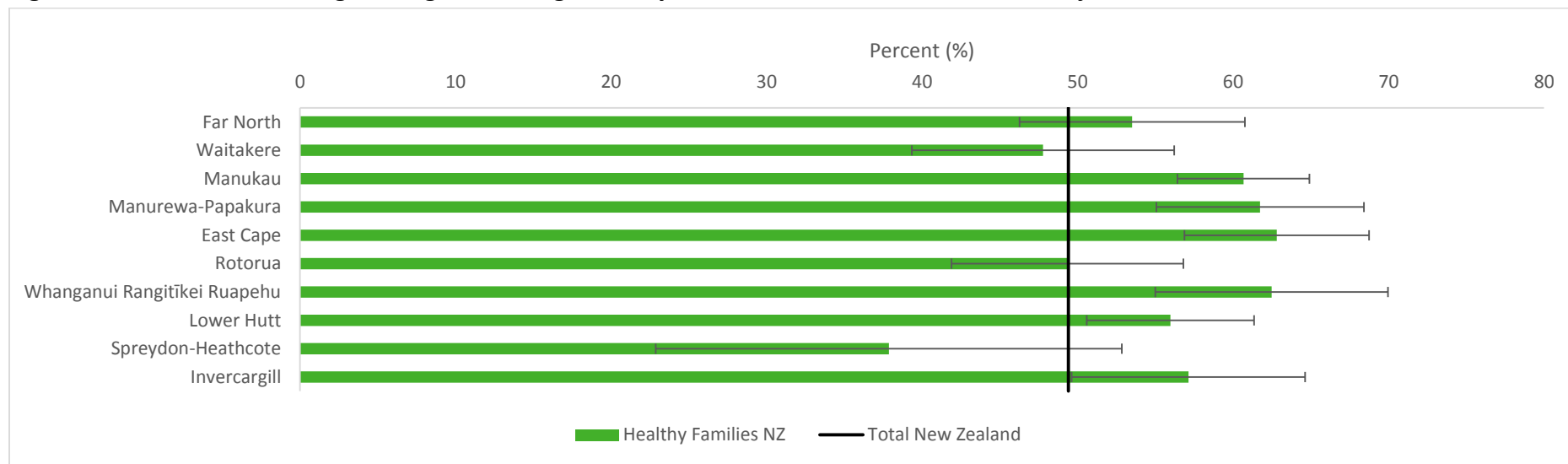
N.B. Unadjusted results with counts <5, Adjusted results with counts <20, and Results with Relative Standard Errors >50% are suppressed

<sup>‡</sup> Calculation takes into account survey weights

\* Results with Relative Standard Errors between 30%-50% should be used with caution

Physical activity

**Figure 30. Television watching, among children aged 2-14 years, NZHS 2011/12 – 2014/15, unadjusted**



Children from five of the locations were **more** likely to have watched two or more hours of television each day in the past week than total New Zealand children, namely Manukau, Manurewa-Papakura, East Cape, Whanganui Rangitikei Ruapehu, and Lower Hutt.

Children from the remaining five locations have similar rates of having watched two or more hours of television each day in the past week to total New Zealand children.



**Television watching (2-14 years)**

**Child - New Zealand Health Survey, 2011/12 - 2014/15**

	Number	Total Respondents	Unadjusted Percent <sup>‡</sup>	Unadjusted 95% Confidence Interval		Adjusted Percent <sup>‡</sup>	Adjusted 95% Confidence Interval	
Far North	200	348	53.5	46.3	60.8	52.0	44.7	59.2
Waitakere	245	495	47.8	39.4	56.2	46.9	38.5	55.4
Manukau	504	814	60.7	56.4	64.9	60.9	56.7	65.1
Manurewa-Papakura	305	485	61.7	55.1	68.4	61.8	55.1	68.5
East Cape	282	435	62.8	56.9	68.7	62.9	56.9	68.8
Rotorua	208	391	49.4	41.9	56.8	49.0	41.5	56.4
Whanganui Rangitikei Ruapehu	219	339	62.5	55.0	70.0	62.4	54.9	69.9
Lower Hutt	290	476	56.0	50.6	61.4	55.8	50.4	61.1
Spreydon-Heathcote	49	110	37.9	22.9	52.9	37.1	22.1	52.1
Invercargill	143	247	57.1	49.6	64.6	55.6	48.1	63.1
NZ	7735	14423	49.4	48.2	50.6	49.1	47.9	50.3

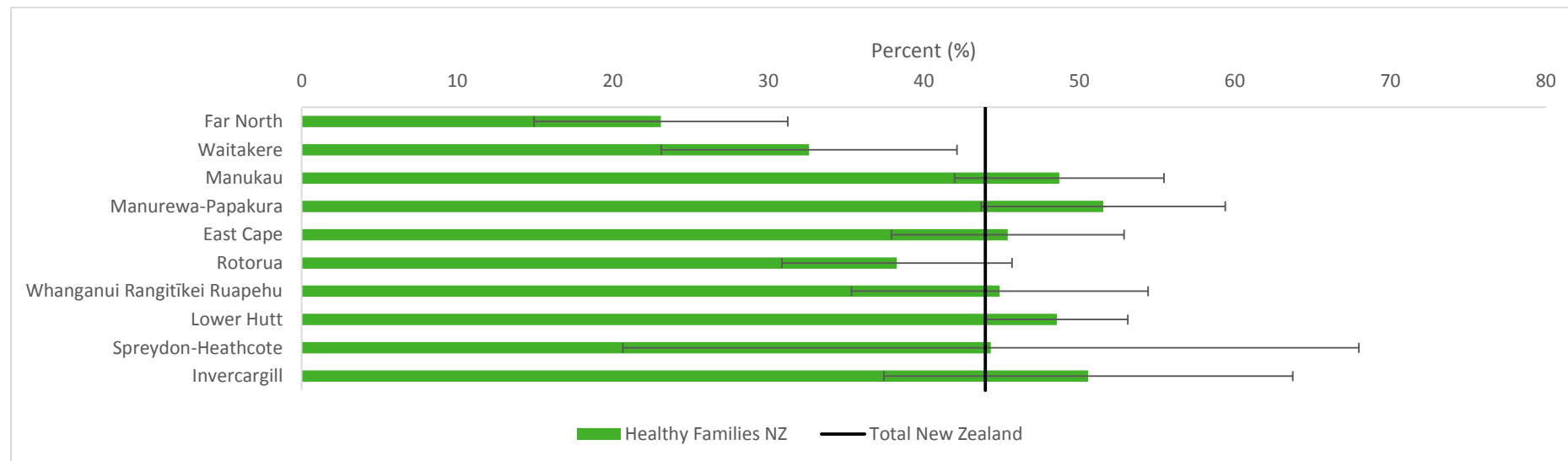
N.B. Missing data (e.g. who either refused to say, or didn't know) are excluded

N.B. Unadjusted results with counts <5, Adjusted results with counts <20, and Results with Relative Standard Errors >50% are suppressed

<sup>‡</sup> Calculation takes into account survey weights

\* Results with Relative Standard Errors between 30%-50% should be used with caution

**Figure 31. Active travel, among children aged 5-14 years, NZHS 2011/12 – 2014/15, unadjusted**



Children from one of the locations were **less** likely to use a physically active way to travel to and from school than the total New Zealand children, namely Far North.

Children from the remaining nine locations have similar rates of using a physically active way to travel to and from school to total New Zealand children.

**Active travel (5-14 years)**

**Child - New Zealand Health Survey, 2011/12 - 2014/15**

	Number	Total Respondents	Unadjusted Percent <sup>‡</sup>	Unadjusted 95% Confidence Interval		Adjusted Percent <sup>‡</sup>	Adjusted 95% Confidence Interval	
Far North	73	290	23.1	14.9	31.3	23.1	14.9	31.3
Waitakere	126	348	32.6	23.1	42.1	33.1	23.5	42.6
Manukau	288	598	48.7	42.0	55.4	48.9	42.2	55.6
Manurewa-Papakura	178	345	51.5	43.7	59.4	51.5	43.7	59.4
East Cape	142	319	45.4	37.9	52.9	45.7	38.3	53.2
Rotorua	126	288	38.3	30.9	45.7	39.2	31.7	46.6
Whanganui Rangitikei Ruapehu	114	256	44.9	35.3	54.4	45.5	35.9	55.0
Lower Hutt	166	358	48.6	44.0	53.1	48.6	44.0	53.1
Spreydon-Heathcote	36	77	44.3	20.6	68.0	43.4	19.8	67.1
Invercargill	79	182	50.6	37.4	63.7	51.2	38.1	64.4
NZ	4871	10744	44.0	42.0	45.9	44.0	42.0	46.0

N.B. Missing data (e.g. who either refused to say, or didn't know) are excluded

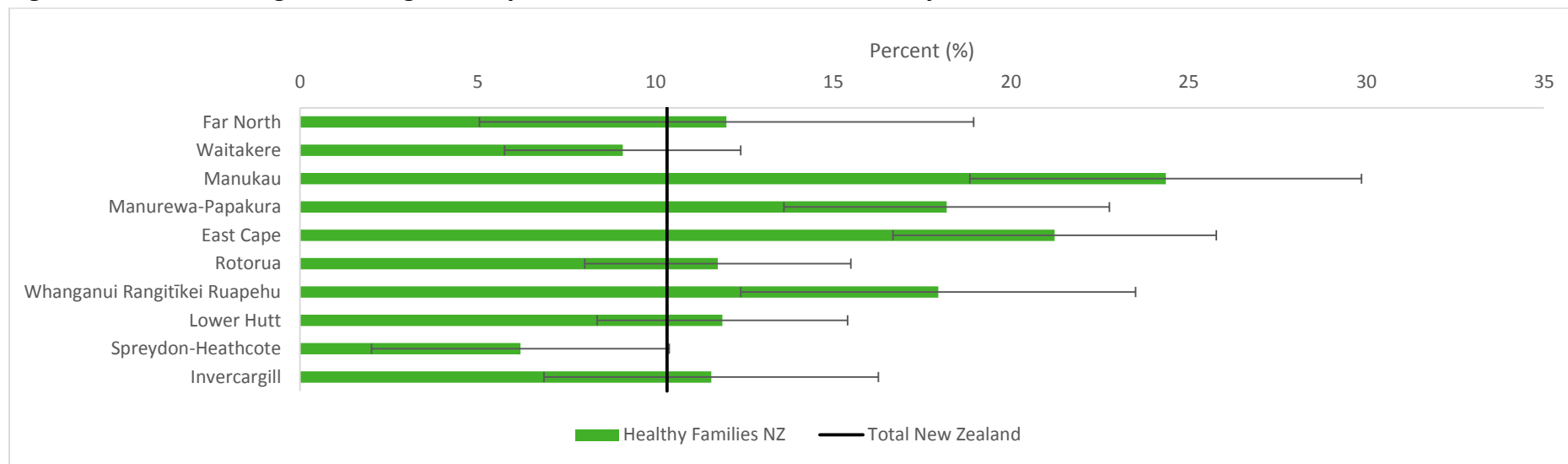
N.B. Unadjusted results with counts <5, Adjusted results with counts <20, and Results with Relative Standard Errors >50% are suppressed

<sup>‡</sup> Calculation takes into account survey weights

\* Results with Relative Standard Errors between 30%-50% should be used with caution

Body mass index

**Figure 32. Obese, among children aged 2-14 years, NZHS 2011/12 – 2014/15, unadjusted**



Children from four of the locations are **more** likely to be obese than total New Zealand children, namely Manukau, Manurewa-Papakura, East Cape, and Whanganui Rangitikei Ruapehu.

Children from the remaining six locations have similar rates of obesity to total New Zealand children.

**Obese (2-14 years)**

**Child - New Zealand Health Survey, 2011/12 - 2014/15**

	Number	Total Respondents	Unadjusted Percent <sup>‡</sup>	Unadjusted 95% Confidence Interval		Adjusted Percent <sup>‡</sup>	Adjusted 95% Confidence Interval		
Far North	50	315	12.0	5.0	19.0	11.1	4.2	18.1	*
Waitakere	55	426	9.1	5.8	12.4	8.9	5.6	12.3	
Manukau	178	688	24.4	18.8	29.9	24.2	18.7	29.7	
Manurewa-Papakura	91	411	18.2	13.6	22.8	18.0	13.4	22.6	
East Cape	96	375	21.2	16.7	25.8	21.2	16.6	25.7	
Rotorua	48	375	11.8	8.0	15.5	12.1	8.4	15.9	
Whanganui Rangitikei Ruapehu	63	294	18.0	12.4	23.5	17.8	12.3	23.4	
Lower Hutt	61	408	11.9	8.4	15.4	12.3	8.8	15.8	
Spreydon-Heathcote	9	102	6.2	2.0	10.4	-	-	-	
Invercargill	30	230	11.6	6.9	16.3	11.3	6.6	16.0	
<b>NZ</b>	<b>1784</b>	<b>12882</b>	<b>10.3</b>	<b>9.5</b>	<b>11.2</b>	<b>10.2</b>	<b>9.4</b>	<b>11.0</b>	

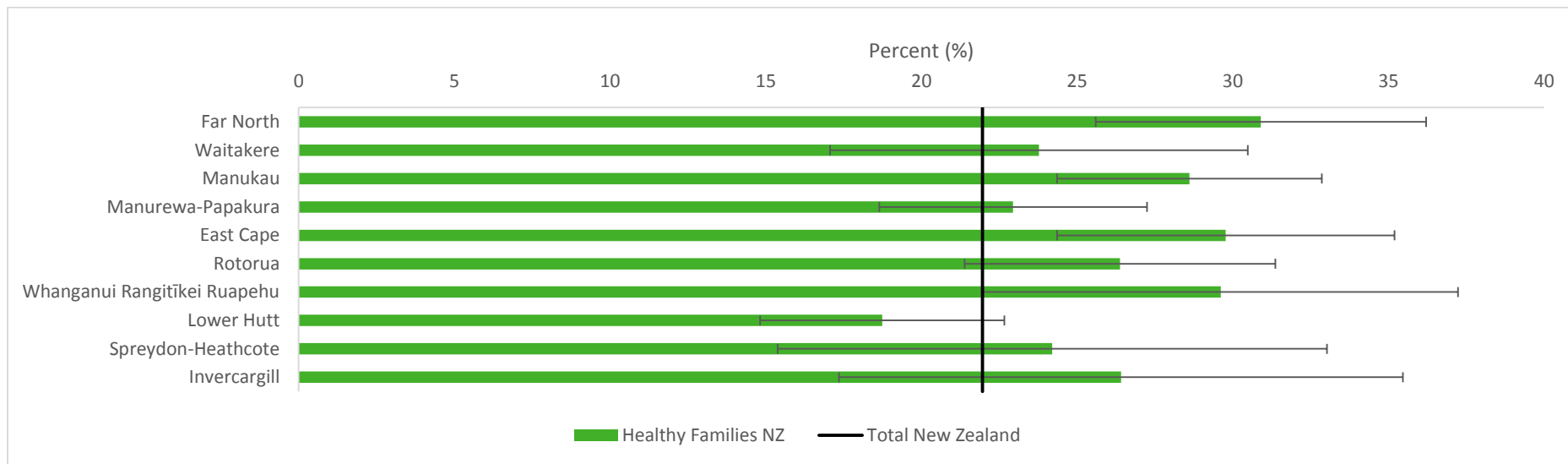
N.B. Missing data (e.g. who either refused to say, or didn't know) are excluded

N.B. Unadjusted results with counts <5, Adjusted results with counts <20, and Results with Relative Standard Errors >50% are suppressed

<sup>‡</sup> Calculation takes into account survey weights

\* Results with Relative Standard Errors between 30%-50% should be used with caution

**Figure 33. Overweight, among children aged 2-14 years, NZHS 2011/12 – 2014/15, unadjusted**



Children from three of the locations are **more** likely to be overweight than total New Zealand children, namely Far North, Manukau, and East Cape.

Children from the remaining seven locations have similar rates of being overweight to total New Zealand children.

**Overweight (2-14 years)**

**Child - New Zealand Health Survey, 2011/12 - 2014/15**

	Number	Total Respondents	Unadjusted Percent <sup>‡</sup>	Unadjusted 95% Confidence Interval		Adjusted Percent <sup>‡</sup>	Adjusted 95% Confidence Interval	
Far North	89	315	30.9	25.6	36.2	29.4	24.1	34.7
Waitakere	103	426	23.8	17.1	30.5	24.3	17.6	31.0
Manukau	182	688	28.6	24.4	32.9	28.6	24.3	32.8
Manurewa-Papakura	101	410	22.9	18.6	27.2	22.7	18.4	27.0
East Cape	107	375	29.8	24.4	35.2	29.3	23.9	34.7
Rotorua	105	374	26.4	21.4	31.4	26.6	21.6	31.6
Whanganui Rangitikei Ruapehu	80	294	29.6	22.0	37.2	30.0	22.4	37.7
Lower Hutt	88	408	18.7	14.8	22.7	18.1	14.2	22.1
Spreydon-Heathcote	24	102	24.2	15.4	33.0	23.7	14.9	32.5
Invercargill	57	230	26.4	17.4	35.5	25.1	16.0	34.1
NZ	3034	12868	22.0	21.0	23.0	21.9	20.9	22.9

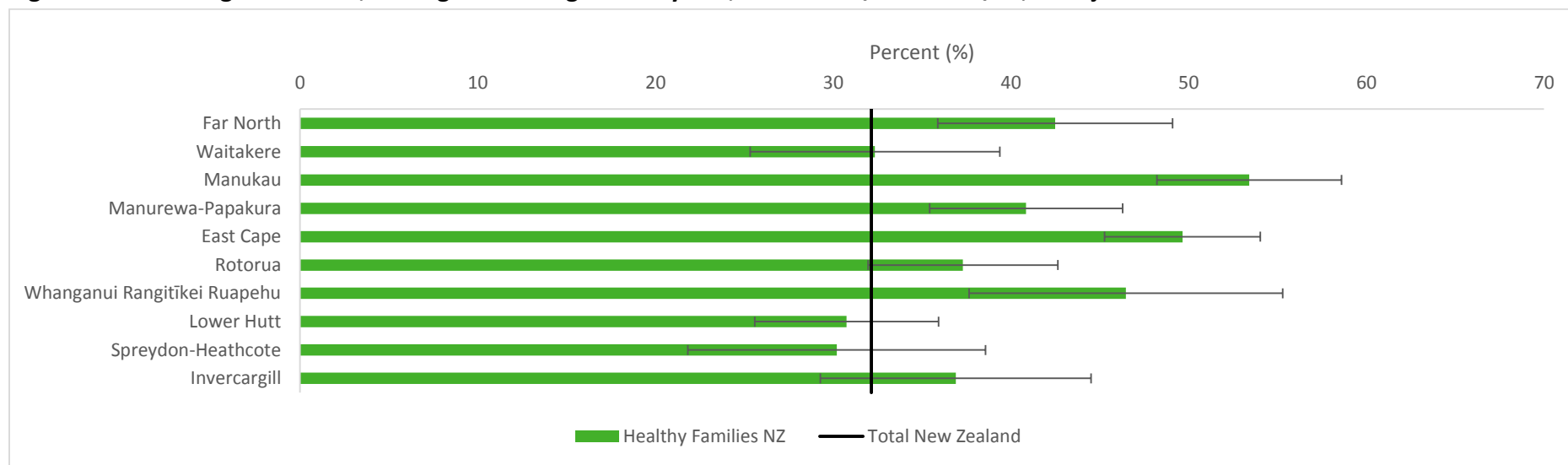
N.B. Missing data (e.g. who either refused to say, or didn't know) are excluded

N.B. Unadjusted results with counts <5, Adjusted results with counts <20, and Results with Relative Standard Errors >50% are suppressed

<sup>‡</sup> Calculation takes into account survey weights

\* Results with Relative Standard Errors between 30%-50% should be used with caution

**Figure 34. Overweight or obese, among children aged 2-14 years, NZHS 2011/12 – 2014/15, unadjusted**



Children from five of the locations are **more** likely to be either overweight or obese than total New Zealand children, namely Far North, Manukau, Manurewa-Papakura, East Cape, and Whanganui Rangitikei Ruapehu.

Children from the remaining five locations have similar rates of being either overweight or obese to total New Zealand children.



**Overweight/Obese (2-14 years)**

**Child - New Zealand Health Survey, 2011/12 - 2014/15**

	Number	Total Respondents	Unadjusted Percent <sup>‡</sup>	Unadjusted 95% Confidence Interval		Adjusted Percent <sup>‡</sup>	Adjusted 95% Confidence Interval	
Far North	138	315	42.5	35.9	49.1	40.3	33.7	46.9
Waitakere	155	426	32.4	25.3	39.4	32.6	25.6	39.6
Manukau	362	688	53.4	48.2	58.6	53.3	48.1	58.5
Manurewa-Papakura	191	411	40.9	35.4	46.3	40.4	34.9	45.8
East Cape	200	375	49.7	45.3	54.0	49.3	44.9	53.7
Rotorua	150	375	37.3	32.0	42.6	37.7	32.4	43.1
Whanganui Rangitikei Ruapehu	141	294	46.5	37.6	55.3	46.4	37.6	55.2
Lower Hutt	151	408	30.8	25.6	35.9	30.5	25.3	35.6
Spreydon-Heathcote	33	102	30.2	21.8	38.6	29.9	21.5	38.3
Invercargill	85	230	36.9	29.3	44.5	35.1	27.5	42.7
<b>NZ</b>	<b>4795</b>	<b>12882</b>	<b>32.1</b>	<b>30.9</b>	<b>33.4</b>	<b>31.9</b>	<b>30.6</b>	<b>33.1</b>

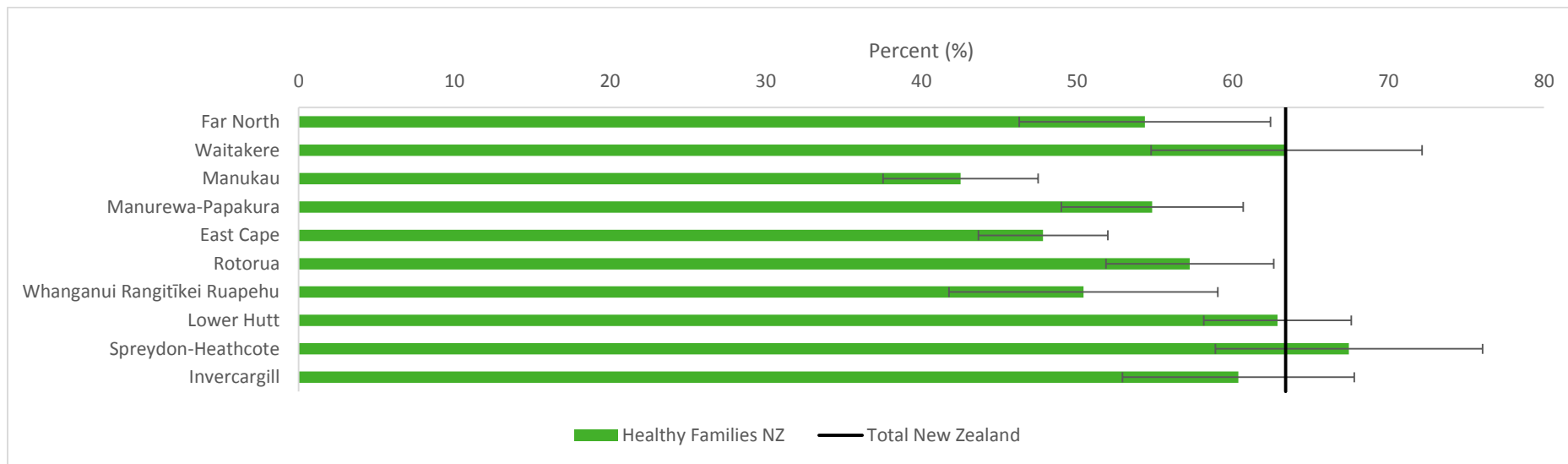
N.B. Missing data (e.g. who either refused to say, or didn't know) are excluded

N.B. Unadjusted results with counts <5, Adjusted results with counts <20, and Results with Relative Standard Errors >50% are suppressed

<sup>‡</sup> Calculation takes into account survey weights

\* Results with Relative Standard Errors between 30%-50% should be used with caution

**Figure 35. Healthy weight, among children aged 2-14 years, NZHS 2011/12 – 2014/15, unadjusted**



Children from four of the locations are **less** likely to be a healthy weight than total New Zealand children, namely Manukau, Manurewa-Papakura, East Cape, Whanganui Rangitikei Ruapehu.

Children from the remaining six locations have similar rates of being a healthy weight to total New Zealand children.

**Healthy weight (2-14 years)**

**Child - New Zealand Health Survey, 2011/12 - 2014/15**

	Number	Total Respondents	Unadjusted Percent <sup>‡</sup>	Unadjusted 95% Confidence Interval		Adjusted Percent <sup>‡</sup>	Adjusted 95% Confidence Interval	
Far North	167	315	54.4	46.3	62.4	56.6	48.5	64.7
Waitakere	255	426	63.5	54.8	72.2	63.5	54.8	72.2
Manukau	303	688	42.5	37.5	47.5	42.5	37.5	47.5
Manurewa-Papakura	202	411	54.8	49.0	60.7	55.2	49.4	61.0
East Cape	167	375	47.8	43.7	52.0	47.9	43.8	52.1
Rotorua	209	375	57.2	51.9	62.6	56.6	51.2	61.9
Whanganui Rangitikei Ruapehu	142	294	50.4	41.8	59.1	50.5	41.9	59.1
Lower Hutt	239	408	62.9	58.1	67.6	62.9	58.2	67.7
Spreydon-Heathcote	65	102	67.5	58.9	76.1	67.8	59.2	76.4
Invercargill	139	230	60.4	52.9	67.8	62.5	55.0	69.9
<b>NZ</b>	<b>7566</b>	<b>12882</b>	<b>63.4</b>	<b>62.1</b>	<b>64.7</b>	<b>63.5</b>	<b>62.2</b>	<b>64.8</b>

N.B. Missing data (e.g. who either refused to say, or didn't know) are excluded

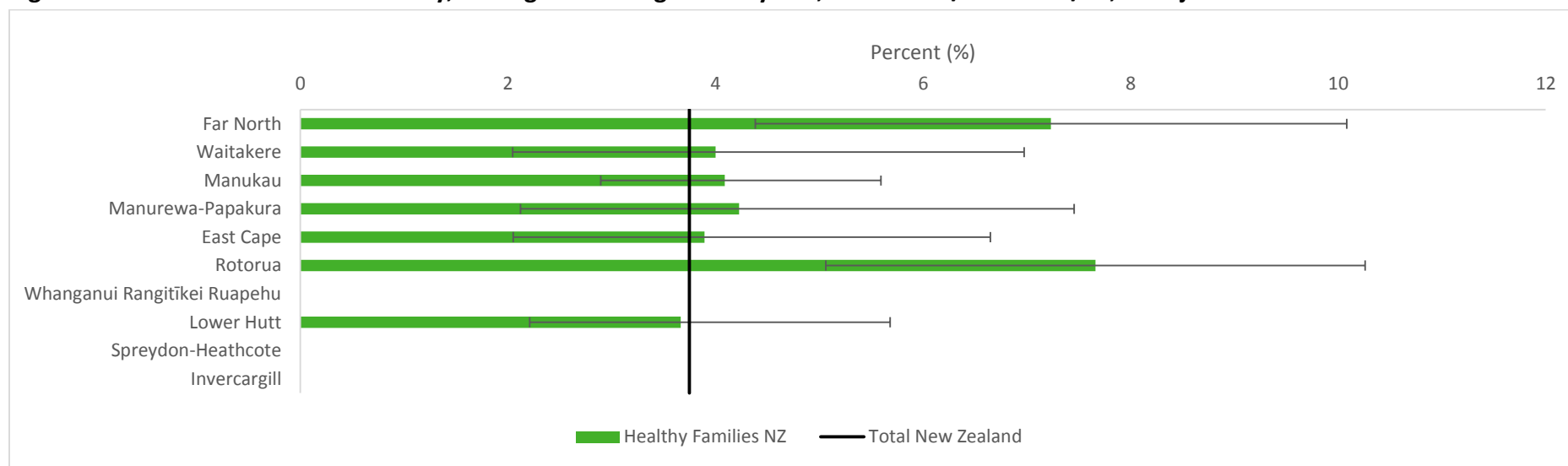
N.B. Unadjusted results with counts <5, Adjusted results with counts <20, and Results with Relative Standard Errors >50% are suppressed

<sup>‡</sup> Calculation takes into account survey weights

\* Results with Relative Standard Errors between 30%-50% should be used with caution

## Oral health

**Figure 36. Teeth removed due to decay, among children aged 1-14 years, NZHS 2011/12 – 2014/15, unadjusted**



Children from two of the locations are **more** likely to have had one or more teeth removed in the past 12 months due to decay, infection or gum disease than total New Zealand children, namely Far North and Rotorua.

Children from the remaining five<sup>8</sup> locations have similar rates of having had one or more teeth removed in the past 12 months due to decay, infection or gum disease to total New Zealand children.

<sup>8</sup> Results for three locations (i.e. Whanganui Rangitikei Ruapehu, Spreydon-Heathcote, and Invercargill) are considered unreliable and have been suppressed.

**Teeth removed due to decay (1-14 years)**

**Child - New Zealand Health Survey, 2011/12 - 2014/15**

	Number	Total Respondents	Unadjusted Percent <sup>‡</sup>	Unadjusted 95% Confidence Interval			Adjusted Percent <sup>‡</sup>	Adjusted 95% Confidence Interval		
Far North	30	375	7.2	4.4	10.1		6.0	3.2	8.9	
Waitakere	18	554	4.0	2.0	7.0	*	-	-	-	
Manukau	39	902	4.1	2.9	5.6		4.0	2.8	5.5	
Manurewa-Papakura	22	541	4.2	2.1	7.5	*	4.4	2.3	7.6	*
East Cape	22	499	3.9	2.1	6.6	*	3.8	2.0	6.6	*
Rotorua	35	435	7.7	5.1	10.3		7.2	4.6	9.8	
Whanganui Rangitikei Ruapehu	6	370	-	-	-		-	-	-	
Lower Hutt	23	539	3.7	2.2	5.7		3.6	2.1	5.6	
Spreydon-Heathcote	6	116	-	-	-		-	-	-	
Invercargill	7	272	-	-	-		-	-	-	
NZ	648	16103	3.7	3.4	4.2		3.6	3.2	4.0	

N.B. Missing data (e.g. who either refused to say, or didn't know) are excluded

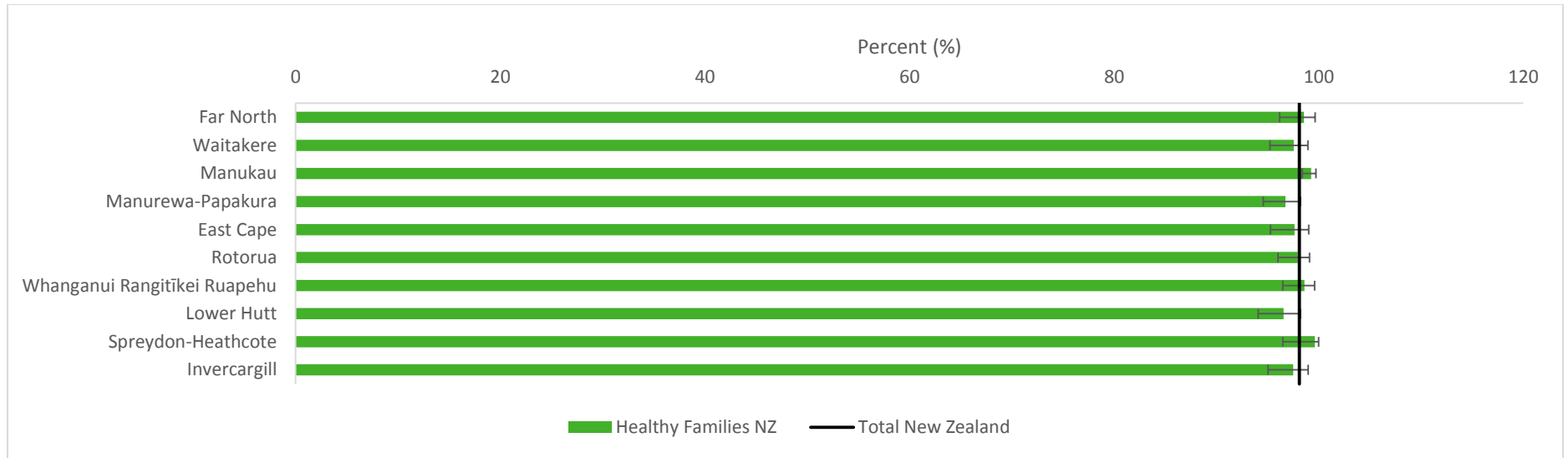
N.B. Unadjusted results with counts <5, Adjusted results with counts <20, and Results with Relative Standard Errors >50% are suppressed

<sup>‡</sup> Calculation takes into account survey weights

\* Results with Relative Standard Errors between 30%-50% should be used with caution

Health status

**Figure 37. Good or better parent-rated health, among children aged 0-14 years, NZHS 2011/12 – 2014/15, unadjusted**



Children from all of the locations have similar rates of parent-rated good, very good or excellent health to total New Zealand children.

**Good or better parent-rated health**

**Child - New Zealand Health Survey, 2011/12 - 2014/15**

	Number	Total Respondents	Unadjusted Percent <sup>‡</sup>	Unadjusted 95% Confidence Interval		Adjusted Percent <sup>‡</sup>	Adjusted 95% Confidence Interval	
Far North	389	399	98.6	96.2	99.6	98.5	96.1	99.5
Waitakere	580	603	97.6	95.2	98.9	97.5	95.1	98.8
Manukau	960	970	99.3	98.4	99.7	99.2	98.3	99.7
Manurewa-Papakura	569	586	96.7	94.6	98.2	96.7	94.5	98.2
East Cape	533	544	97.6	95.3	99.0	97.6	95.2	99.0
Rotorua	452	462	98.0	96.0	99.1	98.0	96.0	99.1
Whanganui Rangitikei Ruapehu	398	404	98.6	96.5	99.6	98.6	96.5	99.6
Lower Hutt	544	562	96.6	94.1	98.2	96.5	94.0	98.1
Spreydon-Heathcote	130	131	99.6	96.5	100.0	99.6	96.5	100.0
Invercargill	287	299	97.5	95.1	99.0	97.5	95.0	98.9
<b>NZ</b>	<b>17090</b>	<b>17474</b>	<b>98.1</b>	<b>97.8</b>	<b>98.4</b>	<b>98.1</b>	<b>97.8</b>	<b>98.4</b>

N.B. Missing data (e.g. who either refused to say, or didn't know) are excluded

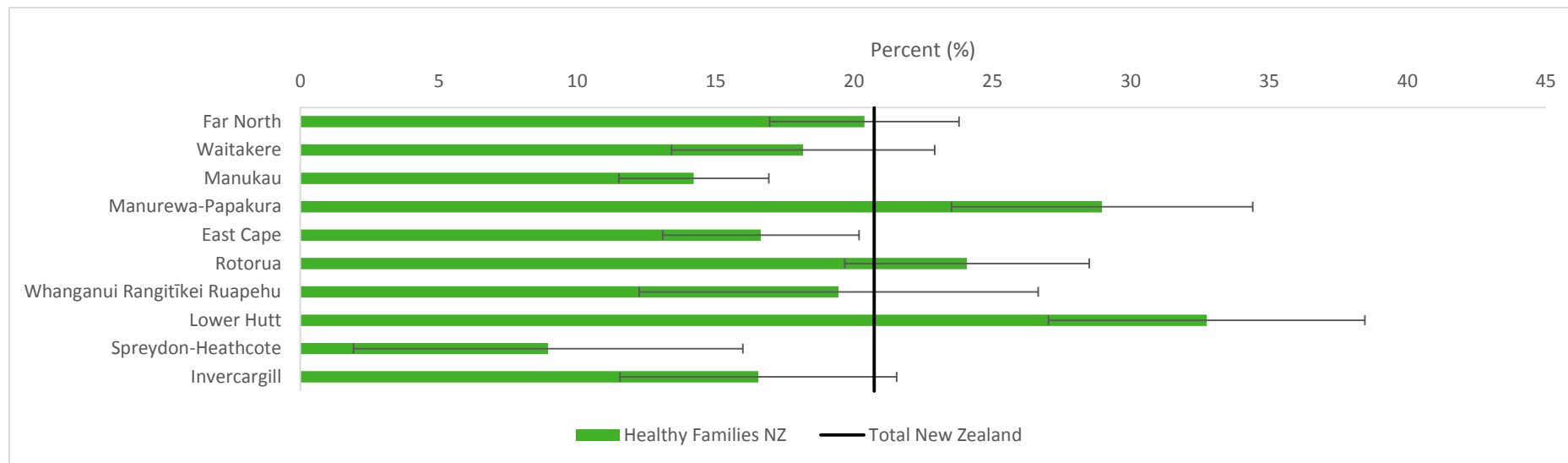
N.B. Unadjusted results with counts <5, Adjusted results with counts <20, and Results with Relative Standard Errors >50% are suppressed

<sup>‡</sup> Calculation takes into account survey weights

\* Results with Relative Standard Errors between 30%-50% should be used with caution

## Access to primary health care

**Figure 38. Unmet need for primary health care, among children aged 0-14 years, NZHS 2011/12 – 2014/15, unadjusted**



Children from two of the locations are **less** likely to have an unmet need for primary health care than total New Zealand children, namely Manukau and Spreydon-Heathcote.

Children in two of the locations are **more** likely to have an unmet need for primary health care than total New Zealand children, namely Manurewa-Papakura and Lower Hutt.

Children in the remaining six locations have similar rates of unmet need for primary health care to total New Zealand children.



**Unmet need for primary health care**

**Child - New Zealand Health Survey, 2011/12 - 2014/15**

	Number	Total Respondents	Unadjusted Percent <sup>‡</sup>	Unadjusted 95% Confidence Interval		Adjusted Percent <sup>‡</sup>	Adjusted 95% Confidence Interval	
Far North	80	397	20.4	17.0	23.8	20.5	17.1	23.9
Waitakere	99	605	18.2	13.4	22.9	18.0	13.3	22.8
Manukau	120	989	14.2	11.5	16.9	14.0	11.3	16.7
Manurewa-Papakura	163	581	29.0	23.5	34.4	29.4	23.9	34.8
East Cape	77	541	16.6	13.1	20.2	16.5	13.0	20.1
Rotorua	105	467	24.1	19.7	28.5	23.9	19.5	28.3
Whanganui Rangitikei Ruapehu	60	404	19.4	12.2	26.7	19.4	12.2	26.6
Lower Hutt	187	577	32.8	27.0	38.5	32.9	27.2	38.7
Spreydon-Heathcote	16	131	9.0	1.9	16.0	-	-	-
Invercargill	57	298	16.5	11.5	21.5	16.6	11.6	21.6
<b>NZ</b>	<b>3688</b>	<b>17482</b>	<b>20.7</b>	<b>19.8</b>	<b>21.6</b>	<b>20.7</b>	<b>19.8</b>	<b>21.6</b>

N.B. Missing data (e.g. who either refused to say, or didn't know) are excluded

N.B. Unadjusted results with counts <5, Adjusted results with counts <20, and Results with Relative Standard Errors >50% are suppressed

<sup>‡</sup> Calculation takes into account survey weights

\* Results with Relative Standard Errors between 30%-50% should be used with caution

## New Zealand Health Survey Glossary

**Table 7. NZHS glossary, adults**

Indicator	Definition	Further explanation
<b>Health status, health behaviours and risk factors</b>		
Current smokers	Adults who are current smokers (smoke at least monthly)	
Hazardous drinkers	Adults who are hazardous drinkers (score 8 or more on an Alcohol Use Disorders Identification Test), in total population	'Hazardous drinking' refers to an established drinking pattern that carries a risk of harming the drinker's physical or mental health, or having harmful social effects on the drinker or others.
Adequate vegetable intake	Adults who eat at least three servings of vegetables per day, as recommended by the Ministry of Health,	
Adequate fruit intake	Adults who eat at least two servings of fruit per day, as recommended by the Ministry of Health	
Adequate vegetable and fruit intake	Adults who eat at least two servings of fruit per day <i>and</i> at least three servings of vegetables per day, as recommended by the Ministry of Health	
Physical activity	Adults who were physically active for at least 30 minutes on five or more days in the past week	Physical activity (adults aged 15+ years) is defined as doing at least 30 minutes of brisk walking or moderate-intensity physical activity (or equivalent vigorous activity), for at least 10 minutes at a time, at least five days a week. Examples of moderate-intensity physical activity include golf, heavy gardening (such as manual lawn-mowing), heavy housework (such as cleaning windows) and occupations such as plumbing. Examples of vigorous activity include running, touch rugby and vigorous work such as chopping wood. The Ministry of Health recommends that adults aged 18+ years do at least 30 minutes of moderate-intensity physical activity on most if not all days of the week.
Little or no physical activity	Adults who were physically active for less than 30 minutes in the past week	
Underweight	Adults who are underweight, with a measured body mass index (BMI) of 18.5 or less (or equivalent for < 18 years)	
Healthy weight	Adults who are a healthy weight, with a measured body mass index (BMI) between 18.5 and 24.99 (or equivalent for < 18 years)	
Overweight	Adults who are overweight, with a measured body mass index (BMI) between 25.00 to 29.99 (or equivalent for < 18 years)	
Obese	Adults who are obese, with a measured body mass index (BMI) of 30 or more (or equivalent for < 18 years)	
Overweight/obese	Adults who are overweight, with a measured body mass index (BMI) between 25.00 to 29.99 (or equivalent for < 18 years) OR Adults who are obese, with a measured body mass index (BMI) of 30 or more (or equivalent for < 18 years)	

<b>Health conditions</b>		
High blood pressure (medicated)	Adults diagnosed with high blood pressure and currently taking medication for this condition	Excludes pregnant women
High cholesterol (medicated)	Adults diagnosed with high cholesterol and currently taking medication for this condition	
Ischaemic heart disease (diagnosed)	Adults diagnosed with ischaemic heart disease	A person is defined as having ischaemic heart disease if they have been admitted to hospital with a heart attack at some time in their life, or if they have been diagnosed with angina (typically temporary chest pain while doing exercise) by a doctor
Heart failure (diagnosed)	Adults diagnosed as having heart failure.	A person is defined as having heart failure if they have ever been told by a doctor that they have heart failure.
Stroke (diagnosed)	Adults diagnosed as having had a stroke, excluding transient ischaemic attacks (TIA)	A person is defined as having had a stroke if a doctor has told them at some time in their life that they have had a stroke (this excludes transient ischaemic attacks, which are sometimes referred to as mini-strokes).
Diabetes (diagnosed)	Adults diagnosed as having diabetes	A person is defined as having diabetes if they have ever been told by a doctor that they have diabetes. This does not include diabetes during pregnancy (gestational diabetes)
Type 2 diabetes (proxy)	Adults aged 25 years and over, diagnosed as having diabetes when they were 25 years or older.	A person is defined as having type 2 diabetes if they have ever been told by a doctor that they have diabetes and they were 25 years or older when they were first told by a doctor that they had diabetes.
Mood or anxiety disorder (diagnosed)	Adults diagnosed with a mood (depression or bipolar disorder) and/or anxiety disorder	People who reported that at some time in their life a doctor had told them they had depression, bipolar disorder and/or anxiety disorder (including generalised anxiety disorder, phobias, posttraumatic stress disorder and obsessive-compulsive disorder)
Psychological distress	Adults experiencing psychological distress in the past four weeks, with a score of 12 or more on the K10,	The NZHS measures psychological (mental) distress using the Kessler Psychological Distress Scale (K10). This measures a person's experience of symptoms such as anxiety, confused emotions, depression or rage in the past four weeks. People who have a score of 12 or more have a high probability of having an anxiety or depressive disorder.
<b>Oral health</b>		
Teeth removed due to decay	Adults who had one or more of their teeth removed in the past 12 months, due to decay, infection or gum disease	Excludes teeth lost for other reasons, such as injury, a crowded mouth or orthodontics.
<b>Self-rated health</b>		
Good or better self-rated health	Adults who rated their health as at least good (including excellent, very good or good)	
<b>Access to health care</b>		
Unmet need for primary health care	Adults who have experienced one or more types of unmet need for primary health care in the past 12 months	Whether people had experienced any of the following five barriers to accessing primary health care in the past 12 months: unmet need for a GP due to cost; unmet need for after-hours services due to cost; unmet need for a GP due to lack of transport; unmet need for after-hours services due to lack of transport; and inability to get an appointment at their usual medical centre within 24 hours.

**Table 8. NZHS glossary, children**

Result	Definition	Further explanation
<b>Health status, health behaviours and risk factors</b>		
Adequate vegetable intake (2-14 years)	Children aged 2-4 years who eat at least two servings of vegetables per day OR children aged 5-14 years who eat at least three servings of vegetables per day.	As recommended by the Ministry of Health
Adequate fruit intake (2-14 years)	Children aged 2-14 years who eat at least two servings of fruit per day.	As recommended by the Ministry of Health
Adequate vegetable and fruit intake (2-14 years)	Children aged 2-14 years who eat the recommended number of servings of vegetables per day for their age AND at least two servings of fruit per day	As recommended by the Ministry of Health
Fizzy drink intake 3+ times/week (2-14 years)	Children aged 2-14 years who had had a fizzy drink, such as cola or lemonade, three or more times in the past week	
Fast food intake 3+ times/week (2-14 years)	Children aged 2-14 years who had eaten any food purchased from a takeaway shop or fast food place, three or more times in the past week	Food such as fish and chips, burgers, fried chicken or pizza.
Television watching (2-14 years)	Children aged 2–14 years who watched two or more hours of television each day	Averaged over a week. Excludes other screen time eg computer games.
Active travel (5-14 years)	Children aged 5–14 years who travel to and from school by walking, cycling or other non-motorised mode such as skates.	
Thinness (2-14 years)	Children who are low weight for age, with a measured body mass index (BMI) equivalent to an adult BMI of 18.5 or less	Revised International Obesity Task Force (IOTF) BMI age and sex specific reference values used to classify a thinness category in children and adolescents aged 2–14 years
Healthy weight(2-14 years)	Children who are a healthy weight, with a measured body mass index (BMI), equivalent to an adult BMI of between 18.5 and 24.99	Revised International Obesity Task Force (IOTF) BMI age and sex specific reference values used to classify a healthy weight category in children and adolescents aged 2–14 years
Overweight(2-14 years)	Children aged 2-14 years who are overweight, with a measured body mass index (BMI), equivalent to an adult BMI of between 25.00 to 29.99	Revised International Obesity Task Force (IOTF) BMI age and sex specific reference values used to classify overweight in children and adolescents aged 2–14 years
Obese (2-14 years)	Children aged 2-14 years who are obese, with a body mass index (BMI) equivalent to an adult BMI of 30 (or greater)	Revised International Obesity Task Force (IOTF) BMI age and sex reference values used to classify obesity in children and adolescents aged 2–14 years
Overweight/Obese (2-14 years)	Children aged 2-14 years who are overweight, with a measured body mass index (BMI), equivalent to an adult BMI of between 25.00 to 29.99 OR Children aged 2-14 years who are obese, with a body mass index (BMI) equivalent to an adult BMI of 30 (or greater)	

<b>Oral health</b>		
Teeth removed due to decay (1-14 years)	Children who had one or more of their teeth removed in the past 12 months, due to decay, infection or gum disease	Excludes teeth lost for other reasons, such as injury, a crowded mouth or orthodontics.
<b>Parent-rated health</b>		
Good or better parent-rated health	Children with excellent, very good or good health, as rated by their parent.	
<b>Access to health care</b>		
Unmet need for primary health care	Children who have experienced one or more types of unmet need for primary health care, at any point in the past 12 months	Whether children had experienced any of these six barriers to accessing primary health care services in the past 12 months: unmet need for a GP due to cost; unmet need for after-hours services due to cost; unmet need for a GP due to lack of transport; unmet need for after-hours services due to lack of transport; unmet need for a GP due to lack of childcare for other children; and inability to get an appointment at their usual medical centre within 24 hours.

## **B4 School Check results**

### **What is presented?**

This section presents results from the B4 School Check for obesity and overweight. The B4 School Check is a nationwide programme offering a free health and development check for four-year-old children.

Crude or unadjusted results are presented for each Healthy Family NZ location and total New Zealand. Results are shown as the percentage of 4-year-old children using four financial years of data from 2011/12 to 2014/15 (July to June).

The results presented in this report have 95% confidence intervals. A confidence interval is a range around an estimate that tells us how precise it is. It indicates the level of uncertainty in a measurement that occurs due to taking a sample. If we selected many samples, the 95% confidence interval would enclose the 'true' value for the population 95% of the time. The sample size of the group influences the size of the confidence interval. When the sample size is small, the confidence interval is typically wide and the estimate is less precise (Ministry of Health 2012).

The difference between two groups or years is statistically significant if their confidence intervals do not overlap. Sometimes, even when two confidence intervals overlap, the difference between these groups can be statistically significant (Ministry of Health 2012). The text reports differences where the confidence intervals do not overlap unless otherwise stated.

#### ***Methodological notes***

Table 9 shows the number of children who had completed some or all of the B4 School Check during the four-year period 2011/12 to 2014/15. The number of children ranged from 2,867 in Spreydon-Heathcote to 10,650 in Manukau.

**Table 9. Number of children completing some or all of the B4 School Check, 2011/12 – 2014/15**

<b>Location</b>	<b>Number of children checked</b>
Far North	3 112
Waitakere	9 136
Manukau	10 650
Manurewa-Papakura	8 971
East Cape	3 262
Rotorua	4 124
Whanganui Rangitikei Ruapehu	3 293
Lower Hutt	5 411
Spreydon-Heathcote	2 867
Invercargill	3 014

Assessing obesity and overweight in children during the B4 School Check is done using Body Mass Index (BMI) centiles. BMI centiles for the child's sex and age in years and months are based on the WHO Child Growth Standards published in 2006. A BMI above the 91<sup>st</sup> centile is considered *overweight* and a BMI above the 98<sup>th</sup> centile is considered *very overweight* (clinically obese) (Ministry of Health 2010). These percentile thresholds have been set for use in a clinical setting.

Children are excluded from the analysis of overweight and obese prevalence if;

- The caregiver is recorded as declining the B4 School Check
- The caregiver is recorded as declining the growth component of the B4 School check where the height and weight are measured for calculation of height
- The child is outside the target age range at the time of the growth check (less than 48 months or greater than 60 months)
- The child has a recorded BMI of less than 5 or greater than 60 (probable data entry errors).

# Findings

## Current rates of obese and overweight

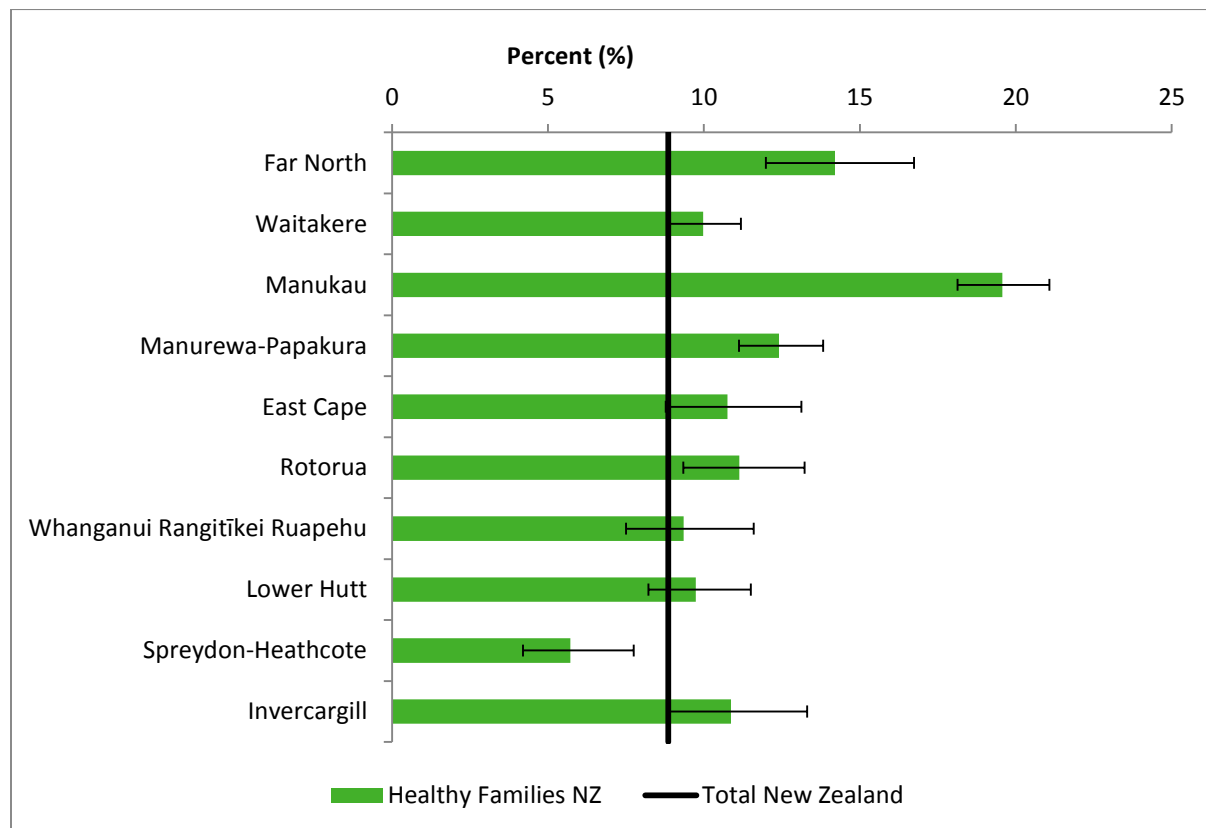
### Obese

Among four-year old children in 2014/15, children in one of the Healthy Families NZ locations are **less** likely to be obese than total New Zealand children, namely Spreydon-Heathcote (Figure 39).

Among four-year old children in 2014/15, children in four of the locations are **more** likely to be obese than total New Zealand children, namely Far North, Manukau, Manurewa-Papakura and Rotorua.

Four-year-old children in the remaining five locations have similar rates of obesity to total New Zealand children.

**Figure 39. Obese, Healthy Families NZ locations, among children aged 48 – 60 months (4 years), B4 School Check, 2014/15**





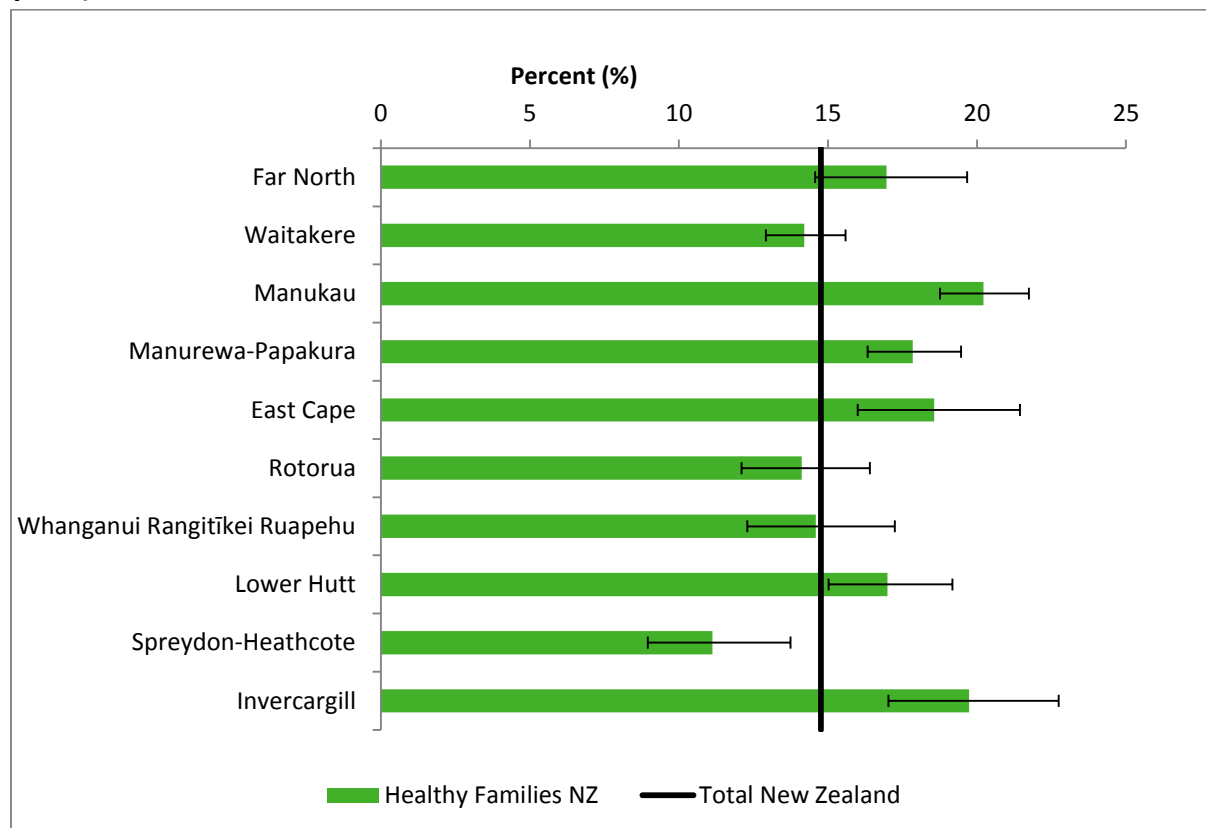
## Overweight

Among four-year old children in 2014/15, children in one of the Healthy Families NZ locations are **less** likely to be overweight than total New Zealand children, namely Spreydon-Heathcote (Figure 40).

Among four-year old children in 2014/15, children in four of the locations are **more** likely to be overweight than total New Zealand children, namely Manukau, Manurewa-Papakura, East Cape and Invercargill.

Four-year-old children in the remaining five locations had similar rates of being overweight to total New Zealand children.

**Figure 40. Overweight, Healthy Families NZ locations, among children aged 48 – 60 months (4 years), B4 School Check, 2014/15**

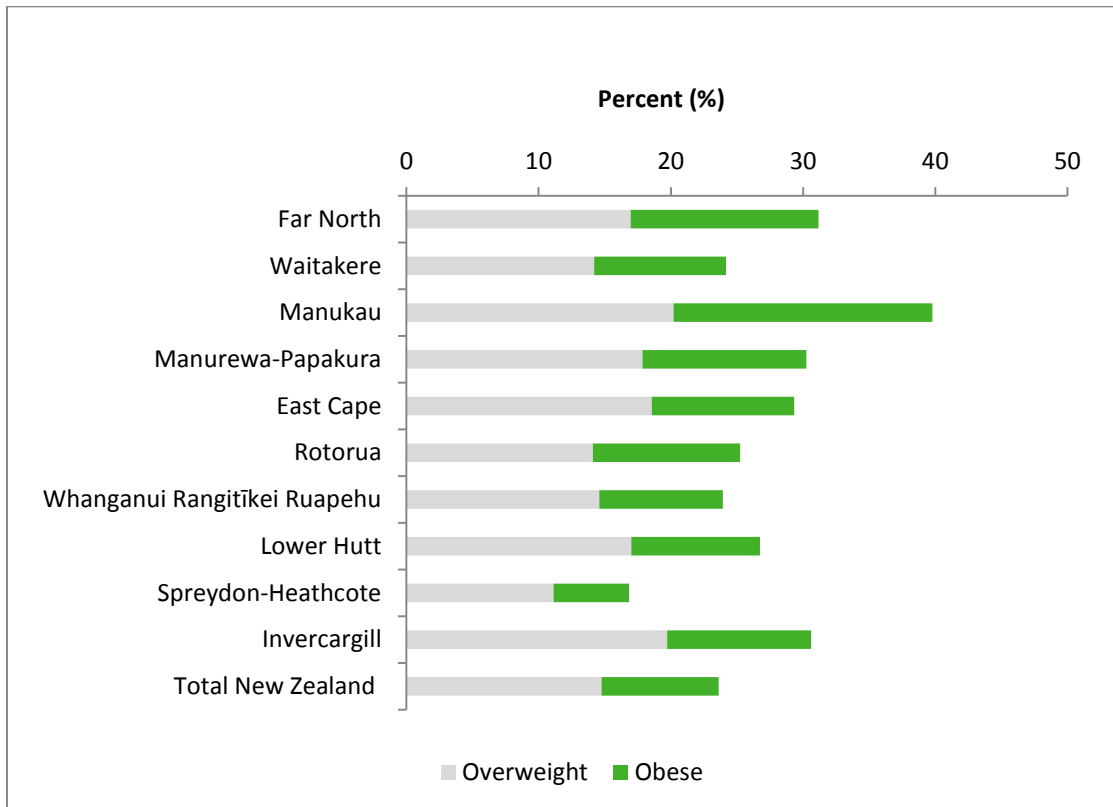


### Overweight or obese

In seven of the Healthy Families NZ locations, the rate of overweight four-year-old children is higher than the rate of obese four-year-old children (Appendix 1). This is the same pattern as for total New Zealand four-year-old children (Figure 41).

Four-year-old children in the remaining three locations had similar rates of being overweight and obese, namely Far North, Manukau and Rotorua.

**Figure 41. Overweight and obese, Healthy Families NZ locations, among children aged 48 – 60 months (4 years), B4 School Check, 2014/15**



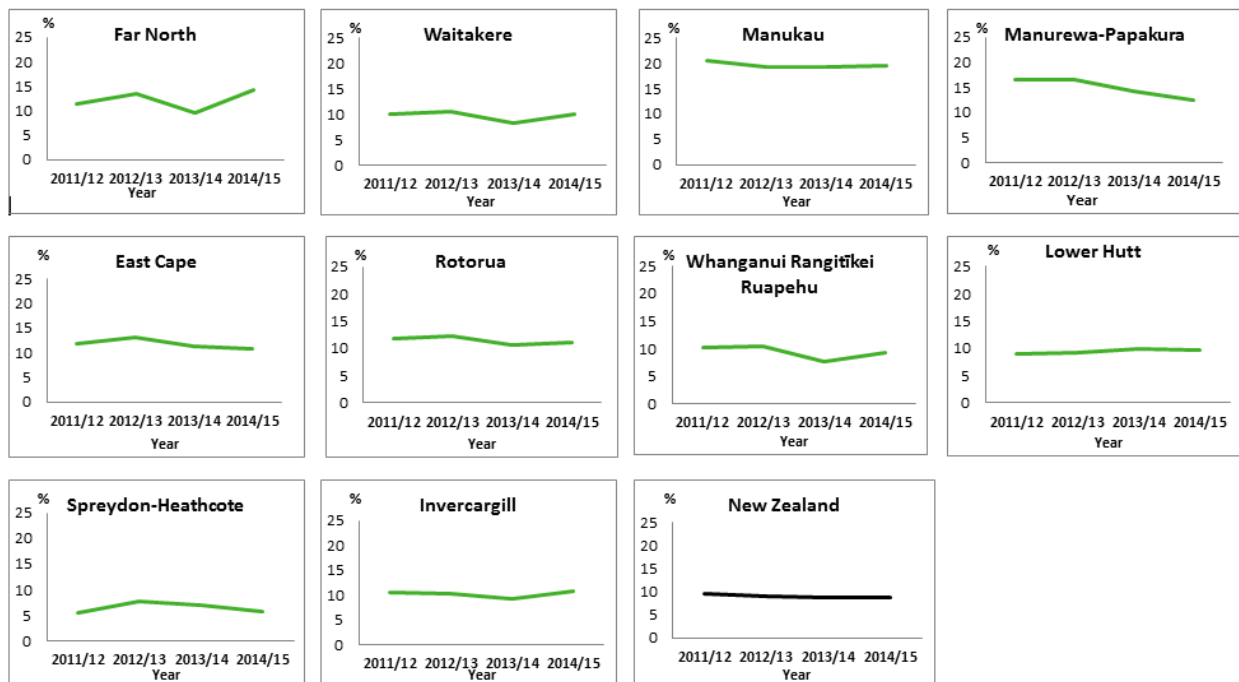
## Time trends

### Obese

Figure 42 shows the overall trend for obesity for all Healthy Families NZ locations and for total New Zealand, among four-year-old children, over the four years 2011/12 to 2014/15.

There has been a small decrease in obesity among all New Zealand children, with a statistically significant decline between 2011/12 and 2014/15 (Table 10). There has also been a statistically significant decrease in obesity in Manurewa-Papakura children from 17% in 2011/12 and 12% in 2014/15 (Table 14). For the remaining nine locations, there is no clear change over time in rates of obesity among four-year old children.

**Figure 42. Obese, Healthy Families NZ locations, B4 School Check, 2011/12 – 2014/15**



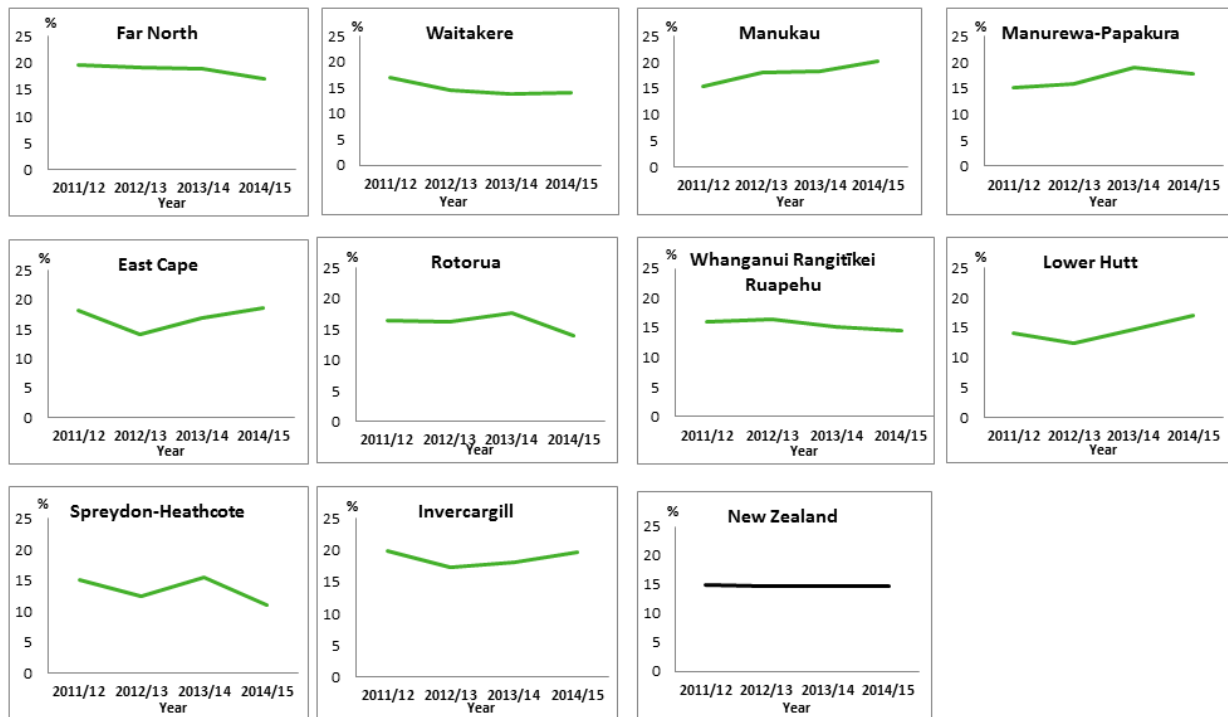
## Overweight

Figure 43 shows the overall trend for being overweight for all Healthy Families NZ locations and for total New Zealand, among four-year-old children, over the four years 2011/12 to 2014/15.

Rates of overweight among children have been stable for New Zealand over the four years 2011/12 to 2014/15. Among the Healthy Families NZ locations, there has been a statistically significant increase in rates of overweight four-year-old children in Manukau, from 15% in 2011/12 to 20% in 2014/15 (Table 13). In Lower Hutt there has also been a statistically significant increase in rates of overweight four-year-old children from a low of 12% in 2012/13 to a high of 17% in 2014/15 (Table 18).

For the remaining locations, there is no clear change in rates of overweight children over the four-year period.

**Figure 43. Overweight, Healthy Families NZ locations, B4 School Check, 2011/12 – 2014/15**



*Results tables for B4 School Check findings*

**Table 10. B4 School Check findings for overweight and obesity, all of New Zealand National , 2011/12 - 2014/15** N= 225843

	Year	Number	Total		95% Confidence	
			children^	Percent	Interval	
Overweight	2011/12	7284	49099	14.8	14.5	15.2
	2012/13	7390	50469	14.6	14.3	15.0
	2013/14	8380	57143	14.7	14.4	15.0
	2014/15	8362	56645	14.8	14.5	15.1
Obese	2011/12	4677	49099	9.5	9.3	9.8
	2012/13	4590	50469	9.1	8.8	9.3
	2013/14	5011	57143	8.8	8.5	9.0
	2014/15	5014	56645	8.9	8.6	9.1

^ Not all children with a B4 School Check are included in BMI reporting. See Methodological notes for further details.

**Table 11. B4 School Check findings for overweight and obesity, Far North Healthy Families NZ location -Far North, 2011/12 - 2014/15** N= 3112

	Year	Number	Total		95% Confidence	
			children^	Percent	Interval	
Overweight	2011/12	126	640	19.7	16.8	22.9
	2012/13	126	659	19.1	16.3	22.3
	2013/14	141	742	19.0	16.3	22.0
	2014/15	141	831	17.0	14.6	19.7
Obese	2011/12	73	640	11.4	9.2	14.1
	2012/13	89	659	13.5	11.1	16.3
	2013/14	72	742	9.7	7.8	12.0
	2014/15	118	831	14.2	12.0	16.7

^ Not all children with a B4 School Check are included in BMI reporting. See Methodological notes for further details.

**Table 12. B4 School Check findings for overweight and obesity, Waitakere**

Healthy Families NZ location - Waitakere, 2011/12 - 2014/15

N= 9136

	Year	Total		95% Confidence		
		Number children^	Percent	Interval		
Overweight	2011/12	249	1462	17.0	15.2	19.0
	2012/13	273	1867	14.6	13.1	16.3
	2013/14	377	2734	13.8	12.5	15.1
	2014/15	373	2626	14.2	12.9	15.6
Obese	2011/12	145	1462	9.9	8.5	11.6
	2012/13	196	1867	10.5	9.2	12.0
	2013/14	229	2734	8.4	7.4	9.5
	2014/15	262	2626	10.0	8.9	11.2

^ Not all children with a B4 School Check are included in BMI reporting. See Methodological notes for further details.

**Table 13. B4 School Check findings for overweight and obesity, Manukau**

Healthy Families NZ location - Manukau, 2011/12 - 2014/15

N= 10650

	Year	Total		95% Confidence		
		Number children^	Percent	Interval		
Overweight	2011/12	375	2434	15.4	14.0	16.9
	2012/13	433	2385	18.2	16.7	19.8
	2013/14	507	2769	18.3	16.9	19.8
	2014/15	562	2780	20.2	18.8	21.7
Obese	2011/12	500	2434	20.5	19.0	22.2
	2012/13	457	2385	19.2	17.6	20.8
	2013/14	529	2769	19.1	17.7	20.6
	2014/15	544	2780	19.6	18.1	21.1

^ Not all children with a B4 School Check are included in BMI reporting. See Methodological notes for further details.

**Table 14. B4 School Check findings for overweight and obesity, Manurewa-Papakura**  
**Healthy Families NZ location - Manurewa-Papakura, 2011/12 -** N= 8971

	Year	Total		95% Confidence		
		Number	children^	Percent	Interval	
Overweight	2011/12	290	1916	15.1	13.6	16.8
	2012/13	313	1962	16.0	14.4	17.6
	2013/14	472	2477	19.1	17.6	20.6
	2014/15	410	2297	17.8	16.3	19.5
Obese	2011/12	319	1916	16.6	15.0	18.4
	2012/13	327	1962	16.7	15.1	18.4
	2013/14	350	2477	14.1	12.8	15.6
	2014/15	285	2297	12.4	11.1	13.8

^ Not all children with a B4 School Check are included in BMI reporting. See Methodological notes for further details.

**Table 15. B4 School Check findings for overweight and obesity, East Cape**  
**Healthy Families NZ location - East Cape, 2011/12 - 2014/15** N= 3262

	Year	Total		95% Confidence		
		Number	children^	Percent	Interval	
Overweight	2011/12	128	701	18.3	15.6	21.3
	2012/13	113	795	14.2	12.0	16.8
	2013/14	142	844	16.8	14.5	19.5
	2014/15	145	781	18.6	16.0	21.4
Obese	2011/12	82	701	11.7	9.5	14.3
	2012/13	104	795	13.1	10.9	15.6
	2013/14	95	844	11.3	9.3	13.6
	2014/15	84	781	10.8	8.8	13.1

^ Not all children with a B4 School Check are included in BMI reporting. See Methodological notes for further details.

**Table 16. B4 School Check findings for overweight and obesity, Rotorua**

Healthy Families NZ location - Rotorua, 2011/12 - 2014/15

N= 4124

	Year	Number	Total		95% Confidence	
			children^	Percent	Interval	
Overweight	2011/12	162	984	16.5	14.3	18.9
	2012/13	150	922	16.3	14.0	18.8
	2013/14	173	979	17.7	15.4	20.2
	2014/15	142	1006	14.1	12.1	16.4
Obese	2011/12	117	984	11.9	10.0	14.1
	2012/13	112	922	12.1	10.2	14.4
	2013/14	103	979	10.5	8.8	12.6
	2014/15	112	1006	11.1	9.3	13.2

^ Not all children with a B4 School Check are included in BMI reporting. See Methodological notes for further details.

**Table 17. B4 School Check findings for overweight and obesity, Whanganui Rangitikei Ruapehu**

Healthy Families NZ location - Whanganui Rangitikei Ruapehu, 2011/12 - 2014/15, N=3293

	Year	Number	Total		95% Confidence	
			children^	Percent	Interval	
Overweight	2011/12	116	724	16.0	13.5	18.9
	2012/13	114	694	16.4	13.9	19.4
	2013/14	128	840	15.2	13.0	17.8
	2014/15	114	781	14.6	12.3	17.2
Obese	2011/12	74	724	10.2	8.2	12.6
	2012/13	73	694	10.5	8.4	13.0
	2013/14	65	840	7.7	6.1	9.7
	2014/15	73	781	9.3	7.5	11.6

^ Not all children with a B4 School Check are included in BMI reporting. See Methodological notes for further details.



**Table 18. B4 School Check findings for overweight and obesity, Lower Hutt**

**Healthy Families NZ location - Lower Hutt, 2011/12 - 2014/15**

N= 5411

	Year	Number	Total		95% Confidence	
			children^	Percent	Interval	
Overweight	2011/12	171	1215	14.1	12.2	16.1
	2012/13	158	1275	12.4	10.7	14.3
	2013/14	212	1440	14.7	13.0	16.6
	2014/15	213	1253	17.0	15.0	19.2
Obese	2011/12	108	1215	8.9	7.4	10.6
	2012/13	116	1275	9.1	7.6	10.8
	2013/14	143	1440	9.9	8.5	11.6
	2014/15	122	1253	9.7	8.2	11.5

^ Not all children with a B4 School Check are included in BMI reporting. See Methodological notes for further details.

**Table 19. B4 School Check findings for overweight and obesity, Spreydon-Heathcote**

**Healthy Families NZ location - Spreydon-Heathcote, 2011/12 -**

N= 2867

	Year	Number	Total		95% Confidence	
			children^	Percent	Interval	
Overweight	2011/12	82	545	15.0	12.3	18.3
	2012/13	97	776	12.5	10.4	15.0
	2013/14	105	680	15.4	12.9	18.4
	2014/15	74	665	11.1	9.0	13.7
Obese	2011/12	30	545	5.5	3.9	7.7
	2012/13	60	776	7.7	6.1	9.8
	2013/14	48	680	7.1	5.4	9.2
	2014/15	38	665	5.7	4.2	7.7

^ Not all children with a B4 School Check are included in BMI reporting. See Methodological notes for further details.

**Table 20. B4 School Check findings for overweight and obesity, Invercargill**  
**Healthy Families NZ location - Invercargill, 2011/12 - 2014/15** N= 3014

	Year	Number	Total		95% Confidence	
			children^	Percent	Interval	
Overweight	2011/12	122	610	20.0	17.0	23.4
	2012/13	131	755	17.4	14.8	20.2
	2013/14	148	818	18.1	15.6	20.9
	2014/15	147	745	19.7	17.0	22.7
Obese	2011/12	65	610	10.7	8.4	13.4
	2012/13	77	755	10.2	8.2	12.6
	2013/14	75	818	9.2	7.4	11.3
	2014/15	81	745	10.9	8.8	13.3

^ Not all children with a B4 School Check are included in BMI reporting. See Methodological notes for further details.

