Alcohol-related Harm Indicators in Auckland

Results from 2013, 2014 and 2015

Report Prepared for the Executive Planning Group

Taisia Huckle
Karl Parker

SHORE & Whariki Research Centre
College of Health, Massey University
PO Box 6137, Wellesley Street,
Auckland

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MASSEY UNIVERSITY

Contents

Summary of Key Findings

Aim: The aim of the report was to analyse alcohol-related harm indicators in Auckland, compared to the rest of New Zealand, in 2013, 2014 and 2015.

Methods & analysis: Data on wholly alcohol-attributable hospitalisations, Police calls for service for assaults and drivers in alcohol-involved crashes resulting in an injury or fatality were obtained in 2013, 2014 and 2015 (where possible by age, gender and ethnicity).

Rates were calculated using population estimates for 2013, 2014 and 2015 in the Auckland region and the rest of NZ per 100,000 people for: a) the population aged 15+ years, b) by gender c) by age group (15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64 and 65+) and d) by ethnicity.

Key findings

Rates of alcohol-related harm in the population (15+ years)

- For two of the three alcohol-related harm indicators, wholly alcohol-attributable hospitalisations and Police calls for service for late night assaults, rates in Auckland were higher compared to rates in the rest of New Zealand.
    - In Auckland, rates of wholly alcohol-attributable hospitalisations were 17% higher in 2013, 12% higher in 2014 and 7% higher in 2015 compared to rates in the rest of the country.
    - In Auckland, the rates of late night assaults between midnight and 3:59am were 38% higher than rates in the rest of the country in 2013 and 2014 and 21% higher in 2015.
    - For assaults between 4:00am and 6:59am the rates in Auckland were 41% higher than the rates in the rest of the country in 2013; 40% higher in 2014 and 49% higher in 2015.
- Rates of drivers in alcohol-involved traffic crashes, resulting in an injury or fatality, were lower in Auckland than in the rest of the country.
    - In Auckland rates of alcohol-involved traffic crashes were 11% lower in 2013, 16% lower in 2014 and 2% lower in 2015 than rates in the rest of New Zealand.

Increases or decreases in rates of alcohol-related harm in the population (15+ years)

- Rates of wholly alcohol-attributable hospitalisations decreased in Auckland.
    - The rate in Auckland decreased by 1% between 2013 and 2014 (as compared to a 4% increase in the rate in the rest of New Zealand). Between 2014 and 2015, the rate in Auckland decreased by 6% (as compared to a 2% decrease in the rate the rest of New Zealand).

- Rates of Police calls for service for late night assaults decreased in Auckland, as too in the rest of the country.
    - In Auckland, rates of assaults between midnight and 3:59am decreased by 12% between 2013 and 2014 (and rates decreased by 11% in the rest of the country).

- In Auckland, rates of assaults between 4:00am and 6:59am decreased by 9% between 2013 and 2014 (and rates decreased by 9% in the rest of New Zealand).
- Between 2014 and 2015, rates of assaults between midnight and 3:59am in Auckland continued to decrease, while rates of assaults between 4:00am and 6:59am increased - but still remained lower than the rate in 2013.
- Rates of assaults at other times, 07:00am —19:59pm and 20:00 —23:59pm, were also analysed and increases in rates were found in both Auckland and the rest of New Zealand.

- Rates of drivers in alcohol-involved crashes, resulting in an injury or fatality, in Auckland went down between 2013 and 2014 and up between 2014 and 2015.

Alcohol-related harm by demographic group

Gender

- Males in Auckland had higher rates of wholly alcohol-attributable hospitalisations than in the rest of the country in 2013, 2014 and 2015. A decrease in rates among males was found in Auckland (to a greater extent than in the rest of the country).
- Females in Auckland had higher rates of wholly alcohol-attributable hospitalisations than in the rest of the country in 2013 only.
- Rates of alcohol-involved crashes were generally lower in Auckland among males and females relative to rates in the rest of the country.

Age

- In Auckland, rates of wholly alcohol-attributable hospitalisations were higher among the older age groups (45-49 years to 65+ years) relative to rates among the same age groups in the rest of the country. Rates in Auckland were lower among the 15-19 and 20-24 year age groups.
- Rates of alcohol-involved traffic crashes resulting in an injury or fatality in Auckland were lower among most age groups in all years, compared to the rest of New Zealand, excluding some of the older age groups.
- Some changes in rates over time were found by age group for wholly alcohol- attributable hospitalisations and for drivers in alcohol-involved crashes resulting in an injury or fatality (in Auckland and in the rest of the New Zealand).

Ethnicity

- Rates of wholly alcohol-attributable hospitalisations were higher in Auckland, than in the rest of New Zealand, for the "Other" ethnic group (that included NZ European and other Europeans) and for Maori in 2013, 2014 and 2015.
- Some changes in rates over time were found by ethnic group including decreases among the Maori and Asian groups in Auckland.

Conclusions

- Of the three alcohol-related harm indicators analysed, Auckland had higher rates, compared to the rest of New Zealand, for two of these — wholly alcohol-attributable hospitalisations and Police calls for service for late night assaults in 2013, 2014 and 2015.
- Over the years of data analysed, rates of harm in Auckland showed some improvement as indicated by decreases in rates of harm, and in some cases improvements occurred in the rest of New Zealand too. However, this did not change the findings that Auckland had higher rates of harms relative to the rest of the country (for the two indicators above).
- There were some differences between Auckland and the rest of New Zealand with respect to rates of some indicators for age, gender and ethnicity. Some improvements in the rates of some harm indicators were found by demographic group in Auckland as indicated by decreases in these rates.

Introduction

Alcohol is among the leading causes of morbidity and mortality in New Zealand and young people and Maori are disproportionally affected[1]. In the Auckland region, some types of alcohol-related harm have been shown to be higher than national levels[2], making alcohol a priority area in terms of reducing the harm in this region.

A regional planning forum held in June 2011 recognised that while there was already much activity underway in Auckland, there was a need for greater collaboration and coordination of efforts to more effectively reduce alcohol-related harm in Auckland. In response to this Alcohol Healthwatch established the Executive Planning Group to lead the development and implementation of a collaborative and evidence-based plan to reduce alcohol-related harm.

The Executive Planning Group consists of representatives from the key agencies with roles and responsibilities for reducing alcohol-related harm in Auckland; including NZ Police, Auckland Council, Auckland Regional Public Health Service, Community Alcohol and Drug Service, Hāpai Te Hauora Tapui, Health Promotion Agency and Alcohol Healthwatch.

The plan - **Action on Alcohol 2013 – 2018** - is the result of this collaboration. It guides harm reduction activity in Auckland towards a sustainable reduction in alcohol-related harm and inequalities.

Action on Alcohol includes a set of outcome indicators which the Executive Planning Group monitors over time in order to track progress.

This report analyses alcohol-related harm indicators in Auckland, compared to the rest of New Zealand in 2013, 2014 and 2015.

[1] Connor J, Broad J, Rehm J, Vander Hoorn S, Jackson R. (2005) The burden of death, disease, and disability due to alcohol in New Zealand. N Z Med J, 118(1213):U1412.

[2] Huckle, T. (2014). Alcohol-related harm 2013: Auckland v New Zealand. SHORE & Whariki Research Centre, Massey University: Auckland.

Methods

Wholly alcohol-attributable hospitalisations

Hospitalisations that were wholly attributable to alcohol were obtained from the National Minimum Dataset in 2013, 2014 and 2015. The data represent hospitalisations not individual people. Wholly alcohol-attributable conditions are those conditions where alcohol is implicated in all cases of the condition. By definition, the Attributable Fraction = 1 (or 100%), because no cases would be expected to arise in the absence of alcohol.

Hospitalisations for the following conditions (recorded as a primary diagnosis) were obtained:

- Mental and behavioural disorders due to use of alcohol including: acute intoxication, harmful use, dependence syndrome, withdrawal state (including with delirium), psychotic disorder, amnesic syndrome, residual and late-onset psychotic disorder, other and unspecified mental and behavioural disorders that are all attributable to alcohol,
- Alcoholic liver cirrhosis,
- Alcohol toxicity (poisoning),
- Alcoholic cardiomyopathy (where alcohol weakens the heart muscle),
- Alcoholic gastritis (inflammation of the lining of the stomach caused by excessive alcohol use),
- Alcoholic poly neuropathy (damage to the nerves that results from excessive drinking of alcohol),
- Alcohol induced pancreatitis.

Late night assaults

Police calls for service for assaults were obtained from the Communications and Resource Deployment (CARD) database held by the New Zealand Police (2013, 2014 and 2015). The CARD database records all 111 calls and vehicle stops, whether or not they lead to arrests. As CARD events include 111 calls initiated by the public these data are less dependent on factors related to policing practice so are more reliable over time (compared with Police databases of arrests). The times of calls are recorded. No demographics were available.

Alcohol-involved traffic crashes

Data on drivers in alcohol-involved traffic crashes, resulting in an injury or fatality, over the entire New Zealand population were obtained from the Ministry of Transport in 2013, 2014 and 2015.

Crashes involving injury or death are required by law to be reported to the Police in New Zealand. In non-fatal injury crashes, driver alcohol levels are available from hospital blood tests or police administered breath tests. Drivers are required to be over the legal BAC limit for driving for alcohol-involvement to be coded. In the case of fatal crashes, a blood test is obtained at autopsy for drivers who die.

Measured BACs were available for around 80% of fatally injured drivers. In some cases, Police recorded that alcohol was suspected but did not record an alcohol level. Evidence indicates that this is a reasonably accurate indicator of alcohol-involvement[3].

From 1 December 2014 the alcohol limit for drivers aged 20 years and over the blood alcohol limit lowered from 80mg of alcohol per 100ml of blood to 50mg; the level for drivers under 20 years remained at zero.

With respect to the data used in this report, this meant that from 1 December 2014, drivers who had measurements taken of their alcohol limits and were of 50mg per 100ml of blood or above (or the equivalent breath alcohol reading) were included in the data, whereas previously they were only included if they were 80mg of alcohol per 100ml of blood or above[4]. For those with 'alcohol suspected' but no alcohol reading to confirm, it is unlikely there would be any change — if alcohol wasn't suspected before it probably wouldn't be with a lower legal limit (pers com Jones 2016).

Population estimates

Population estimates for 2013, 2014 and 2015 were obtained from NZ.stat[5] for the Auckland region and for the rest of New Zealand, for: a) the population aged 15+ years, b) by gender and c) by age.

A customised data request was submitted to Statistics New Zealand to obtain population estimates by prioritised ethnicity by region; however these data were not available apart from in 2013 (Census year), i.e. we could not obtain them for 2014 and 2015. To obtain estimates in 2014 and 2015, ethnicity population numbers from 2013 were adjusted to match the size of the total population in 2014 and 2015 separately in Auckland and the rest of the country.

Ethnicity

Analysis by ethnicity was conducted for prioritised ethnicity and is reported only for wholly alcohol-attributable hospitalisations. Analysis by ethnicity could not be undertaken with respect to the Police calls for service for assault data, as no demographics were available. Analysis was not undertaken with regard to the ethnicity data collected as part of the alcohol- involved traffic crash data as Police can assign a drivers ethnicity themselves, which may mean that ethnicity is assigned incorrectly. Further, and likely reflecting the practices around collecting ethnicity data, there were relatively large numbers of individuals categorised as unknown.

[3] Kypri K. Minimum Purchase Age as a Strategy to Reduce Alcohol-related Injury. Centre for Clinical Epidemiology & Biostatistics, School of Medicine and Public Health, University of Newcastle; 2010.
[4] Ministry of Transport retrieved August 2016 (http://www.transport.govt.nz/land/bloodalcoholqanda/).
[5] http://nzdotstat.stats.govt.nz/wbos/Index.aspx

Measures

Rates of wholly alcohol-attributable hospitalisations: Rates of wholly alcohol-attributable hospitalisations were generated for Auckland, the rest of New Zealand, and with disaggregation by demographics (gender, age and ethnicity) in 2013, 2014 and 2015.

Rates of late night assaults: Rates of Police calls for service for late night assaults were generated for Auckland and the rest of New Zealand in 2013, 2014 and 2015 (assaults at other times were also generated for contextual purposes).

Rates of alcohol-involved traffic crashes resulting in an injury or fatality: Rates of alcohol-involved traffic crashes, resulting in an injury or fatality, were generated for Auckland, the rest of New Zealand, and with disaggregation by demographics (gender and age) in 2013, 2014 and 2015.

Analysis

Rates of alcohol-related harm indicators were calculated using population estimates for 2013, 2014 and 2015 from the Auckland region and the rest of New Zealand per 100,000 people for: a) the population aged 15+ years, b) by gender, c) by age group (15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64 and 65+), and d) by ethnicity (where possible).

The analysis compares rates in Auckland to rates in the rest of the country, as opposed to national rates, to better isolate the difference between Auckland and not Auckland.

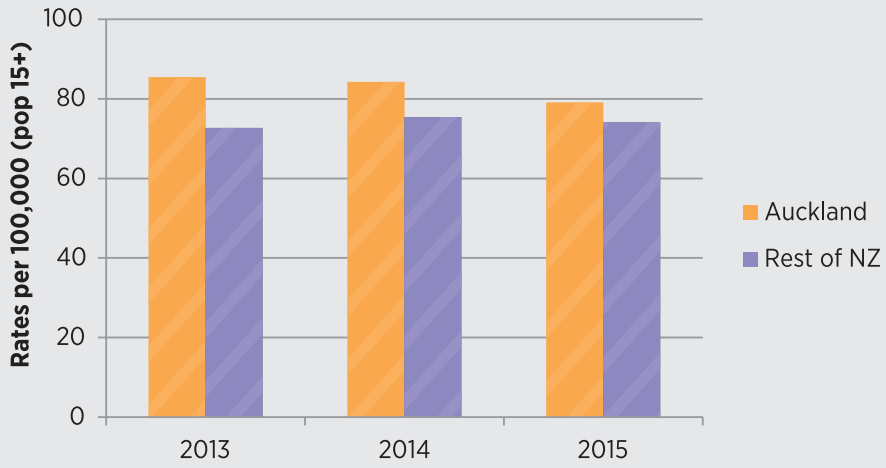
Percentage differences comparing rates in Auckland and the rest of New Zealand are reported. Percentage differences comparing rates over time in Auckland and the rest of New Zealand separately are also reported. Data were analysed using SAS 9.3.

Results

Wholly alcohol-attributable hospitalisations

The following section compares rates of wholly alcohol-attributable hospitalisations, among those aged 15+ years, between the Auckland region and the rest of New Zealand in 2013, 2014 and 2015.

Figure 1: **Rates of wholly alcohol-attributable hospitalisations aged 15+ years**



Auckland vs rest of New Zealand

In each year, rates were higher in the Auckland region compared to the rest of the country. Rates in Auckland were 17% higher in 2014, 12% higher in 2014 and 7% higher in 2015, compared to the rates in the rest of the country (Figure 1).

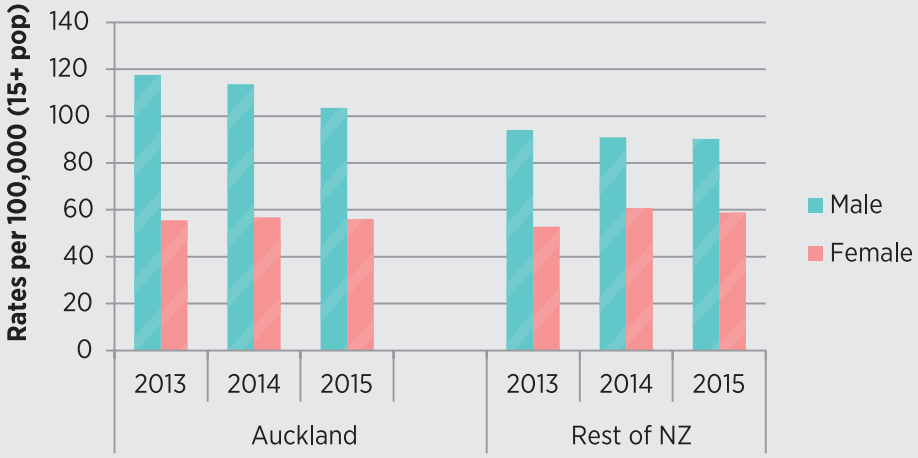
Increases or decreases

Figure 1 shows that the rates of wholly alcohol-attributable hospitalisations decreased in the Auckland region.

There was a 1% decrease in rates in Auckland between 2013 and 2014 (as compared to a 4% increase in the rest of NZ). There was a 6% decrease between 2014 and 2015 in Auckland (as compared to a 2% decrease in the rest of the country) (Figure 1).

Wholly alcohol-attributable hospitalisations by gender

Figure 2: **Rates of wholly alcohol-attributable hospitalisations 15+ years by gender**



Auckland v rest of New Zealand

In each year, rates of wholly alcohol-attributable hospitalisations were higher among males in Auckland than males in the rest of the country (25% higher in 2013, 25% higher in 2014 and 15% higher in 2015) (Figure 2).

In 2013, rates among females in Auckland were 5% higher than females in the rest of New Zealand and were 7% and 5% lower in 2014 and 2015, respectively (Figure 2).

Increases and decreases

In Auckland, the rates of wholly alcohol-attributable hospitalisations decreased among males by 3% between 2013 and 2014, and by 9% between 2014 and 2015 (in the rest of the country rates among males decreased by 3% and 1% respectively) (Figure 2).

For females, in Auckland, a 2% increase in rates was found between 2013 and 2014 and a decrease of 1% between 2014 and 2015 (in the rest of the country rates increased among females by 15% between 2013 and 2014 and decreased by 3% between 2014 and 2015) (Figure 2).

Wholly alcohol-attributable hospitalisations by age

*Table 1: Rates (and % difference in rates) of wholly alcohol-attributable hospitalisations by age group in Auckland vs rest of New Zealand in 2013, 2014 and 2015**

	2013			2014			2015		
	Auckland	Rest of NZ	*% difference*	Auckland	Rest of NZ	*% difference*	Auckland	Rest of NZ	*% difference*
15-19	17	49	*-66*	18	51	*-64*	24	52	*-53*
20-24	28	39	*-27*	28	41	*-30*	28	58	*-51*
25-29	44	38	*15*	50	41	*22*	38	50	*-24*
30-34	59	70	*-16*	63	47	*35*	50	65	*-24*
35-39	98	73	*33*	81	86	*-5*	68	88	*-23*
40-44	127	109	*17*	120	128	*-7*	105	105	*0*
45-49	155	107	*45*	134	124	*7*	139	105	*33*
50-54	149	99	*50*	153	112	*37*	122	109	*12*
55-59	145	96	*51*	117	98	*20*	134	101	*32*
60-64	95	80	*20*	126	68	*85*	143	69	*107*
65+	62	55	*13*	76	53	*43*	73	48	*53*

**The light purple shading indicates that the percentage difference in rates was higher in Auckland in each year (compared to the rest of the country). The dark purple shading indicates that the percentage difference in rates was lower in Auckland in each year. No shading indicates that no consistent pattern was found.*

Auckland vs rest of New Zealand

Table 1 shows the rates for age groups in the Auckland region and the rest of the country. The "% difference" column shows the percentage difference in the rate in Auckland relative to the rest of the country (Table 1).

Auckland had higher rates of wholly alcohol-attributable hospitalisations in each year, for the age groups 45-49 years to 65+ years (Table 1).

Auckland had lower rates of wholly alcohol-attributable hospitalisations in each year, for the age groups 15-19 years and 20-24 years (Table 1).

Rates among the other age groups in Auckland were sometimes higher and sometimes lower than the rest of New Zealand, or, in other words, did not show a consistent direction over the years (Table 1).

*Table 2: Percentage change in rates of wholly alcohol-attributable hospitalisations by age group over time**

	Auckland		Rest of NZ	
	2013 v 2014 (%)	2014 v 2015 (%)	2013 v 2014 (%)	2014 v 2015 (%)
15-19	11	33	4	2
20-24	1	0	5	42
25-29	13	-23	7	23
30-34	7	-22	-33	39
35-39	-17	-16	17	2
40-44	-6	-12	18	-18
45-49	-14	4	16	-16
50-54	3	-21	13	-3
55-59	-19	14	2	3
60-64	32	14	-15	1
65+	21	-3	-4	-10

**The light purple shading indicates an increase in both time periods (i.e. between 2013 and 2014 and 2014 and 2015). The dark purple shading indicates a decrease in both time periods. No shading indicates that no consistent direction of change was observed.*

Increases or decreases

Among 15-19 year olds, rates of wholly alcohol-attributable hospitalisations increased in Auckland between 2013 and 2014, and 2014 and 2015 (as with the rest of the country but to a lesser extent) (Table 2).

Among the 35-39 year age group in Auckland decreases in rates were found between 2013 and 2014 and 2014 and 2015 (while increases in rates were found in the rest of New Zealand).

In Auckland rates of wholly alcohol-attributable hospitalisations among 40-44 year-olds decreased between 2013 and 2014 and between 2014 and 2015 (while there was no consistent direction of change in rates among the same age group in the rest of the country i.e. rates went up then down) (Table 2).

For most other age groups in Auckland no consistent direction of change in rates was observed (e.g. some rates went up then down, or vice a versa) (Table 2).

Types of alcohol-attributable hospitalisations

Most wholly alcohol-attributable hospitalisations in 2013, 2014 and 2015 were due to mental and behavioural disorders due to use of alcohol (including acute intoxication, harmful use, dependence, withdrawal state and psychosis).

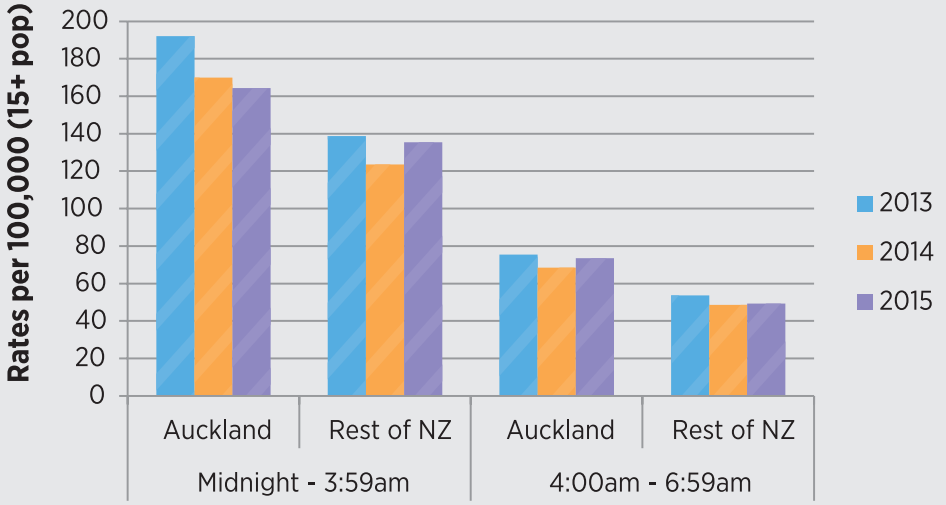
Among the younger age groups, hospitalisations due to mental and behavioural disorders due to use of alcohol were by far the most common reason for wholly alcohol-attributable hospitalisations. The next most common reasons for hospitalisations were the toxic effect of alcohol and alcoholic gastritis in each year (but the latter two diagnoses were still relatively rare by comparison).

Among those 35 years and older, a diagnosis of alcoholic liver disease was the next most common reason for a hospitalisation in each year caused by alcohol, after mental and behavioural disorders due to use of alcohol.

Late night assaults

The following section reports rates of Police calls for service for late night assaults in 2013, 2014 and 2015 (in the Auckland region compared to the rest of New Zealand). At least 75% of assaults between 9:00pm and 6:00am are estimated to be alcohol-related by the New Zealand Police (New Zealand Police 2013)[6].

Figure 3: **Rates of late night assaults**



Auckland vs rest of New Zealand

Figure 3 shows that rates of Police calls for service for late night assaults were higher in the Auckland region than in the rest of New Zealand (for assaults between both midnight to 3:59am and 4:00am to 6.59am).

In Auckland in 2013, rates of assaults between midnight to 3:59am were 38% higher than in the rest of New Zealand. For assaults between 4:00am and 6:59am, rates were 41% higher in Auckland than in the rest of the country (Figure 3).

In 2014, rates of assaults in Auckland between midnight to 3:59am were higher by 38%, than in the rest of New Zealand, and rates of assaults between 4:00am and 6:59am were 40% higher in Auckland (Figure 3).

In 2015, rates of assaults between midnight to 3:59am were higher by 21%, than in the rest of New Zealand, and rates of assaults between 4:00am and 6:59am were 49% higher in Auckland (Figure 3).

[6] New Zealand Police Audit, New Zealand Police 2013

Increases or decreases

Between 2013 and 2014, rates of Police calls for service for assaults occurring between midnight to 3:59am decreased in Auckland by 12% and by 11% in the rest of the country; rates of assaults occurring between 4:00am to 6.59am decreased by 9% in both Auckland and the rest of New Zealand (Table 3).

Between 2014 and 2015, assaults between midnight to 3:59am in Auckland continued to decrease (by 3%) while they increased in the rest of the country (by 10%). Assaults between 4:00am to 6.59am increased in Auckland by 7% and by 1% in the rest of the country. The rates of late night assaults, however, still remained lower than in 2013.

Assaults at other times

The percentage changes in rates of Police calls for service for assaults for other times were also generated to understand if the decreases in late night assaults were the same, or differed comparatively relative to other times.

Between 2013 and 2014, rates of assaults occurring during 07:00am to 19:59pm increased in Auckland by 3%, and by 0.6% in the rest of New Zealand. Rates of assaults during 20:00pm to 23:59pm increased in Auckland by 3%, and by 1% in the rest of the country. This shows that the decreases found in the late night assaults were not related to a more general pattern of decreases in assaults at all times between 2013 and 2014 (Table 3).

Between 2014 and 2015, assaults occurring during 07:00am to 19:59pm increased in Auckland by 8%, and by 10% in the rest of New Zealand. Rates of assaults during 20:00pm to 23:59pm increased in Auckland by 9%, and by 11% in the rest of the country. Late night assaults between 2014 and 2015 i.e. between midnight and 3:59am in Auckland and assaults between 04:00 to 6:00am in the rest of the country, however, did not follow this pattern (Table 3).

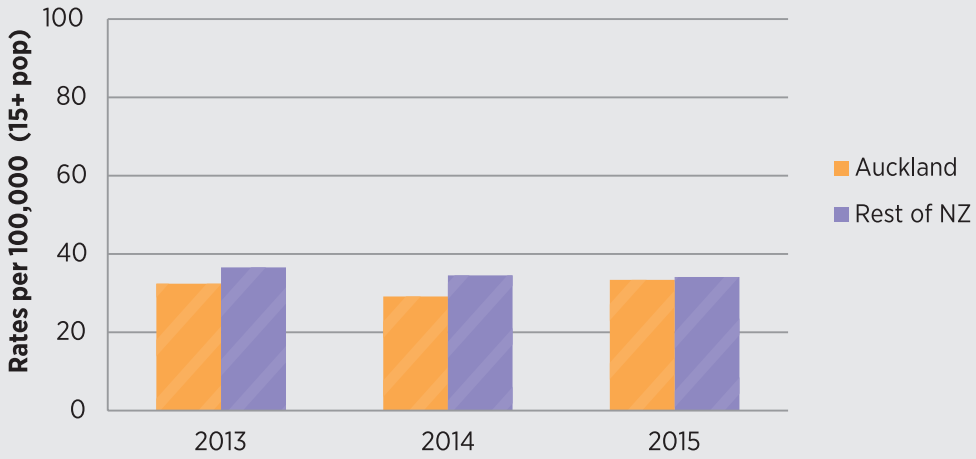
Table 3: Percentage change in rates of assaults over time

	Time	2013 v 2014 (%)	2014 v 2015 (%)
Auckland	07:00 - 19:59	3	8
	20:00 - 23:59	3	9
	00:00 - 03:59	-12	-3
	04:00 - 06:59	-9	7
Rest of NZ	07:00 - 19:59	0.6	10
	20:00 - 23:59	1	11
	00:00 - 03:59	-11	10
	04:00 - 06:59	-9	1

Drivers in alcohol-involved traffic crashes (resulting in an injury or fatality)

The following section reports rates of alcohol-involved crashes resulting in an injury or fatality among drivers aged 15+ years in Auckland compared to the rest of the country in 2013, 2014 and 2015.

Figure 4: **Rates of drivers in alcohol-involved crashes* aged 15+ years**



**Resulting in an injury or fatality*

Auckland vs the rest of New Zealand

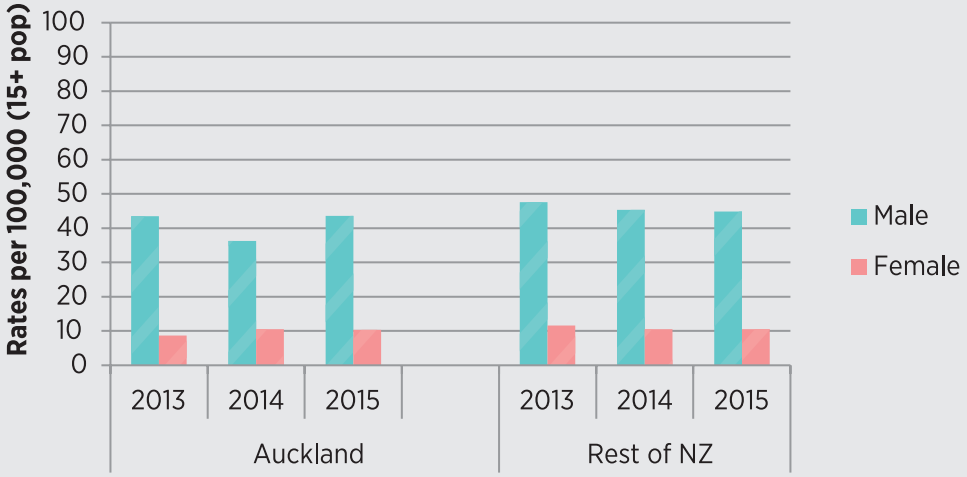
In each year (2013, 2014 and 2015), rates of alcohol-involved crashes were lower in Auckland than in the rest of the country. The rates of alcohol-involved crashes were 11% lower in 2013; 16% lower in 2014 and 2% lower in 2015 relative to rates in the rest of the country (Figure 4).

Increases or decreases

Between 2013 and 2014, the rate of alcohol-involved crashes decreased in Auckland by 10% (and there was a 6% decrease in the rate in the rest of New Zealand). Between 2014 and 2015, there was a 15% increase in the rate of alcohol-involved crashes in Auckland (compared to a 3% decrease in the rest of New Zealand) (Figure 4).

Drivers in alcohol-involved traffic crashes, resulting in an injury or fatality, by gender

Figure 5: **Rates of drivers in alcohol-involved crashes* aged 15+ years by gender**



** Resulting in an injury or fatality*

Auckland vs rest of New Zealand

Rates of alcohol-involved crashes, resulting in an injury or fatality, among males in Auckland were lower in each year relative to the rest of the country (9% lower in 2013; 20% lower in 2014 and 3% lower in 2015) (Figure 5).

Among females in Auckland rates of alcohol-involved crashes, resulting in an injury or fatality, were lower than in the rest of the country in 2013 and 2015 (25% and 2% lower respectively) but in 2014 there was no difference in rates (Figure 5).

Increases or decreases

Among males in Auckland a 17% decrease in rates was found between 2013 and 2014 (compared to a 5% decrease in the rest of New Zealand). Between 2014 and 2015 for males in Auckland, an increase in rates of 20% was found as compared to 1% decrease in the rest of the country (Figure 5).

Among females in Auckland, an increase of 21% in rates of alcohol-involved crashes resulting in an injury or fatality was found between 2013 and 2014, as compared to a 9% decrease in the rest of the country. Between 2014 and 2015 a 2% decrease in rates occurred in Auckland (as compared to a 0.5% decrease in the rest of New Zealand (Figure 5).

Drivers in alcohol-involved traffic crashes resulting in an injury or fatality by age

Table 4: Rates (and % difference in rates) of alcohol-involved traffic crashes, resulting in an injury or fatality, by age group in 2013, 2014 and 2015 — Auckland vs rest of New Zealand

	2013			2014			2015		
	Auckland	Rest of NZ	% diff	Auckland	Rest of NZ	% diff	Auckland	Rest of NZ	% diff
15-19	40	58	-31	37	50	-26	47	61	-22
20-24	91	102	-11	80	97	-18	76	94	-19
25-29	56	82	-31	43	76	-43	60	76	-22
30-34	40	51	-22	39	43	-9	36	44	-19
35-39	39	41	-5	28	37	-24	28	31	-10
40-44	22	33	-34	16	37	-56	24	29	-17
45-49	19	29	-35	21	27	-20	20	23	-12
50-54	21	21	1**	20	15	37	28	21	29
55-59*	5	10	-53	14	11	28	15	13	11
60-64*	3	9	-70	8	15	-44	9	7	37
65+*	2	5	-49	3	5	-47	4	6	-24

**In these age groups rates are small; as such changes in the absolute rate can produce large % differences.*
***Due to rounding for table presentation*

Auckland vs rest of New Zealand

Rates of drivers in alcohol-involved traffic crashes, resulting in an injury or fatality, were lower in Auckland than in the rest of New Zealand for almost all age groups in each year. The exceptions were the 50-54 year olds in 2013, the 50-54 year and 55-59 year olds in 2014 and the 50-54, 55-59 and 60-64 year olds in 2015, where higher rates were found compared to in the rest of New Zealand (Table 4).

Table 5: Percentage change in rates of alcohol-involved traffic crashes by age group over time

	Auckland		Rest of NZ	
	2013 v 2014 (%)	2014 v 2015 (%)	2013 v 2014 (%)	2014 v 2015 (%)
15-19	-9	28	-15	-5
20-24	-12	-5	-4	-22
25-29	-23	38	-7	-22
30-34	-1	-9	-15	-18
35-39	-28	-2	-10	-25
40-44	-24	46	13	-36
45-49	15	-5	-6	-24
50-54	-3	36	-28	86
55-59*	191	5	8	34
60-64*	193	14	54	-36
65+*	42	54	15	-18

**In these age groups rates are small; as such changes in the absolute rate can produce a large % difference.*

Alcohol-involved traffic crashes decreased in Auckland among those aged 20-24 years between 2013 and 2014 and 2014 and 2015, by 12% and 5% respectively. Rates also decreased among 20-24 year-olds in the rest of the country (by 4% between 2013 and 2014 and by 22% between 2014 and 2015) (Table 5).

Rates among those in the 30-34 year and 35-39 year age groups in Auckland decreased between 2013 and 2014 and 2014 and 2015 - as did rates in these age groups in the rest of New Zealand (Table 5).

There were large percentage increases for the 55-59 year, 60-64 year and 65+ year age groups in Auckland, particularly between 2013 and 2014, but this was because absolute rates were small in these age groups and changes in small absolute rates can produce large percentage differences (Table 5).

For the other age groups in Auckland no consistent direction of change in rates was observed (e.g. some rates went up then down or vice versa) (Table 5).

Ethnicity

The following section reports rates for wholly alcohol-attributable hospitalisations by ethnicity in Auckland, compared to the rest of New Zealand, in 2013, 2014 and 2015.

Table 6: Rates (and % difference in rates) of wholly alcohol-attributable hospitalisations by ethnicity 2013, 2014 and 2015 —Auckland vs rest of New Zealand

	2013			2014			2015		
	Auckland	Rest of NZ	% diff	Auckland	Rest of NZ	% diff	Auckland	Rest of NZ	% diff
Asian	24	15	64	23	25	-10	20	22	-12
Māori	65	52	26	60	52	16	54	51	6
Other*	96	65	49	96	67	42	92	66	39
Pacific	25	36	-29	29	26	12	26	38	-32

**the other category includes New Zealand European and other Europeans.*

Rates among ethnic groups

In 2013, 2014 and 2015 rates of wholly alcohol-attributable hospitalisations were highest among the "Other" ethnic group (New Zealand European and other Europeans), followed by Māori, Pacific and Asian (Table 6).

Auckland vs rest of the New Zealand

Rates were higher in Auckland than the rest of the country in 2013 for almost all ethnic groups excluding Pacific. In 2014, rates were higher in Auckland than in the rest of New Zealand for almost all ethnic groups excluding the Asian ethnic group. In 2015 rates were higher in Auckland among the Māori and Other ethnic groups only (Table 6).

Table 7: Percentage change in rates of wholly alcohol-attributable hospitalisations by ethnicity over time

	Auckland		Rest of NZ	
	2013 v 2014 (%)	2014 v 2015 (%)	2013 v 2014 (%)	2014 v 2015 (%)
Asian	-7	-13	68	-10
Māori	-8	-10	0	-2
Other	0	-4	4	-2
Pacific	15	-11	-27	46

Increases or decreases

In Auckland rates of wholly alcohol-attributable hospitalisations decreased between 2013 and 2014, and 2014 and 2015 for those in the Asian and Māori ethnic groups.

Changes in rates over the years were found among each ethnic group in the rest of New Zealand, however, these did not show change in a consistent direction.

Key Messages

Several key messages can be drawn from the findings of this report:

- For wholly alcohol-attributable hospitalisations and Police calls for service for late night assaults, rates in Auckland were higher than rates in the rest of New Zealand in each year.
- Rates of drivers in alcohol-involved traffic crashes, resulting in an injury or fatality, were lower in Auckland than in the rest of the country in each year.
- Rates of wholly alcohol-attributable hospitalisations decreased in Auckland.
- Rates of late night assaults decreased in Auckland between midnight and 3:59am in each year.
- There were some differences between Auckland and the rest of New Zealand with respect to rates of some indicators for age, gender and ethnicity.

Conclusion

Of the three alcohol-related harm indicators analysed, Auckland had higher rates than the rest of New Zealand for two of these — wholly alcohol-attributable hospitalisations and Police calls for service for late night assaults. Over the years of data analysed, rates of harm in Auckland showed some improvement as indicated by decreases in rates of harm. In some cases improvements occurred in the rest of New Zealand too, however this did not change the finding that Auckland had higher rates of harms relative to the rest of the country (for the two indicators above). There were some differences between Auckland and the rest of New Zealand with respect to rates of some indicators for age, gender and ethnicity. There were some improvements in the rates of some harm indicators by demographic group in Auckland, as indicated by decreases in rates.