New Zealand Arrestee Drug Use Monitoring

(NZ-ADUM)

2013 Report

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Aims and methodology

The aim of the New Zealand Arrestee Drug Use Monitoring (NZ-ADUM) study is to track trends in alcohol and other drug use, and related harm, among police detainees in New Zealand, and to investigate the role alcohol and other substance use plays in criminal offending. The 2013 NZ-ADUM interviewed 848 detainees at four police watch houses (i.e. Whangarei, Auckland Central, Wellington Central and Christchurch Central) from mid-April to the end of July 2013. This report presents the findings from the 2013 NZ-ADUM interviews and compares them with the previous three years of surveying.

Detainees continue to report high levels of alcohol consumption

As in previous years, the detainees reported high levels of alcohol consumption. Forty-one percent had been drinking alcohol prior to their arrest in 2013, and this had not changed from previous years. The number of alcoholic drinks the detainees had consumed before their arrest has increased from 12 in 2010 to 17 in 2013. Seventy-seven percent of the detainees could purchase alcohol in less than 20 minutes. Thirty-three percent of the alcohol using detainees said drinking alcohol was 'more likely' or 'much more likely' to make them become angry. Nineteen percent who drove and drank alcohol had completed at least some of their driving under the influence of alcohol. Twenty-six percent of the alcohol using detainees felt they were dependent on alcohol in 2013. Seventy-six percent of the detainees attributed their substance use problems to alcohol.

Methamphetamine use and availability remains largely stable except in Christchurch

The detainees continued to report much higher levels of methamphetamine use than the general New Zealand population. Thirty percent of the detainees had used methamphetamine in the previous 12 months in 2013, compared to only 0.9% of the general adult population (aged 16-64 years)[1]. Detainees in Auckland Central (38%) were

[1]Ministry of Health (2013) Amphetamine use in New Zealand, 2012/13. New Zealand Government: Wellington.

more likely to have used methamphetamine in the past year than those in Christchurch Central (25%) and Whangarei (25%). There was no change in the last year prevalence of methamphetamine use among the detainees, but the proportion of detainees from Auckland Central who had used methamphetamine in the previous month increased from 19% in 2010 to 27% in 2013. Auckland Central detainees were more likely to report that they felt dependent on methamphetamine than those from Christchurch Central. The proportion of detainees using methamphetamine prior to their arrest increased from 3% in 2010 to 6% in 2013. The availability of methamphetamine was reported to be fairly stable, except in Christchurch where availability has recovered steadily since the earthquakes in 2011. Similarly, while the overall price of methamphetamine was fairly stable, at $100 a 'point' (0.1 grams) and $700 a gram, Christchurch Central detainees reported an increase in the mean price of a 'point' from $110 in 2010 to $134 in 2013, and an increase in the mean price of a gram from $750 in 2010 to $985 in 2013. The detainees continued to report the strength of methamphetamine was stable or declining.

A surprising decline in the use and availability of cannabis

We found a surprising decline in the use, dependency, harm and availability of cannabis in 2013 compared to previous years. This may reflect the emergence of 'legal' synthetic cannabinoids, and detainees subsequently choosing to use these products rather than illegal cannabis plant in order to avoid positive drug tests and related legal and other sanctions. The proportion of detainees who had used cannabis in the previous year declined from 76% in 2011 to 70% in 2013. Declines in the last year prevalence of cannabis were found in Whangarei and Christchurch. The proportion of detainees from Whangarei who had used cannabis in the previous month declined from 73% in 2011 to 45% in 2013. These declines in self-reported use of cannabis were confirmed by a decrease in the number of positive urine tests for cannabis among the detainees. The number of days the Auckland Central detainees had used cannabis in the past year declined from 196 in 2010 to 146 in 2013. The proportion of detainees in Auckland Central who felt dependent on cannabis decreased from 43% in 2010 to 32% in 2013. The proportion of detainees who attributed their substance use problems to cannabis declined from 33% in 2010 to 25% in 2013. The availability of cannabis declined in both Auckland and Christchurch from 2010 to 2013.

The emergence of legal highs as drugs of concern

In 2013, for the first time, we asked the detainees a range of questions about their use of 'legal highs' (i.e. synthetic cannabinoids, party pills and salvia divinorum). Synthetic cannabinoids were by far the most widely used legal high (47% of detainees had used them in the past year), followed by salvia divinorum (8%) and party pills (6%). Synthetic cannabinoids were also used most frequently (66 days in the previous year, compared to 8 days for salvia and 4 days for party pills). The last year use of synthetic cannabinoids (like many other legal highs) was higher in Christchurch (53%) than Auckland (40%) and Whangarei (44%). Seventeen percent of synthetic cannabinoid users felt they were dependent on these products while dependence was very low for salvia (3%) and party pills (0%). The availability of legal highs was high (as you would expect for legally available products). The availability of synthetic cannabinoids was higher in Christchurch Central and Wellington Central than the other two sites. Eighty-five percent of Christchurch Central detainees could purchase synthetic cannabis in 20 minutes or less. Salvia was considered a highly potent substance with 94% of detainees describing its strength as 'high' (compared to 59% for synthetic cannabis and 18% for party pills). Legal highs were generally not considered to increase the likelihood of becoming angry, and this was particularly so for salvia where 40% of detainees said using salvia was 'less likely' or 'much less likely' to make them feel angry.

Ecstasy remains an illegal market in turmoil

The ecstasy market in New Zealand continues to show signs of disruption, as a result of the ongoing global shortage of MDMA (the traditional active ingredient in ecstasy), and recent successful domestic law enforcement operations against local syndicates involved in supplying low quality ecstasy substitutes. The proportion of detainees who had used ecstasy in the previous year decreased from 28% in 2011 to 21% in 2013. The availability of ecstasy was described as 'stable/more difficult' in 2013, and this has not changed since around 2011. The mean price of a pill of ecstasy declined from $50 in 2010 to $41 in 2013, and the current strength was reported to be 'low/medium'. Thirty-four percent of the Auckland Central and 33% of the Wellington Central detainees described the strength of ecstasy as

'decreasing' in 2013. The detainees were more likely to report that ecstasy increased their likelihood of becoming angry from 2010 to 2013, and this may reflect the fact that the substitute compounds being used as replacements for MDMA are more likely to induce agitation and confusion. Only one percent of the ecstasy using detainees felt they were dependent on ecstasy, and only one percent had been using it prior to their arrest.

Ongoing disruptions to the illicit opioid market?

The 2012 Illicit Drug Monitoring System (IDMS) had previously reported a disruption in the Christchurch opioid market with sharp declines in availability and purity and a rise in price. The 2013 NZ-ADUM supports these findings, and suggests the disruption may have occurred in other centers, such as Auckland. In 2013, detainees in Christchurch Central (11%) were more likely to have used an opioid in the previous year than those in Whangarei (1%) and Wellington Central (3%). Forty percent of the opioid using detainees felt they were dependent on opioids in 2013. Both Christchurch and Auckland detainees reported the availability of opioids had become 'more difficult' from 2012 to 2013. The mean price of a milligram of opioids increased from $0.85 in 2010 to $1.10 in 2013. The price of opioids was reported to be 'stable/increasing' in 2013. The Christchurch Central detainees were more likely to report the price of opioids was 'increasing', and to report a decline in current strength of opioids.

Cocaine remains a boutique drug in New Zealand

The proportion of detainees who had ever tried cocaine increased from 17% in 2010 to 24% in 2013. Increases in lifetime experience of cocaine use were found in Auckland Central and Christchurch Central. However, there was little change in the proportion of detainees who had used cocaine in the previous year from 2010 to 2013 (4% to 5%). Furthermore, the detainees had used cocaine on a mean of only 4 days in the previous 12 months, suggesting use may have occurred in another country, perhaps during a holiday. Forty-six percent of detainees described the current availability of cocaine as 'very difficult' in 2013. Thirty eight percent reported availability had become 'more difficult' over the previous six months.

High levels of alcohol and other drug related harm among detainees

Eighty-nine percent of the detainees who used alcohol, tobacco, legal highs or other drugs had experienced at least one problem from their substance use in the previous 12 months in 2013. Thirty-four percent of the detainees had physically hurt someone while under the influence of alcohol and other drugs, and 30% had stolen property while under the influence of alcohol and other drugs. High proportion of the detainees reported unsafe driving practices while under the influence of alcohol and other drugs. Thirty-eight percent had 'driven too fast' and 28% had 'driven through a stop sign or red light'. As in previous years, the detainees overwhelmingly attributed their substance use problems to three drug types: alcohol (76%), cannabis (25%) and methamphetamine (18%). However, there was a sharp rise in the proportion of detainees who attributed their substance use problems to synthetic cannabinoids from a previously very low level (up from <1% in 2012 to 8% in 2013). This included 12% of the Christchurch Central detainees who linked their substance use problems to synthetic cannabis.

Changing criminal justice responses to alcohol and other drug use problems

We found a small decline in arrests for (any) drug offence (down from 14% in 2010 to 9% in 2013). Of greater significance, was the change in the drug type involved in these offences. Arrests for methamphetamine increased from 21% in 2010 to 58% in 2013, while arrests for cannabis declined from 76% in 2010 to 49% in 2013. The proportion of detainees convicted for (any) assault increased from 26% in 2010 to 47% in 2013. The proportion of detainees imprisoned for assault also increased. Imprisonment for (any) drug offence also increased, from 7% in 2010 to 17% in 2013, and most likely reflected the greater number of arrests for more serious drug offences, such as methamphetamine. The proportion of detainees who had been convicted of a crime who had received drug treatment increased from 20% in 2010 to 42% in 2012, before dropping slightly to 37% in 2013. A similar pattern of increasing access to drug treatment was found for those who had been imprisoned in the past 12 months.

Table E 1: Overview of the drug use patterns of the police detainees, 2010-2013

	Alcohol				Methamphetamine				Cannabis				Ecstasy			
	2010 (n=814)	2011 (n=827)	2012 (n=802)	2013 (n=848)	2010 (n=813)	2011 (n=827)	2012 (n=802)	2013 (n=848)	2010 (n=814)	2011 (n=827)	2012 (n=799)	2013 (n=848)	2010 (n=814)	2011 (n=827)	2012 (n=802)	2013 (n=848)
Used in the past 12 months	90%	92%	90%	91%	26%	29%	28%	30%	72%	76%	70%	70%	22%	28%	24%	21%
Mean number of days used in past 12 months*	108 days	105 days	93 days	101 days	68 days	75 days	68 days	82 days	187 days	168 days	166 days	158 days	11 days	14 days	13 days	16 days
Felt dependent on drug in the last 12 months*	23%	23%	23%	26%	25%	22%	25%	30%	38%	35%	33%	34%	4%	4%	2%	1%
Using when arrested*	36%	41%	40%	41%	3%	5%	4%	6%	18%	17%	18%	17%	1%	1%	1%	1%
Current availability*	Very easy	Very easy	Very easy	Very easy/easy	Very easy/ easy	Easy/ very easy	Very easy/ easy	Very easy/ easy	Very easy/ easy	Very easy/ easy	Very easy/ easy	Very easy/easy	Easy/ difficult	Easy/ difficult	Easy/ very easy	Easy/difficult
Change in availability*	Stable/ easier	Stable	Stable	Stable	Stable/ more difficult	Stable	Stable/ easier	Stable/ easier	Stable/easier	Stable/ more difficult	Stable/ more difficult	Stable/ more difficult	Stable/ more difficult	Stable/ easier	Stable/ more difficult	Stable/ more difficult
Median price ($)* (retail)					$100 per point	$100 per point	$100 per point	$100 per point	$20 per 'tinny'	$20 per 'tinny'	$20 per 'tinny'	$20 per 'tinny'	$50 per pill	$40 per pill	$40 per pill	$40 per pill
Median price ($)* (mid-level)					$700 per gram	$750 per gram	$650 per gram	$700 per gram	$325 per ounce	$325 per ounce	$325 per ounce	$350 per ounce				
Completed at least some driving under influence**	24%	21%	19%	19%	42%	46%	45%	40%	47%	50%	46%	42%	8%	18%	11%	17%

* of those who had used drug in the past 12 months

** of those who drove and used the drug

Table E 2: Overview of the drug use patterns of the police detainees (continued), 2010-2013

	Opioids				Cocaine			
	2010 (n=814)	2011 (n=827)	2012 (n=802)	2013 (n=848)	2010 (n=814)	2011 (n=827)	2012 (n=799)	2013 (n=848)
Used in the past 12 months	8%	6%	6%	6%	4%	4%	5%	5%
Mean number of days used in past 12 months*	94 days	104 days	82 days	118 days	5 days	29 days	17 days	4 days
Felt dependent on drug in the last 12 months*	41%	43%	32%	40%				
Using when arrested*	2%	1%	1%	1%				
Current availability*	Easy/ very easy	Difficult/ very easy	Easy/ very easy	Very easy/difficult	Difficult/ very difficult	Difficult/ very difficult	Difficult/ very difficult	Very difficult/ difficult
Change in availability*	Stable/ easier	Stable/ more difficult	Stable/ easier	Stable/ more difficult	Stable/ more difficult	Stable/ more difficult	Stable/ more difficult	Stable/more difficult
Median price ($)* (retail)	$0.9 per milligram	$1.0 per milligram	$1.0 per milligram	$1.0 per milligram	$312 per gram	$300 per gram	$350 per gram	$300 per gram
Median price ($)* (mid-level)								
Completed at least some driving under influence**	40%	50%	27%	34%				

* of those who had used drug in the past 12 months

** of those who drove and used the drug

Chapter 1 - Methodology

Introduction

The New Zealand Arrestee Drug Use Monitoring (NZ-ADUM) study investigates levels of alcohol, legal high and drug use among police detainees and related criminal behavior and other harms (see Wilkins et al., 2010b). This report presents the findings from the 2013 NZ-ADUM and compares them with the findings from the three previous years of the study.

Intended use

NZ-ADUM is intended to inform strategic directions with regard to issues around alcohol and other drug use and criminal offending in New Zealand. NZ-ADUM contributes to an understanding of the drivers of crime and substance misuse, monitors trends in alcohol, legal high and other drug use and related markets, documents the harms from substance use, and identifies the emergence of new drug types.

Background

NZ-ADUM[2] was adapted from the ADAM methodology (Arrestee Drug Abuse Monitoring System) which was first developed in the United States during the mid-1980s (Hart, 2003; Taylor, 2002). Studies based on the core ADAM methodology are conducted in Australia (i.e. Drug Use Monitoring in Australia or DUMA) and England and Wales (i.e. New England and Wales Arrestee Drug Abuse Monitoring Research or NEW-ADAM) (see Boreham et al., 2007; Gaffney et al., 2010). The United States ADAM programme was extended in 2000 and is currently conducted in 10 key sites in the United States (Office of National Drug Control Policy, 2009, 2011). The core component of the ADAM methodology is the interviewing of individuals detained in police stations about their alcohol and other drug use and criminal offending behavior (Hunt & Rhodes, 2001; National Institute of Justice, 2003). Self-reported drug using behavior is objectively verified through the scientific testing of urine samples from detainees.

[2] NZ-ADUM was originally known as the NZ-ADAM (New Zealand Arrestee Drug Abuse Monitoring System)

NZ-ADUM was adapted from the international ADAM in 2003 (Wilkins & Rose, 2003) and a local pilot of the NZ-ADUM methodology was completed in 2004 at the Papakura Police Station (Wilkins et al., 2004). A national NZ-ADUM was conducted from 2005 to 2009 and the NZ-ADUM methodology refreshed in 2010 (Wilkins, et al., 2010b).

Aims

- To measure the level of alcohol, legal high and other drug use among police detainees
- To monitor trends in substance use including the emergence of new drug types
- To investigate the role alcohol, legal high and other drug use plays in criminal offending
- To document the level of harm from alcohol, legal high and other drug use
- To monitor trends in the price and availability of key drugs of concern
- To identify the level of demand for help services for substance use problems among police detainees
- To identify barriers experienced by police detainees when attempting to find help for substance use issues
- To identify underlying drivers of crime and substance use

Method

NZ-ADUM is conducted in four central city police watch houses in New Zealand (i.e. Whangarei, Auckland Central, Wellington Central and Christchurch Central). The study involves the face-to-face interviewing of approximately 800 police detainees at the four selected police watch houses. Interviews are conducted at each police watch house for a period of approximately three months each year. The four police watch houses were selected as sites for the study as they are considered to be key strategic locations and likely to provide a broadly representative picture of the police detainee population in each site location. The selected watch houses were required to have a sufficient numbers of

detainees to allow interviewing, and the facilities to accommodate private interviewing and urine sampling.

It is not ethical or safe to interview some police detainees due to their high level of intoxication, violent behavior, emotional state, mental illness or lack of English language competency. Detainees were excluded from the study if they were:

- under 17 years of age;
- unfit for interview due to intoxication from alcohol/drugs or medication;
- unfit for interview due to mental health issues;
- unable to understand the questions due to poor English language comprehension;
- unfit for interview due to threatening or violent behavior;
- held in custody for more than 48 hours;
- deemed unavailable by watch house staff due to ongoing legal/administrative proceedings

Police watch house staff were responsible for assessing the suitability of detainees to be interviewed. Those detainees who were interested in participating were escorted to a private interview room where the ADUM interviewer introduced the study and invited them to participate in an interview. The interviewer explained to the detainee that participation in the study was voluntary, everything they said would be confidential, they could choose not to answer any question if they didn't want to, and the results of the study would only be reported in aggregate. The interviewer explained that no information was required about specific people, places, times or events. The interviewers were directed to terminate an interview if detainees started to voluntarily provide any specific details about offending to avoid the risk of the study becoming embroiled in any subsequent legal proceedings. The ethical protocols used in NZ-ADUM have been reviewed and approved by the Massey University Human Subjects Ethics Committee.

Interviewing for the study was completed from mid-April to end of July 2013. A total of 848 interviews, and 201 urine samples were collected, as part of the 2013 NZ-ADUM study. The interviewers were present at a morning and evening shift on every day of the week for the

whole three months of interviewing. The interviewing shift times were selected to match the two periods of the day when the police cells were at their fullest (i.e. following the night shift and following the day shift). Table 1.1 shows completed interviews by day of the week for 2010, 2011, 2012 and 2013. A higher proportion of interviews tend to be conducted on a Sunday as watch houses are often busiest on a Saturday night and a greater number of detainees are available on this day, as there is no court in operation on Sunday for them to attend.

Table 1.1: Distribution of interviews by day of the week by location, 2010-2013

Day (%)	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All sites			
	2010 (n=114)	2011 (n=150)	2012 (n=151)	2013 (n=150)	2010 (n=282)	2011 (n=316)	2012 (n=247)	2013 (n=304)	2010 (n=151)	2011 (n=171)	2012 (n=101)	2013 (n=98)	2010 (n=262)	2011 (n=191)	2012 (n=301	2013 (n=288)	2010 (n=809)	2011 (n=828)	2012 (n=800)	2013 (n=848)
Sunday	7	25	19	22	23	31	26	25	23	22	21	19	20	20	18	17	20	26	21	21
Monday	25	13	14	12	9	9	15	13	15	11	14	9	15	13	13	12	14	11	14	12
Tuesday	7	7	13	11	8	10	9	12	13	8	11	10	14	17	14	11	11	11	12	11
Wednesday	24	15	11	13	13	10	12	11	12	12	10	7	11	16	14	16	14	13	12	13
Thursday	16	13	19	13	14	12	16	14	12	16	14	18	9	14	13	17	12	13	15	15
Friday	12	12	14	17	17	13	9	13	13	15	16	19	16	10	14	14	15	13	13	15
Saturday	9	14	11	13	16	16	13	11	13	15	15	16	15	10	16	13	14	14	14	13

Analysis

The 2011, 2012 and 2013 NZ-ADUM survey waves were weighted to match the locational distribution of interviews completed in 2010 to ensure consistent comparisons over time. The number of interviews completed in each site location has generally been fairly similar from year to year. The exception was Christchurch Central in 2011 where the earthquakes prevented the usual number of interviews being completed. The statistical analyses in this report compare the results from the 2013 wave with the previous three annual waves, and between the four locational sites of the study for 2013. When a statistically significant difference was found between the four years additional tests were conducted to compare specific years to each other, with the p-values adjusted for multiple comparisons using the simulation method in SAS. Differences between proportions (e.g. ever used cannabis) were tested using logistic regression and differences between continuous variables (e.g. age) were tested using ANOVA. Ordered categorical questions (e.g. frequency unemployed or in temporary employment over the past five years, where the options range from "Never" to "All the time") were assigned numbers and tested using ANOVA. Some continuous variables were positively skewed (e.g. frequency of use of methamphetamine) hence statistical testing was run on the log-transformed values for these items. Analysis was only completed for questions where there were sufficient numbers of detainees answering the question (i.e. n>10). All analysis was run using SAS version 9.2.

Chapter 2 - Demographics

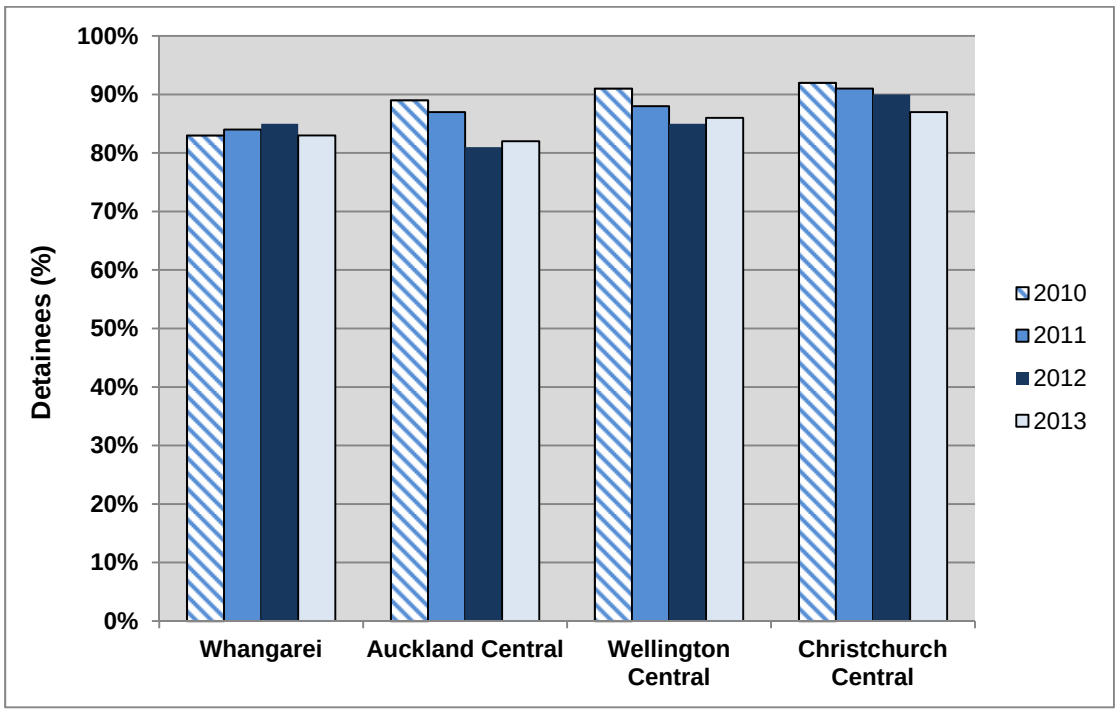
Introduction

Police detainees are an 'at risk' population who are often associated with a range of social problems in addition to criminal offending. Detainee populations around the world tend to be disproportionately male, young, poorly educated, unemployed, have poor mental health, and are members of disadvantaged ethnic minorities (see Boreham, et al., 2007; Gaffney, et al., 2010; Office of National Drug Control Policy, 2009). For example, in the 2012 NZ-ADUM sample, 86% of the detainees were male, 53% were unemployed or on a sickness benefit, 58% had not competed the compulsory years of high school education, 34% had suffered from a mental illness, 40% were Maori and 11% were Pacific people (Wilkins et al., 2012a). Seventy-three percent of the detainees interviewed in 2012 had previously been convicted of a criminal offence, and 39% had previously been imprisoned (Wilkins et al., 2012a). This chapter presents the demographic characteristics of the detainees interviewed for the 2013 NZ-ADUM and examines the extent to which these characteristics have changed over the past four years.

Gender

Eighty-five percent of the detainees interviewed in 2013 were male. There was no statistically significant change in the proportion of detainees who were male in 2013 compared to previous years (Figure 2.1).

Figure 2.1: Proportion of the police detainees who were male by location, 2010-2013



Age

The mean age of the detainees was 29 years in 2013 (median 25 years, range 17-71 years) (Table 2.1). There was no statistically significant change in the mean age of the detainee sample from 2010 to 2013 (p=0.4706).

Table 2.1: Mean age of the police detainees by location, 2010-2013

	2010		2011		2012		2013	
Site	Mean age (years)	Age range	Mean age (years)	Age range	Mean age (years)	Age range	Mean age (years)	Age range
	n=114	n=114	n=148	n=148	n=151	n=151	n=153	n=153
Whangarei	27	17-60	28	17-62	28	17-56	30	17-71
	n=284	n=284	n=311	n=311	n=246	n=246	n=300	n=300
Auckland Central	29	17-63	28	17-67	28	17-58	29	17-65
	n=152	n=152	n=171	n=171	n=99	n=99	n=106	n=106
Wellington Central	28	17-62	28	17-61	27	17-58	29	17-66
	n=262	n=262	n=191	n=191	n=302	n=302	n=288	n=288
Christchurch Central	27	17-63	29	17-77	29	17-70	30	17-61
	n=812	n=812	n=821	n=821	n=798	n=798	n=847	n=847
All sites	28	17-63	28	17-77	28	17-70	29	17-71

Ethnicity

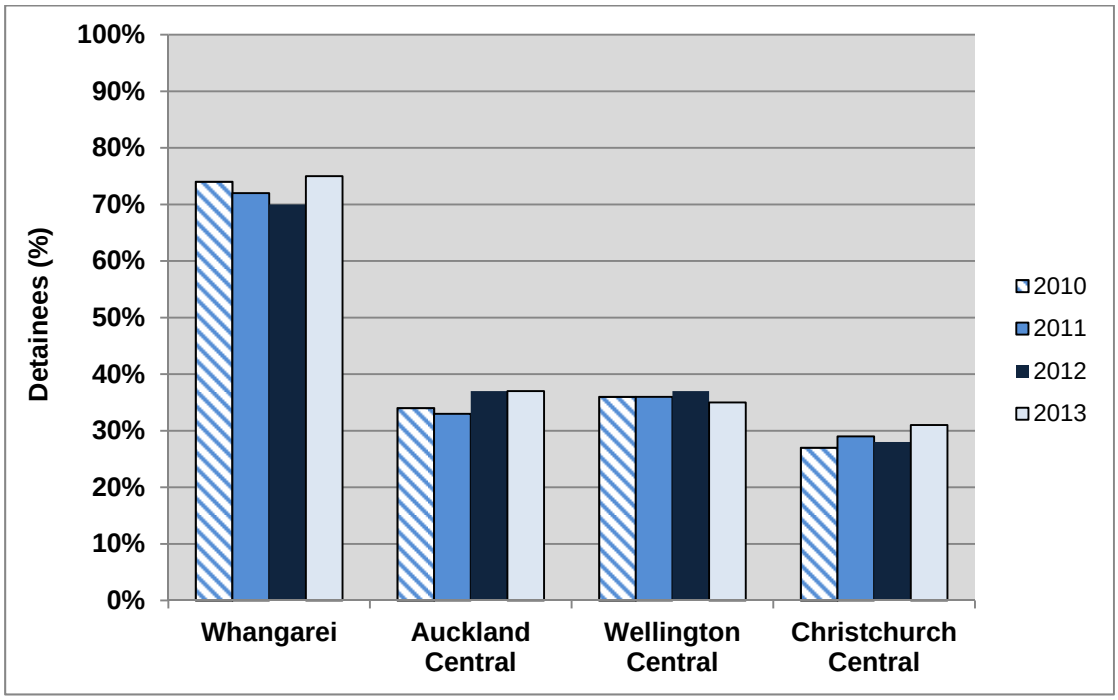
The detainees were asked two questions about their ethnicity: 'Which ethnic group do you mainly belong to?'; and 'Is there any other ethnic group you belong to?'. For the purposes of this report we classified the detainees by their primary ethnicity. In 2013, 41% of the detainees identified their primary ethnicity as European, 41% were Maori, 13% were Pacific and 2% were Asian (Table 2.2). There was no statistically significant change in the proportion of detainees who were Maori in 2013 compared to previous years.

Table 2.2: Primary ethnicity of the police detainees by location, 2010-2013

Primary ethnicity (%)	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All sites			
	2010	2011	2012	2013	2010	2011	2012	2013	2010	2011	2012	2013	2010	2011	2012	2013	2010	2011	2012	2013
	n=114	n=148	n=150	n=153	n=285	n=315	n=246	n=300	n=151	n=169	n=101	n=104	n=262	n=191	n=303	n=289	n=812	n=823	n=801	n=846
European	23	24	26	18	32	29	34	31	42	43	44	47	67	64	64	62	44	39	45	41
Maori	74	72	70	75	34	33	37	37	36	36	37	35	27	29	28	31	38	40	40	41
Pacific	4	4	4	5	24	31	25	24	15	11	9	12	5	6	5	5	14	16	11	13
Asian	0	0	0	1	5	4	2	3	1	7	3	4	0	0	1	1	2	3	1	2
Other	0	0	0	1	5	3	2	6	6	3	8	3	<1	1	1	1	3	2	2	3

In 2013, a higher proportion of detainees in Whangarei were Maori compared to Auckland Central (75% vs. 37%, p<0.0001), Wellington Central (70% vs. 35%, p<0.0001) and Christchurch Central (70% vs. 31%, p<0.0001) (Figure 2.2).

Figure 2.2: Proportion of the police detainees who were Maori by location, 2010-2013



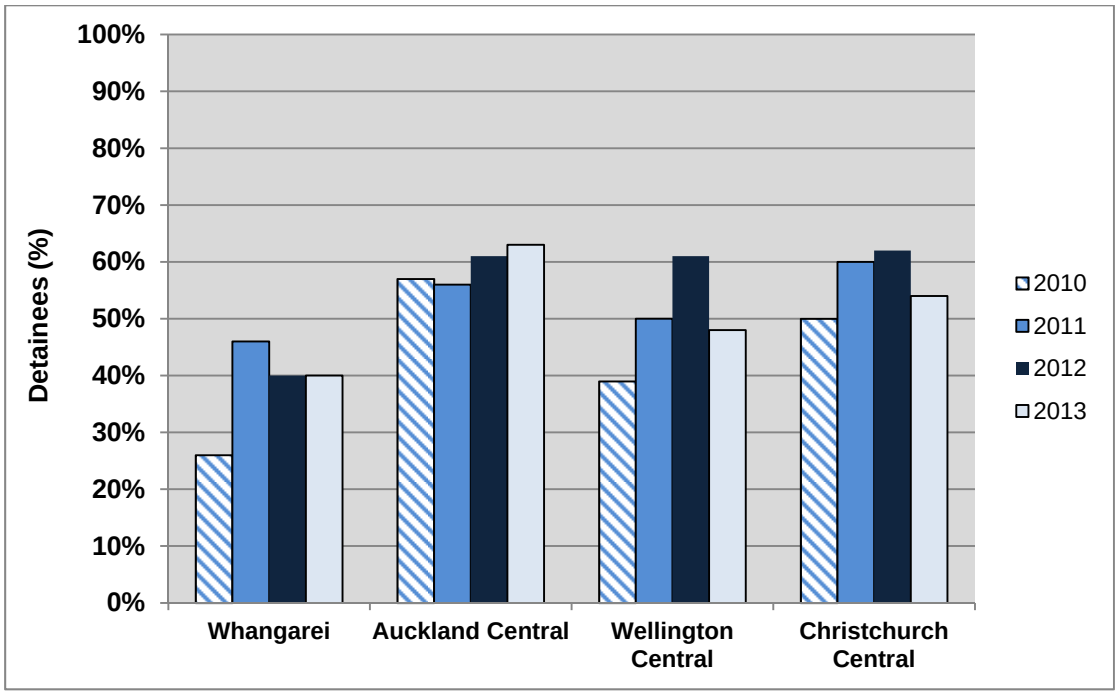
Iwi affiliation

The detainees who identified Maori were asked if they knew their iwi affiliation. Ninety-three percent of the detainees who identified Maori as their primary ethnicity knew their iwi in 2013.

Education

The proportion of the detainees who had completed the compulsory years of high school education increased from 47% in 2010 to 54% in 2013 (p=0.0156). In 2013, Auckland Central detainees were more likely to have completed the compulsory years of high school than detainees in Wellington Central (63% vs. 48%, p=0.0296) and Whangarei (63% vs. 40%, p<0.0001) (Figure 2.3).

Figure 2.3: Proportion of police detainees who completed the compulsory years of high school education by location, 2010-2013



Employment status

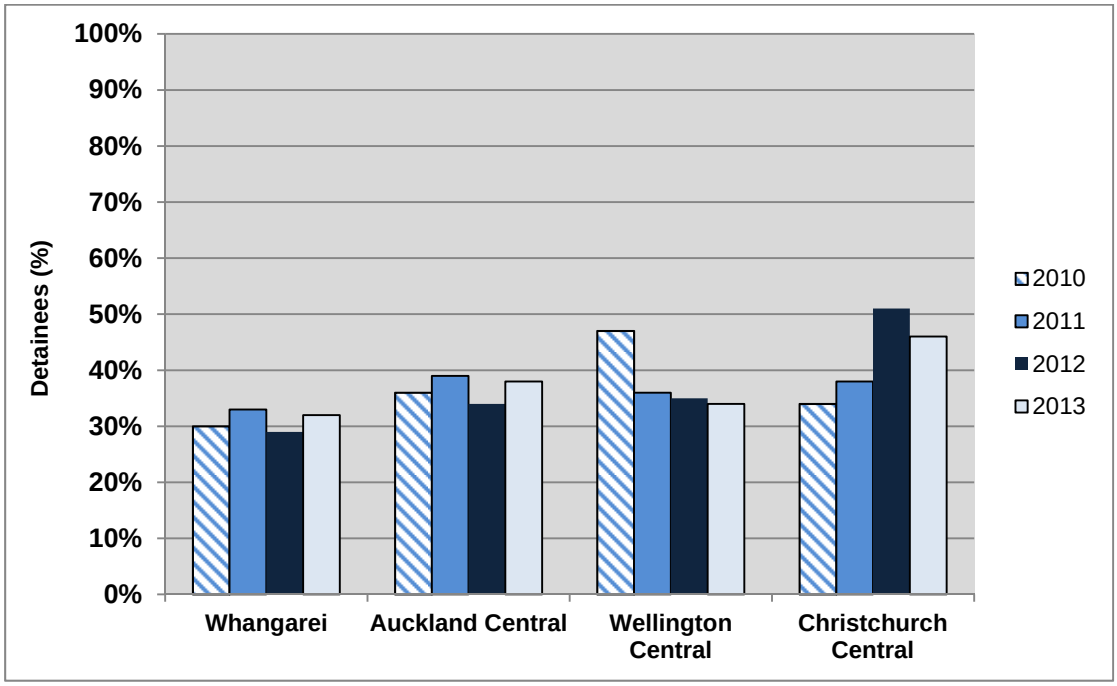
In 2013, 54% of the detainees were unemployed or on a sickness benefit, 39% were employed (9% part-time and 30% full-time), and 7% were students in 2013 (Table 2.3).

Table 2.3: Employment status of police detainees by location 2010-2013

Employment status (%)	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All sites			
	2010 (n=115)	2011 (n=149)	2012 (n=150)	2013 (n=151)	2010 (n=283)	2011 (n=315)	2012 (n=247)	2013 (n=298)	2010 (n=152)	2011 (n=170)	2012 (n=101)	2013 (n=106)	2010 (n=262)	2011 (n=191)	2012 (n=297)	2013 (n=289)	2010 (n=812)	2011 (n=825)	2012 (n=796)	2013 (n=847)
Unemployed/ sickness	64	61	61	63	55	54	55	51	45	52	55	55	61	56	45	53	56	55	55	54
Employed	30	33	29	32	36	39	34	38	47	36	35	34	34	38	51	46	37	37	38	39
Students	5	6	10	5	9	7	11	11	8	12	10	11	5	6	4	1	7	8	8	7

The proportion of detainees from Christchurch Central who were employed increased from 34% in 2010 to 46% in 2013 (p=0.0001). In 2013, detainees from Christchurch Central were more likely to be employed than those in the other three sites (p<0.0001) (Figure 2.4).

Figure 2.4: Proportion of the police detainees who were employed by location, 2010-2013



Unemployment or temporary employment over the past five years

All the detainees were asked to describe how often they had been unemployed or in temporary employment during the previous five years using a five point scale (i.e. 1=never–5=all the time). Thirty-three percent of the detainees had been unemployed or in temporary employment 'often' or 'all the time' over the previous five years in 2013 (Table 2.4).

Table 2.4: Extent to which police detainees had been unemployed or in temporary employed during the previous five years by location, 2010-2013

Frequency (%)	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All sites			
	2010 (n=109)	**2011** (n=149)	**2012** (n=151)	**2013** (n=150)	**2010** (n=280)	**2011** (n=311)	**2012** (n=244)	**2013** (n=292)	**2010** (n=145)	**2011** (n=170)	**2012** (n=101)	**2013** (n=105)	**2010** (n=255)	**2011** (n=191)	**2012** (n=300)	**2013** (n=287)	**2010** (n=789)	**2011** (n=821)	**2012** (n=796)	**2013** (n=837)
All the time [4]	17	14	18	17	21	20	23	15	12	14	18	15	11	15	12	12	15	17	17	14
Often [3]	15	26	15	22	12	20	17	17	19	24	21	20	16	19	14	17	15	22	18	19
Sometimes [2]	39	25	25	26	23	23	30	27	25	22	26	28	29	23	28	26	28	23	26	27
Hardly any [1]	20	21	29	18	23	22	17	21	25	19	24	22	30	23	23	29	25	21	22	23
Never [0]	9	13	14	17	21	15	14	19	19	21	12	15	15	20	23	16	17	17	17	17
Mean frequency (0=never–4= all the time)	2.1	2.1	2.0	2.0	1.9	2.1	2.2	1.9	1.8	1.9	2.1	2.0	1.8	1.9	1.7	1.8	1.9	2.0	2.0	2.0

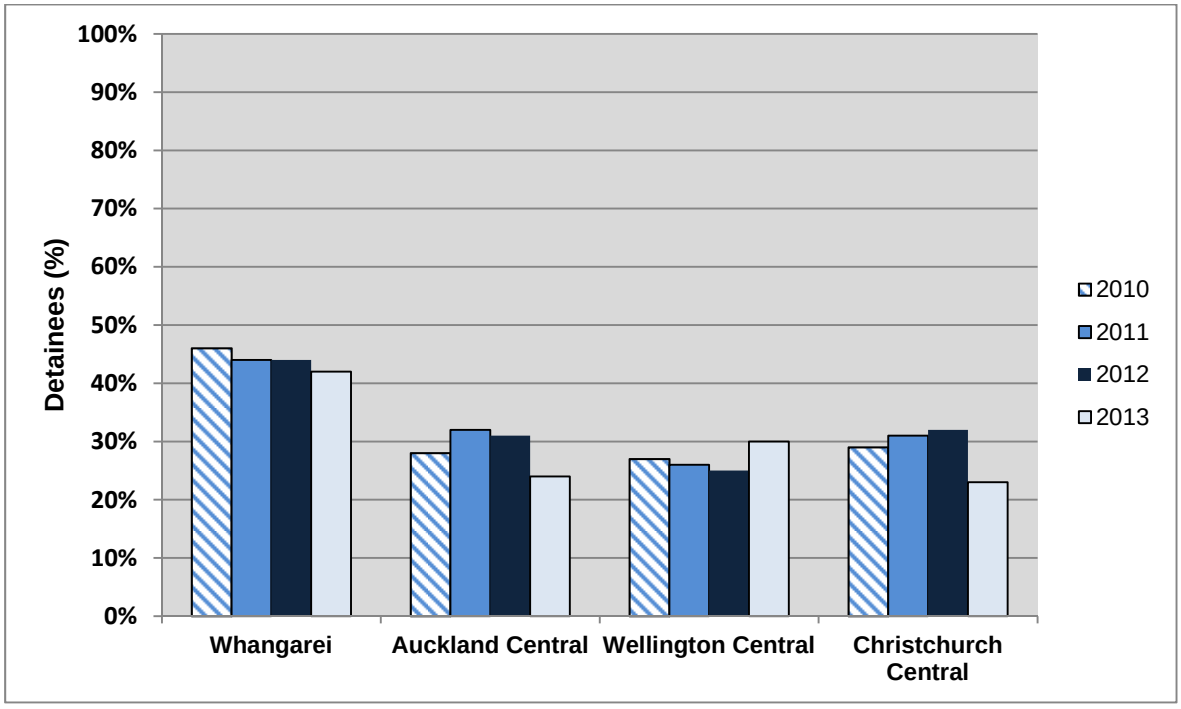
Marital status

Sixty-two percent of the detainees were single, 26% were living in a de facto relationship and 4% were married in 2013. There was no change in the marital status of the detainees from 2010 to 2013 (p=0.6905). In 2013, Whangarei detainees were less likely to be single than those in Auckland Central (46% vs. 62%, p=0.0070), Christchurch Central (46% vs. 69%, p<.0001) and Wellington Central (46% vs. 68%, p=0.0021).

Number of dependent children

Twenty-eight percent of the detainees had dependent children in 2013. There was no change in the proportion of detainees who had dependent children from 2010 to 2013 (p=0.1812). In 2013, the detainees in Whangarei were more likely to have dependent children than those in Auckland Central (42% vs. 24%, p<0.0001), Wellington Central (42% vs. 30%, p<0.0001) and Christchurch Central (42% vs. 23%, p<0.0001) (Figure 2.5).

Figure 2.5: Proportion of the police detainees with dependent children by location, 2010-2013



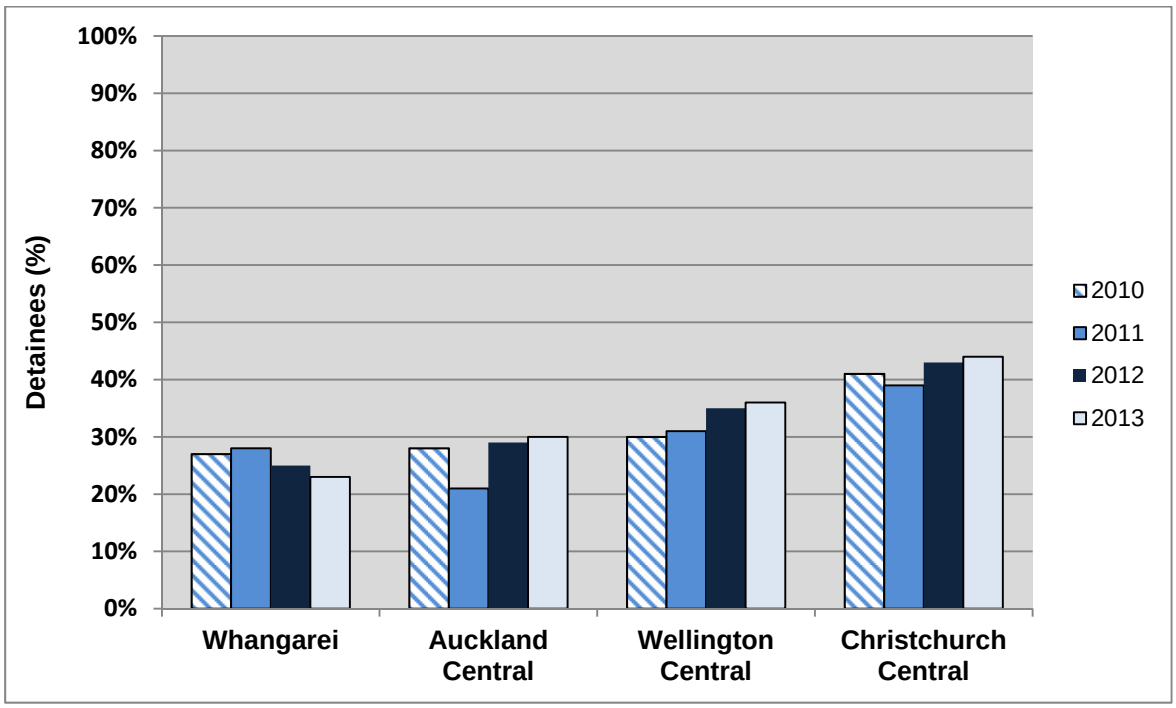
Accommodation

In 2013, 46% of the detainees were living in someone else's house and 43% in their own house in the previous 30 days. Three percent of the detainees had no fixed address.

Mental illness

Thirty-four percent of the detainees in 2013 reported having had a mental illness at some stage in their lives. Detainees in Christchurch Central were more likely to have ever suffered from a mental illness than detainees in Auckland Central (44% vs. 30%, p=0.0025) and Whangarei (44% vs. 23%, p<0.0001) (Figure 2.6).

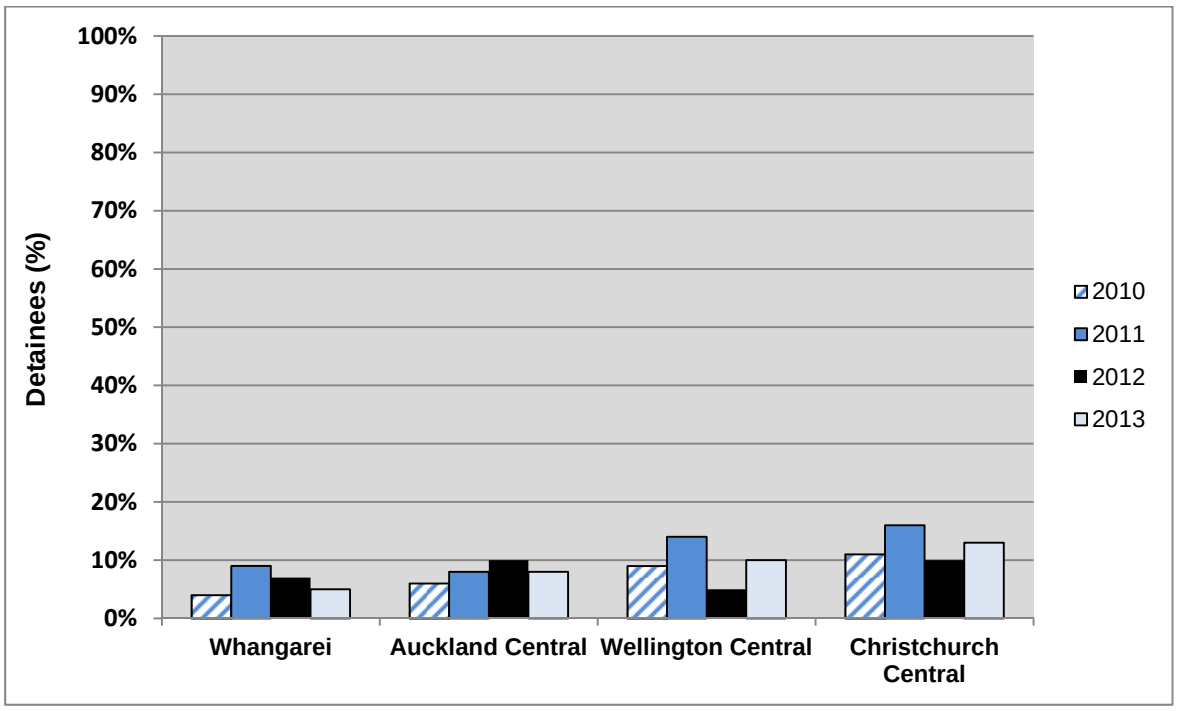
Figure 2.6: Proportion of the police detainees who had ever suffered from a mental illness by location, 2010-2013



Psychiatric inpatient

Ten percent of the detainees had been a patient in a psychiatric ward or hospital for an overnight stay or longer at some point in their lives in 2013. There was no statistically significant change in the proportion of detainees who had ever been in a psychiatric ward or hospital from 2010 to 2013 (8% to 10%, p=0.1126). Christchurch Central detainees were more likely to report having been a patient in a psychiatric ward or hospital at some point in their lives than Whangarei detainees (13% vs. 5%, p=0.0321) (Figure 2.7).

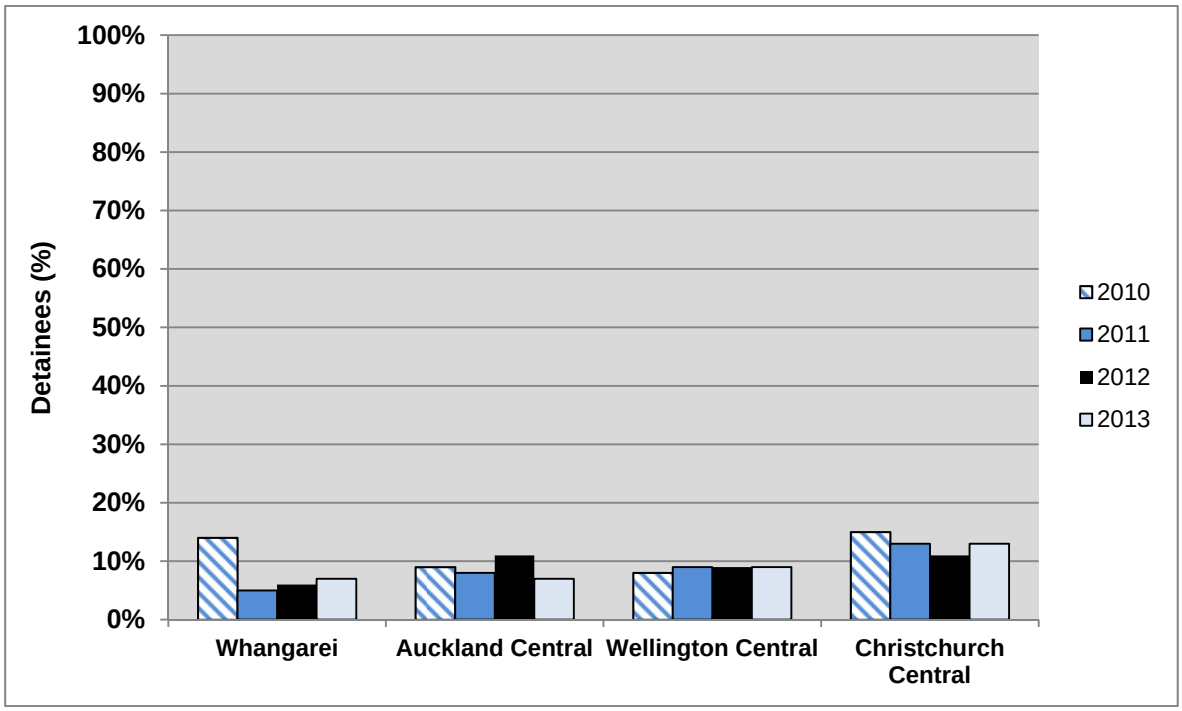
Figure 2.7: Proportion of police detainees who had ever been a patient in a psychiatric ward or hospital for an overnight stay or longer by location, 2010-2013



Current treatment or medication for mental illness

Nine percent of the detainees were currently receiving treatment or medication for a mental illness at the time of their arrest in 2013. The proportion of detainees in Whangarei who were currently receiving treatment or medication for a mental illness declined from 14% in 2010 to 7% in 2013, and this difference was close to being statistically significant (p=0.0609) (Figure 2.8).

Figure 2.8: Proportion of police detainees currently receiving treatment or medication for a mental illness by location, 2010-2013



Summary

- Eighty-five percent of the detainee sample was male in 2013
- The detainees were a mean age of 29 years in 2013
- Forty-one percent of the detainees were European, 41% were Maori, 13% were Pacific and 2% were Asian in 2013
- A higher proportion of detainees in the Whangarei site were Maori than those in the other three sites in 2013
- The proportion of the detainees who had completed the compulsory years of high school education increased from 47% in 2010 to 54% in 2013
- Fifty-four percent of the detainees were unemployed or on a sickness benefit, 39% were employed and 7% were students in 2013
- The proportion of detainees in Christchurch Central who were employed increased from 34% in 2010 to 46% in 2013
- In 2013, detainees in Christchurch Central were more likely to be employed than those in the other three sites
- Twenty-eight percent of the detainees had dependent children in 2013
- In 2013, detainees in Whangarei were more likely to have dependent children than those in the other three sites
- Thirty-four percent of the police detainees had suffered from a mental illness in their lifetimes in 2013
- In 2013, detainees in Christchurch Central were more likely to have suffered from a mental illness than those in Auckland Central and Whangarei
- Nine percent of the detainees were currently receiving treatment or medication for a mental illness in 2013

Chapter 3 – Alcohol

Introduction

The use of alcohol contributes to a range of social problems including public nuisance, disorderly behavior, physical and sexual assault, family violence, dangerous driving, injury and accidents, suicide, work absenteeism, low work performance and unsafe work practices (Babor et al., 2010a; Kleiman, 1992). Alcohol use is also a risk factor in many health disorders including lethal overdose, liver damage, cardiovascular disease, pancreatitis, hypertension, cancer, brain damage and alcoholism (Babor, et al., 2010a).

Alcohol is the most widely available recreational drug in New Zealand (Wilkins & Sweetsur, 2008b, 2008c). The 2012 NZ-ADUM found 40% of the police detainees had been drinking alcohol prior to their arrest (Wilkins, et al., 2012a). The proportion of detainees in Whangarei who had been drinking prior to their arrest increased from 32% in 2010 to 53% in 2012 (Wilkins et al., 2012a). The number of alcoholic drinks the detainees had consumed prior to their arrest increased from 12 in 2010 to 18 in 2012 (Wilkins et al., 2012a). Auckland Central detainees reported an increase in the availability of alcohol from 2010 to 2012 (Wilkins et al., 2012a).

Use of alcohol

In 2013, 91% of the police detainees had consumed alcohol in the previous year and 80% had drunk alcohol in the past month (Table 3.1). There was no statistically significant change in the prevalence of alcohol use among the detainees in the past 12 months from 2010 to 2013 (p=0.2677) (Figure 3.2). The detainees had first tried alcohol at a mean age of 13 years, and this did not change from previous years.

Figure 3.1: Mean age at which police detainees first tried alcohol by location, 2010-2013

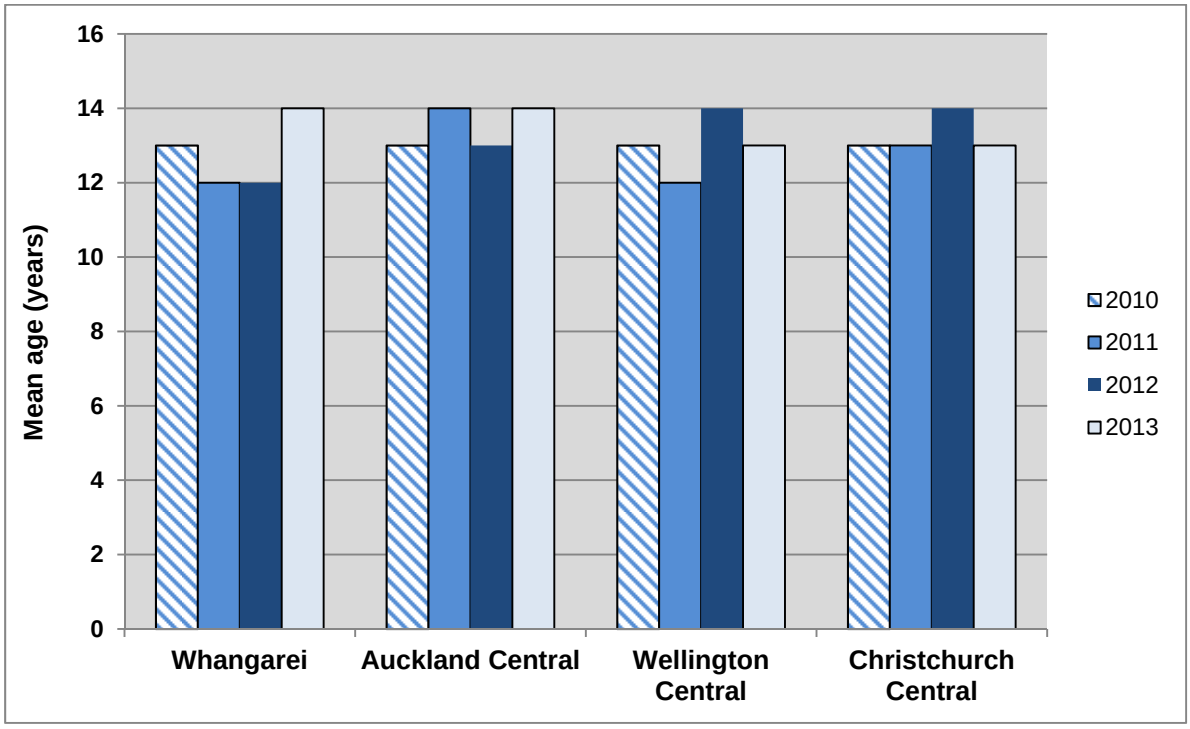


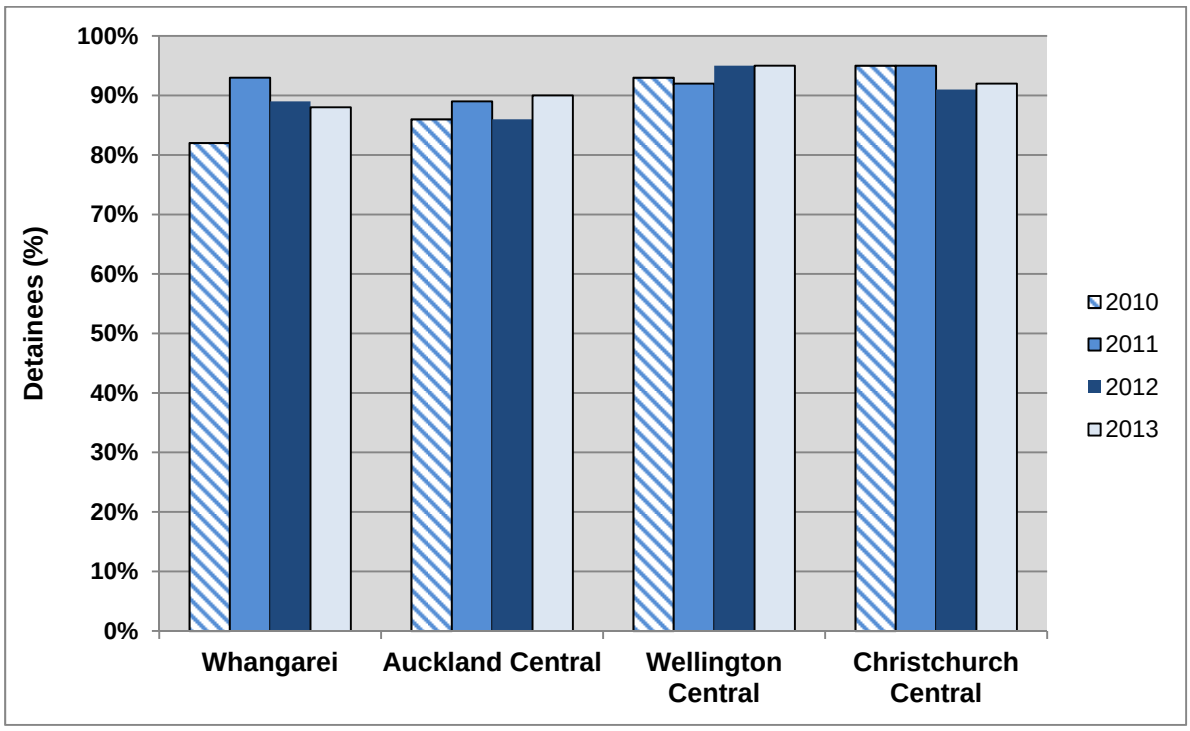
Table 3.1: Police detainees' patterns of alcohol use by location, 2010-2013

Use of alcohol	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All sites			
	2010 (n=115)	2011 (n=149)	2012 (n=151)	2013 (n=153	2010 (n=285)	2011 (n=316)	2012 (n=247)	2013 (n=299)	2010 (n=152)	2011 (n=171)	2012 (n=101)	2013 (n=106)	2010 (n=262)	2011 (n=191)	2012 (n=303)	2013 (n=289)	2010 (n=814)	2011 (n=827)	2012 (n=802)	2013 (n=850)
Ever used (%)	97	99	100	99	97	99	98	98	99	99	100	100	100	100	99	99	98	99	99	99
Mean age first used (years)	13	12	13	14	13	14	13	14	13	12	14	13	13	13	14	13	13	13	13	13
Used in past 12 months (%)	82	93	89	88	86	89	86	90	93	92	95	95	95	95	91	92	90	92	90	91
Mean number of days used in past 12 months*	89	85	70	84	118	107	92	101	100	111	100	98	109	107	100	109	108	105	93	101
Mean number of standard drinks per day*	15	19	18	20	11	13	18	18	13	17	18	16	12	15	16	19	12	15	17	18
Felt dependent in past 12 months (%)*	21	19	22	26	26	26	21	26	26	24	23	30	21	21	25	22	23	23	23	26
Used in past month (%)	74	83	77	75	76	78	80	78	84	81	87	84	86	85	84	81	80	81	82	80
Mean number of days used in past month**	8	8	6	9	10	10	8	10	8	10	8	10	9	10	9	9	9	9	8	9

Mean number of days males had 5 or more drinks in past month**	6	7	6	8	8	10	7	8	8	9	8	10	9	9	8	9	8	9	7	9
Mean number of days females had 3 or more drinks in past month**	7	11	7	11	8	6	10	11	2	9	7	3	7	12	11	11	7	9	9	10

* of those who drank alcohol in the past 12 months ** of those who drank alcohol in the past month

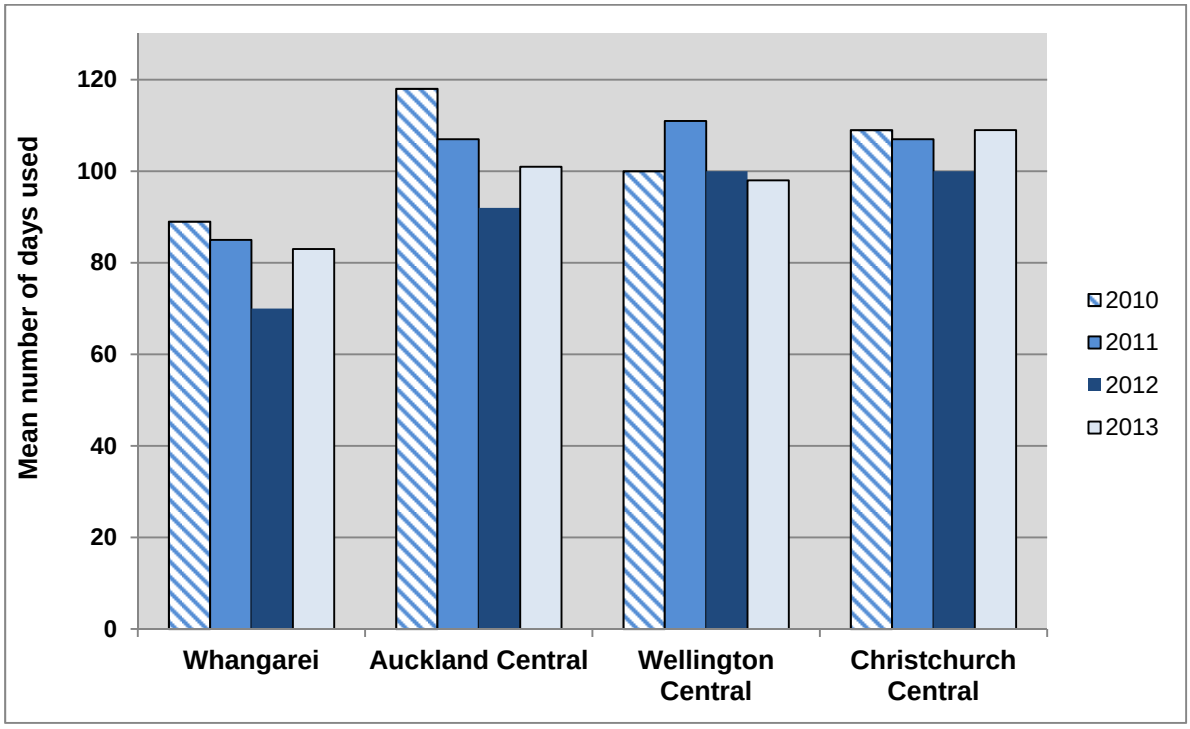
Figure 3.2: Proportion of police detainees who used alcohol in the past 12 months by location, 2010-2013



Frequency of alcohol use

The detainees drank alcohol on a mean of 101 days in the previous 12 months in 2013 (median 52, range 1-365 days). There was no statistically significant change in the mean number of days on which the detainees had drunk alcohol in the previous year from 2010 to 2013 (Figure 3.3).

Figure 3.3: Number of days alcohol consumed in the previous 12 months by location, 2010-2013



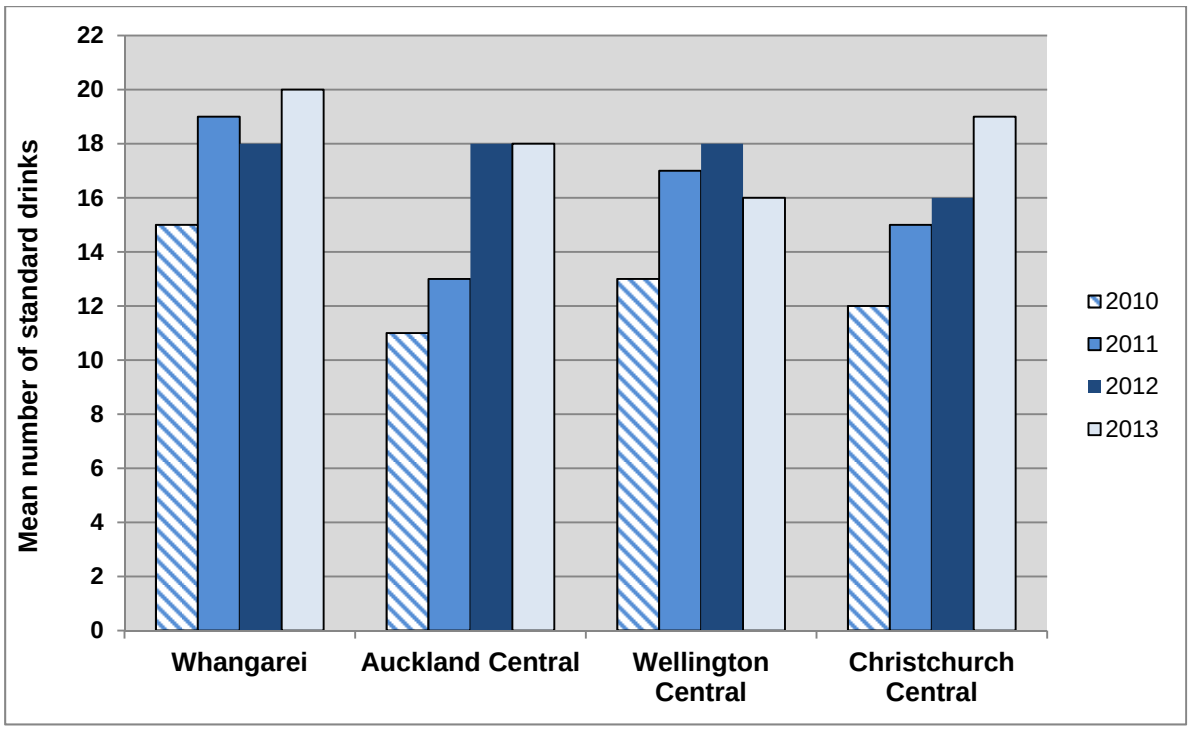
The detainees had consumed alcohol on an average of 9 days in the previous month in 2013. The mean number of days of alcohol consumption in the past month increased slightly from 8.0 days in 2012 to 9.5 days in 2013 (p=0.0155).

Quantity of alcohol consumed

The detainees were asked how much alcohol they would consume on a typical day of use. The interviewers collected detailed information on each detainee's alcohol consumption including the alcohol type they consumed (e.g. beer, spirits), the container type (e.g. bottle, shots) and number of units. Some detainees reported extraordinarily high levels of alcohol consumption (range 0.5-80.0 standard drinks in 2013). These extremely high levels of alcohol consumption are possible for heavy daily drinkers. The mean number of alcoholic drinks the detainees consumed on a typical day of use increased from 12 in 2010 to 18 in 2013 (p<0.0001). The higher consumption of alcohol occurred in a number of the study sites. The number of drinks consumed by Auckland Central detainees on a typical day of use increased from 11 in 2010 to 18 in 2013 (p<0.0001) (Figure 3.4). The number of drinks consumed by Christchurch Central detainees also increased from 12 in 2010 to 19 in 2013

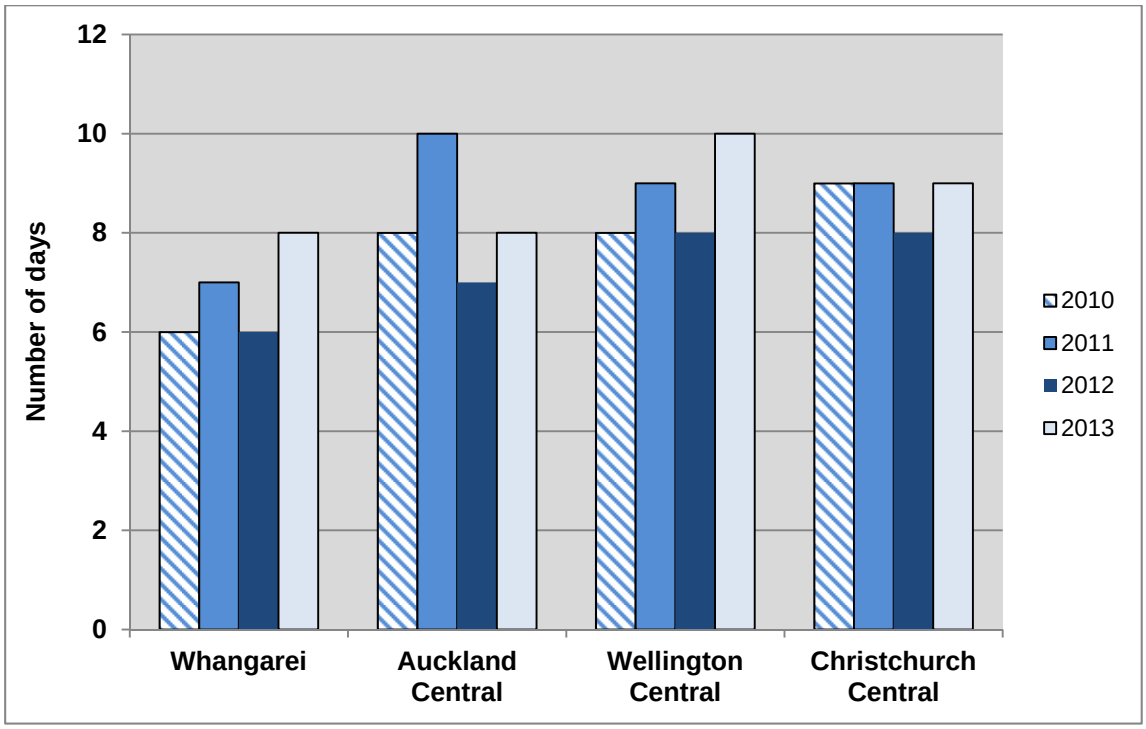
(p<0.0001). There were no statistically significant differences between the sites in terms of the detainees' consumption of alcohol in 2013.

Figure 3.4: Mean number of standard alcohol drinks consumed by police detainees on a typical day by location (of those who had drunk alcohol in the previous 12 months), 2010-2013



The detainees who had drunk alcohol in the past month were asked on how many days during the past month they had drunk larger quantities of alcohol (i.e. five or more drinks for men on a single occasion or three or more drinks for women on a single occasion). Eighty-three percent of the male detainees had drunk five or more drinks in a single day in the past month in 2013. Male detainees had drunk five or more standard drinks on an average of 9 days in the previous month in 2013 (Figure 3.5).

Figure 3.5: Mean number of days on which male detainees had drunk five or more standard alcoholic drinks in the past 30 days by location (of those who had drunk alcohol in the previous month), 2010-2013



Dependency on alcohol

The detainees who had drunk alcohol in the past 12 months were asked if they felt they were dependent on alcohol during this time. Twenty-six percent of the alcohol using detainees felt they were alcohol dependent in 2013. There was no change in the proportion of detainees who felt they were dependent on alcohol from 2010 to 2013 (p=0.5428).

Alcohol use at time of arrest

Forty-one percent of the detainees had been drinking alcohol prior to their arrest in 2013. There was no statistically significant change in the proportion of detainees who had been drinking prior to their arrest from 2010 to 2013 (p=0.1826) (Table 3.2 and Figure 3.6).

Figure 3.6: Proportion of police detainees who had been drinking alcohol prior to their arrest by location, 2010-2013

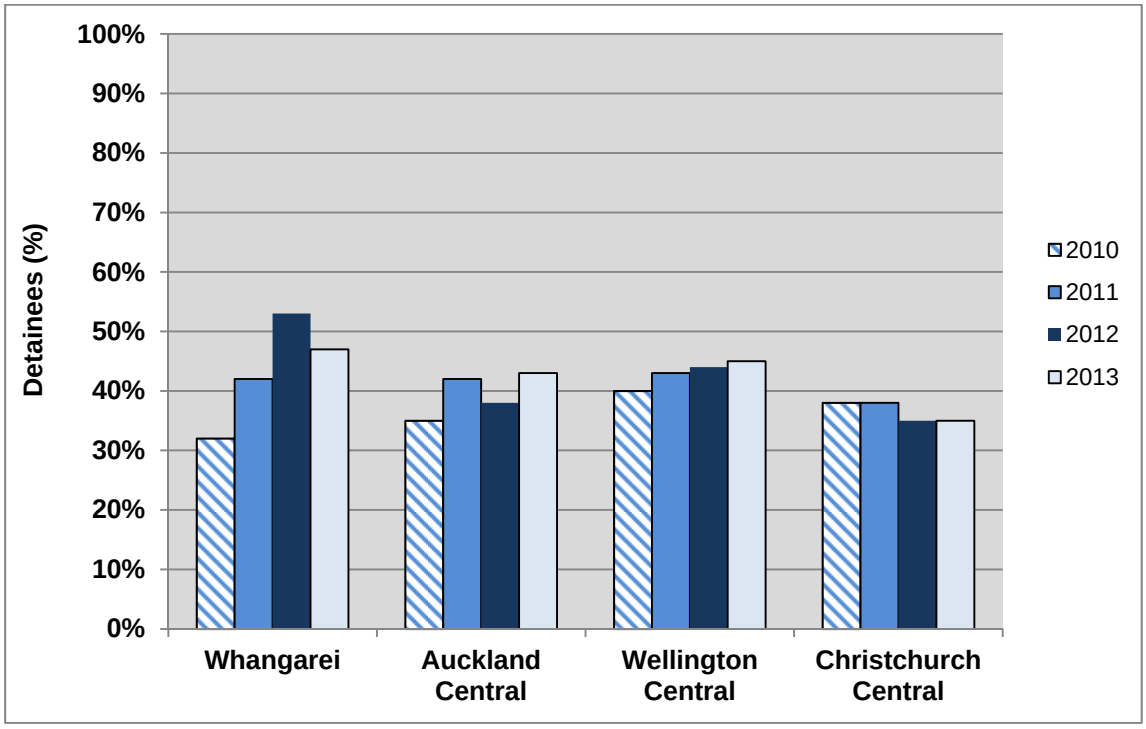


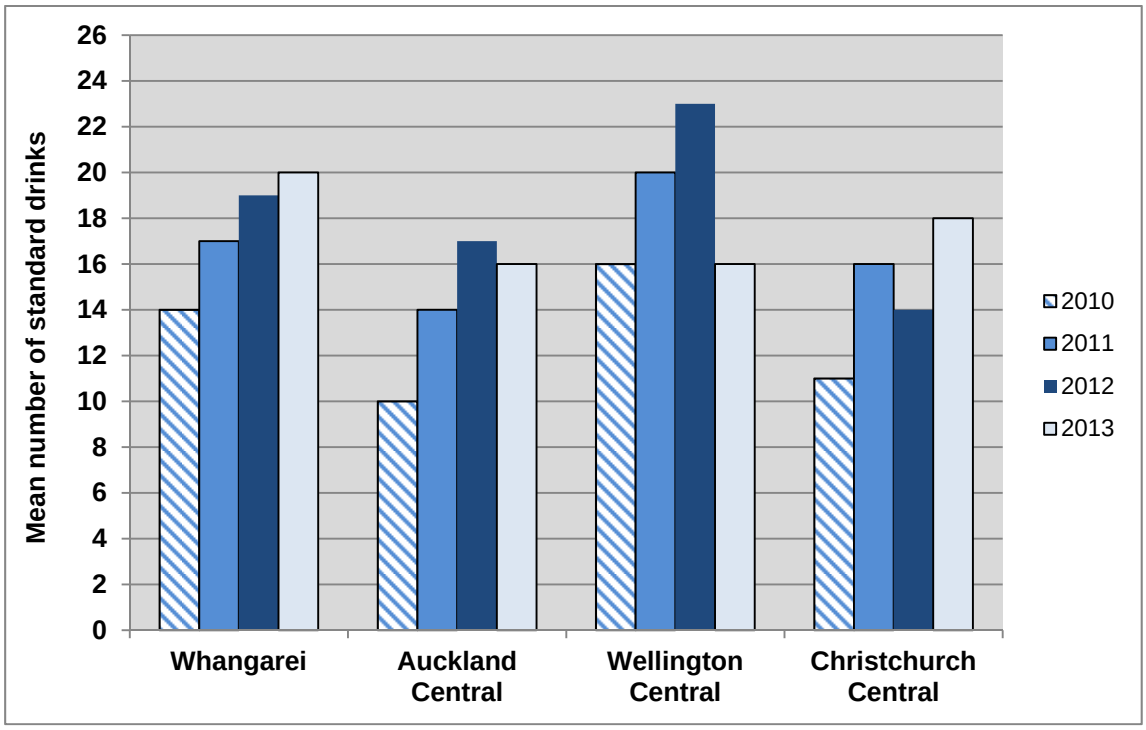
Table 3.2: Proportion of police detainees who had been drinking alcohol prior to their arrest by location, 2010-2013

Use of alcohol	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All sites			
	2010 (n=111)	2011 (n=149)	2012 (n=146)	2013 (n=150)	2010 (n=283)	2011 (n=310)	2012 (n=243)	2013 (n=293)	2010 (n=147)	2011 (n=170)	2012 (n=98)	2013 (n=104)	2010 (n=262)	2011 (n=189)	2012 (n=299)	2013 (n=288)	2010 (n=803)	2011 (n=818)	2012 (n=786)	2013 (n=838)
Using when arrested (%)	32	42	53	47	35	42	38	43	40	43	44	45	38	38	35	35	36	41	40	41
Mean number of standard drinks before arrest*	14	17	19	20	10	14	17	16	16	20	23	16	11	16	14	18	12	16	18	17

* of those who had been drinking alcohol when arrested

The number of alcoholic drinks the detainees consumed before their arrest increased from 12 in 2010 to 17 in 2013 (p=0.0002). The detainees in Auckland Central drank a greater number of drinks in 2013 compared to 2010 (16 vs. 10 standard drinks, p=0.0230) (Figure 3.7). Christchurch Central detainees reported an increase in the number of drinks consumed prior to their arrest (up from 11 in 2010 to 18 in 2013, p<0.0001). In 2013, detainees in Christchurch Central consumed a greater number of drinks before their arrest than those in Auckland Central (18 vs. 16 standard drinks) and this difference was close to being statistically significant (p=0.0657).

Figure 3.7: Mean number of standard alcoholic drinks consumed at the time of arrest by location, 2010-2013



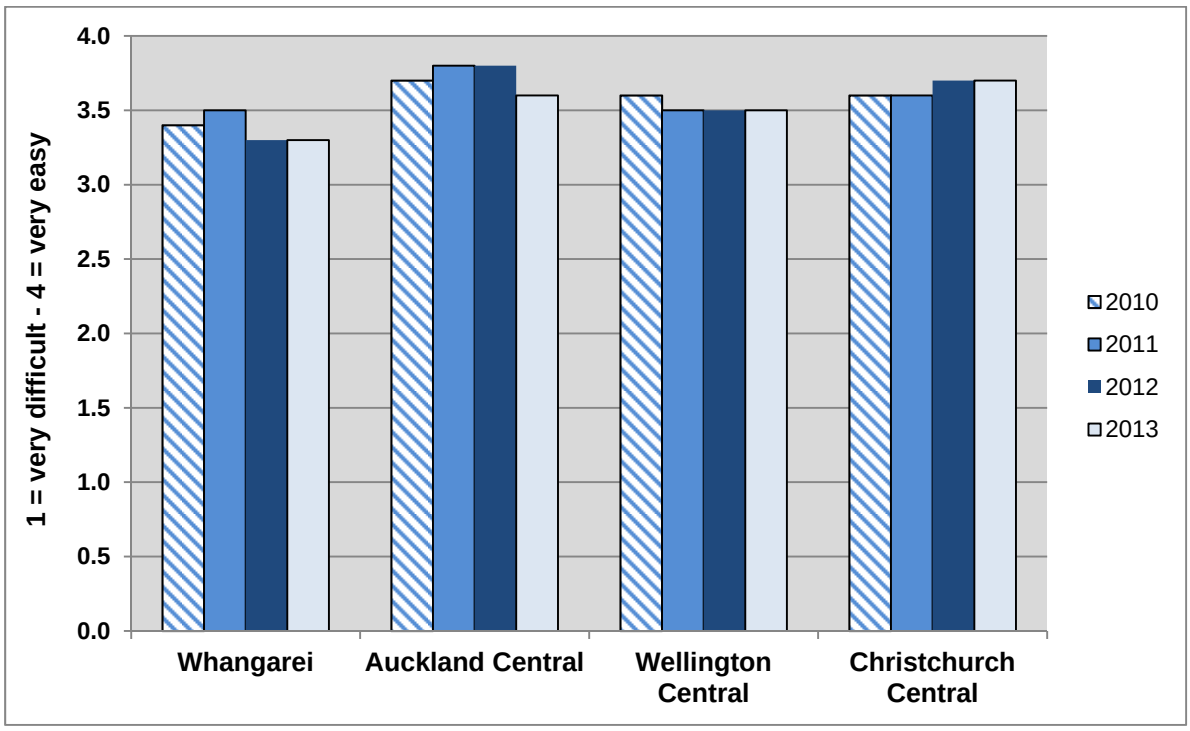
Current availability of alcohol

The detainees reported the current availability of alcohol was 'very easy/easy' in 2013 (Table 3.3). Sixty-nine percent of detainees described alcohol as 'very easy' to obtain in 2013. The availability of alcohol was reported to be more difficult in Whangarei than in the other three sites – Auckland Central (3.3 vs. 3.6, p=0.0006), Wellington Central (3.3 vs. 3.5, p=0.0404) and Christchurch Central (3.3 vs. 3.7, p<0.0001).

Table 3.3: Police detainees' perceptions of the current availability of alcohol by location, 2010-2013

Current availability of alcohol	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All sites			
	2010 (n=97)	2011 (n=139)	2012 (n=131)	2013 (n=117)	2010 (n=245)	2011 (n=278)	2012 (n=211)	2013 (n=269)	2010 (n=138)	2011 (n=155)	2012 (n=94)	2013 (n=94)	2010 (n=248)	2011 (n=181)	2012 (n=275)	2013 (n=265)	2010 (n=728)	2011 (n=753)	2012 (n=712)	2013 (n=745)
Very easy [4]	49%	60%	49%	46%	77%	85%	85%	69%	70%	61%	57%	67%	72%	69%	73%	77%	70%	71%	71%	69%
Easy [3]	41%	28%	37%	38%	17%	12%	11%	25%	23%	28%	35%	24%	18%	24%	22%	15%	22%	21%	23%	23%
Difficult [2]	7%	10%	9%	12%	4%	2%	3%	3%	5%	8%	5%	4%	9%	6%	3%	5%	6%	6%	4%	4%
Very difficult [1]	2%	2%	5%	3%	2%	1%	1%	3%	1%	3%	2%	4%	2%	2%	1%	3%	2%	2%	2%	3%
Average availability (1 = very difficult – 4 = very easy)	3.4	3.5	3.3	3.3	3.7	3.8	3.8	3.6	3.6	3.5	3.5	3.5	3.6	3.6	3.7	3.7	3.6	3.6	3.6	3.6
Overall current availability	Very easy/ easy	Very easy/ Easy	Very easy/ easy	Very easy/ easy	Very easy	Very easy	Very easy	Very easy/ easy	Very easy	Very easy/ Easy	Very easy/ easy	Very easy/ easy	Very easy	Very easy/ easy	Very easy	Very easy	Very easy	Very easy	Very easy	Very easy/ easy

Figure 3.8: Current availability of alcohol by location, 2010-2013



Change in availability of alcohol

The detainees reported the availability of alcohol had been 'stable' over the past six months in 2013 (Table 3.4).

Table 3.4: Change in the availability of alcohol by location, 2010-2013

Change in availability of alcohol	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All sites			
	2010 (n=96)	2011 (n=137)	2012 (n=125)	2013 (n=113)	2010 (n=242)	2011 (n=269)	2012 (n=204)	2013 (n=262)	2010 (n=137)	2011 (n=151)	2012 (n=92)	2013 (n=93)	2010 (n=248)	2011 (n=180)	2012 (n=275)	2013 (n=263)	2010 (n=723)	2011 (n=737)	2012 (n=697)	2013 (n=731)
Easier [3]	26%	18%	15%	19%	22%	19%	19%	18%	19%	11%	21%	12%	21%	23%	20%	21%	22%	18%	19%	18%
Stable [2]	64%	67%	69%	64%	69%	77%	76%	70%	71%	83%	68%	83%	67%	69%	73%	68%	68%	74%	73%	71%
Fluctuates [2]	5%	4%	6%	5%	2%	2%	1%	2%	3%	1%	4%	4%	6%	0%	1%	2%	4%	2%	3%	3%
More difficult [1]	5%	11%	10%	12%	7%	2%	3%	10%	7%	5%	7%	1%	6%	7%	5%	9%	6%	6%	6%	8%
Mean change in availability (1 = more difficult – 3 = easier)	2.2	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.1	2.2	2.1	2.1	2.1
Overall change in availability	Stable/ easier	Stable/ easier	Stable/ more difficult	Stable/ easier	Stable/ easier	Stable	Stable	Stable	Stable	Stable	Stable/ easier	Stable	Stable/ easier	Stable/ easier	Stable	Stable/ easier	Stable/ easier	Stable	Stable	Stable

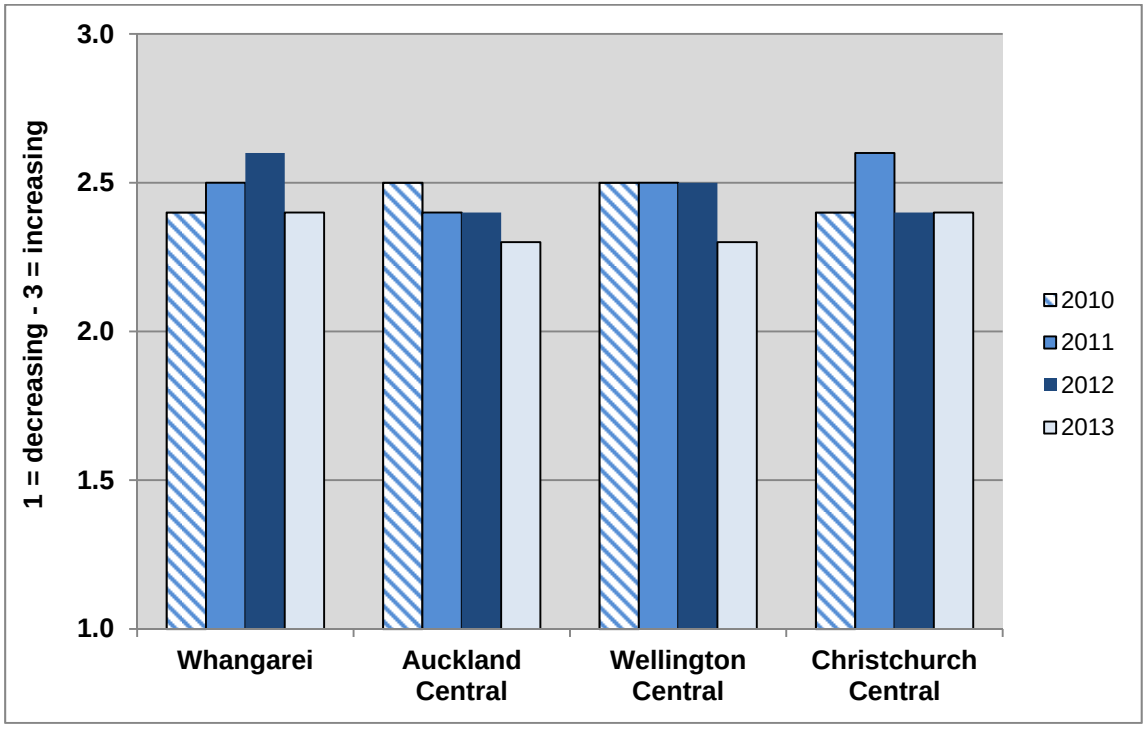
Change in the price of alcohol

The detainees reported the price of alcohol had been 'increasing/stable' over the previous six months in 2013 (Table 3.5). A slightly lower proportion of detainees reported the price of alcohol to be 'increasing' from 2011 to 2013 (down from 2.5 to 2.4, p=0.0006). A lower proportion of Wellington Central detainees said the price of alcohol was 'increasing' (down from 2.5 in 2010 to 2.3 in 2013, p=0.0155).

Table 3.5: Police detainees' perceptions of the change in the price of alcohol in the past six months by location, 2010-2013

Change in price of alcohol	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All sites			
	2010 (n=91)	2011 (n=121)	2012 (n=127)	2013 (n=120)	2010 (n=224)	2011 (n=256)	2012 (n=197)	2013 (n=249)	2010 (n=116)	2011 (n=143)	2012 (n=85)	2013 (n=85)	2010 (n=238)	2011 (n=171)	2012 (n=257)	2013 (n=257)	2010 (n=669)	2011 (n=691)	2012 (n=667)	2013 (n=711)
Increasing [3]	46%	56%	66%	47%	54%	52%	48%	41%	57%	52%	51%	31%	53%	65%	47%	49%	53%	57%	51%	43%
Fluctuating [2]	22%	12%	5%	18%	9%	12%	13%	15%	9%	13%	19%	15%	5%	8%	9%	13%	10%	11%	11%	15%
Stable [2]	24%	22%	25%	26%	29%	29%	32%	35%	28%	30%	25%	49%	32%	22%	40%	34%	29%	26%	32%	36%
Decreasing [1]	8%	10%	4%	9%	8%	7%	7%	8%	6%	4%	6%	5%	9%	5%	4%	5%	8%	7%	5%	7%
Mean change in price (1 = decreasing – 3 = increasing)	2.4	2.5	2.6	2.4	2.5	2.4	2.4	2.3	2.5	2.5	2.5	2.3	2.4	2.6	2.4	2.4	2.5	2.5	2.5	2.4
Overall change in availability	Increasing/ stable	Increasing/ stable	Increasing/ stable	Increasing/ stable	Increasing/ stable	Increasing/ stable	Increasing/ stable	Increasing/ stable	Increasing/ stable	Increasing/ stable	Increasing/ stable	Stable/ increasing	Increasing/ stable	Increasing/ stable	Increasing/ stable	Increasing/ stable	Increasing/ stable	Increasing/ stable	Increasing/ stable	Increasing/ stable

Figure 3.9: Police detainees' perceptions of the change in the price of alcohol in the past six months by location, 2010-2013



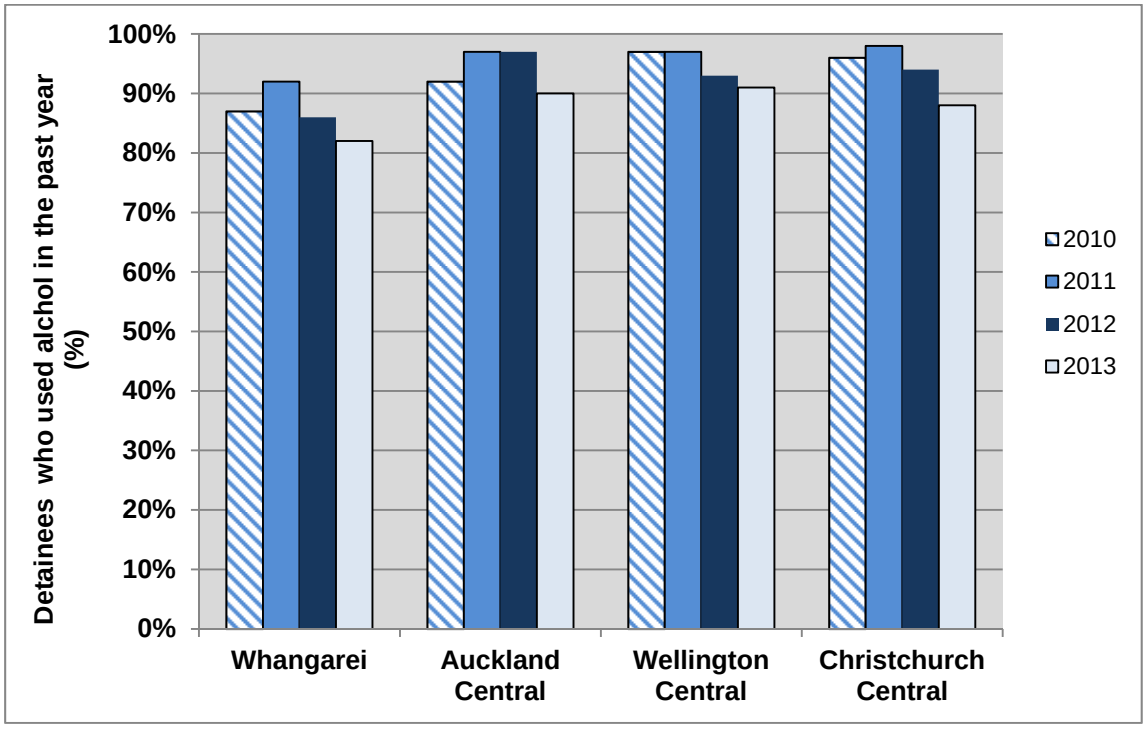
Time taken to purchase alcohol

Eighty-eight percent of the detainees could purchase alcohol in one hour or less in 2013. Seventy-seven percent could purchase it in less than 20 minutes. A lower proportion of the detainees could purchase alcohol in one hour or less in 2013 compared to 2010 (88% vs. 94%, p=0.0005) (Table 3.6 and Figure 3.10).

Table 3.6: Time taken by police detainees to purchase alcohol by location, 2010-2013

Time taken to purchase alcohol (%)	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All sites			
	2010 (n=96)	2011 (n=138)	2012 (n=133)	2013 (n=129)	2010 (216)	2011 (n=276)	2012 (n=209)	2013 (n=270)	2010 (n=137)	2011 (n=154)	2012 (n=93)	2013 (n=98)	2010 (n=247)	2011 (n=181)	2012 (n=273)	2013 (n=267)	2010 (n=696)	2011 (n=752)	2012 (n=708)	2013 (n=769)
Months	0%	0%	0%	0%	0%	1%	<1%	1%	0%	0%	1%	0%	0%	0%	<1%	1%	0%	<1%	<1%	1%
Weeks	2%	2%	1%	2%	1%	0%	0%	1%	0%	0%	0%	1%	<1%	0%	1%	<1%	1%	<1%	<1%	1%
Days	6%	2%	0%	2%	1%	<1%	1%	0%	0%	0%	1%	0%	0%	0%	1%	1%	1%	1%	1%	1%
About 1 day	1%	1%	6%	5%	3%	<1%	1%	3%	1%	1%	2%	1%	0%	1%	1%	2%	1%	1%	2%	2%
Hours	4%	2%	8%	9%	3%	1%	<1%	5%	3%	3%	2%	7%	3%	2%	4%	8%	3%	2%	3%	7%
1 hour	13%	18%	16%	17%	14%	9%	8%	7%	15%	11%	6%	16%	12%	16%	12%	10%	13%	13%	10%	11%
Less than 20 mins	74%	74%	70%	65%	78%	88%	89%	83%	82%	86%	87%	74%	84%	82%	82%	78%	80%	83%	84%	77%

Figure 3.10: Proportion of the police detainees who could purchase alcohol in one hour or less by location, 2010-2013



Effect of alcohol on the likelihood of becoming angry

Those detainees who reported drinking alcohol in the past 12 months were asked what effect drinking alcohol had on their likelihood of becoming angry. Thirty-three percent of the alcohol using detainees said using alcohol was 'more likely' or 'much more likely' to make them become angry in 2013 (Table 3.7).

Table 3.7: Effect of alcohol on police detainees' likelihood of becoming angry, 2010-2013

Effect of alcohol on likelihood of becoming angry	All sites			
	2010 (n=720)	2011 (n=741)	2012 (n=707)	2013 (n=762)
Much more likely [5]	11%	8%	9%	11%
More likely [4]	26%	27%	28%	22%
No effect [3]	32%	41%	41%	40%
Less likely [2]	23%	19%	17%	21%
Much less likely [1]	8%	5%	6%	6%
Mean impact on likelihood to become angry(1 = much less – 5 = much more)	3.1	3.1	3.2	3.1

Driving under the influence of alcohol

Those detainees who had drunk alcohol in the past year were asked how often they drove under the influence of alcohol. Twenty-five percent of the alcohol using detainees said they did not drive and a further 7% said their driver license was suspended in 2013. Nineteen percent of the detainees who drove and drank alcohol had completed at least some of their driving under the influence of alcohol in 2013 (Table 3.8).

Table 3.8: Extent police detainees who drove and who had used alcohol in the past 12 months had driven under the influence of alcohol by location, 2010-2013

Extent drove under the influence of alcohol (%)	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All sites			
	2010 (n=79)	2011 (n=100)	2012 (n=96)	2013 (n=95)	2010 (n=165)	2011 (n=198)	2012 (n=145)	2013 (n=910)	2010 (n=91)	2011 (n=98)	2012 (n=72)	2013 (n=56)	2010 (n=54)	2011 (n=124)	2012 (n=208)	2013 (n=182)	2010 (n=489)	2011 (n=520)	2012 (n=521)	2013 (n=520)
All [4]	3%	2%	1%	2%	2%	2%	1%	3%	4%	2%	1%	5%	2%	0%	1%	2%	3%	1%	1%	3%
Most [3]	3%	0%	5%	8%	3%	5%	6%	4%	3%	3%	3%	2%	6%	3%	2%	2%	4%	3%	4%	4%
Some [2]	14%	8%	14%	13%	18%	20%	15%	14%	14%	14%	6%	11%	19%	18%	19%	11%	17%	16%	14%	12%
Hardly any [1]	37%	26%	25%	17%	19%	20%	16%	32%	18%	18%	22%	20%	18%	19%	22%	23%	21%	20%	21%	25%
None [0]	44%	64%	55%	60%	58%	54%	61%	47%	60%	62%	68%	63%	55%	60%	56%	62%	55%	59%	60%	56%

Summary

- Ninety-one percent of the detainees had drunk alcohol in the past 12 months in 2013
- There was no change in the prevalence of drinking among the detainees from 2010 to 2013
- The detainees reported using alcohol for the first time at an average age of 13 years
- The detainees had drunk alcohol on a mean of 101 days in the previous 12 months in 2013
- The mean number of alcoholic drinks consumed by the detainees on a typical day of drinking increased from 12 in 2010 to 18 in 2013
- Increased alcohol consumption was found in Auckland Central and Christchurch Central in 2013 compared to previous years
- Twenty-six percent of the alcohol using detainees felt they were dependent on alcohol in 2013 and this had not changed from previous years
- Forty-one percent of detainees had been drinking prior to their arrest in 2013
- The number of alcoholic drinks the detainees consumed before their arrest increased from 12 in 2010 to 17 in 2013
- Increased alcohol consumption prior to arrest was found in Auckland Central and Christchurch Central in 2013 compared to previous years
- Sixty-nine percent of detainees described alcohol as 'very easy' to obtain in 2013
- The availability of alcohol was reported to be 'stable' in 2013
- The price of alcohol was reported to be 'increasing/stable' over the previous six months in 2013
- Seventy-seven percent of the detainees could purchase alcohol in less than 20 minutes in 2013
- The proportion of detainees who could purchase alcohol in one hour or less declined slightly from 94% in 2010 to 88% in 2013
- Thirty-three percent of the alcohol using detainees said drinking alcohol was 'more likely' or 'much more likely' to make them become angry in 2013

- Nineteen percent of the detainees who drove and drank alcohol had completed at least some of their driving under the influence of alcohol in 2013

Chapter 4 - Methamphetamine

Introduction

Methamphetamine, known colloquially in New Zealand as 'P', is a powerful and addictive psycho-stimulant (Gawin & Ellinwood, 1988; Hall & Hando, 1994; Kuhn et al., 1998; Shearer et al., 2002). Chronic and high dose use of methamphetamine can cause hostility, paranoia, hallucinations, obsessive behavior, psychosis resembling schizophrenia, and drug dependency (Hall & Hando, 1994; Kuhn, et al., 1998; Shearer, et al., 2002).

Methamphetamine use emerged in New Zealand in the late-1990s/early2000s. Its population prevalence peaked at 5.0% of the population (aged 15-45 years) in 2001, before declining to 3.4% by 2006 (Wilkins et al., 2002b; Wilkins & Sweetsur, 2008c). The most recent population estimate, from a household survey conducted in 2012/13, found 0.9% of New Zealanders aged 16-64 years reported using 'amphetamines'[3] in the previous year (Ministry of Health, 2013). The same rate of amphetamine use (0.9%) had previously been found in a similar 2011/12 household survey, although direct comparisons are not possible due to some differences in the survey methodology employed (Ministry of Health, 2013).

High levels of methamphetamine use and related harm have persisted among specific 'at risk' populations, such as frequent drug users and police detainees (Wilkins, et al., 2012b; 2011b). The 2012 NZ-ADUM found 28% of police detainees had used methamphetamine in the previous 12 months (Wilkins, et al., 2012a). In 2012, methamphetamine use was higher among detainees in Auckland and Whangarei than in Wellington and Christchurch, although there were signs of a recovery in the methamphetamine market in Christchurch following the earthquakes there in 2011 (Wilkins, et al., 2012a). The detainees reported some decline in the (gram) price and strength of methamphetamine in 2012 compared to the previous year (Wilkins, et al., 2012a). The 2012 Illicit Drug Monitoring system (IDMS), which interviews frequent methamphetamine users, also found a decline in the (gram) price and strength of methamphetamine in 2012 (Wilkins et al., 2013). There are a number of possible

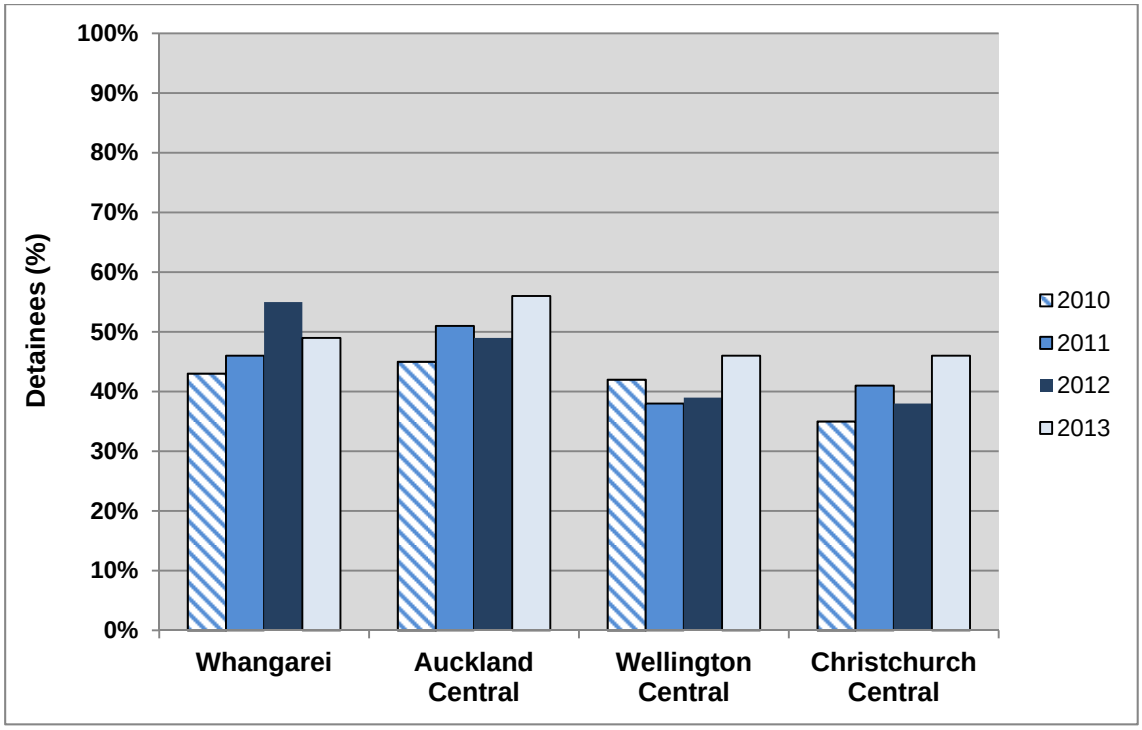
[3] In this survey the term 'amphetamines' referred to a number of amphetamine type drugs including methamphetamine, crystal methamphetamine (Ice) and amphetamine sulphate ('speed')

explanations for the emergence of these cheaper, lower quality grams of methamphetamine including declining demand for methamphetamine, the impact of greater precursor controls on the quality of methamphetamine manufacture, or merely attempts to exploit a particular segment of the market.

Patterns of methamphetamine use

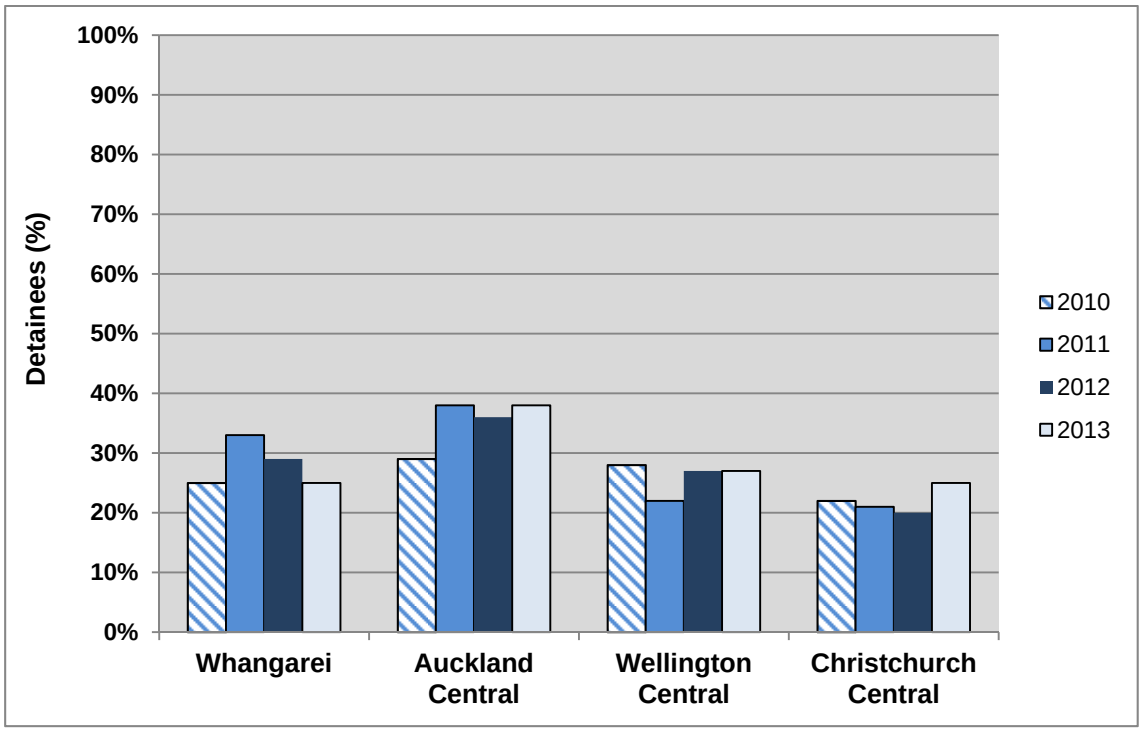
Fifty percent of the police detainees had tried methamphetamine in their lifetimes, 30% had used it in the previous year and 19% had used it in the past month in 2013 (Table 4.1). The proportion of detainees who reported having ever used methamphetamine increased from 41% in 2010 to 50% in 2013 (p=0.0019). There was a rise in the lifetime prevalence of methamphetamine use in Auckland Central (up from 45% in 2010 to 56% in 2013, p=0.0313) (Figure 4.1). There was also a rise in the lifetime use of methamphetamine in Christchurch Central, up from 36% in 2010 to 46% in 2013, and this increase was close to being statistically significant (p=0.0640). In 2013, detainees in Auckland Central were more likely to have ever used methamphetamine than detainees in Christchurch Central (56% vs. 46%) and this difference was close to being statistically significant (p=0.0667).

Figure 4.1: Proportion of police detainees who had ever used methamphetamine by location, 2010-2013



There was no statistically significant change in the prevalence of methamphetamine use in the previous year from 2010 to 2013 (p=0.3937). A higher proportion of detainees in Auckland Central reported using methamphetamine in the past year (up from 29% in 2010 to 38% in 2013), although this increase was not statistically significant (p=0.1475). In 2013, detainees in Auckland Central were more likely to have used methamphetamine in the previous 12 months than detainees in Christchurch Central (38% vs. 25%, p=0.0047) and Whangarei (38% vs. 25%, p=0.0484).

Figure 4.2: Proportion of police detainees who used methamphetamine in the past 12 months by location, 2010-2013



The proportion of detainees who had used methamphetamine in the previous month increased from 14% in 2010 to 19% in 2013, and this increase was close to being statistically significant (p=0.0850) (Figure 4.3). The proportion of Auckland Central detainees who had used methamphetamine in the previous month also increased (up from 19% in 2010 to 27% in 2013) and this difference was also close to being statistically significant (p=0.0698). In 2013, detainees in Auckland Central were more likely to have used methamphetamine in the past month than detainees in Christchurch Central (27% vs. 13%, p<0.0001) and Whangarei (27% vs. 15%, p=0.0271).

Figure 4.3: Proportion of police detainees who used methamphetamine in the past month by location, 2010-2013

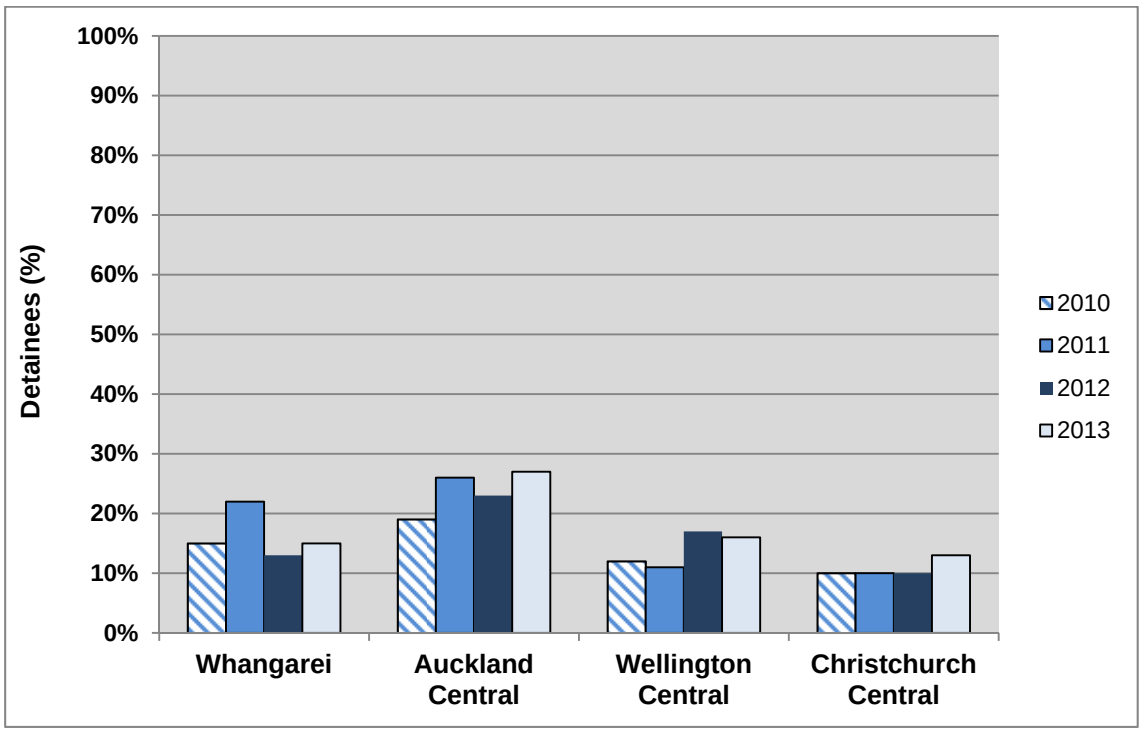


Table 4.1: Police detainees' patterns of methamphetamine use by location, 2010- 2013

Use of meth-amphetamine	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All sites			
	2010 (n=115)	2011 (n=149)	2012 (n=151)	2013 (n=153)	2010 (n=284)	2011 (n=316)	2012 (n=247)	2013 (n=294)	2010 (n=152)	2011 (n=171)	2012 (n=101)	2013 (n=106)	2010 (n=262)	2011 (n=191)	2012 (n=303)	2013 (n=287)	2010 (n=813)	2011 (n=827)	2012 (n=802)	2013 (n=843)
Ever used (%)	43	46	55	49	45	51	49	56	42	38	39	46	35	41	38	46	41	45	44	50
Mean age first used (years)*	22	21	21	20	22	22	21	22	22	23	21	20	22	22	23	21	22	22	21	21
Used in past 12 months (%)	25	33	29	25	29	38	36	38	28	22	27	27	22	21	20	25	26	29	28	30
Mean number of days used in past 12 months**	44	77	55	45	102	82	81	105	67	77	58	90	35	59	58	55	68	75	68	82
Injected in past 12 months**	10	8	8	6	29	20	28	22	18	16	7	17	15	19	28	15	20	17	21	17
Felt dependent in past 12 months (%)**	19	16	24	19	36	31	29	37	28	24	21	37	7	8	20	18	25	23	25	30
Used in past month (%)	15	22	13	15	19	26	23	27	12	11	17	16	10	10	10	13	14	18	16	19
Mean number of days used in past month***	7	10	9	7	12	8	11	12	9	10	10	14	5	8	10	7	9	8	10	10

* of those who had ever tried

** of those who had used in the past 12 months

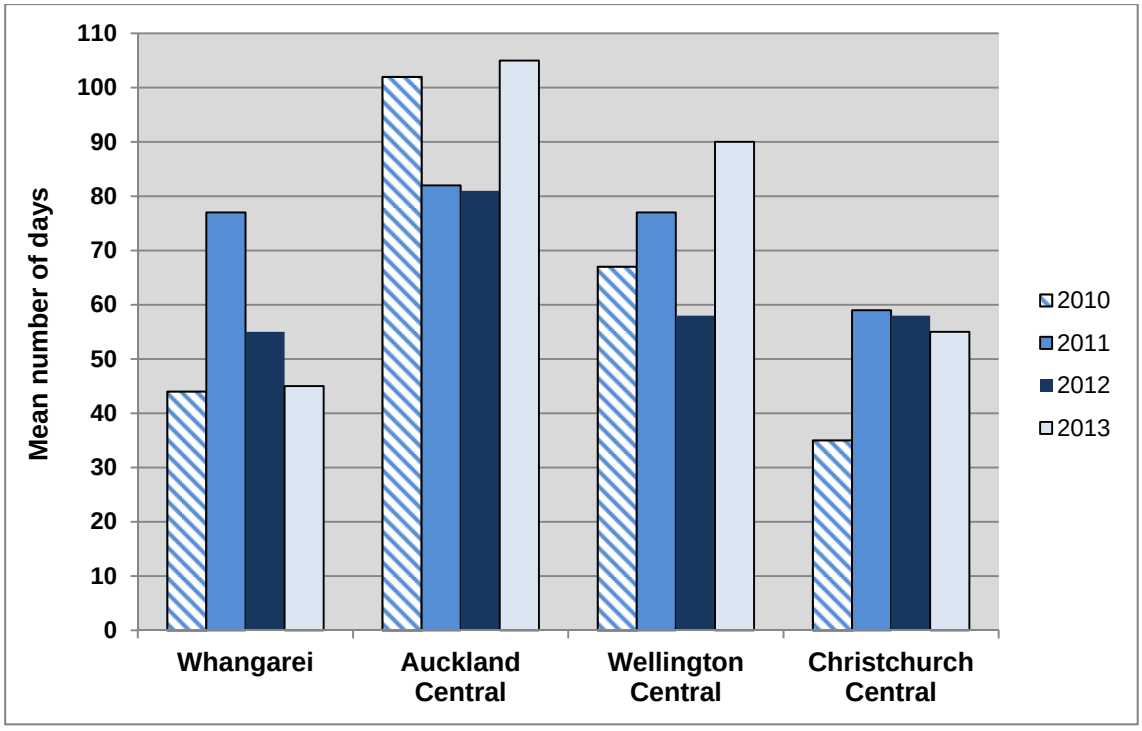
*** of those who had used in the past month

Seventeen percent of the detainees who had used methamphetamine in the past 12 months in 2013 had injected it. There was no change in level of injection of methamphetamine from 2010 to 2013 (p=0.6343).

Frequency of methamphetamine use

The detainees had used methamphetamine on a mean of 82 days in the previous 12 months in 2013 (median 12 days, range of 1-365 days). There is often a great deal of natural variation between methamphetamine using detainees with respect to their frequency of methamphetamine use and this reduces the likelihood of finding clear statistically significant differences. There was an increase in the mean number of days the detainees had used methamphetamine, up from 68 days in 2010 to 82 days in 2013, and this difference was close to being statistically significant (p=0.0842). In 2013, detainees in Auckland Central had used methamphetamine on a greater number of days in the past year than detainees in Christchurch Central (105 vs. 55 days, p=0.0007) and Whangarei (105 days vs. 45 days, p=0.0021) (Figure 4.4).

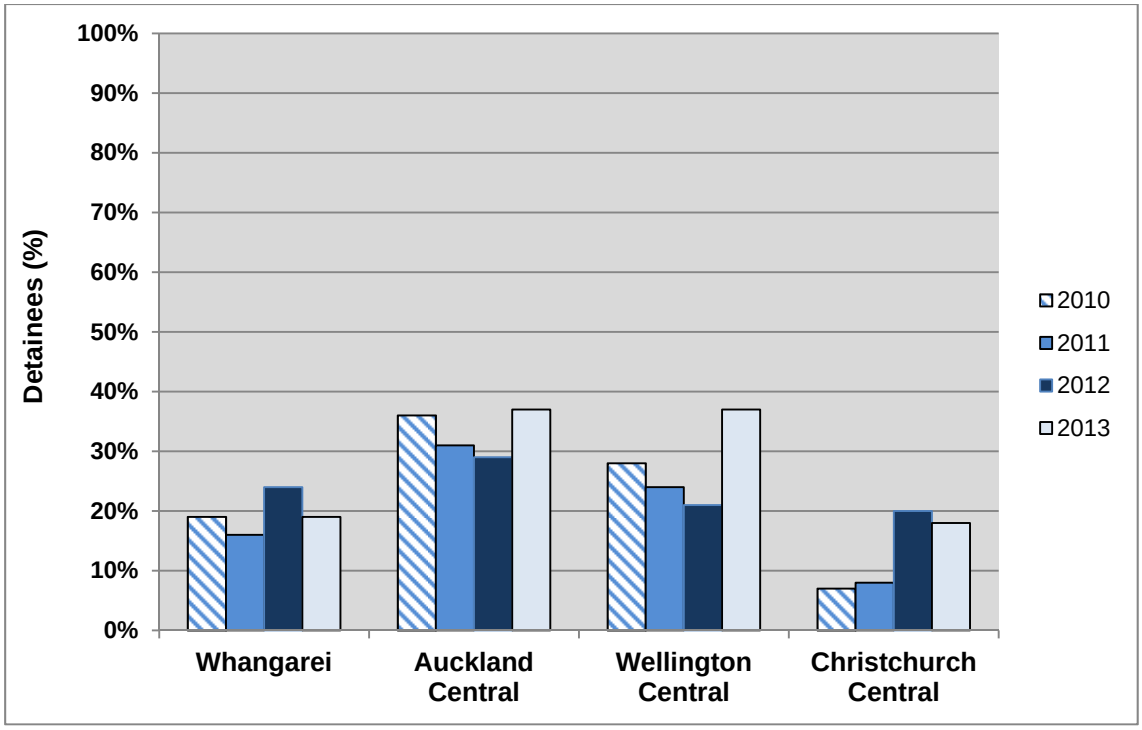
Figure 4.4: Mean number of days police detainees used methamphetamine in the past 12 months by location, 2010- 2013



Dependency on methamphetamine

The detainees who had used methamphetamine in the previous year were asked if they felt dependent on methamphetamine during the past 12 months. Thirty percent of the methamphetamine using detainees felt they were dependent on methamphetamine during this time. There was no statistically significant change in the level of dependency on methamphetamine from 2010 to 2013 (p=0.2513). In 2013, Auckland Central detainees were more likely to report that they had felt dependent on methamphetamine than Christchurch Central detainees (37% vs. 18%, p=0.0393) (Figure 4.5).

Figure 4.5: Proportion of police detainees who felt they were dependent on methamphetamine in the past 12 months by location (of those who had used methamphetamine in the past 12 months), 2010-2013



Methamphetamine use at the time of arrest

Six percent of the detainees (of the entire sample) reported they were using methamphetamine prior to being arrested in 2013 (Table 4.2). The proportion of detainees using methamphetamine at the time of their arrest increased from 3% in 2010 to 6% in 2013, and this increase was close to being statistically significant (p=0.0666). In 2013, detainees in Auckland Central were more likely to have been using methamphetamine prior to their arrest than detainees in Whangarei (9% vs. 2%), and this difference was also close to being statistically significant (p=0.0600) (Figure 4.6).

Figure 4.6: Proportion of police detainees who were using methamphetamine prior to their arrest by location, 2010-2013

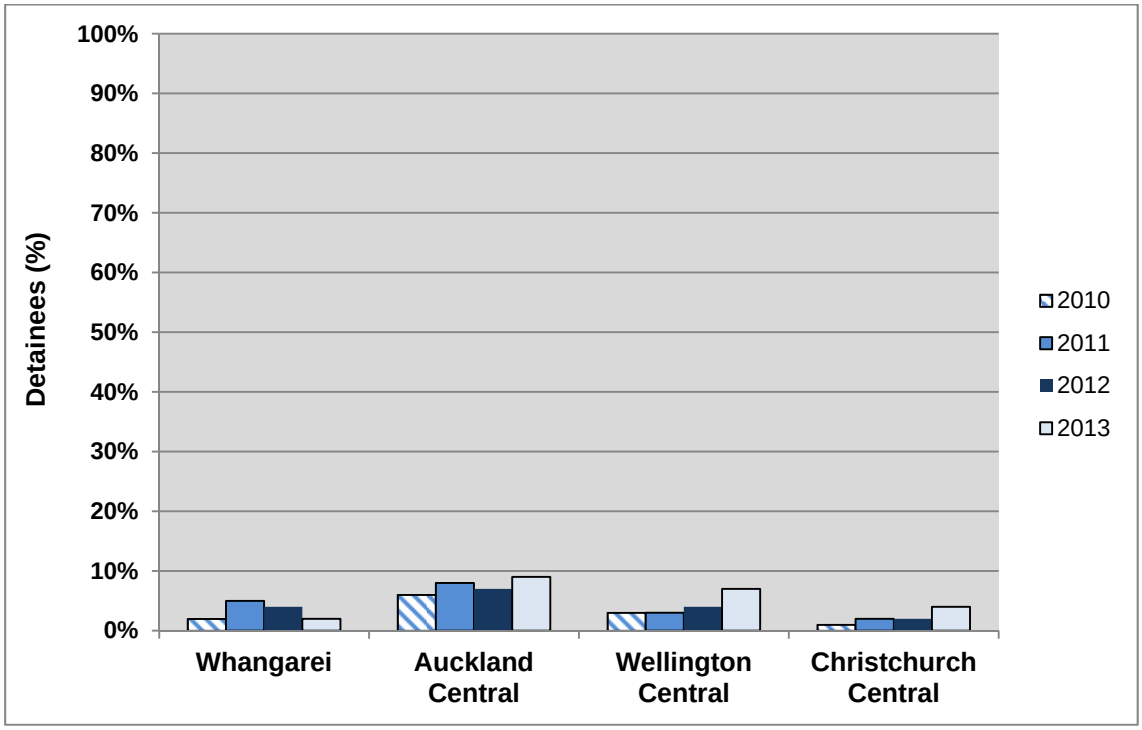


Table 4.2: Methamphetamine use by police detainees at time of arrest by location, 2010-2013

Use of meth-amphetamine	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All sites			
	2010 (n=113	2011 (n=148)	2012 (n=144)	2013 (n=145)	2010 (n=280)	2011 (n=309)	2012 (n=243)	2013 (n=290)	2010 (n=149)	2011 (n=170)	2012 (n=99)	2013 (n=106)	2010 (n=262)	2011 (n=190)	2012 (n=299)	2013 (n=281)	2010 (n=804)	2011 (n=817)	2012 (n=785)	2013 (n=827)
Using when arrested (%)	2	5	4	2	6	8	7	9	3	3	4	7	1	2	2	4	3	5	5	6

Current availability of methamphetamine

The detainees reported the current availability of methamphetamine to be 'very easy/easy' in 2013 (Table 4.3). There was no change in the current availability of methamphetamine from 2010 to 2013 (i.e. mean score of availability 3.0 in all years). The current availability of methamphetamine increased in Whangarei (up from 2.6 in 2010 to 3.1 in 2013), but the increase was not statistically significant (p=0.1073) (Figure 4.7).

Figure 4.7: Mean score of current availability of methamphetamine by location, 2010-2013

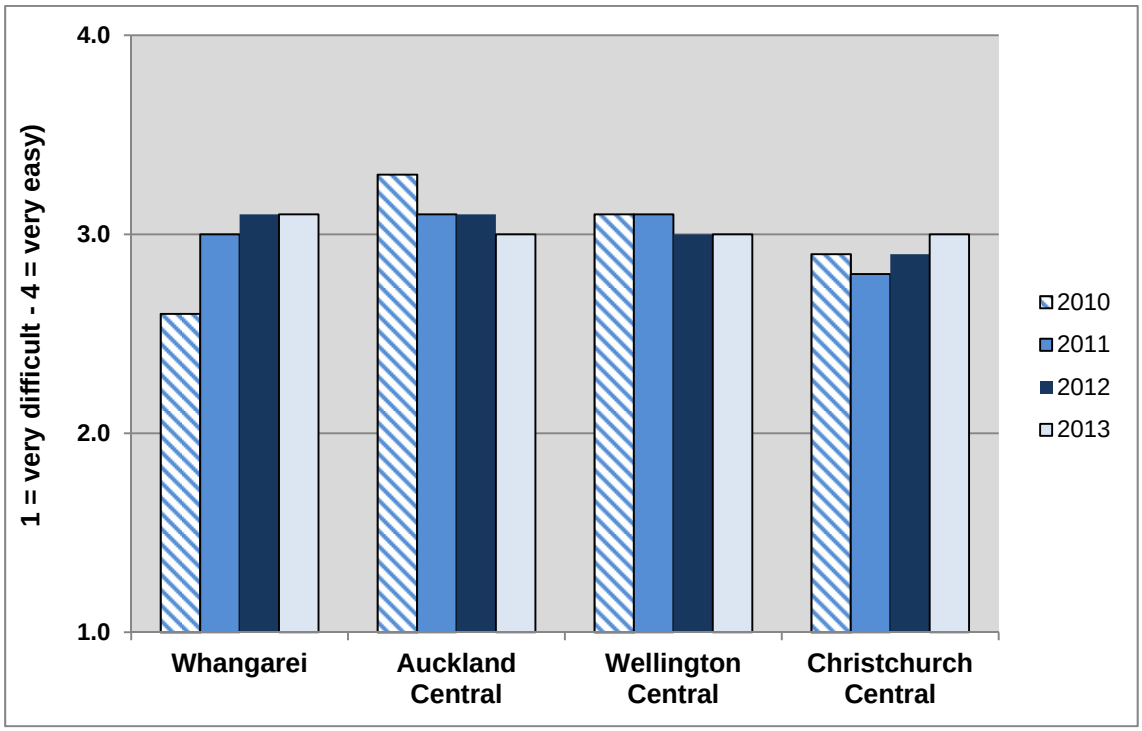


Table 4.3: Police detainees' perceptions of the current availability of methamphetamine by location, 2010-2013

Current availability of meth-amphetamine	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All sites			
	2010 (n=29)	2011 (n=48)	2012 (n=37)	2013 (n=37)	2010 (n=82)	2011 (n=112)	2012 (n=83)	2013 (n=110)	2010 (n=39)	2011 (n=33)	2012 (n=25)	2013 (n=26)	2010 (n=54)	2011 (n=34)	2012 (n=53)	2013 (n=72)	2010 (n=204)	2011 (n=227)	2012 (n=198)	2013 (n=245)
Very easy [4]	17%	35%	41%	35%	50%	38%	41%	41%	44%	36%	32%	35%	35%	29%	36%	43%	40%	36%	38%	40%
Easy [3]	38%	33%	32%	43%	28%	38%	36%	32%	31%	45%	36%	35%	33%	29%	28%	28%	31%	37%	34%	32%
Difficult [2]	34%	27%	19%	22%	20%	18%	13%	18%	13%	12%	24%	23%	19%	32%	23%	18%	20%	21%	18%	19%
Very difficult[1]	10%	4%	8%	0%	2%	5%	10%	9%	13%	6%	8%	8%	13%	9%	13%	11%	8%	6%	10%	8%
Average availability score (1=very difficult – 4=very easy)	2.6	3.0	3.1	3.1	3.3	3.1	3.1	3.0	3.1	3.1	3.0	3.0	2.9	2.8	2.9	3.0	3.0	3.0	3.0	3.0
Overall current status	Easy/ difficult	Very easy/ easy	Very easy/ easy	Easy/ very easy	Very easy/ easy	Very easy/ easy	Very easy/ easy	Very easy/ easy	Very easy/ easy	Easy/ very easy	Easy/ very easy	Very easy/ easy	Very easy/ easy	Difficult/ easy	Very easy/ easy	Very easy/ easy	Very easy/ easy	Easy/ very easy	Very easy/ easy	Very easy/ easy

Change in availability of methamphetamine

In 2013, 43% of the detainees reported the availability of methamphetamine had been 'stable', 25% said it had become 'easier' and 20% said it had become 'more difficult' (Table 4.4). There was no overall change in the availability of methamphetamine from 2010 to 2013 (2.0 in 2010 to 2.1 in 2013, p=0.7689). The availability of methamphetamine increased in Christchurch Central from 2011 to 2013 (up from 1.7 in 2011 to 2.1 in 2013, p=0.0201) (Figure 4.8).

Figure 4.8: Mean score of change in the availability of methamphetamine by location, 2010-2013

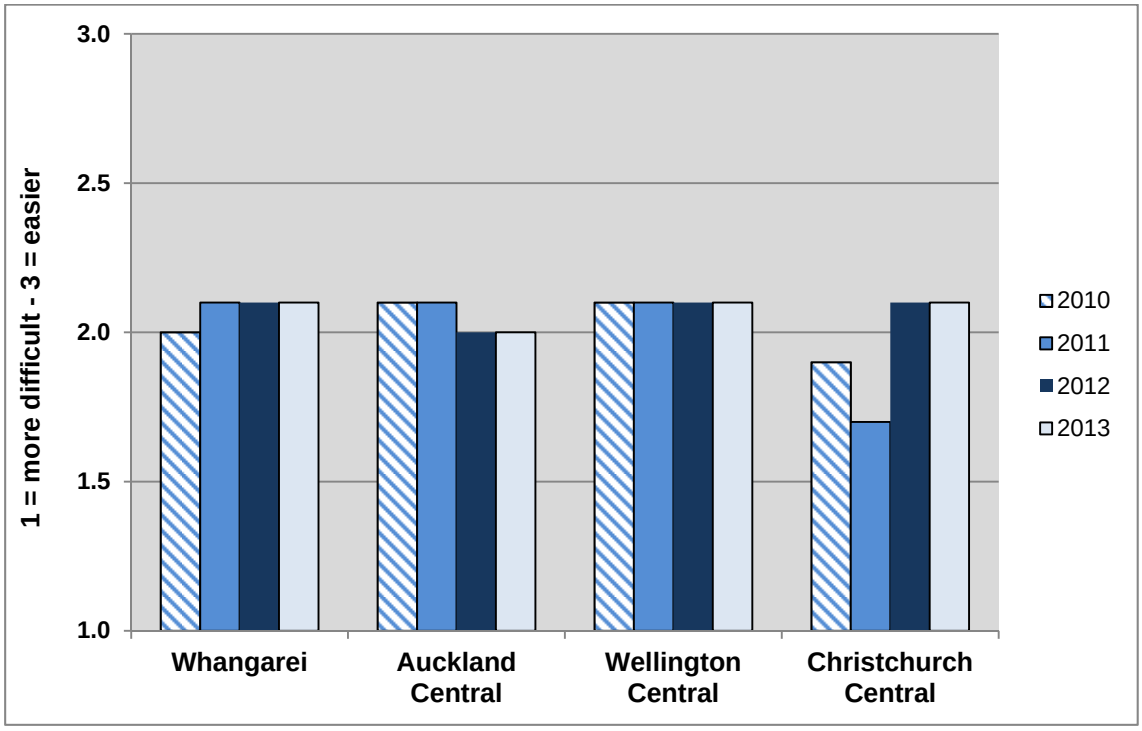


Table 4.4: Police detainees' perceptions of the change in availability of methamphetamine by location, 2010-2013

Change in availability of meth-amphetamine	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All sites			
	2010 (n=27)	2011 (n=48)	2012 (n=37)	2013 (n=36)	2010 (n=76)	2011 (n=104)	2012 (n=73)	2013 (n=99)	2010 (n=30)	2011 (n=30)	2012 (n=25)	2013 (n=24)	2010 (n=51)	2011 (n=34)	2012 (n=48)	2013 (n=67)	2010 (n=184)	2011 (n=216)	2012 (n=183)	2013 (n=226)
Easier [3]	19%	31%	30%	22%	32%	20%	21%	24%	27%	20%	28%	21%	16%	6%	27%	31%	24%	20%	25%	25%
Stable [2]	33%	33%	41%	53%	32%	50%	48%	39%	33%	63%	28%	50%	39%	47%	38%	39%	34%	48%	41%	43%
Fluctuates [2]	26%	19%	14%	11%	12%	15%	8%	12%	27%	7%	24%	17%	16%	12%	17%	10%	17%	14%	14%	12%
More difficult [1]	22%	17%	16%	14%	25%	14%	23%	24%	13%	10%	20%	13%	29%	35%	19%	19%	24%	18%	21%	20%
Average change in availability score (1=more difficult – 3=easier)	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1	1.9	1.7	2.1	2.1	2.0	2.0	2.0	2.1
Overall recent change	Stable/ fluctuates	Stable/ easier	Stable/ easier	Stable/ easier	Stable/ easier	Stable/ easier	Stable/ more difficult	Stable/ easier	Stable/ fluctuates	Stable/ easier	Easier/ stable	Stable/ easier	Stable/ more difficult	Stable/ more difficult	Stable/ easier	Stable/ easier	Stable/ more difficult	Stable/ easier	Stable/ easier	Stable/ easier

Current price of methamphetamine

The detainees reported the median price of a 'point' (0.1 grams) of methamphetamine was $100 (mean $109) (Table 4.5). There was no statistically significant change in the overall mean price of a 'point' of methamphetamine from 2010 to 2013 (p=0.1690). The mean price of a 'point' of methamphetamine in Christchurch Central increased from $110 in 2010 to $134 in 2013 (p=0.0016) (Figure 4.9). In 2013, the mean price paid for a 'point' of methamphetamine was higher in Christchurch Central than in Auckland Central ($134 vs. $99, p<0.0001), Wellington Central ($134 vs. $99, p<0.0001) and Whangarei ($134 vs. $100, p<0.0001).

Figure 4.9: Mean price paid for a point (0.1 grams) of methamphetamine by location, 2010-2013

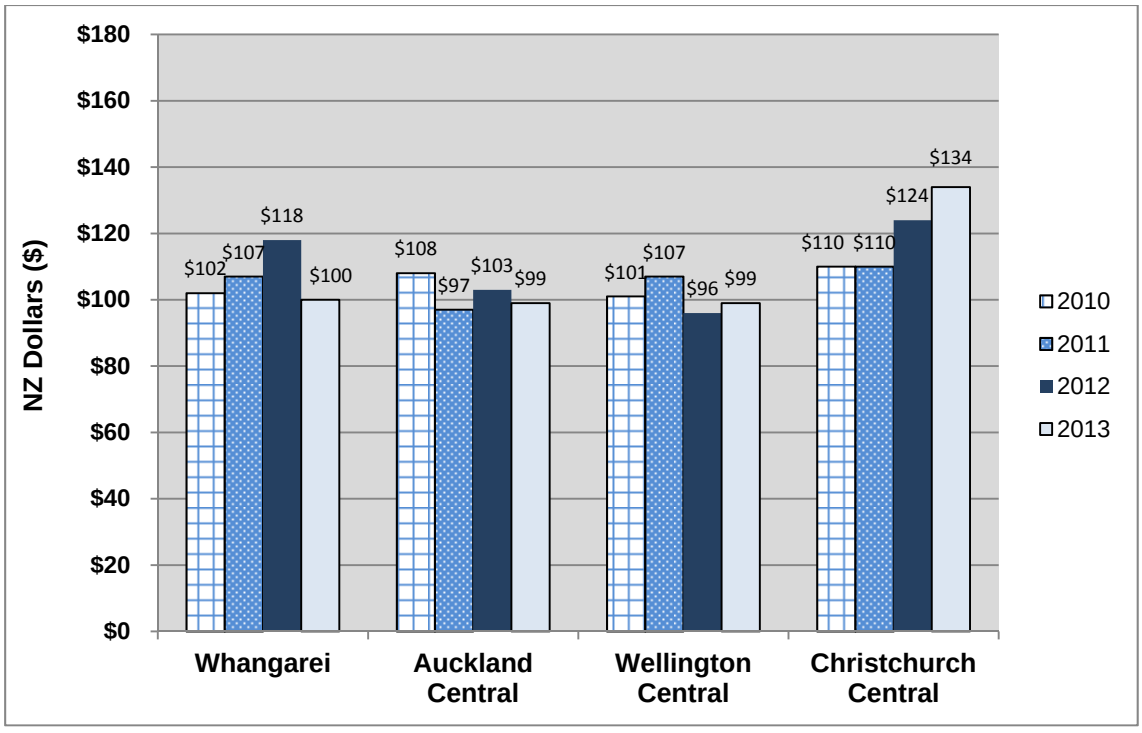
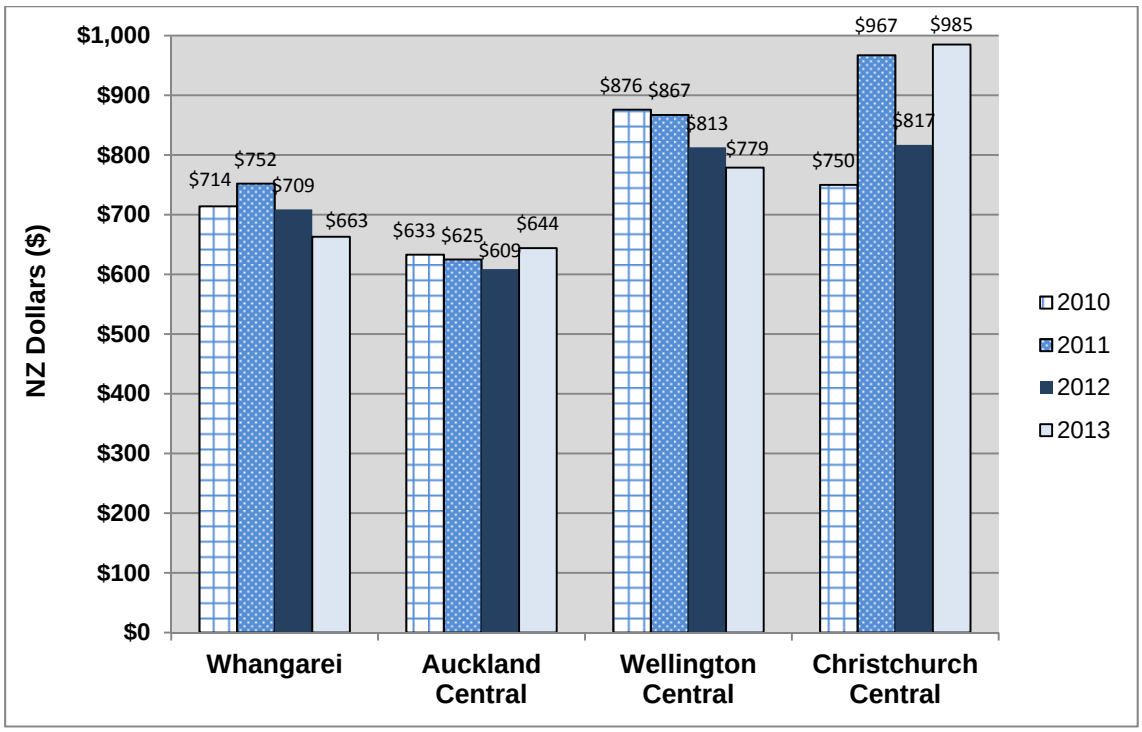


Table 4.5: Current median (mean) price paid by police detainees for a 'point' and gram of methamphetamine (NZD) by location, 2010 - 2013

Current price of methamphetamine ($)	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All sites			
Number with knowledge	2010 (n=24)	2011 (n=36)	2012 (n=28)	2013 (n=25)	2010 (n=63)	2011 (n=89)	2012 (n=59)	2013 (n=92)	2010 (n=22)	2011 (n=25)	2012 (n=15)	2013 (n=20)	2010 (n=47)	2011 (n=20)	2012 (n=41)	2013 (n=58)	2010 (n=156)	2011 (n=170)	2012 (n=143)	2013 (n=195)
Median (mean) price 'point' (0.1 grams)	$100 ($102)	$100 ($107)	$100 ($118)	(100 ($100)	$100 ($108)	$100 ($97)	$100 ($103)	$100 ($99)	$100 ($101)	$100 ($107)	$100 ($96)	$100 ($99)	$100 ($110)	$100 ($110)	$120 ($124)	$150 ($134)	$100 ($107)	$100 ($102)	$100 ($109)	$100 ($109)
Number with knowledge	2010 (n=7)	2011 (n=22)	2012 (n=19)	2013 (n=23)	2010 (n=34)	2011 (n=34)	2012 (n=35)	2013 (n=70)	2010 (n=18)	2011 (n=16)	2012 (n=6)	2013 (n=13)	2010 (n=12)	2011 (n=15)	2012 (n=18)	2013 (n=48)	2010 (n=71)	2011 (n=87)	2012 (n=78)	2013 (n=154)
Median (mean) price gram	$800 ($714)	$775 ($752)	$700 ($708)	$700 ($663)	$600 ($633)	$600 ($625)	$600 ($609)	$625 ($644)	$850 ($876)	$888 ($867)	$825 ($813)	$750 ($779)	$900 ($750)	$1000 ($967)	$900 ($817)	$1000 ($985)	$700 ($723)	$750 ($778)	$650 (691)	$700 ($766)

The median price of a gram of methamphetamine was $700 in 2013 (mean $766). The mean price of a gram of methamphetamine increased from $691 in 2012 to $766 in 2013, although this increase was not statistically significant (p=0.1270). The gram price increased in Christchurch (up from $750 in 2010 to $985 in 2013), and this increase was close to being statistically significant (p=0.0992). The mean price of a gram of methamphetamine in 2013 was higher in Christchurch Central than in Auckland Central ($985 vs. $644, p<0.0001) and Whangarei ($985 vs. $663, p<0.0001).

Figure 4.10: Mean price paid for a gram of methamphetamine by location, 2010-2013



Change in the price of methamphetamine

Fifty-four percent of the detainees said the price of methamphetamine had been 'stable', 23% said it had been 'fluctuating', and 16% said it had been 'increasing' over the previous six months in 2013 (Table 4.6). There was no statistically significant change in perceptions of the change in price of methamphetamine from 2010 to 2013 (i.e. 'stable/fluctuating') (Figure 4.11).

Figure 4.11: Mean score of the change in the price of methamphetamine by location, 2010-2013

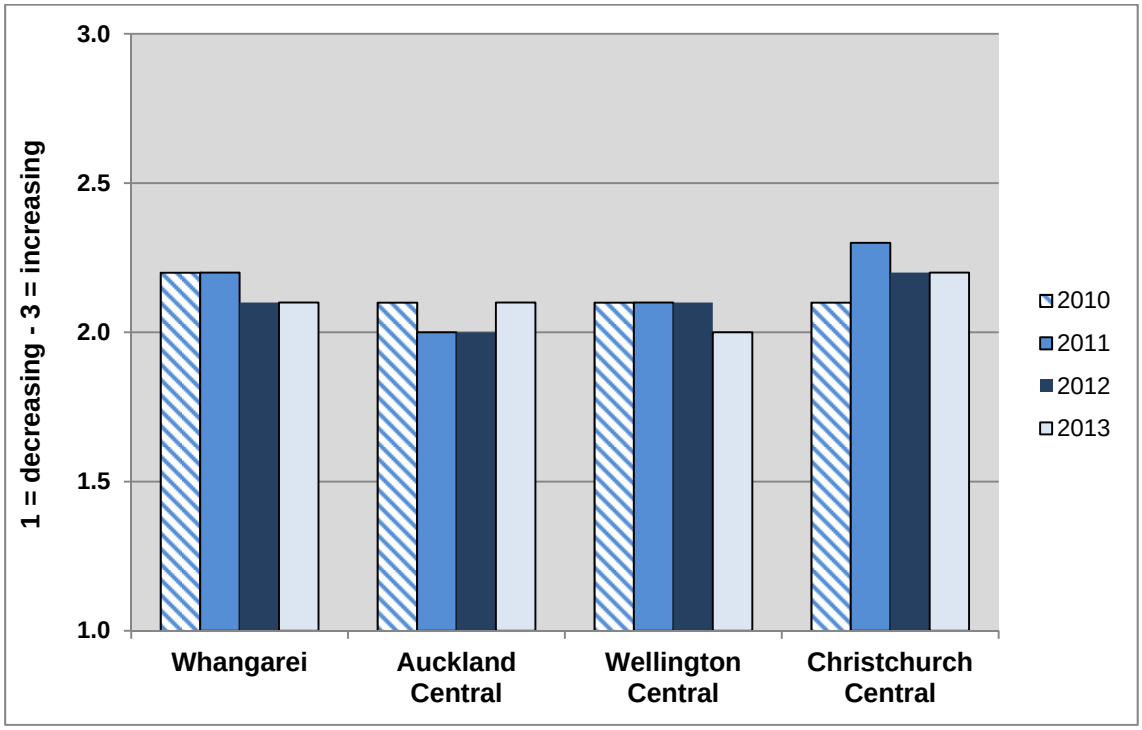


Table 4.6: Police detainees' perceptions of the change in the price of methamphetamine in the past six months by location, 2010-2013

Change in price of meth amphetamine	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All sites			
	2010 (n=28)	2011 (n=42)	2012 (n=36)	2013 (n=32)	2010 (n=81)	2011 (n=100)	2012 (n=)	2013 (n=96)	2010 (n=31)	2011 (n=32)	2012 (n=22)	2013 (n=24)	2010 (n=50)	2011 (n=33)	2012 (n=45)	2013 (n=67)	2010 (n=190)	2011 (n=207)	2012 (n=176)	2013 (n=792)
Increasing [3]	21%	29%	17%	19%	22%	8%	12%	16%	23%	16%	18%	0%	20%	30%	24%	24%	22%	17%	17%	16%
Fluctuating [2]	18%	21%	17%	28%	10%	22%	14%	24%	10%	19%	18%	29%	8%	9%	18%	15%	11%	19%	16%	23%
Stable [2]	57%	43%	56%	41%	58%	58%	66%	51%	52%	59%	55%	67%	64%	58%	53%	57%	58%	55%	60%	54%
Decreasing [1]	4%	7%	11%	13%	10%	12%	8%	9%	16%	6%	9%	4%	8%	3%	4%	4%	9%	9%	8%	7%
Average change in price score (1= decreasing – 3= increasing)	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.1	2.3	2.2	2.2	2.1	2.1	2.1	2.1
Overall recent change	Stable/ increasing	Stable/ increasing	Stable/ increasing	Stable/ fluctuating	Stable/ increasing	Stable/ fluctuating	Stable/ fluctuating	Stable/ fluctuating	Stable/ increasing	Stable/ fluctuating	Stable/ fluctuating	Stable/ fluctuating	Stable/ increasing	Stable/ increasing	Stable/ increasing	Stable/ increasing	Stable/ increasing	Stable/ fluctuating	Stable/ increasing	Stable/ fluctuating

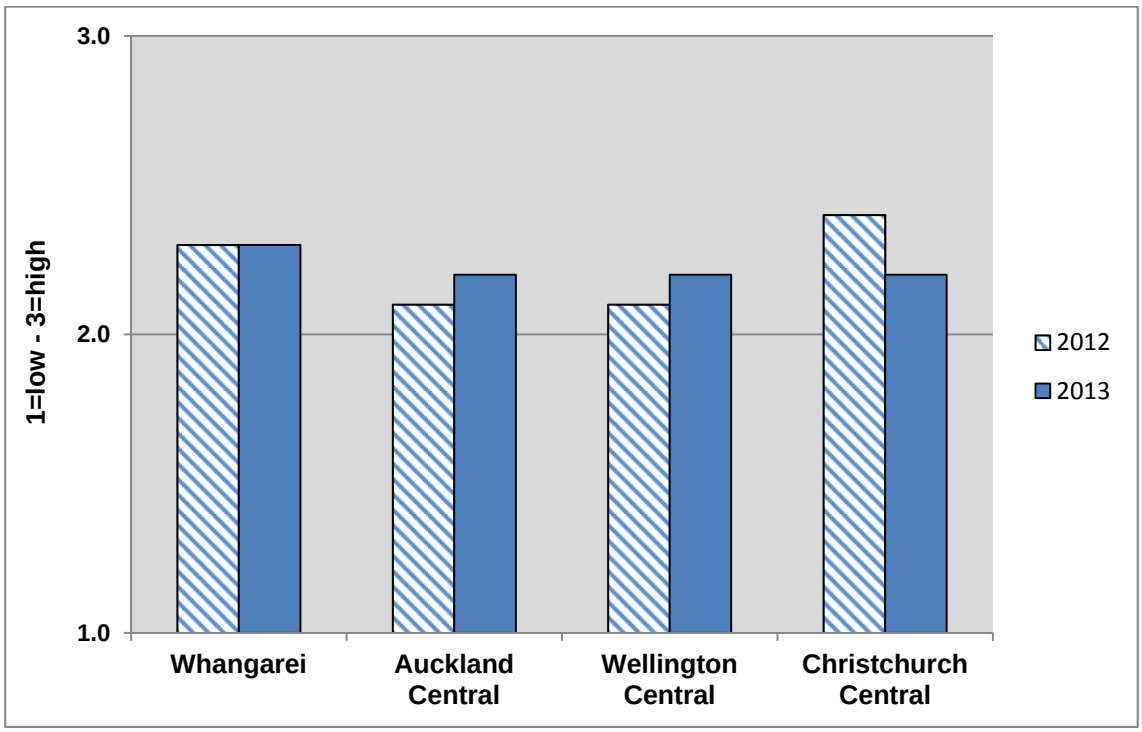
Current strength of methamphetamine

Questions concerning the strength of methamphetamine were included for the first time in the 2012 NZ-ADUM. Forty percent of the detainees described the current strength of methamphetamine as 'high', 18% said it was 'medium' and 25% said it 'fluctuates' in 2013. The overall current strength of methamphetamine was reported to be 'high/fluctuating' (Table 4.7). The strength of methamphetamine declined in Christchurch Central (down from 2.4 in 2012 to 2.2 in 2013), and this decline was close to being statistically significant (p=0.0983). In 2013, the detainee reports of the current strength of methamphetamine did not vary across the four sites (p=0.7788) (Figure 4.12).

Table 4.7: Police detainees' perceptions of current strength of methamphetamine in 2012-2013

Current strength methamphetamine (%)	Whangarei		Auckland Central		Wellington Central		Christchurch Central		All sites	
	2012 (n=36)	2013 (n=37)	2012 (n=80)	2013 (n=100)	2012 (n=23)	2013 (n=25)	2012 (n=49)	2013 (n=69)	2012 (n=188)	2013 (n=231)
High [3]	31%	49%	30%	33%	26%	48%	51%	42%	35%	40%
Medium [2]	39%	14%	29%	18%	39%	16%	24%	22%	31%	18%
Fluctuates [2]	28%	22%	20%	34%	22%	12%	18%	17%	21%	25%
Low [1]	3%	16%	21%	15%	13%	24%	6%	19%	13%	17%
Average strength score (1=low – 3=high)	2.3	2.3	2.1	2.2	2.1	2.2	2.4	2.2	2.2	2.2
Overall current status	Medium/ high	High/ fluctuating	High/ medium	Fluctuates/ high	Medium/ High	High/ low	High/ medium	High/ medium	High/ medium	High/ fluctuating

Figure 4.12: Mean score of the current strength of methamphetamine by location, 2012-2013



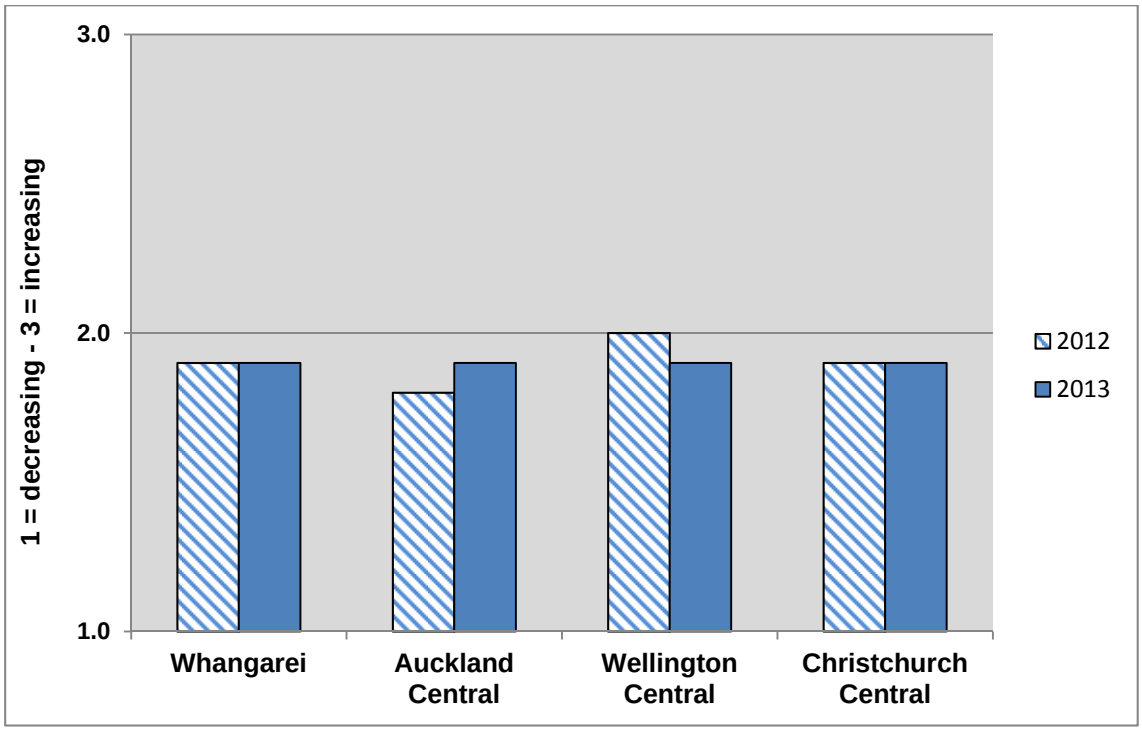
Change in strength of methamphetamine

Thirty-nine percent of the detainees reported the strength of methamphetamine had been 'stable', 25% said it had been 'fluctuating' and 23% said it had been 'declining' during the previous six months in 2013 (Table 4.8). Twenty-two percent of detainees in Auckland Central and 25% of detainees in Whangarei reported the strength of methamphetamine had been 'decreasing' in 2013 (Figure 4.13). There was no statistically significant change in the detainees' perceptions of the change in the strength of methamphetamine from 2012 to 2013 (p=0.7408). There were also no differences in the detainees' perceptions of change in strength of methamphetamine between the study sites (p=0.9451).

Table 4.8: Police detainees' perceptions of change in strength of methamphetamine in the past six months in 2012-2013

Change in strength of meth-amphetamine (%)	Whangarei		Auckland Central		Wellington Central		Christchurch Central		All sites	
	2012 (n=33)	2013 (n=28)	2012 (n=74)	2013 (n=95)	2012 (n=21)	2013 (n=23)	2012 (n=41)	2013 (n=61)	2012 (n=169)	2013 (n=207)
Increasing [3]	12%	21%	12%	12%	14%	13%	5%	11%	11%	13%
Stable [2]	42%	25%	35%	37%	57%	43%	46%	48%	42%	39%
Fluctuating [2]	21%	21%	23%	29%	19%	22%	32%	18%	24%	25%
Decreasing [1]	24%	25%	30%	22%	10%	22%	17%	23%	23%	23%
Average change in strength (1=decreasing – 3=increasing)	1.9	2.0	1.8	1.9	2.0	1.9	1.9	1.9	1.9	1.9
Overall recent change	Stable/ decreasing	Stable/ fluctuating	Stable/ decreasing	Stable/ fluctuating	Stable/ fluctuating	Stable/ fluctuating	Stable/ fluctuating	Stable/ decreasing	Stable/ fluctuating	Stable/ fluctuating

Figure 4.13: Change in strength of methamphetamine by location, 2012-2013



Time taken to purchase methamphetamine

Sixty-five percent of the detainees who used methamphetamine in the previous 12 months were able to purchase it in one hour or less in 2013 (Table 4.9). There was no statistically significant change in the proportion of detainees who could purchase methamphetamine in one hour or less from 2010 to 2013 (i.e. 57% in 2010, 60% in 2011, 61% in 2012 and 65% in 2013) (p=0.3664). The proportion of detainees in Christchurch Central who could purchase methamphetamine in one hour or less increased from 31% in 2011 to 55% in 2013, and this increase was close to being statistically significant (p=0.0874) (Figure 4.14). In 2013, a lower proportion of Christchurch Central detainees were able to purchase methamphetamine in one hour or less compared to Whangarei detainees (55% vs. 77%), however this difference was not statistically significant (p=0.1305).

Figure 4.14: Proportion of police detainees who could purchase methamphetamine in one hour or less by location, 2010-2013

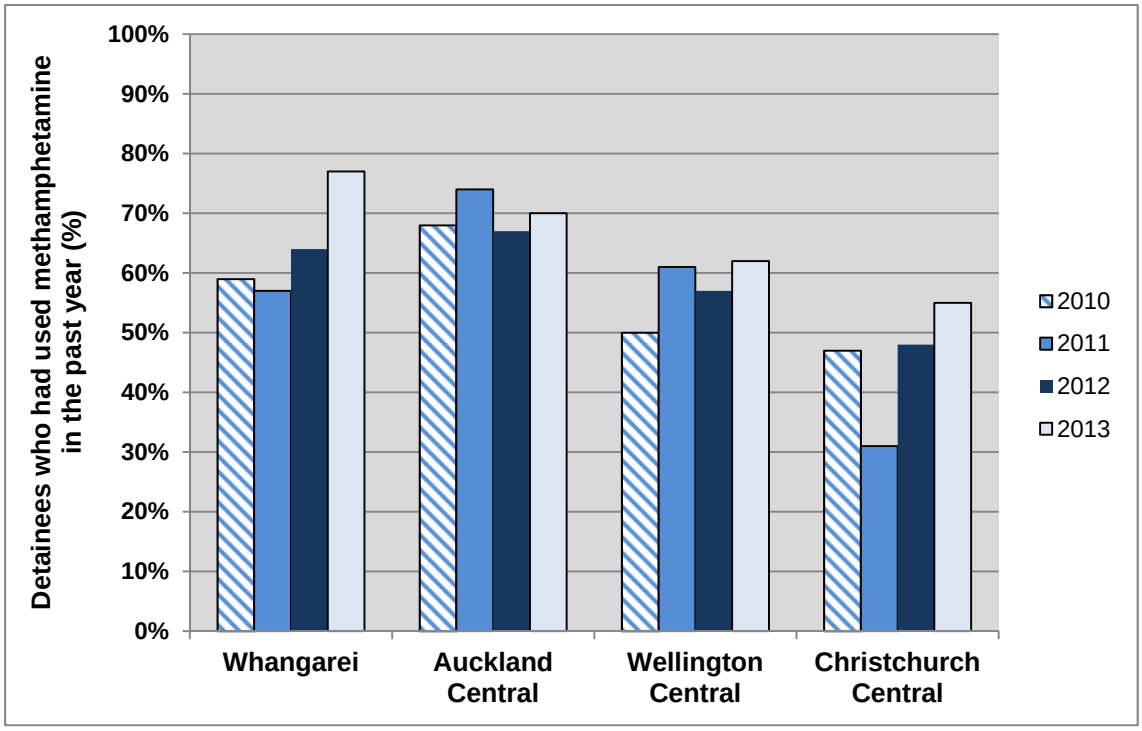


Table 4.9: Time taken by police detainees to purchase methamphetamine by location, 2010-2013

Time to purchase meth-amphetamine (%)	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All sites			
	2010 (n=29)	2011 (n=49)	2012 (n=39)	2013 (n=35)	2010 (n=81)	2011 (n=106)	2012 (n=83)	2013 (n=103)	2010 (n=31)	2011 (n=31)	2012 (n=21)	2013 (n=26)	2010 (n=50)	2011 (n=36)	2012 (n=52)	2013 (n=71)	2010 (n=194)	2011 (n=214)	2012 (n=199)	2013 (n=236)
Months	0	0	5	0	0	2	2	1	0	3	0	8	0	3	6	1	0	2	3	2
Weeks	7	4	3	3	3	2	1	1	3	3	0	0	4	0	4	0	4	2	2	1
Days	7	18	8	6	5	0	4	3	11	6	14	8	4	17	12	11	6	8	8	6
About one day	10	4	13	3	8	8	7	7	8	6	0	4	16	17	10	4	11	9	7	5
Hours	17	16	8	11	16	14	18	18	28	19	29	19	29	33	21	28	22	19	19	21
1 Hour	34	22	33	37	34	37	27	30	11	23	29	27	25	11	21	28	27	27	27	30
Less than 20 mins	24	35	31	40	34	37	41	40	39	39	29	35	22	19	27	27	30	33	34	35

Effect of methamphetamine on the likelihood of becoming angry

Those detainees who reported using methamphetamine in the previous 12 months were asked what effect using methamphetamine had on the likelihood of them becoming angry. Thirty-one percent of the methamphetamine using detainees in 2013 said using methamphetamine was 'more likely' or 'much more likely' to make them become angry (Table 4.10).

Table 4.10: Effect of methamphetamine on police detainees' likelihood of becoming angry, 2010-2013

Effect of meth-amphetamine on likelihood of becoming angry	All sites			
	2010 (n=201)	2011 (n=232)	2012 (n=201)	2013 (n=238)
Much more likely [5]	13%	11%	9%	16%
More likely [4]	19%	24%	25%	15%
No effect [3]	44%	45%	43%	44%
Less likely [2]	15%	14%	14%	17%
Much less [1]	8%	5%	9%	8%
Mean impact on likelihood to become angry (1=much less - 5=much more)	3.1	3.2	3.1	3.2

Driving under the influence of methamphetamine

Those detainees who had used methamphetamine in the past year were asked how often they drove under the influence of methamphetamine. Twenty-three percent of the methamphetamine using detainees said they did not drive and a further 6% said their driver licence was suspended. Forty-two percent of the detainees who used methamphetamine and drove had completed at least some of their driving under the influence of methamphetamine (Table 4.11). There was no change in the level of driving under the influence of methamphetamine among the detainees from 2010 to 2013 (p=0.8178).

Table 4.11: Extent to which police detainees who drove and who had used methamphetamine in the past 12 months had driven under the influence of methamphetamine by location, 2010-2013

Extent drove under the influence of methamphetamine	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All sites			
	2010 (n=26)	2011 (n=34)	2012 (n=34)	2013 (n=26)	2010 (n=54)	2011 (n=73)	2012 (n=61)	2013 (n=69)	2010 (n=29)	2011 (n=23)	2012 (n=21)	2013 (n=21)	2010 (n=30)	2011 (n=26)	2012 (n=36)	2013 (n=55)	2010 (n=139)	2011 (n=151)	2012 (n=157)	2013 (n=173)
All [4]	8%	12%	18%	15%	7%	10%	7%	6%	28%	43%	10%	29%	10%	8%	11%	11%	12%	14%	10%	13%
Most [3]	12%	9%	9%	12%	17%	10%	15%	22%	10%	9%	5%	0%	3%	8%	6%	7%	12%	9%	10%	12%
Some [2]	27%	24%	24%	31%	20%	34%	23%	17%	14%	4%	38%	10%	10%	12%	19%	15%	18%	23%	25%	17%
Hardly any [1]	15%	9%	0%	8%	13%	15%	15%	17%	10%	17%	5%	5%	17%	23%	14%	18%	14%	16%	10%	14%
None [0]	38%	47%	50%	35%	43%	31%	41%	38%	38%	26%	43%	57%	60%	50%	50%	49%	44%	38%	45%	44%
Mean score of extent drove under influence (0=none -4=all)	1.3	1.3	1.4	1.7	1.3	1.5	1.3	1.4	1.8	2.3	1.3	1.4	0.9	1.0	1.1	1.1	1.3	1.5	1.3	1.3

Summary

- The proportion of the detainees who had ever tried methamphetamine increased from 41% in 2010 to 50% in 2013
- In 2013, detainees in Auckland Central were more likely to have ever used methamphetamine than detainees in Christchurch Central
- Thirty percent of the detainees had used methamphetamine in the previous year in 2013
- There was no change in the last year prevalence of methamphetamine from 2010 to 2013
- In 2013, detainees in Auckland Central were more likely to have used methamphetamine in the past year than detainees in Christchurch Central and Whangarei
- The proportion of detainees in Auckland Central who had used methamphetamine in the previous month increased from 19% in 2010 to 27% in 2013
- Seventeen percent of the detainees who had used methamphetamine in the past year had injected it in 2013
- The detainees had used methamphetamine on a mean of 82 days in the previous 12 months in 2013
- In 2013, detainees in Auckland Central had used methamphetamine on a greater number of days than those in Christchurch Central and Whangarei
- Thirty percent of the methamphetamine using detainees felt dependent on methamphetamine in 2013
- In 2013, Auckland Central detainees were more likely to report dependency on methamphetamine than detainees in Christchurch Central
- The proportion of detainees using methamphetamine prior to their arrest increased from 3% in 2010 to 6% in 2013
- The current availability of methamphetamine was reported to be 'very easy/easy' in 2013
- There was no change in the current availability of methamphetamine from 2010 to 2013

- The availability of methamphetamine increased in Christchurch Central from 2011 to 2013

- The median price reported for methamphetamine was $100 per 'point' and $700 per gram in 2013

- The mean price of a 'point' of methamphetamine increased in Christchurch Central from $110 in 2010 to $134 in 2013

- In 2013, the mean price paid for a 'point' of methamphetamine was higher in Christchurch Central than Auckland Central, Wellington Central and Whangarei

- The mean price for a gram of methamphetamine increased from $691 in 2012 to $766 in 2013

- In 2013, the mean price of a gram of methamphetamine was higher in Christchurch Central than in Auckland Central and Whangarei

- The detainees reported the price of methamphetamine had been 'stable/fluctuating' over the previous six months in 2013

- The current strength of methamphetamine was reported to be 'high/fluctuating' in 2013

- The strength of methamphetamine was reported to be have been 'stable/fluctuating' in the past six months in 2013

- Twenty-two percent of detainees in Auckland Central and 25% of detainees in Whangarei reported the strength of methamphetamine had been 'decreasing' in 2013

- Sixty-five percent of the detainees could purchase methamphetamine in an hour or less in 2013

- The proportion of detainees in Christchurch Central who could purchase methamphetamine in one hour or less increased from 31% in 2011 to 55% in 2013

- In 2013, 31% of the detainees who had used methamphetamine in the past year said it made them 'more likely' or 'much more likely' to become angry

- Forty-three percent of detainees who used methamphetamine and drove completed at least some of their driving under the influence of methamphetamine in 2013

Chapter 5 - Cannabis

Introduction

Cannabis has been the most widely used illegal drug in in many other countries around the world, including New Zealand, for many decades (Wilkins et al., 2002). Yet, despite its relatively wide use it is still subject to cyclical trends in popularity. For example, the population prevalence of cannabis use declined in New Zealand in the mid-2000s (down from 20% in 2001 to 18% in 2006 among 15-45 year olds) (Wilkins & Sweetsur, 2008c). Similar declines were found in Australia, the United Kingdom, Western Europe and the United States around the same years, and this global trend may reflect concerns about the health risks of smoking and the growing availability of new synthetic drugs, such as ecstasy (European Monitoring Centre for Drugs and Drug Addiction (EMCDDA), 2009).

New Zealand has been self-sufficient in the supply of cannabis since the early 1980s with large scale clandestine cultivation occurring in a number of rural areas (Wilkins & Casswell, 2003). The retail black market for cannabis has been estimated to have an annual turnover of $131-$190 million (NZD) (Wilkins & Casswell, 2002; Wilkins et al., 2005e). Exploration of the structure of the cannabis market in New Zealand suggests that many cannabis users receive their cannabis for 'free' during group consumption sessions, and that some heavy cannabis users pay for their own cannabis consumption by selling cannabis to others (Wilkins & Sweetsur, 2006). While cannabis is generally sold within private social networks (MacCoun & Reuter, 2001), in New Zealand it is also sold from semi-public drug houses, known as 'tinny' houses, and from street drug markets (Wilkins et al., 2005d). Adolescent cannabis users have been found to be more likely than adult users to purchase their cannabis from 'tinny' houses (Wilkins, et al., 2005d).

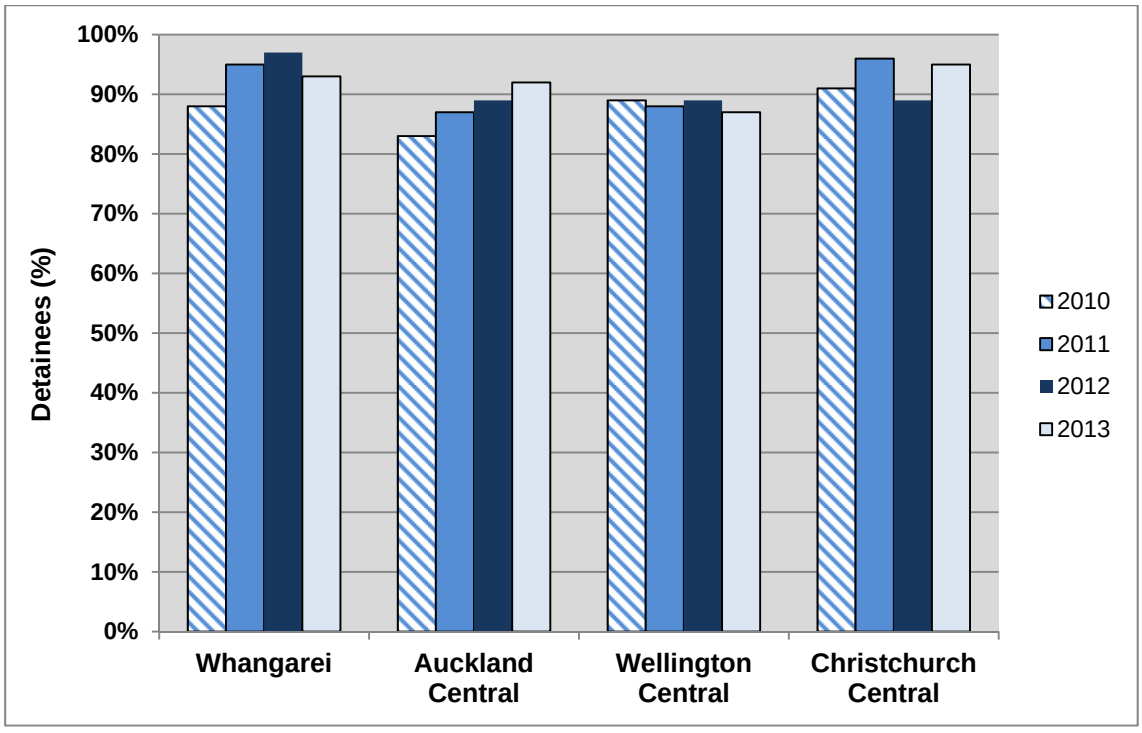
The 2012 Illicit Drug Monitoring System found a small decline in the availability of cannabis compared to previous years, and this may reflect the rising availability of legal synthetic alternatives to cannabis, such as Kronic and K2, which are sometimes used as substitutes for natural plant cannabis (Wilkins, et al., 2013). Synthetic cannabis products emerged in New Zealand from around 2010 with dozens of different products available from a range of

convenience outlets (Wilkins, 2011; Wilkins, et al., 2013; Wilkins & Sweetsur, 2013). Synthetic cannabis is sometimes used to avoid detection by the drug testing associated with particular professions (e.g. the military, forestry), criminal justice contexts (e.g. parole), and mental health treatment programmes (Perrone et al., 2013).

Use of cannabis

Ninety-two percent of the police detainees had ever tried cannabis, 70% had used cannabis in the past 12 months, and 57% had used it in the past month in 2013 (Table 5.1). The proportion of detainees who had tried cannabis in their lifetimes increased slightly from 87% in 2010 to 92% in 2013 (p=0.0127). There was an increase in the proportion of Auckland Central detainees who had ever tried cannabis (up from 83% in 2010 to 92% in 2013, p=0.0132) (Figure 5.1).

Figure 5.1: Proportion of police detainees who have ever used cannabis by location, 2010-2013



The detainees had first tried cannabis at a mean age of 14 years in 2013 (Figure 5.2).

Figure 5.2: Mean age at which cannabis was first used by location, 2010-2013

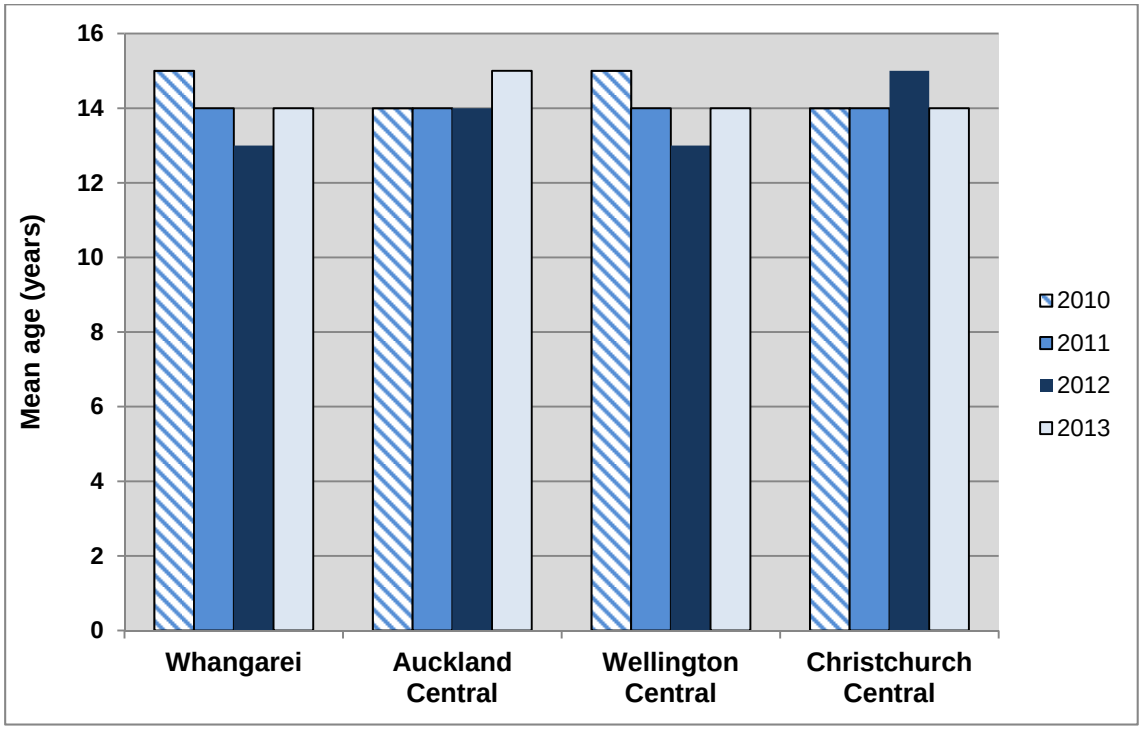


Table 5.1: Police detainees' patterns of cannabis use by location, 2010-2013

Use of cannabis	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All Sites			
	2010 (n=115)	2011 (n=149)	2012 (n=151)	2013 (n=153)	2010 (n=285)	2011 (n=316)	2012 (n=246)	2013 (n=299)	2010 (n=152)	2011 (n=171)	2012 (n=100)	2013 (n=106)	2010 (n=262)	2011 (n=191)	2012 (n=303)	2013 (n=288)	2010 (n=814)	2011 (n=827)	2012 (n=799)	2013 (n=849)
Ever used (%)	88	95	97	93	83	87	89	92	89	88	89	87	91	96	89	95	87	91	90	92
Mean age first used (years)*	15	14	13	14	14	14	14	15	15	14	13	14	14	14	15	14	14	14	14	14
Used in past 12 months (%)	68	83	78	64	63	69	64	70	76	75	74	70	81	79	70	74	72	76	70	70
Mean number of days used in past 12 months**	160	186	186	155	196	151	150	146	181	178	183	156	191	169	162	173	187	168	166	158
Felt dependent in the past 12 months (%)**	30	36	37	42	43	30	31	32	44	42	39	40	34	34	29	32	38	35	33	34
Used in past month (%)	58	73	64	45	57	58	52	56	63	63	63	59	71	67	57	62	63	64	58	57
Mean number of days used in past month***	16	17	20	17	17	15	15	15	18	17	17	14	18	16	16	16	18	16	17	15

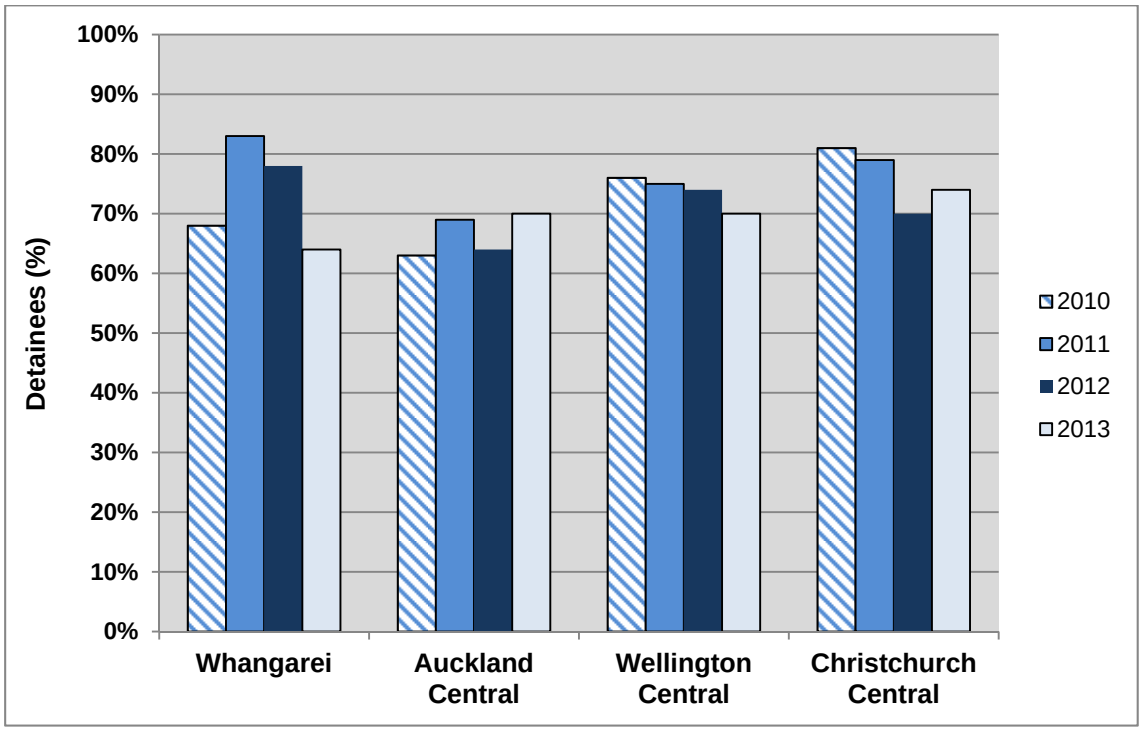
* of those who had ever tried

** of those who had used in the past 12 months

*** of those who had used in the past month

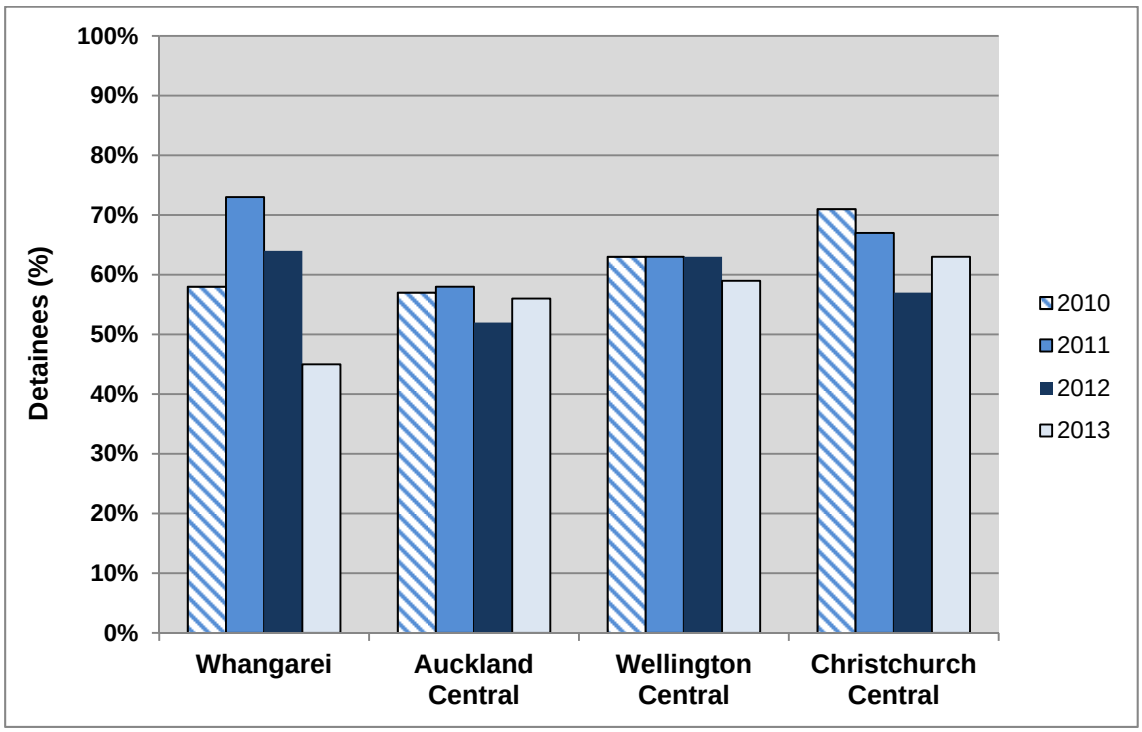
Overall, the proportion of detainees who had used cannabis in the previous 12 months declined from 76% in 2011 to 70% in 2013, and this decline was close to being statistically significant (p=0.0635). The proportion of Whangarei detainees who had used cannabis in the previous 12 months declined from 83% in 2011 to 64% in 2013 (p=0.0012). The proportion of Christchurch Central detainees who had used cannabis in the previous year also declined from 81% in 2010 to 74% in 2013 (p=0.0140) (Figure 5.3).

Figure 5.3: Proportion of police detainees who had used cannabis in the past 12 months by location, 2010-2013



The proportion of detainees who reported using cannabis in the past month decreased from 64% in 2011 to 57% in 2013 (p=0.0250). There was a decrease in the proportion of detainees in Whangarei who had used cannabis in the previous month (down from 73% in 2011 to 45% in 2013, p<0.0001) (Figure 5.4).

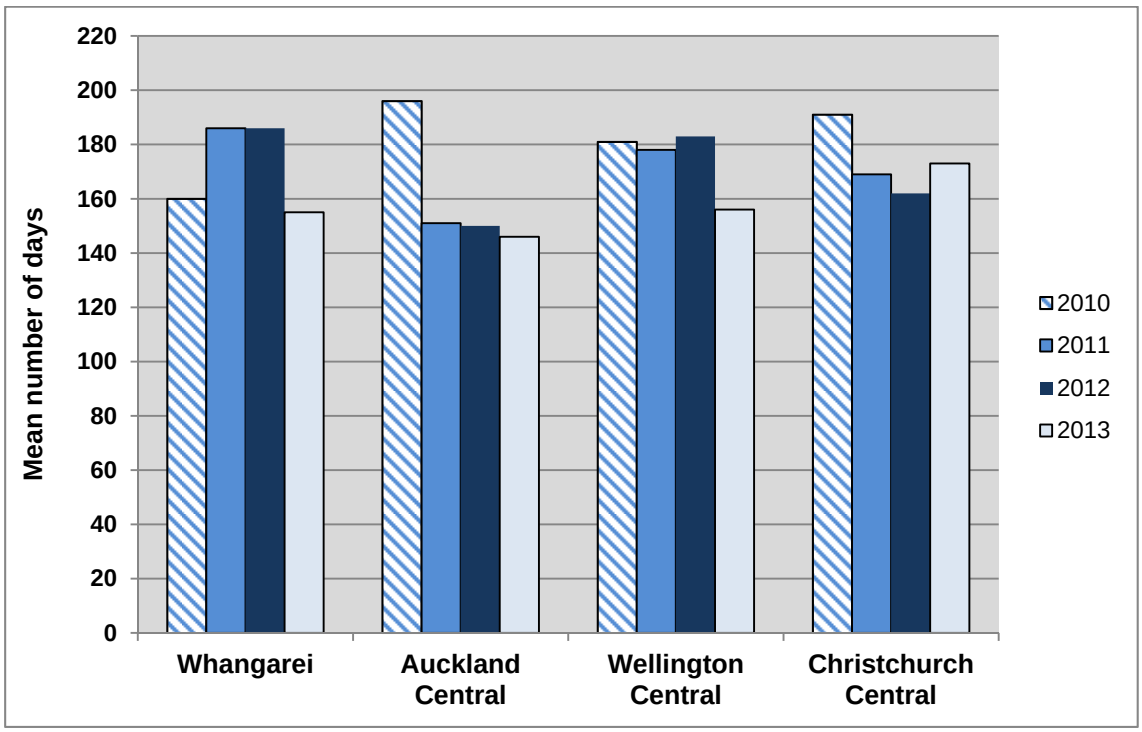
Figure 5.4: Proportion of police detainees who used cannabis in the past 30 days by location, 2010-2013



Frequency of cannabis use

The detainees had used cannabis on a mean of 158 days in the past 12 months in 2013 (median 104, 1-365 days). The mean number of days the detainees had used cannabis in the previous year declined from 187 days in 2010 to 158 days in 2013 (p=0.0071). Auckland Central detainees had used cannabis on fewer days from 2010 to 2013 (down from 196 days to 146 days, p=0.0067) (Figure 5.5). In 2013, Christchurch Central detainees had used cannabis on higher mean number of days than detainees in Auckland Central (173 vs. 146 days, p=0.0534) and Whangarei (173 vs. 155 days), however this last difference was not statistically significant (p=0.1084).

Figure 5.5: Mean number days of cannabis use in the past 12 months by location, 2010-2013

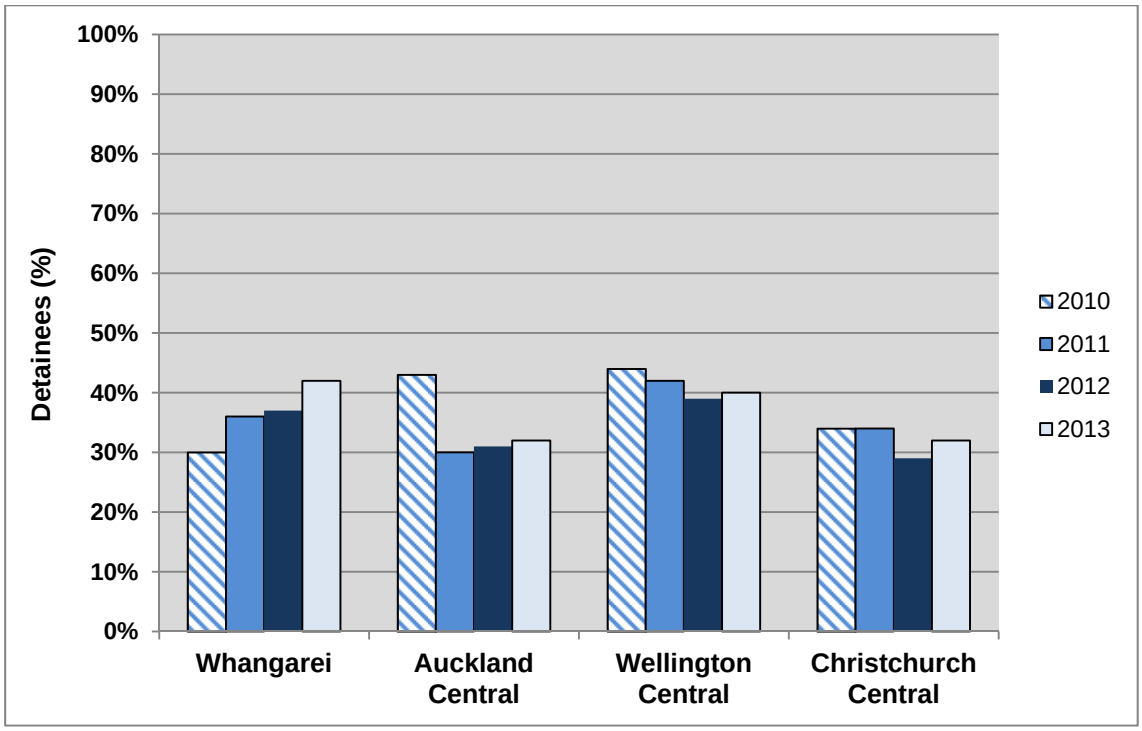


There was also a decrease in the mean number of days the detainees had used cannabis in the previous month, down from 18 days in 2010 to 15 days in 2013 (p= 0.0107).

Dependency on cannabis

Thirty-four percent of the detainees who had used cannabis in the previous year felt they were dependent on it in 2013. Overall, there was little change in perceptions of the level of cannabis dependency from 2010 to 2013 (p=0.3136). The proportion of detainees in Auckland Central who felt dependent on cannabis decreased from 43% in 2010 to 32% in 2013, but this decline was not statistically significant (p=0.1154) (Figure 5.6).

Figure 5.6: Proportion of police detainees who felt dependent on cannabis in the past year by location (of those who had used cannabis in the past 12 months), 2010-2013



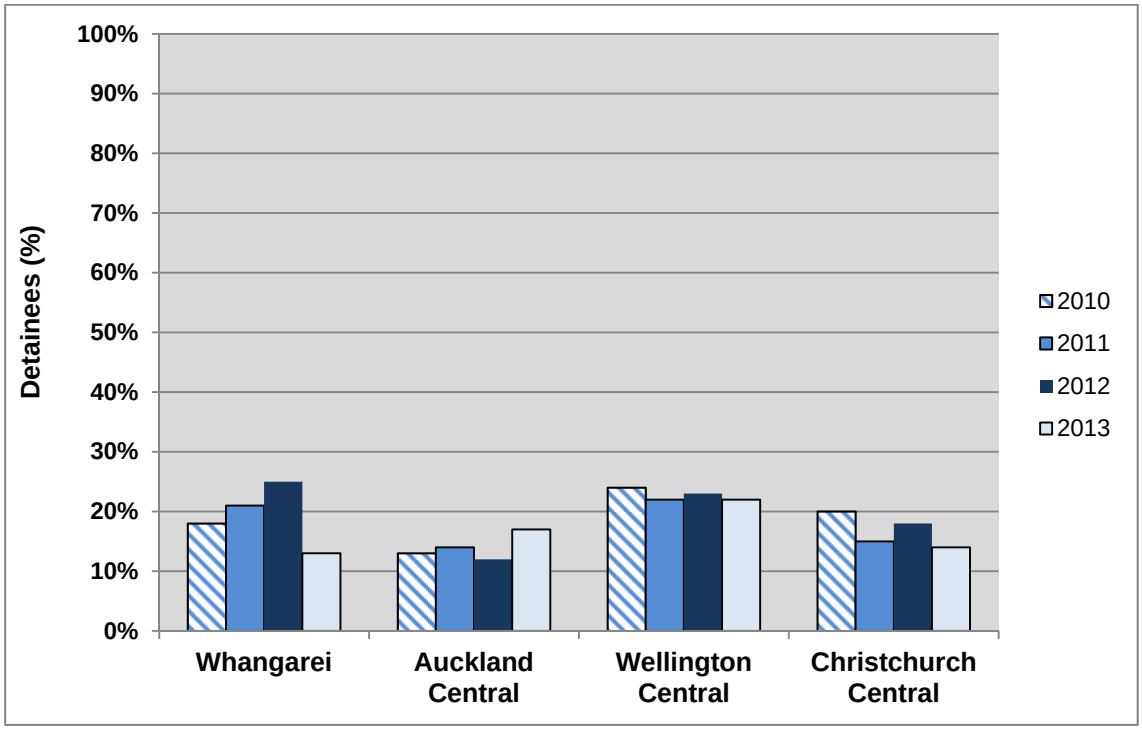
Cannabis use at the time of arrest

Seventeen percent of the detainees reported using cannabis prior to their arrest in 2013 (Table 5.2). There was no change in the incidence of cannabis use at the time of arrest from 2010 to 2013 (p=0.7981) (Figure 5.7). There were no significant differences between the four sites in terms of proportion of detainees who reported using cannabis prior to their arrest in 2013.

Table 5.2: Cannabis use by police detainees at time of arrest by location, 2010-2013

Use of cannabis	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All Sites			
	2010 (n=110)	2011 (n=149)	2012 (n=147)	2013 (n=145)	2010 (n=281)	2011 (n=310)	2012 (n=240)	2013 (n=288)	2010 (n=150)	2011 (n=168)	2012 (n=96)	2013 (n=104)	2010 (n=259)	2011 (n=188)	2012 (n=)	2013 (n=283)	2010 (n=800)	2011 (n=815)	2012 (n=780)	2013 (n=824)
Using when arrested (%)	18	21	25	13	13	14	12	17	24	22	23	22	20	15	18	14	18	17	18	17

Figure 5.7: Proportion of police detainees who were using cannabis prior to being arrested by location, 2010-2013



Current availability of cannabis

The detainees described the current availability of cannabis as 'very easy/easy' in 2013 (Table 5.3). The current availability of cannabis declined from 2010 to 2013 (down from 3.3 to 3.2, p=0.0228). The availability of cannabis declined in Auckland Central (down from 3.4 in 2010 to 3.1 in 2013, p=0.0245) and Christchurch Central (down from 3.4 in 2010 to 3.2 in 2013, p=0.0167) (Figure 5.8). In 2013, the current availability of cannabis was reported to be easier in Wellington Central than in Christchurch Central (3.5 vs. 3.2, p=0.0724) and Auckland Central (3.5 vs. 3.1, p=0.0395).

Figure 5.8: Current availability of cannabis by location, 2010-2013

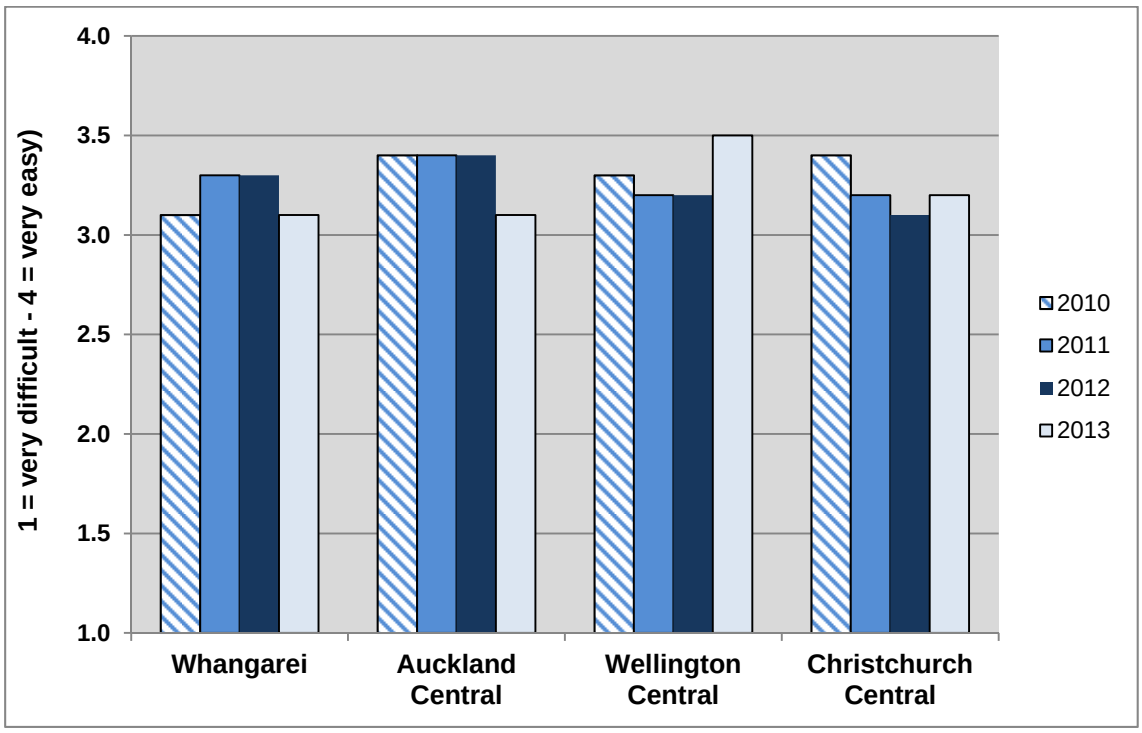


Table 5.3: Police detainees' perceptions of the current availability of cannabis by location, 2010-2013

Current availability of cannabis	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All Sites			
	2010 (n=80)	2011 (n=121)	2012 (n=114)	2013 (n=89)	2010 (n=175)	2011 (n=205)	2012 (n=151)	2013 (n=207)	2010 (n=110)	2011 (n=125)	2012 (n=71)	2013 (n=72)	2010 (n=209)	2011 (n=143)	2012 (n=204)	2013 (n=215)	2010 (n=574)	2011 (n=594)	2012 (n=541)	2013 (n=583)
Very easy [4]	41%	45%	57%	40%	55%	53%	58%	40%	54%	46%	45%	54%	58%	48%	40%	50%	54%	49%	49%	46%
Easy [3]	34%	39%	25%	38%	30%	34%	24%	40%	31%	31%	35%	39%	28%	31%	36%	26%	30%	33%	30%	35%
Difficult [2]	21%	12%	10%	16%	13%	11%	17%	14%	11%	15%	13%	6%	12%	15%	21%	16%	13%	13%	16%	13%
Very difficult [1]	4%	3%	8%	6%	2%	4%	2%	6%	5%	7%	7%	1%	2%	5%	3%	9%	3%	5%	4%	6%
Average availability score (1=very difficult – 4=very easy)	3.1	3.3	3.3	3.1	3.4	3.4	3.4	3.1	3.3	3.2	3.2	3.5	3.4	3.2	3.1	3.2	3.3	3.3	3.2	3.2
Overall current status	Very easy/ easy	Very easy/ easy	Very easy/ easy	Very easy/ easy	Very easy/ easy	Very easy / easy	Very easy/ easy	Very easy/ easy	Very easy/ easy	Very easy/ easy	Very easy/ easy	Very easy/ easy	Very easy/ easy	Very easy/ easy	Very easy/ easy	Very easy/ easy	Very easy/ easy	Very easy/ easy	Very easy/ easy	Very easy/ easy

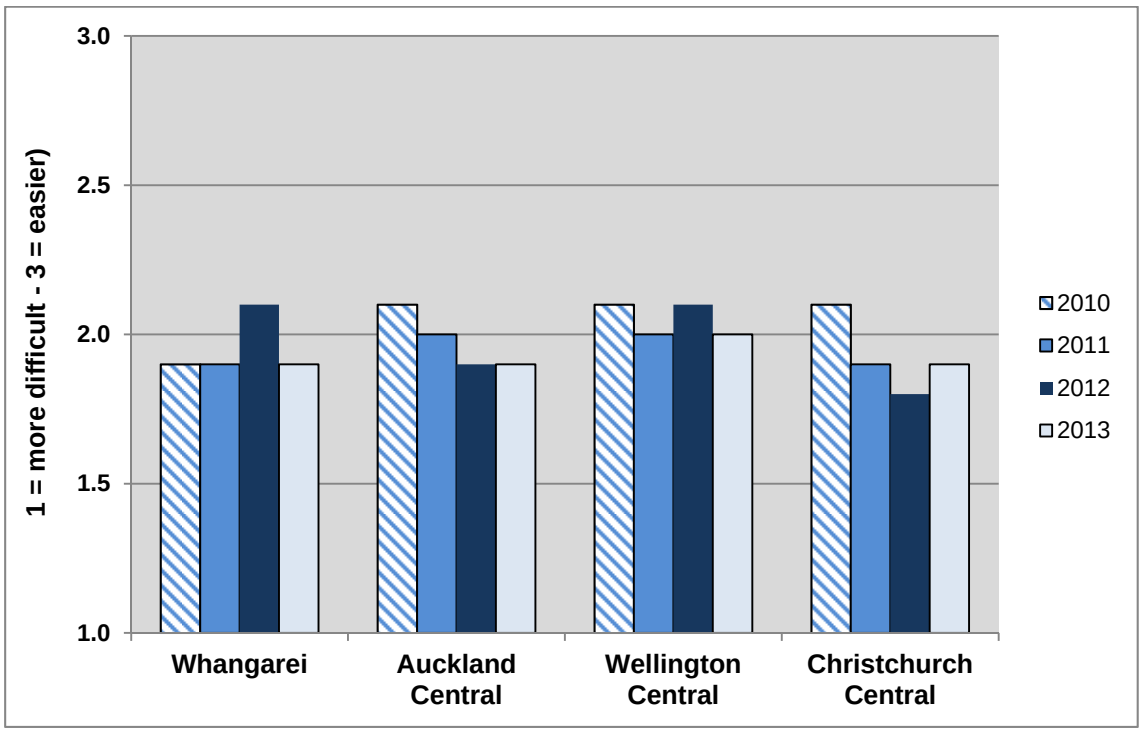
Change in availability of cannabis

The detainees reported the availability of cannabis had been 'stable/more difficult' over the previous six months in 2013 (Table 5.4). Overall, cannabis was considered to have been 'more difficult' to obtain from 2010 to 2013 (down from 2.1 to 1.9, p=0.0002). The availability of cannabis was reported to be 'more difficult' to obtain in Whangarei from 2012 to 2013 (down from 2.1 to 1.9), and this decline was close to being statistically significant (p=0.0973). Auckland Central detainees reported the availability of cannabis had become 'more difficult' from 2010 to 2013 (2.1 vs. 1.9, p=0.0242). Cannabis was also considered 'more difficult' to obtain in Christchurch Central from 2010 to 2013 (2.1 vs. 1.9, p=0.0013) (Figure 5.9).

Table 5.4: Police detainees' perceptions of the change in availability of cannabis by location, 2010 - 2013

Change in availability of cannabis (%)	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All Sites			
	2010 (n=78)	2011 (n=120)	2012 (n=108)	2013 (n=84)	2010 (n=167)	2011 (n=203)	2012 (n=142)	2013 (n=199)	2010 (n=109)	2011 (n=117)	2012 (n=69)	2013 (n=67)	2010 (n=206)	2011 (n=141)	2012 (n=191)	2013 (n=214)	2010 (n=560)	2011 (n=581)	2012 (n=511)	2013 (n=564)
Easier [3]	12%	15%	25%	17%	25%	17%	14%	17%	21%	13%	19%	16%	18%	12%	7%	17%	20%	15%	15%	17%
Stable [2]	58%	45%	52%	48%	49%	63%	54%	54%	62%	64%	55%	63%	59%	50%	47%	38%	57%	56%	51%	49%
Fluctuates [2]	10%	18%	9%	10%	13%	7%	9%	7%	7%	11%	13%	4%	12%	13%	18%	13%	11%	12%	13%	9%
More difficult [1]	21%	23%	14%	26%	13%	13%	23%	22%	9%	12%	13%	16%	11%	25%	28%	32%	13%	18%	21%	25%
Average change in availability score (1=more difficult – 3=easier)	1.9	1.9	2.1	1.9	2.1	2.0	1.9	1.9	2.1	2.0	2.1	2.0	2.1	1.9	1.8	1.9	2.1	2.0	1.9	1.9
Overall recent change	Stable/ more difficult	Stable/ more difficult	Stable/ easier	Stable/ more difficult	Stable/ easier	Stable/ easier	Stable/ more difficult	Stable/ more difficult	Stable/ easier	Stable/ easier	Stable/ easier	Stable/ more difficult	Stable/ easier	Stable/ more difficult	Stable/ more difficult		Stable/ easier	Stable/ more difficult	Stable/ more difficult	Stable/ more difficult

Figure 5.9: Change in the availability of cannabis by location, 2010-2013



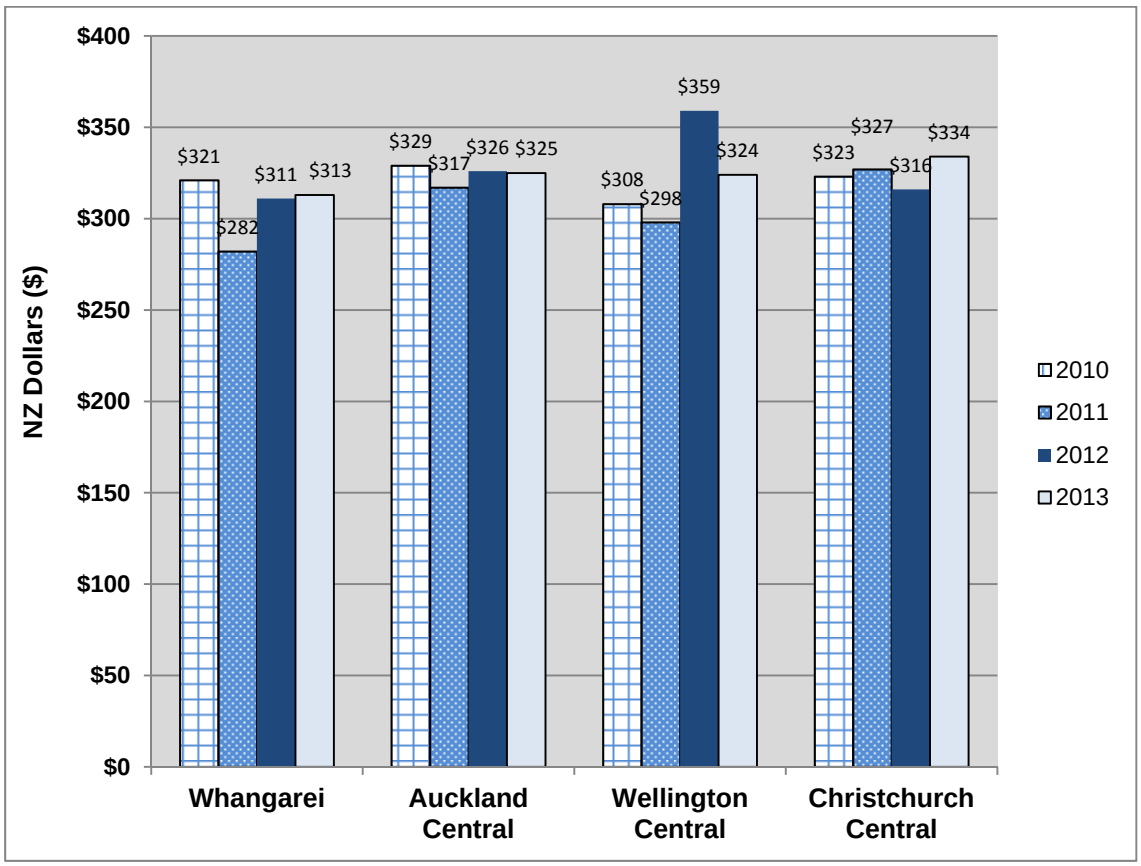
Current price of cannabis

The detainees reported paying a median price of $20 for a 'tinny' of cannabis, $350 for an ounce of cannabis and $3,500 for a pound of cannabis in 2013 (Table 5.5). There was no change in the mean price paid for a 'tinny' of cannabis from 2010 to 2013 ($20 in all years, p=0.5320) and between the sites in 2013 ($20 in the sites, p=0.6884). In 2013, the mean price of an ounce of cannabis was higher in Christchurch Central than in Whangarei ($334 vs. $313, p=0.0436).

Table 5.5: Current median (mean) price paid by police detainees for cannabis (NZD) by location, 2010-2013

Current price of cannabis ($)	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All sites			
Number with knowledge	2010 (n=73)	2011 (n=106)	2012 (n=97)	2013 (n=74)	2010 (n=124)	2011 (n=187)	2012 (n=130)	2013 (n=195)	2010 (n=87)	2011 (n=93)	2012 (n=59)	2013 (n=59)	2010 (n=191)	2011 (n=135)	2012 (n=169)	2013 (n=211)	2010 (n=475)	2011 (n=521)	2012 (n=455)	2013 (n=539)
Median (mean) price per 'tinny'	$20 ($20)	$20 ($20)	$20 ($20)	$20 ($20)	$20 ($20)	$20 ($20)	$20 ($20)	$20 ($20)	$20 ($20)	$20 ($20)	$20 ($20)	$20 ($20)	$20 ($20)	$20 ($20)	$20 ($20)	$20 ($20)	$20 ($20)	$20 ($20)	$20 ($20)	$20 ($20)
Number with knowledge	2010 (n=6)	2011 (n=42)	2012 (n=74)	2013 (n=51)	2010 (n=41)	2011 (n=58)	2012 (n=41)	2013 (n=145)	2010 (n=26)	2011 (n=30)	2012 (n=16)	2013 (n=20)	2010 (n=33)	2011 (n=66)	2012 (n=108)	2013 (n=187)	2010 (n=107)	2011 (n=197)	2012 (n=239)	2013 (n=403)
Median (mean) price per 'ounce'	$325 ($321)	$275 ($282)	$330 ($311)	$300 ($313)	$350 ($329)	$350 ($317)	$350 ($326)	$350 ($325)	$300 ($308)	$300 ($298)	$350 ($359)	$350 ($324)	$340 ($323)	$345 ($327)	$320 ($316)	$350 ($334)	$325 ($322)	$325 ($313)	$325 ($321)	$350 ($328)
Number with knowledge	2010 (n=2)	2011 (n=11)	2012 (n=47)	2013 (n=25)	2010 (n=16)	2011 (n=12)	2012 (n=15)	2013 (n=71)	2010 (n=10)	2011 (n=1)	2012 (n=4)	2013 (n=10)	2010 (n=14)	2011 (n=13)	2012 (n=38)	2013 (n=81)	2010 (n=41)	2011 (n=37)	2012 (n=104)	2013 (n=187)
Median (mean) price per 'pound'	$1925 ($1925)	$2500 ($2582)	$3000 ($3042)	$3000 ($3022)	$3100 ($2677)	$2550 ($2558)	$4000 (3496)	$3700 ($3312)	$1240 ($2152)	$2500 ($2500)	$4150 ($3950)	$2625 ($2605)	$3500 ($3700)	$4500 ($4346)	$3000 ($2955)	$4000 ($3363)	$3100 ($2857)	$3500 ($3298)	$3000 ($3156)	$3500 ($3244)

Figure 5.10: Mean price of an ounce of cannabis by location, 2010-2013



Change in the price of cannabis

The detainees reported the price of cannabis had been 'stable' over the previous six months in 2013 (Table 5.6). There was no change in perceptions of the change in the price of cannabis from 2010 to 2013 (i.e. 2.1 in the four years).

Table 5.6: Police detainees' perceptions of the change in the price of cannabis in the past six months by location, 2010-2013

Change in price of cannabis (%)	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All sites			
	2010 (n=77)	2011 (n=122)	2012 (n=109)	2013 (n=84)	2010 (n=168)	2011 (n=203)	2012 (n=136)	2013 (n=200)	2010 (n=97)	2011 (n=120)	2012 (n=69)	2013 (n=66)	2010 (n=204)	2011 (n=143)	2012 (n=185)	2013 (n=213)	2010 (n=546)	2011 (n=588)	2012 (n=500)	2013 (n=563)
Increasing [3]	8%	16%	18%	15%	9%	10%	7%	8%	11%	7%	13%	5%	8%	10%	14%	15%	9%	11%	12%	11%
Fluctuating [2]	9%	7%	7%	10%	5%	9%	4%	6%	10%	8%	10%	8%	8%	6%	14%	10%	8%	8%	9%	8%
Stable [2]	82%	70%	70%	74%	85%	80%	88%	83%	76%	81%	77%	88%	82%	82%	70%	73%	82%	79%	77%	79%
Decreasing [1]	1%	6%	5%	1%	1%	1%	2%	4%	2%	4%	0%	0%	1%	2%	3%	1%	1%	3%	2%	2%
Average change in price score (1= decreasing – 3= increasing)	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.0	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
Overall recent change	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable

Current strength of cannabis

The current strength of cannabis was reported to be 'high/medium' in 2013 (Table 5.7). There were no statistically significant difference in perceptions of the current strength of cannabis from 2012 to 2013 (p=0.3705).

Table 5.7: Police detainees' perceptions of current purity of cannabis in the past six months, 2012-2013

Current strength of cannabis (%)	Whangarei		Auckland Central (		Wellington Central		Christchurch Central		All sites	
	2012 (n=105)	2013 (n=84)	2012 n=145)	2013 (n=202)	2012 (n=70)	2013 (n=68)	2012 (n=200)	2013 (n=215)	2012 (n=520)	2013 (n=569)
High [3]	30%	33%	38%	37%	31%	26%	38%	35%	36%	35%
Medium [2]	35%	32%	32%	28%	27%	37%	27%	27%	30%	29%
Fluctuates [2]	30%	26%	23%	25%	31%	28%	27%	25%	27%	25%
Low [1]	6%	8%	8%	10%	10%	9%	9%	13%	8%	11%
Average strength score (1=low – 3=high)	2.3	2.3	2.3	2.3	2.2	2.2	2.3	2.2	2.3	2.2
Overall current status	Medium High	High/ medium	High/ medium	High/ medium	High/ fluctuates	Medium/ fluctuates	High/ medium	High/ medium	High/ medium	High/ medium

Change in strength of cannabis

The detainees were asked if the strength of cannabis had changed in the previous six months in 2013 (Table 5.8). They reported the strength of cannabis had been 'stable/fluctuating' in 2013, and this had not changed from the previous year (p=0.6235).

Table 5.8: Police detainees' perceptions of change in strength of cannabis in the past six months, 2012-2013

Change in strength of cannabis (%)	Whangarei		Auckland Central		Wellington Central		Christchurch Central		All sites	
	2012 (n=100)	2013 (n=75)	2012 (n=130)	2013 (n=185)	2012 (n=63)	2013 (n=67)	2012 (n=189)	2013 (n=203)	2012 (n=483)	2013 (n=530)
Increasing [3]	12%	13%	18%	17%	25%	9%	15%	22%	17%	17%
Stable [2]	54%	45%	45%	57%	41%	52%	38%	40%	43%	48%
Fluctuating [2]	21%	25%	19%	11%	27%	31%	39%	27%	28%	22%
Decreasing [1]	13%	16%	18%	15%	6%	7%	8%	11%	12%	13%
Average change in strength (1=decreasing – 3=increasing)	2.0	2.0	2.0	2.0	2.2	2.0	2.1	2.1	2.1	2.0
Overall recent change	Stable/ fluctuating	Stable/ fluctuating	Stable/ increasing	Stable/ increasing	Stable/ fluctuating	Stable/ fluctuating	Stable/ fluctuating	Stable/ fluctuating	Stable/ fluctuating	Stable/ fluctuating

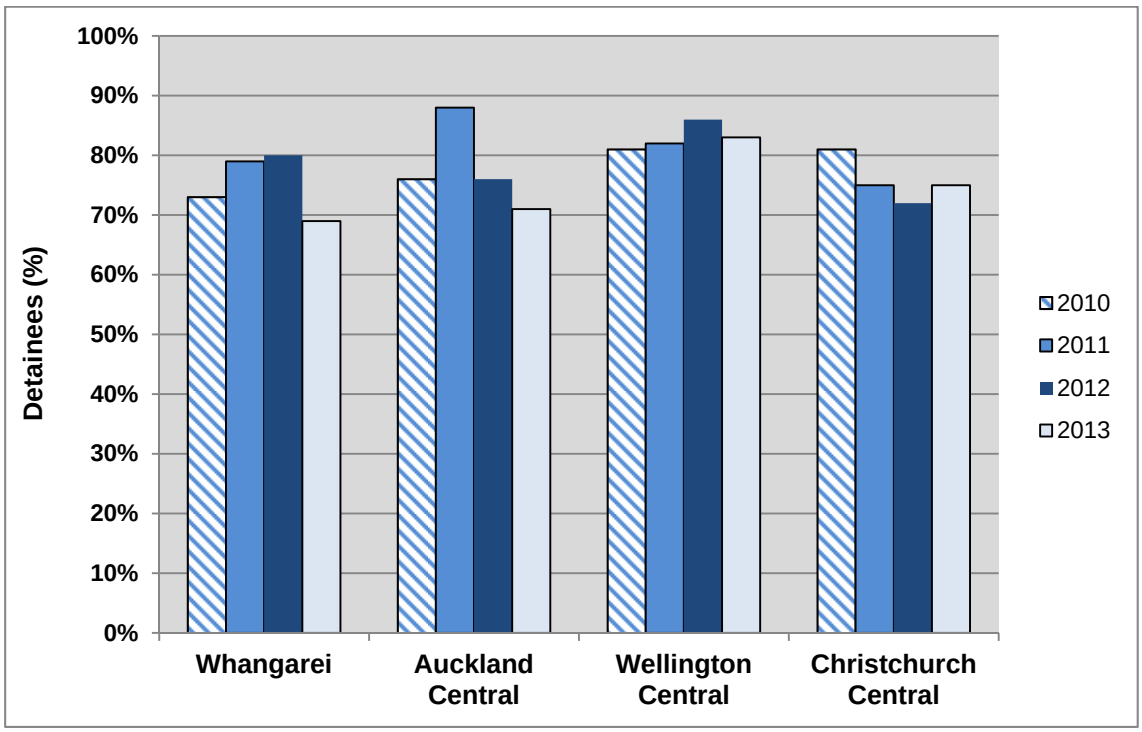
Time taken to purchase cannabis

Seventy-four percent of the detainees who had used cannabis in the past 12 months were able to purchase it in one hour or less in 2013 (Table 5.7). Fifty-one percent could purchase it in 20 minutes or less. The proportion of the detainees who were able to purchase cannabis in one hour or less decreased from 81% in 2011 to 74% in 2013 ($p=0.0051$). A lower proportion of detainees in Auckland Central were able to purchase cannabis in one hour or less from 2011 to 2013 (down from 88% to 71%, $p<0.0001$) (Figure 5.11).

Table 5.9: Time taken by police detainees to purchase cannabis by location, 2010-2013

Time to purchase cannabis (%)	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All sites			
	2010 (n=79)	2011 (n=124)	2012 (n=112)	2013 (n=87)	2010 (n=152)	2011 (n=201)	2012 (n=148)	2013 (n=200)	2010 (n=110)	2011 (n=117)	2012 (n=72)	2013 (n=71)	2010 (n=208)	2011 (n=146)	2012 (n=198)	2013 (n=216)	2010 (n=549)	2011 (n=591)	2012 (n=528)	2013 (n=578)
Months	1	1	1	3	1	0	0	1	2	0	0	0	0	0	1	<1	1	0	<1	1
Weeks	3	2	0	3	1	0	1	2	0	1	0	1	<1	0	1	2	1	0	1	2
Days	6	2	3	3	7	0	5	4	1	3	3	4	3	4	6	4	4	2	5	4
About one day	4	6	9	11	8	3	6	7	8	7	1	6	5	8	8	5	6	6	6	6
Hours	13	10	7	9	8	9	12	16	8	8	10	6	11	13	12	13	10	10	11	12
1 Hour	19	25	6	13	20	31	16	21	31	25	26	30	23	27	20	27	23	27	19	24
Less than 20 mins	54	54	63	56	56	57	60	50	50	57	60	54	58	48	52	48	55	54	58	51

Figure 5.11: Proportion of police detainees who could purchase cannabis in one hour or less, 2010-2013



Effect of cannabis on the likelihood of becoming angry

Those detainees who reported using cannabis in the past 12 months were asked what effect using cannabis had on their likelihood of becoming angry. In 2013, 41% of the detainees said that using cannabis was 'much less likely' to make them become angry, and a further 34% said it was 'less likely' to make them become angry (Table 5.8).

Table 5.10: Effect of cannabis on police detainees' likelihood of becoming angry, 2010-2013

Effect of cannabis on likelihood of becoming angry	All sites			
	2010 (n=575)	2011 (n=613)	2012 (n=544)	2013 (n=584)
Much more likely [5]	1%	1%	1%	1%
More likely [4]	2%	2%	1%	2%
No effect [3]	29%	33%	30%	23%
Less likely [2]	27%	31%	36%	34%
Much less [1]	41%	33%	32%	41%
Mean impact on likelihood to become angry (1=much less - 5=much more)	1.9	2.1	2.0	1.9

Driving under the influence of cannabis

Those detainees who had used cannabis in the past year were asked how often they drove under the influence of cannabis. In 2013, 26% of the cannabis using detainees said they did not drive and a further 6% said their driver license was suspended. Forty-two percent of the detainees who drove and used cannabis had completed at least some of their driving under the influence of cannabis (Table 5.9). There was no change in the level of driving under the influence of cannabis by the detainees from 2010 to 2013 (p=0.6465).

Table 5.11: Mean score of extent to which police detainees who drove and who had used cannabis in the past 12 months had driven under the influence of cannabis by location, 2010 - 2013

Extent drove under the influence of cannabis	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All sites			
	2010 (n=63)	2011 (n=83)	2012 (n=84)	2013 (n=63)	2010 (n=110)	2011 (n=143)	2012 (n=106)	2013 (n=139)	2010 (n=80)	2011 (n=80)	2012 (n=55)	2013 (n=40)	2010 (n=125)	2011 (n=96)	2012 (n=145)	2013 (n=145)	2010 (n=378)	2011 (n=402)	2012 (n=389)	2013 (n=385)
All [4]	10%	16%	13%	11%	8%	7%	8%	10%	18%	24%	16%	20%	14%	14%	17%	10%	12%	14%	13%	12%
Most [3]	13%	13%	18%	10%	13%	8%	10%	9%	11%	14%	9%	13%	14%	12%	10%	11%	13%	10%	11%	10%
Some [2]	24%	13%	19%	24%	22%	33%	19%	14%	20%	23%	22%	20%	22%	25%	26%	24%	22%	26%	22%	20%
Hardly any [1]	16%	13%	19%	14%	17%	15%	13%	23%	13%	10%	9*%	23%	15%	14%	14%	19%	15%	13%	13%	20%
None [0]	38%	45%	31%	41%	40%	37%	49%	44%	39%	30%	44%	25%	34%	35%	34%	36%	38%	37%	40%	38%
Mean score of extent drove under influence (0=none - 4=all)	1.4	1.4	1.6	1.4	1.3	1.3	1.2	1.2	1.6	1.9	1.5	1.8	1.6	1.5	1.6	1.4	1.5	1.5	1.4	1.4

Summary

- The proportion of detainees who had ever tried cannabis increased slightly from 87% in 2010 to 92% in 2013
- The detainees had first tried cannabis at a mean age of 14 years in 2013
- The proportion of detainees who had used cannabis in the previous year declined from 76% in 2011 to 70% in 2013
- Declines in the last year prevalence of cannabis were found among Whangarei and Christchurch Central detainees
- The proportion of detainees who reported using cannabis in the past month decreased from 64% in 2011 to 57% in 2013
- The proportion of detainees in Whangarei who reported using cannabis in the past month also decreased from 73% in 2011 to 45% in 2013
- The mean number of days the detainees had used cannabis in the previous year declined from 187 in 2010 to 158 in 2013
- The number of days the Auckland Central detainees had used cannabis in the past year declined from 196 in 2010 to 146 in 2013
- The number of days the detainees had used cannabis in the previous month also declined from 18 days in 2010 to 15 days in 2013
- Thirty-four percent of the cannabis using detainees felt they were dependent on cannabis in 2013
- The proportion of detainees in Auckland Central who felt dependent on cannabis decreased from 43% in 2010 to 32% in 2013
- Seventeen percent of the detainees had been using cannabis prior to their arrest in 2013
- The current availability of cannabis was described as ‘very easy/easy’ in 2013

- The current availability of cannabis declined in Auckland Central and Christchurch Central from 2010 to 2013

- Cannabis was considered ‘more difficult’ to obtain from 2010 to 2013

- Both Auckland Central and Christchurch Central detainees reported cannabis had become ‘more difficult’ to obtain from 2010 to 2013

- The median price of cannabis was $20 for a ‘tinny’, $350 for an ounce and $3,500 for a pound in 2013

- There was no change in the mean price paid for a ‘tinny’ of cannabis from 2010 to 2013 ($20 in all years)

- There was little change in the price of an ounce of cannabis from 2010 to 2013

- The current strength of cannabis was reported to be ‘high/medium’ in 2013

- Seventy-four percent of the cannabis using detainees could purchase cannabis in one hour or less in 2013

- The proportion of detainees who were able to purchase cannabis in one hour or less decreased from 81% in 2011 to 74% in 2013

- The proportion of detainees in Auckland Central who were able to purchase cannabis in one hour or less decreased from 88% in 2011 to 71% in 2013

- In 2013, 75% of cannabis using detainees said cannabis was ‘less likely’ or ‘much less likely’ to make them become angry

- Forty-two percent of the cannabis using detainees who drove had completed at least some of their driving under the influence of cannabis in 2013

Chapter 6 – Ecstasy

Introduction

It is increasingly understood that that 'ecstasy' is an umbrella term which can refer to a range of tablet drug types including MDMA (3,4-methylenedioxymethamphetamine) as the sole ingredient, mixtures of MDMA and other illegal drugs and/or new psychoactive substances (NPS), and tablets which do not contain any MDMA but rather psychoactive substances which mimic its effects (UNODC, 2014). It is believed that this diversifying of ecstasy ingredients from the traditional MDMA came about because of greater controls imposed over key ecstasy precursors, such as piperonal, SRO and PMK, by a number of Asian governments during the mid-2000s. As a result, there are now some distinct regional variations in 'ecstasy' composition based on the specific compounds available in particular places (UNODC, 2014).

Reflecting these global trends, the frequent drug users interviewed for the Illicit Drug Monitoring System (IDMS) in New Zealand reported a decline in the strength of ecstasy from around 2008 onwards (Wilkins, et al., 2011b). The price of ecstasy also declined around this time and has stayed low in subsequent years. This appears to reflect the greater use of cheaper substitute compounds for MDMA, and the emergence of local ecstasy manufacture in New Zealand. Laboratory analysis of ecstasy tablets seized in New Zealand has found they contain BZP (benzylpiperazine), TFMPP **(**trifluoromethylphenylpiperazine), mephedrone (methylmethcathinone), 4-MEC (methylethcathinone), DMAA (dimethylamylamine), methylone (methylenedioxymethcathinone) and caffeine, and also occasionally MDMA (ESR, 2013; UNODC, 2014).

There have been some recent reports of an improvement in the strength of ecstasy in Auckland which may indicate some recovery in the international supply of MDMA (Wilkins, et al., 2013). Improvements in MDMA supply have also been noted in Europe in recent years and this may lead to resurgence in use (EMCDDA, 2013; UNODC, 2012, 2013). Increasing

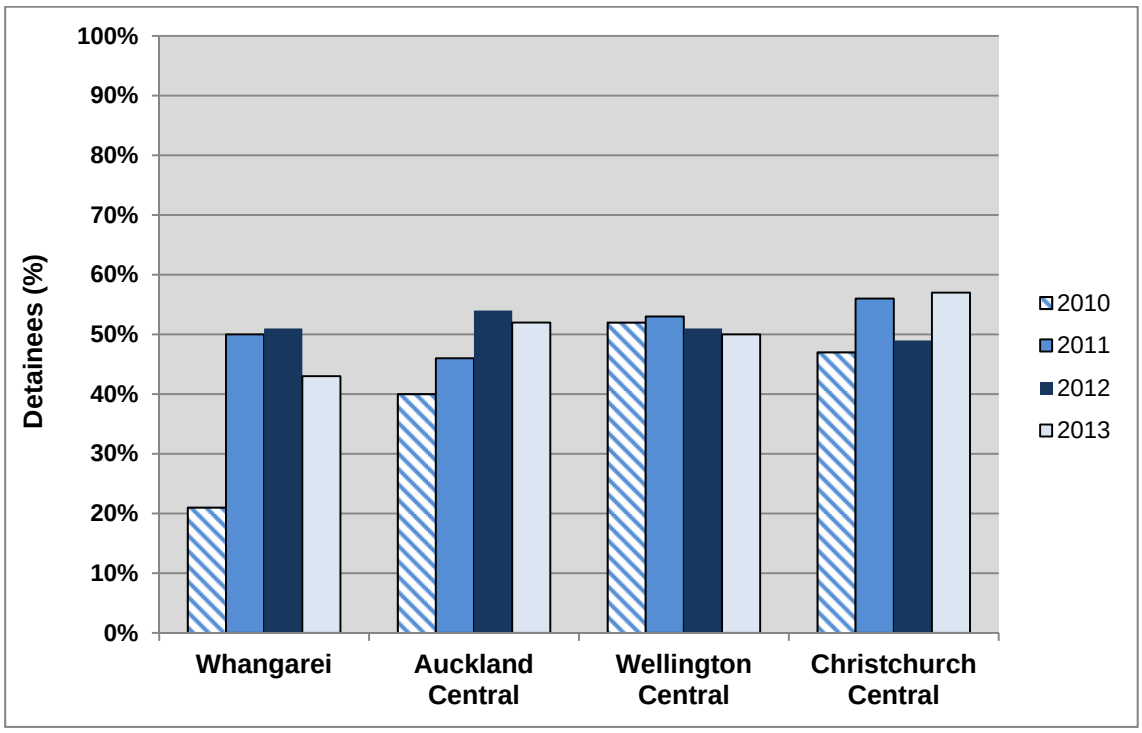
levels of MDMA in ecstasy are thought to be behind the recovery in the preference for ecstasy in Australia (Sindicich & Burns, 2012).

This picture of improving global MDMA supply has been complicated in the New Zealand context by a series of successful law enforcement operations against local ecstasy syndicates in late 2011 and 2012 (NDIB, 2013). These operations appear to have been responsible for a decline in availability and rise in the price of 'ecstasy' in Auckland and other cities (Wilkins, et al., 2013).

Use of ecstasy

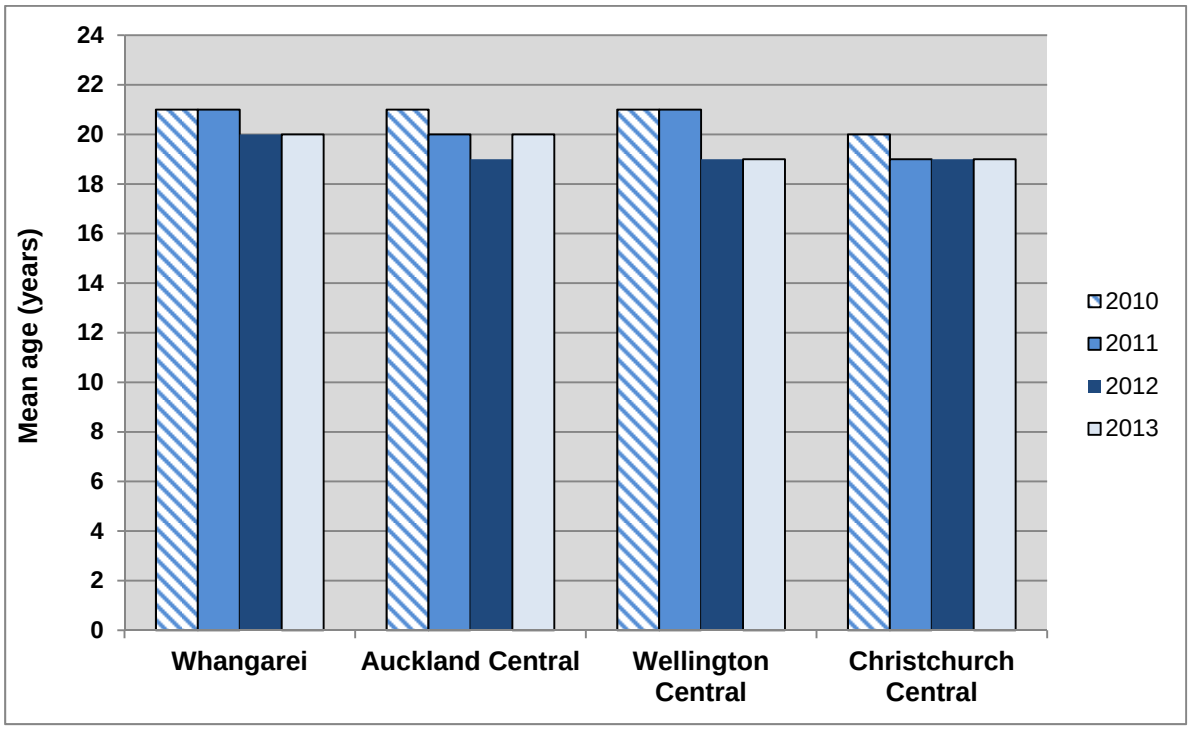
In 2013, 52% of the police detainees had tried ecstasy in their lifetimes, 21% had used it in the past 12 months and 9% had used it in the past month (Table 6.1). A higher proportion of detainees had ever tried ecstasy in 2013 compared to 2010 (52% vs. 42%, $p<0.0001$). The proportion of detainees from Whangarei who had tried ecstasy increased from 21% in 2010 to 43% in 2013 ($p=0.0008$) The proportion of Auckland Central detainees who had tried ecstasy also increased from 40% in 2010 to 52% in 2013 ($p=0.0131$). The proportion of Christchurch Central detainees who had tried ecstasy increased from 47% in 2010 to 57% in 2013, and this increase was close to being statistically significant ($p=0.0776$) (Figure 6.1).

Figure 6.1: Proportion of police detainees who had ever used ecstasy by location, 2010-2013



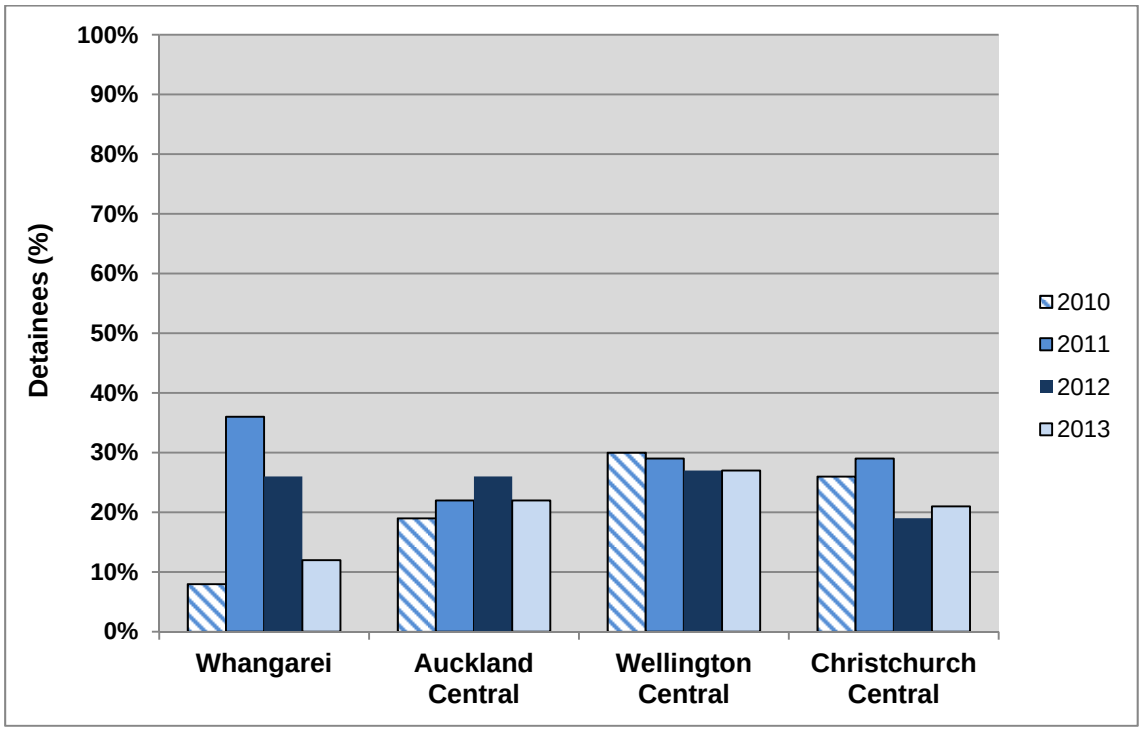
The detainees had used ecstasy for the first time at a mean age of 20 years old in 2013. The mean age at which the detainees had first used ecstasy declined from 21 years 2010 to 20 years in 2013 (p=0.0091)(Figure 6.2).

Figure 6 2: Mean age at which detainees had first tried ecstasy by location, 2010-2013



The proportion of detainees who had used ecstasy in the previous year decreased from 28% in 2011 to 21% in 2013 (p=0.0135) (Figure 6.3). The proportion of Whangarei detainees who had used ecstasy in the previous year declined from 36% in 2011 to 12% in 2013 (p<0.0001). The proportion of Christchurch Central detainees who had used ecstasy in the previous year also fell from 29% in 2011 to 21% in 2013 (p=0.0514). In 2013, Whangarei detainees were less likely to report ecstasy use in the previous year than those in Auckland (12% vs. 22%, p=0.0478), Wellington Central (12% vs. 27%, p=0.0113) and Christchurch Central (12% vs. 21%, p=0.0991).

Figure 6 3: Proportion of police detainees who used ecstasy in the past 12 months by location, 2010-2013



The proportion of detainees who had used ecstasy in the previous month decreased from 11% in 2011 to 9% in 2013, but this decrease was not statistically significant (p=0.2263) (Figure 6.4).

Figure 6 4: Proportion of police detainees who had used ecstasy in the past month by location, 2010-2013

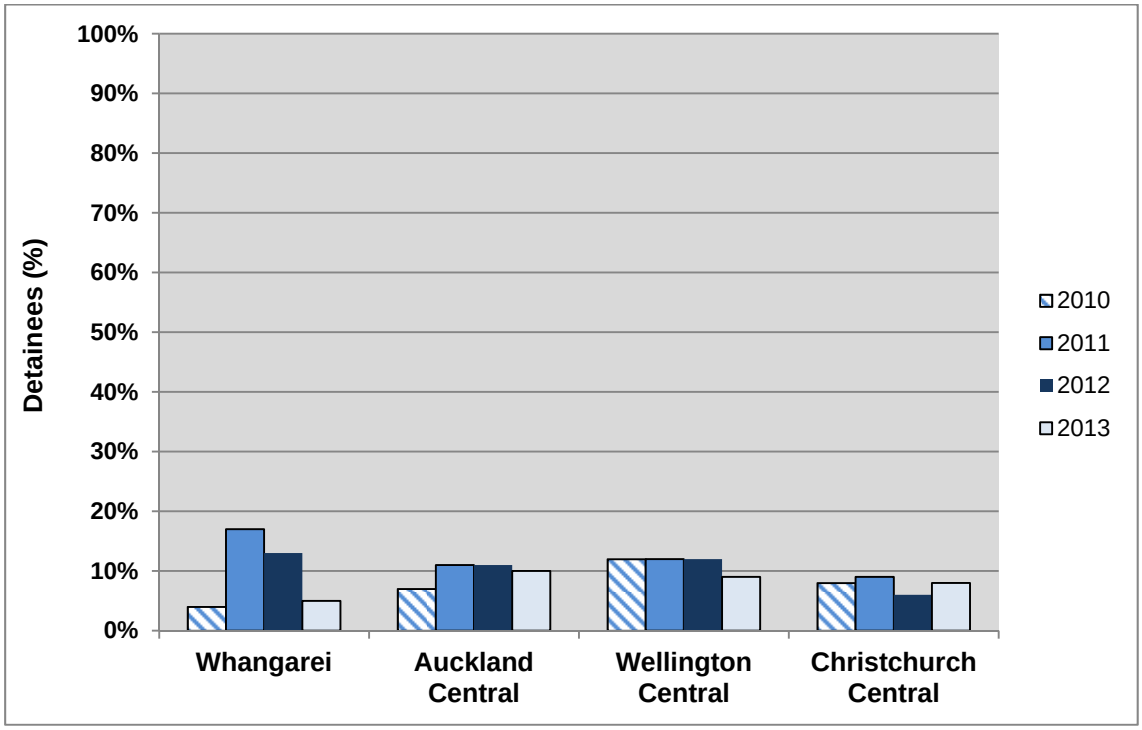


Table 6.1: Police detainees' patterns of ecstasy use by location, 2010-2013

Use of ecstasy	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All sites			
	2010 (n=115)	2011 (n=149)	2012 (n=151)	2013 (n=152)	2010 (n=284)	2011 (n=316)	2012 (n=247)	2013 (n=295)	2010 (n=152)	2011 (n=171)	2012 (n=101)	2013 (n=106)	2010 (n=262)	2011 (n=191)	2012 (n=303)	2013 (n=285)	2010 (n=814)	2011 (n=827)	2012 (n=802)	2013 (n=841)
Ever used (%)	21	50	51	43	40	46	54	52	52	53	51	50	47	56	49	57	42	51	51	52
Mean age first used (years)*	21	21	21	20	21	20	19	20	21	21	19	19	20	19	19	19	21	20	19	20
Used in past 12 months (%)	8	36	26	12	19	22	26	22	30	29	27	27	26	29	19	21	22	28	24	22
Mean number of days used in past 12 months	4	12	13	23	18	25	11	19	14	12	25	11	5	8	8	14	11	14	13	16
Felt dependent in the past 12 months (%)**	9	6	3	0	6	5	5	2	5	6	0	0	0	2	0	0	4	4	2	1
Used in past month (%)	4	17	13	5	7	11	11	10	12	12	12	9	8	9	6	8	8	12	10	9
Mean number of days used in past month***	2	3	3	4	3	3	2	3	2	3	4	4	2	2	3	3	2	3	3	3

* of those who had ever tried

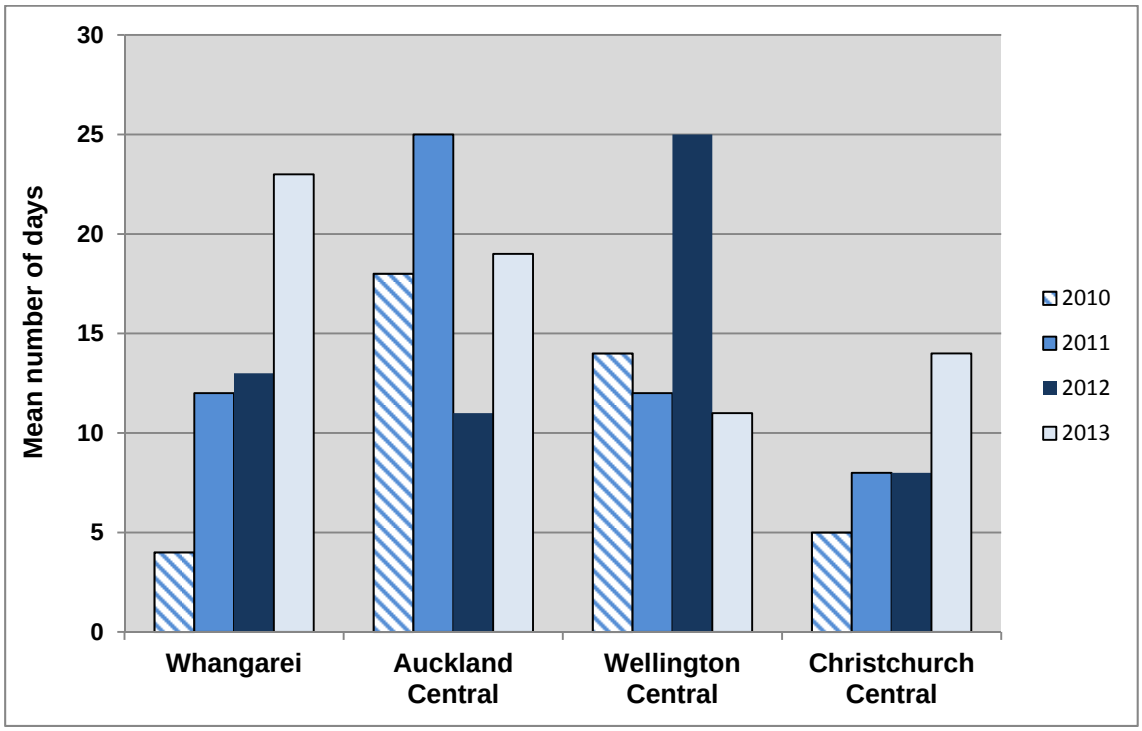
** of those who had used in the past 12 months

*** of those who had used in the past month

Frequency of ecstasy use

The detainees had used ecstasy on a mean of 16 days in the past 12 months in 2013 (median 3, range 1-365 days). Overall, the detainees had used ecstasy on a higher mean number of days in 2013 than in 2010 (16 vs. 11 days, p=0.0113) (Figure 6.5).

Figure 6 5: Mean number of days police detainees used ecstasy in the past year by location, 2010-2013



Dependency on ecstasy

The detainees who had used ecstasy in the past 12 months were asked if they had felt dependent on ecstasy during this time. Only 1% of the ecstasy using detainees said they had felt dependent on ecstasy in 2013.

Ecstasy use at the time of arrest

Only one percent of the detainees had been using ecstasy prior to their arrest in 2013. This had not changed from previous years.

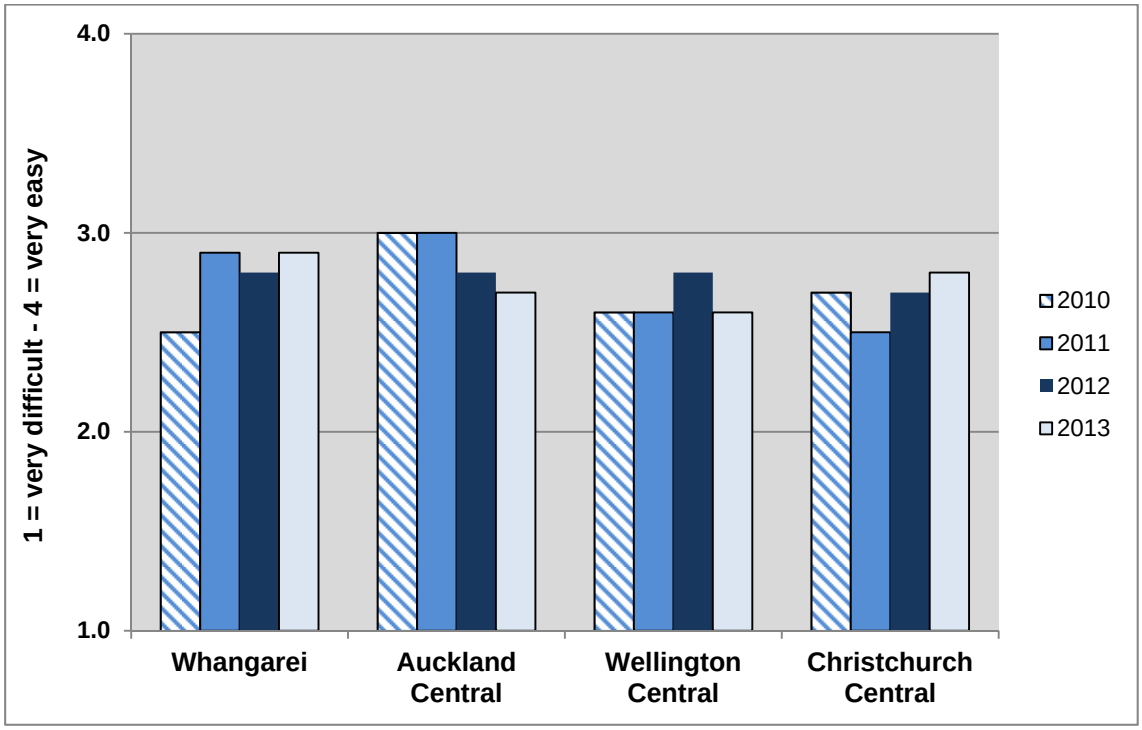
Current availability of ecstasy

The detainees reported the current availability of ecstasy to be 'easy/difficult' in 2013. Thirty-two percent of the detainees considered the current availability of ecstasy to be 'easy', 31% said it was 'difficult' and 26% said it was 'very easy' (Table 6.2). There was no change in perceptions of the current availability of ecstasy from 2010 to 2013 (p=0.9506). There was also no change in perception of current availability of ecstasy across the four sites (p=0.6930).

Table 6.2: Police detainees' perceptions of the current availability of ecstasy by location, 2010-2013

Current availability of ecstasy	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All sites			
	2010 (n=10)	2011 (n=51)	2012 (n=34)	2013 (n=18)	2010 (n=49)	2011 (n=62)	2012 (n=57)	2013 (n=63)	2010 (n=39)	2011 (n=45)	2012 (n=26)	2013 (n=28)	2010 (n=65)	2011 (n=51)	2012 (n=47)	2013 (n=65)	2010 (n=163)	2011 (n=209)	2012 (n=164)	2013 (n=180)
Very easy [4]	20%	24%	32%	33%	35%	34%	28%	25%	28%	20%	15%	21%	22%	24%	23%	28%	27%	26%	25%	26%
Easy [3]	40%	45%	32%	33%	39%	39%	35%	35%	26%	31%	58%	29%	34%	20%	36%	31%	34%	33%	40%	32%
Difficult [2]	10%	25%	15%	28%	22%	23%	23%	24%	28%	36%	19%	39%	35%	39%	28%	32%	28%	31%	22%	31%
Very difficult [1]	30%	6%	21%	6%	4%	5%	14%	16%	18%	13%	8%	11%	9%	18%	13%	9%	11%	11%	13%	12%
Average availability score (1=very difficult – 4=very easy)	2.5	2.9	2.8	2.9	3.0	3.0	2.8	2.7	2.6	2.6	2.8	2.6	2.7	2.5	2.7	2.8	2.8	2.7	2.8	2.7
Overall current status	Easy/ very difficult	Easy/ difficult	Very easy/ easy	Very easy/easy	Easy/ very easy	Every easy/ difficult	Easy/ very easy	Easy/ very easy	Very easy/ difficult	Difficult/ easy	Easy/ difficult	Difficult/ easy	Difficult/ easy	Difficult/ very easy	Easy/ difficult	Difficult/ easy	Easy/ difficult	Easy/ difficult	Easy/ Very easy	Easy/ difficult

Figure 6 6: Mean score of the current availability of ecstasy by location, 2010-2013



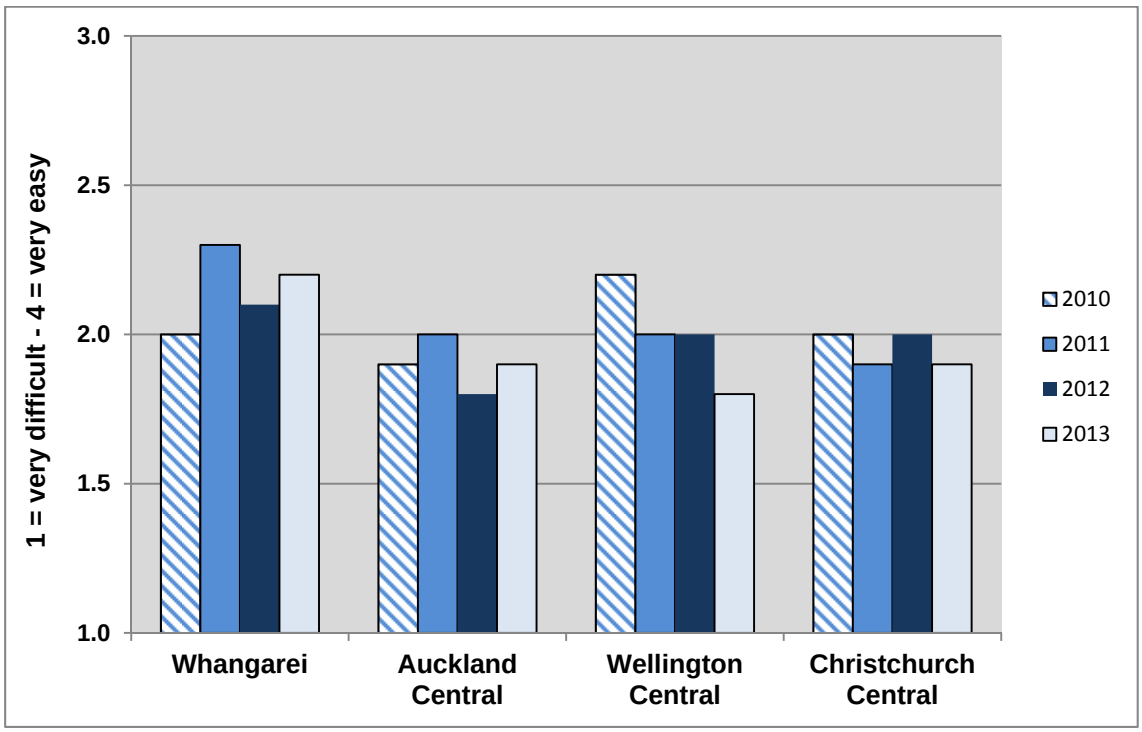
Change in availability of ecstasy

In 2013, 44% of the detainees reported the availability of ecstasy had been 'stable', 26% said it had become 'more difficult' and 15% said it had been 'fluctuating' over the previous six months (i.e. 'stable/more difficult') (Table 6.3). There was no difference in the perception of the change in the availability of ecstasy from 2010 to 2013 (p=0.2471).

Table 6.3: Police detainees' perceptions of the change in availability of ecstasy by location, 2010-2013

Change in availability of ecstasy (%)	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All sites			
	2010 (n=12)	2011 (n=51)	2012 (n=30)	2013 (n=18)	2010 (n=45)	2011 (n=52)	2012 (n=49)	2013 (n=55)	2010 (n=31)	2011 (n=35)	2012 (n=26)	2013 (n=23)	2010 (n=60)	2011 (n=51)	2012 (n=44)	2013 (n=61)	2010 (n=148)	2011 (n=189)	2012 (n=149)	2013 (n=161)
Easier [3]	25%	41%	23%	33%	18%	21%	16%	16%	26%	20%	12%	9%	27%	16%	20%	11%	24%	24%	17%	14%
Stable [2]	33%	37%	50%	33%	40%	48%	41%	47%	45%	57%	62%	39%	40%	39%	28%	48%	41%	44%	44%	44%
Fluctuates [2]	17%	8%	10%	17%	11%	10%	10%	11%	16%	9%	8%	22%	7%	16%	28%	15%	11%	11%	14%	15%
More difficult [1]	25%	14%	17%	17%	31%	21%	33%	25%	13%	14%	19%	30%	27%	29%	25%	26%	25%	21%	25%	26%
Average change in availability score (1=more difficult – 3=easier)	2.0	2.3	2.1	2.2	1.9	2.0	1.8	1.9	2.2	2.0	2.0	1.8	2.0	1.9	2.0	1.9	2.0	2.0	1.9	1.9
Overall recent change	Stable/ more difficult	Easier/ stable	Stable/ easier	Easier/ stable	Stable/ more difficult	Stable/ easier/ more difficult	Stable/ more difficult	Stable/ more difficult	Stable/ easier	Stable/ easier	Stable/ More difficult	Stable/ more difficult	Stable/ more difficult	Stable/ more difficult	Stable/ fluctuates	Stable/ more difficult	Stable/ more difficult	Stable/ easier	Stable/ more difficult	Stable/ more difficult

Figure 6 7: Mean score of the change in the availability of ecstasy by location, 2010-2013



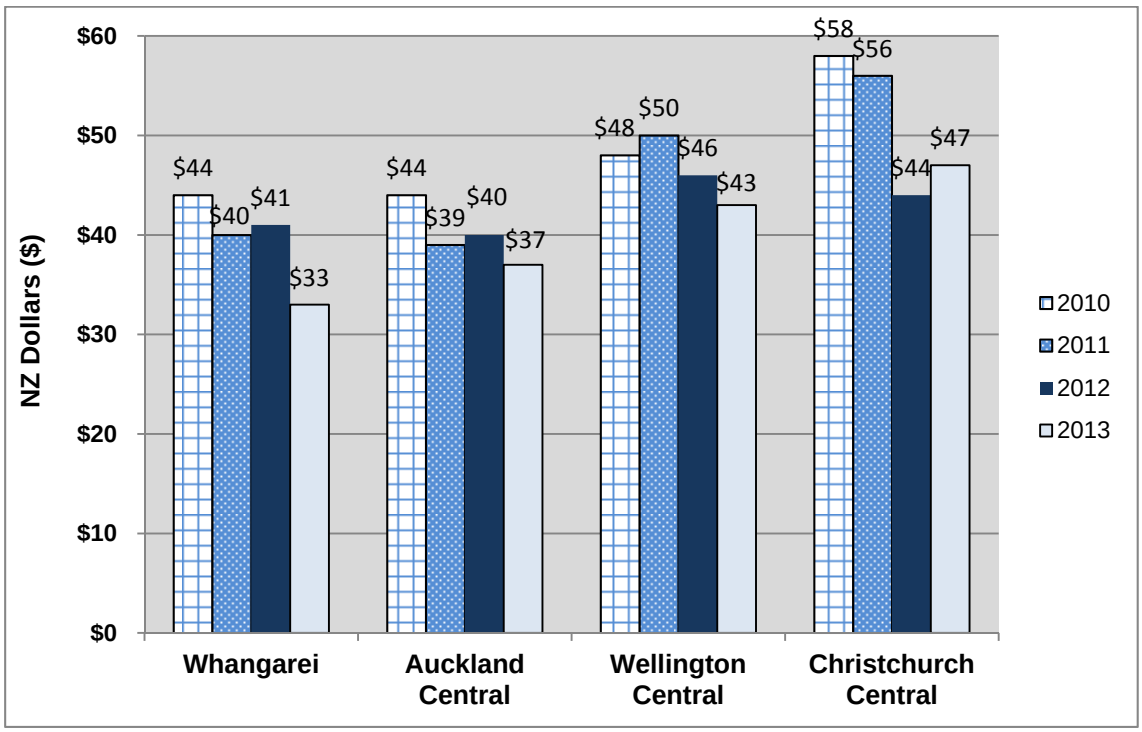
Current price of ecstasy

The detainees reported the median price of a pill of ecstasy was $40 in 2013 (mean $41) (Table 6.4). The price of a pill of ecstasy decreased from $50 in 2010 to $41 in 2013 ($p<0.0001$) (Figure 6.8). The price paid for a pill of ecstasy by the Christchurch Central detainees declined from $59 in 2010 to $47 in 2013 ($p<0.0012$). However, despite the price decreases, Christchurch Central detainees still reported a higher price for a pill of ecstasy than detainees in Auckland Central ($47 vs. $37, $p=0.0057$) and Whangarei ($47 vs. $33, $p=0.0052$) in 2013.

Table 6.4: Current median (mean) price paid by police detainees for a pill of ecstasy (NZD) by location, 2010-2013

Current price of ecstasy ($)	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All sites			
	2010 (n=7)	2011 (n=50)	2012 (n=30)	2013 (n=18)	2010 (n=43)	2011 (n=60)	2012 (n=59)	2013 (n=58)	2010 (n=38)	2011 (n=39)	2012 (n=23)	2013 (n=27)	2010 (n=65)	2011 (n=46)	2012 (n=44)	2013 (n=61)	2010 (n=153)	2011 (n=195)	2012 (n=156)	2013 (n=164)
Median (mean) price per pill	$50 ($44)	$40 ($40)	$40 ($41)	$30 ($33)	$40 ($44)	$40 ($39)	$40 ($40)	$34 ($37)	$50 ($48)	$50 ($50)	$45 ($46)	$40 ($$43)	$60 ($58)	$60 ($56)	$40 ($44)	$40 ($47)	$50 ($50)	$40 ($46)	$40 ($42)	$40 ($41)

Figure 6 8: Mean price paid for a pill of ecstasy by location, 2010-2013



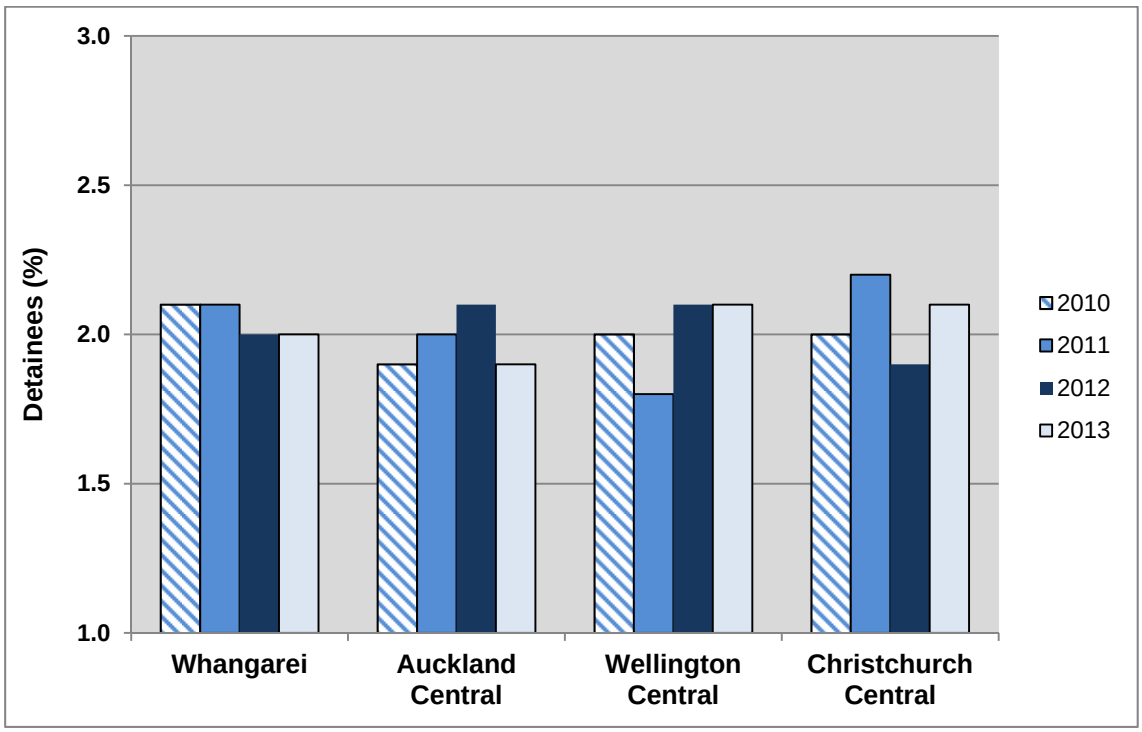
Change in the price of ecstasy

The detainees reported the price of ecstasy had been 'stable/fluctuating' over the past six months in 2013 (Table 6.6). There was no difference in the detainees' perceptions of the change in the price of ecstasy from 2010 to 2013 (p=0.4312).

Table 6.5: Police detainees' perceptions of the change in the price of ecstasy in the past six months by location, 2010-2013

Change in price of ecstasy (%)	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All sites			
	2010 (n=9)	2011 (n=46)	2012 (n=31)	2013 (n=18)	2010 (n=43)	2011 (n=54)	2012 (n=53)	2013 (n=57)	2010 (n=32)	2011 (n=35)	2012 (n=26)	2013 (n=23)	2010 (n=63)	2011 (n=44)	2012 (n=40)	2013 (n=55)	2010 (n=147)	2011 (n=179)	2012 (n=150)	2013 (n=153)
Increasing [3]	22%	20%	10%	11%	14%	17%	19%	9%	19%	6%	19%	9%	14%	23%	13%	20%	16%	17%	16%	13%
Fluctuating [2]	22%	20%	13%	39%	14%	24%	11%	12%	9%	34%	27%	17%	22%	11%	33%	20%	17%	21%	21%	18%
Stable [2]	44%	48%	61%	39%	47%	46%	60%	61%	50%	31%	42%	74%	44%	59%	33%	49%	46%	48%	50%	58%
Decreasing [1]	11%	13%	10%	11%	26%	13%	9%	18%	22%	29%	12%	0%	19%	7%	23%	11%	21%	14%	13%	11%
Average change in price score (1=decreasing – 3=increasing)	2.1	2.1	2.0	2.0	1.9	2.0	2.1	1.9	2.0	1.8	2.1	2.1	2.0	2.2	1.9	2.1	1.9	2.0	2.0	2.0
Overall recent change	Stable/ fluctuating	Stable/ increasing/ fluctuating	Stable/ fluctuating	Stable/ fluctuating	Stable / increasing /fluctuating	Stable/ increasing /fluctuating	Stable/ increasing	Stable/ decreasing	Stable/ decreasing	Fluctuating / stable	Stable/ fluctuating	Stable	Stable / Fluctuating	Stable / Increasing	Fluctuating/ stable	Stable/ fluctuating	Stable / decreasing	Stable / Fluctuating	Stable/ fluctuating	Stable/ fluctuating

Figure 6 9: Mean score of the change in the price of ecstasy by location, 2010-2013



Current strength of ecstasy

In 2013, 29% of the detainees reported the current strength of ecstasy was 'low', 27% said it was 'medium', and 25% said it was 'high' (Table 6.6). There was no difference in perceptions of the current strength of ecstasy from 2012 to 2013 (p=0.3392). The strength of ecstasy was reported to be lower in Wellington Central compared to Christchurch Central (1.5 vs. 2.1, p=0.0090) and Whangarei (1.5 vs. 2.2, p=0.0359).

Table 6.6: Police detainees' perceptions of the current strength of ecstasy in the past six months by location, 2012-2013

Current strength of ecstasy (%)	Whangarei		Auckland Central		Wellington Central		Christchurch Central		All sites	
	2012 (n=28)	2013 (n=19)	2012 (n=58)	2013 (n=60)	2012 (n=26)	2013 (n=22)	2012 (n=49)	2013 (n=66)	2012 (n=161)	2013 (n=167)
High [3]	29%	26%	28%	27%	19%	9%	35%	29%	35%	25%
Medium [2]	25%	42%	24%	18%	23%	23%	24%	32%	24%	27%
Fluctuates [2]	29%	21%	21%	18%	23%	14%	18%	21%	18%	19%
Low [1]	18%	11%	28%	37%	35%	55%	22%	18%	25%	29%
Average strength score (1=low – 3=high)	2.1	2.2	2.0	1.9	1.8	1.5	2.1	2.1	2.0	2.0
Overall current status	High/ fluctuates	Medium/ high	High/ low	Low/ high	Low/ Medium	Low/ medium	High/ medium	Medium/ high	High/ low	Low/ Medium

Change in strength of ecstasy

Forty-three percent of the detainees reported the strength of ecstasy had been 'stable', 25% said it had been 'decreasing' and 23% said it had been 'fluctuating' in the previous six months in 2013 (Table 6.7). Thirty-four percent of the detainees in Auckland Central and 33% of the detainees in Wellington Central reported the strength of ecstasy had been 'decreasing' in 2013. There was no difference in perceptions of the change in the strength of ecstasy from 2012 to 2013 (i.e. 'stable/decreasing').

Table 6.7: Police detainees' perceptions of change in strength of ecstasy in the past six months by location, 2012- 2013

Change in strength of ecstasy (%)	Whangarei		Auckland Central		Wellington Central		Christchurch Central		All sites	
	2012 (n=25)	2013 (n=14)	2012 (n=45)	2013 (n=50)	2012 (n=21)	2013 (n=18)	2012 (n=40)	2013 (n=54)	2012 (n=131)	2013 (n=136)
Increasing [3]	16%	14%	11%	14%	10%	0%	18%	6%	14%	9%
Stable [2]	60%	57%	22%	34%	33%	33%	30%	52%	34%	43%
Fluctuating [2]	8%	14%	29%	18%	19%	33%	35%	26%	25%	23%
Decreasing [1]	16%	14%	38%	34%	38%	33%	18%	17%	27%	25%
Average change in strength (1=decreasing – 3=increasing)	2.0	2.0	1.7	1.8	1.7	1.7	2.0	1.9	1.9	1.8
Overall recent change	Stable/ decreasing	Stable/ decreasing	Decreasing/ fluctuating	Stable/ decreasing	Decreasing/ stable	Stable/ decreasing	Fluctuating/ stable	Stable/ fluctuating	Stable/ decreasing	Stable/ decreasing

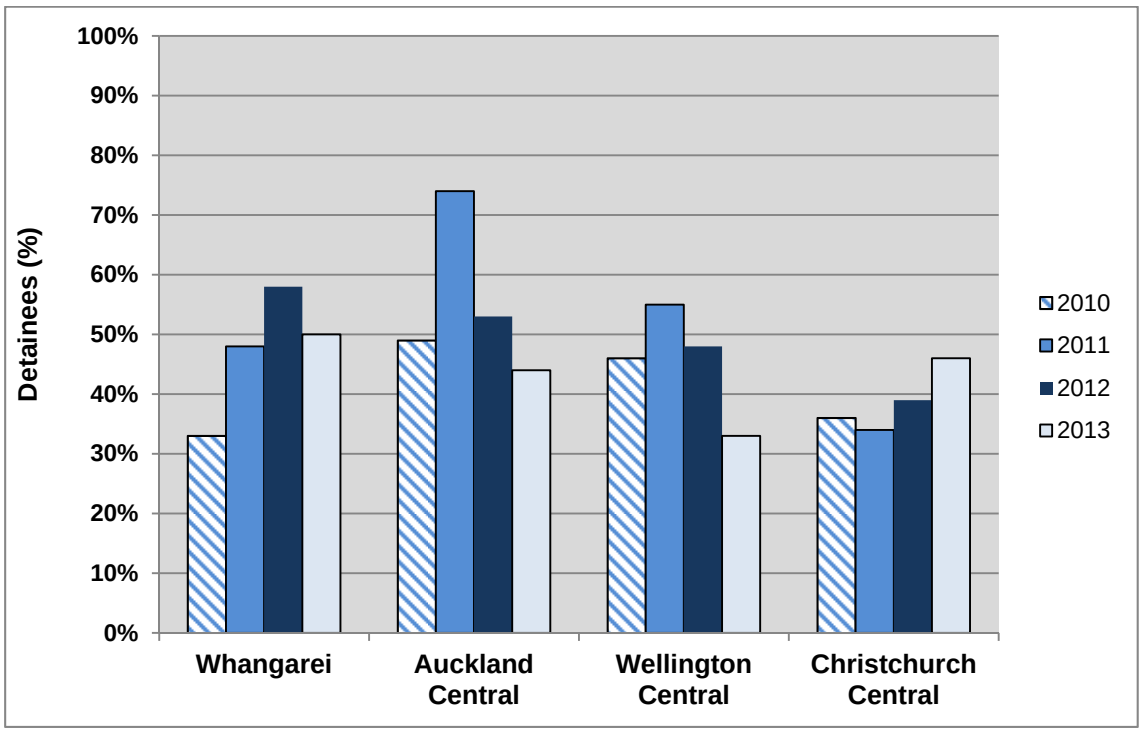
Time taken to purchase ecstasy

Forty-three percent of the detainees who had used ecstasy in the previous year were able to purchase it in one hour or less in 2013 (Table 6.8). The proportion of detainees in Auckland Central who were able to purchase ecstasy in one hour or less increased from 49% in 2010 to 74% in 2011 (p=0.0463), and then decreased from 74% in 2011 to 44% in 2013 (p=0.0062) (Figure 6.10).

Table 6.8: Time taken by police detainees to purchase ecstasy by location, 2010-2013

Time to purchase (%)	*Whangarei*				*Auckland Central*				*Wellington Central*				*Christchurch Central*				*All sites*			
	2010 (n=9)	2011 (n=54)	2012 (n=33)	2013 (n=18)	2010 (n=45)	2011 (n=61)	2012 (n=58)	2013 (n=61)	2010 (n=37)	2011 (n=42)	2012 (n=25)	2013 (n=27)	2010 (n=66)	2011 (n=50)	2012 (n=51)	2013 (n=69)	2010 (n=157)	2011 (n=206)	2012 (n=171)	2013 (n=181)
Months	0	0	0	6	2	0	2	3	0	2	0	0	0	2	2	6	1	1	1	4
Weeks	11	2	12	0	0	0	3	3	8	5	0	4	5	4	8	6	4	3	5	4
Days	33	19	9	11	11	7	10	5	19	10	8	26	8	20	7	22	13	14	13	16
About one day	11	11	9	11	16	3	17	23	14	10	12	7	27	24	12	6	20	12	14	12
Hours	11	20	12	22	22	16	14	21	14	19	32	30	24	16	18	14	20	18	18	21
1 Hour	33	20	27	17	20	49	22	21	24	31	24	15	15	12	22	26	20	28	23	21
Less than 20 mins	0	28	30	33	29	25	31	23	22	24	24	19	21	22	18	20	22	24	26	22

Figure 6 10: Proportion of police detainees who could purchase ecstasy in one hour or less, 2010-2013



Effect of ecstasy on the likelihood of becoming angry

Those detainees who reported using ecstasy in the past 12 months were asked what effect using ecstasy had on their likelihood of becoming angry. In 2013, 46% of detainees reported that using ecstasy was 'less likely' or 'much less' likely to make them become angry. The detainees were more likely to report that ecstasy made them feel angry from 2010 to 2013 (up from 2.1 to 2.5, p=0.0166).

Table 6.9: Effect of ecstasy on police detainees' likelihood of becoming angry, 2010-2013

Effect of ecstasy on likelihood of becoming angry	All sites			
	2010 (n=164)	2011 (n=213)	2012 (n=167)	2013 (n=187)
Much more likely [5]	2%	2%	4%	3%
More likely [4]	5%	5%	3%	7%
No effect [3]	34%	39%	42%	45%
Less likely [2]	24%	24%	28%	25%
Much less [1]	36%	30%	23%	21%
Mean impact on likelihood of becoming angry (1=much less - 5=much more)	2.1	2.3	2.4	2.5

Driving under the influence of ecstasy

Those detainees who had used ecstasy in the past year were asked how often they drove under the influence of ecstasy. Eighteen percent of the detainees said they did not drive and a further 8% said their driver license was suspended. In 2013, 9% of the ecstasy using detainees had completed at least some of their driving under the influence of ecstasy (Table 6.10). The detainees completed more of their driving under the influence of ecstasy from 2010 to 2013 (up from 0.3 to 0.7, p=0.0018) (Figure 6.11). A higher proportion of Wellington Central detainees had completed at least some of their driving under the influence of ecstasy over the four years (up from 0.2 in 2010 to 1.4 in 2013, p=0.0010), although the number of respondents answering this question was fairly modest (i.e. around 20 in each year). The proportion of Christchurch Central detainees who had completed at least some of their driving under the influence of ecstasy also increased from 2010 to 2013 (up from 0.1 to 0.5, p=0.0533).

Table 6.10: Extent police detainees who drove and who used ecstasy in the past 12 months had driven under the influence of ecstasy by location, 2010 - 2013

Extent drove under the influence of ecstasy	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All sites			
	2010 (n=10)	2011 (n=39)	2012 (n=29)	2013 (n=13)	2010 (n=36)	2011 (n=47)	2012 (n=47)	2013 (n=46)	2010 (n=28)	2011 (n=31)	2012 (n=19)	2013 (n=20)	2010 (n=47)	2011 (n=37)	2012 (n=44)	2013 (n=54)	2010 (n=121)	2011 (n=153)	2012 (n=141)	2013 (n=137)
All [4]	0%	5%	3%	0%	3%	0%	0%	0%	0%	6%	0%	25%	0%	3%	0%	2%	1%	3%	1%	6%
Most [3]	0%	3%	0%	8%	6%	2%	4%	0%	0%	3%	5%	0%	0%	3%	2%	4%	2%	3%	3%	2%
Some [2]	10%	3%	10%	15%	8%	19%	6%	9%	4%	3%	0%	15%	2%	16%	11%	6%	5%	11%	7%	9%
Hardly any [1]	0%	10%	10%	8%	14%	21%	4%	15%	11%	16%	21%	10%	6%	11%	7%	22%	9%	15%	9%	16%
None [0]	90%	79%	76%	69%	69%	57%	85%	76%	86%	71%	74%	50%	91%	68%	80%	67%	83%	68%	80%	66%
Mean score of extent drove under influence (1=none - 5=all)	0.2	0.4	0.4	0.6	0.6	0.7	0.3	0.3	0.2	0.6	0.4	1.4	0.1	0.6	0.4	0.5	0.3	0.6	0.4	0.7

Figure 6 11: Mean score of the extent to which police detainees who drove and who used ecstasy in the past 12 months had driven under the influence of ecstasy by location, 2010-2013

Summary

- The proportion of detainees who had tried ecstasy in their lifetimes increased from 42% in 2010 to 52% in 2013
- A higher proportion of detainees in Whangarei, Auckland Central and Christchurch Central had tried ecstasy from 2010 to 2013
- The mean age at which the detainees had first tried ecstasy declined from 21 years in 2010 to 20 years in 2013
- The proportion of detainees who had used ecstasy in the previous year decreased from 28% in 2011 to 21% in 2013
- Similar decreases in the prevalence of ecstasy from 2011 to 2013 were found in Whangarei and Christchurch Central
- The number of days the detainees had used ecstasy in the previous year increased slightly from 11 in 2010 to 16 in 2013
- Only one percent of the ecstasy using detainees felt they were dependent on the drug
- Only one percent of the detainees had been using ecstasy prior to their arrest in 2013
- The current availability of ecstasy was reported to be 'easy/difficult' in 2013, and this had not changed from previous years
- The change in the availability of ecstasy was described as 'stable/more difficult' in 2013, and this had not changed from previous years
- The mean price of a pill of ecstasy has declined from $50 in 2010 to $41 in 2013
- The mean price of a pill of ecstasy declined in Christchurch Central from $59 in 2010 to $47 in 2013
- The detainees reported the price of ecstasy was 'stable/fluctuating' in 2013

- The current strength of ecstasy was reported to be ‘low/medium’ in 2013

- The change in strength of ecstasy was reported to be ‘stable/decreasing’ in 2013, and this had not changed from previous years

- Thirty-four percent of the Auckland Central and 33% of the Wellington Central detainees described the strength of ecstasy as ‘decreasing’ in 2013

- Forty-three percent of detainees who had used ecstasy in the previous year were able to purchase it in one hour or less in 2013

- The proportion of detainees in Auckland Central who were able to purchase ecstasy in one hour or less increased from 49% in 2010 to 74% in 2011, and then decreased to 44% in 2013

- In 2013, 46% of detainees thought ecstasy was ‘less likely’ or ‘much less likely’ to make them feel angry

- The detainees were more likely to report that ecstasy increased their likelihood of becoming angry from 2010 to 2013

- The detainees had competed more of their driving under the influence of ecstasy from 2010 to 2013

Chapter 7 - Opioids

Introduction

The international supply of heroin to New Zealand was substantially disrupted in the late 1970s by the arrest of members of the 'Mr Asia' international heroin syndicate (New Zealand Customs Service, 2002; Newbold, 2000). In the subsequent decades three domestic sources of opioids emerged to largely replace heroin: (1) 'street morphine' - pharmaceutical morphine illicitly diverted from the medical system; (2) 'homebake heroin/morphine' – morphine made by users from diverted codeine in make-shift 'kitchen' laboratories; and (3) opium extracted on a seasonal basis from locally grown opium poppies (Adamson & Sellman, 1998; New Zealand Customs Service, 2002). Consequently, to gain a clear picture of opioid drug use among the detainees they were asked about the use of a range of opioids including 'heroin, morphine, opiates/opioids, smack, skag, junk and misties'.

While morphine has traditionally been the principal opioid used by injecting drug users in New Zealand, there is evidence that newer pharmaceutical opioid products, such as oxycodone, are increasingly being used (Wilkins et al., 2011a). The 2012 Illicit Drug Monitoring System (IDMS) found the proportion of frequent injecting drug users who had used oxycodone in the past six months increased from 8% in 2008 to 25% in 2012 (Wilkins et al., 2012c). In the United States, high levels of oxycodone availability, amongst other factors, contributed to rising levels of opioid abuse (Maxwell, 2011). In New Zealand, there has also been a steady rise in the use of a range of other pharmaceuticals among frequent injecting drug users, including methylphenidate (Ritalin™), anti-depressants, tramadol, codeine and benzodiazepines (Wilkins, et al., 2013).

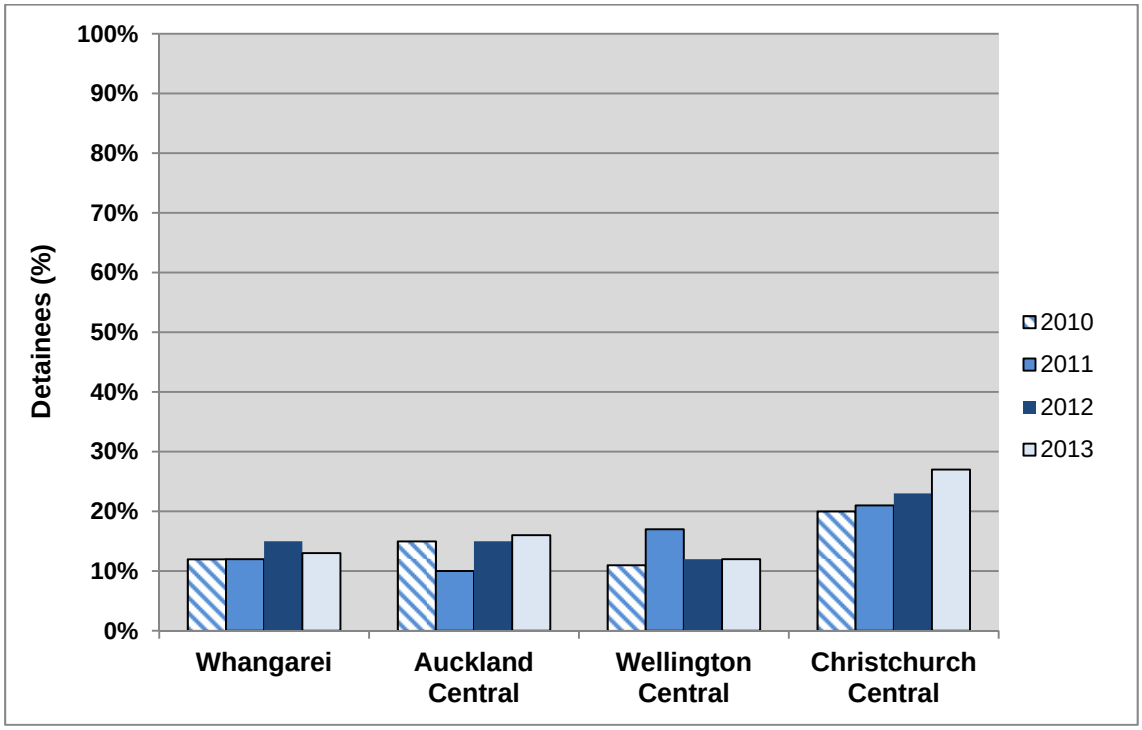
Both NZ-ADUM and the IDMS have found higher levels of injecting drug use in Christchurch and there is evidence that the illicit market for morphine has recently been disrupted there (Wilkins, et al., 2012a; 2013). The frequent injecting drug users interviewed for the 2012 IDMS reported an increase in the price and sharp decline in availability of 'street' morphine compared to the previous year. Most of the frequent injecting drug users interviewed for

the IDMS come from Christchurch, and so the reported changes may reflect local conditions there, including social and lifestyle changes brought about by the 2011 earthquakes, changes to prescription practices as a result of the earthquakes, or local enforcement operations.

Use of opioids

Nineteen percent of the police detainees had used an opioid in their lifetimes, 6% had used an opioid in the previous 12 months and 4% had used an opioid in the past 30 days in 2013 (Table 7.1). There was no statistically significant change in the proportion of detainees who had ever tried opioids from 2010 to 2013 (p=0.250). In 2013, detainees in Christchurch Central were more likely to have ever tried an opioid than detainees in Auckland Central (27% vs. 16%, p=0.0064), Whangarei (27% vs. 13%, p=0.0022) and Wellington Central (27% vs. 12%, p=0.0100) (Figure 7.1).

Figure 7.1: Proportion of police detainees who had ever used opioids by location, 2010-2013



There was no statistically significant change in the age at which the detainees had first tried opioids in 2013 compared to 2012 (21 vs. 20 years, p=0.7785).

There was also no change in the proportion of detainees who had used an opioid in the previous 12 months from 2010 to 2013 (p=0.4636). In 2013, detainees in Christchurch Central were more likely to have used an opioid in the previous 12 months than detainees in Whangarei (11% vs. 1%, p=0.0137) and Wellington Central (11% vs. 3%, p=0.0910) (Figure 7.2).

Figure 7.2: Proportion of police detainees who had used opioids in the past 12 months by location, 2010-2013

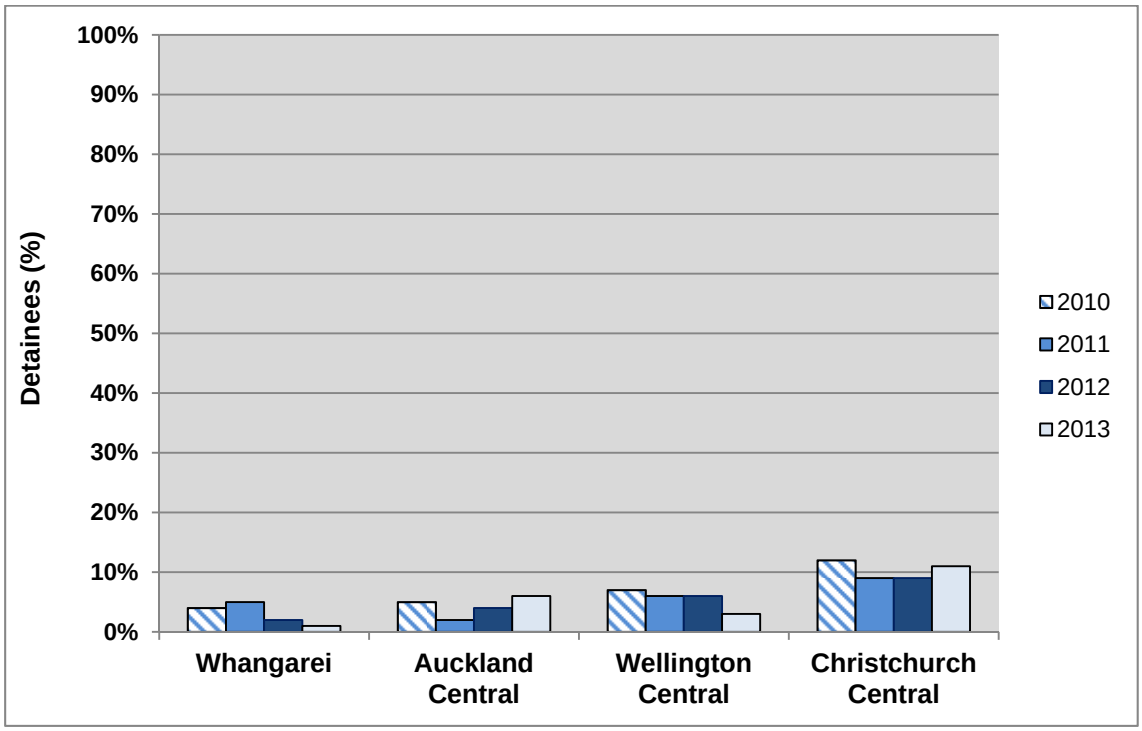


Table 7.1: Police detainees' patterns of opioid use by location, 2010- 2013

Use of opioids	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All sites			
	2010 (n=115)	2011 (n=149)	2012 (n=151)	2013 (n=152)	2010 (n=285)	2011 (n=316)	2012 (n=247)	2013 (n=294)	2010 (n=152)	2011 (n=171)	2012 (n=101)	2013 (n=106)	2010 (n=262)	2011 (n=191)	2012 (n=303)	2013 (n=284)	2010 (n=814)	2011 (n=827)	2012 (n=802)	2013 (n=839)
Ever used (%)	12	12	15	13	15	10	15	16	11	17	12	12	20	21	23	27	15	15	17	19
Mean age first used (years)*	25	21	22	21	21	21	20	20	25	21	20	22	19	20	20	20	21	21	20	21
Used in past 12 months (%)	4	5	2	1	5	2	4	6	7	6	6	3	12	9	9	11	8	6	6	6
Mean number of days used in past 12 months**	29	12	1	4	112	95	45	27	46	123	69	198	110	122	114	166	94	104	82	118
Injected in past 12 months**	20	50	33	0	60	57	73	47	56	73	17	50	53	82	55	53	53	72	51	48
Felt dependent in past 12 months (%)**	40	0	0	0	47	43	18	25	25	45	0	25	43	53	58	53	41	43	32	40
Used in past month (%)	3	2	1	1	3	2	2	3	5	5	2	3	6	6	6	8	4	4	3	4
Mean number of days used in past month***	18	3	0	1	15	11	7	4	6	14	10	17	19	20	18	17	15	16	12	13

* of those who had ever tried

** of those who had used in the past 12 months

*** of those who had used in the past month

There was no change in the proportion of detainees who reported using opioids in the previous month from 2010 to 2013 (4% in both years, p=0.6433). The proportion of detainees who reported injecting opioids decreased from 72% in 2011 to 48% in 2013, and this decline was close to being statistically significant (p=0.0774). However, levels of opioid injection in 2013 were similar to levels found in previous years (i.e. 53% in 2010, 51% in 2012).

Frequency of opioid use

The detainees had used opioids on a mean of 118 days in the past 12 months in 2013 (median 15, range 1-365 days). There was no statistically significant change in the number of days opioids were used in the previous 12 months from 2010 to 2013 (p=0.4890).

Dependency on opioids

Forty percent of the detainees who had used an opioid in the previous year reported they felt dependent on them in 2013. There was no change in level of dependency on opioids from 2010 to 2013 (p=0.7322).

Opioid use at the time of arrest

Only 1% of the detainees reported they were using an opioid at the time of their arrest in 2013, and this had not changed from previous years (p=0.3191).

Current availability of opioids

The detainees who had used an opioid in the previous 12 months reported the current availability of opioids to be 'very easy/difficult' in 2013 (Table 7.2). There was no statistically significant change in the current availability of opioids from 2010 to 2013 (p=0.5782).

Table 7.2: Police detainees' perceptions of the current availability of opioids, 2010-2013

Current availability of opioids	All sites			
	2010 (n=53)	2011 (n=41)	2012 (n=44)	2013 (n=51)
Very easy [4]	32%	30%	18%	33%
Easy [3]	42%	28%	60%	21%
Difficult [2]	17%	35%	12%	28%
Very difficult [1]	9%	8%	11%	18%
Average availability score (1=very difficult – 4=very easy)	3.0	2.8	2.9	2.7
Overall current status	Easy/ very easy	Difficult/ very easy	Easy / very easy	Very easy/ difficult

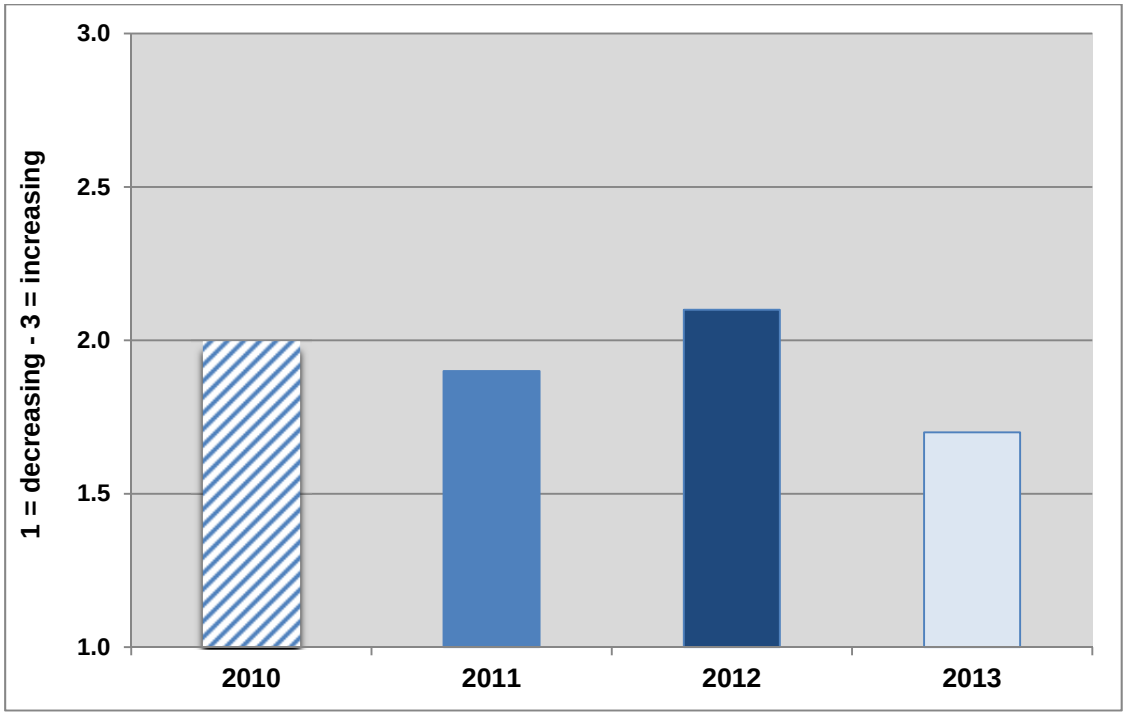
Change in availability of opioids

Forty percent of the opioid using detainees reported the availability of opioids had been 'stable', 39% said availability was 'more difficult' and 12% said it had 'fluctuated' compared to the previous six months in 2013 (Table 7.3). A higher proportion of detainees reported opioids had been 'more difficult' to obtain from 2010 to 2013 (down from 2.0 to 1.7, p=0.0428) and from 2012 to 2013 (down from 2.1 to 1.7, p=0.0280) (Figure 7.3). Auckland Central detainees were more likely to report the availability of opioids had been 'more difficult' from 2010 to 2013 (down from 2.4 to 1.6, p=0.0426) and from 2012 to 2013 (down from 2.4 to1.6, p=0.0846). Christchurch Central detainees also reported declining levels of opioid availability from 2010 to 2013 (down from 2.0 to 1.7), although this decline was not statistically significant (p=0.3795).

Table 7.3: Police detainees' perceptions of the change in availability of opioids, 2010-2013

Change in availability of opioids	All sites			
	2010 (n=51)	2011 (n=37)	2012 (n=36)	2013 (n=46)
Easier [3]	24%	16%	24%	8%
Stable [2]	47%	42%	41%	40%
Fluctuates [2]	10%	14%	21%	12%
More difficult [1]	19%	27%	14%	39%
Average change in availability score (1=more difficult – 3=easier)	2.0	1.9	2.1	1.7
Overall recent change	Stable/ easier	Stable/ more difficult	Stable/ easier	Stable/ more difficult

Figure 7 3: Change in the availability of opioids, 2010-2013



Current price of opioids

Only 30 of the detainees reported the price of opioids in 2013. This is a similar number of respondents to previous years. The median price of opioids was reported to be $1 per milligram or $100 per 100 milligrams (mean $1.10 per milligram). The mean price of a milligram of opioids increased from $.085 in 2010 to $1.10 in 2013 (p=0.0097).

Change in the price of opioids

Fifty-two percent of the opioid using detainees reported the price of opioids had been 'stable' and 28% said the price had been 'increasing' over the previous six months in 2013 (Table 7.4). There was no statistically significant change in the perceptions of the change in the price of opioids from 2010 to 2013 (p=0.4721). The Christchurch Central detainees were more likely to report the price of opioids was 'increasing' from 2010 to 2013 (up from 2.0 to 2.4, p=0.0365).

Table 7.4: Police detainees' perceptions of the change in the price of opioids in the past six months, 2010-2013

Change in price of opioids	All sites			
	2010 (n=42)	2011 (n=36)	2012 (n=32)	2013 (n=37)
Increasing [3]	12%	17%	22%	28%
Fluctuating [2]	12%	10%	9%	10%
Stable [2]	69%	71%	59%	52%
Decreasing [1]	7%	3%	10%	6%
Average change in price score (1=decreasing – 3=increasing)	2.0	2.1	2.1	2.2
Overall recent change	Stable/ fluctuating	Stable	Stable/ increasing	Stable/ increasing

Current strength of opioids

The opioid using detainees described the current strength of opioids as 'medium/high' in 2013 (Table7.5). Forty-four percent of the detainees reported the current strength as being 'medium'. The current strength of opioids declined in Christchurch Central from 2012 to 2013 (down from 2.6 to 2.3, p=0.0348).

Table 7.5: Police detainees' perceptions of the current strength of opioids in the past six months, 2012-2013

Current purity of opioids (%)	All sites	
	2012 (n=39)	2013 (n=46)
High [3]	54%	37%
Medium [2]	26%	44%
Fluctuates [2]	18%	13%
Low [1]	3%	7%
Average purity score (1=low – 3=high)	2.5	2.3
Overall current status	High/ medium	Medium/ high

Change in purity of opioids

The purity of opioids was reported to have been 'stable' over the previous six months in 2013 (Table 7.6). Eighty percent of the opioid using detainees described the purity as 'stable'.

Table 7.6: Police detainees' perceptions of change in purity of opioids in the past six months in 2013

Change in purity of opioids (%)	All sites	
	2012 (n=31)	2013 (n=41)
Increasing [3]	0%	5%
Stable [2]	90%	80%
Fluctuating [2]	3%	10%
Decreasing [1]	6%	5%
Average change in purity (1=decreasing – 3=increasing)	1.9	2.0
Overall recent change	Stable	Stable

Time taken to purchase opioids

Fifty-two percent of the detainees who had used an opioid in the previous 12 months reported they could purchase an opioid in one hour or less in 2013 (Table 7.7). There was no statistically significant change in the proportion of detainees who could purchase an opioid in one hour or less from 2010 to 2013 (i.e. 60% in 2010, 49% in 2011, 53% in 2012 and 52% in 2013, p=0.6932).

Table 7.7: Time taken by police detainees to purchase opioids, 2010-2013

Time to purchase opioids (%)	All sites			
	2010 (n=53)	2011 (n=48)	2012 (n=38)	2013 (n=47)
Months	0	5	7	9
Weeks	2	4	0	2
Days	6	14	0	7
About one day	4	13	24	10
Hours	28	16	16	19
1 Hour	25	17	21	20
Less than 20 mins	36	31	32	32

Effect of opioids on the likelihood of becoming angry

Those detainees who reported using opioids in the past 12 months were asked what effect using opioids had on their likelihood of becoming angry. Fifty-three percent of the detainees reported that using opioids was 'less likely' or 'much less likely' to make them become angry (Table 7.8).

Table 7.8: Effect of opioids on detainees' likelihood of becoming angry, 2010-2013

Effect of opioids on likelihood to become angry	All sites			
	2010 (n=56)	2011 (n=43)	2012 (n=44)	2013 (n=50)
Much more likely [5]	2%	5%	3%	0%
More likely [4]	9%	8%	5%	2%
No effect [3]	21%	30%	36%	46%
Less likely [2]	30%	26%	29%	23%
Much less [1]	38%	31%	27%	30%
Mean impact on likelihood to become angry (1=much less - 5=much more)	2.1	2.3	2.3	2.2

Driving under the influence of opioids

Those detainees who had used opioids in the past year were asked how often they drove under the influence of opioids. In 2013, 26% of the opioid using detainees said they did not drive and a further 7% said their license was suspended. Thirty-four percent of the detainees who used opioids and drove had completed at least some of their driving under the influence of opioids in 2013 (Table 7.9). There was no statistically significant change in the extent of driving under the influence of opioids from 2010 to 2013 (p=0.5388).

Table 7.9: Extent to which police detainees who drove and who had used opioids in the past 12 months had driven under the influence of opioids, 2010-2013

Extent drove under the influence of opioids	All sites			
	2010 (n=35)	2011 (n=26)	2012 (n=27)	2013 (n=53)
All [4]	14%	17%	15%	8%
Most [3]	6%	22%	6%	14%
Some [2]	20%	10%	6%	12%
Hardly any [1]	12%	5%	18%	16%
None [0]	48%	44%	55%	50%
Mean score of extent drove under influence (0=none - 4=all)	1.3	1.6	1.1	1.1

Summary

- Nineteen percent of the detainees in 2013 had tried an opioid in their lifetimes, and this had not changed from previous years
- In 2013, detainees in Christchurch Central were more likely to have ever tried an opioid than those in Whangarei, Auckland Central and Wellington Central
- There was no change in the proportion of detainees who had used an opioid in the previous year from 2010 to 2013
- In 2013, detainees in Christchurch Central were more likely to have used an opioid in the previous 12 months than those in Whangarei and Wellington Central
- The opioid using detainees had used opioids on a mean of 118 days in the previous 12 months in 2013, and this had not changed from previous years
- Forty percent of the opioid using detainees felt they were dependent on opioids in 2013
- Only 1% of the detainees had been using opioids at the time of their arrest in 2013
- The current availability of opioids was reported to be 'very easy/difficult' in 2013
- There was no change in the current availability of opioids from 2010 to 2013
- The change in the availability of opioids was described as 'stable/more difficult' in 2013
- A higher proportion of detainees thought the availability of opioids had become 'more difficult' from 2010 to 2013, and from 2012 to 2013
- The median price of 100 milligrams of opioids was reported to be $100 in 2013
- The mean price of a milligram of opioids increased from $0.85 in 2010 to $1.10 in 2013
- The price of opioids was reported to be 'stable/increasing' in 2013

- The Christchurch Central detainees were more likely to report the price of opioids was ‘increasing’ from 2010 to 2013

- The current purity of opioids was reported to be ‘medium/high’ in 2013

- The current strength of opioids declined in Christchurch Central from 2012 to 2013

- Thirty-four percent of the detainees who used opioids and drove had completed at least some of their driving under the influence of opioids in 2013

Chapter 8 – Cocaine

Introduction

Cocaine use has historically been very low in New Zealand (Field & Casswell, 1999; Wilkins & Sweetsur, 2008c). There are a number of possible reasons for this, including cocaine's high price, the short duration of its action (i.e. around 20 minutes), the high availability of domestically made methamphetamine, and tight border controls (New Zealand Customs Service, 2002). International experience suggests that cocaine and methamphetamine are close substitutes for one another and consequently one tends to dominate at the expense of the other in a given geographical area (Weisheit & White, 2009). The established market for methamphetamine in New Zealand may therefore inhibit any expansion of cocaine use.

New South Wales has a larger cocaine market, and New Zealand and other Pacific countries have been used as transit points for the smuggling of cocaine into Australia (NDIB, 2012). The large seizures of cocaine periodically made at the New Zealand border appear to be destined for the Australian market rather domestic consumption. However, there is a concern that being part of the international supply route to Australia could facilitate the development of a larger cocaine market in New Zealand (NDIB, 2012).

The NZ-ADUM and IDMS surveys have found a growing number of people who have tried cocaine at some point in their lives (Wilkins, et al., 2012a; 2013). However, there is little evidence from these studies of a growing domestic cocaine market in New Zealand. For example, the frequent drug users interviewed for the 2012 Illicit Drug Monitoring System (IDMS) reported cocaine was 'difficult' or 'very difficult' to obtain, strength was 'low', and the number of people using it was described as the 'same' or 'less' (Wilkins, et al., 2013). Only 8% of the frequent drug users interviewed in 2012 felt confident enough to comment on the price, purity and availability of cocaine (Wilkins et al., 2013). There was also no change in the recent prevalence of cocaine use among the frequent drug users interviewed in 2012 (Wilkins et al., 2013). It may be the case that New Zealanders' growing exposure to cocaine use is occurring overseas rather than via an expanding local market. This

understanding is reinforced by the great variation in cocaine seizures in New Zealand from year to year. Only 229 grams of cocaine was seized in New Zealand in 2013, compared to 15 kilograms in the previous year (NDIB, 2014).

Use of cocaine

Twenty-four percent of the police detainees had tried cocaine in their lifetimes, and 5% had used cocaine in the previous year in 2013 (Table 8.1). The proportion of detainees who had ever used cocaine increased from 17% in 2010 to 24% in 2013 (p=0.0033). The proportion of detainees who had ever tried cocaine in Auckland Central increased from 18% in 2011 to 28% in 2013 (p=0.0309), and the proportion in Christchurch Central who had tried cocaine increased from 13% in 2010 to 24% in 2013 (p=0.0040) (Figure 8.1).

Figure 8.1: Proportion of police detainees who had ever used cocaine by location, 2010-2013

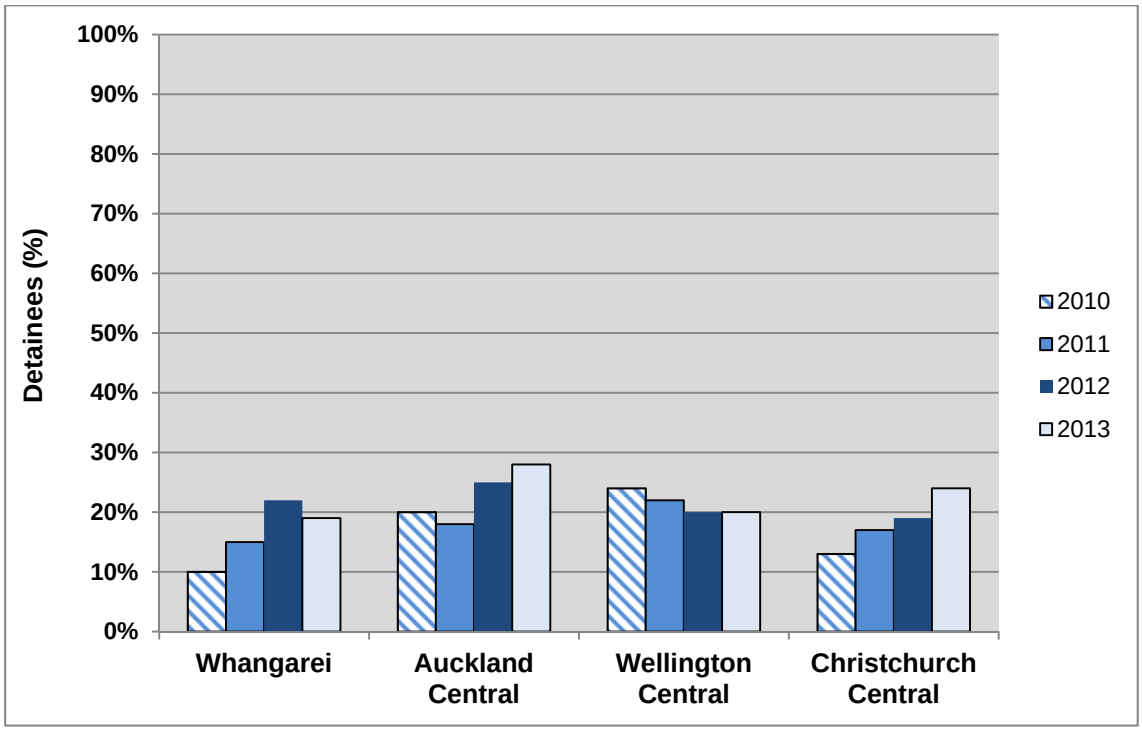


Table 8.1: Police detainees' patterns of cocaine use by location, 2010-2013

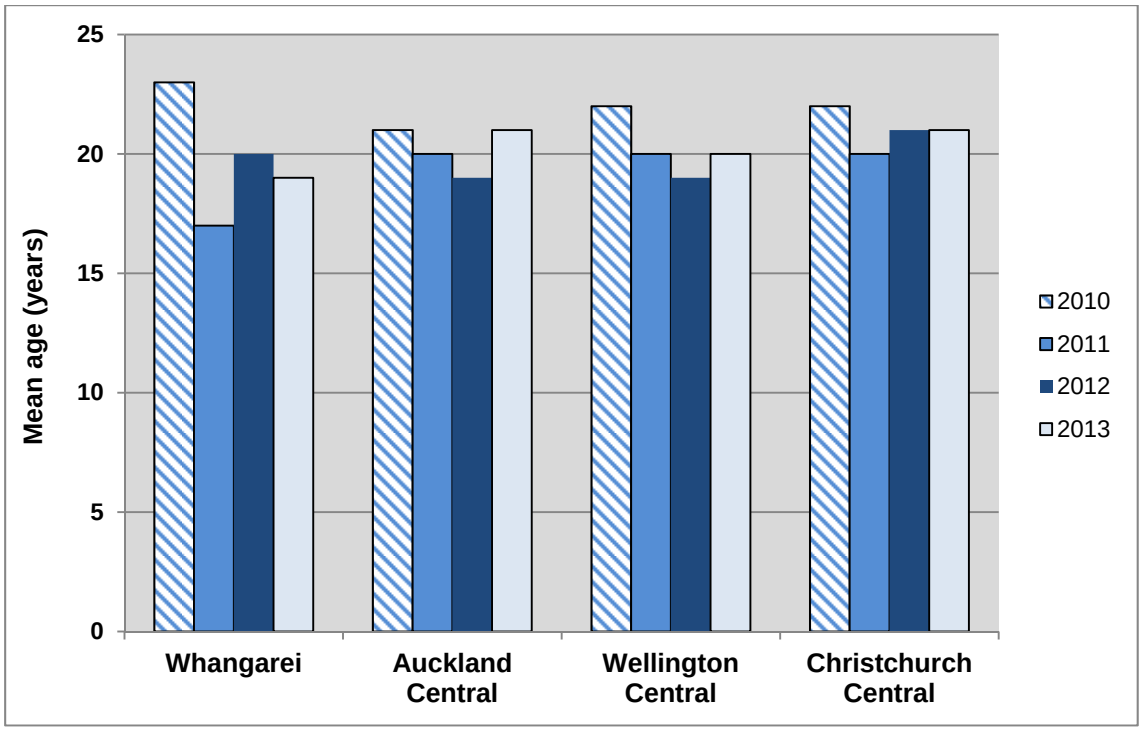
Use of cocaine	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All sites			
	2010 (n=115)	2011 (n=149)	2012 (n=151)	2013 (n=152)	2010 (n=285)	2011 (n=316)	2012 (n=246)	2013 (n=292)	2010 (n=152)	2011 (n=171)	2012 (n=100)	2013 (n=103)	2010 (n=262)	2011 (n=191)	2012 (n=302)	2013 (n=287)	2010 (n=814)	2011 (n=827)	2012 (n=799)	2013 (n=839)
Ever used (%)	10	15	22	19	20	18	25	28	24	22	20	20	13	17	19	24	17	18	22	24
Mean age first used (years)*	23	17	20	19	21	20	19	21	22	20	19	20	22	20	21	21	22	20	20	21
Used in past 12 months (%)	0	4	5	1	5	4	6	6	7	5	6	8	3	3	3	4	4	4	5	5
Mean number of days used in past 12 months**	-	93	7	3	2	24	13	4	10	23	15	5	3	1	37	2	5	29	17	4

* of those who had ever tried

** of those who had used in the past 12 months

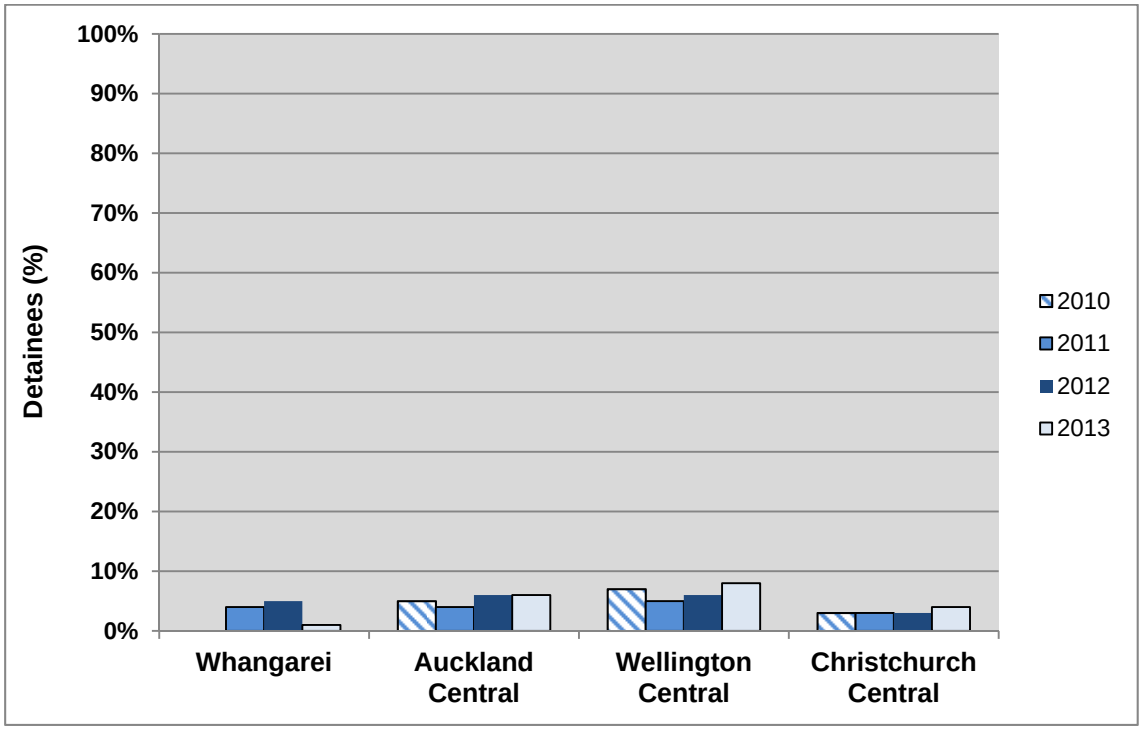
The Whangarei detainees had tried cocaine at a younger age in 2013 compared to 2010 (19 vs. 23 years, p=0.0474) (Figure 8.2).

Figure 8.2: Mean age detainees had first used cocaine by location, 2010-2013



There was no change in the proportion of detainees who had used cocaine in the previous 12 months from 2010 to 2013 (4% to 5%, p=0.7094) (Figure 8.3).

Figure 8.3: Proportion of police detainees who had used cocaine in the past 12 months by location, 2010-2013



Frequency of cocaine use

The detainees who had used cocaine in the previous year had used it on a mean of only four days in the past 12 months in 2013 (median 2, 1-24 days). There was no statistically significant change in the frequency of cocaine use from 2010 to 2013 (p=0.3288).

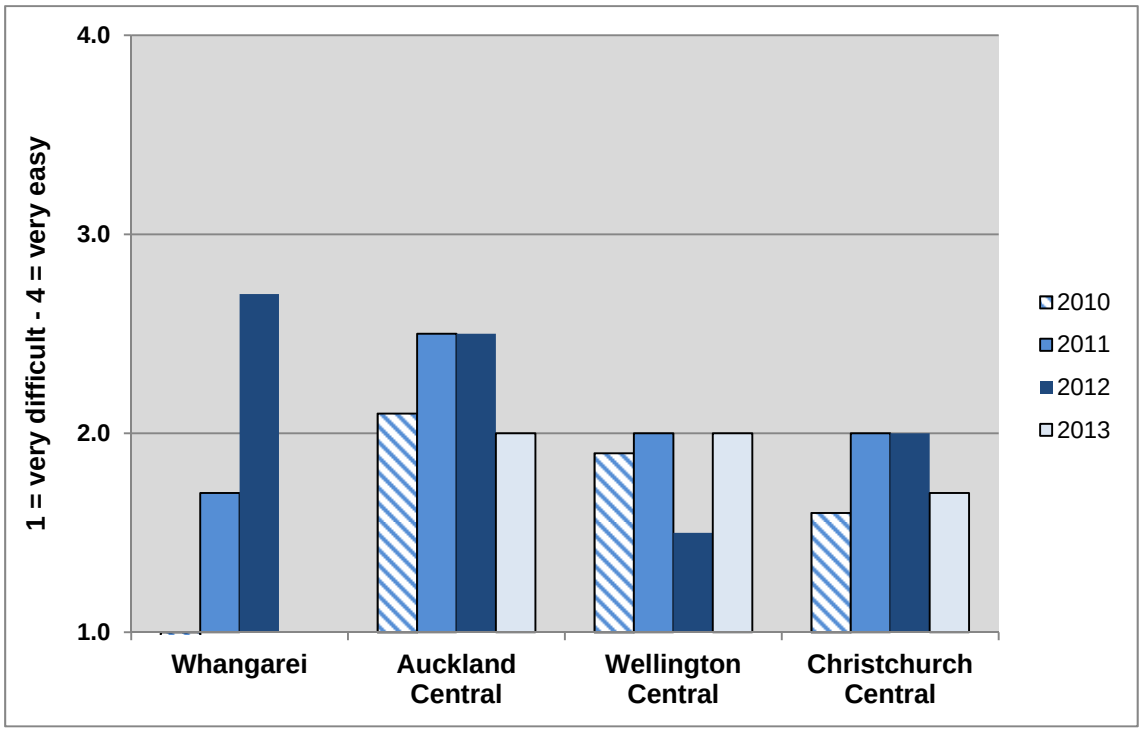
Current availability of cocaine

Forty-six percent of the detainees described the current availability of cocaine as 'very difficult', and a further 28% described it as 'difficult' in 2013 (Table 8.2). There was no statistically significant change in the current availability of cocaine from 2010 to 2013 (1.9 in both years, p=0.4903) (Figure 8.4).

Table 8.2: Police detainees' perceptions of the current availability of cocaine, 2010-2013

Current availability of cocaine	All sites			
	2010 (n=30)	2011 (n=31)	2012 (n=31)	2013 (n=36)
Very easy [4]	7%	16%	14%	10%
Easy [3]	13%	13%	28%	16%
Difficult [2]	47%	37%	25%	28%
Very difficult [1]	33%	33%	33%	46%
Mean score of availability (1 = very difficult – 4 = very easy)	1.9	2.1	2.2	1.9
Overall current status	Difficult/ very difficult	Difficult/ very difficult	Very difficult/ easy	Very difficult/ difficult

Figure 8.4: Police detainees' perceptions of the current availability of cocaine, 2010-2013



Change in availability of cocaine

The detainees reported the availability of cocaine had been 'stable/more difficult' over the previous six months in 2013 (Table 8.3). There was no change in the availability of cocaine from 2010 to 2013 (p=0.8725).

Table 8.3: Police detainees' perceptions of the current availability of cocaine, 2010-2013

Change in availability of cocaine	All sites			
	2010 (n=29)	2011 (n=26)	2012 (n=27)	2013 (n=31)
Easier [3]	17%	16%	14%	8%
Stable [2]	31%	39%	41%	51%
Fluctuates [2]	14%	7%	15%	3%
More difficult [1]	38%	39%	31%	38%
Mean score of availability (1 = more difficult – 3 = easier)	1.8	1.8	1.8	1.7
Overall current status	Stable/ more difficult	Stable/ more difficult	Stable/ more difficult	Stable/ more difficult

Current price of cocaine

Only eighteen of the detainees were able to provide a price for cocaine in 2013. They reported paying a median price of $300 for a gram of cocaine (mean $347). There was no statistically significant change in the mean price of a gram of cocaine from 2010 to 2013 ($295 vs. $347, p=0.3757).

Change in the price of cocaine

Fifty-nine percent of the detainees reported the price of cocaine had been 'stable', and 21% said the price had been 'increasing' over the previous six months in 2013 (Table 8.4). There was no statistically significant change in perceptions of the change in the price of cocaine from 2010 to 2013 (p=0.7484).

Table 8.4: Police detainees' perceptions of the change in the price of cocaine in the past six months, 2010-2013

Change in price of cocaine	All sites			
	2010 (n=20)	2011 (n=18)	2012 (n=18)	2013 (n=22)
Increasing [3]	15%	10%	30%	21%
Fluctuating [2]	0%	16%	10%	12%
Stable [2]	75%	74%	51%	59%
Decreasing [1]	10%	0%	8%	8%
Mean change in price (1 = decreasing – 3 = increasing)	2.1	2.1	2.2	2.1
Overall change in availability	Stable	Stable	Stable/ increasing	Stable/ increasing

Current purity of cocaine

Forty-two percent of the detainees described the current purity of cocaine as 'high', 26% said it was 'low', and 19% said it was 'fluctuating' in 2013 (Table 8.5). There was no statistically significant change in perceptions of the current strength of cocaine from 2012 to 2012 (p=0.4569).

Table 8.5: Police detainees' perceptions of current purity of cocaine in the past six months, 2012-2013

Current purity of cocaine (%)	All sites	
	2012 (n=27)	2013 (n=31)
High [3]	26%	42%
Medium [2]	37%	13%
Fluctuates [2]	7%	19%
Low [1]	30%	26%
Average purity score (1=low – 3=high)	2.0	2.1
Overall current status	Medium/ low	High/ low

Change in purity of cocaine

The strength of cocaine was reported to have been 'stable/decreasing' over the past six months in 2013 (Table 8.6). There was no statistically significant change in perceptions of the change in the strength of cocaine from 2011 to 2012 (p=0.7470).

Table 8.6: Police detainees' perceptions of change in purity of cocaine in the past six months, 2012-2013

Change in purity of cocaine(%)	**All sites**	
	2012 (n=20)	**2013 (n=23)**
Increasing [3]	10%	4%
Stable [2]	40%	52%
Fluctuating [2]	10%	22%
Decreasing [1]	40%	22%
Average change in purity (1=decreasing – 3=increasing)	1.7	1.8
Overall recent change	Stable/ decreasing	Stable/ decreasing

Summary

- The proportion of detainees who had tried cocaine in their lifetimes increased from 17% in 2010 to 24% in 2013

- The proportion of detainees who had ever tried cocaine increased in Auckland Central and Christchurch Central

- There was no change in the proportion of detainees who had used cocaine in the previous year from 2010 to 2013 (4% to 5%)

- The detainees had used cocaine on a mean of only 4 days in the previous 12 months in 2013

- Forty-six percent of detainees described the current availability of cocaine as 'very difficult' in 2013

- Thirty eight percent of detainees reported the availability of cocaine had become 'more difficult' over the previous six months in 2013

- The median price of a gram of cocaine was $300 (mean $347)

- The detainees reported the price of cocaine had been 'stable/increasing' over the past six months in 2013

- Forty-two percent of the detainees described the current purity of cocaine as 'high' and 26% said it was 'low' in 2013

- The purity of cocaine was reported to have been 'stable/decreasing' over the past six months in 2013.

Chapter 9- New Drugs

Introduction

A range of new psychoactive substances (NPS) have emerged around the world over the past five years including synthetic cannabinoids (e.g. Kronic, Spice), piperazines (e.g. benzylpiperazine), cathinones (e.g. mephedrone, methylone), tryptamines (e.g. DMT), phenethylamines (e.g. 2C-B, 2C-I) and plant extracts, such as salvia divinorum (Griffiths et al., 2013; UNODC, 2013). Some of these compounds have been sold in 'legal high' products which mimic the effects of established illegal drugs, such as cannabis and ecstasy (MDMA).

The number of new NPS compounds identified each year by the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) has increased from 13 in 2008 to 73 in 2012 (EMCDDA, 2013). The number of NPS reported worldwide has increased from 166 at the end of 2009 to 251 by mid-2012 (UNODC, 2013). In 2013, the number of identified NPS exceeded the total number of drugs controlled under the United Nations Drug Conventions for the first time (i.e. 251 vs. 234) (UNODC, 2013).

In New Zealand, the Illicit Drug Monitoring System (IDMS) has found the proportion of frequent drug users who reported noticing a 'new drug' increased from 9% in 2008 to 27% in 2012 (Wilkins, et al., 2012c). The proportion of frequent drug users who had used a drug 'for the first time' increased from 24% in 2009 to 34% in 2012 (Wilkins, et al., 2012c). NZ-ADUM found the proportion of detainees who had used synthetic cannabis for the first time increased dramatically from 0% in 2010 to 28% in 2011, before declining to 9% in 2012, following greater controls brought about by the Temporary Drug Class Notices (TDCN) (Wilkins, et al., 2012a).

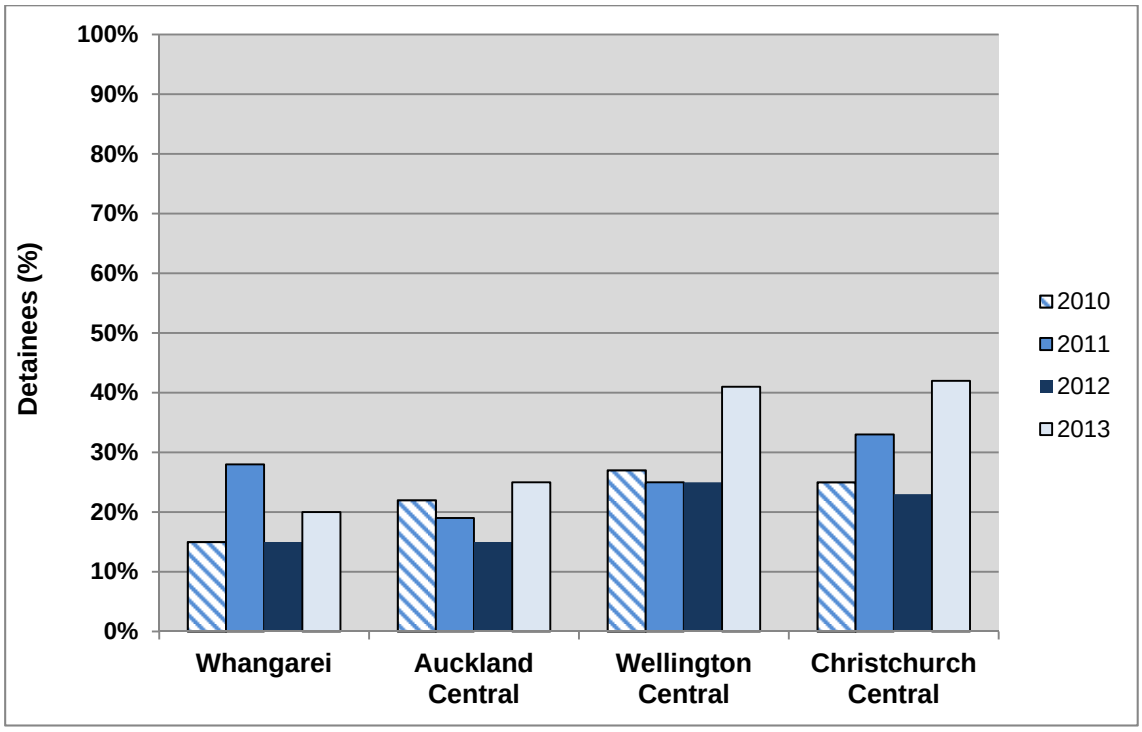
Drug types used for the first time in 2012

Nineteen percent of the detainees had tried a drug for the first time in the previous 12 months in 2013. The proportion of detainees who had tried a drug for the first time increased from 23% in 2010 to 33% in 2013 ($p<0.0001$). A sharp rise in the proportion of

detainees who used a drug for the first time occurred from 2012 to 2013 (up from 19% to 33%, p<0.0001). The proportion of detainees in Auckland Central who had tried a drug for the first time increased from 15% in 2012 to 25% in 2013 (p=0.0218) (Figure 9.1). Detainees in Christchurch Central were also more likely to have tried a drug for the first time from 2010 to 2013 (up from 25% to 42%, p=0.0002). Similarly, the proportion of detainees in Wellington Central who tried a drug for the first time increased from 27% in 2010 to 41% in 2013, and this increase was close to being statistically significant (p=0.0881).

In 2013, detainees in Christchurch Central were more likely to have tried a drug for the first time than those in Auckland Central (42% vs. 25%, p=0.0004) and Whangarei (42% vs. 20%, p=0.0002). Wellington Central detainees were also more likely to have tried a drug for the first time than those in Auckland Central (41% vs. 25%, p=0.0139) and Whangarei (41% vs. 20%, p=0.0026).

Figure 9.1: Proportion of police detainees who had tried a drug for the first time in the past 12 months by location, 2010-2013



The drug types which the detainees had most commonly used for the first time in 2013 were synthetic cannabis (e.g. Kronic, K2) (46%), methamphetamine (11%), ecstasy (7%), LSD (6%), magic mushrooms (psilocybin) (5%), amphetamine (4%), cocaine (4%), benzodiazepines (4%) and GHB (4%) (Table 9.1). A small proportion of detainees reported using other NPS such as salvia divinorum (3%) and non-BZP party pills (2%) for the first time in 2013. Two detainees (1%) reported using 25i-NBOMe for the first time in the previous 12 months in 2013.

Table 9.1: Drug types tried for the first time in the previous 12 months by location (of those detainees who had tried a drug for the first time), 2010-2013

	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All sites			
	2010 (n=17)	2011 (n=42)	2012 (n=22)	2013 (n=30)	2010 (n=63)	2011 (n=59)	2012 (n=35)	2013 (n=73)	2010 (n=41)	2011 (n=42)	2012 (n=25)	2013 (n=42)	2010 (n=65)	2011 (n=61)	2012 (n=67)	2013 (n=116)	2010 (n=186)	2011 (n=209)	2012 (n=150)	2013 (n=269)
Synthetic cannabimimetics (%)	0	10	5	67	0	20	6	32	0	10	12	26	0	49	10	63	0	28	9	46
Methamphetamine (%)	35	12	5	0	17	17	20	14	20	5	12	19	18	5	13	7	20	9	14	11
Ecstasy (%)	12	26	27	0	19	20	14	12	27	36	4	7	28	13	16	6	23	21	14	7
LSD (%)	0	5	5	10	2	3	3	5	10	7	8	5	8	10	15	5	5	7	9	6
Magic Mushrooms (psilocybin) (%)	12	19	23	7	8	8	14	7	7	7	8	5	11	15	7	3	9	12	11	5
Cocaine (%)	0	5	0	0	3	8	11	4	7	5	4	5	5	0	4	4	4	4	6	4
GHB/GBL (%)	0	0	0	0	3	3	3	5	0	0	0	10	0	2	0	0	1	2	1	4
Benzodiazepines (%)	0	2	9	0	10	0	0	5	0	5	8	5	6	7	3	3	5	4	4	4
Amphetamine (%)	6	5	5	0	3	5	0	3	0	7	20	10	3	3	12	3	3	5	10	4
Ketamine (%)	0	2	0	0	13	2	0	1	0	5	12	7	2	0	0	1	4	2	3	3
Salvia Divinorum (%)	1	5	9	0	0	0	0	1	1	2	0	7	0	2	1	3	2	1	2	3
Morphine (%)	6	7	5	0	2	0	6	1	0	2	0	2	3	3	6	3	2	3	4	2
Methylphenidate (Ritalin) (%)	6	0	5	7	3	0	0	3	0	2	0	0	0	5	4	2	2	2	2	2

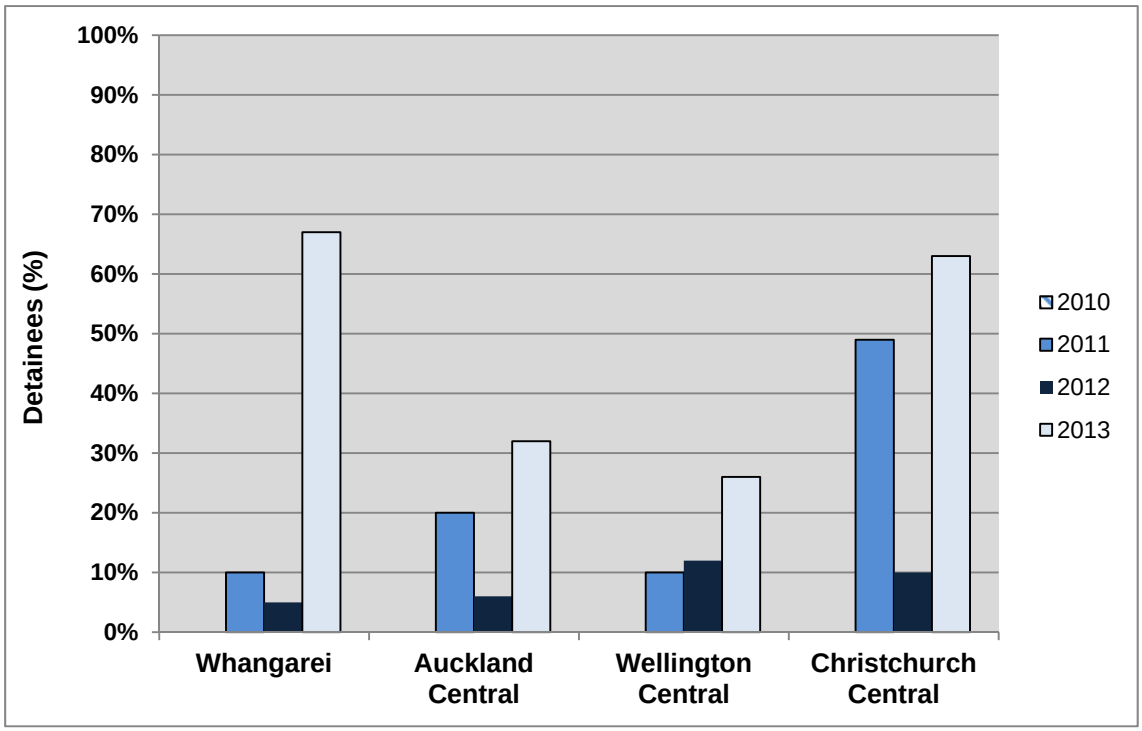
Non-BZP party pills (dimethylamylamine) (%)	0	2	0	7	1	3	3	3	1	2	4	0	1	2	1	1	2	2	2	2
Methadone (%)	0	2	0	0	0	2	0	3	2	0	0	5	0	0	1	0	1	1	1	2
Mescaline/Cactus (%)	0	0	0	0	0	0	3	3	0	0	8	2	0	0	1	1	0	0	3	2
Street BZP (%)	0	0	0	0	5	0	0	0	0	2	0	0	14	18	6	3	6	8	2	1
Cannabis (%)	0	2	0	3	5	12	14	3	7	2	0	0	11	3	5	1	7	5	5	1
Tobacco (%)	12	0	0	0	2	2	6	0	5	2	0	2	0	2	0	0	3	2	2	1
Crystal Methamphetamine (%)	0	2	0	0	0	0	0	0	0	0	4	0	0	2	0	1	0	1	1	<1
Codeine (%)	0	5	0	0	0	0	3	1	0	0	0	0	0	0	1	0	0	1	1	<1
DMT (dimethyltryptamine) (%)	1	5	0	0	1	0	6	1	1	0	0	0	0	0	1	0	2	1	2	<1
Amyl nitrate (%)	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	0	<1	0	<1
Heroin (%)	0	2	0	0	3	0	3	5	12	0	0	0	3	0	1	0	5	<1	1	1
Oxycodone (%)	0	0	0	<1	0	0	0	0	0	2	0	0	2	0	4	0	1	<1	2	<1
Tramadol (%)	0	0	0	3	0	0	0	1	0	2	0	0	2	0	3	0	1	<1	1	1
Zopiclone (%)	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	<1	0	0
Dexamphetamine (%)	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	<1	0	0

Rinse (%)	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	<1	0	0
Homebake morphine/heroin (%)	0	0	5	0	0	0	0	0	0	0	0	0	2	0	1	0	1	0	1	0
MDA (%)	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	1	0
Nitrous oxide (%)	0	0	0	0	0	0	3	0	0	0	0	0	0	0	1	0	0	0	1	0
Poppies (%)	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
MDPV (%)	0	0	0	0	0	0	3	0	0	0	4	0	0	0	0	0	0	0	2	0
Duromine (%)	0	0	5	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	2	0
Solvents (%)	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Methylone (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0
Dimethoxybro amphetaimne (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	<1
25i-NBOMe(%)	0	0	0	0	0	0	0	1	0	0	0	5	0	0	0	0	0	0	0	1
Mephedrone (%)	0	0	0	0	0	2	0	0	1	2	4	0	0	0	0	0	1	1	1	0
2C drugs (e.g. 2CE, 2CB) (%)	1	0	5	0	1	0	6	0	1	7	12	0	0	0	1	0	2	1	6	0
Alcohol (%)	0	0	0	0	2	3	0	0	0	0	0	0	2	2	1	0	1	2	1	0
Antidepressants (%)	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0

The proportion of detainees who had used synthetic cannabis for the first time had previously increased dramatically from 0% in 2010 to 28% in 2011 (Figure 9.2). The first time use of synthetic cannabis then declined substantially from 28% in 2011 to 9% in 2012 ($p<0.0001$), before increasing again to 46% in 2013 ($p<0.0001$). Conversely, the proportion of detainees who had used natural plant cannabis for the first time declined from 7% in 2010 to 1% in 2013 ($p=0.0237$).

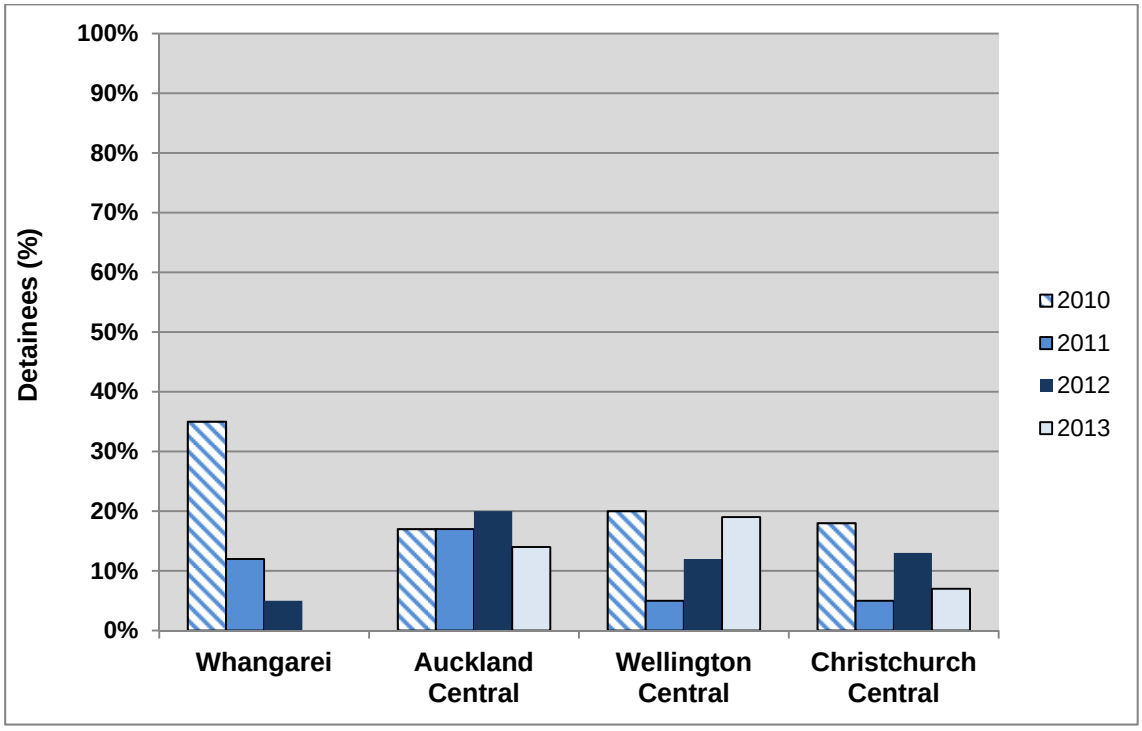
In 2013, Christchurch Central detainees were more likely to have used synthetic cannabis for the first time in the previous year than those in Auckland Central (63% vs. 32%, $p<0.0001$) and Wellington Central (63% vs. 26%, $p=0.0002$). Whangarei detainees were also more likely to have tried synthetic cannabis for the first time compared to detainees in Auckland Central (67% vs. 32%, $p=0.0084$) and Wellington Central (67% vs. 26%, $p=0.0055$).

Figure 9.2: Proportion of police detainees who had tried synthetic cannabinoids for the first time in the past 12 months by location (of those who had tried a drug for the first time), 2010-2013



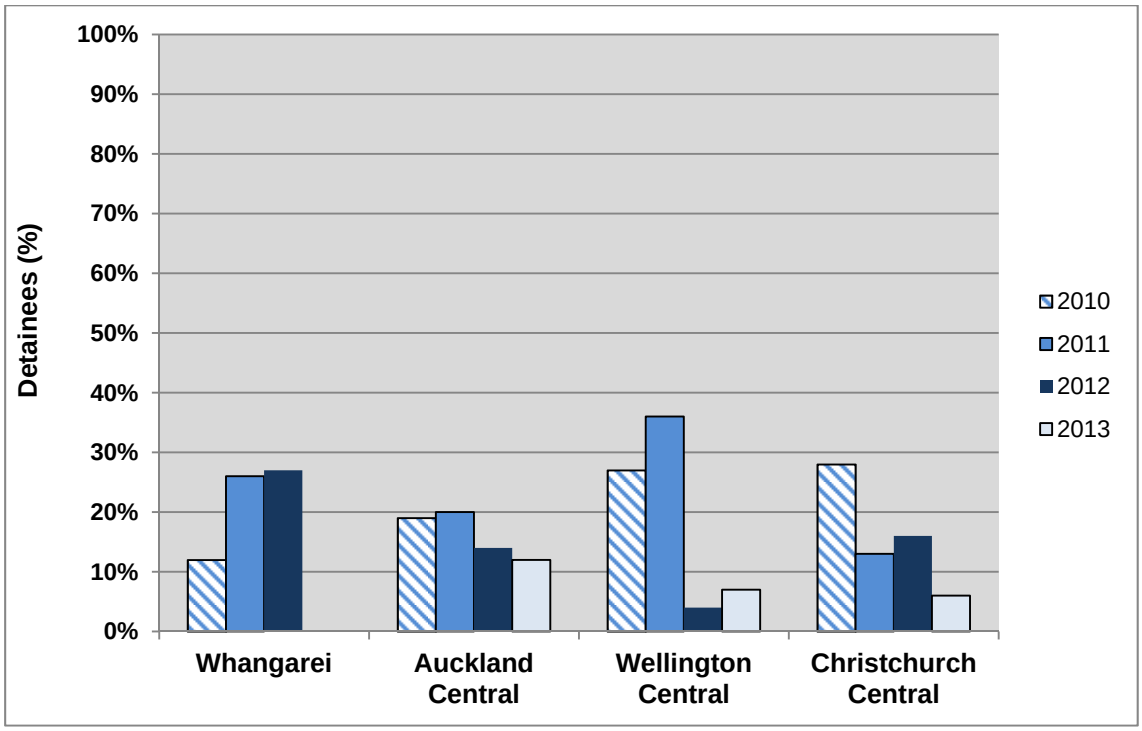
There was a decline in the proportion of detainees who had tried methamphetamine for the first time in the previous 12 months from 2010 to 2013 (down from 20% to 11%, p=0.0402). The decrease in the proportion of detainees who used methamphetamine for the first time occurred in Christchurch Central (down from 18% in 2010 to 7% in 2013, 0.0932), and Whangarei (down from 35% in 2010 to 0% in 2013) (Figure 9.3).

Figure 9.3: Proportion of police detainees who had tried methamphetamine for the first time in the past 12 months by location (of those who had tried a drug for the first time), 2010-2013



A lower proportion of detainees had tried ecstasy for the first time from 2010 to 2013 (down from 23% to 7%, p<0.0001). The decline in the proportion of detainees who had tried ecstasy for the first time occurred in Whangarei (down from 12% in 2010 to 0% in 2013) and Wellington Central (down from 27% in 2010 to 7% in 2013, p=0.1023) (Figure 9.4).

Figure 9.4: Proportion of police detainees who had tried ecstasy for the first time in the past 12 months by location (of those who had tried a drug for the first time), 2010-2013

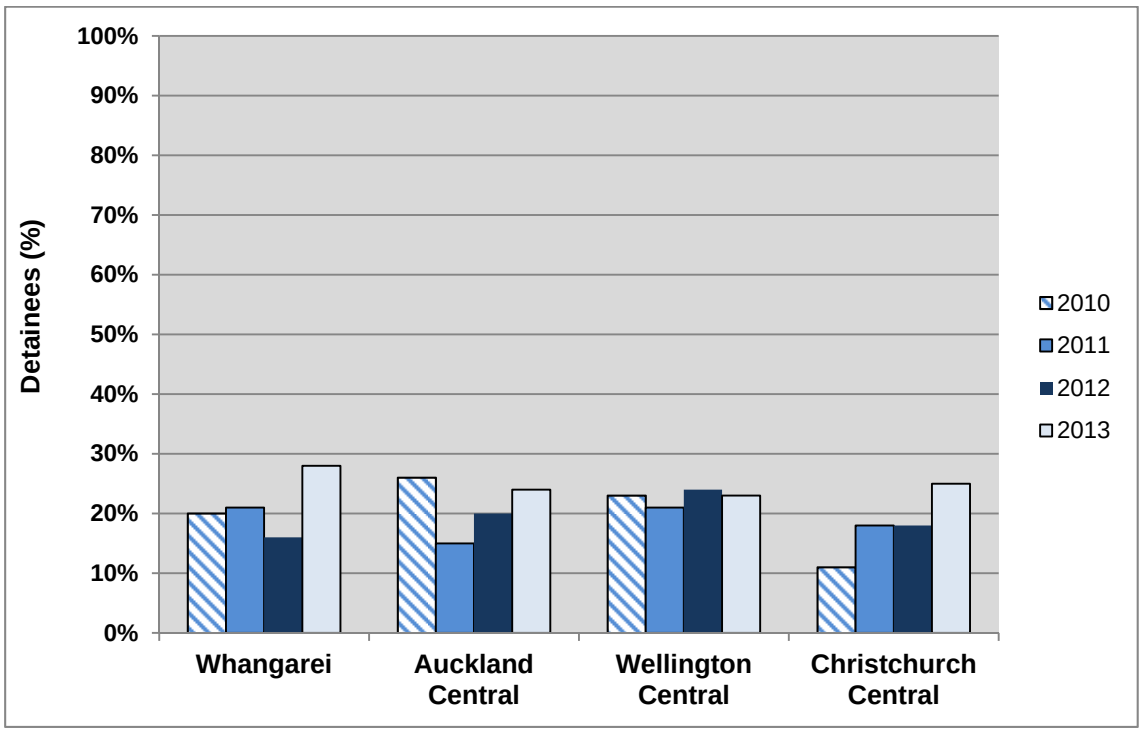


The proportion of detainees who had tried 'street BZP' for the first time declined from 6% in 2010 to 1% in 2013 (p=0.0417).

New drugs noticed

The detainees were also asked whether they had heard of any 'new drugs' being used in 2013. There was an increase in the proportion of detainees who had heard of a new drug(s) being used from 2011 to 2013 (up from 18% to 25%, p<0.0001), and from 2012 to 2013 (up from 20% to 25%, p=0.0016). Detainees in Auckland Central were more likely to have heard of new drugs being used from 2011 to 2013 (up from 15% to 24%, p=0.0194) (Figure 9.5). Detainees in Christchurch Central were more likely to have heard of new drugs being used from 2010 to 2013 (up from 11% to 25%, p<0.0001). Detainees in Whangarei were more likely to have heard of new drugs being used from 2012 to 2013 (up from 16% to 28%), and this increase was close to being statistically significant (p=0.0607).

Figure 9.5: Proportion of police detainees who had heard of a new drug being used by location, 2010-2013



The 'new drug types' which the detainees had most commonly heard of being used in 2013 were synthetic cannabis (36%), mephedrone (7%), salvia divinorum (7%), GHB (5%), MDPV (5%), other synthetic 'smokables' (3%) and LSD (3%) (Table 9.2). A higher proportion of detainees had heard of synthetic cannabis being used from 2011 to 2013 (up from 15% to 36%) and from 2012 to 2013 (up from 7% to 36%).

Table 9.2: New drug types which the police detainees had heard were being used by location 2010-2013

	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All sites			
	2010 (n=22)	2011 (n=30)	2012 (n=23)	2013 (n=42)	2010 (n=73)	2011 (n=45)	2012 (n=48)	2013 (n=69)	2010 (n=31)	2011 (n=31)	2012 (n=24)	2013 (n=23)	2010 (n=28)	2011 (n=33)	2012 (n=50)	2013 (n=68)	2010 (n=154)	2011 (n=139)	2012 (n=145)	2013 (n=200)
Synthetic cannabimimetics (%)	0	23	4	49	0	16	6	30	0	16	4	22	4	9	12	43	1	15	7	36
Salvia Divinorum (%)	0	0	9	2	3	2	0	0	6	0	4	26	0	0	0	6	3	1	2	7
Mephedrone (%)	0	3	0	0	12	9	0	9	10	3	0	9	0	0	4	7	8	4	1	7
GHB (%)	5	13	9	2	11	16	9	10	13	0	9	9	0	0	4	0	8	7	7	5
MDPV (%)	0	0	0	7	0	0	13	7	0	0	0	4	0	0	8	1	0	0	7	5
Ecstasy (%)	5	0	35	5	5	7	10	3	10	10	17	4	0	6	12	3	5	6	15	3
Methamphetamine (%)	59	17	4	5	12	7	6	3	16	0	4	0	14	12	14	3	20	9	8	3
LSD (%)	5	3	0	5	4	7	2	1	3	10	0	0	4	6	2	6	4	7	1	3
Synthetic smokables (%)	0	0	0	0	0	0	0	3	0	0	0	4	0	0	0	3	0	0	0	3
Inhalants (%)	0	0	0	7	0	0	0	4	0	0	0	0	0	0	0	1	0	0	0	3
Non-BZP party pills (dimethylamylamine) (%)	0	0	0	0	0	0	6	1	3	0	0	0	7	0	6	4	2	0	4	2
Drug mixture (%)	0	0	9	2	0	0	2	0	0	0	0	4	0	0	6	3	0	0	4	2
Cocaine (%)	0	10	0	0	1	4	2	4	3	3	0	0	7	3	2	3	3	5	1	2
Ketamine (%)	0	0	0	0	14	2	2	3	6	0	0	4	4	6	0	0	8	3	1	2
Crystal Methamphetamine (%)	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	4	0	0	1	2
Cannabis (%)	5	0	4	0	4	4	2	0	3	10	4	0	0	0	2	1	3	3	3	<1

Amphetamine (%)	0	0	4	0	1	0	2	1	0	3	0	0	4	3	6	0	1	2	3	<1
Street BZP (%)	5	0	9	0	1	0	0	0	0	0	0	0	7	3	8	3	3	1	3	1
Datura (%)	0	0	0	0	0	0	0	0	0	0	9	0	0	0	2	1	0	0	3	<1
Benzodiazepines (%)	0	3	0	0	0	2	4	1	0	0	0	0	0	0	0	0	0	1	2	<1
Methylphenidate (Ritalin) (%)	0	0	4	0	0	0	2	0	3	3	0	0	4	0	2	1	1	1	2	<1
Other pharmaceuticals (%)	0	0	9	2	0	0	2	0	0	0	0	0	0	0	0	1	0	0	2	1
Methadone (%)	0	0	0	0	1	2	0	1	0	0	4	4	0	0	0	0	1	1	1	1
Magic mushrooms (psilocybin) (%)	5	0	9	0	0	0	0	3	3	0	0	0	0	3	0	0	1	1	1	1
Amyl nitrate (%)	0	0	0	2	0	0	0	0	0	0	0	0	11	0	2	0	2	0	1	1
Mescaline/ Cactus (%)	0	0	0	0	0	0	2	1	0	0	0	4	0	0	2	0	0	0	1	1
Date rape drugs (%)	0	0	4	4	0	0	2	1	0	0	0	0	0	0	0	0	0	0	1	1
Heroin (%)	0	7	0	0	3	0	0	3	3	0	0	0	4	0	0	1	3	1	0	1
Oxycodone (%)	0	0	0	1	0	0	0	0	0	0	0	0	0	3	0	3	0	1	0	1
Benzo Fury/ 6-APB (%)	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	<1
25i-NBOMe (%)	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	3	0	0	0	1
Research chemicals (%)	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Sex drugs (%)	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Dime (%)	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Yerba (%)	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	1
2C drugs (e.g. 2CB, 2CE) (%)	0	0	0	0	4	2	2	0	0	13	26	0	7	3	2	0	3	4	7	0

Solvents (%)	0	0	4	0	0	0	0	0	0	0	4	0	0	0	2	0	0	0	2	0
Other hallucinogen (%)	0	0	0	0	0	0	0	0	0	0	4	0	0	0	2	0	0	0	2	0
Morphine (%)	0	3	4	0	0	0	0	0	0	0	0	0	0	3	0	0	0	2	1	0
Homebake morphine/heroin (%)	0	0	0	0	0	0	0	0	0	0	0	0	4	3	2	0	1	1	1	0
PCP (%)	0	0	0	0	0	4	2	0	3	0	0	0	0	0	0	0	1	1	1	0
Antidepressants	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0
Viagra (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0
Dexamphetamine (%)	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	1	0
4-MEC (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0
Pseudoephedrine (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0
Bromo-Dragon Fly (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	1	0
Methoxetamine (%)	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0
DMT (dimethyltryptamine) (%)	0	3	0	0	0	2	0	0	0	3	0	0	0	0	0	0	0	2	0	0
Nitrous oxide (%)	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Codeine (%)	0	0	0	0	1	2	0	0	3	0	0	0	0	0	0	0	1	1	0	0
Rinse (%)	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	1	0	0
Opium poppies (%)	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0

Summary

- The proportion of detainees who had tried a drug for the first time increased from 23% in 2010 to 33% in 2013
- A sharp rise in the proportion of detainees who had tried a drug for the first time occurred from 2012 to 2013 (up from 19% to 33%)
- The increase in the proportion of detainees who had tried a drug for the first time from 2012 to 2013 occurred in Auckland Central, Christchurch Central and Wellington Central
- The drug types which the detainees had most commonly used for the first time in 2013 were synthetic cannabis (46%), methamphetamine (11%), 'ecstasy' (7%), LSD (6%), 'magic' mushrooms (psilocybin) (5%), cocaine (4%), GHB/GBL (4%) and benzodiazepines (4%)
- Only small numbers of detainees reported using salvia divinorum (3%), non-BZP party pills (2%) and 25i-NBOMe (1%) for the first time in 2013
- The proportion of detainees who had tried synthetic cannabis for the first time increased from 0% in 2010 to 28% in 2011, declined to 9% in 2012, and then increased to 46% in 2013
- The proportion of detainees who had tried methamphetamine for the first time declined from 20% in 2010 to 11% in 2013
- The proportion of detainees in Christchurch Central who had tried methamphetamine for the first time declined from 18% in 2010 to 7% in 2013
- The proportion of detainees who had tried ecstasy for the first time declined from 23% in 2010 to 7% in 2013
- The proportion of detainees who noticed a new drug being used increased from 18% in 2011 to 25% in 2013
- Detainees in Auckland Central and Christchurch Central were more likely to have heard of a new drug being used in 2013 compared to previous years
- The new drug types which the detainees had most commonly noticed being used in 2013 were synthetic cannabis (36%), mephedrone (7%), salvia divinorum (7%), GHB (5%), and MDPV (5%)

Chapter 10 – Urine test results for drug use

Introduction

The original United States ADAM research methodology included the capacity to verify detainees' self-reported information on recent drug use with biological testing for the presence of drug use in urine samples. Subsequent comparisons of the self-reported data on drug use and urine test results suggests there is a fairly high level truthfulness among the interviewed detainees, although this can vary according to the drug type in question and the level of legal penalties and social stigma attached to it (see Office of National Drug Control Policy, 2009). For example, in the United States ADAM programme, 82% of those testing positive for cannabis use had also self-reported use, 55% of those testing positive for methamphetamine use had self-reported use, and 48% of those testing positive for heroin use had self-reported use (Office of National Drug Control Policy, 2009).

The validity of the comparison between self-reported data and the corresponding urine test is also affected by the capacity of the test to detect different drug types, and the ability of users to correctly recall and identify the drug types they have used. Some drug types, such as cannabis, can stay in a user's system for many weeks, while others, such as methamphetamine, may only be detectable up to a few days after use. A drug user may honestly believe they have consumed one drug type, for example MDMA in ecstasy, but may have actually been sold a tablet containing a range of other substitute compounds which mimic the effects of MDMA, such as TFMPP, BZP, mephedrone and ketamine.

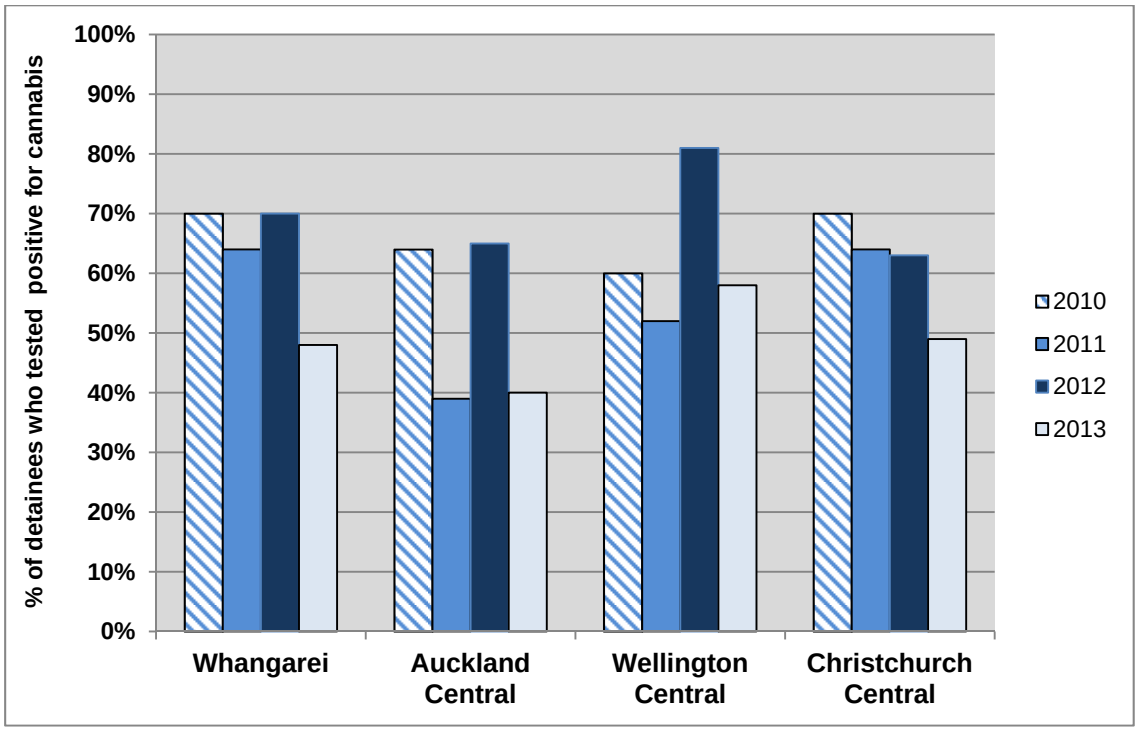
Many of the compounds found in synthetic cannabis products are not detectable by routine drug testing, and legal high users have indicated they choose to use synthetic cannabis, instead of natural plant cannabis, specifically to avoid a positive test (Perrone, et al., 2013). Drug testing may be required in particular industries, such as forestry, but also as a requirement for complying with certain criminal justice orders, such as parole and home detention. The ESR drug testing completed for NZ-ADUM is able to detect cannabis, methamphetamine, amphetamine, cocaine, morphine, methadone, codeine and BZP. A total of 209 detainees provided urine samples for testing as part of the 2013 NZ-ADUM

survey wave. These samples were collected from the four sites in the same distribution as previous years to facilitate consistent year-to-year comparisons.

Urine test results for drug use

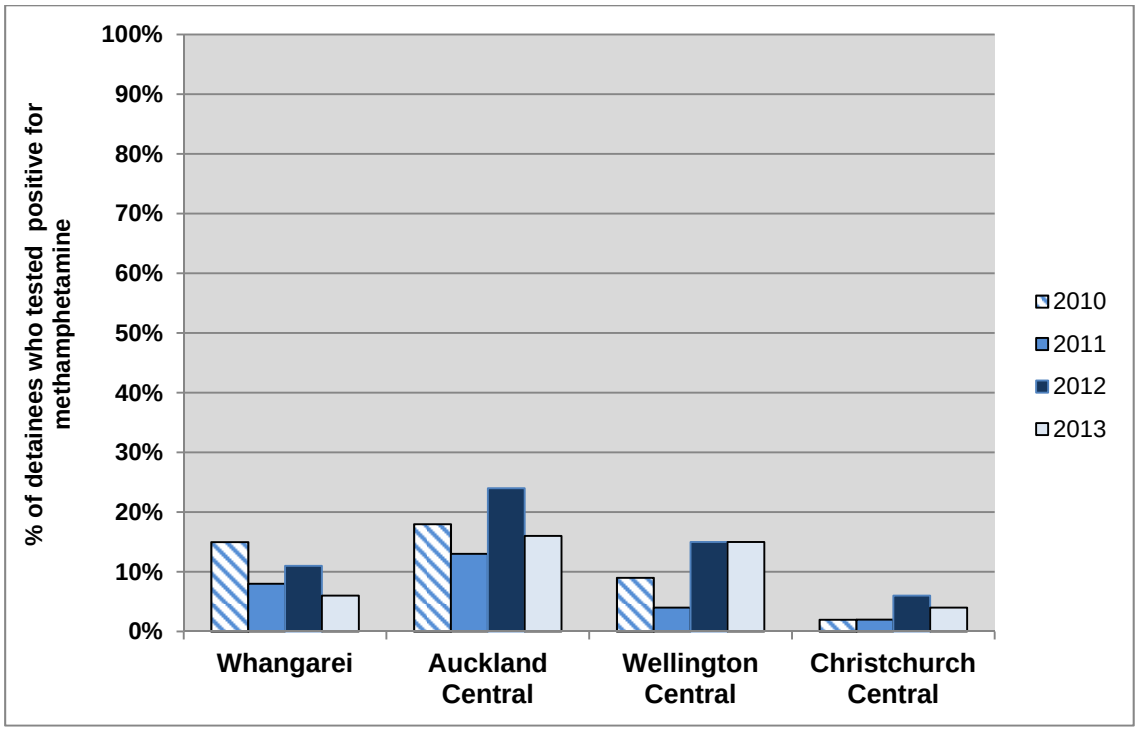
In 2013, 50% of the detainees who provided a urine sample tested positive for cannabis use, 12% tested positive for amphetamine, 12% tested positive for methamphetamine, and 1% tested positive for morphine (Table 10.1). The proportion of the detainees testing positive for cannabis use decreased from 65% in 2010 to 50% in 2013 (p=0.0059) and from 68% in 2012 to 50% in 2013 (p=0.0006). The detainees in Auckland Central were less likely to test positive for cannabis use from 2010 to 2013 (down from 64% to 40%, p=0.0225) and from 2012 to 2013 (65% to 40%, p=0.0181) (Figure 10.1). Christchurch Central detainees were also less likely to test positive for cannabis from 2010 to 2013 (down from 70% to 49%) and this decline was close to being statistically significant (p=0.1221).

Figure 10.1: Proportion of detainees who tested positive for cannabis at the time of interview by location (of the 209 detainees tested), 2010-2013



There was no statistically significant change in the proportion of detainees who tested positive for methamphetamine from 2010 to 2013 (11% to 12%, p=0.9947). There were insufficient numbers of positive tests for methamphetamine use to make comparisons between the sites over the four years (Figure 10.2).

Figure 10.2: Proportion of detainees who tested positive for methamphetamine at the time of interview by location (of the 209 detainees tested), 2010-2013



There was no statistically significant change in the proportion of detainees who tested positive for amphetamine use from 2010 to 2013 (8% to 12%, p=0.4914). A lower proportion of detainees tested positive for morphine use from 2011 to 2013 (down from 6% to 1%), and this decline was close to being statistically significant (p=0.1055).

Table 10.1: Proportion of police detainees who tested positive for drug use at the time of interview (of the 209 detainees tested), 2010-2013

Positive urine test for drug use (% detainees)	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All sites			
	2010 (n=20)	2011 (n=25)	2012 (n=37)	2013 (n=31)	2010 (n=72)	2011 (n=71)	2012 (n=66)	2013 (n=68	2010 (n=53)	2011 (n=54)	2012 (n=27)	2013 (n=53)	2010 (n=56)	2011 (n=50)	2012 (n=78)	2013 (n=57)	2010 (n=201)	2011 (n=200)	2012 (n=208)	2013 (n=209)
Cannabis	70	64	70	48	64	39	65	40	60	52	81	58	70	64	63	49	65	53	68	50
Amphetamine	10	8	11	6	13	13	26	18	8	4	15	15	2	2	8	4	8	6	16	12
Methamphetamine	15	8	11	6	18	13	24	16	9	4	15	15	2	2	6	4	11	7	15	12
Benzodiazepines	0	0	3	0	1	1	3	4	0	2	0	0	5	8	3	2	2	3	2	2
Codeine	0	8	5	3	4	1	2	0	0	2	0	0	0	4	3	4	1	3	2	1
Morphine	0	8	3	0	3	3	0	1	6	2	0	0	4	10	1	4	3	6	1	1
Methadone	0	0	0	0	3	0	2	0	4	2	4	0	2	2	4	0	2	1	2	0
Benzylpiperazine	0	0	0	0	0	3	0	0	0	0	0	0	2	4	0	0	1	2	0	0

Corroboration of self-reported drug use with urinalysis

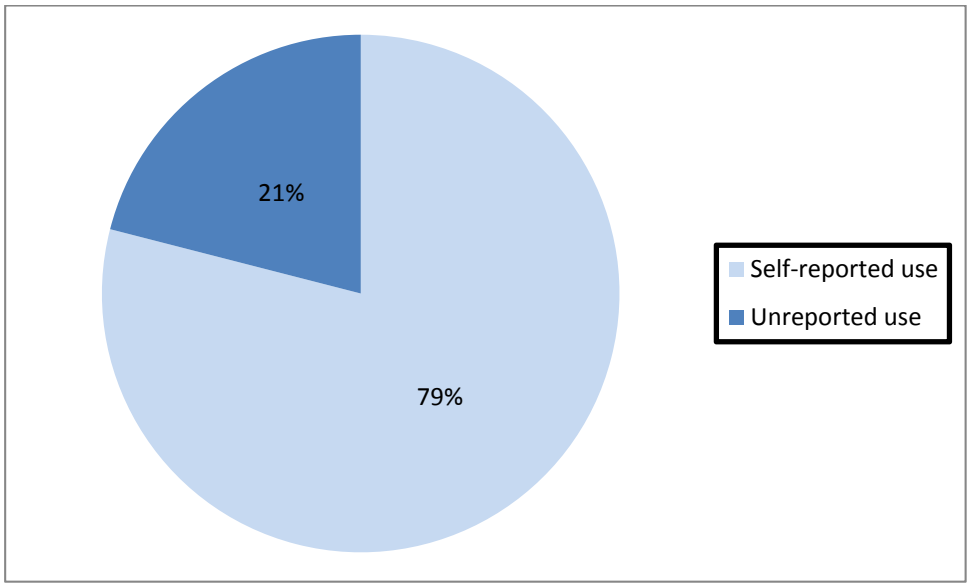
Cannabis use

Table 10.2 compares the police detainees' urine test results for the presence of cannabis with their self-reporting of cannabis use in the past month from the face-to-face interviews. In 2013, 79% of those detainees who tested positive for cannabis (n=101) had also self-reported using cannabis in the past month (Figure 10.3). Interestingly, 32% of the detainees who did not test positive for cannabis self-reported use in the previous month.

Table 10.2: Comparison of test results for the presence of cannabis use with self-reported cannabis use in the past month, 2010-2013

	Self-reported cannabis use in past month (%)							
	2010		2011		2012		2013	
Tested positive for cannabis (%)	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**
No	89	11	71	29	75	25	68	32
Yes	6	94	11	89	16	84	21	79

Figure 10.3: Proportion of police detainees who tested positive for cannabis use and who also self-reported cannabis use in the previous month, 2013



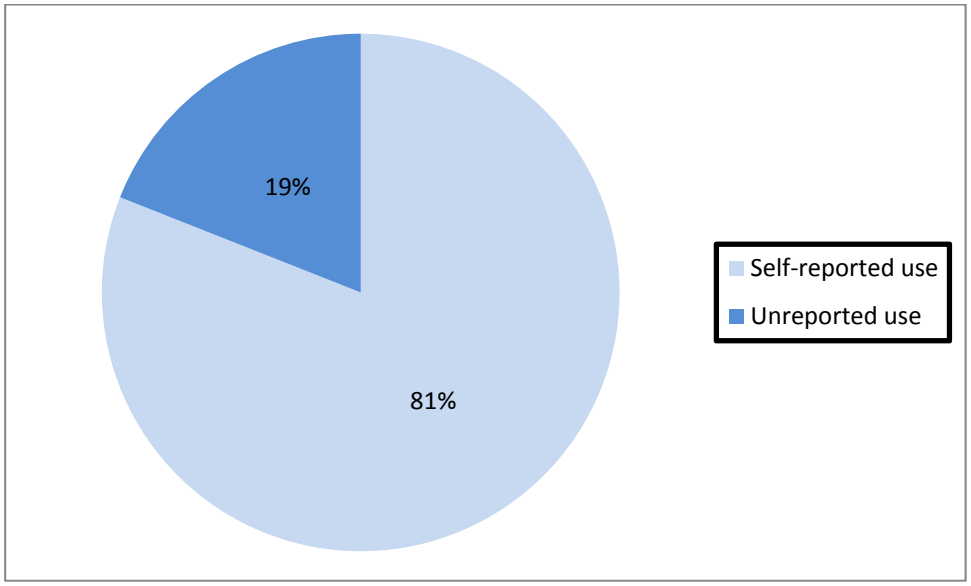
Methamphetamine use

Table 10.3 compares the police detainees' urine test results for the presence of methamphetamine with levels of self-reported methamphetamine use in the previous month. In 2013, 81% percent of those detainees who tested positive for methamphetamine (n=23) had also self-reported using methamphetamine in the previous month (Figure 10.4). As only 23 of the detainees provided a urine sample which tested positive for the presence of methamphetamine, the comparison should be treated with some caution. Thirteen percent of the detainees who did not test positive for methamphetamine self-reported use in the past month in 2013.

Table 10.3: Comparison of test results for the presence of methamphetamine use with self-reported methamphetamine use in the past month, 2010-2013

	Self-reported methamphetamine use in past month (%)							
	2010		**2011**		**2012**		**2013**	
Tested positive for methamphetamine (%)	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**
No	89	11	89	11	89	11	87	13
Yes	18	82	42	58	24	76	19	81

Figure 10.4: Proportion of police detainees who tested positive for methamphetamine use and who also self-reported methamphetamine use in the past month, 2013



Opioid use

Table 10.4 compares the police detainees' test results for the presence of opioids with levels of self-reported opioid use in the previous month. The self-reported opioid category includes the self-reporting of morphine and methadone in the previous 30 days. Only three of the detainees provided a urine sample which tested positive for the presence of opioids in 2013, and this low number does not allow statistical comparison with levels of self-reported use (Figure 10.5). Only one of the three detainees who tested positive for opioids also self-reported use in 2013.

Table 10.4: Comparison of test results for the presence of opioid use with self-reported opioid use in the past month, 2010 - 2013

	Self-reported opioid use in past month (%)							
	2010		**2011**		**2012**		**2013**	
Tested positive for opioid use (%)	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**
No	97	3	98	2	98	2	96	4
Yes	55	45	58	42	67	33	67	33

Summary

- Fifty percent of the police detainees tested positive for cannabis, 12% tested positive for methamphetamine, 12% tested positive for amphetamine and 1% tested positive for morphine in 2013

- The proportion of detainees who tested positive for cannabis use decreased from 65% in 2010 to 50% in 2013, and from 65% in 2012 to 50% in 2013

- Similar decreases in positive tests for cannabis were found in Auckland Central and Christchurch Central detainees from 2010 to 2013

- There was no change in the proportion of detainees who tested positive for methamphetamine from 2010 to 2013 (11% to 12%)

- There was also no change in the proportion of detainees who tested positive for amphetamine from 2010 to 2013 (8% to 12%)

- A lower proportion of detainees tested positive for morphine from 2011 to 2013 (down from 6% to 1%)

- Seventy-nine percent of the detainees who tested positive for cannabis use had also self-reported use of cannabis in the previous month in 2013

- Eighty-one percent of the detainees who tested positive for methamphetamine use had also self-reported use of methamphetamine in the previous month in 2013

- Only a very small number of the detainees tested positive for opioids in 2013 (n=3) and this limits any reliable comparison with rates of self-reported use

Chapter 11 – Offending behavior

Introduction

Arrestees are often found to have high levels of alcohol and drug use, and this substance use can contribute to their offending in a number of ways (see Bennett & Holloway, 2005; Hammersley et al., 1989; Seddon, 2000). Alcohol and drug intoxication can precipitate criminal acts and escalate the seriousness of offending, for example drunkenness may lead to a violent altercation and may intensify the seriousness of the attack. Secondly, withdrawal from substance use may make a person more irritable and hence more likely to strike out. Thirdly, offending may be motivated by the need to obtain money to pay for alcohol and drug use. Finally, in the case of the illegal drugs market, violence may be used to resolve disputes, protect market share and rob participants.

In New Zealand, a strong association has been found among police detainees between levels of spending on methamphetamine and levels of earnings from property crime and drug dealing (Wilkins & Sweetsur, 2008a, 2010b). For example, those detainees who spent $1,000 or more on methamphetamine in the previous month had earned $2,735 from property crime in the previous month (Wilkins & Sweetsur, 2010a). In contrast, those detainees who spent no money on methamphetamine had earned only $368 from property crime over the same period (Wilkins & Sweetsur, 2010a). Further research is required to identify the primary causal factors in these associations, and the influence that developmental factors, such as poor family life and risky adolescent behavior may have on levels of drug use and criminal offending.

Shoplifting in the previous month

Fifteen percent of the police detainees self-reported shoplifting in the previous month in 2013 (Table 11.1). Six percent of the detainees had shoplifted weekly or more often. There was no clear trend in the incidence of shoplifting from 2010 to 2013. The proportion of detainees who had recently shoplifted decreased in Whangarei (down from 16% in 2011 to

9% in 2013, p=0.0562) and Christchurch Central (from 18% in 2010 to 11% in 2013, p=0.0958) (Figure 11.1). In 2013, detainees in Auckland Central were more likely to have shoplifted in the previous month than those in Christchurch Central (20% vs. 11%, p=0.0225) and Whangarei (20% vs. 9%, p=0.0240).

Figure 11.1: Proportion of police detainees who had shoplifted in the previous month by location, 2010–2013

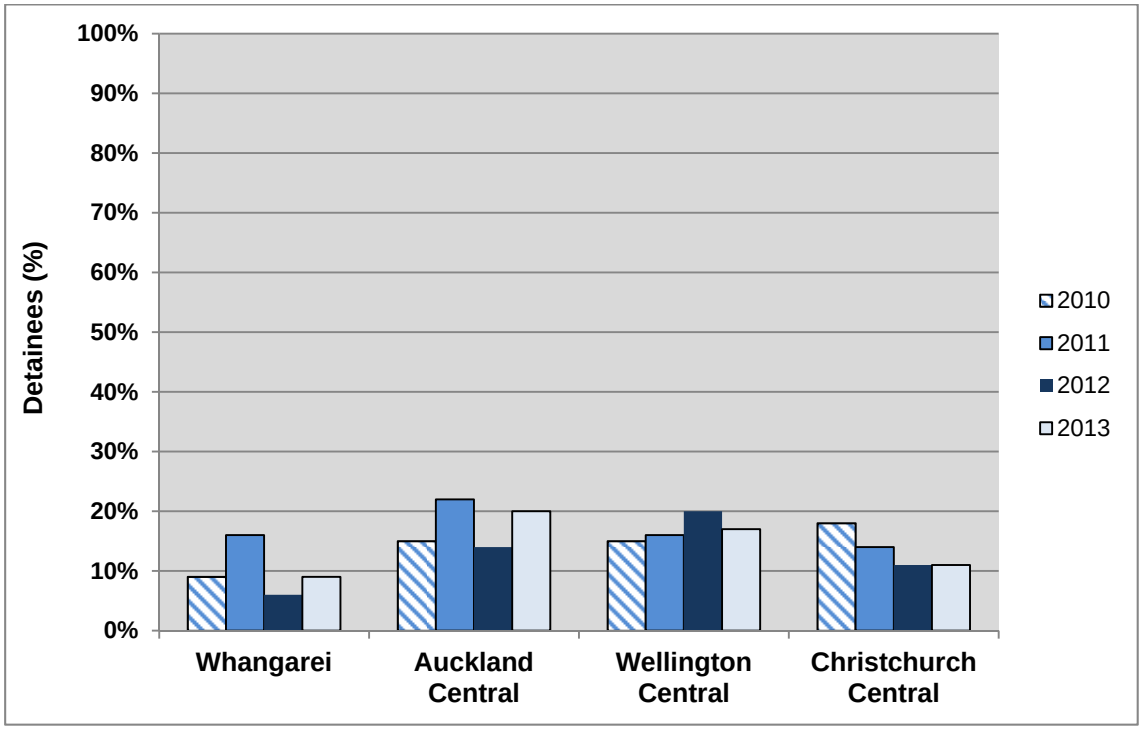


Table 11.1: Frequency police detainees had shoplifted in the previous month by location, 2010-2013

Frequency shoplifted in past month (%)	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All sites			
	2010 (n=110)	2011 (n=144)	2012 (n=143)	2013 (n=)	2010 (n=267)	2011 (n=302)	2012 (n=241)	2013 (n=289)	2010 (n=149)	2011 (n=164)	2012 (n=100)	2013 (n=99)	2010 (n=259)	2011 (n=188)	2012 (n=301)	2013 (n=281)	2010 (n=785)	2011 (n=798)	2012 (n=785)	2013 (n=815)
Never	91	84	94	91	85	78	86	80	85	84	80	83	82	86	89	89	85	82	87	85
1-2 times	5	10	5	5	6	13	7	11	9	5	10	10	11	8	6	8	8	9	7	9
Once a week	1	3	1	2	4	3	3	3	3	2	1	2	2	3	1	1	3	3	2	2
More than once per week (but not daily)	3	2	1	1	3	3	2	2	1	6	7	4	3	2	1	1	3	3	2	2
Daily	1	1	0	1	2	3	2	4	2	2	2	1	3	2	2	1	2	2	2	2

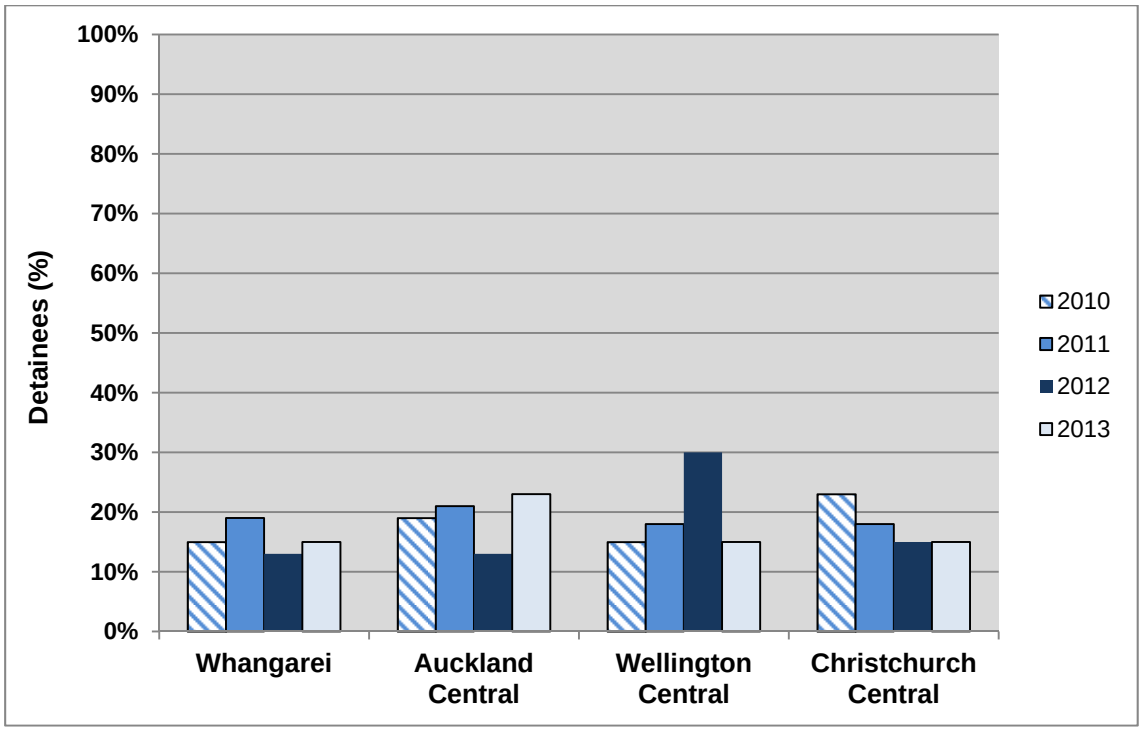
Property crime in the previous month

Eighteen percent of the detainees self-reported they had committed a property crime in the previous month in 2013 (Table 11.2). Six percent had committed a property crime weekly or more often. Overall, there was no statistically significant change in the level of property offending from 2010 to 2013 (19% vs. 18%, p=0.6238). The proportion of Auckland Central detainees who had committed a property offence increased sharply from 13% in 2012 to 23% in 2013 (p=0.0239), although the 2013 figure resembled previous rates of property offending found in 2010 and 2011. The proportion of Wellington Central detainees who had committed a property offence decreased quite sharply from 30% in 2012 to 15% in 2013 (p=0.0656). Again, the 2013 figure resembled the previous incidence reported in 2010 and 2011 (Figure 11.2). A lower proportion of Christchurch Central detainees reported committing a property crime from 2010 to 2013 (down from 23% to 15%), and this decline was close to being statistically significant (p=0.1025). In 2013, Auckland Central detainees were more likely to have committed a property crime in the previous month than those in Christchurch Central (23% vs. 15%, p=0.0846).

Table 11.2: Frequency police detainees had committed a property crime in the previous month by location, 2010-2013

Frequency committed property crime in past month (%)	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All sites			
	2010 (n=110)	2011 (n=145)	2012 (n=142)	2013 (n=144)	2010 (n=267)	2011 (n=297)	2012 (n=239)	2013 (n=289)	2010 (n=149)	2011 (n=164)	2012 (n=100)	2013 (n=99)	2010 (n=259)	2011 (n=188)	2012 (n=302)	2013 (n=280)	2010 (n=785)	2011 (n=794)	2012 (n=784)	2013 (n=812)
Never	85	81	87	85	81	79	87	77	85	82	70	85	77	82	85	85	81	81	83	82
1-2 times	13	17	8	13	12	15	8	14	7	13	19	8	17	13	12	11	13	14	11	12
Once a week	2	2	3	1	3	2	3	4	3	2	2	6	3	3	2	1	3	2	2	3
More than once per week (but not daily)	0	1	1	1	3	1	2	3	2	2	7	1	2	3	2	2	2	2	3	2
Daily	1	0	0	0	2	2	1	2	3	1	2	0	1	0	0	1	2	1	1	1

Figure 11.2: Proportion of police detainees who had committed a property crime in the previous month by location, 2010–2013



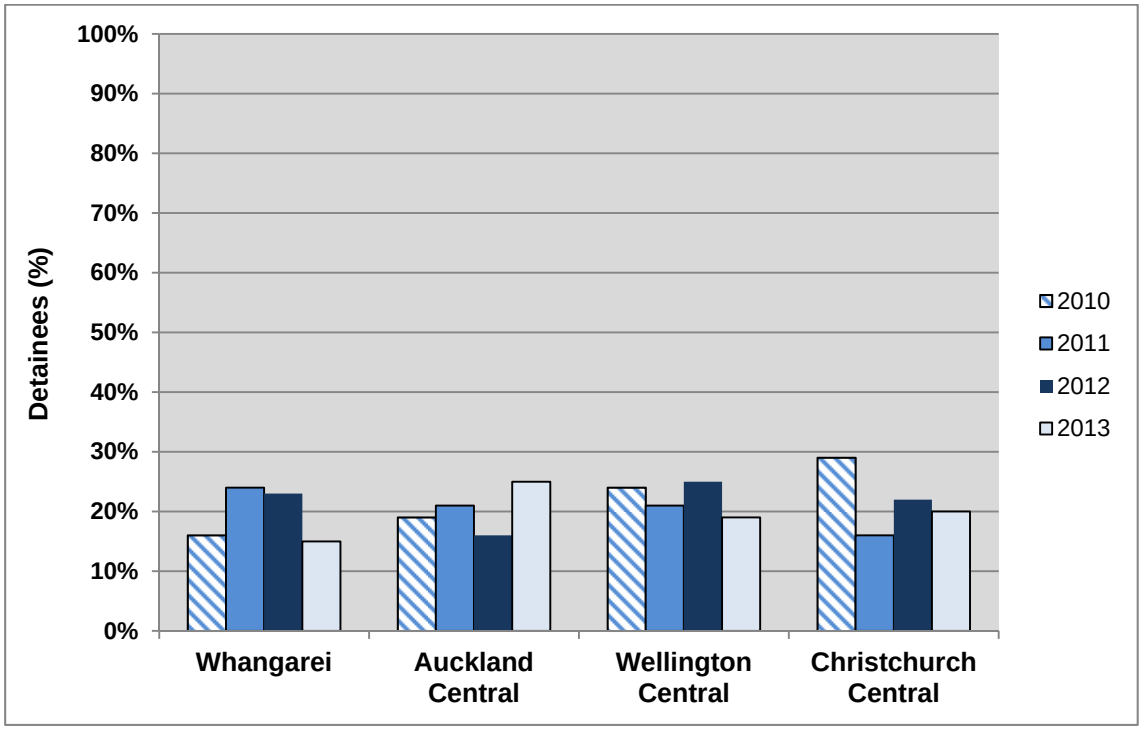
Drug dealing in the previous month

Twenty-one percent of the detainees self-reported selling drugs in the previous month in 2013 (Table 11.3). Fifteen percent had sold drugs weekly or more often. There was no change in the proportion of detainees who had sold drugs in the previous month from 2010 to 2013 (p=0.4968). The proportion of detainees in Christchurch Central who had sold drugs in the previous month decreased from 29% in 2010 to 20% in 2013, and this decline was close to being statistically significant (p=0.0670) (Figure 11.3). In 2013, Auckland Central detainees were more likely to have sold drugs in the previous month than those in Whangarei (25% vs. 15%), and this difference was close to being statistically significant (p=0.0790).

Table 11.3: Frequency police detainees had sold drugs in the previous month by location, 2010-2013

Frequency sold drugs in past month (%)	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All sites			
	2010 (n=109)	2011 (n=145)	2012 (n=142)	2013 (n=144)	2010 (n=267)	2011 (n=301)	2012 (n=240)	2013 (n=289)	2010 (n=149)	2011 (n=162)	2012 (n=100)	2013 (n=99)	2010 (n=259)	2011 (n=188)	2012 (n=302)	2013 (n=281)	2010 (n=784)	2011 (n=798)	2012 (n=785)	2013 (n=815)
Never	84	76	77	85	81	79	84	75	76	79	75	81	71	84	78	80	77	80	79	79
1-2 times	4	8	8	6	4	6	3	7	3	7	8	2	8	6	6	5	5	6	6	5
Once a week	2	2	1	2	2	5	3	4	2	2	3	5	4	1	2	4	2	3	2	4
More than once per week (but not daily)	1	6	6	0	5	4	4	6	4	5	3	5	7	5	8	6	5	5	5	5
Daily	9	9	8	7	8	6	6	7	15	6	11	7	10	4	6	5	10	6	7	6

Figure 11.3: Proportion of the police detainees who had sold drugs in the previous month by location, 2010-2013



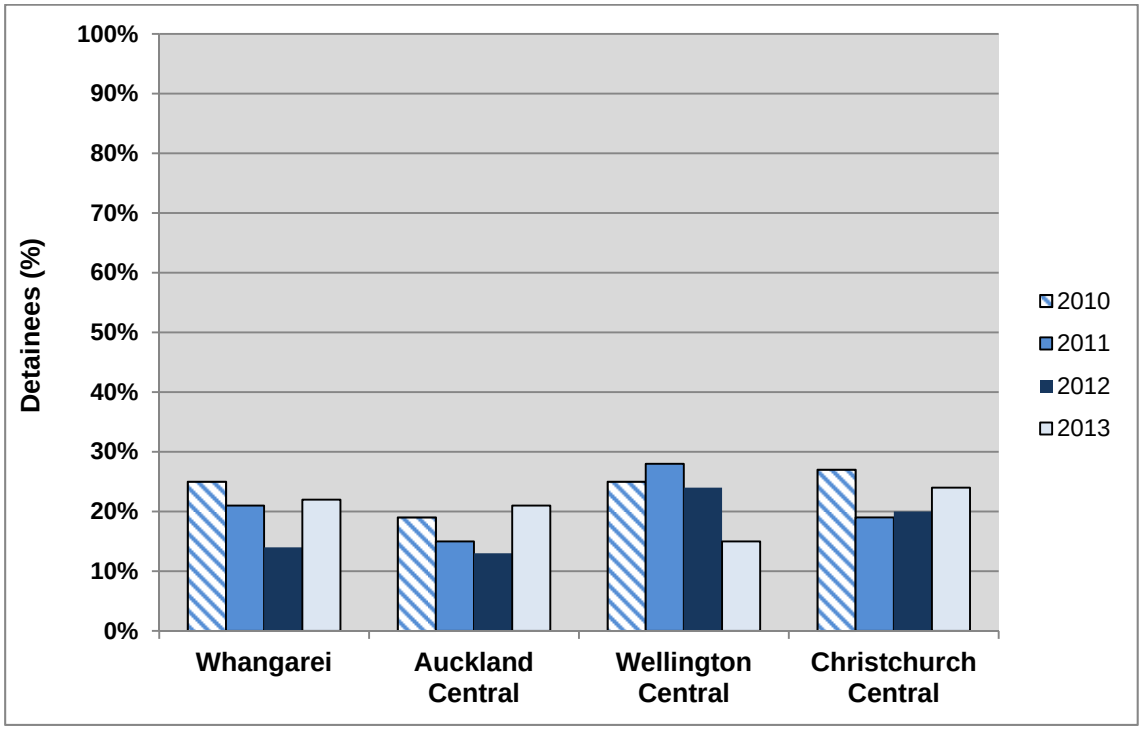
Violent crime in the previous month

Twenty-one percent of the detainees self-reported committing a violent crime in the previous month in 2013 (Table 11.4). Three percent had done so weekly or more often. Overall, the proportion of detainees who had committed a violent crime in the previous month declined from 24% in 2010 to 17% in 2012 (p=0.0152), before increasing again to 21% in 2013 (Figure 11.4). The proportion of Auckland Central detainees who recently committed a violent crime increased quite sharply from 13% in 2012 to 21% in 2013 (p=0.0536). In 2013, there were no statistically significant differences between the sites with respect to the proportion of police detainees who committed a violent crime (p=0.3097).

Table 11.4: Frequency police detainees had committed violent crime in the previous month by location, 2010 - 2013

Frequency committed violent crime in past month (%)	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All sites			
	2010 (n=109)	2011 (n=145)	2012 (n=145)	2013 (n=144)	2010 (n=266)	2011 (n=299)	2012 (n=239)	2013 (n=290)	2010 (n=149)	2011 (n=162)	2012 (n=100)	2013 (n=99)	2010 (n=259)	2011 (n=188)	2012 (n=302)	2013 (n=281)	2010 (n=783)	2011 (n=794)	2012 (n=787)	2013 (n=816)
Never	75	79	86	78	81	85	87	79	75	72	76	85	73	81	80	76	77	81	83	79
1-2 times	22	19	14	21	17	14	11	16	18	23	15	13	24	16	18	23	20	17	15	19
Once a week	3	1	1	1	2	0	1	3	5	3	3	1	2	2	<1	1	2	1	1	1
More than once per week (but not daily)	0	1	0	1	<1	<1	<1	1	2	1	6	0	1	1	1	<1	1	1	1	1
Daily	0	0	0	0	0	<1	0	1	1	1	0	1	<1	0	0	0	<1	<1	0	1

Figure 11.4: Proportion of police detainees who had committed violent crime in the previous month by location, 2010–2013



Summary

- Fifteen percent of the detainees had shoplifted in the previous month in 2013
- The proportion of detainees who had shoplifted has decreased in Christchurch Central and Whangarei in recent years
- Eighteen percent of the detainees had committed a property crime in the previous month in 2013
- The proportion of detainees from Auckland Central who had committed a property crime in the past month increased quite sharply from 13% in 2012 to 23% in 2013, although the 2013 result resembles the previous rates in 2010 and 2011
- The proportion of detainees from Wellington Central who had committed a property crime in the past month decreased quite sharply from 30% in 2012 to 15% in 2013, but again, the 2013 result resembles the previous rates in 2010 and 2011
- Twenty-one percent of the detainees had sold drugs in the previous month in 2013
- The proportion of Christchurch Central detainees who had sold drugs in the previous month decreased from 29% in 2010 to 20% in 2013
- Twenty-one percent of the detainees had committed a violent crime in the previous month in 2013
- The proportion of the Auckland Central detainees who had committed a violent crime in the past month increased quite sharply from 13% in 2012 to 21% in 2013

Chapter 12 - History of contact with criminal justice system

Introduction

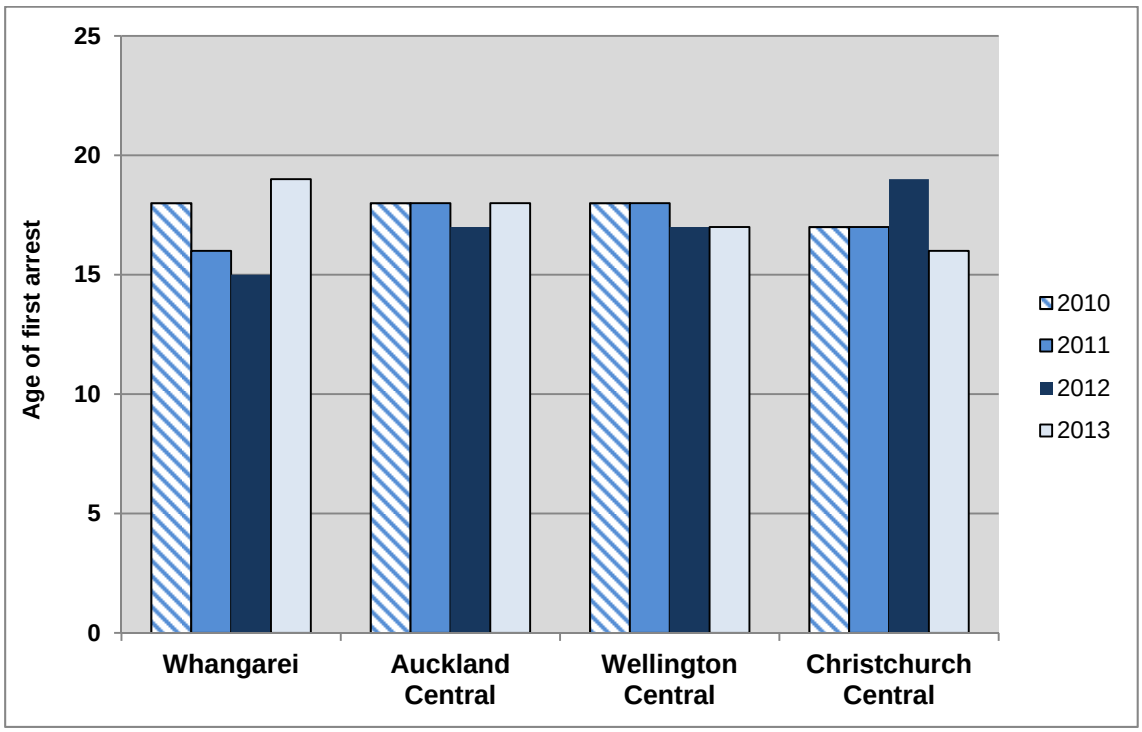
Heavy alcohol and drug-using individuals often come into contact with police and the criminal justice system, and substance use can sometimes trap these people in a cycle of ongoing offending (Wilkins, et al., 2012b). In recognition of the role substance use can play in facilitating offending, the criminal justice system is increasingly being utilized to direct problematic alcohol and drug users into drug treatment programmes (see Caulkins & Reuter, 2009; Hough, 1996). Contact with the criminal justice system potentially provides an opportunity to assess a detainee's alcohol and drug use and the role it plays in their offending, and include alcohol and drug treatment as part of their pre-trial diversion, sentencing and parole conditions (Strang et al., 2012).

Two pilot Alcohol and Drug Treatment Courts were established at the Auckland and Waitakere District Courts in November 2012. Offenders who are substance dependent and plead guilty to an offence (excluding arson, serious violence or sexual offences) and who would otherwise be sentenced to a prison term of up to three years are eligible for the drug court programme. Once in the programme, offenders will be required to comply with a treatment plan imposed by the courts, which includes mandatory drug testing and attendance at treatment meetings. Once a detainee has completed the programme the judge will take their compliance into account when sentencing them for their original offence.

Age of first arrest

The detainees had been arrested for the first time at a mean age of 17 years old (median 16 years, range 16-68 years). Overall, there was no change in the mean age at which the detainees were first arrested from 2010 to 2013 (p=0.6110). There was an increase in the mean age at which Whangarei detainees were first arrested, up from 16 years in 2011 to 19 years in 2013 (p=0.0239), and up from 15 years in 2012 to 19 years in 2013 (p=0.0006). In 2013, Christchurch Central detainees were first arrested at a younger age than those in Whangarei (17 vs. 19 years, p=0.0397) (Figure 12.1).

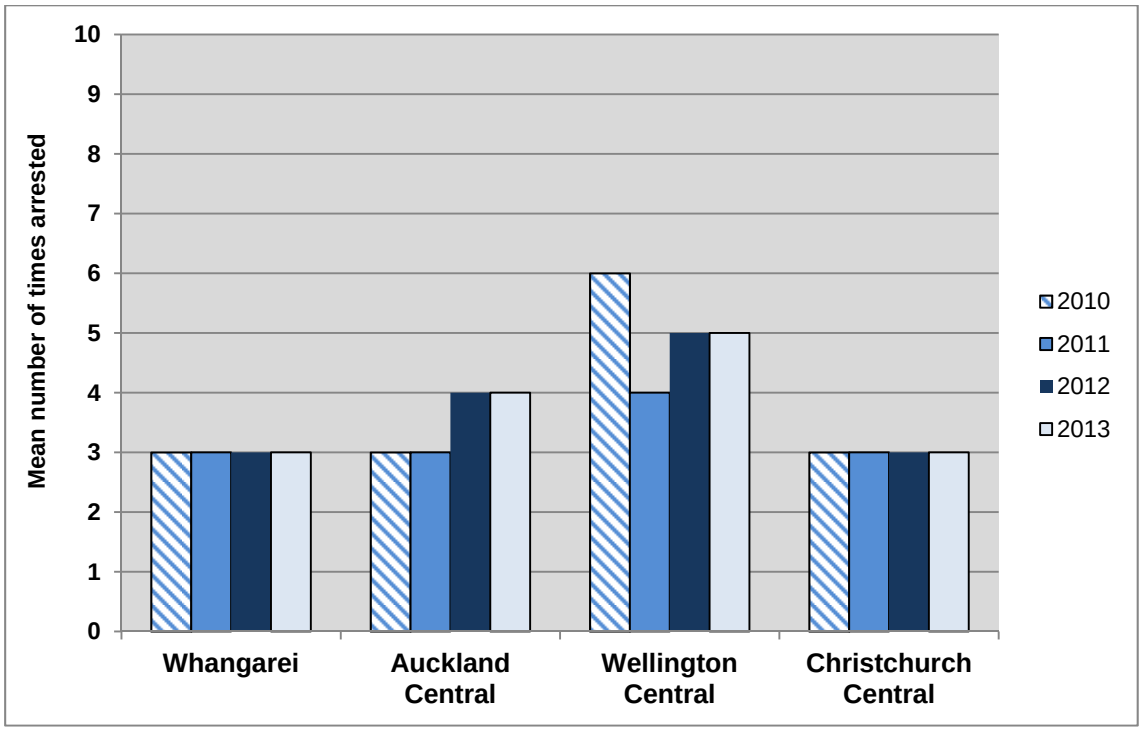
Figure 12.1: Age of the detainees when they were arrested for the first time by location, 2010-2013



Recent arrest history

The detainees reported they had been arrested a mean of 3.7 times in the previous 12 months in 2013 (median 2 times, range 1-100 times). There was no statistically significant change in the mean number of times the detainees had been arrested in the previous year from 2010 to 2013 (i.e. 2010=3.6, 2011=3.3, 2012=3.7, 2013=3.7, p=0.7235). Less than 1% of the detainees interviewed (n=2) had not been arrested at the time of interview. In 2013, Whangarei detainees had been arrested fewer times in the previous year than detainees in Auckland Central (2.5 vs. 4.1 times, p=0.0014), Christchurch Central (2.5 vs. 3.2 times, p=0.0129) and Wellington Central (2.5 vs. 4.8 times, p=0.0066) (Figure 12.2).

Figure 12.2: Mean number of times the detainees had been arrested in the previous 12 months by location (rounded up to nearest whole number), 2010-2013



The detainees were asked what offence type(s) they had been arrested for over the previous 12 months (including the offence they were currently being held for). The responses are summarised in Table 12.1. Note, Table 12.1 presents the offence *categories* the detainees were arrested for over the previous year, not the number of times they were arrested for each offence type. The offence category 'Against Justice' refers to situations where a detainee has failed to comply with a court order in relation to a previous offence and includes charges such as 'breach of bail', 'breach of a non-association order', 'failure to appear in court', 'breach of a protection order', 'breach of parole' and 'breach of periodic detention'. In these situations the interviewers encouraged the detainee to name their original offence in order to obtain a clearer picture of the detainee's offending history. In instances where this additional information was divulged the Against Justice offence was recoded as the original offence. The 'serious assault' category includes arrests for partner violence (i.e. 'male assaults female').

The offence types the detainees had been most commonly been arrested for in 2013 were 'Against Justice' (unspecified) (42%), (any) assault (26%) [i.e. minor assault, serious assault, grievous assault and assault (unspecified)], 'driving offences' (14%), (any) drug offence (9%)

[i.e. cannabis offence, non-cannabis drug offence, new drug, drugs unspecified], ‘public disorder’ (9%), ‘burglary’ (9%), ‘car conversion’ (9%), ‘wilful damage’ (9%), ‘fines’ (8%), ‘theft’ (7%), ‘By-laws breach’ (5%), and ‘shoplifting’ (4%).

Table 12.1: Proportion of police detainees who were arrested for different offence categories in the previous 12 months by location, 2010-2013

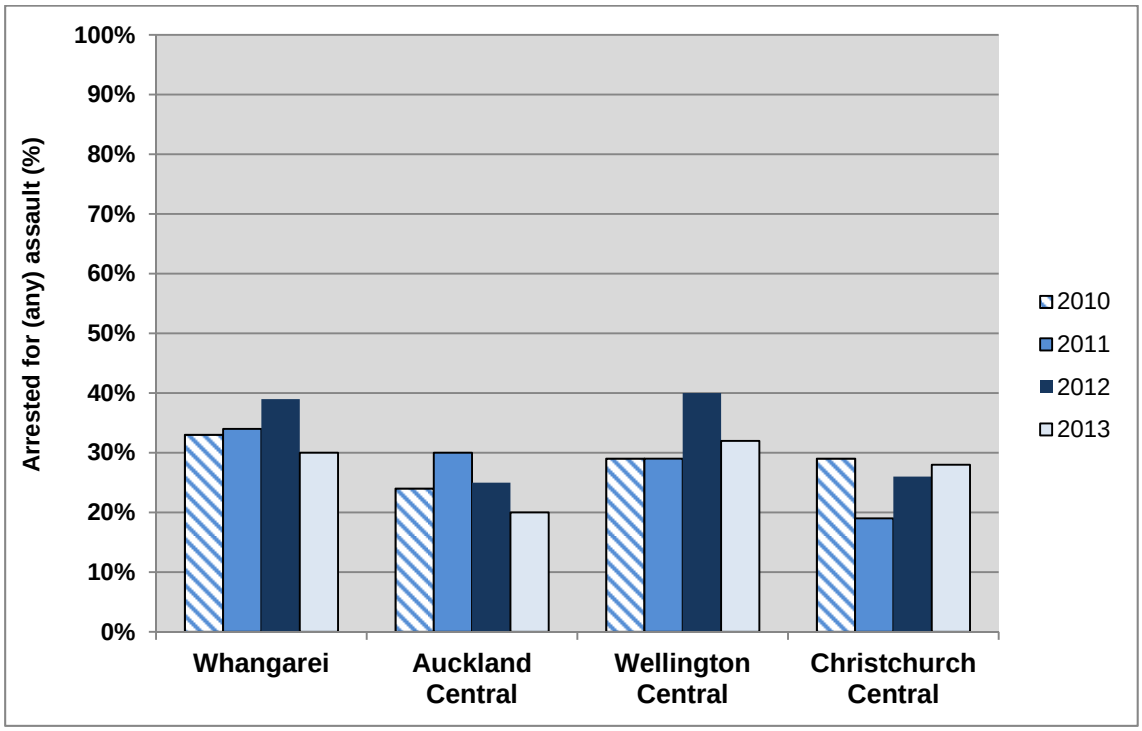
Self-reported offence arrested for in past 12 months (%)	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All sites			
	2010 (n=104)	2011 (n=122)	2012 (n=129)	2013 (n=140)	2010 (n=253)	2011 (n=273)	2012 (n=231)	2013 (n=284)	2010 (n=143)	2011 (n=149)	2012 (n=97)	2013 (n=96)	2010 (n=239)	2011 (n=212)	2012 (n=293)	2013 (n=267)	2010 (n=739)	2011 (n=756)	2012 (n=752)	2013 (n=789)
Against Justice (unspecified)	23	35	47	40	41	37	40	45	35	38	37	43	43	43	44	42	38	39	42	42
Driving offence (including alcohol impaired driving)	20	22	19	15	14	15	16	14	16	15	10	9	15	19	22	18	16	17	17	14
Assault (unspecified)	19	16	13	15	10	16	11	10	13	11	14	16	13	11	11	14	13	14	12	13
Serious assault	12	15	17	13	11	10	9	9	14	12	18	13	14	7	9	10	13	11	12	11
Warrant to arrest (unspecified)	3	5	5	4	10	5	7	11	10	7	11	11	8	7	11	13	8	6	9	11
Public disorder	12	18	11	5	10	14	8	7	15	13	12	14	14	14	11	12	12	14	10	9
Burglary	13	11	10	11	9	10	9	10	10	9	7	7	14	16	11	9	12	12	10	9
Car conversion etc.	6	1	5	4	7	10	10	13	5	2	11	9	9	3	6	7	7	5	8	9
Wilful damage	5	0	9	4	3	0	7	9	3	0	8	14	7	0	9	8	5	0	8	9
Fines	4	2	4	4	3	5	7	9	2	1	0	3	2	1	1	8	10	2	2	6	8
Theft	6	10	5	1	6	8	6	9	8	13	8	8	12	14	5	7	9	11	6	7
By-laws breach	5	5	3	3	1	4	6	4	8	5	15	8	8	2	7	5	5	4	8	5
Shoplifting	9	4	0	3	4	7	4	5	6	9	7	3	7	3	9	4	6	6	6	4
Drugs (unspecified)	9	4	0	1	6	5	3	7	6	3	3	2	3	2	<1	3	6	3	2	4

Minor assault	5	2	8	3	3	4	6	1	1	5	11	6	2	3	6	5	2	4	7	3
Drugs (cannabis only)	8	6	9	2	10	2	4	2	6	3	4	4	7	3	8	4	8	3	6	3
Trespass	1	2	3	0	3	3	8	4	2	2	2	3	8	3	5	4	4	3	5	3
Intimidation/ threats	7	3	7	4	2	3	3	4	4	5	5	3	5	4	4	3	4	4	4	3
Robbery	1	4	5	4	5	4	3	4	1	3	4	3	2	1	1	2	3	3	3	3
Drugs (new drugs)	0	0	0	1	0	0	3	5	0	0	1	4	0	0	1	1	0	0	2	3
Receiving stolen property	2	4	2	2	4	7	3	3	1	3	0	1	4	6	3	2	3	6	2	2
Other	0	1	5	0	0	1	6	1	0	1	4	0	<1	0	3	1	<1	<1	4	1
Fraud	4	1	0	1	3	2	4	1	4	3	2	3	1	3	1	1	3	2	2	1
Destruction of property	2	10	0	0	4	6	2	0	2	8	0	1	2	11	1	0	3	9	1	<1
Drugs (not cannabis)	4	4	1	0	3	5	2	<1	4	3	1	0	<1	1	1	<1	3	3	1	<1
Grievous assault	1	4	4	0	2	2	2	1	3	2	0	0	2	0 0	<1	2	2	2	1	1
Sexual attack	1	0	1	1	1	0	<1	0	2	2	1	0	0	0	<1	1	1	<1	1	<1
Detox	0	0	0	0	0	0	0	1	0	0	0	1	<1	1	1	2	<1	<1	<1	1
Immigration offences	0	0	0	0	0	2	0	<1	1	0	0	1	<1	1	1	0	<1	1	<1	<1
Family offence	1	1	0	1	4	2	0	0	5	3	0	0	1	1	0	0	3	2	0	<1
Arms Act offence	2	2	1	3	2	2	<1	1	1	0	0	1	<1	2	<1	1	1	1	0	1
No charge (detained)	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	<1	<1	0	0	<1

Dishonesty miscellaneous	0	0	2	0	<1	0	1	0	0	0	0	0	0	0	1	0	<1	0	1	0
Sexual affronts	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	<1	0
Abnormal sex	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0o	0	0	<1	0
Immoral behaviour	0	0	0	0	0	0	<1	0	0	0	1	0	0	0	<1	0	0	0	<1	0
Immoral behavior (miscellaneous)	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	<1	0
Kidnapping and abduction	0	<1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	<1	1	0	0
Endangering	0	0	0	0	0	<1	0	0	0	0	0	0	0	0	0	0	0	<1	0	0
Cruelty to animals	0	0	0	0	0	<1	0	0	0	0	0	0	0	0	0	0	0	<1	0	0
Group assembly	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0
Postal/ rail/ fire service abuse	0	0	0	0	<1	0	0	0	1	0	0	0	<1	0	0	0	<1	0	0	0
Vagrancy offences	1	0	0	0	<1	0	0	0	0	0	0	0	<1	0	0	0	<1	0	0	0
Against justice (special)	0	0	0	0	0	0	0	0	0	0	0	0	<1	0	0	0	<1	0	0	0

Overall, there was no change in the proportion of detainees who had been arrested for (any) assault from 2010 to 2013 (28% to 26%, p=0.3809) (Figure 12.3). The proportion of Auckland Central detainees who had been arrested for (any) assault fell from 30% in 2011 to 20% in 2013 (p=0.0186). In 2013, Auckland Central detainees were less likely to have been arrested for (any) assault in comparison to detainees in Christchurch Central (20% vs. 28%, p=0.0856), Whangarei (20% vs. 30%, p=0.0770) and Wellington Central (20% vs. 32%, p=0.0513), and these differences were close to being statistically significant.

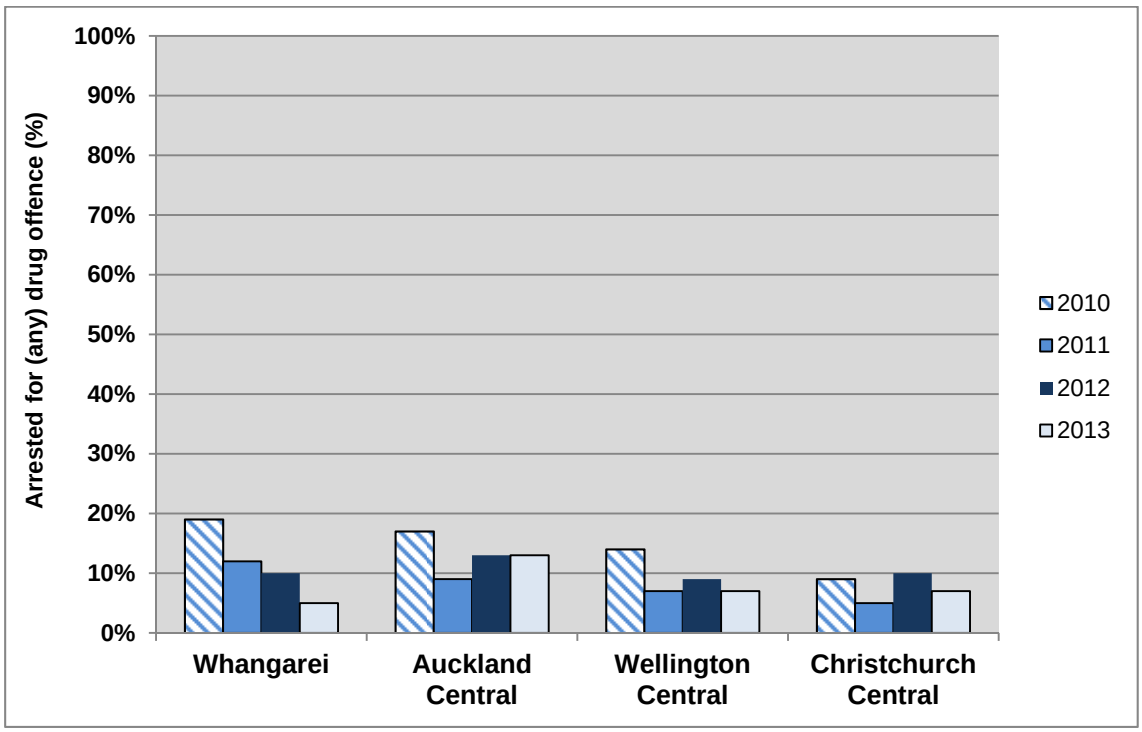
Figure 12.3: Proportion of detainees who had been arrested for (any) assault by location, 2010-2013



Recent arrest for drug offences

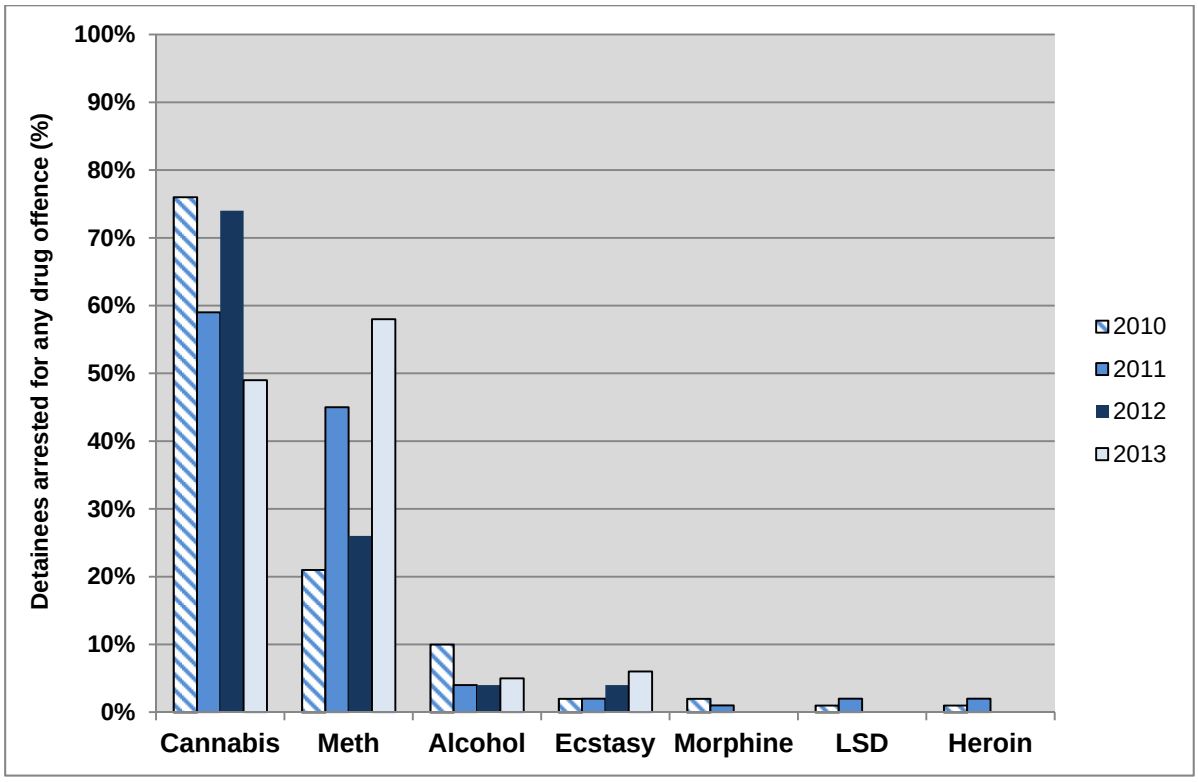
The proportion of detainees who had been arrested for (any) drug offence [i.e. cannabis offence, non-cannabis drug offence, new drug, drugs unspecified] declined from 14% in 2010 to 9% in 2013 (p=0.0070). There was a statistically significant decrease in the proportion of Whangarei detainees who had been arrested for (any) drug offence (down from 19% to 5%, p=0.0062) (Figure 12.4). In 2013, Whangarei detainees were less likely to have been arrested for (any) drug offence compared to Auckland Central detainees (5% vs. 13%), and this difference was close to being statistically significant (p=0.0626).

Figure 12.4: Proportion of detainees who had been arrested for (any) drug offence by location, 2010-2013



The proportion of the detainees arrested for a drug offence who had been arrested for a methamphetamine offence increased from 21% in 2010 to 58% in 2013 (p=0.0194), with a sharp increase from 26% in 2012 to 58% in 2013 (p=0.0347) (Figure 12.5). Conversely, the proportion of detainees who had been arrested for a cannabis offence decreased from 76% in 2010 to 49% in 2013, and dropped sharply down from 74% in 2012 to 49% in 2013, although these declines were not statistically significant (p=0.3047).

Figure 12.5: Drug type(s) involved in arrest for a drug offence in the past 12 months (of those who had been arrested for a drug offence in the past year), 2010-2013



Conviction history

Seventy-five percent of the detainees in 2013 had been convicted of a criminal offence in their lifetimes (Table 12.2). There was no change in the proportion of detainees who had ever been convicted of a crime from 2010 to 2013 (p=0.3874) (Figure 12.6). There were also no differences across the four sites in terms of the proportion of detainees who reported being convicted of a criminal offence in their lifetimes.

Figure 12.6: Proportion of police detainees who had ever been convicted of a crime by location, 2010-2013

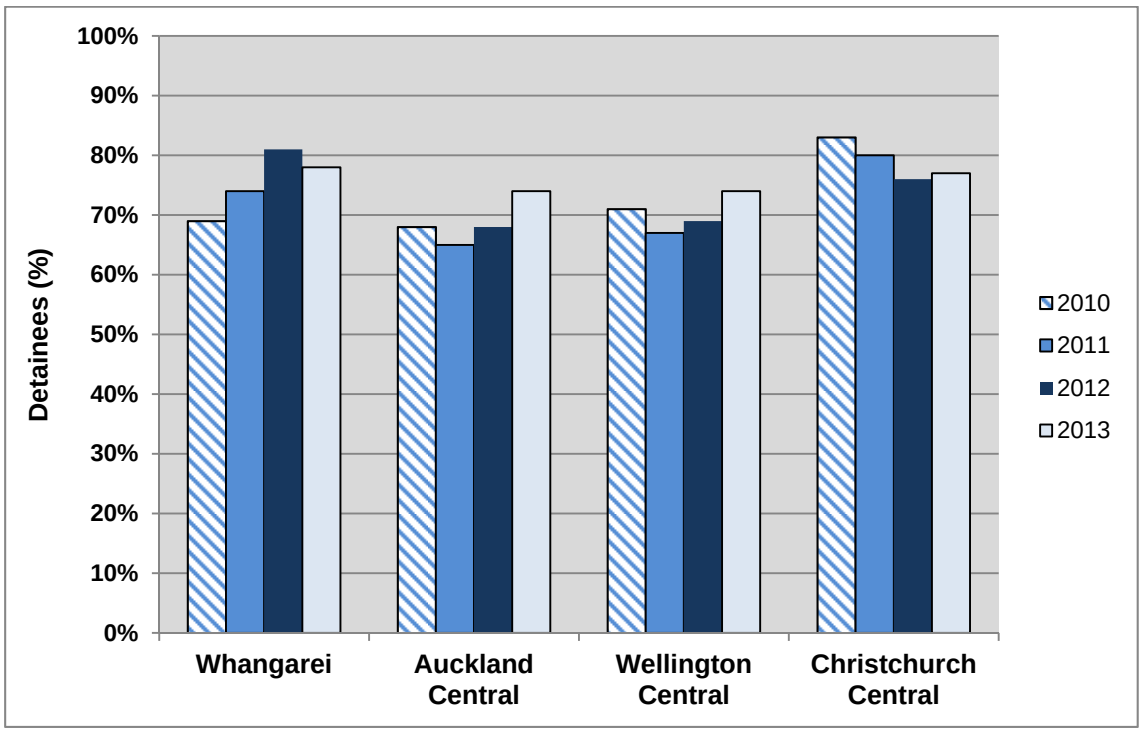


Table 12.2: Police detainees' history of conviction and imprisonment by location, 2010-2013

Arrest history	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All sites			
	2010 (n=106)	2011 (n=145)	2012 (n=144)	2013 (n=143)	2010 (n=266)	2011 (n=298)	2012 (n=240)	2013 (n=285)	2010 (n=147)	2011 (n=163)	2012 (n=100)	2013 (n=99)	2010 (n=259)	2011 (n=189)	2012 (n=302)	2013 (n=278)	2010 (n=777)	2011 (n=795)	2012 (n=786)	2013 (n=807)
Ever convicted of a criminal offence	69	74	81	78	68	65	68	74	71	67	69	74	83	80	76	77	73	72	73	75
Ever been in prison	37	44	45	38	36	34	34	39	37	35	37	42	43	43	43	41	39	39	39	40
Imprisonment in past 12 months	9	14	20	19	11	15	15	18	14	16	19	16	16	17	17	15	13	16	17	17

Those detainees who had been convicted of a crime were asked about the criminal offences for which they had been convicted. The offences for which the detainees had most often been convicted were (any) assault (47%) [i.e. minor assault, serious assault, grievous assault and assault (unspecified)], a 'driving offence' (37%), 'burglary' (25%), (any) drug offence (21%) [i.e. cannabis offence, non-cannabis drug offence, new drug and drug offence unspecified], 'car conversion' (19%), 'theft' (16%), and 'robbery' (10%) (Table 12.3).

The proportion of the convicted detainees who had ever been convicted for (any) assault increased from 26% in 2010 to 47% in 2013 ($p<0.0001$). The rise in convictions for assault occurred in a number of the sites. The proportion of convicted detainees in Auckland Central who had been convicted for (any) assault increased from 18% in 2010 to 45% in 2013 ($p<0.0001$) (Figure 12.7). Similarly, a higher proportion of convicted detainees from Christchurch Central had been convicted of (any) assault from 2010 to 2013 (up from 30% to 52%, $p<0.0001$). Finally, a higher proportion of convicted detainees from Wellington Central had also been convicted for (any) assault from 2010 to 2013 (up from 27% to 43%), and this increase was close to being statistically significant ($p=0.1415$).

Figure 12.7: Proportion of convicted detainees who had been convicted for (any) assault by location, 2010-2013

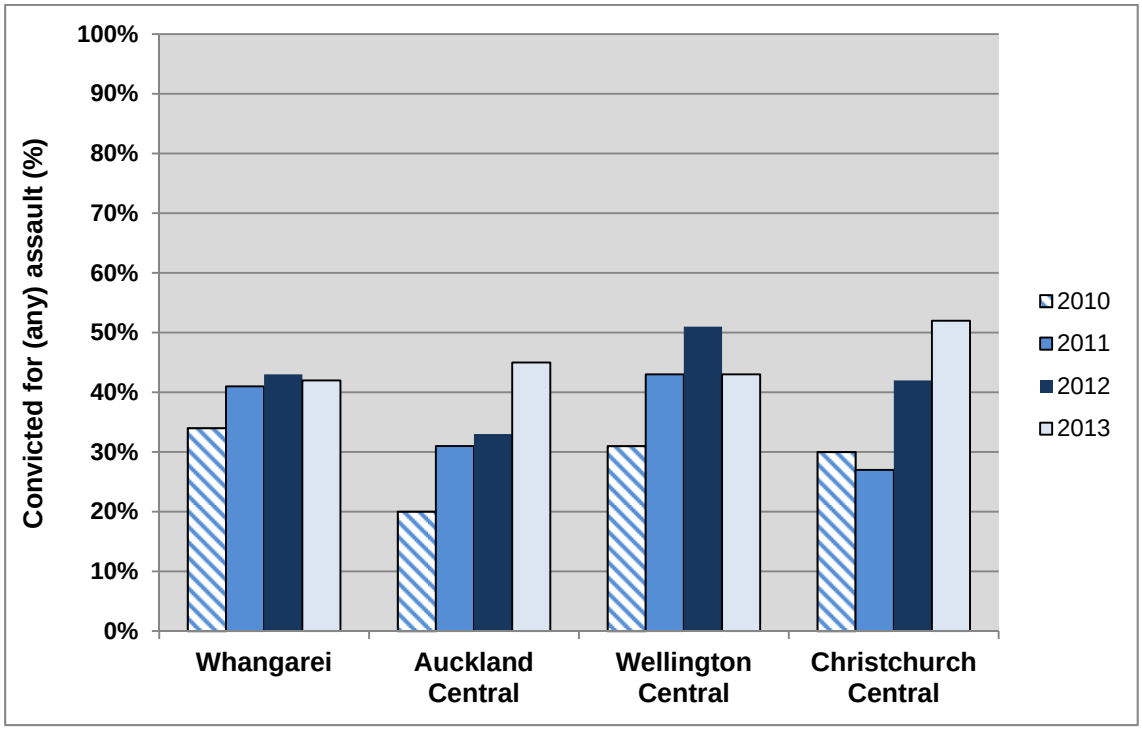


Table 12.3: Proportion of police detainees who had been convicted of different offence types by location (of those who had ever been convicted of a crime), 2010 -2013

Criminal convictions (%)	Whangarei				Auckland Central				Wellington Central				Christ church Central				All sites			
	2010 (n=70)	2011 (n=104)	2012 (n=116)	2013 (n=107)	2010 (n=161)	2011 (n=183)	2012 (n=163)	2013 (n=204)	2010 (n=89)	2011 (n=105)	2012 (n=69)	2013 (n=68)	2010 (n=215)	2011 (n=145)	2012 (n=)231	2013 (n=216)	2010 (n=535)	2011 (n=537)	2012 (n=571)	2013 (n=593)
Driving offence (including alcohol impaired driving)	17	34	32	45	21	16	24	37	35	36	32	28	32	36	46	39	29	31	35	37
Assault (unspecified)	20	23	31	25	10	22	24	27	18	21	38	31	16	18	31	38	15	21	30	31
Burglary	27	24	24	31	21	28	23	21	28	25	16	29	26	28	27	24	25	27	24	25
Car conversion etc.	10	5	17	10	14	11	13	19	9	9	17	22	15	4	12	21	13	7	14	19
Theft	10	17	12	7	11	30	23	17	17	24	17	13	17	33	16	21	14	27	18	16
Serious assault (incl. male assaults female)	13	15	11	18	6	8	5	13	10	11	13	10	8	7	7	13	8	9	8	13
Drugs (cannabis only)	13	8	17	7	9	3	7	10	18	12	10	12	7	11	9	14	10	8	10	11
Robbery	6	13	13	7	7	15	11	10	10	10	10	15	6	5	5	7	7	11	9	10
Drugs (unspecified)	10	8	6	6	9	9	7	11	4	2	9	15	4	11	4	8	6	8	6	10
Against justice (unspecified)	6	5	6	9	3	5	8	8	1	4	13	7	5	5	11	10	4	5	10	9
Willful damage	4	4	6	6	3	4	10	10	4	7	9	10	7	6	10	10	5	5	9	9
Public disorder	6	8	16	4	6	9	6	6	19	19	16	7	9	17	4	10	9	13	9	8

Minor assault	3	2	2	7	2	2	3	11	4	12	7	6	3	3	7	6	3	4	5	8
Shoplifting	13	8	3	5	4	4	5	5	13	10	6	9	6	4	7	6	8	6	6	6
Fraud	4	6	2	3	2	7	7	7	11	6	4	5	4	7	6	6	5	7	5	6
Receiving stolen goods	1	1	3	4	4	3	3	6	8	4	3	4	4	4	3	5	4	3	3	5
Trespass	1	5	2	1	7	2	5	2	7	3	4	6	4	1	4	5	5	2	4	4
Intimidation/ threat	1	8	2	6	4	5	1	3	6	6	4	3	7	7	4	3	5	6	3	3
Drug (new drugs)	0	0	4	2	0	0	3	7	0	0	1	7	0	0	3	3	0	0	3	3
Grievous assault	4	5	3	4	3	3	4	4	3	7	0	0	6	2	2	3	4	4	2	3
Arms Act offence	4	2	4	4	2	1	2	2	2	4	0	0	1	4	2	2	2	3	2	2
By-laws breach	4	0	0	0	0	1	2	2	3	1	3	3	4	3	2	2	3	2	2	2
Dishonesty miscellaneous	0	0	0	1	1	0	1	1	0	0	1	0	0	0	<1	5	<1	0	1	2
Other	0	0	1	2	0	0	2	1	0	0	3	0	0	0	1	<1	0	<1	2	1
Drugs (not cannabis)	0	4	1	0	2	4	1	0	6	7	0	0	2	1	0	<1	2	4	1	<1
Sexual attack	0	0	0	0	1	2	1	1	1	2	0	1	<1	1	2	1	1	1	<1	<1
Kidnapping and abduction	0	1	0	0	0	0	1	<1	0	3	0	0	2	1	1	<1	1	1	1	<1
Homicide	1	3	0	0	1	1	0	0	1	0	1	0	0	1	0	1	1	1	<1	<1
Fines	0	0	1	1	1	0	1	<1	1	1	0	0	0	0	0	0	<1	<1	1	<1
Group assembly	1	0	0	0	2	0	0	<1	1	0	0	0	1	0	0	0	1	0	0	<1
Warrant to arrest	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	<1	<1	0	0	<1

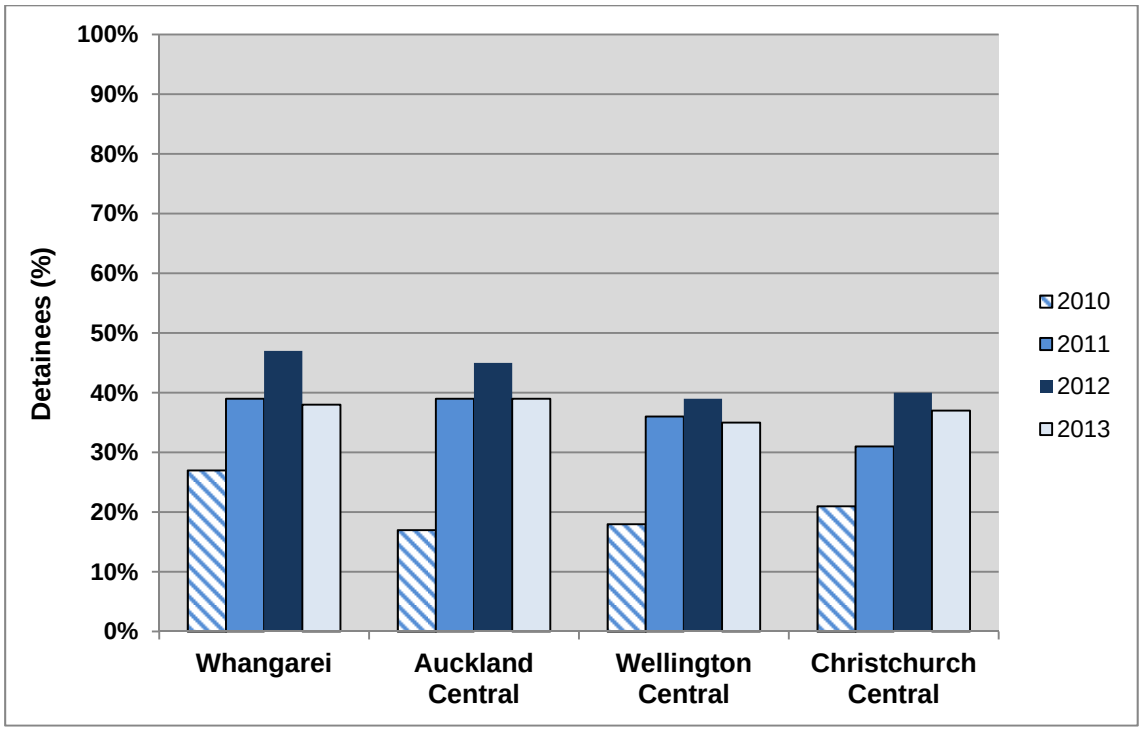
(unspecified)																			
Destruction of property	3	3	1	0	2	5	1	0	7	5	0	0	1	5	0	0	3	4	<1	0
Sexual affront	0	0	0	0	1	0	0	0	1	0	0	0	0	0	<1	0	<1	0	<1	0
Indecent videos	0	0	0	0	0	0	0	0	0	0	0	0	0	0	<1	0	0	0	<1	0
Abnormal sex	0	0	0	0	0	0	1	0	0	0	0	0	0	0	<1	0	0	0	<1	0
Family offence	1	3	0	0	0	0	0	0	0	4	0	0	1	0	0	0	1	1	0	0
Sale of liquor act (1989)	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	<1	0	0
Postal/ rail/ fire services abuse	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	<1	0	0	0
Endangering	0	0	0	0	0	0	0	0	0	0	0	0	<1	0	0	0	<1	0	0	0
Littering	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	<1	0	0	0
Cruelty to animals	0	0	0	0	0	0	0	0	0	0	0	0	<1	0	0	0	<1	0	0	0
Gaming	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vagrancy	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

There was a small increase in the proportion of convicted detainees who had been convicted for (any) drug offence from 2010 to 2013 (up from 16% to 21%), although this increase was not statistically significant (p=0.1241). This increase appeared strongest in Christchurch Central (up from 13% in 2010 to 21% in 2013, p=0.1044) and Auckland Central (up from 15% in 2012 to 23% in 2013, p=0.1231).

Drug treatment as part of sentencing

The detainees who had been convicted of a criminal offence were asked if they had ever received any treatment for drug and alcohol issues as part of their sentence. The proportion of convicted detainees who had ever received treatment for substance abuse problems increased from 20% in 2010 to 42% in 2012 (p=0.1154), before falling somewhat to 37% in 2013 (p=0.0012). Increasing rates of accessing alcohol and drug treatment through the criminal justice system were found in all the site locations. The proportion of detainees in Whangarei who had ever received alcohol and drug treatment as part of their sentence increased from 27% in 2010 to 47% in 2012 (p=0.0432) (Figure 12.8). The proportion of detainees in Auckland Central who had received treatment as part of their sentence increased from 17% in 2010 to 39% in 2013 (p=0.0002). Similarly, Wellington Central detainees were more likely to have received treatment as part of their sentence from 2010 to 2013 (up from 18% to 35%, p=0.0566). Finally, Christchurch Central detainees were more likely to have received treatment as part of their sentence from 2010 to 2013 (up from 21% to 37%, p=0.0013).

Figure 12.8: Proportion of police detainees who had ever received treatment for drug and alcohol issues as part of their sentence (of those who had ever been convicted of a crime) by location, 2010-2013



Ever been to prison

Forty percent of the detainees had been imprisoned at some point in their lifetimes in 2013. There was no change in the proportion of detainees who had ever been to prison from 2010 to 2013 (39%=2010, 39%=2011, 38%=2012, p=0.9288). Those detainees who had ever been to prison were asked what crime they had been sent to prison for. In 2013, 39% had been imprisoned for (any) assault [i.e. minor assault, serious assault, grievous assault and assault (unspecified)], 24% for driving offences, 23% for burglary, 17% for (any) drug offence [i.e. cannabis offence, non-cannabis drug offence, new drugs and drug offence (unspecified)], 15% for car conversion, 13% for theft, and 12% for robbery (Table 12.4).

Table 12.4: Proportion of police detainees who had been imprisoned for different offence types by location (of those who had ever been imprisoned), 2010-2013

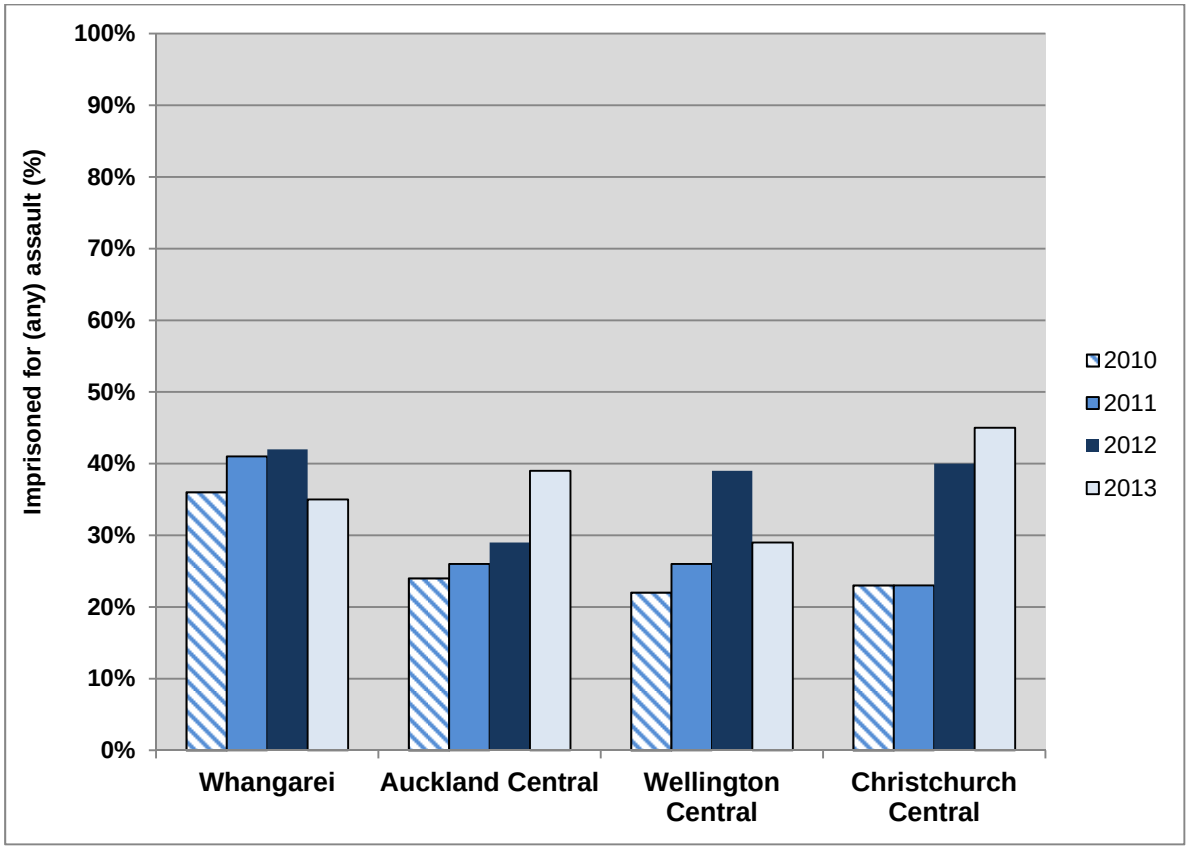
Prison history (%)	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All sites			
	2010 (n=36)	2011 (n=63)	2012 (n=62)	2013 (n=51)	2010 (n=89)	2011 (n=97)	2012 (n=75)	2013 (n=104)	2010 (n=49)	2011 (n=53)	2012 (n=36)	2013 (n=41)	2010 (n=111)	2011 (n=77)	2012 (n=123)	2013 (n=110)	2010 (n=285)	2011 (n=290)	2012 (n=289)	2013 (n=309)
Assault (unspecified)	22	24	19	35	9	18	15	18	14	8	22	22	11	18	32	39	12	16	23	28
Driving offence (including alcohol impaired driving)	0	25	23	24	9	9	9	20	13	26	6	20	12	15	28	29	10	18	17	24
Burglary	17	22	16	31	20	31	27	22	37	21	22	17	23	36	36	25	22	29	27	23
Car conversion etc.	10	3	10	12	11	6	13	15	10	4	19	12	14	3	7	18	11	4	11	15
Against justice (unspecified)	3	11	21	14	15	8	15	14	6	8	17	12	17	16	15	15	12	11	16	14
Theft	5	14	10	6	8	19	19	16	11	14	8	7	15	26	15	15	10	19	14	13
Robbery	6	16	18	14	1	21	15	8	12	13	17	12	5	8	7	15	10	14	13	12
Serious assault (incl. male assaults female)	11	14	19	4	7	6	5	13	2	11	14	10	5	4	7	5	5	7	10	9
Drugs (unspecified)	3	2	5	6	6	4	7	8	2	2	6	7	3	14	2	8	4	7	5	8
Fraud	6	3	0	6	4	11	9	8	8	4	6	7	5	12	5	6	5	9	6	7
Drugs (new drugs)	0	0	5	2	0	0	8	14	0	0	3	5	0	0	1	2	0	0	4	7
Drugs (cannabis only)	12	3	5	4	1	1	5	9	0	11	8	5	1	4	4	4	2	4	5	6
Grievous assault	5	6	3	6	6	1	8	6	8	8	3	0	6	3	6	6	6	4	5	5

Minor assault	0	3	2	4	3	2	4	11	0	2	0	0	2	0	4	2	2	2	3	5
Willful damage	0	0	2	8	0	2	5	5	0	0	6	2	2	0	2	5	1	1	4	5
Receiving stolen goods	0	2	5	0	3	4	3	4	4	0	0	3	2	4	3	4	2	3	3	3
Arms Act offence	5	2	2	10	3	4	0	2	0	4	0	0	5	4	0	4	4	4	1	3
Dishonesty	0	0	0	0	0	0	0	3	0	0	0	2	0	0	1	5	0	0	<1	3
Intimidation/ threat	0	2	5	4	1	1	1	4	2	8	3	0	6	3	4	1	3	3	3	2
Shoplifting	3	3	0	2	1	1	3	1	6	9	6	2	0	3	3	4	2	3	3	2
Trespass	0	2	0	0	3	0	1	1	0	2	0	2	3	0	2	3	2	1	1	2
Fines	0	2	0	0	4	0	0	2	0	7	0	0	1	0	1	3	2	1	<1	2
Public disorder	6	0	2	0	2	3	1	0	0	2	6	0	3	4	2	3	2	3	2	1
Sexual attack	0	0	0	0	2	3	1	3	2	4	0	2	3	2	4	0	2	2	2	1
Drugs (not cannabis)	3	6	2	0	2	5	0	0	4	2	0	0	1	1	0	0	2	3	<1	0
Kidnapping and abduction	0	3	0	0	1	1	1	1	0	6	0	0	3	1	2	1	1	2	1	1
Indecent videos	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	<1	0
Postal/rail/fire services abuses	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	<1	0
Immigration	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	1	0
Against justice (special)	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	<1	0
Other	0	0	0	2	2	0	0	2	0	0	0	0	0	0	1	1	1	0	<1	1
Destruction of property	5	0	0	0	1	2	0	0	2	4	0	2	1	0	0	0	2	1	0	<1
Homicide	2	3	0	0	1	1	0	0	0	0	0	0	2	1	0	1	1	1	0	<1
Family	0	0	0	0	0	1	0	0	2	4	0	0	0	0	0	0	<1	1	0	0

offence																			
Vagrancy offences	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	<1	0	0
Endangering	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0
Group assembly	0	0	0	0	2	0	0	0	4	0	0	0	0	0	0	0	1	0	0	0
No charge (detained)	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	<1	<1	0	0

The proportion of detainees who had been imprisoned for (any) assault increased from 24% in 2010 to 39% in 2013 (p<0.0001). Auckland Central detainees were more likely to have been imprisoned for (any) assault from 2010 to 2013 (up from 24% in to 39%, p=0.0479). Christchurch Central detainees were more likely to have been imprisoned for assault from 2010 to 2013 (up from 23% to 45%, p=0.0036) (Figure 12.9).

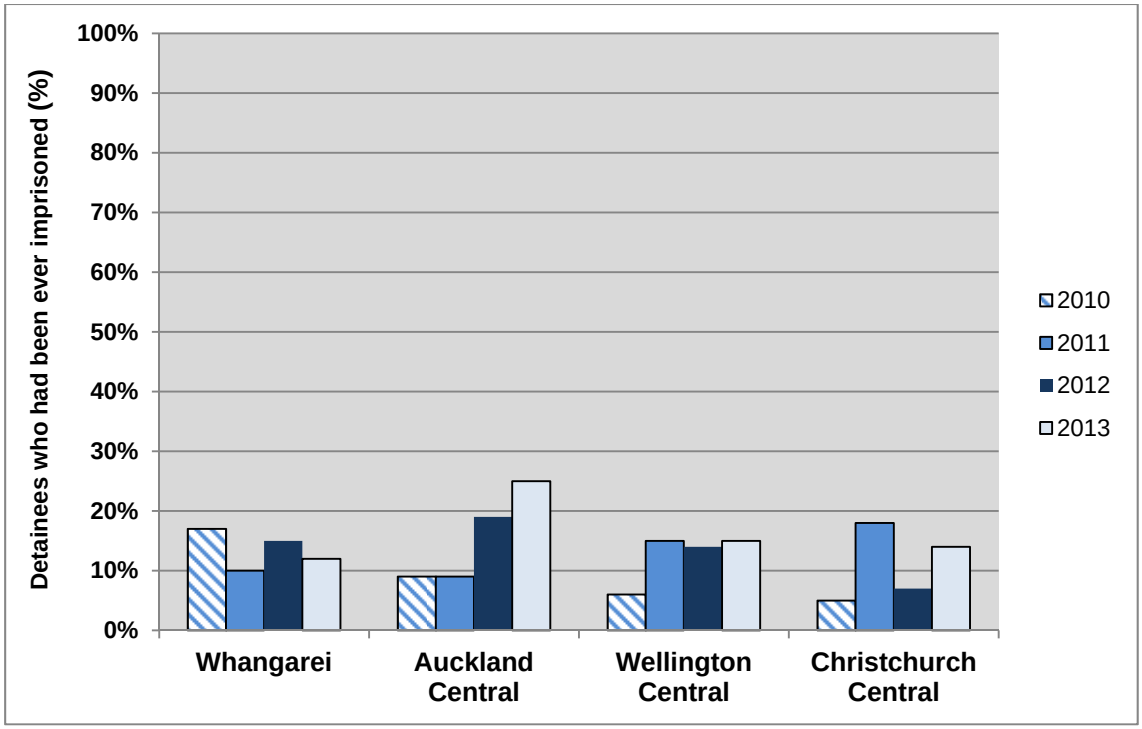
Figure 12.9: Proportion of detainees who had been imprisoned for (any) assault by location (of those who had ever been imprisoned), 2010-2013



There was an increase in the proportion of detainees who had been imprisoned for (any) drug offence from 2010 to 2013 (up from 7% to 17%, p=0.0009). There was no change in the proportion of detainees who had been imprisoned for a drug offence from 2012 to 2013 (14% to 17%, p=0.3891). There was an increase in the proportion of Auckland Central detainees imprisoned for (any) drug offence from 2010 to 2013 (up from 8% to 25%, p=0.0123) (Figure 12.10). There was also an increase in the proportion of detainees

imprisoned for a drug offence in Christchurch Central from 2010 to 2013 (5% to 14%), and this was close to being statistically significant (p=0.1048).

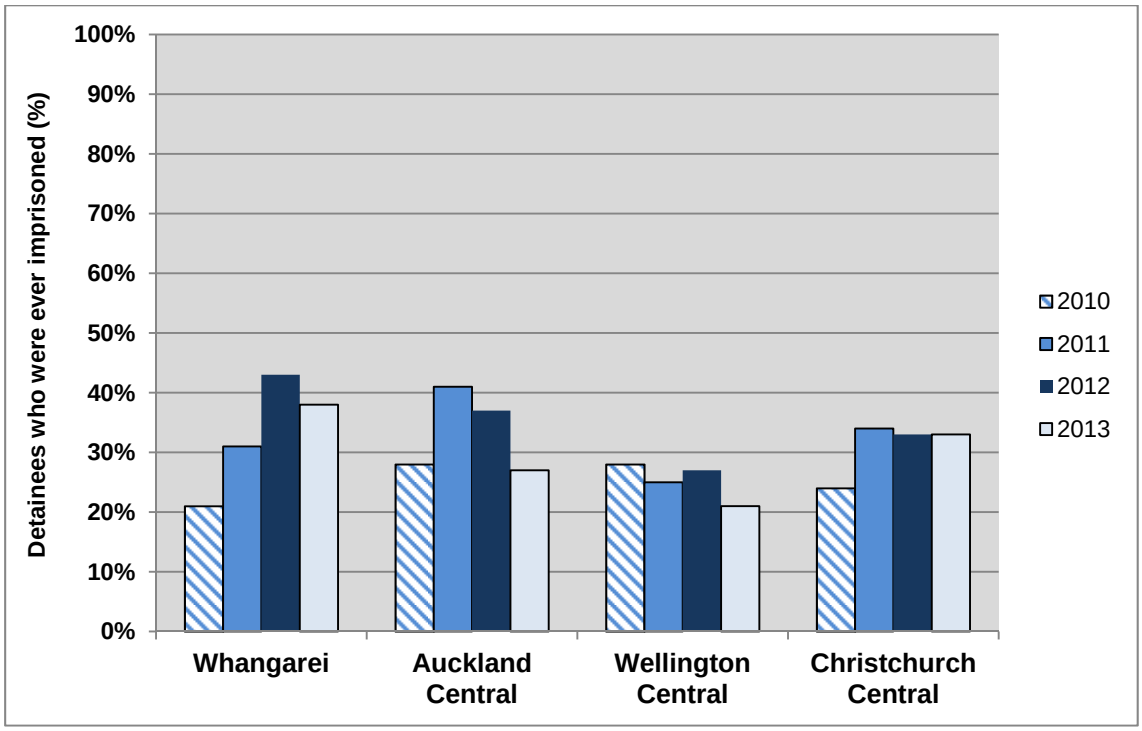
Figure 12.10: Proportion of detainees who had been imprisoned for (any) drug offence by location (of those who had ever been imprisoned), 2010-2013



Alcohol and drug treatment while in prison

In 2013, 29% of these detainees who had ever been to prison had received treatment for alcohol and drug issues as part of their prison sentence. The proportion of imprisoned detainees who had received alcohol and drug treatment as part of their prison sentence increased from 26% in 2010 to 29% in 2013, but the increase was not statistically significant (p=0.7871) (Figure 12.11).

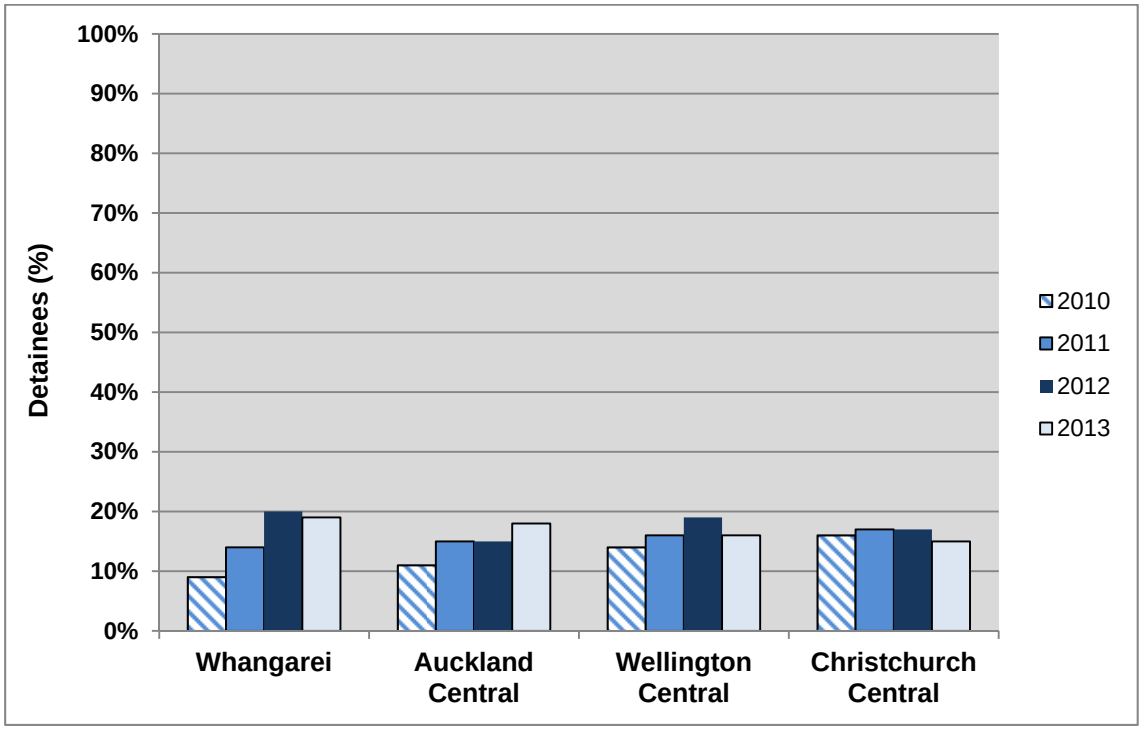
Figure 12.11: Proportion of police detainees who had ever received treatment for drug and alcohol issues as part of their prison sentence by location (of those who had ever been to prison), 2010-2013



Prison in the previous 12 months

Seventeen percent of the detainees in 2013 had been in prison in the previous 12 months. The proportion of detainees who had been imprisoned in the past 12 months increased from 13% in 2010 to 17% in 2013, but this increase was not statistically significant (p=0.1873). There was no change in the proportion of detainees who had been in prison in the previous year from 2012 to 2013 (17% in both the years). The proportion of detainees in Whangarei who had been imprisoned in the previous year increased from 9% in 2010 to 19% in 2013, but this increase was not statistically significant (p=0.1062) (Figure 12.12).

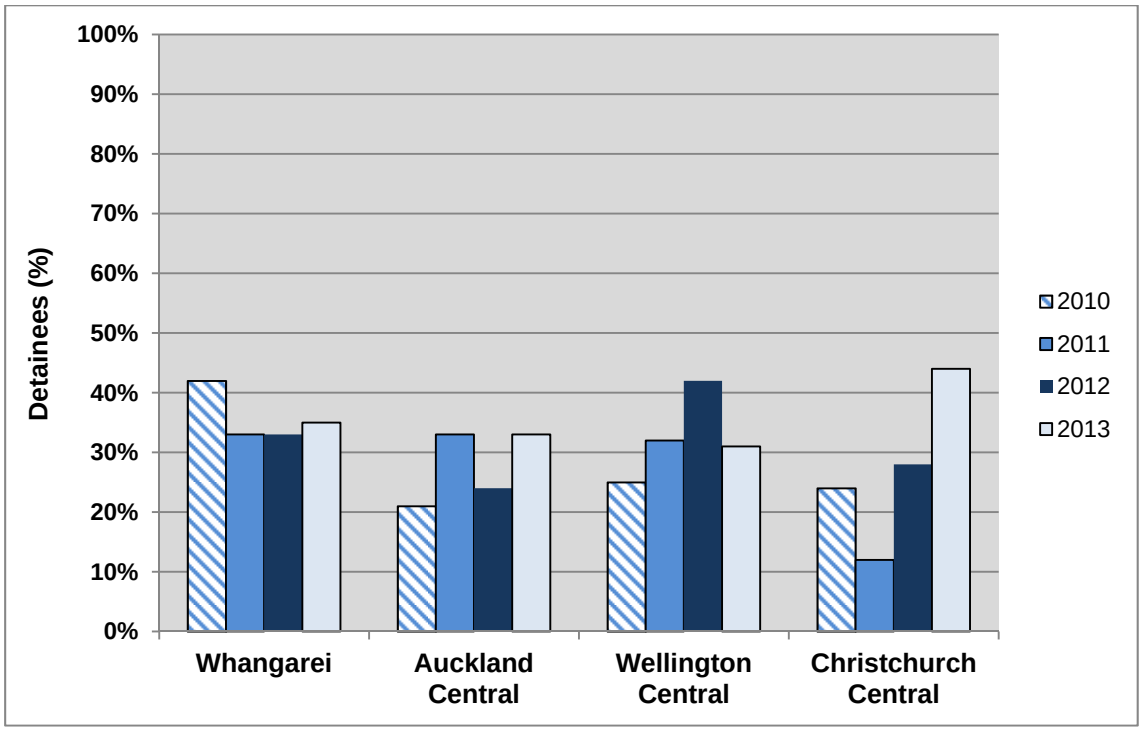
Figure 12.12: Proportion of detainees who had been in prison in the previous 12 months by location, 2010-2013



Those detainees who had been imprisoned in the previous 12 months were asked what crime they had been sent to prison for. Thirty-six percent had been imprisoned for (any) assault [i.e. minor assault, serious assault, grievous assault and assault (unspecified)], 22% for Against Justice (unspecified), 20% for burglary, 12% for a driving offence, 11% for car conversion, 10% for (any) drug offence [i.e. cannabis offence, non-cannabis drug offence, new drugs and drug offence (unspecified)] and 8% for theft (Table 12.6).

Although there was an increase in the proportion of detainees who had been imprisoned for (any) assault in the previous 12 months from 2010 to 2013 (up from 25% to 36%), the difference was not statistically significant (p=0.1738). However, there was a statistically significant increase in the proportion of Christchurch Central detainees who had been imprisoned for (any) assault in the previous 12 months from 2010 to 2013 (up from 24% to 44%, p=0.0212) (Figure 12.13).

Figure 12.13: Proportion of police detainees who had been imprisoned for (any) assault in the past 12 months (of those who had been imprisoned in past 12 months), 2010-2013



The proportion of detainees who had been imprisoned for (any) drug offence in the previous 12 months increased from 3% in 2010 to 10% in 2013, but this increase was not statistically significant (p=0.1143) (Figure 12.14). The 12 detainees who had been imprisoned for a drug offence in the past 12 months in 2013 were imprisoned for methamphetamine offences (n=9) and cannabis offences (n=3).

Figure 12.14: Proportion of police detainees who had been imprisoned for a drug offence in the past 12 months (of those who had been imprisoned in past 12 months), 2010-2013

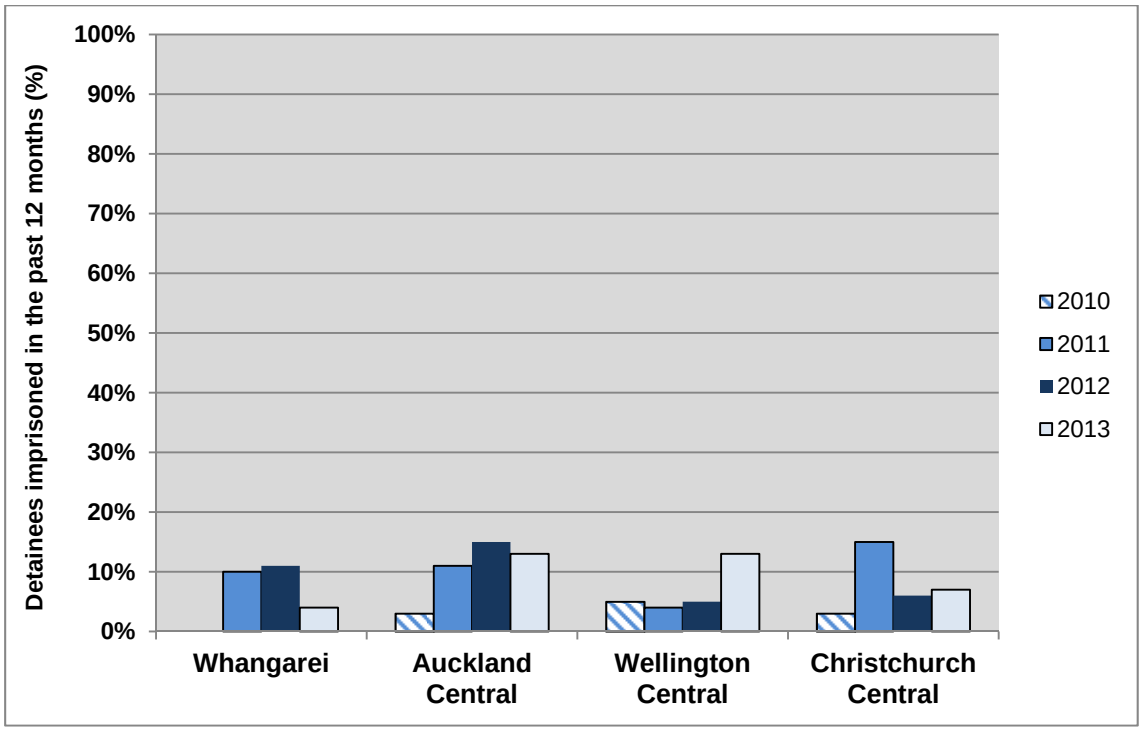


Table 12.5: Proportion of police detainees who had been imprisoned for different offence types in the past 12 months (of those who had been imprisoned in past 12 months), 2010-2013

Imprisonment in previous 12 months (%)	All sites			
	2010 (n=107)	2011 (n=126)	2012 (n=126)	2013 (n=131)
Against justice (unspecified)	21	20	29	22
Burglary	18	25	23	20
Assault (unspecified)	14	12	17	18
Serious assault (incl. male assaults female)	4	7	9	17
Driving offence(including alcohol impaired driving)	10	12	11	12
Car conversion	6	7	13	11
Theft	7	1	11	8
Drugs (unspecified)	3	2	5	7
Arms act offences	0	5	1	6
Robbery	10	5	7	5
Receiving stolen goods	4	2	5	5
Fraud	2	5	2	5
Intimidation/ threat	4	3	3	4
Wilful damage	2	2	2	4
Minor assault	1	3	1	4
Grievous assault	7	5	4	3
Drugs (new drugs)	0	0	4	2
Drugs (cannabis only)	1	4	2	2
Sexual attack	2	2	0	2
Trespass	3	0	5	1
Shoplifting	7	2	3	1
Other	3	0	2	1
Dishonesty	0	0	1	1
Fines	0	1	0	1
Public disorder	3	2	4	0
Immigration	0	0	1	0
Drugs (not cannabis)	1	8	0	0
Kidnapping and abduction	1	2	0	0
Family offences	0	1	0	0
No charge (detained)	0	1	0	0

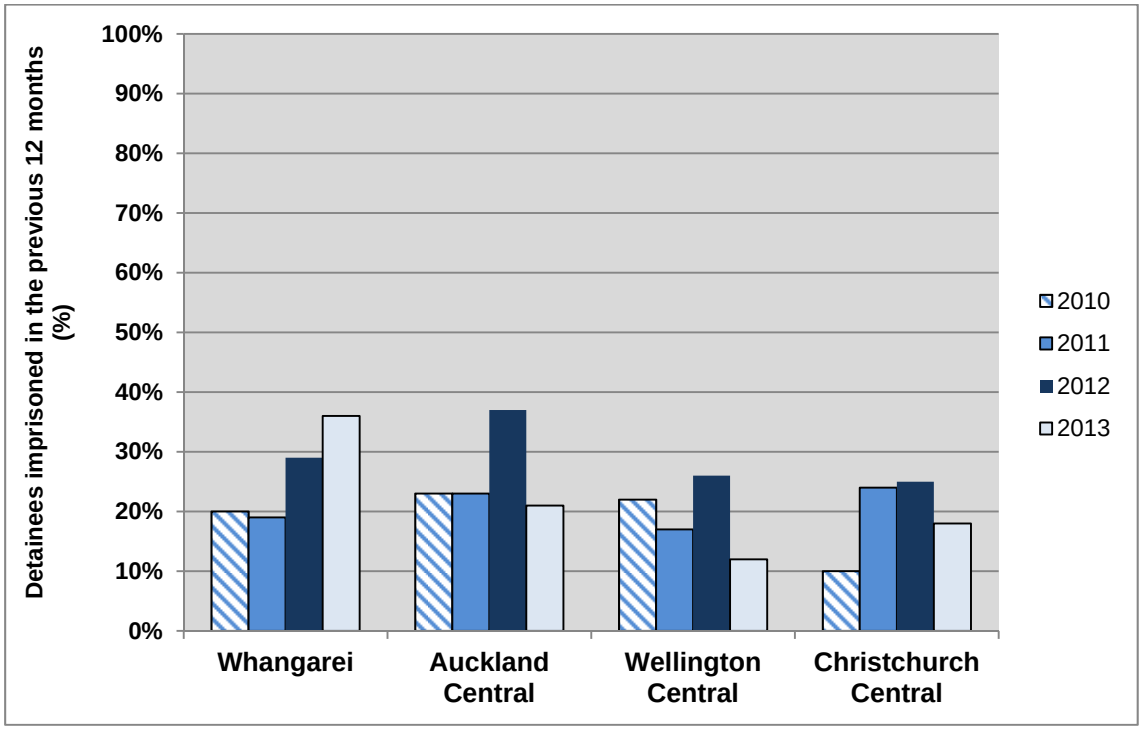
Drug use in prison in the previous 12 months

Thirty-six percent of the detainees who had been to prison in the past 12 months reported they had used drugs while in prison in 2013. There was no change from 2010 to 2013 in the proportion of detainees who had been in prison in the past year who had used drugs while in prison (p=0.6842).

Alcohol and drug treatment while in prison in previous 12 months

Twenty-one percent of the detainees who had been in prison in the past 12 months had received treatment for drug and alcohol issues as part of their prison sentence. The proportion of detainees who had been imprisoned in the past 12 months who had received treatment for alcohol and drug treatment increased from 17% in 2010 to 30% in 2012, and then decreased to 21% in 2013 (Figure 12.15).

Figure 12.15: Proportion of police detainees who had received treatment for drug and alcohol issues in the previous 12 months as part of their prison sentence by location (of those who had been to prison in the previous 12 months), 2010-2013



Summary

- The detainees had been arrested a mean of 3.7 times in the previous 12 months in 2013 (median 2 times, range 1-100 times)

- There was no change in the mean number of times the detainees had been arrested in the previous year from 2010 to 2013

- The offence types the detainees had been most commonly arrested for in 2013 were 'Against Justice' (42%), (any) 'assault' (26%), 'driving offences' (14%), (any) drug offences (9%), 'public disorder' (9%), 'burglary' (9%), 'car conversion' (9%), 'willful damage' (9%), 'fines' (8%), 'theft' (7%), 'by-laws breach' (5%) and 'shoplifting' (6%)

- The proportion of detainees arrested for (any) drug offence declined slightly from 14% in 2010 to 9% in 2013

- The proportion of the detainees arrested for a drug offence who had been arrested for a methamphetamine offence increased 21% in 2010 to 58% in 2013, with a sharp increase from 26% in 2012 to 58% in 2013

- Conversely, the proportion of the detainees arrested for a drug offence who had been arrested for a cannabis offence decreased from 76% in 2010 to 49% in 2013, with a sharp decline down from 74% in 2012 to 49% in 2013

- Seventy-five percent of the detainees had been convicted of a criminal offence in their lifetimes in 2013, and this had not changed from previous years

- The crimes the detainees had most often been convicted of in 2013 were (any) assault (47%), a 'driving offence' (37%), 'burglary' (25%), (any) drug offence (21%), 'car conversion' (19%), 'theft' (16%), and 'robbery' (10%)

- The proportion of convicted detainees who had ever been convicted for (any) assault increased from 26% in 2010 to 47% in 2013

- The rise in convictions for (any) assault was found in Auckland Central, Wellington Central and Christchurch Central

- The proportion of detainees who had been convicted of a crime who had ever received treatment for drug and alcohol problems increased from 20% in 2010 to 42% in 2012, before dropping slightly to 37% in 2013

- Increasing rates of accessing drug treatment through the criminal justice system were found in all the study sites from 2010 to 2013

- There was no change in the proportion of the detainees who had ever been in prison from 2010 to 2013

- The offence categories the detainees had most commonly been imprisoned for in 2012 were (any) assault (39%), 'driving offences' (24%), 'burglary' (23%), (any) drug offence (17%), 'car conversion' (15%), 'theft' (13%) and 'robbery' (12%)

- The proportion of detainees who had been imprisoned for (any) assault increased from 24% in 2010 to 39% in 2013

- The proportion of detainees who had been imprisoned for (any) drug offence increased from 7% in 2010 to 17% in 2013

- There was no change in the proportion of detainees who had been imprisoned in the previous year from 2012 to 2013 (17% in both years)

- The offence categories that the detainees had been imprisoned for in the previous 12 months were (any) assault (36%), 'Against Justice' (22%), 'burglary' (20%), 'driving offences' (12%), 'car conversion' (11%), (any) drug offence (10%) and 'theft' (8%)

- The 12 detainees who had been imprisoned for a drug offence in the past 12 months in 2012 were imprisoned for methamphetamine offences (n=9) and cannabis offences (n=3)

- The proportion of detainees who had been imprisoned in the past 12 months who had received alcohol and drug treatment increased from 17% in 2010 to 30% in 2012, and then decreased to 21% in 2013

Chapter 13 – Alcohol and other drug harm

Introduction

Alcohol and other drug use is associated with a range of negative health and social outcomes, including dependency, chronic illness, relationship breakdown, mental illness, suicide, violence, physical and sexual assault, vehicular accidents, physical injury, impaired educational achievement, and low work productivity (Babor, et al., 2010a; 2010b). As a population with high levels of alcohol and other drug use, police detainees are particularly 'at risk' from substance related harm. These can include physical and psychological problems from substance use which are directly borne by the detainee themselves, such as vomiting, overdose, depression and paranoia, and wider social harms which are borne by their family, friends, neighbors and work mates, such as family violence, financial stress, anti-social behavior, poor driving and unsafe work practices.

Extent of alcohol and other drug use

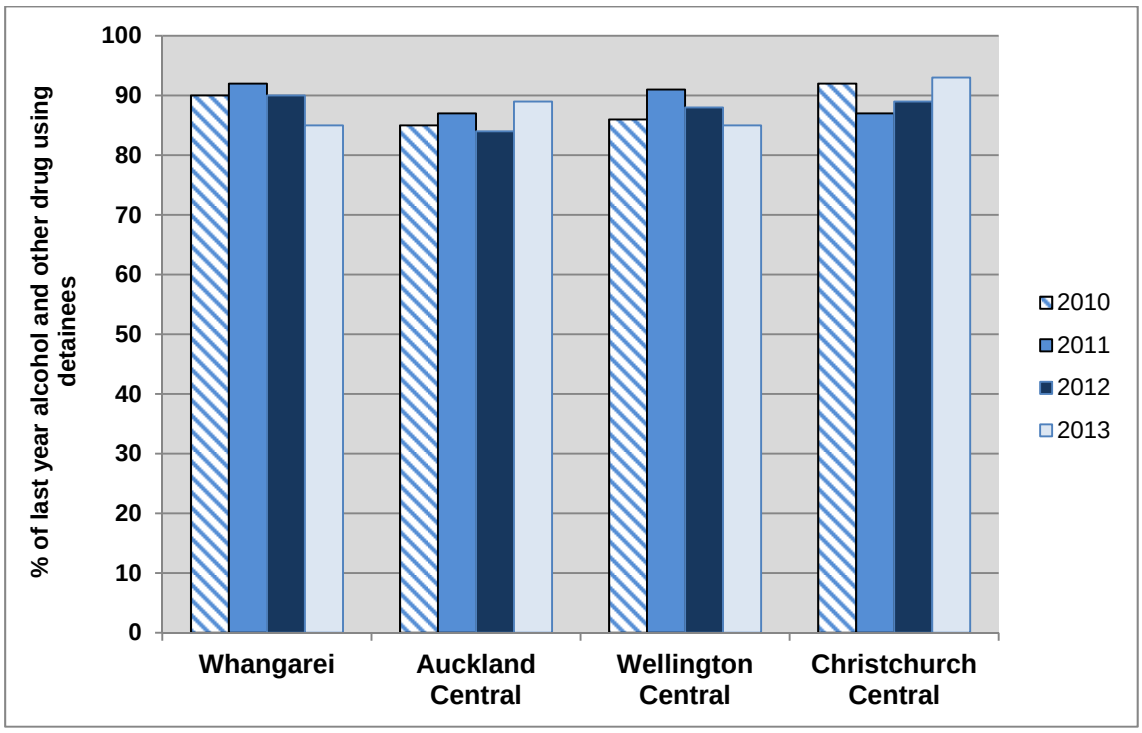
Ninety-seven percent of police detainees had used alcohol, tobacco, legal highs or other drugs in the previous 12 months in 2013. There was no change in the level of alcohol and other drug use among the detainees over the past three years (i.e. 97%=2010, 98%=2011, 98%=2012, 97%=2013). In 2013, 91% of the detainees had drunk alcohol, 82% had smoked tobacco, 70% had smoked cannabis, 47% had smoked synthetic cannabis, 30% had used methamphetamine, 21% had used ecstasy and 21% had used hallucinogens in the previous year. Seventy-six percent of the detainees had reported using an illegal drug in the previous 12 months in 2013. There was no change in the proportion of detainees who had used any illegal drug over the previous four years (i.e. 75%=2010, 79%=2011, 77%=2012, 76%=2013).

Extent of problems due to alcohol and other drug use

Those detainees who had drunk alcohol or used other drugs in the past 12 months were asked if they had experienced any of a list of 34 substance-related problems in the previous year. Eighty-nine percent had experienced at least one problem related to their substance use in 2013. There was no change in the proportion of detainees who had reported at least

one harm due to their substance use from 2010 to 2012 (88%=2010, 88%=2011, 87%=2012, 89%=2013, p=0.8230). In 2013, Christchurch Central detainees were more likely to have experienced at least one problem from their substance use compared to those from Wellington Central (93% vs. 85%, p=0.0795) and Whangarei (93% vs. 85%, p=0.0758), and these differences were close to being statistically significant (Figure 13.1).

Figure 13.1: Proportion of police detainees who experienced at least one problem from their alcohol and other drug use in the past 12 months by location (of those who used alcohol and other drugs in the past 12 months), 2010-2013



General problems due to alcohol and other drug use

Forty-eight percent of the alcohol and drug using police detainees reported that they 'couldn't remember what happened the night before' due to their substance use in 2013 (Table 13.1). Fifty percent had 'upset a family relationship', 40% had 'damaged someone else's property' and 40% had 'reduced work/study performance' as a result of their substance use. Twenty-eight percent had physically hurt themselves, 36% had 'ended a personal relationship', 30% 'stole someone's property' (Figure 13.2) and 31% had 'got into debt' as a result of their alcohol and other drug use.

Figure 13.2: Proportion of police detainees who stole someone's property as a result of their alcohol and other drug use (of those who used alcohol and other drugs in the past 12 months), 2010-2013

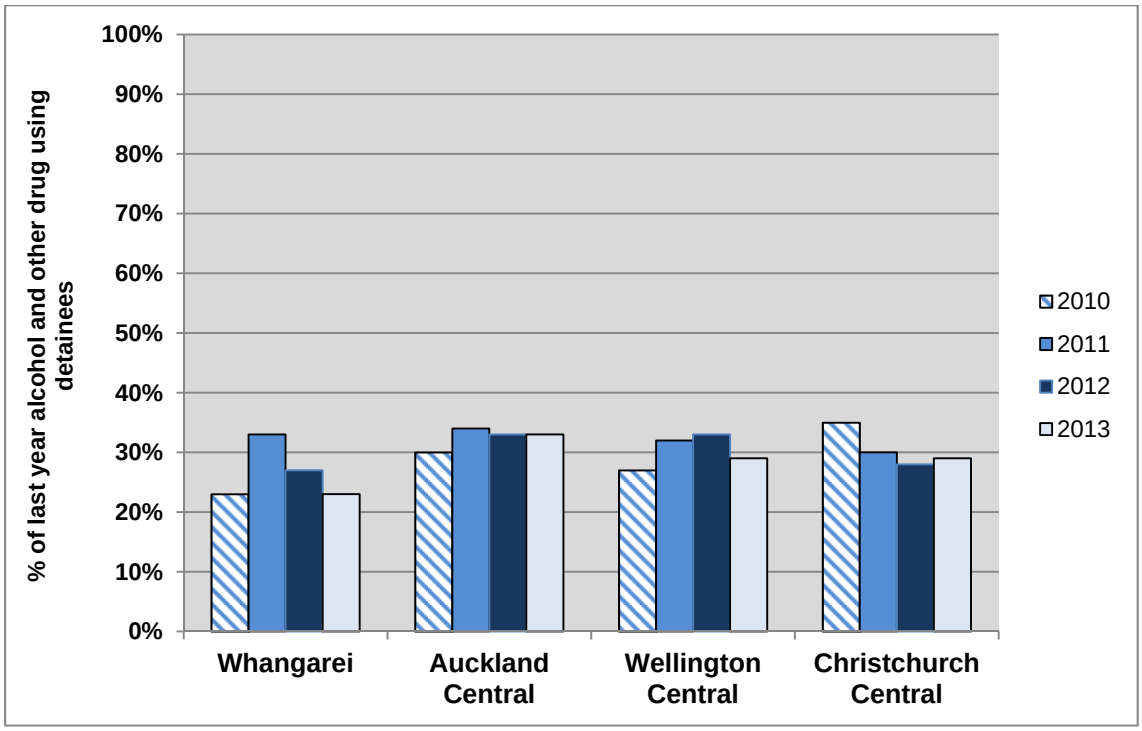


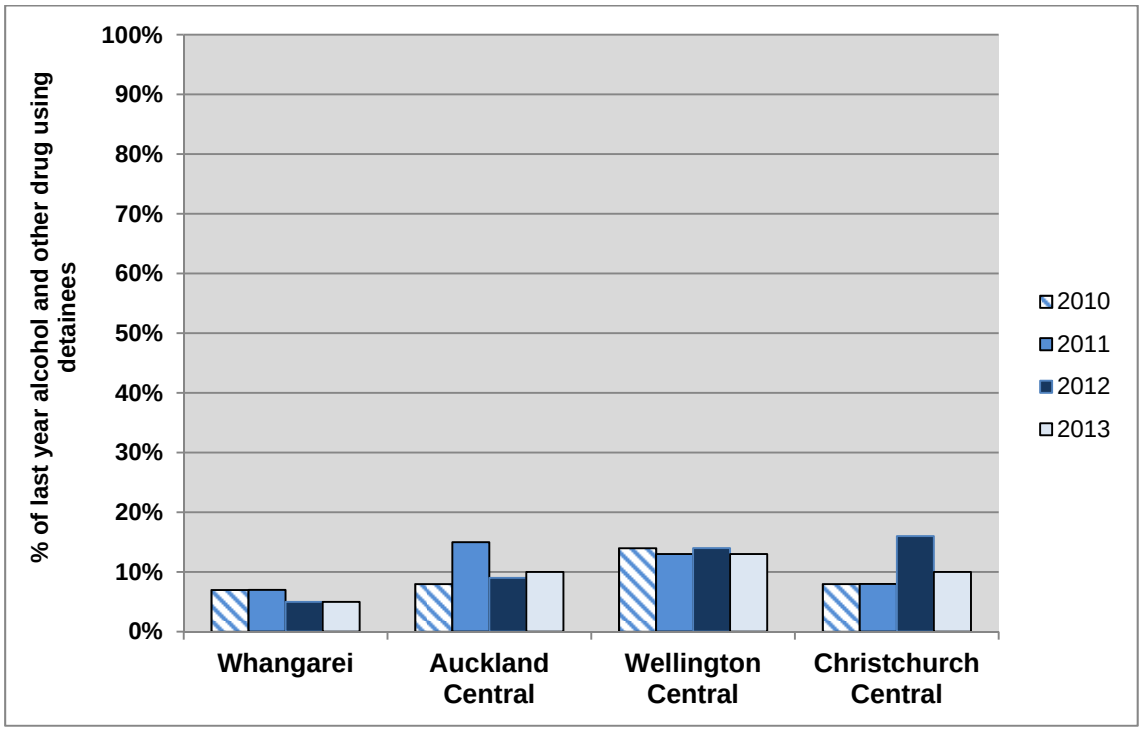
Table 13.1: Proportion of alcohol and other drug using police detainees who experienced problems due to their substance use in the previous 12 months by location, 2010-2013

Harm (%)	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All sites			
	2010 (n=111)	2011 (n=147)	2012 (n=146)	2013 (n=142)	2010 (n=270)	2011 (n=300)	2012 (n=233)	2013 (n=279)	2010 (n=149)	2011 (n=165)	2012 (n=96)	2013 (n=102)	2010 (n=259)	2011 (n=191)	2012 (n=296)	2013 (n=272)	2010 (n=789)	2011 (n=803)	2012 (n=772)	2013 (n=799)
Couldn't remember what happened the night before	58	62	58	48	54	56	50	54	54	61	65	58	63	62	61	56	57	60	58	54
Upset a family relationship	50	58	54	48	52	52	45	46	41	51	44	54	52	45	55	51	50	50	50	50
Damaged someone's property	39	45	38	34	38	41	35	42	39	45	40	41	51	45	44	40	43	44	39	40
Had reduced work/ study performance	32	39	31	26	46	36	29	41	38	50	33	42	36	37	43	42	39	39	35	40
Ended a personal relationship	32	38	29	27	36	37	28	36	28	36	35	36	37	30	31	40	34	35	31	36
Spent some nights sleeping rough (i.e. living on the streets)	35	26	18	25	33	25	33	35	30	34	28	36	36	30	29	31	33	28	29	33
Got into debt/owing money	38	37	27	26	34	39	29	26	24	37	25	42	34	32	25	32	33	36	27	31

Stole someone's property	23	33	27	23	30	34	33	33	27	32	33	29	35	30	28	29	30	32	31	30
Kicked out of where you were living	30	36	24	25	32	31	28	28	22	30	25	38	31	29	27	31	29	31	27	30
Took sick leave/ did not attend class	30	31	21	19	36	29	31	31	27	34	25	31	29	28	33	30	31	30	29	29
Physically hurt yourself	26	32	21	17	26	29	29	32	26	35	34	30	34	29	39	27	29	31	32	28
No money for food or rent	26	18	15	20	29	28	24	23	25	27	30	27	24	25	24	24	26	26	24	24
Sacked/ lose business/ quit study course	14	14	15	7	14	14	12	16	15	11	11	12	10	13	11	16	13	13	12	14
Overdosed from drugs	7	7	5	5	8	15	9	10	14	13	14	13	8	8	16	10	9	11	12	10

Ten percent of the substance using detainees had 'overdosed on drugs' during the previous year (Figure 13.3).

Figure 13.3: Proportion of police detainees who overdosed on drugs (of those who used alcohol and other drugs in the past 12 months), 2010-2013



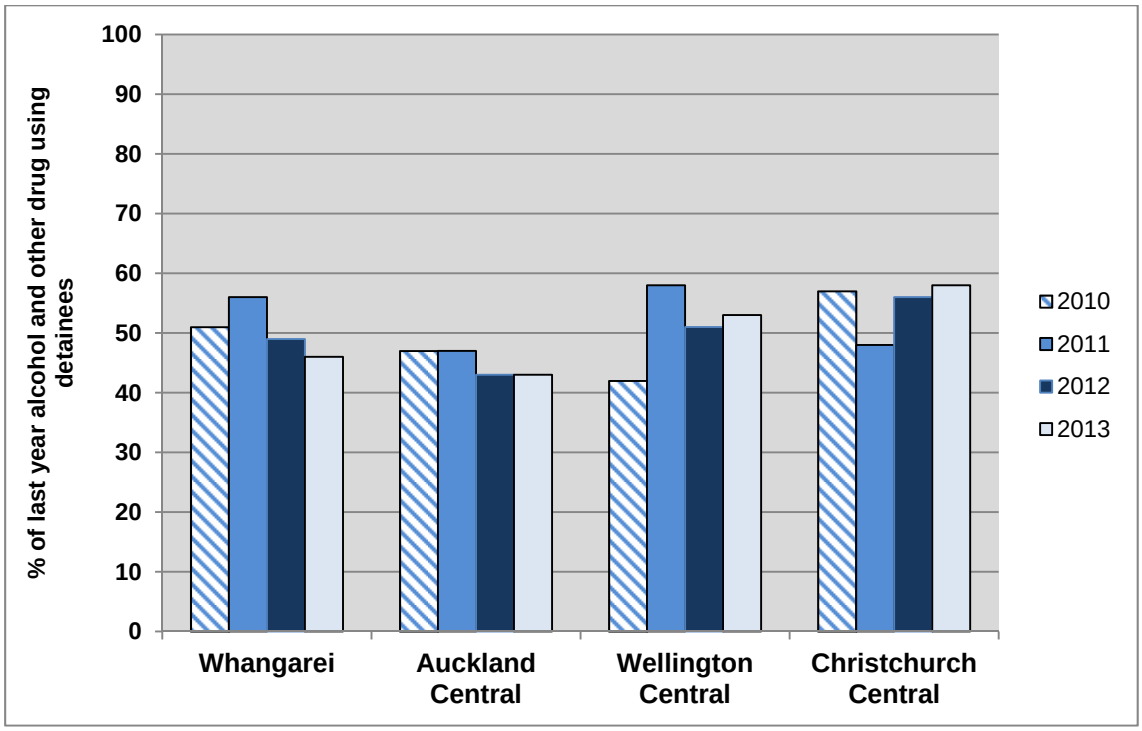
Aggression due to alcohol and other drug use

Fifty-seven percent of the alcohol and other drug using police detainees reported 'losing their temper' due to their substance use during the previous 12 months in 2013 (Table 13.2). Fifty percent had 'physically or verbally threatened someone' as a result of their substance use and 40% had been 'physically or verbally threatened' in 2013.

Table 13.2: Proportion of alcohol and other drug using detainees who reported aggression due to their substance use in the past 12 months by location, 2010-2013

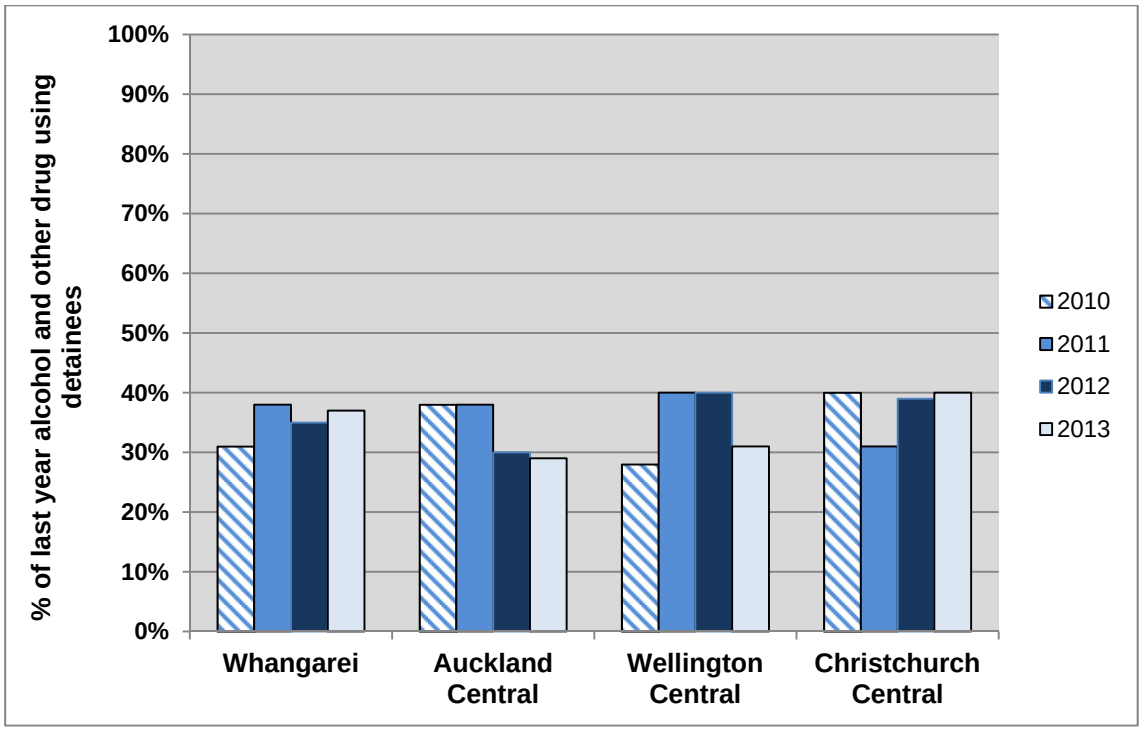
Harm (%)	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All sites			
	2010 (n=110)	2011 (n=147)	2012 (n=144)	2013 (n=142)	2010 (n=267)	2011 (n=299)	2012 (n=233)	2013 (n=278)	2010 (n=149)	2011 (n=163)	2012 (n=96)	2013 (n=103)	2010 (n=259)	2011 (n=190)	2012 (n=295)	2013 (n=272)	2010 (n=785)	2011 (n=801)	2012 (n=766)	2013 (n=800)
Lost your temper	56	67	56	51	56	59	48	54	54	63	64	54	60	56	61	64	57	60	56	57
Physically or verbally threatened someone	51	56	49	46	47	47	43	43	42	58	51	53	57	48	56	58	50	50	50	50
Were physically or verbally threatened	38	37	38	35	49	44	41	37	40	45	41	46	37	39	46	44	42	42	42	40
Physically hurt someone	31	38	35	37	38	38	30	29	28	40	40	31	40	31	39	40	36	36	36	34
Were physically assaulted	31	37	31	30	36	33	35	30	33	34	41	39	35	38	38	32	34	35	36	32

Figure 13.4: Proportion of police detainees who had physically or verbally threatened someone as a result of their alcohol and other drug use by location (of those who used a substance in the past 12 months), 2010-2013



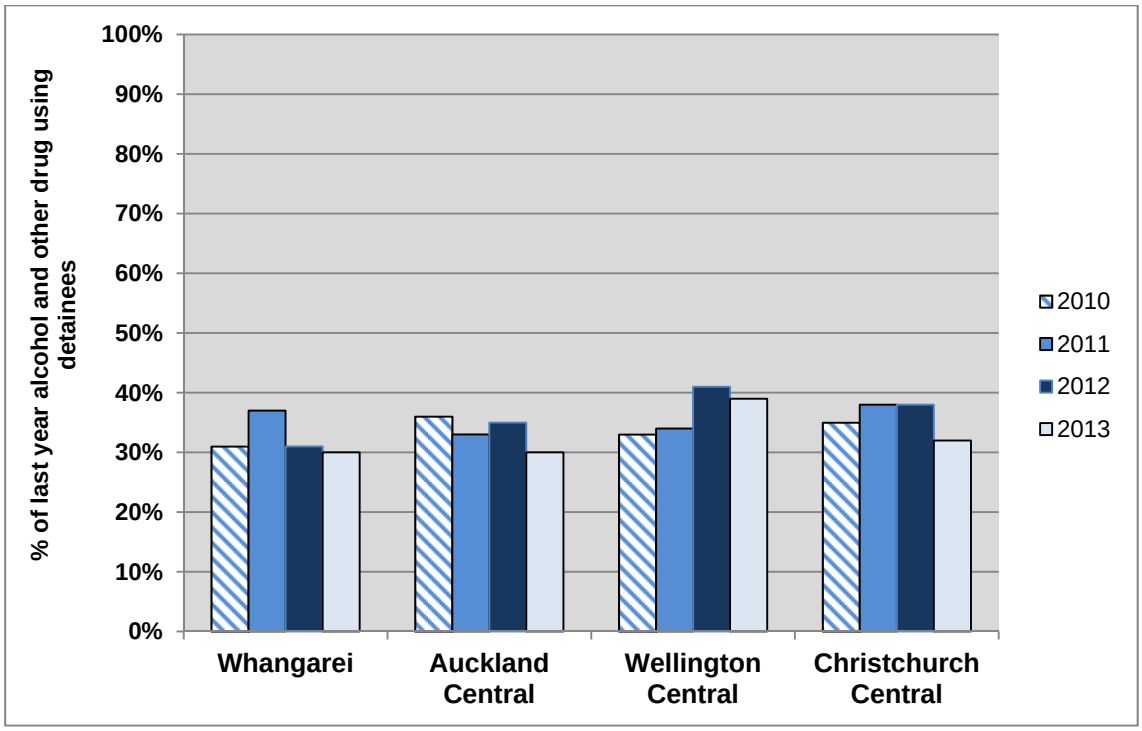
Thirty-four percent of the detainees had 'physically hurt someone' as a result of their alcohol and other drug use (Figure 13.5) and thirty-two percent had themselves been physically hurt due to someone else's alcohol and other drug use (Figure 13.6).

Figure 13.5: Proportion of police detainees who physically hurt someone as a result of their alcohol and other drug use by location (of those who used a substance in the past 12 months), 2010-2013



There was a decline in the proportion of Auckland Central detainees who had 'physically hurt someone' as a result of their alcohol and other drug use (down from 38% in 2011 to 29% in 2013), and this decline was close to being statistically significant (p=0.0886) (Figure 13.5). In 2013, Auckland Central detainees were less likely to report 'physically hurting someone' as a result of their alcohol and other drug use than those in Christchurch Central (29% vs. 40%, p=0.0215).

Figure 13.6: Proportion of police detainees who were physically assaulted as a result of their alcohol and drug use by location (of those who used a substance in the past 12 months), 2010-2013



Driving incidents due to alcohol and other drug use

Almost a third (32%) of the detainees did not drive or had had their driving license revoked in 2013. Thirty-eight percent of the alcohol and other drug using police detainees who drove reported driving 'too fast' due to their substance use in the previous 12 months in 2013. Thirty-two percent had been charged with a 'driving offence', 28% received a 'traffic ticket', 22% had 'lost concentration while driving', 26% 'lost their temper at another driver' and 28% 'drove through a stop sign or red light' as a result of their alcohol and other drug use in the previous year in 2013. Sixteen percent 'couldn't remember driving home' and 16% had 'had a car crash' due to their alcohol and other drug use.

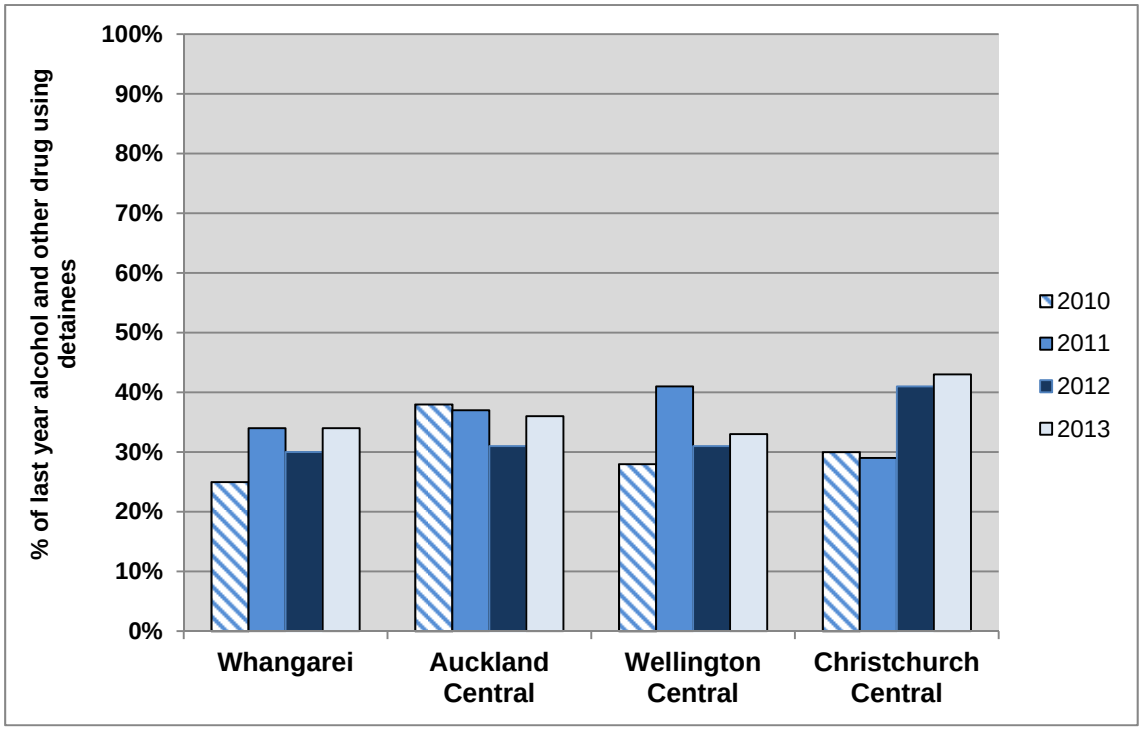
Table 13.3: Proportion of alcohol and other drug using detainees who reported a driving related incident due to their alcohol and other drug use in the past 12 months by location, 2010-2013

Harm (%)	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All sites			
	2010 (n=106)	2011 (n=114)	2012 (n=131)	2013 (n=102)	2010 (n=191)	2011 (n=234)	2012 (n=144)	2013 (n=214)	2010 (n=97)	2011 (n=96)	2012 (n=77)	2013 (n=58)	2010 (n=223)	2011 (n=163)	2012 (n=203)	2013 (n=175)	2010 (n=617)	2011 (n=618)	2012 (n=556)	2013 (n=545)
Drove too fast	25	34	30	34	38	37	31	36	28	41	31	33	30	29	41	43	31	34	33	38
Charged with a driving offence	36	37	24	33	35	31	32	31	30	33	27	24	24	31	34	36	30	32	30	32
Got a traffic ticket	27	39	20	31	32	29	27	26	29	37	22	22	22	20	26	34	27	28	25	28
Drove through a stop sign or red light	22	25	14	22	29	35	24	34	20	30	18	15	16	20	22	29	22	27	20	28
Lost your temper at another driver	13	21	18	21	29	31	21	27	31	29	25	20	22	23	20	29	24	26	21	26
Lost concentration while driving	16	18	18	22	26	21	24	22	20	20	27	22	17	17	22	23	20	19	23	22
Couldn't remember driving home	22	18	14	14	17	18	21	18	18	14	19	8	15	14	21	19	17	16	19	16

Nearly hit another car	15	20	9	15	22	20	21	20	14	19	18	12	14	12	13	14	17	17	16	16
Had a car crash	14	12	8	14	15	16	15	16	15	15	13	12	13	11	13	18	14	13	13	16
Nearly hit a pedestrian	3	3	4	2	2	6	6	6	3	3	3	3	3	2	2	3	3	4	4	4

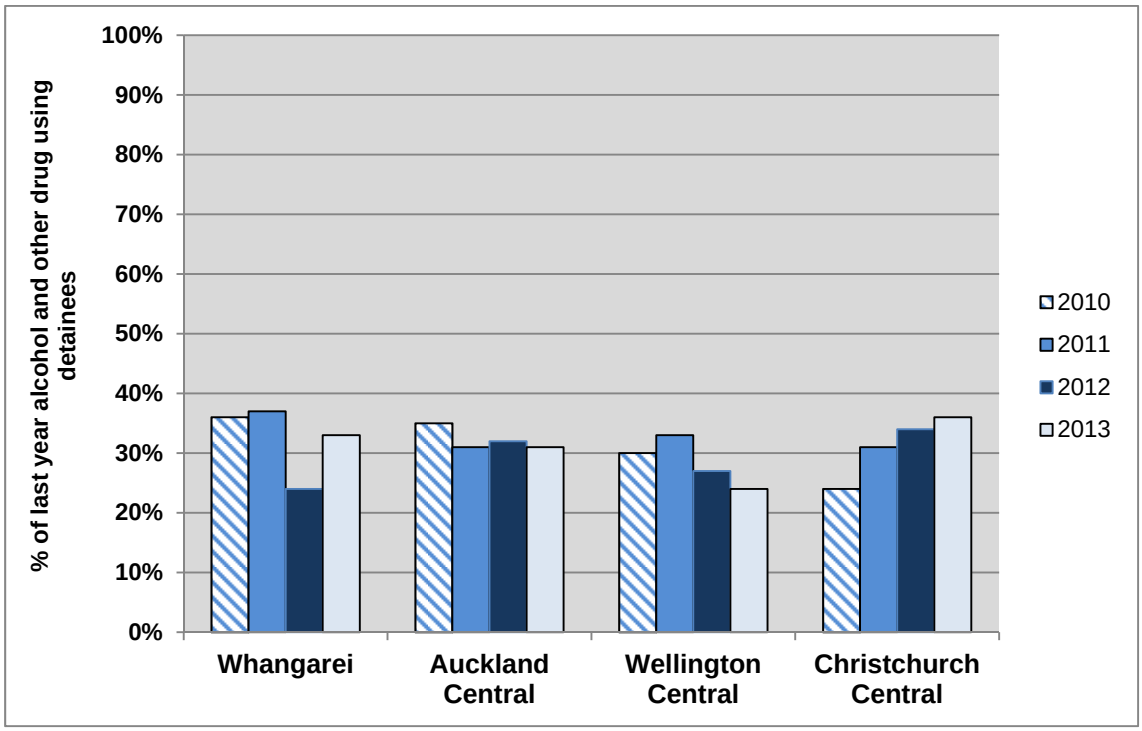
The proportion of detainees who reported 'driving too fast' as a result of their alcohol and other drug use increased from 31% in 2010 to 38% in 2013, but this increase was not statistically significant (p=0.1025). The proportion of Christchurch Central detainees who reported 'driving too fast' due to their alcohol and other drug use increased from 30% in 2010 to 43% in 2013 (p=0.0236), with a sharp increase from 29% in 2011 to 43% in 2013 (p=0.0407) (Figure 13.7).

Figure 13.7: Proportion of police detainees who reported driving too fast as a result of their alcohol and other drug use by location, 2010-2013



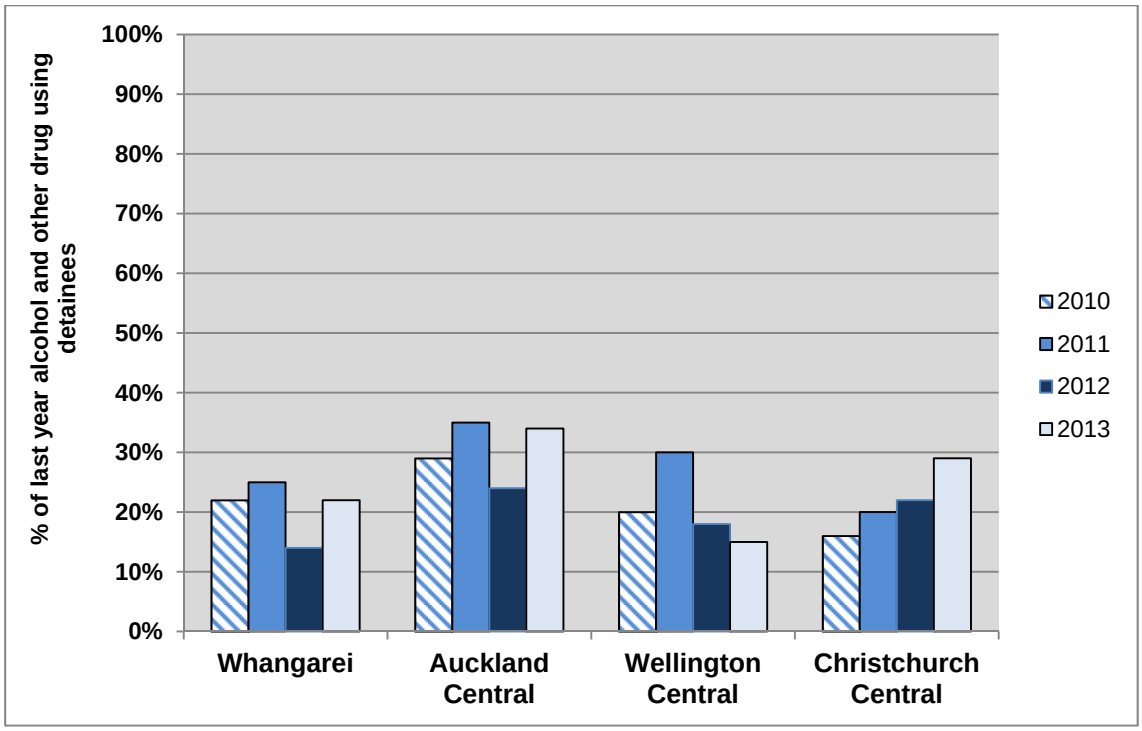
The proportion of Christchurch Central detainees who were charged with a driving offences as a result of their alcohol and other drug use also increased from 24% in 2010 to 33% in 2013 (p=0.0436) (Figure 13.8).

Figure 13.8: Proportion of police detainees who had been charged with a driving offence as a result of their alcohol and other drug use by location, 2010-2013



The proportion of detainees in Christchurch Central who reported getting a traffic ticket as a result of their alcohol and other drug use increased from 22% in 2010 to 34% in 2013, p=0.0550). The proportion of detainees who reported driving through a stop sign or red light in the past 12 months as a result of their alcohol and other drug use increased from 20% in 2012 to 28% in 2013 (p=0.0226). A higher proportion of Christchurch Central detainees had driven through a stop sign or red light (up from 16% in 2010 to 29% in 2013, p=0.0120) (Figure 13.9). In 2013, Auckland Central detainees were more likely to have driven through a stop sign or red light due to alcohol and other drug use than those from Wellington Central (34% vs. 15%, p=0.0333) and Whangarei (34% vs. 22%, p=0.1074).

Figure 13. 9: Proportion of police detainees who had driven through a stop sign or red light as a result of their alcohol and other drug use by location, 2010-2013



Sexual harm incidents due to alcohol and other drug use

The proportion of the detainees reported having 'unprotected sex' due to their alcohol and other drug use decreased from 51% in 2010 to 43% in 2013 (p=0.0087). Whangarei detainees were less likely to have unprotected sex due to their substance use (down from 45% to 29% in 2013, p=0.0241). The proportion of detainees who reported 'having sex and later regretting it' decreased down from 34% in 2010 to 28% in 2010 (p=0.0469). In 2013, a higher proportion of Auckland Central detainees reported being 'sexually harassed' due to their alcohol and other drug use compared to Christchurch Central detainees (9% vs. 4%, p=0.0755) and Whangarei detainees (9% vs. 2%, p=0.0544).

Table 13.4: Proportion of alcohol and other drug using detainees who reported sexual harm related to their substance use in the past 12 months by location, 2010-2013

Harm (%)	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All sites			
	2010 (n=111)	2011 (n=146)	2012 (n=141)	2013 (n=141)	2010 (n=265)	2011 (n=298)	2012 (n=231)	2013 (n=278)	2010 (n=148)	2011 (n=164)	2012 (n=95)	2013 (n=103)	2010 (n=259)	2011 (n=190)	2012 (n=291)	2013 (n=270)	2010 (n=783)	2011 (n=800)	2012 (n=757)	2013 (n=792)
Had unprotected sex	41	48	45	29	47	41	46	40	46	50	49	45	61	55	55	51	51	48	50	43
Had sex and later regretted it	29	42	27	22	33	28	24	31	34	29	27	32	39	37	35	26	34	33	29	28
Had sex but felt you hadn't wholly consented	11	12	9	9	13	13	12	15	15	14	5	14	12	13	13	12	13	13	10	13
Were sexually harassed	2	5	5	2	7	7	7	9	9	8	8	7	6	5	6	4	6	6	7	6
Were sexually assaulted	1	3	3	2	3	4	3	5	6	7	5	4	3	2	3	2	3	4	3	4

Main drug types attributed to alcohol and other drug-related problems in the previous 12 months

Those detainees who had experienced problems related to their alcohol and drug use in the previous year were asked about the drug type(s) to which they mainly attributed these problems. Detainees could nominate more than one drug type. The detainees named three drug types as mainly responsible for their substance use problems: alcohol (76%), cannabis (25%) and methamphetamine (18%) (Table 13.5). Eight percent of the detainees considered 'synthetic cannabis' to be responsible for their substance use problems (up from only <1% in 2012).

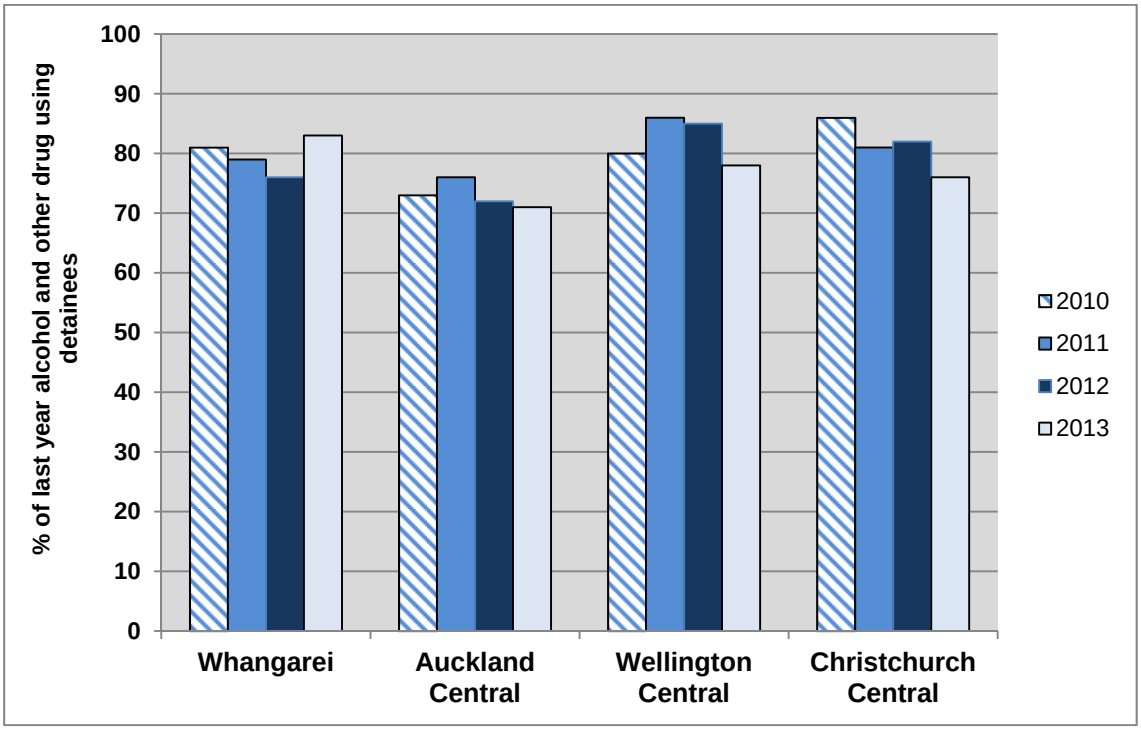
Table 13.5: Drug type(s) which the police detainees nominated as responsible for their substance related problems in the past 12 months by location, 2010-2013

Drug (%)	Whangarei				Auckland Central				Wellington Central				Christchurch Central				All sites			
	2010 (n=105)	2011 (n=134)	2012 (n=135)	2013 (n=146)	2010 (n=229)	2011 (n=248)	2012 (n=209)	2013 (n=279)	2010 (n=130)	2011 (n=148)	2012 (n=88)	2013 (n=103)	2010 (n=241)	2011 (n=166)	2012 (n=268)	2013 (n=273)	2010 (n=705)	2011 (n=696)	2012 (n=700)	2013 (n=801)
Alcohol	81	79	76	83	73	76	72	71	80	86	85	78	86	81	82	76	80	80	79	76
Cannabis	30	33	34	28	33	28	23	23	32	28	31	24	36	38	29	28	33	32	28	25
Methamphetamine	12	19	13	14	21	28	21	28	14	11	10	17	8	7	8	10	14	17	14	18
Synthetic cannabis	-	1	0	9	-	0	<1	4	-	0	0	10	-	0	0	12	-	<1	<1	8
Tobacco	4	5	4	1	3	4	5	3	2	5	3	0	11	9	4	2	6	6	4	2
LSD	1	0	0	1	1	<1	<1	3	5	3	0	1	4	1	1	1	3	1	1	2
Ecstasy	2	4	6	1	2	3	3	2	5	4	6	2	2	1	1	<1	3	3	3	1
Benzodiazepines	2	1	1	0	2	<1	1	<1	1	1	1	0	4	1	3	1	2	1	2	<1
Can't specify	2	0	1	0	4	0	0	<1	0	2	0	0	2	0	1	0	2	<1	<1	<1
Morphine	2	0	0	0	2	0	<1	1	0	1	1	0	5	3	3	3	2	1	1	1
Magic mushrooms	1	1	2	0	1	1	<1	<1	3	2	0	0	2	1	2	1	2	1	1	<1
Amphetamine	1	1	1	0	1	2	0	1	1	2	2	1	1	2	<1	<1	1	2	1	1

Street BZP	0	0	0	0	0	0	<1	0	1	0	0	0	2	2	1	<1	1	1	1	<1
Heroin	1	0	0	0	1	<1	0	1	2	1	0	0	<1	2	1	<1	1	1	<1	<1
'Homebake' Morphine/heroin	0	1	0	0	0	<1	0	<1	0	1	0	0	2	1	1	1	1	1	<1	<1
Ice (crystal meth-amphetamine)	3	0	0	0	<1	<1	<1	2	1	0	0	0	<1	1	<1	0	1	1	<1	1
Methadone	0	0	0	0	1	0	1	1	1	1	0	0	2	1	1	<1	1	1	1	1
Ritalin (methylphenidate)	0	0	0	0	0	0	0	0	1	0	1	0	3	1	2	1	1	<1	1	<1
Amyl nitrate	0	0	0	1	<1	0	0	1	0	0	0	0	1	0	1	0	<1	0	<1	<1
Cocaine	1	2	1	0	<1	<1	0	1	0	0	0	0	0	0	0	0	<1	<1	<1	<1
Codeine	0	0	0	0	0	<1	<1	<1	0	0	0	0	1	0	1	<1	<1	<1	1	<1
GHB	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	<1	0	<1	<1
Tramadol	0	0	0	0	<1	0	<1	1	0	0	0	0	<1	0	2	0	<1	0	1	<1
Antidepressants	1	0	0	0	<1	0	0	<1	0	0	0	0	<1	0	0	<1	<1	0	0	<1
Opium poppies	0	0	0	0	0	0	<1	0	0	0	0	0	<1	0	1	0	<1	0	1	0
Zopiclone	0	0	0	0	<1	0	<1	0	0	0	0	0	<1	0	1	0	<1	0	<1	0
Buprenorphine	0	0	0	0	0	0	0	0	0	0	0	0	<1	0	0	0	<1	0	0	0

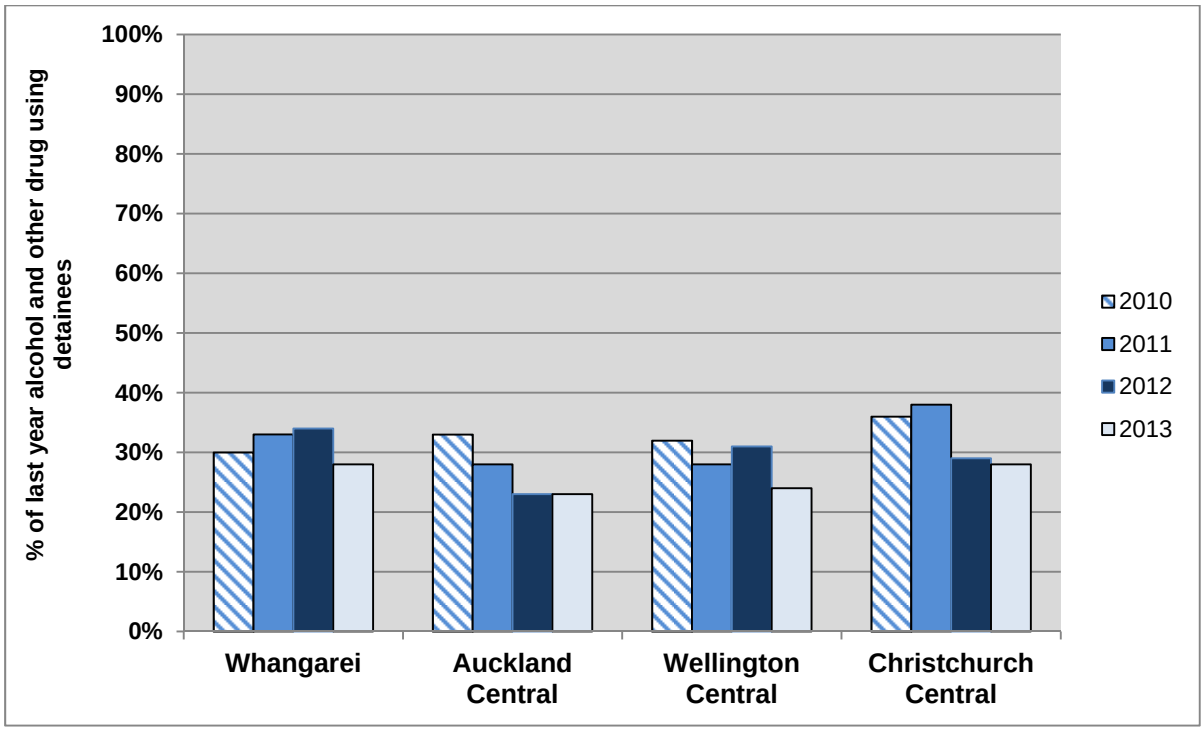
Overall, there was no statistically significant change in the proportion of detainees who attributed their substance use problems to alcohol (Figure 13.10). However, the proportion of Christchurch Central detainees who attributed their problems to alcohol declined from 86% in 2010 to 76% in 2013 (p=0.0333).

Figure 13.10: Proportion of police detainees who attributed their substance use related problems to alcohol by location (of those detainees who experienced an alcohol and drug problem in the past 12 months), 2010-2013



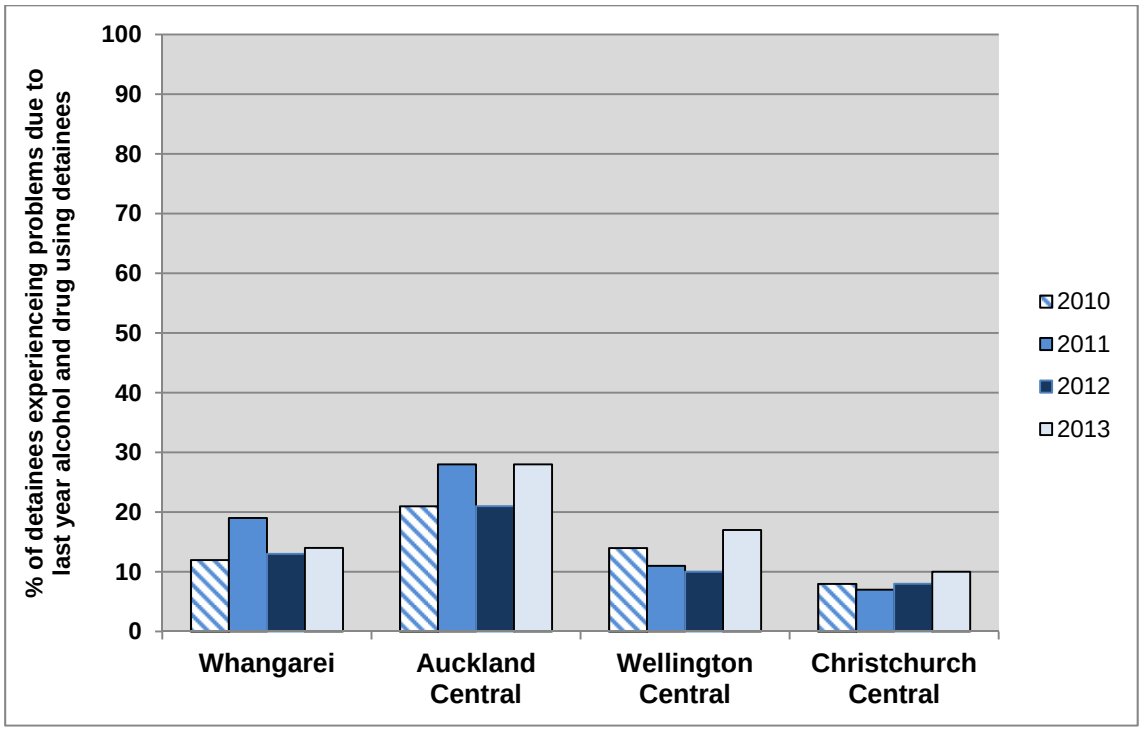
The proportion of detainees who attributed their substance use related problems to cannabis declined from 33% in 2010 to 25% in 2013 (p=0.0057). A lower proportion of Auckland Central detainees attributed their substance use related problems to cannabis (down from 33% in 2010 to 23% in 2013, p=0.0598) (Figure 13.11). Similarly, a lower proportion of Christchurch Central detainees attributed their substance use related problems to cannabis (down from 38% in 2011 to 28% in 2013) but this decline was not statistically significant (p=0.1427).

Figure 13.11: Proportion of police detainees who attributed their substance use related problems to cannabis by location (of those detainees who had experienced an alcohol and other drug problem in the past 12 months), 2010-2013



Overall, a higher proportion of detainees attributed their substance use problems to methamphetamine (up from 14% in 2010 to 18% in 2013), but this increase was not statistically significant (p=0.1356). A similar increase in those attributing substance use problems to methamphetamine was found from 2012 to 2013 (up from 14% to 18%), but, again, this increase was not statistically significant (p=0.1106). The proportion of Auckland Central detainees who attributed their substance use problems to methamphetamine increased from 21% in 2010 to 28% in 2013, but, again, this increase was not statistically significant (p=0.2207). In 2013, detainees in Auckland Central were more likely to attribute their substance use related problems to methamphetamine than those in Christchurch Central (28% vs.10%, p<0.0001) and Whangarei (28% vs. 14%, p=0.0057) (Figure 13.12).

Figure 13.12: Proportion of police detainees who attributed their substance use related problems to methamphetamine by location (of those detainees who experienced an alcohol and other drug problem in the past 12 months), 2010-2013



The proportion of detainees who attributed their substance use related problems to tobacco declined from 6% in 2011 to 2% in 2013 (p=0.0005), and from 4% in 2012 to 2% in 2013 (p=0.0524). The proportion of detainees who attributed their substance use related problems to ecstasy declined from 3% in 2012 to 1% in 2013, and this decline was close to being statistically significant (p=0.1012). Finally, a lower proportion attributed their substance use problems to benzodiazepines (down from 2.4% in 2010 to 0.36% in 2013, p=0.0262).

Alcohol and Driving

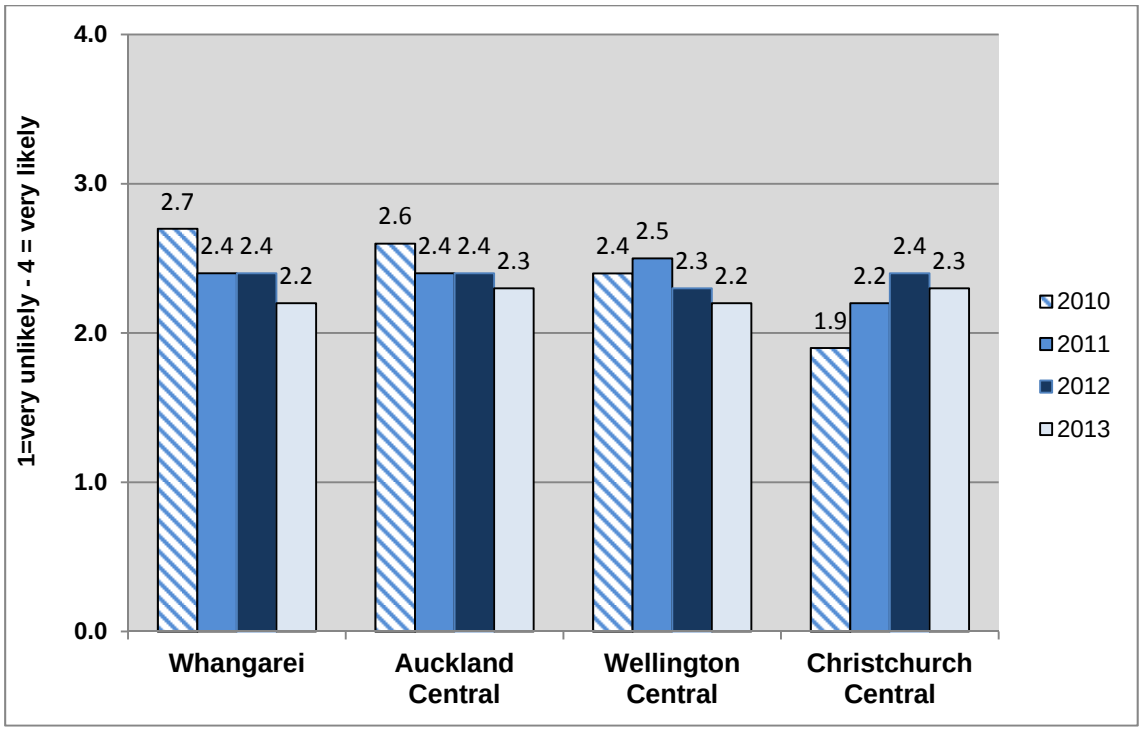
The detainees who had used alcohol and other drugs in the previous 12 months were asked how likely they thought it was that they would be stopped if they drove under the influence of alcohol. Twenty-eight percent of the detainees had not driven in the previous 12 months. Fifty-seven percent of the detainees who had driven thought it was 'unlikely' or 'very unlikely' they would be stopped by the police while driving under the influence of alcohol (Table 13.6). Overall, there was no change in the detainees' perceptions of the likelihood of being stopped while driving under the influence of alcohol from 2010 to 2013 (p=0.1767).

However, detainees from Christchurch Central were more likely to believe they would be stopped while driving under the influence of alcohol from 2010 to 2013 (mean score up from 1.9 to 2.3, p=0.0301) (Figure 13.13).

Table 13.6: Police detainees' perceptions of the likelihood of being stopped by police whilst driving under the influence of alcohol by location (of those detainees who used alcohol and other drugs in the past year and who drove), 2010-2013

Likelihood of being stopped by police while under influence of alcohol	Whangarei				Auckland Central				Wellington Central				Christchurch Central				Total			
	2010 (n=29)	2011 (n=112)	2012 (n=116)	2013 (n=107)	2010 (n=153)	2011 (n=205)	2012 (n=149)	2013 (n=194)	2010 (n=110)	2011 (n=102)	2012 (n=69)	2013 (n=54)	2010 (n=226)	2011 (n=140)	2012 (n=227)	2013 (n=167)	2010 (n=518)	2011 (n=563	2012 (n=552)	2013 (n=522)
Very likely (4)	28	23	26	21	22	18	28	23	25	23	17	17	16	20	27	21	20	20	25	21
Likely (3)	28	26	25	20	33	30	20	22	22	29	25	20	16	18	20	23	23	25	22	22
Unlikely (2)	31	16	18	22	25	30	20	22	22	22	25	28	15	24	20	18	20	25	21	22
Very unlikely (1)	14	36	31	37	20	22	32	34	32	26	33	35	54	38	33	38	37	30	32	35
Mean score of likelihood of being stopped (1=Very unlikely – 4=Very likely)	2.7	2.4	2.5	2.2	2.6	2.4	2.4	2.3	2.4	2.5	2.3	2.2	1.9	2.2	2.4	2.3	2.3	2.4	2.4	2.3

Figure 13.13: Mean score of likelihood of being stopped while driving under the influence of alcohol by location (of those detainees who used alcohol and other drugs in the past year and who drove), 2010-2013



Drugs and Driving

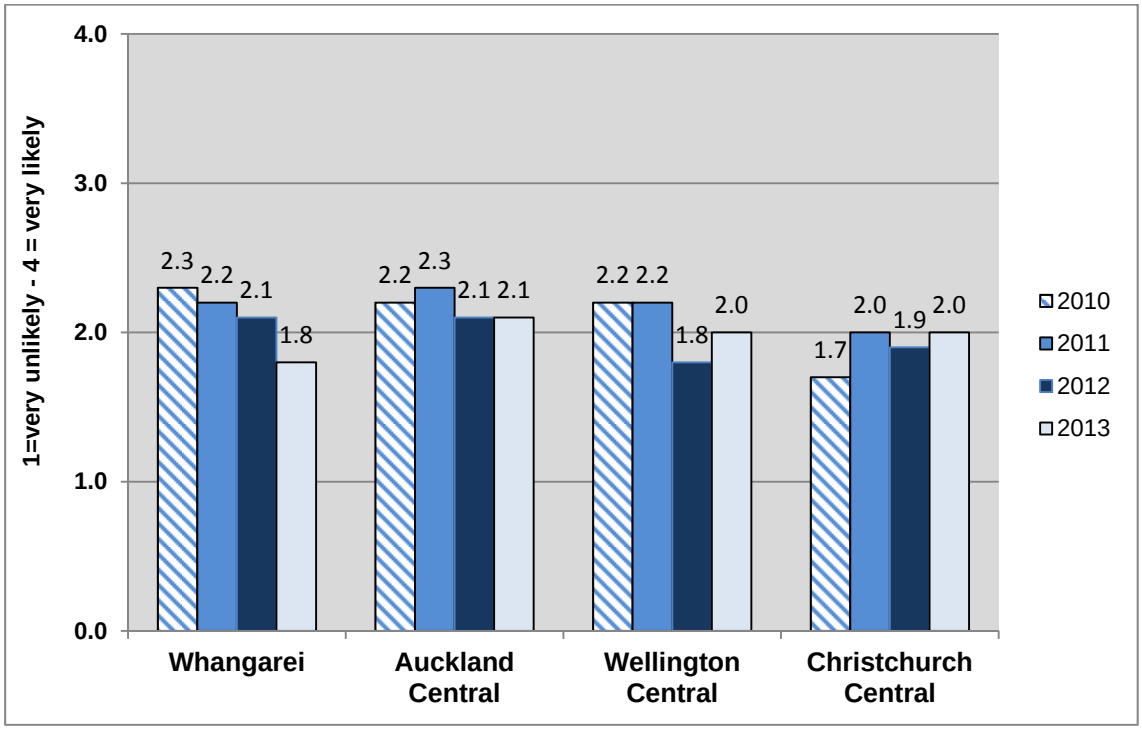
The detainees who had recently used alcohol and other drugs were also asked how likely they thought it was that they would be stopped if they drove under the influence of drugs *other than alcohol* (e.g. cannabis, methamphetamine, ecstasy or heroin). Approximately a quarter (28%) of the detainees had not driven in the past year in 2013. Sixty-four percent of the detainees who did drive thought it was 'unlikely' or 'very unlikely' they would be stopped by the police while driving under the influence of drugs (other than alcohol) in 2013 (Table 13.7). Overall, the detainees were less likely to think they would be stopped if they drove under the influence of drugs from 2011 to 2013 (down from 2.2 to 2.0), although this decline was not statistically significant.

Table 13.7: Police detainees' perceived likelihood of being stopped by the police whilst driving under the influence of drugs other than alcohol by location (of those detainees who used alcohol and drugs in the past year and who drove), 2010-2013

Likelihood of being stopped by police while under influence of drugs	Whangarei				Auckland Central				Wellington Central				Christchurch Central				Total			
	2010 (n=29)	**2011 (n=93)**	**2012 (n=110)**	2013 (n=109)	**2010 (n=144)**	**2011 (n=176)**	**2012 (n=131)**	2013 (n=192)	**2010 (n=106)**	**2011 (n=92)**	**2012 (n=66)**	2013 (n=101)	**2010 (n=219)**	**2011 (n=132)**	**2012 (n=202)**	2013 (n=165)	**2010 (n=498)**	**2011 (n=501)**	**2012 (n=501)**	2013 (n=519)
Very likely (4)	14	18	14	9	15	13	16	13	20	16	5	15	9	11	11	16	13	13	12	14
Likely (3)	24	25	20	17	24	30	16	22	19	22	23	17	16	23	16	16	19	25	18	19
Unlikely (2)	45	18	30	20	28	31	30	30	26	27	26	23	17	23	28	18	24	26	28	24
Very unlikely (1)	17	39	36	53	33	27	38	35	35	35	47	45	58	42	45	49	44	36	42	44
Mean score of likelihood of being stopped (1=Very unlikely – 4=Very likely)	2.3	2.2	2.1	1.8	2.2	2.3	2.1	2.1	2.2	2.2	1.8	2.0	1.7	2.0	1.9	2.0	2.0	2.2	2.0	2.0

Whangarei detainees believed they were less likely to be stopped by police while driving under the influence of drugs from 2011 to 2013 (down from 2.2 to 1.8, p=0.0389). Wellington Central detainees also thought they were less likely to be stopped by police while driving under the influence of drugs from 2010 to 2013 (down from 2.2 to 2.0), and this difference was close to being statistically significant (p=0.1018). Conversely, Christchurch Central detainees were more likely to believe they would be stopped by police while driving under the influence of drugs from 2010 to 2013 (up from 1.7 to 2.0) and this increase was close to being statistically significant (p=0.1016) (Figure 13.14).

Figure 13.14: Mean score of likelihood of being stopped while under the influence of drugs (other than alcohol) by location (of those detainees who used alcohol and drugs in the past year and who drove), 2010-2013



Summary

- Ninety-seven percent of the police detainees had used alcohol, legal highs, tobacco or other drugs in the previous 12 months in 2013, and this had not changed from previous years

- Seventy-six percent had used an illegal drug in the previous 12 months in 2013, and this had not changed from previous years

- Eighty-nine percent of the detainees who used alcohol and other drugs had experienced at least one problem from their substance use in the previous 12 months in 2013, and this had not changed from previous years

- High proportions of the detainees reported experiencing problems such as family issues, financial issues, low work performance, verbal and physical aggression, dangerous driving and risky sexual behavior

- Forty percent of the alcohol and other drug using detainees had 'damaged someone's property' as a result of their substance use in 2013

- Thirty percent of the alcohol and other drug using detainees 'stole someone's property' as a result of their substance use in 2013

- Thirty-four percent of the alcohol and other drug using detainees had 'physically hurt someone' as a result of their substance use in 2013

- There was a decline in the proportion of Auckland Central detainees who had 'physically hurt someone' as a result of their alcohol and other drug use (down from 38% in 2011 to 29% in 2013)

- Ten percent of the substance using detainees had overdosed on drugs in 2013

- Thirty-eight percent of the detainees had 'driven too fast' due to their alcohol and other drug use in 2013

- The proportion of Christchurch Central detainees who had driven too fast due to alcohol and other drug use increased from 30% in 2010 to 43% in 2013

- The proportion of Christchurch Central detainees who had been charged with a driving offence as a result of alcohol and other drug use increased from 24% in 2010 to 33% in 2013

- Twenty-eight percent of the detainees had 'driven through a stop sign or red light' due to their alcohol and drug use in 2013

- Sixteen percent of the detainees 'couldn't remember driving home' as a result of their alcohol and other drug use in 2013

- Sixteen percent of the detainees had 'had a car crash' as a result of their alcohol and other drug use in 2013

- The detainees named three drug types as mainly responsible for their substance use problems in 2013: alcohol (76%), cannabis (25%) and methamphetamine (18%)

- Eight percent of the detainees considered 'synthetic cannabis' to be responsible for their substance use problems (up from only <1% in 2012)

- There was no change in the proportion of detainees who attributed their substance use problems to alcohol over the past four years

- The proportion of detainees who attributed their substance use related problems to cannabis declined from 33% in 2010 to 25% in 2013

- The proportion of detainees who attributed their substance use problems to methamphetamine increased slightly from 14% in 2010 to 18% in 2013

- The proportion of detainees who attributed their substance use related problems to ecstasy declined from 3% in 2012 to 1% in 2013

- The proportion of detainees who attributed their substance use related problems to tobacco declined from 6% in 2011 to 2% in 2013

- Fifty-seven percent of the detainees who drove thought it was 'unlikely' or 'very unlikely' they would be stopped by the police while driving under the influence of alcohol in 2013

- Christchurch Central detainees thought they were more likely to be stopped while driving under the influence of alcohol from 2010 to 2013

- Sixty-four percent of the detainees who drove thought it was ‘unlikely’ or ‘very unlikely’ they would be stopped by the police while driving under the influence of drugs in 2013

- Whangarei and Wellington Central detainees were less likely to believe they would be stopped by police while driving under the influence of drugs

- Christchurch Central detainees were more likely to believe they would be stopped by police while driving under the influence of drugs from 2010 to 2013

Chapter 14 – Legal highs

Introduction

Over the past five years or so an increasing number of new psychoactive substances (NPS) have emerged around the world, with many sold as so called 'legal highs' (EMCDDA, 2013; UNODC, 2013). New Zealand has been at the forefront of this phenomenon, experiencing successive waves of 'legal highs' including 'party pills' containing benzylpiperazine (BZP) and dimethylamylamine (DMAA), synthetic cannabimimetic products (e.g. K2, Kronic), and plant extracts such as salvia divinorum (Wilkins & Sweetsur, 2013).

New Zealand has reported some of the highest prevalence rates for legal highs in the world. For example, in 2006, 40% of males aged 18-24 years reported using legal BZP party pills in the previous year (Wilkins et al., 2007). In 2011, 45% of frequent ecstasy users had used synthetic cannabinoids in the previous six months (Wilkins, et al., 2012c). Use of these products has resulted in increased hospital emergency department admissions and poisoning notifications, involving seizure, renal toxicity, respiratory failure, hyperthermia, serotonin syndrome, rhabdomyolsis and psychosis (Every-Palmer, 2010; Gee & Fountain, 2007; Gee et al., 2005; Hermanns-Clausen et al., 2013). Little research has been conducted on the patterns of use, dependency and health problems of these products outside of clinical contexts and among the wider population of users (Wilkins, 2014a, 2014b). Manufacturers of legal highs claim their products offer a 'safer' alternative to existing illegal drugs (Birdwell et al., 2011). Yet, to date, no research has been conducted comparing the health consequences of legal high products to those of existing legal and illegal drugs, or the extent to which users substitute legal highs for existing drugs.

Use of synthetic cannabinoids

Fifty-four percent of the police detainees had tried synthetic cannabinoids at some point in their lives, 47% had used synthetic cannabinoids in the previous 12 months, and 29% had used them in the previous month in 2013 (Table 14.1). Detainees in Christchurch Central were more likely to have ever tried synthetic cannabinoids than those in Auckland Central

(62% vs. 48%, p=0.0030) (Figure 14.1). Detainees in Christchurch Central were also more likely to have used synthetic cannabinoids in the previous 12 months than those in Auckland Central (53% vs. 40%, p=0.0106). Detainees in Wellington Central were more likely to have used synthetic cannabinoids in the previous month than those in Whangarei (36% vs. 24%), but this difference was not statistically significant (p=0.1904). There were no other statistically significant differences in use in the previous month between the site locations.

Figure 14 1: Proportion of police detainees who had used synthetic cannabinoids in their lifetimes, previous 12 months, and previous 30 days, by location, 2013

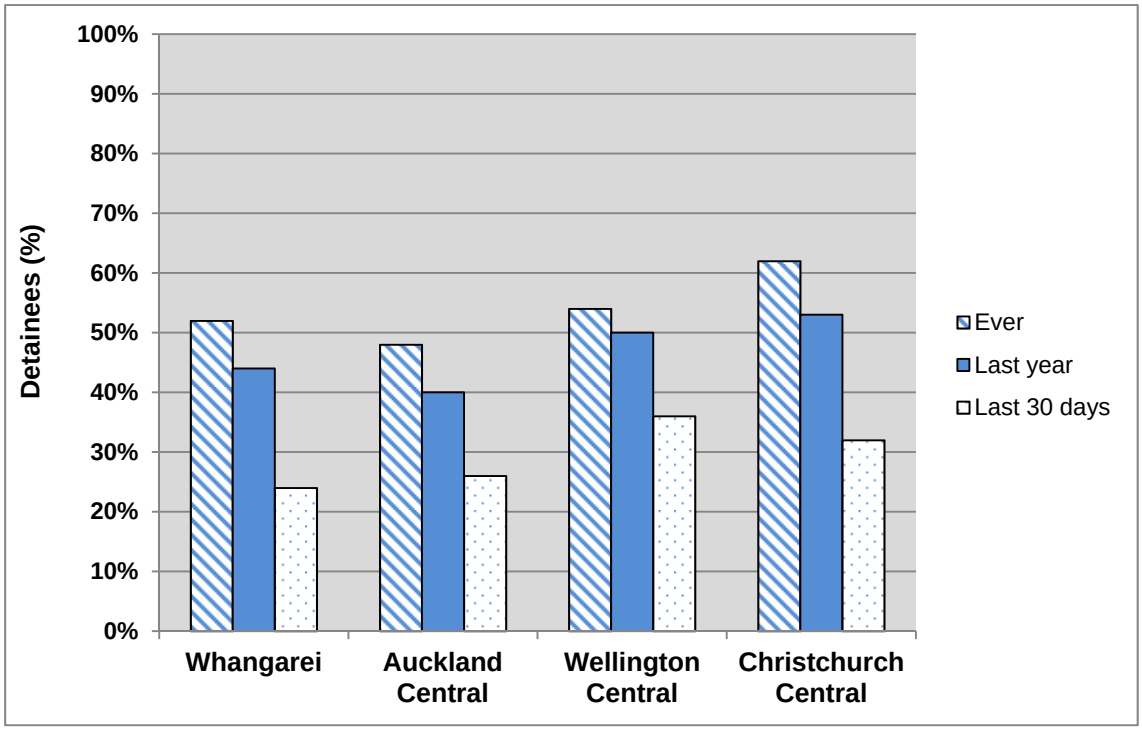


Table 14.1: Police detainees' patterns of synthetic cannabinoids' use by location, 2013

Use of synthetic cannabinoids	Whangarei	Auckland Central	Wellington Central	Christchurch Central	All Sites
	(n=149)	(n=287)	(n=106)	(n=280)	(n=822)
Ever used (%)	52	48	54	62	54
Used in past 12 months (%)	44	40	50	53	47
Mean number of days used in past 12 months**	54	60	74	74	66
Felt dependent in the past 12 months (%)**	10	12	16	24	17
Used in past month (%)	24	26	36	32	29
Mean number of days used in past month***	10	10	11	12	11

** of those who had used in the past 12 months
*** of those who had used in the past month

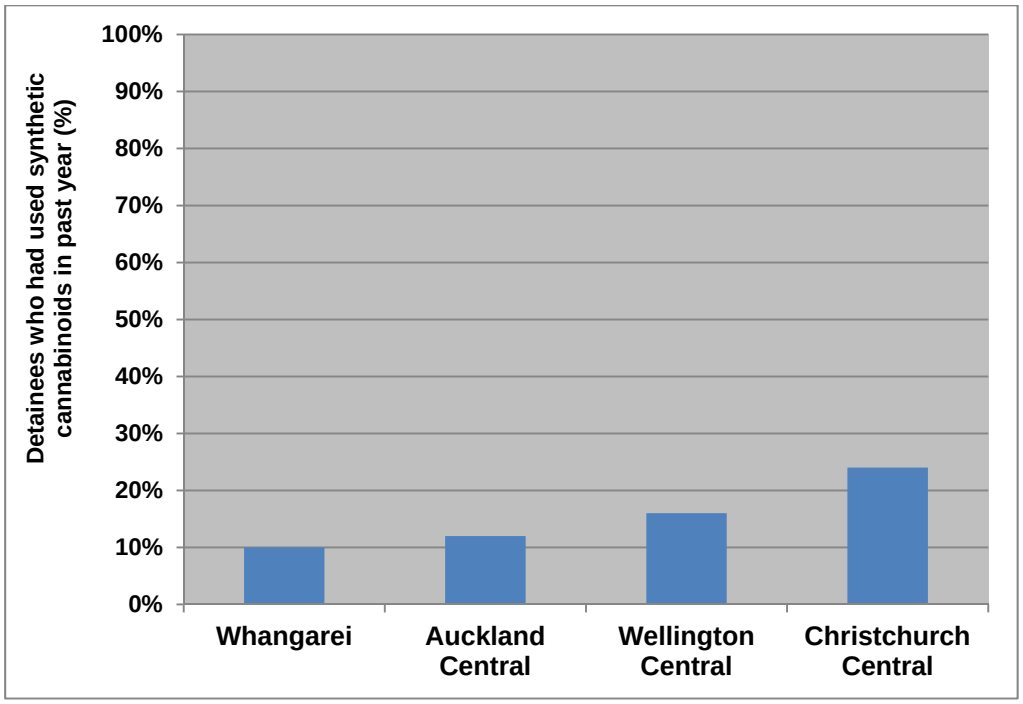
Frequency of synthetic cannabinoids use

The detainees had used synthetic cannabinoids on a mean of 66 days in the previous 12 months in 2013 (median 5, 1-365 days). There were no statistically significant differences between the site locations with respect to the number of days the detainees had used synthetic cannabinoids in the previous year (p=0.5785). The detainees had used synthetic cannabinoids on an average of 11 days in the previous month in 2013 (median 4, 1-30 days). There was no statistically significant difference between the sites with respect to the number of days of use in the previous month (p=0.7815).

Dependency on synthetic cannabinoids

Seventeen percent of the detainees who had used synthetic cannabinoids in the previous year felt they were dependent on them in 2013. Detainees in Christchurch Central were more likely than those in Auckland Central to feel dependent on synthetic cannabinoids (24% vs. 12%, p=0.0509) (Figure 14.2).

Figure 14.2: Proportion of police detainees who felt dependent on synthetic cannabinoids in the past year by location (of those who had used synthetic cannabinoids in the past 12 months), 2013



Synthetic cannabinoids use at the time of arrest

Seven percent of the detainees had been using synthetic cannabinoids prior to their arrest in 2013 (Table 14.2). There was no statistically significant difference between the sites with respect to the proportion of detainees who were using synthetic cannabinoids at the time of arrest (p=0.3644).

Table 14.2: Synthetic cannabinoids use by police detainees at time of arrest by location, 2013

Use of synthetic cannabinoids	Whangarei	Auckland Central	Wellington Central	Christchurch Central	All Sites
	(n=153)	(n=300)	(n=106)	(n=289)	(n=848)
Using when arrested (%)	5	6	9	8	7

Current availability of synthetic cannabinoids

Seventy-two percent of the detainees described the current availability of synthetic cannabinoids as ‘very easy’ (Table 14.3). The availability of synthetic cannabinoids was

considered to be higher in Wellington Central than in Whangarei (3.8 vs. 3.4, p=0.0236) and higher in Wellington Central than Auckland Central (3.8 vs. 3.5, p=0.0345) (Figure 14.3).

Figure 14.3: Current availability of synthetic cannabinoids by location, 2013

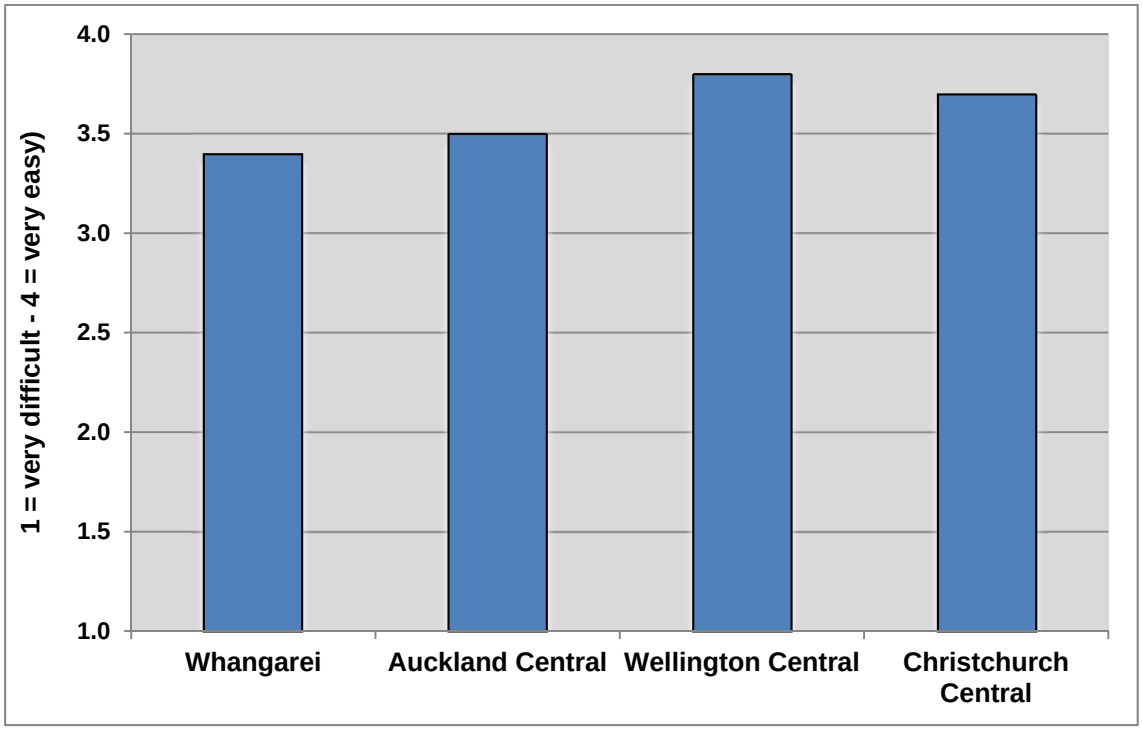


Table 14.3: Police detainees' perceptions of the current availability of synthetic cannabinoids by location, 2013

Current availability of synthetic cannabinoids (%)	Whangarei	Auckland Central	Wellington Central	Christchurch Central	All Sites
	(n=57)	(n=117)	(n=53)	(n=151)	(n=378)
Very easy [4]	61%	65%	85%	78%	72%
Easy [3]	25%	21%	13%	13%	17%
Difficult [2]	5%	10%	0%	5%	6%
Very difficult [1]	9%	4%	2%	3%	4%
Average availability score (1=very difficult – 4=very easy)	3.4	3.5	3.8	3.7	3.6
Overall current status	Very easy/easy	Very easy/easy	Very easy	Very easy	Very easy

Change in availability of synthetic cannabinoids

The detainees reported the availability of synthetic cannabinoids had been 'stable/easier' over the previous six months in 2013 (Table 14.4). There was no statistically significant difference between the sites with respect to how the availability of synthetic cannabinoids had changed over the previous six months (p=0.3408).

Table 14.4: Police detainees' perceptions of the change in availability of synthetic cannabinoids by location, 2013

Change in availability of synthetic cannabinoids (%)	Whangarei	Auckland Central	Wellington Central	Christchurch Central	All Sites
	(n=56)	(n=112)	(n=47)	(n=146)	(n=361)
Easier [3]	38%	17%	21%	26%	24%
Stable [2]	36%	58%	70%	51%	53%
Fluctuates [2]	5%	8%	2%	6%	6%
More difficult [1]	21%	17%	6%	16%	16%
Average change in availability score (1=more difficult – 3=easier)	2.2	2.0	2.1	2.1	2.1
Overall recent change	Easier/ stable	Stable/ easier	Stable/ easier	Stable/ easier	Stable/ easier

Change in the price of synthetic cannabinoids

The detainees reported the price of synthetic cannabinoids had been 'stable' over the previous six months in 2013 (Table 14.5). There was no difference between the sites with respect to assessments of the change in the price of synthetic cannabinoids (p=0.4259).

Table 14.5: Police detainees' perceptions of the change in the price of synthetic cannabinoids in the past six months by location, 2013

Change in price of synthetic cannabinoids (%)	Whangarei	Auckland Central	Wellington Central	Christchurch Central	All Sites
	(n=46)	(n=99)	(n=44)	(n=130)	(n=319)
Increasing [3]	4%	8%	5%	6%	6%
Fluctuating [2]	2%	8%	2%	2%	4%
Stable [2]	85%	70%	84%	72%	75%
Decreasing [1]	9%	14%	9%	20%	15%
Average change in availability score (1=decreasing – 3=increasing)	2.0	1.9	2.0	1.9	1.9
Overall recent change	Stable	Stable	Stable	Stable	Stable

Current strength of synthetic cannabinoids

The current strength of synthetic cannabinoids was reported to be 'high/medium' in 2013 (Table 14.6). Fifty-nine percent of the detainees described the strength of synthetic cannabinoids as 'high'. Detainees in Christchurch Central were more likely than those in Auckland Central to describe the strength of synthetic cannabinoids as high (2.5 vs. 2.2, p=0.0086). Detainees in Whangarei were also more likely than those in Auckland Central to describe the strength of synthetic cannabinoids as high (2.5 vs. 2.2), and this difference was close to being statistically significant (p=0.0844).

Table 14.6: Police detainees' perceptions of current purity of synthetic cannabinoids in the past six months, 2013

Current strength of synthetic cannabinoids (%)	Whangarei (n=55)	Auckland Central (n=118)	Wellington Central (n=51)	Christchurch Central (n=149)	All sites (n=373)
High [3]	65%	47%	51%	68%	59%
Medium [2]	16%	22%	29%	13%	19%
Fluctuates [2]	5%	7%	10%	3%	6%
Low [1]	13%	24%	10%	15%	17%
Average strength score (1=low – 3=high)	2.5	2.2	2.4	2.5	2.4
Overall current status	High/ medium	High/ low	High/ medium	High/ low	High/ medium

Change in strength of synthetic cannabinoids

The detainees were asked if the strength of synthetic cannabinoids had changed in the past six months in 2013 (Table 14.7). Sixty-three percent reported the strength had been 'stable'. There was no statistically significant difference between the sites with respect to perceptions of the change in the strength of synthetic cannabinoids (p=0.1392).

Table 14.7: Police detainees' perceptions of change in strength of synthetic cannabinoids in the past six months, 2013

Change in strength of synthetic cannabinoids (%)	Whangarei (n=42)	Auckland Central (n=93)	Wellington Central (n=41)	Christchurch Central (n=136)	All sites (n=312)
Increasing [3]	14%	13%	27%	18%	17%
Stable [2]	71%	69%	46%	60%	63%
Fluctuating [2]	5%	5%	22%	13%	11%
Decreasing [1]	10%	13%	5%	9%	10%
Average change in strength (1=decreasing – 3=increasing)	2.0	2.0	2.2	2.1	2.1
Overall recent change	Stable/ increasing	Stable/ increasing	Stable/ increasing	Stable/ increasing	Stable/ increasing

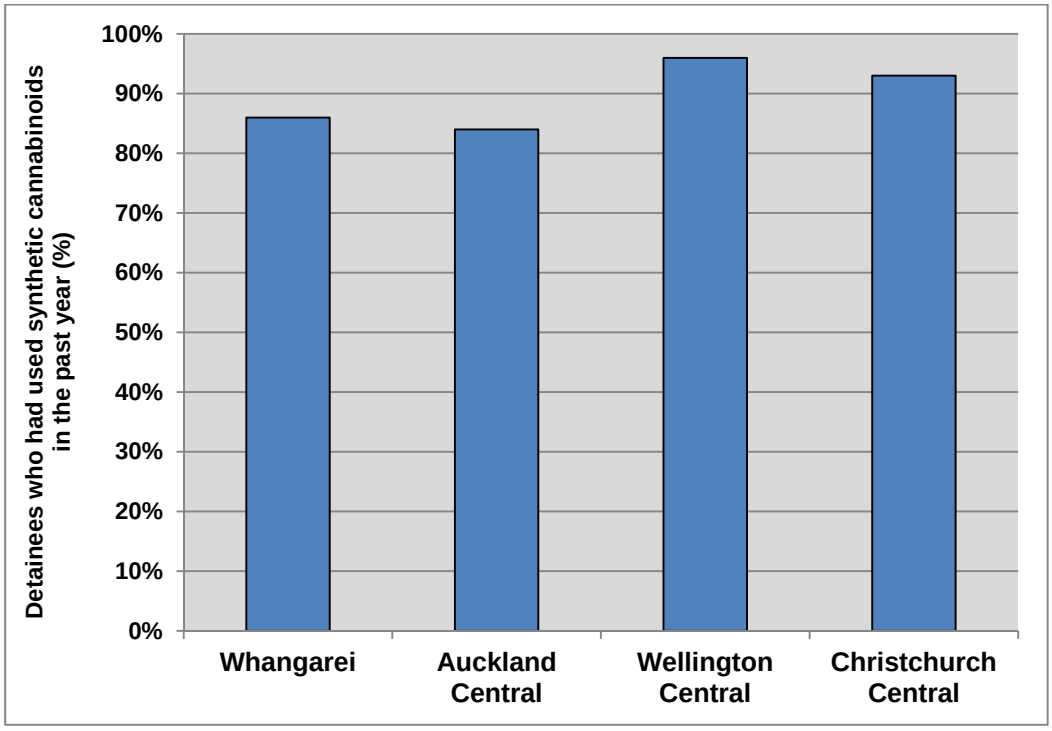
Time taken to purchase synthetic cannabinoids

Eighty-eight percent of the detainees who had used synthetic cannabinoids in the previous year were able to purchase them in one hour or less in 2013 (Table 14.8). Seventy-seven percent could purchase synthetic cannabinoids in 20 minutes or less. Detainees in Whangarei were less likely to be able to purchase synthetic cannabinoids in one hour or less than those in Christchurch Central (76% vs. 93%, p=0.0053) and those in Wellington Central (76% vs. 96%, p=0.0470) (Figure 14.4). Detainees in Christchurch Central were more likely than those in Auckland Central to be able to purchase synthetic cannabinoids in one hour or less (93% vs. 84%), and this difference was close to being statistically significant (p=0.0730).

Table 14.8: Time taken by police detainees to purchase synthetic cannabinoids by location, 2013

Time to purchase synthetic cannabinoids (%)	Whangarei	Auckland Central	Wellington Central	Christchurch Central	All sites
	(n=53)	(n=117)	(n=48)	(n=148)	(n=366)
Months	6	1	2	3	2
Weeks	2	1	0	1	1
Days	2	2	0	1	1
About one day	8	3	2	1	3
Hours	8	9	0	1	4
1 Hour	23	10	13	8	11
Less than 20 minutes	53	74	83	85	77

Figure 14.4: Proportion of police detainees who could purchase synthetic cannabinoids in one hour or less by location, 2013



Effect of synthetic cannabinoids on the likelihood of becoming angry

Those detainees who reported using synthetic cannabinoids in the past 12 months were asked what effect using synthetic cannabinoids has on their likelihood of becoming angry. In 2013, 52% of the detainees said that using synthetic cannabinoids had 'no effect' on their likelihood of becoming angry, and a further 20% said it was 'less likely' to make them become angry (Table 14.9). Only 15% said it was 'more likely' or 'much more likely' to make them feel angry.

Table 14.9: Effect of synthetic cannabinoids on police detainees' likelihood of becoming angry, 2013

Effect of synthetic cannabinoids on likelihood of becoming angry	Whangarei	Auckland Central	Wellington Central	Christchurch Central	All sites
	(n=61)	(n=112)	(n=53)	(n=148)	(n=374)
Much more likely [5]	5%	6%	9%	5%	6%
More likely [4]	5%	4%	13%	12%	9%
No effect [3]	44%	51%	57%	54%	52%
Less likely [2]	23%	27%	13%	17%	20%
Much less [1]	23%	12%	8%	11%	13%
Mean impact on likelihood to become angry (1=much less - 5=much more)	2.5	2.7	3.0	2.8	2.8

Use of party pills

Sixteen percent of the police detainees had tried party pills at some point in their lives, 6% had used them in the previous 12 months, and <1% had used them in the previous month in 2013 (Table 14.10 and Figure 14.5). There was no statistically significant difference between the locations with respect to lifetime experience of using party pills (p=0.6219). Christchurch Central detainees were more likely than those from Auckland Central to have used party pills in the previous 12 months (9% vs. 4%), and this difference was close to being statistically significant (p=0.1111). The detainees had used party pills on a mean of only 4 days in the past year. None of the detainees reported feeling dependent on legal party pills. Only one detainee (<1%) reported using party pills at the time of their arrest.

Figure 14.5: Proportion of police detainees who had used party pills in their lifetimes and previous 12 months by location, 2013

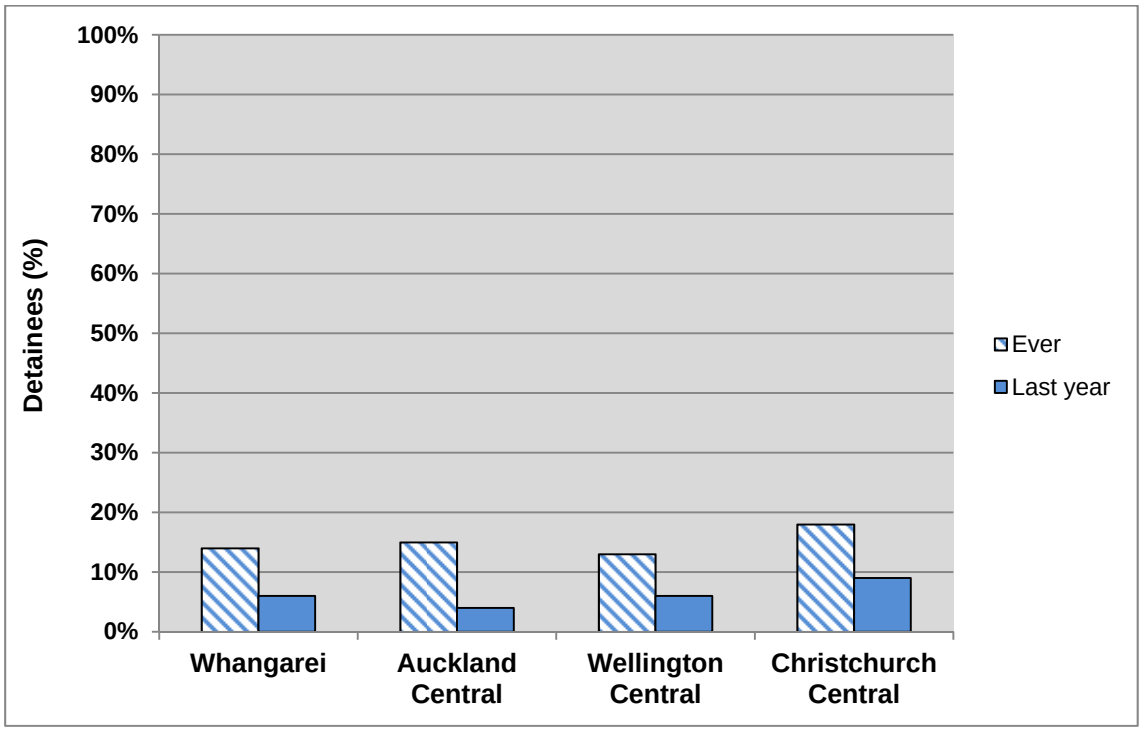


Table 14.10: Police detainees' patterns of party pill use by location, 2013

Use of party pills	Whangarei	Auckland Central	Wellington Central	Christchurch Central	All Sites
	(n=147)	(n=288)	(n=106)	(n=275)	(n=816)
Ever used (%)	14	15	13	18	16
Used in past 12 months (%)	6	4	6	9	6
Mean number of days used in past 12 months**	3	3	6	4	4

** of those who had used in the past 12 months

Current availability of party pills

The detainees described the current availability of party pills as 'very easy/easy' in 2013 (Table 14.11).

Table 14.11: Police detainees' perceptions of the current availability of party pills by location, 2013

Current availability of party pills (%)	All Sites
	(n=51)
Very easy [4]	55%
Easy [3]	33%
Difficult [2]	6%
Very difficult [1]	6%
Average availability score (1=very difficult – 4=very easy)	3.4
Overall current status	Very easy/ easy

Change in availability of party pills

The detainees reported the availability of party pills had been 'stable/more difficult' over the previous six months in 2013 (Table 14.12). Sixty-two percent of the detainees described the change in availability of party pills as 'stable'.

Table 14.12: Police detainees' perceptions of the change in availability of party pills by location, 2013

Change in availability of party pills (%)	All Sites
	(n=45)
Easier [3]	15%
Stable [2]	62%
Fluctuates [2]	4%
More difficult [1]	18%
Average change in availability score (1=more difficult – 3=easier)	2.0
Overall recent change	Stable/ more difficult

Change in the price of party pills

The detainees reported the price of party pills had been 'stable' over the previous six months in 2013 (Table 14.13). Seventy-nine percent described the price of party pills as 'stable'.

Table 14.13: Police detainees' perceptions of the change in the price of party pills in the past six months by location, 2013

Change in price of party pills (%)	All Sites
	(n=34)
Increasing [3]	6%
Fluctuating [2]	6%
Stable [2]	79%
Decreasing [1]	8%
Average change in availability score (1=decreasing – 3=increasing)	2.0
Overall recent change	Stable

Current strength of party pills

The current strength of party pills was reported to be 'medium/low' in 2013 (Table 14.14).

Table 14.14: Police detainees' perceptions of current strength of party pills in the past six months, 2013

Current strength of party pills (%)	All sites (n=50)
High [3]	18%
Medium [2]	42%
Fluctuates [2]	6%
Low [1]	34%
Average strength score (1=low – 3=high)	2.4
Overall current status	Medium/ low

Change in strength of party pills

The detainees were asked if the strength of party pills had changed in the past six months in 2013 (Table 14.15). Seventy-four percent of detainees said the strength had been 'stable'.

Table 14.15: Police detainees' perceptions of change in strength of party pills in the past six months, 2013

Change in strength of party pills (%)	All sites (n=38)
Increasing [3]	3%
Stable [2]	74%
Fluctuating [2]	8%
Decreasing [1]	16%
Average change in strength (1=decreasing – 3=increasing)	1.9
Overall recent change	Stable

Time taken to purchase party pills

Seventy-eight percent of the detainees who had used party pills in the past year were able to purchase them in one hour or less in 2013 (Table 14.16). Fifty-eight percent could purchase party pills in 20 minutes or less.

Table 14.16: Time taken by police detainees to purchase party pills by location, 2013

Time to purchase party pills (%)	All sites
	(n=50)
Months	6
Weeks	0
Days	2
About one day	6
Hours	8
1 Hour	20
Less than 20 minutes	58

Effect of party pills on the likelihood of becoming angry

Those detainees who reported using party pills in the past 12 months were asked what effect using party pills had on their likelihood of becoming angry. In 2013, 63% of the detainees said that using party pills had 'no effect' on their likelihood of becoming angry, and a further 15% said they were 'less likely' to make them become angry (Table 14.17).

Table 14.17: Effect of party pills on police detainees' likelihood of becoming angry, 2013

Effect of party pills on likelihood of becoming angry	All sites
	(n=52)
Much more likely [5]	6%
More likely [4]	8%
No effect [3]	63%
Less likely [2]	15%
Much less [1]	8%
Mean impact on likelihood to become angry (1=much less -5=much more)	2.9

Use of salvia divinorum

Seventeen percent of the police detainees had tried salvia divinorum at some point in their lives, 8% had used it in the previous 12 months, and 2% (n=15) had used it in the previous month in 2013 (Table 14.18). Detainees in Christchurch Central were more likely to have ever tried salvia than those in Auckland Central (26% vs. 11%, $p<0.0001$) and Whangarei (26% vs. 5%, $p=0.0203$) (Figure 14.6). Christchurch Central detainees were also more likely to have used salvia in the previous 12 months than those from Auckland Central (13% vs. 5%, $p=0.0072$) and Whangarei (13% vs. 4%, $p=0.0238$). The detainees had used salvia on a mean of eight days in the past year. Three percent of the detainees who had used salvia in the previous year (n=2) reported they felt dependent on it. Only one detainee (<1%) reported using salvia at the time of their arrest.

Figure 14.6: Proportion of police detainees who had used salvia divinorum in their lifetimes and in the previous 12 months by location, 2013

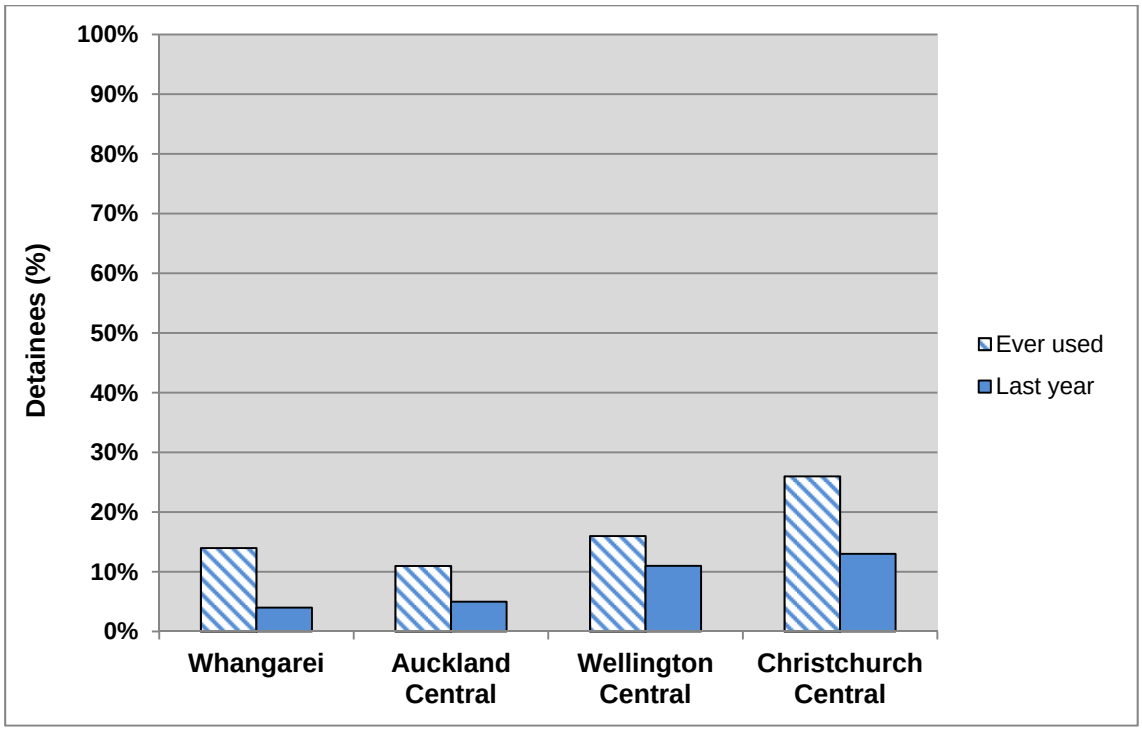


Table 14.18: Police detainees' patterns of salvia divinorum use by location, 2013

Use of salvia divinorum	Whangarei	Auckland Central	Wellington Central	Christchurch Central	All Sites
	(n=147)	(n=288)	(n=106)	(n=275)	(n=816)
Ever used (%)	14	11	16	26	17
Used in past 12 months (%)	4	5	11	13	8
Mean number of days used in past 12 months**	25	23	2	2	8

** of those who had used in the past 12 months

Current availability of salvia divinorum

The detainees described the current availability of salvia divinorum as 'very easy/easy' in 2013 (Table 14.19).

Table 14.19: Police detainees' perceptions of the current availability of salvia divinorum by location, 2013

Current availability of salvia divinorum (%)	All Sites
	(n=65)
Very easy [4]	52%
Easy [3]	26%
Difficult [2]	8%
Very difficult [1]	14%
Average availability score (1=very difficult – 4=very easy)	3.2
Overall current status	Very easy/ easy

Change in availability of salvia divinorum

The detainees reported the availability of salvia divinorum had been 'stable/easier' over the previous six months in 2013 (Table 14.20). Sixty-eight percent of the detainees described the change in availability of salvia as 'stable'.

Table 14.20: Police detainees' perceptions of the change in availability of salvia divinorum by location, 2013

Change in availability of salvia divinorum (%)	All Sites
	(n=57)
Easier [3]	18%
Stable [2]	68%
Fluctuates [2]	4%
More difficult [1]	11%
Average change in availability score (1=more difficult – 3=easier)	2.1
Overall recent change	Stable/ easier

Change in the price of salvia divinorum

Eighty-three percent of the detainees described the price of salvia as 'stable' over the previous six months (Table 14.21).

Table 14.21: Police detainees' perceptions of the change in the price of salvia divinorum in the past six months by location, 2013

Change in price of salvia divinorum (%)	All Sites
	(n=47)
Increasing [3]	6%
Fluctuating [2]	9%
Stable [2]	83%
Decreasing [1]	2%
Average change in availability score (1=decreasing – 3=increasing)	2.0
Overall recent change	Stable

Current strength of salvia divinorum

Ninety-four percent of the detainees reported the current strength of salvia divinorum as 'high' in 2013 (Table 14.22).

Table 14.22: Police detainees' perceptions of current purity of salvia divinorum in the past six months, 2013

Current strength of salvia divinorum (%)	All sites (n=64)
High [3]	94%
Medium [2]	3%
Fluctuates [2]	0%
Low [1]	3%
Average strength score (1=low – 3=high)	2.8
Overall current status	High

Change in strength of salvia divinorum

Seventy-eight percent of the detainees reported the strength of salvia had been 'stable' in the past six months in 2013 (Table 14.23).

Table 14.23: Police detainees' perceptions of change in strength of salvia divinorum in the past six months, 2013

Change in strength of salvia divinorum (%)	All sites (n=46)
Increasing [3]	17%
Stable [2]	78%
Fluctuating [2]	2%
Decreasing [1]	2%
Average change in strength (1=decreasing – 3=increasing)	2.2
Overall recent change	Stable

Time taken to purchase salvia divinorum

Seventy-nine percent of the detainees who had used salvia divinorum in the past year were able to purchase it in one hour or less in 2013 (Table 14.24). Sixty-seven percent could purchase salvia in 20 minutes or less.

Table 14.24: Time taken by police detainees to purchase salvia divinorum by location, 2013

Time to purchase salvia divinorum (%)	All sites
	(n=67)
Months	6
Weeks	0
Days	3
About one day	5
Hours	7
1 Hour	12
Less than 20 minutes	67

Effect of salvia divinorum on the likelihood of becoming angry

Those detainees who reported using salvia divinorum in the past 12 months were asked what effect using it had on their likelihood of becoming angry. In 2013, 55% of the detainees said that using salvia had 'no effect' on their likelihood of becoming angry. A further 40% said it was 'less likely' or 'much less likely' to make them feel angry (Table 14.25).

Table 14.25: Effect of salvia divinorum on police detainees' likelihood of becoming angry, 2013

Effect of salvia divinorum on likelihood of becoming angry	All sites
	(n=65)
Much more likely [5]	0%
More likely [4]	5%
No effect [3]	55%
Less likely [2]	23%
Much less likely [1]	17%
Mean impact on likelihood to become angry (1=much less -5=much more)	2.5

Summary

- Fifty-four percent of the detainees had tried synthetic cannabinoids at some point in their lives
- Detainees in Christchurch Central were more likely than those in in Auckland Central to have ever tried synthetic cannabinoids (62% vs. 48%)
- Forty-seven percent of the detainees had used synthetic cannabinoids in the previous 12 months in 2013
- Detainees in Christchurch Central were more likely than those in in Auckland Central to have used synthetic cannabinoids in the previous 12 months (53% vs. 40%)

- The detainees had used synthetic cannabinoids on a mean of 66 days in the previous 12 months in 2013

- Seventeen percent of detainees who had used synthetic cannabinoids felt they were dependent on them in 2013

- Detainees in Christchurch Central were more likely than those in Auckland Central to feel dependent on synthetic cannabinoids

- Seven percent of the detainees had been using synthetic cannabinoids prior to their arrest in 2013

- The detainees described the current availability of synthetic cannabinoids as 'very easy' in 2013

- The availability of synthetic cannabinoids was considered to be higher in Central Wellington than Auckland Central and Whangarei

- The detainees reported the availability of synthetic cannabinoids had been 'stable/easier' over the previous six months in 2013

- The detainees reported the price of synthetic cannabinoids had been 'stable' over the previous six months in 2013

- The current strength of synthetic cannabinoids was reported to be 'high/medium' in 2013

- The strength of synthetic cannabinoids was reported to have been 'stable' in the previous six months in 2013

- Seventy-seven percent of detainees could purchase synthetic cannabinoids in 20 minutes or less

- Detainees in Christchurch Central were more likely than those in Auckland Central to be able to purchase synthetic cannabinoids in one hour or less (93% vs. 84%)

- Fifty-two percent of the detainees said that using synthetic cannabinoids had 'no effect' on their likelihood of becoming angry, and 20% said it was 'less likely' to make them feel angry

- Sixteen percent of the detainees had tried party pills in their lifetimes and 6% had used them in the previous six months in 2013

- The detainees had used party pills on a mean of only four days and no users reported feeling dependent on party pills in 2013

- The current availability of party pills was described as 'very easy/easy' in 2013

- The current strength of party pills was reported to be 'medium/low' in 2013

- Seventy-eight percent of the detainees who had used party pills were able to purchase them in one hour or less in 2013

- Sixty-three percent of the detainees who had used party pills said they had 'no impact' on their likelihood of becoming angry

- Seventeen percent of the detainees had tried salvia divinorum in their lifetimes and 8% had used it in the previous six months in 2013

- Detainees in Christchurch Central were more likely to have ever used salvia than those in Auckland Central (26% vs. 11%) and Whangarei (26% vs. 5%)

- Christchurch Central detainees were also more likely to have used salvia in the previous 12 months than those in Auckland Central (13% vs. 5%) and Whangarei (13% vs. 4%)

- The detainees had used salvia on a mean of only eight days, and 3% of users reported felling dependent on it in 2013

- The current availability of salvia was described as 'very easy/easy' in 2013

- Ninety-four percent of users reported the strength of salvia as 'high' in 2013

- Seventy-nine percent of the detainees who had used salvia divinorum were able to purchase it in one hour or less in 2013

- Forty percent of the detainees who had used salvia said it was 'less likely' or 'much less likely' to make them feel angry

References

Adamson, S., & Sellman, D. (1998). The pattern of intravenous drug use and associated criminal activity in patients on a methadone waiting list. *Drug and Alcohol Review, 17*, 159-166.

Babor, T., Caetano, R., Casswell, S., Edwards, G., Giesbrecht, N., Graham, K., Grube, J., Hill, L., Holder, H., Homel, R., Livingston, M., Osterberg, E., Rehm, J., Room, R., & Rossow, I. (2010a). *Alcohol: No Ordinary Commodity Research and Public Policy* (2 ed.). Oxford: Oxford University Press.

Babor, T., Caulkins, J., Edwards, G., Fischer, B., Foxcroft, D., Humphreys, K., Obot, I., Rehm, J., Room, R., Rossow, I., & Strang, J. (2010b). *Drug Policy and the Public Good*. Oxford: Oxford University Press.

Bennett, T., & Holloway, K. (2005). *Understanding Drugs, Alcohol and Crime*. Berkshire: Open University Press.

Birdwell, J., Chapman, J., & Singleton, N. (2011). *Taking Drugs Seriously: A Demos and UK Drug Policy Commission Report on Legal Highs*. London: Demos.

Boreham, R., Cronberg, A., Dollin, L., & Pudney, S. (2007). *The Arrestee Survey 2003 – 2006* (Home Office Statistical Bulletin 12/07). London: Home Office

Caulkins, J., & Reuter, P. (2009). Towards a harm-reduction approach to enforcement. *Safer Communities, 8*(1), 9-23.

EMCDDA. (2013). *European Drug Report 2013: Trends and developments*. Lisbon: European Monitoring Centre for Drugs and Drug Addiction. http://www.emcdda.europa.eu/attachements.cfm/att_213154_EN_TDAT13001ENN1.pdf.

ESR. (2013). *Personal communication*: Environmental Science and Research.

European Monitoring Centre for Drugs and Drug Addiction (EMCDDA). (2009). *Drug Offences: Sentencing and Other Outcomes*. Lisbon: EMCDDA.

Every-Palmer, S. (2010). Warning: legal synthetic cannabinoid-receptor agonists such as JWH-018 may precipitate psychosis in vulnerable individuals. *Addiction, 105*, 1859-1860.

Field, A., & Casswell, S. (1999). *Drug Use in New Zealand: Comparison Surveys 1990 & 1998*. University of Auckland: Alcohol and Public Health Research Unit.

Gaffney, A., Jones, W., Sweeney, J., & Payne, J. (2010). *Drug use Monitoring in Australia: 2008 Annual Report on Drug Use Among Police Detainees* (Monitoring Report No. 9): Australian Institute of Criminology.

Gawin, F., & Ellinwood, E. (1988). Cocaine and other stimulants: actions, abuse and treatment. *New England Journal of Medicine, 318*, 1173-1182.

Gee, P., & Fountain, J. (2007). Party on? BZP party pills in New Zealand. *New Zealand Medical Journal, 120*(1249), http://journal.nzma.org.nz/journal/120-1249/2422/.

Gee, P., Richardson, S., Woltersdorf, W., & Moore, G. (2005). Toxic effects of BZP-based herbal party pills in humans: a prospective study in Christchurch, New Zealand. *New Zealand Medical Journal, 118*(1227). Retrieved from http://www.nzma.org.nz/journal/118-1227/1784/

Griffiths, P., Evans-Brown, M., & Sedefov, R. (2013). Getting up to speed with the public health and regulatory challenges posed by new psychoactive substances in the information age. *Addiction, 108*(10), 1700-1703.

Hall, W., & Hando, J. (1994). Route of administration and adverse effects of amphetamine use among young adults in Sydney, Australia. *Drug and Alcohol Review, 13*, 277-284.

Hammersley, R., Forsyth, A., Morrison, V., & Davies, J. (1989). The relationship between crime and opioid use. *British Journal of Addiction, 84*, 1029-1043.

Hart, S. (2003). 2000 Arrestee Drug Abuse Monitoring: Annual Report. [National Institute of Justice], Retrieved 11 November 2010, from http://www.adam-nij.net/files/ar2000/193013.pdf

Hermanns-Clausen, M., Kneisel, S., Szabo, B., & Auwärter, V. (2013). Acute toxicity due to the confirmed consumption of synthetic cannabinoids. *Addiction, 108*(3), 534-544.
Hough, M. (1996). *Drugs Misuse and the Criminal Justice System: A Review of the Literature* (Drugs Prevention Initiative Paper 15). London: Home Office.
Hunt, D., & Rhodes, W. (2001). Arrestee Drug Abuse Monitoring (ADAM) Program: Methodology Guide for ADAM. [National Institute of Justice], Retrieved 11 November 2010, from http://www.adam-nij.net/files/Admguid.pdf
Kleiman, M. (1992). *Against Excess: Drug Policy for Results*. New York: Basic Books.
Kuhn, C., Swartzwelder, S., & Wilson, W. (1998). *Buzzed: The Straight Facts About the Most Used and Abused Drugs from Alcohol to Ecstacy*. New York: W.W.Norton & Co.
MacCoun, R., & Reuter, P. (2001). *Drug War Heresies: Learning from Other Vices, Times, and Places*. New York: Cambridge University Press.
Maxwell, J. (2011). The prescription drug epidemic in the United States: A perfect storm. *Drug and Alcohol Review, 30*(3), 264-270.
Ministry of Health. (2013). *Amphetamine Use 2012/13: Key findings of the New Zealand Health Survey*, December. Wellington.
National Institute of Justice. (2003). *2000 Arrestee Drug Abuse Monitoring: Annual Report*. Washington, DC: Office of Justice, Programs, US Department of Justice.
NDIB. (2012). *Personal communication*: National Drug Intelligence Bureau.
NDIB. (2013). *Personal communication*. Wellington: National Drug Intelligence Bureau.
NDIB. (2014). *Personal communication*. Wellington: National Drug Intelligence Bureau.
New Zealand Customs Service. (2002). *Review of Customs Drug Enforcement Strategies 2002. Project Horizon Outcome Report*. Wellington: New Zealand Customs Service.
Newbold, G. (2000). *Crime in New Zealand*. Palmerston North: Dunmore Press.
Office of National Drug Control Policy. (2009). *Adam II 2008 Annual Report Arrestee Drug Abuse Monitoring Program II*. Washington, DC.
Office of National Drug Control Policy. (2011). *ADAM II - 2010 Annual Report: Arrestee Drug Abuse Monitoring Program II*. Washington, DC.
Perrone, D., Helgesen, R., & Fischer, R. (2013). United States drug prohibition and legal highs: How drug testing may lead cannabis users to Spice. *Drugs: Education Prevention and Policy, 20*(3), 216-224.
Seddon, T. (2000). Explaining the drug-crime link: theoretical, policy and research issues. *Journal of Social Policy, 29*(1), 95-107.
Shearer, J., Sherman, J., Wodak, A., & van Beek, I. (2002). Substitution theory for amphetamine users. *Drug and Alcohol Review, 21*, 179-185.
Sindicich, N., & Burns, L. (2012). *An overview of the 2012 EDRS: Ecstasy returns and the emerging class of drugs* (Ecstasy and Related Drugs Reporting System Drug Trends Bulletin, October). Sydney: National Drug and Alcohol Research Centre, The University of New South Wales.
Strang, J., Babor , T., Caulkins, J., Fischer, B., Foxcroft, D., & Humphreys, K. (2012). Drug policy and the public good: evidence for effective interventions. *Lancet, 379*, 71-83.
Taylor, B. (Ed.). (2002). *I-ADAM in Eight Countries: Approaches and Challenges*: Office of Justice Programs & National Institute of Justice, US Department of Justice.
UNODC. (2012). *World Drug Report 2012*. Vienna: United Nations Office on Drugs and Crime.
UNODC. (2013). *World Drug Report 2013*. Vienna: United Nations Office on Drugs and Crime. http://www.unodc.org/unodc/secured/wdr/wdr2013/World_Drug_Report_2013.pdf.
UNODC. (2014). *Global SMART Update 2014 - Vol. 11* (Vol. 11, Special Segment - The changing nature of "ecstasy"). Vienna: United Nations Office on Drigs and Crime. https://www.unodc.org/documents/scientific/GSU-11-EN.pdf.
Weisheit, R., & White, W. (2009). *Methamphetamine: Its History, Physiology, and Treatment*. Center City, MN: Hazelden.

Wilkins, C. (2011). A paradigm shift in recreational drug use: the challenge of legal highs in New Zealand [Letter]. *New Zealand Medical Journal, 124*(1339), 99-101.
Wilkins, C. (2014a). A critical first assessment of the new pre-market approval regime for new psychoactive substances (NPS) in New Zealand. *Addiction, in press*.
Wilkins, C. (2014b). The interim regulated legal market for NPS ('legal high') products in New Zealand: The impact of new retail restrictions and product licensing. *Drug Testing and Analysis, in press*.
Wilkins, C., Bhatta, K., & Casswell, S. (2002b). The emergence of amphetamine use in New Zealand: findings from the 1998 and 2001 national drug surveys. *New Zealand Medical Journal, 115*(1166), 256-263.
Wilkins, C., & Casswell, S. (2002). The cannabis black market and the case for the legalisation of cannabis in New Zealand. *Social Policy Journal of New Zealand, 18*, 31-43.
Wilkins, C., & Casswell, S. (2003). Organised crime in cannabis cultivation in New Zealand: an economic analysis. *Contemporary Drug Problems, 30*, 757-777.
Wilkins, C., Casswell, S., Bhatta, K., & Pledger, M. (2002). *Drug Use in New Zealand: National Surveys Comparison 1998 & 2001*. Auckland: Alcohol & Public Health Research Unit.
Wilkins, C., Girling, M., & Sweetsur, P. (2007). The prevalence of use, dependency and harms of legal 'party pills' containing benzylpiperazine (BZP) and trifluorophenylmethylpiperazine (TFMPP) in New Zealand. *Journal of Substance Use, 12*, 213-224.
Wilkins, C., Jawalkar, P., Moewaka Barnes, H., Parker, K., & Asiasiga, L. (2012a). *New Zealand Arrestee Drug Use Monitoring (NZ-ADUM) 2012 Report*, December. Auckland: SHORE and Whariki Research Centre, Massey University.
Wilkins, C., Jawalkar, S., & Parker, K. (2013). *Recent trends in illegal drug use in New Zealand 2006-2012: Findings from the 2006, 2007, 2008, 2009, 2010, 2011 and 2012 Illicit Drug Monitoring System (IDMS)*. Auckland: SHORE and Whariki Research Centre, Massey University.
Wilkins, C., Pledger, M., Lee, A., Adams, R., & Rose, E. (2004). *A Local Pilot of the New Zealand Arrestee Drug Abuse Monitoring (NZ-ADAM) System*. Auckland: Centre for Social and Health Outcomes Research and Evaluation (SHORE) and Te Ropu Whariki, Massey University.
Wilkins, C., Reilly, J., & Casswell, S. (2005d). Cannabis 'tinny' houses in New Zealand; implications for the use of cannabis and other drugs in New Zealand. *Addiction, 100*, 971-980.
Wilkins, C., Reilly, J., Pledger, M., & Casswell, S. (2005e). Estimating the dollar value of the illicit market for cannabis in New Zealand. *Drug and Alcohol Review, 24*(3), 227-234.
Wilkins, C., & Rose, E. (2003). *A Scoping Report on NZ-ADAM*. Auckland: Centre for Social and Health Outcomes Research and Evaluation (SHORE), Massey University.
Wilkins, C., & Sweetsur, P. (2006). Exploring the structure of the illegal market for cannabis in New Zealand. *De Economist, 154*(4), DOI 10.1007/s10645-10006-19029-10647.
Wilkins, C., & Sweetsur, P. (2008a). *The economic relationship between high spending on methamphetamine and cannabis use and the dollar earnings from acquisitive crime among police detainees*. Auckland: Centre for Social and Health Outcomes Research and Evaluation (SHORE), Massey University.
Wilkins, C., & Sweetsur, P. (2008b). Tracking the Availability of Drugs in New Zealand: Implications for Policy Response. *Social Policy Journal of New Zealand, 34*, 163-171.
Wilkins, C., & Sweetsur, P. (2008c). Trends in population drug use in New Zealand: Findings from national household surveying of drug use in 1998, 2001, 2003 and 2006. *New Zealand Medical Journal, 121*, 61-71.
Wilkins, C., & Sweetsur, P. (2010a). The association between spending on methamphetamine and cannabis for personal use and earnings from acquisitive crime among police detainees in New Zealand. *Addiction, Accepted manuscript online: 21 OCT 2010*, doi: 10.1111/j.1360-0443.2010.03241.x.

Wilkins, C., & Sweetsur, P. (2010b). The association between the number of days of methamphetamine use and the level of earnings from acquisitive crime among police detainees in New Zealand. *Bulletin on Narcotics, in press*.

Wilkins, C., & Sweetsur, P. (2013). The impact of the prohibition of BZP legal highs on the prevalence of BZP, new legal highs and other drug use in New Zealand. *Drug and Alcohol Dependence, 127*, 72-80.

Wilkins, C., Sweetsur, P., & Griffiths, R. (2011a). Recent trends in pharmaceutical drug use among frequent injecting drug users, frequent methamphetamine users and frequent ecstasy users in New Zealand, 2006–2009. *Drug and Alcohol Review, 30*, 255-263.

Wilkins, C., Sweetsur, P., Moewaka Barnes, H., Griffiths, R., Asiasiga, L., & Smart, B. (2010b). *New Zealand Arrestee Drug Use Monitoring (NZ-ADUM) 2010 Report*. Auckland: Social and Health Outcomes Research and Evaluation & Te Ropu Whariki, SHORE and Whariki Research Centre, Massey University.

Wilkins, C., Sweetsur, P., Moewaka Barnes, H., Smart, B., Asiasiga, L., & Warne, C. (2012b). *New Zealand Arrestee Drug Use Monitoring (NZ-ADUM) - 2011 Results*. Auckland: SHORE and Whariki Research Centre, School of Public Health, Massey University.

Wilkins, C., Sweetsur, P., Smart, B., & Griffiths, R. (2011b). *Recent Trends in Illegal Drug Use in New Zealand, 2006-2010: Findings from the 2006, 2007, 2008, 2009 and 2010 Illicit Drug Monitoring System (IDMS)*: Social and Health Outcomes Research and Evaluation (SHORE), Massey University.

Wilkins, C., Sweetsur, P., Smart, B., Warne, C., & Jawalkar, S. (2012c). *Recent Trends in Illegal Drug Use in New Zealand, 2006-2011: Findings from the 2006, 2007, 2008, 2009, 2010 and 2011 Illicit Drug Monitoring System (IDMS)*. Auckland: Social and Health Outcomes Research and Evaluation (SHORE), SHORE and Whariki Research Centre, Massey University.