# New Zealand Arrestee Drug Use Monitoring

# (NZ-ADUM)

## 2016 Report

Chris Wilkins
Jitesh Prasad
Helen Moewaka Barnes
Karl Parker
Lanuola Asiasiga

SHORE & Whariki Research Centre
College of Health, Massey University,
P O Box 6137, Wellesley St,
Auckland, New Zealand

June 2017

## Acknowledgements

The New Zealand Drug Use Monitoring (NZ-ADUM) research study is funded by the New Zealand Police and is conducted by SHORE & Whariki Research Centre, College of Health at Massey University, Auckland. We would like to thank police staff at Whangarei, Auckland Central, Wellington Central and Christchurch Central police watch houses for their assistance and cooperation with this research. We would also like to thank all the interviewers who worked with us on NZ-ADUM and all the police detainees who agreed to be interviewed for the study.

# Table of Contents

# List of Figures

## List of Tables

# Executive Summary

The aim of the New Zealand Arrestee Drug Use Monitoring (NZ-ADUM) study is to monitor trends in alcohol and other drug use among police detainees in New Zealand, and to document the harms associated with this substance use. NZ-ADUM tracks key indicators of illegal drug markets, such as availability and price, and identifies emergent new drug types, such as synthetic cannabinoids. NZ-ADUM also assesses the level of demand for drug treatment services among police detainees, and the barriers they experience in accessing these services. The 2016 NZ-ADUM interviewed 800 police detainees at four central city police watch houses (i.e. Whangarei, Auckland Central, Wellington Central and Christchurch Central) from June to October 2016. Urine samples were collected from 202 of the interviewed detainees to confirm the drug types used. This report presents the findings from the 2016 NZ-ADUM and compares them with the previous five years of the study.

**Supply of methamphetamine remains high**

Consistent with recent record border seizures of methamphetamine made in New Zealand and Australia, we found increasing use and availability of methamphetamine and declining prices. The proportion of detainees who reported using methamphetamine in the past year increased from 26% in 2010 to 38% in 2016. The mean number of days methamphetamine was used increased from 68 in 2010 to 84 in 2016. The mean price of a gram of methamphetamine decreased from $788 in 2014 to $620 in 2016. The United Nations Office of Drugs and Crime (UNODC) reported recently that the quantity of methamphetamine seized in East and South-East Asia “almost quadrupled” from 2009 to 2014 (UNODC, 2016).

**Increases in methamphetamine supply in Christchurch and Wellington**

There were increases in the proportion of detainees who reported using methamphetamine in the past year in Christchurch (up from 20% in 2012 to 32% in 2016) and Wellington (up from 22% in 2011 to 40% in 2016). The availability of methamphetamine was reported to have

increased in Christchurch from 2010 to 2016. The price of a gram of methamphetamine declined in Christchurch (from $1,120 in 2014 to $765 in 2016) and Wellington (from $876 in 2010 to $640 in 2016). Growing supply of methamphetamine to Christchurch may reflect the general recovery of the city following the earthquakes there, and greater organised gang involvement in the drugs market.

**Some evidence of a cannabis drought**

The proportion of detainees in Christchurch who had used cannabis in the past year declined from 81% in 2010 to 66% in 2016. Cannabis was considered increasingly difficult to obtain in Whangarei, Wellington and Christchurch. The mean price of an ounce of cannabis increased from $323 in 2014 to $340 in 2016. There were increases in the mean price of an 'ounce' of cannabis in Auckland (up from $325 in 2011 to $349 in 2016) and Christchurch (up from $316 in 2012 to $343 in 2016). These findings support anecdotal reports of a "cannabis drought", particularly in the South Island, and may reflect the higher profits available from synthetic cannabinoids and other drugs, and the effectiveness of Police cannabis crop eradication operations.

**Lower levels of synthetic cannabinoid use following bans but more dependent use**

The banning of all "legal high" products in May 2014 has reduced the use and availability of synthetic cannabinoids, but appears to have left a residual group of dependent users. The proportion of detainees who had used synthetic cannabinoids in the previous 12 months declined from 47% in 2013 to 20% in 2016. There was a decline the proportion of detainees who had used synthetic cannabinoids in the previous year in Whangarei (down from 44% in 2014 to 5% in 2016), Auckland (down from 40% in 2013 to 20% in 2016), Wellington (down from 50% in 2014 to 21% in 2016) and Christchurch (down from 53% in 2013 to 26% in 2016). However, the proportion of detainees who used synthetic cannabinoids and felt dependent on them increased from 17% in 2013 to 29% in 2016. Christchurch continues to be a hotspot for synthetic cannabinoid use, although levels of use there are now more consistent with the other locations. The proportion of Christchurch Central detainees who used synthetic cannabinoids

and felt dependent on them increased from 24% in 2013 to 47% in 2016. These findings suggest there is a need to attract more synthetic cannabinoid users to drug treatment and other help services.

**Rising prices for black market synthetic cannabinoids**

The impact of the May 2014 "legal high" ban can also be seen in rising prices for synthetic cannabinoids. The mean price of a gram of synthetic cannabinoid increased from $11 in 2013 to $19 in 2016. The gram price of synthetic cannabinoids increased in Whangarei (up from $10 in 2014 to $22 in 2016), Auckland ($11 in 2013 to $19 in 2016), Wellington ($9 in 2013 to $24 in 2016) and Christchurch ($11 in 2013 to $17 in 2016).

**A developing black market for synthetic cannabinoids**

The 2014 ban on synthetic cannabinoids appears to have been particularly effective in reducing the availability of these products in Whangarei, perhaps due to the easier availability of natural cannabis as an alternative. In contrast, the availability of synthetic cannabinoids was reported to be increasing over the past year in Auckland, Wellington and Christchurch in 2016, suggesting a developing black market for these products. Synthetic cannabinoids are manufactured overseas, sold from websites and shipped via international mail. They contain untested and often toxic compounds manufactured without any safety standards.

**Alcohol, methamphetamine and cannabis most responsible for drug related harm**

The detainees named three drug types as mainly responsible for their substance use problems: alcohol (78%), methamphetamine (33%) and cannabis (32%). Nine percent attributed their substance use problems to synthetic cannabinoids. There were increases in the proportion of detainees who attributed their substance use problems to alcohol (up from 69% in 2014 to 78% in 2016), cannabis (up from 23% in 2014 to 32% in 2016) and methamphetamine (up from 14% in 2010 to 33% in 2016). Increases in the proportion of detainees who attributed their substance use problems to methamphetamine were found in Whangarei (from 12% in 2010 to

35% in 2016), Auckland (up from 21% in 2010 to 35% in 2016), Wellington (up from 14% in 2010 to 37% in 2016) and Christchurch (up from 8% in 2010 to 27% in 2016).

**Declining levels of heavy drinking?**

The mean number of days on which the detainees reported drinking alcohol in the previous year declined from 101 in 2013 to 76 in 2016. The number of standard drinks consumed on a typical day of use decreased from 17 in 2013 to 15 in 2016. The proportion of detainees who had been drinking prior to their arrest declined from 41% in 2013 to 28% in 2016. There are a number of possible explanations for this reduced drinking among the interviewed detainees, including greater use of Pre-Charge Warnings for minor alcohol offences and hence fewer heavy drinkers available for interview in police cells, and reduced opening hours for alcohol venues which may have a greater impact on heavy drinkers.

**Declining use and availability of ecstasy**

The proportion of detainees who had used "ecstasy" in the previous year decreased from 28% in 2011 to 14% in 2016. Use of ecstasy in the previous year declined in Whangarei (down from 36% in 2011 to 10% in 2016) and Christchurch (down from 29% in 2011 to 13% in 2016). The availability of ecstasy was reported to be 'stable/more difficult' in the previous six months. The mean price of a pill of ecstasy declined from $50 in 2010 to $38 in 2016. Major police operations against domestic syndicates manufacturing ecstasy substitutes in 2011 and 2012 appear to have led to declining use and availability of ecstasy. A range of substitute compounds, rather than the traditional MDMA, are now commonly found in "ecstasy" in New Zealand and this practice has led to declining prices and increased risk of adverse effects.

**Cocaine use remains low**

While there has been increasing lifetime experience of cocaine use, there was little change in current use of cocaine which remains fairly low (6%). The detainees had used cocaine on a mean of only nine days in the previous 12 months. Seventy percent of detainees described the

current availability of cocaine as either ‘difficult’ or ‘very difficult’. A possible explanation for growing lifetime use of cocaine may be people taking the opportunity to use the drug while overseas during holidays or for work.

**The illicit opioid market remains stable**

There was no change in the proportion of detainees who had used an opioid in the previous year from 2010 to 2016 (i.e. 8% to 5%). Forty-four percent of the opioid using detainees felt they were dependent on opioids, and this had not changed from previous years. There was no change in the current availability or price of opioids.

# Chapter 1 - Methodology

## Introduction

The New Zealand Arrestee Drug Use Monitoring (NZ-ADUM) study monitors levels of alcohol and other drug use, and related criminal offending, among police detainees in Whangarei, Auckland, Wellington and Christchurch central city police stations (see Wilkins et al., 2010b). NZ-ADUM tracks key substances of concern, including alcohol, methamphetamine, cannabis, opioids, pharmaceutical medicines and new psychoactive substances (NPS), such as synthetic cannabinoids and NBOMe. NZ-ADUM monitors changes in key drug market indicators, such as availability and price, and documents levels of alcohol and drug related harm and demand for drug treatment services. This report presents the findings from the 2016 NZ-ADUM and compares them with the findings from the previous four years of the study.

## Intended use

NZ-ADUM contributes to the understanding of the drivers of crime and substance misuse, informs strategic and policy responses to alcohol and other drug issues, and provides evaluation data on the effectiveness of policy interventions.

## Background

NZ-ADUM[1] 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 employing the core ADAM methodology are conducted in Australia (Drug Use Monitoring in Australia or DUMA) and England and Wales (New England and Wales Arrestee Drug Abuse Monitoring Research or NEW-ADAM) (see Boreham et al., 2007; Gaffney et al., 2010) and the United States (ADAM) (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 (Hunt & Rhodes,

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

2001; National Institute of Justice, 2003). Self-reported drug use is objectively verified through the scientific testing of urine samples from detainees.

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, illegal drug, pharmaceutical drug, and 'legal high' use among police detainees
- To monitor trends in alcohol and other drug use including the emergence of new drug types
- To investigate the role alcohol and other drug use plays in criminal offending
- To document the level of harm related to alcohol and other drug use
- To monitor trends in the availability and price of key drugs of concern
- To identify the level of demand for help services for substance use problems among police detainees

## 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 over a period of approximately four 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 sufficient numbers of detainees to allow interviewing, and the facilities to accommodate private interviews and urine sampling.

It is not ethical, safe or practical to interview some detainees due to their violent behavior, intoxication, 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 (based on the factors outlined above). Those detainees who were interested in participating in the study 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 they were an independent researcher from Massey University, participation in the study was voluntary, everything they said would be confidential, no individual information would be shared with police, the results of the study would only be reported in aggregate, and they could choose not to answer any question if they didn't want to. The interviewer specifically asked the detainee to not provide any information about specific people, places, times or events. The interviewers were directed to terminate an interview if detainees started to voluntarily provide 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 early June to mid-October 2016. A total of 800 interviews, and 202 urine samples were collected, as part of the 2016 NZ-ADUM study. The interviewers were present at morning and evening shifts 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), and in the hours before the detainees were transported to court and the cells cleared. Table 1 1 shows completed interviews by day of the week for 2010, 2011, 2012, 2013, 2014, 2015 and 2016. A higher proportion of interviews tend to be conducted on a Sunday as watch houses are often busiest on a Saturday night and no court is in operation on Sunday for them to attend.

**Table 1 1: Distribution of interviews by day of the week by location, 2010-2016**

| Days % | Year | N-value | Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|---|---|---|---|---|---|---|---|---|---|
| **Whangarei** | 2010 | (n=114) | 7 | 25 | 7 | 24 | 16 | 12 | 9 |
| | 2011 | (n=150) | 25 | 13 | 7 | 15 | 13 | 12 | 14 |
| | 2012 | (n=151) | 19 | 14 | 13 | 11 | 19 | 14 | 11 |
| | 2013 | (n=153) | 23 | 13 | 11 | 14 | 11 | 14 | 13 |
| | 2014 | (n=150) | 23 | 15 | 13 | 8 | 21 | 15 | 5 |
| | 2015 | (n=167) | 8 | 13 | 10 | 17 | 17 | 16 | 20 |
| | 2016 | (n=131) | 15 | 14 | 10 | 14 | 11 | 12 | 25 |
| **Auckland Central** | 2010 | (n=282) | 23 | 9 | 8 | 13 | 14 | 17 | 16 |
| | 2011 | (n=316) | 31 | 9 | 10 | 10 | 12 | 13 | 16 |
| | 2012 | (n=247) | 26 | 15 | 9 | 12 | 16 | 9 | 13 |
| | 2013 | (n=300) | 25 | 14 | 13 | 11 | 13 | 12 | 12 |
| | 2014 | (n=315) | 27 | 12 | 13 | 12 | 8 | 16 | 13 |
| | 2015 | (n=266) | 15 | 13 | 14 | 13 | 15 | 9 | 21 |
| | 2016 | (n=220) | 10 | 9 | 14 | 10 | 6 | 16 | 35 |
| **Wellington Central** | 2010 | (n=151) | 23 | 15 | 13 | 12 | 12 | 13 | 13 |
| | 2011 | (n=171) | 22 | 11 | 8 | 12 | 16 | 15 | 15 |
| | 2012 | (n=101) | 21 | 14 | 11 | 10 | 14 | 16 | 15 |
| | 2013 | (n=106) | 19 | 10 | 11 | 8 | 17 | 19 | 15 |
| | 2014 | (n=95) | 22 | 15 | 15 | 12 | 11 | 16 | 11 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2015 | (n=107) | 17 | 7 | 18 | 16 | 14 | 7 | 22 |
| | 2016 | (n=213) | 15 | 10 | 11 | 11 | 17 | 13 | 22 |
| **Christchurch Central** | 2010 | (n=262) | 20 | 15 | 13 | 11 | 9 | 16 | 15 |
| | 2011 | (n=191) | 20 | 13 | 17 | 16 | 14 | 10 | 10 |
| | 2012 | (n=301) | 18 | 13 | 14 | 14 | 13 | 14 | 16 |
| | 2013 | (n=285) | 17 | 12 | 10 | 17 | 19 | 14 | 12 |
| | 2014 | (n=272) | 18 | 14 | 7 | 23 | 14 | 13 | 12 |
| | 2015 | (n=291) | 17 | 9 | 13 | 14 | 15 | 11 | 21 |
| | 2016 | (n=233) | 18 | 13 | 13 | 15 | 11 | 12 | 19 |
| **All Sites** | 2010 | (n=809) | 20 | 14 | 11 | 14 | 12 | 15 | 14 |
| | 2011 | (n=828) | 26 | 11 | 11 | 13 | 13 | 13 | 14 |
| | 2012 | (n=800) | 21 | 14 | 12 | 12 | 15 | 13 | 14 |
| | 2013 | (n=844) | 21 | 13 | 11 | 13 | 15 | 14 | 12 |
| | 2014 | (n=832) | 23 | 13 | 11 | 15 | 13 | 15 | 11 |
| | 2015 | (n=831) | 15 | 11 | 13 | 15 | 15 | 11 | 21 |
| | 2016 | (n=797) | 14 | 11 | 12 | 13 | 11 | 13 | 25 |

## Analysis

The 2011, 2012, 2013, 2014, 2015 and 2016 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, so the impact of the weighting is low. The exception was Christchurch Central in 2011 where the earthquakes prevented the usual number of interviews being completed in that site.

The statistical analyses in this report compare the results from the 2016 wave with the previous five annual waves, and between the four locational sites of the study for 2016. When a statistically significant difference was found over the six years (i.e. 2010-2016), 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, such as availability measures, were assigned numbers and the means tested using ANOVA (e.g. very difficult=1 – very easy=4). Some continuous variables were highly positively skewed (e.g. frequency of use of drug use, number of alcoholic drinks consumed), hence statistical testing was run on the log-transformed values for these items to reduce the influence of outliers. 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 3.

# Chapter 2 - Demographics

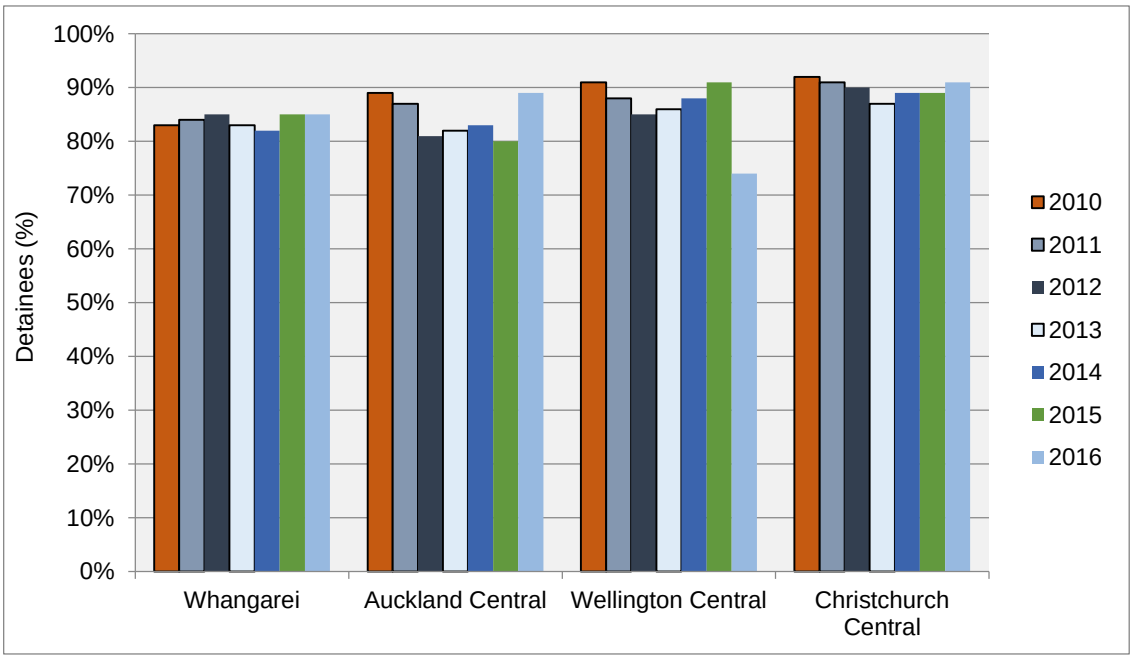
## Introduction

Police detainees are an 'at risk' population who are associated with a range of social and health problems in addition to their criminal offending. Detainee populations around the world tend to be disproportionately male, young, poorly educated, unemployed, have poor mental health, and be members of disadvantaged ethnic minorities (see Boreham, et al., 2007; Gaffney, et al., 2010; Office of National Drug Control Policy, 2009). Similarly, in New Zealand, 85% of the 2015 NZ-ADUM sample were male, 51% were on an unemployment or sickness benefit, 36% had not completed the compulsory years of high school education, and 29% had suffered from a mental illness at some point in their lives (Wilkins et al., 2012a). The detainees interviewed were also disproportionately Maori (42%) compared to the wider population (Wilkins, et al., 2012a). This chapter presents the demographic characteristics of the detainees interviewed for the 2016 NZ-ADUM and examines the extent to which these characteristics may have changed over the past seven years of the study.

## Gender

In 2016, 85% of the detainees interviewed were male. Overall, there was no statistically significant change in the proportion of detainees who were male in 2016 compared to previous years (Figure 2 1). The proportion of Wellington Central detainees who were male declined from 91% in 2015 to 74% in 2016 (p=0.0157).

**Figure 2 1: Proportion of the police detainees who were male by location, 2010-2016**




## Age

In 2016, the mean age of the detainees was 29 years (median 26 years, range 17-70 years) (Table 2 1). There was no statistically significant change in the mean age of the detainee sample from 2010 to 2016.

**Table 2 1: Mean age of the police detainees by location, 2010-2016**

| Site | 2010 | | 2011 | | 2012 | | 2013 | | 2014 | | 2015 | | 2016 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Mean age (years) | Age range | Mean age (years) | Age range | Mean age (years) | Age range | Mean age (years) | Age range | Mean age (years) | Age range | Mean age (years) | Age range | Mean age (years) | Age range |
| **Whangarei** | n=114 | | n=148 | | n=151 | | n=153 | | n =151 | | n=168 | | n= 131 | |
| | 27 | 17-60 | 28 | 17-62 | 28 | 17-56 | 30 | 17-71 | 33 | 17-74 | 29 | 13-56 | 31 | 17-70 |
| **Auckland Central** | n=284 | | n=311 | | n=246 | | n=300 | | n=315 | | n=266 | | n=221 | |
| | 29 | 17-63 | 28 | 17-67 | 28 | 17-58 | 29 | 17-65 | 28 | 17-69 | 26 | 17-54 | 29 | 17-69 |
| **Wellington Central** | n=152 | | n=171 | | n=99 | | n=106 | | n=95 | | n=107 | | n=213 | |
| | 28 | 17-62 | 28 | 17-61 | 27 | 17-58 | 29 | 17-66 | 28 | 17-63 | 28 | 17-63 | 28 | 17-63 |
| **Christchurch Central** | n=262 | | n=191 | | n=302 | | n=288 | | n=273 | | n=292 | | n=235 | |
| | 27 | 17-63 | 29 | 17-77 | 29 | 17-70 | 30 | 17-61 | 29 | 17-69 | 28 | 17-65 | 28 | 17-69 |
| **All sites** | n=812 | | n=821 | | n=798 | | n=847 | | n= 834 | | n=833 | | n=800 | |
| | 28 | 17-63 | 28 | 17-77 | 28 | 17-70 | 29 | 17-71 | 29 | 17 -74 | 28 | 13-65 | 29 | 17-70 |

## 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 have classified the detainees by their primary ethnicity. In 2016, 45% of the detainees were Maori, 38% were European, 13% were Pacific Islanders and 3% were Asian (Table 2 2). There was no statistically significant change in the ethnic mix of the detainee sample from 2010 to 2016.

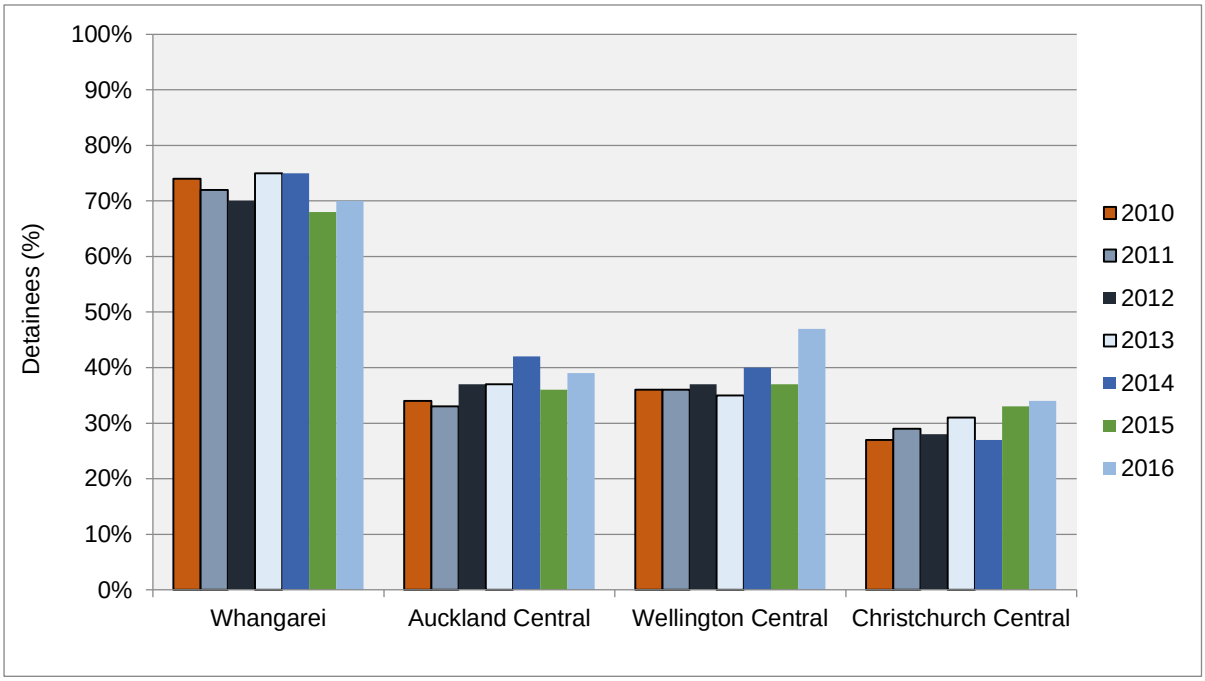
**Table 2 2: Primary ethnicity of the police detainees by location, 2010-2016**

| Sites | Year | N-value | European | Maori | Pacific | Asian | Other |
|---|---|---|---|---|---|---|---|
| **Whangarei** | 2010 | n=114 | 23 | 74 | 4 | 0 | 0 |
| | 2011 | n=148 | 24 | 72 | 4 | 0 | 0 |
| | 2012 | n=150 | 26 | 70 | 4 | 0 | 0 |
| | 2013 | n=153 | 28 | 75 | 5 | 1 | 1 |
| | 2014 | n=150 | 22 | 75 | 3 | 0 | 0 |
| | 2015 | n=169 | 25 | 68 | 5 | 1 | 1 |
| | 2016 | n=131 | 25 | 70 | 4 | 0 | 1 |
| **Auckland Central** | 2010 | n=285 | 32 | 34 | 24 | 5 | 5 |
| | 2011 | n=315 | 29 | 33 | 31 | 4 | 3 |
| | 2012 | n=246 | 35 | 37 | 25 | 2 | 2 |
| | 2013 | n=300 | 31 | 37 | 24 | 3 | 6 |
| | 2014 | n=315 | 28 | 42 | 24 | 2 | 3 |
| | 2015 | n=267 | 26 | 36 | 30 | 3 | 5 |
| | 2016 | n=221 | 25 | 39 | 27 | 7 | 3 |
| **Wellington Central** | 2010 | n=151 | 42 | 36 | 15 | 1 | 6 |
| | 2011 | n=169 | 43 | 36 | 11 | 7 | 3 |
| | 2012 | n=101 | 44 | 37 | 9 | 3 | 8 |
| | 2013 | n=104 | 47 | 35 | 12 | 4 | 3 |
| | 2014 | n=95 | 34 | 40 | 18 | 3 | 5 |
| | 2015 | n=106 | 47 | 37 | 8 | 4 | 5 |
| | 2016 | n=213 | 37 | 47 | 11 | 4 | 1 |
| **Christchurch Central** | 2010 | n=262 | 67 | 27 | 5 | 0 | <1 |
| | 2011 | n=191 | 64 | 29 | 6 | 0 | 1 |
| | 2012 | n=303 | 64 | 28 | 5 | 1 | 1 |
| | 2013 | n=289 | 62 | 31 | 5 | 1 | 1 |
| | 2014 | n=273 | 66 | 27 | 5 | 1 | 1 |
| | 2015 | n=291 | 59 | 33 | 4 | 1 | 2 |
| | 2016 | n=235 | 58 | 34 | 6 | 0 | 1 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **All sites** | 2010 | n=812 | 44 | 38 | 14 | 2 | 3 |
| | 2011 | n=823 | 39 | 40 | 16 | 3 | 2 |
| | 2012 | n=801 | 45 | 40 | 11 | 1 | 2 |
| | 2013 | n=846 | 41 | 41 | 13 | 2 | 3 |
| | 2014 | n=833 | 40 | 43 | 13 | 1 | 2 |
| | 2015 | n=833 | 40 | 42 | 13 | 2 | 3 |
| | 2016 | n=800 | 38 | 45 | 13 | 3 | 1 |

In 2016, a higher proportion of detainees in Whangarei were Maori compared to Auckland Central (70% vs. 39%, p<0.0001), Wellington Central (70% vs. 47%, p<0.0001) and Christchurch Central (70% vs. 34%, p<0.0001) (Figure 2 2). The proportion of detainees who were Maori in Wellington Central was also higher than in Christchurch Central (47% vs. 34%, p=0.0358).

**Figure 2 2: Proportion of the police detainees who were Maori by location, 2010-2016**



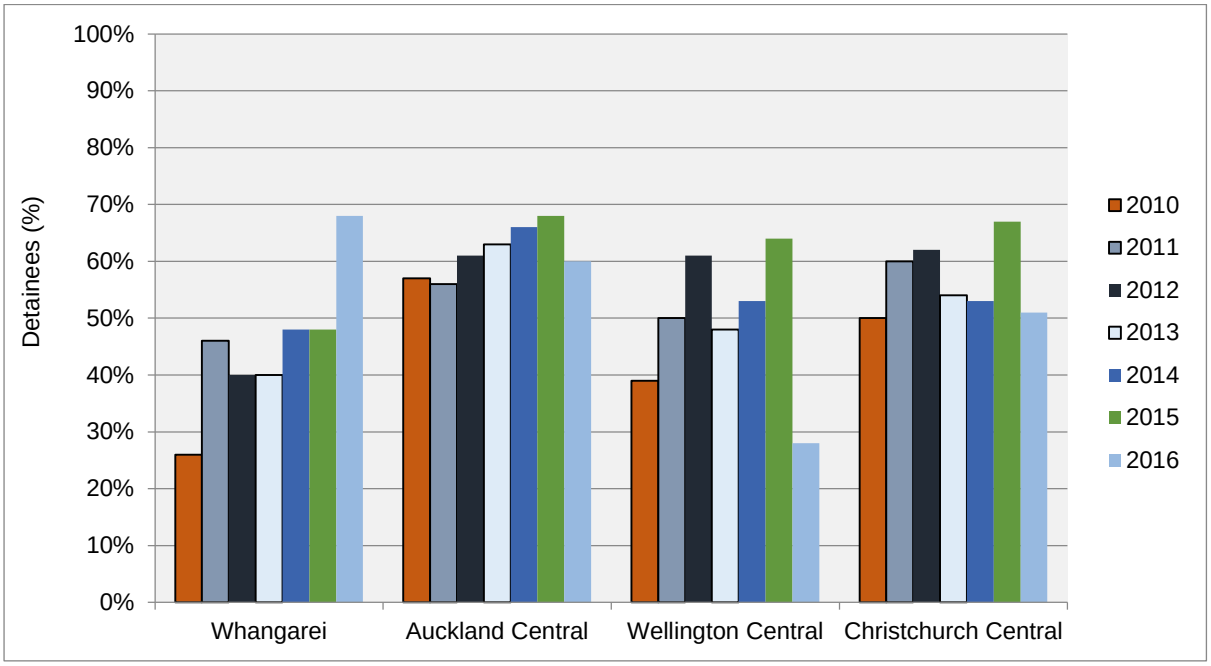

## Iwi affiliation

The detainees who identified as Maori were asked if they knew their iwi affiliation. In 2016, 88% of the detainees who identified their primary ethnicity as Maori knew their iwi.

## Education

The proportion of detainees who had completed the compulsory years of high school education decreased from 64% in 2015 to 52% in 2016 ($p<0.0001$). The proportion of Whangarei detainees who had completed the compulsory years of education increased from 26% in 2010 to 68% in 2016 ($p<0.0001$). Conversely, there was a decline in completion of high school education in Wellington Central (down from 64% in 2015 to 28% in 2016, $p<0.0001$) and Christchurch Central (down from 67% in 2015 to 51% in 2016, $p=0.0018$). In 2016, the Whangarei detainees were more likely to have completed the compulsory years of high school than detainees in Christchurch Central (68% vs. 51%, $p=0.0077$) and Wellington Central (68% vs. 28%, $p<0.0001$). The Wellington Central detainees were less likely to have completed the compulsory years of high school than detainees in Auckland Central (28% vs. 60%, $p<0.0001$) and Christchurch Central (28% vs. 51%, $p<0.0001$) (Figure 2 3).

**Figure 2 3: Proportion of police detainees who completed the compulsory years of high school education by location, 2010-2016**




## Employment status

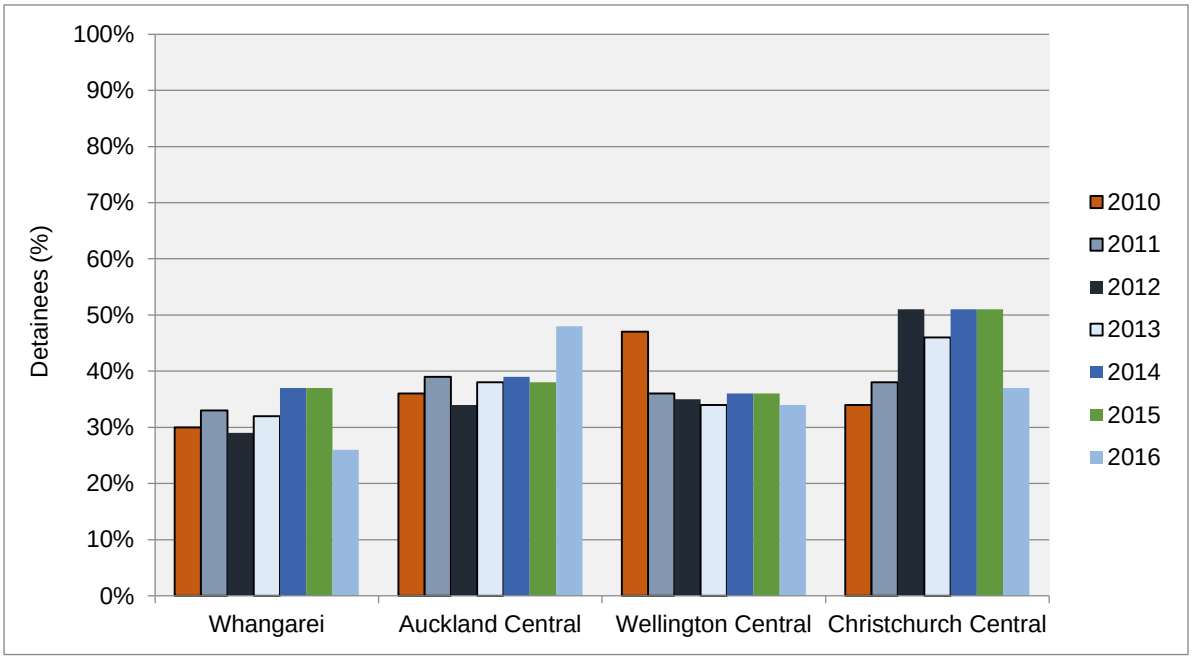
In 2016, 56% of the detainees were unemployed or on a sickness benefit, 39% were employed (9% part-time and 30% full-time), and 5% were students (Table 2 3). The

proportion of detainees from Christchurch Central who were unemployed increased from 46% in 2015 to 60% in 2016 (p=0.0326). In 2016, detainees from Auckland Central were more likely to be employed than those in the other three sites (p<0.0001) (Figure 2 4).

**Table 2 3: Employment status (%) of police detainees by location 2010-2016**

| Locations | Year | N-value | Unemployed/ sickness | Employed | Students |
|---|---|---|---|---|---|
| **Whangarei** | 2010 | n=151 | 64 | 30 | 5 |
| | 2011 | n=149 | 61 | 33 | 6 |
| | 2012 | n=150 | 61 | 29 | 10 |
| | 2013 | n=151 | 63 | 32 | 5 |
| | 2014 | n=150 | 56 | 37 | 7 |
| | 2015 | n=169 | 59 | 37 | 4 |
| | 2016 | n=131 | 68 | 26 | 6 |
| **Auckland Central** | 2010 | n=283 | 55 | 36 | 9 |
| | 2011 | n=315 | 54 | 39 | 7 |
| | 2012 | n=247 | 55 | 34 | 11 |
| | 2013 | n=298 | 51 | 38 | 11 |
| | 2014 | n=314 | 52 | 39 | 10 |
| | 2015 | n=267 | 47 | 38 | 15 |
| | 2016 | n=220 | 45 | 48 | 7 |
| **Wellington Central** | 2010 | n=152 | 45 | 47 | 8 |
| | 2011 | n=170 | 52 | 36 | 12 |
| | 2012 | n=101 | 55 | 35 | 10 |
| | 2013 | n=106 | 55 | 34 | 11 |
| | 2014 | n=95 | 57 | 36 | 7 |
| | 2015 | n=107 | 61 | 36 | 4 |
| | 2016 | n=213 | 62 | 34 | 4 |
| **Christchurch Central** | 2010 | n=262 | 61 | 34 | 5 |
| | 2011 | n=191 | 56 | 38 | 6 |
| | 2012 | n=297 | 45 | 51 | 4 |
| | 2013 | n=289 | 53 | 46 | 1 |
| | 2014 | n=273 | 48 | 51 | 2 |
| | 2015 | n=292 | 46 | 51 | 2 |
| | 2016 | n=234 | 60 | 37 | 3 |
| **All sites** | 2010 | n=812 | 56 | 37 | 7 |
| | 2011 | n=825 | 55 | 37 | 8 |
| | 2012 | n=796 | 55 | 38 | 8 |
| | 2013 | n=847 | 54 | 39 | 7 |
| | 2014 | n=834 | 52 | 42 | 6 |
| | 2015 | n=835 | 51 | 42 | 7 |
| | 2016 | n=797 | 56 | 39 | 5 |

**Figure 2 4: Proportion of the police detainees who were employed by location, 2010-2016**



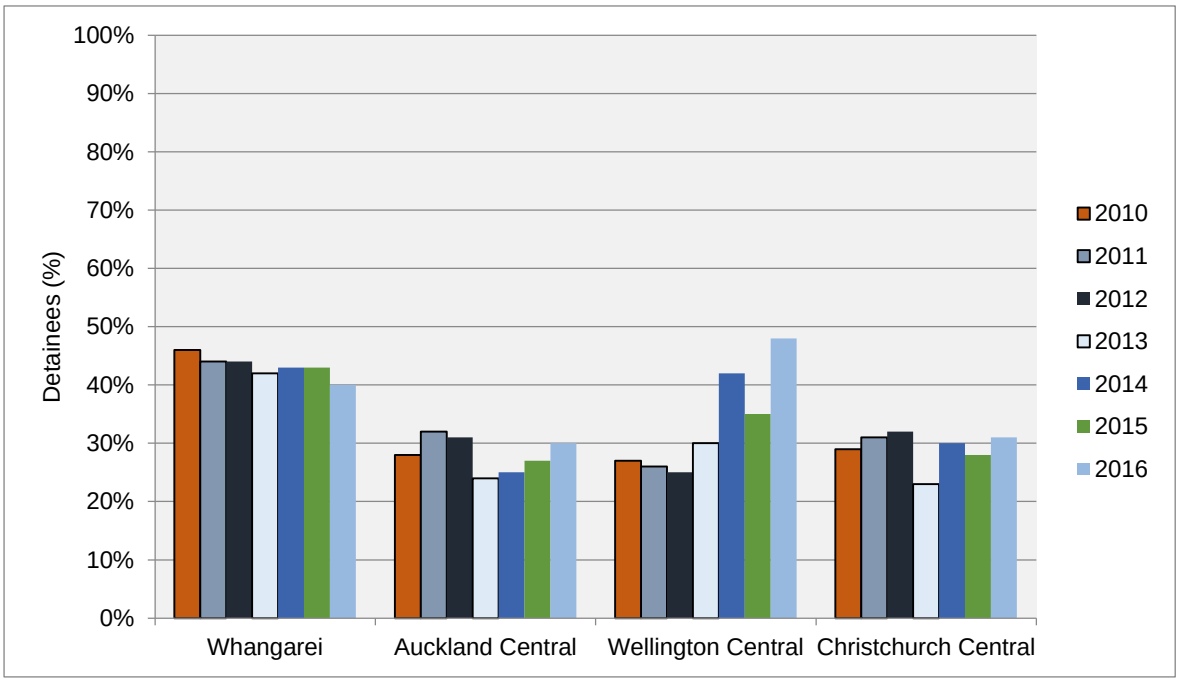

## Marital status

In 2016, 61% of the detainees were single, 27% were living in a de facto relationship and 7% were married. There was no statistically significant change in the marital status of the detainees from 2010 to 2016. In 2016, Whangarei detainees were less likely to be single than those in Christchurch Central (44% vs. 71%, $p<0.0001$), Wellington Central (44% vs. 61%, $p=0.0132$) and Auckland Central (44% vs. 60%, $p=0.0258$). The detainees in Auckland Central were also less likely to be single than those in Christchurch Central (60% vs. 71%, $p=0.0474$).

## Number of dependent children

In 2016, 36% of the detainees had dependent children. There was a slight increase in the proportion of detainees who had dependent children from 2010 to 2016 (up from 31% to 36%, $p=0.0506$). The proportion of Wellington Central detainees who had dependent children increased from 27% in 2010 to 48% in 2016 ($p=0.0013$) (Figure 2 5). In 2016, the detainees in Wellington Central were more likely to have dependent children than those in Auckland Central (48% vs. 30%, $p=0.0011$), and Christchurch Central (48% vs. 31%, $p=0.0021$).

**Figure 2 5: Proportion of the police detainees with dependent children by location, 2010-2016**



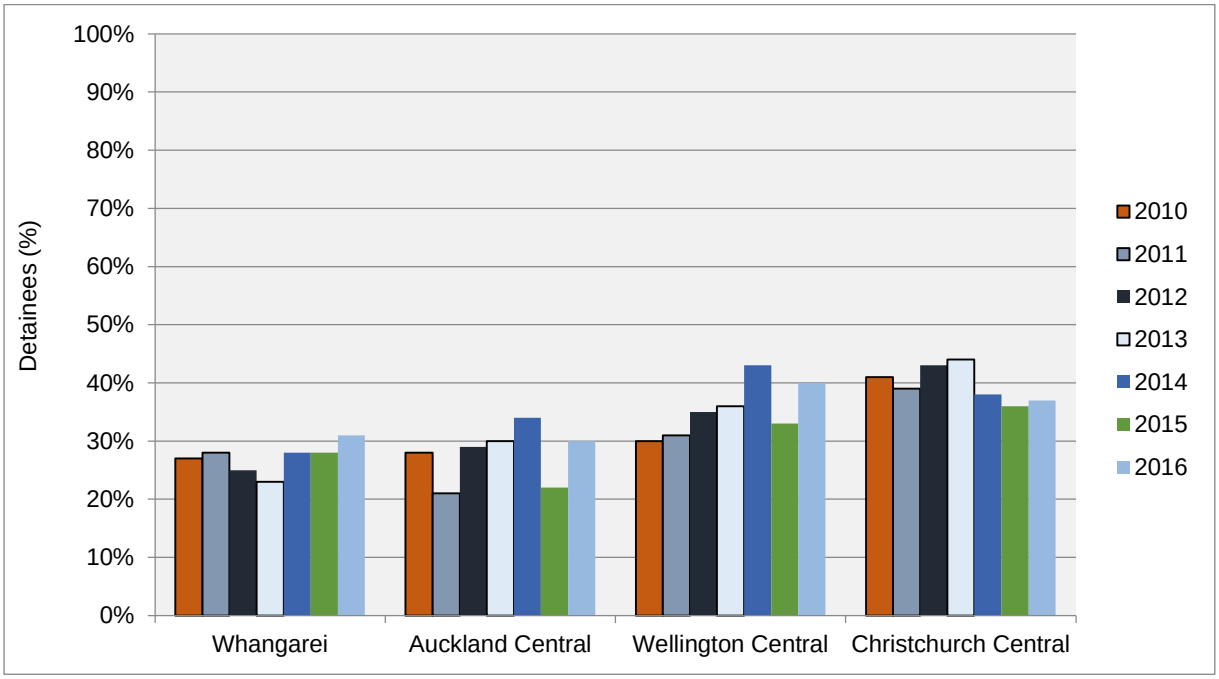

## Accommodation

In 2016, 39% of the detainees were living in a house or apartment, either owned or rented, and 49% in someone else's house or apartment in the previous 30 days. Five percent of the detainees had no fixed address.

## Mental illness

In 2016, 34% of the detainees reported having had a mental illness at some stage in their lives (Figure 2 6).

**Figure 2 6: Proportion of the police detainees who had ever suffered from a mental illness by location, 2010-2016**




## Psychiatric inpatient

In 2016, 9% 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.

## Current treatment or medication for mental illness

In 2016, 8% of the detainees were currently receiving treatment or medication for a mental illness at the time of their arrest.

## Summary

- In 2016, 85% of the detainee sample was male with a mean age of 29 years
- The proportion of Wellington Central detainees who were male declined from 91% in 2015 to 74% in 2016
- In 2016, 45% of the detainees were Maori, 38% were European, 13% were Pacific and 3% were Asian
- A higher proportion of detainees in the Whangarei were Maori compared to those in the other three sites
- The proportion of detainees who were Maori was also higher in Wellington Central than Christchurch Central
- The proportion of detainees who had completed the compulsory years of high school education declined from 64% in 2015 to 52% in 2016
- There were declines in the completion of compulsory high school education in Wellington Central and Christchurch Central, and conversely an increase in high school completion in Whangarei
- In 2016, 56% of the detainees were unemployed or on a sickness benefit, 39% were employed and 5% were students
- The proportion of detainees in Christchurch Central who were unemployed increased from 46% in 2015 to 60% in 2016
- In 2016, detainees in Auckland Central were more likely to be employed than those in the other three sites
- In 2016, 36% of the detainees had dependent children
- The proportion of Wellington Central detainees who had dependent children increased from 27% in 2010 to 48% in 2016
- In 2016, 34% of the police detainees had suffered from a mental illness in their lifetimes, 9% had been a patient in a psychiatric hospital, and 8% were currently receiving treatment or medication for a mental illness

# Chapter 3 – Alcohol

## Introduction

Alcohol consumption contributes to a range of anti-social and criminal behaviour including public nuisance, physical assault, sexual assault, family violence, dangerous driving and accidents (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).

Recent NZ-ADUM surveys have found a surprising decline in drinking among the police detainees. The mean number of days on which the detainees had drunk alcohol in the previous year declined from 101 days in 2013 to 82 days in 2015. The mean number of alcoholic drinks consumed on a typical day of use decreased from 18 in 2013 to 15 in 2015. The proportion of detainees who had been drinking prior to their arrest declined from 41% in 2013 to 28% in 2015. The reduction in drinking in the study may reflect a number of policy and enforcement initiatives including the greater use of Pre-Charge Warnings for alcohol offences and the impact of new government restrictions on alcohol premise opening hours (as part of the *Sale and Supply of Alcohol Act 2012*). Greater use of Pre-Charge Warnings for minor alcohol offences means heavy alcohol-using offenders are no longer held in the cells and consequently are not available to be interviewed for NZ-ADUM. The changes to premise opening hours may be more likely to have impacted younger drinkers and heavier drinkers involved in extended drinking sessions.

## Use of alcohol

The proportion of detainees who drank alcohol in the previous year declined from 92% in 2011 to 87% in 2016 (p=0.0035) (Figure 3.1). The proportion of detainees in Whangarei who had drunk alcohol in the past year declined from 93% in 2011 to 78% in 2016 (p=0.0075).

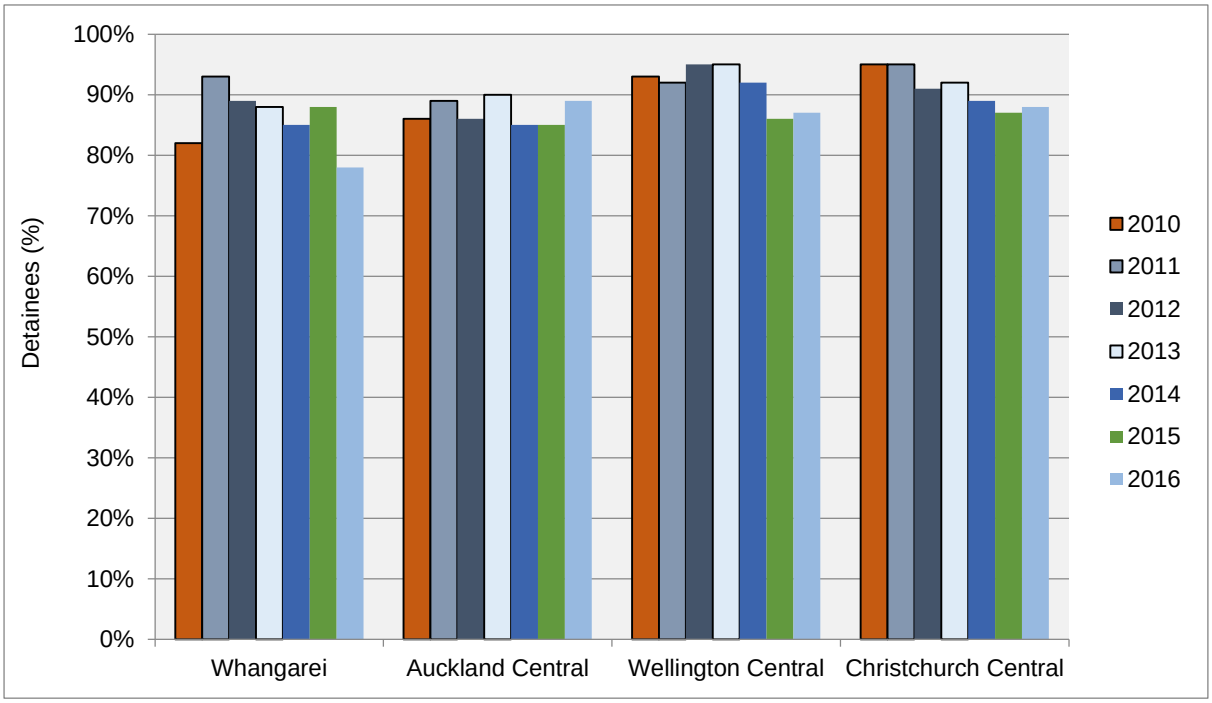
**Table 3 1: Police detainees' patterns of alcohol use by location, 2010-2016**

| Sites | Year | N - value | Ever used (%) | Mean age first used (years) | Used in past 12 months (%) | Mean number of days used in past 12 months* | Mean number of standard drinks per day* | Felt dependent in past 12 months [%]* | Used in past month [%] | Mean number of days used in past month** | Mean number of days males had 5 or more drinks in past month** | Mean number of days females had 5 or more drinks in past month** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Whangarei | 2010 | n= 115 | 97% | 13 | 82% | 89 | 15 | 21% | 74% | 8 | 6 | 7 |
| | 2011 | n=149 | 99% | 12 | 93% | 85 | 17 | 19% | 83% | 8 | 7 | 11 |
| | 2012 | n=151 | 100% | 13 | 89% | 70 | 16 | 22% | 77% | 6 | 6 | 7 |
| | 2013 | n=153 | 99% | 14 | 88% | 84 | 18 | 26% | 75% | 9 | 8 | 11 |
| | 2014 | n=151 | 98% | 13 | 85% | 86 | 18 | 19% | 70% | 8 | 7 | 9 |
| | 2015 | n=169 | 99% | 12 | 88% | 71 | 13 | 13% | 74% | 6 | 5 | 5 |
| | 2016 | n=131 | 100% | 13 | 78% | 57 | 14 | 11% | 66% | 6 | 5 | 4 |
| Auckland Central | 2010 | n=285 | 97% | 13 | 86% | 118 | 11 | 26% | 76% | 10 | 8 | 8 |
| | 2011 | n=316 | 99% | 14 | 89% | 107 | 13 | 26% | 78% | 10 | 10 | 6 |
| | 2012 | n=247 | 98% | 13 | 86% | 92 | 16 | 21% | 80% | 8 | 7 | 10 |
| | 2013 | n=299 | 98% | 14 | 90% | 101 | 17 | 26% | 78% | 10 | 8 | 11 |
| | 2014 | n=315 | 98% | 14 | 85% | 95 | 16 | 24% | 74% | 9 | 8 | 8 |
| | 2015 | n=267 | 99% | 14 | 85% | 75 | 14 | 19% | 70% | 8 | 7 | 9 |
| | 2016 | n=221 | 100% | 13 | 89% | 94 | 16 | 23% | 73% | 8 | 8 | 7 |
| Wellington Central | 2010 | n=152 | 99% | 13 | 93% | 100 | 13 | 26% | 84% | 8 | 8 | 2 |
| | 2011 | n=171 | 99% | 12 | 92% | 111 | 16 | 24% | 81% | 10 | 9 | 9 |
| | 2012 | n=101 | 100% | 14 | 95% | 100 | 19 | 23% | 87% | 8 | 8 | 7 |
| | 2013 | n=106 | 100% | 13 | 95% | 98 | 15 | 30% | 84% | 10 | 10 | 3 |
| | 2014 | n=95 | 98% | 12 | 92% | 81 | 15 | 20% | 79% | 8 | 8 | 8 |
| | 2015 | n=107 | 99% | 13 | 86% | 95 | 15 | 18% | 77% | 9 | 8 | 7 |
| | 2016 | n=213 | 100% | 13 | 87% | 64 | 13 | 15% | 69% | 6 | 6 | 5 |
| | 2010 | n=262 | 100% | 13 | 95% | 109 | 12 | 21% | 86% | 9 | 9 | 7 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Christchurch Central** | 2011 | n=191 | 100% | 13 | 95% | 107 | 14 | 21% | 85% | 10 | 9 | 12 |
| | 2012 | n=303 | 99% | 14 | 91% | 100 | 15 | 25% | 84% | 9 | 8 | 11 |
| | 2013 | n=289 | 99% | 13 | 92% | 109 | 18 | 22% | 81% | 9 | 9 | 11 |
| | 2014 | n=273 | 100% | 13 | 89% | 103 | 15 | 15% | 79% | 9 | 8 | 12 |
| | 2015 | n=292 | 100% | 12 | 87 % | 87 | 15 | 17% | 71% | 8 | 8 | 6 |
| | 2016 | n=235 | 99% | 12 | 88% | 70 | 15 | 14% | 70% | 7 | 7 | 6 |
| **All Sites** | 2010 | n=814 | 98% | 13 | 90% | 108 | 12 | 23% | 80% | 9 | 8 | 7 |
| | 2011 | n=827 | 99% | 13 | 92% | 105 | 14 | 23% | 81% | 9 | 9 | 9 |
| | 2012 | n=802 | 99% | 13 | 90% | 93 | 16 | 23% | 82% | 8 | 7 | 9 |
| | 2013 | n=850 | 99% | 13 | 91% | 101 | 17 | 26% | 80% | 9 | 9 | 10 |
| | 2014 | n=835 | 99% | 13 | 87% | 94 | 16 | 19% | 76% | 9 | 8 | 9 |
| | 2015 | n=835 | 99% | 13 | 86% | 82 | 15 | 17% | 72% | 8 | 7 | 8 |
| | 2016 | n=800 | 100% | 13 | 87% | 76 | 15 | 17% | 70% | 7 | 7 | 6 |

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

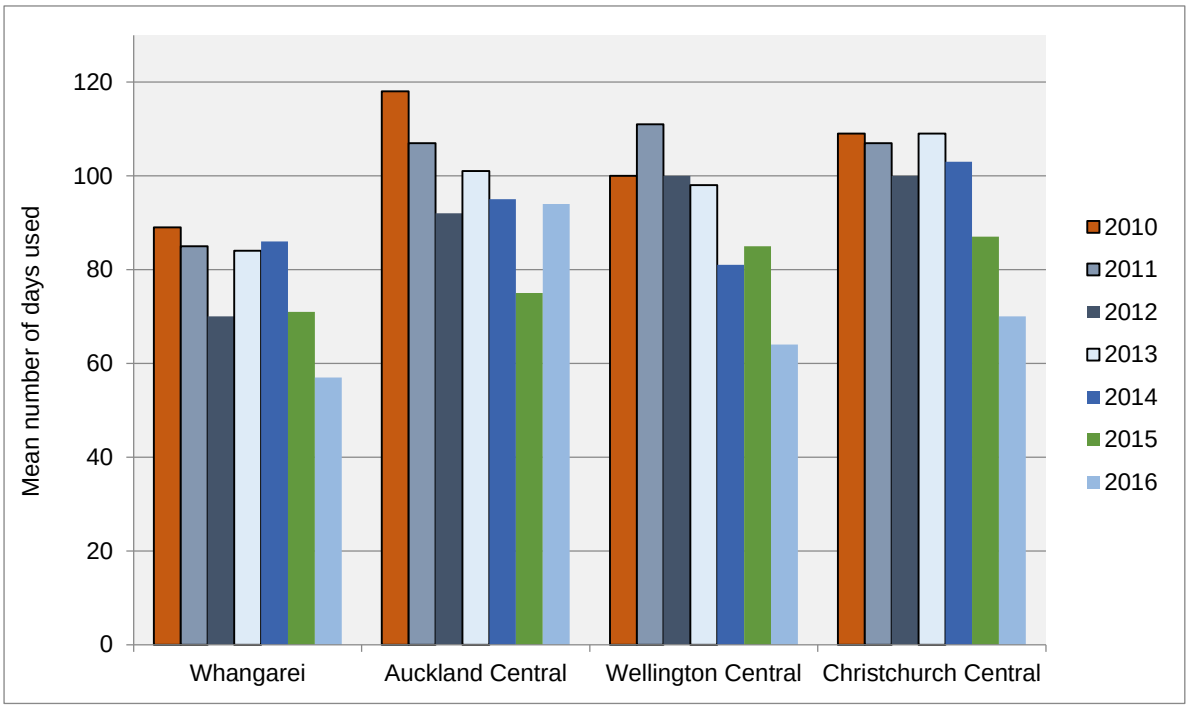
**Figure 3 1: Proportion of police detainees who used alcohol in the past 12 months by location, 2010-2016**




## Frequency of alcohol use

The detainees drank alcohol on a mean of 76 days in the previous 12 months in 2016 (median 48, range 1-365 days). The mean number of days on which the detainees had drunk alcohol in the previous year declined from 101 days in 2013 to 76 days in 2016 (p=0.0002). There were declines in number of days of alcohol consumption in Wellington Central (down from 111 days in 2011 to 64 days in 2016, p=0.0002) and in Christchurch Central (down from 103 days in 2014 to 70 days in 2016, p=0.0007) (Figure 3.2).

**Figure 3 2: Mean number of days alcohol consumed in the previous 12 months by location, 2010-2016**



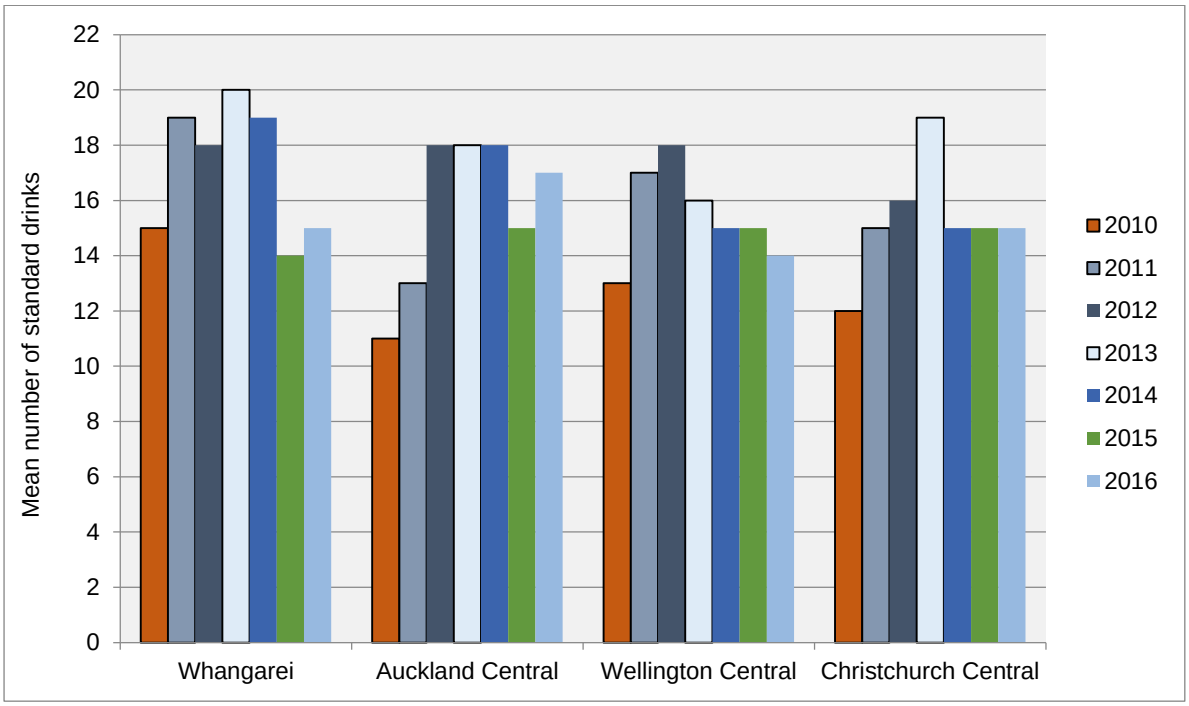

The detainees had consumed alcohol on an average of seven days in the previous month in 2016. The mean number of days of alcohol consumption in the past month decreased from 9.5 days in 2013 to 7.0 days in 2016 ($p<0.0001$). The mean number of days detainees had consumed alcohol in the past month declined in Wellington Central (down from 10.0 days in 2011 to 6.0 days in 2016, $p=0.0261$), and in Christchurch Central (down from 10.0 days in 2011 to 7.0 days in 2016, $p=0.0475$).

## 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, wine), the container type (e.g. bottle, glass, shot) and number of units. A small number of detainees reported extraordinarily high levels of alcohol consumption consistent with prolonged drinking sessions by problem drinkers over an entire day. To control for the influence of these outliers we capped the amount consumed on a single occasion to 60 standard drinks.

The mean number of alcoholic drinks consumed on a typical day of use decreased from 17 in 2013 to 15 in 2016 (p=0.0384). The number of drinks consumed by Auckland Central detainees increased from 11 in 2010 to 16 in 2016 (p=0.0009) (Figure 3.3). The number of drinks consumed by Wellington Central detainees decreased from 18 in 2012 to 13 in 2016 (p=0.0260).

**Figure 3 3: 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), 2010-2016**

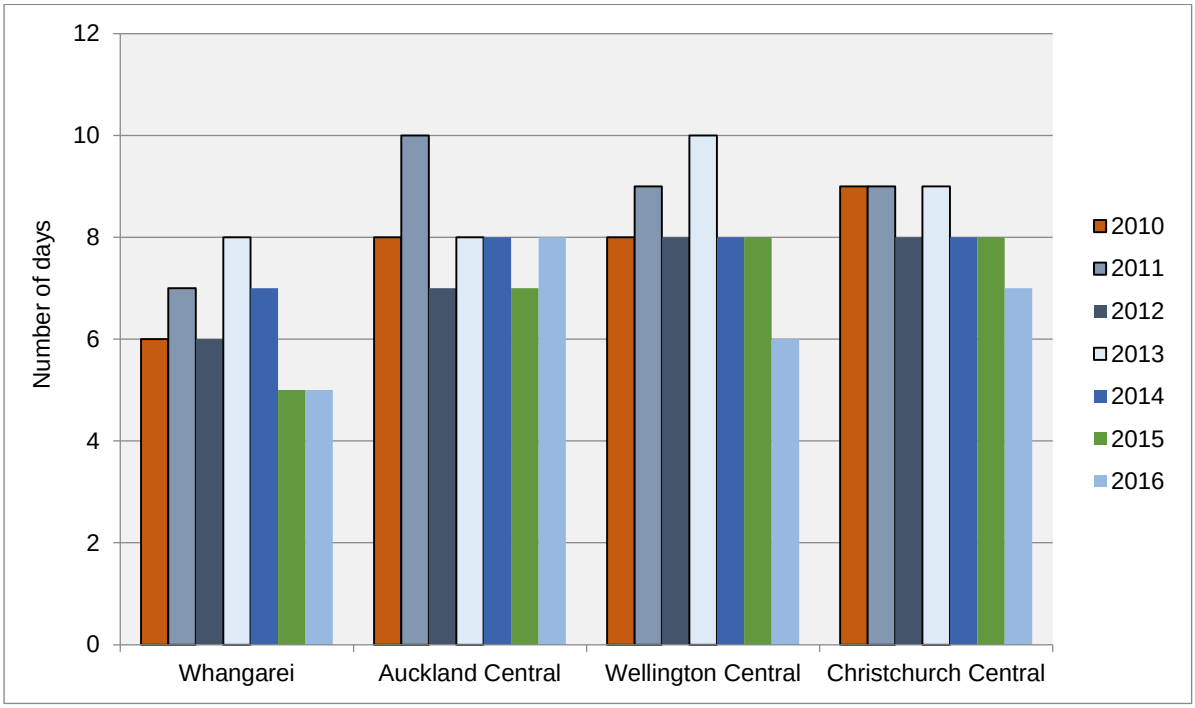



The detainees who had drunk alcohol in the past month were asked on how many days during the past month they had drunk larger quantities of alcohol (i.e. five or more drinks for men on a single occasion, or three or more drinks for women on a single occasion). The proportion of male detainees who drank five or more drinks in a single day in the past month declined from 88% in 2011 to 69% in 2016 (p<0.0001). There were also declines in the proportion of male detainees who drank five or more drinks in the past month in Auckland Central (down from 90% in 2011 to 72% in 2016, p=0.0002) and Christchurch Central (down from 89% in2011 to 65% in 2016, p<0.0001).

The number of days the male detainees had drunk five or more standard drinks in the past month declined from 8.9 days in 2011 to 7.0 days in 2016 (p=0.0012). The number of days

the male detainees from Wellington Central had drunk five or more standard drinks in the past month also declined from 9.4 days in 2011 to 6.0 days in 2016 (p=0.0140) (Figure 3.4).

**Figure 3 4: 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), 2010-2016**




## 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. The proportion of detainees who felt they were dependent on alcohol declined from 26% in 2013 to 17% in 2016 (p=0.0013). The proportion of detainees in Christchurch Central who felt they were dependent on alcohol also declined from 25% in 2012 to 14% in 2016 (p=0.0290).

## Alcohol use at time of arrest

The proportion of detainees who had been drinking prior to their arrest declined from 41% in 2013 to 28% in 2016 (p<0.0001) (Table 3.2). Levels of drinking prior to arrest declined in Whangarei (down from 53% in 2012 to 26% in 2016, p=0.0011) and Wellington Central (down from 45% in 2013 to 20% in 2016, p=0.0002) (Figure 3.5).

**Figure 3 5: Proportion of police detainees who had been drinking alcohol prior to their arrest by location, 2010-2016**

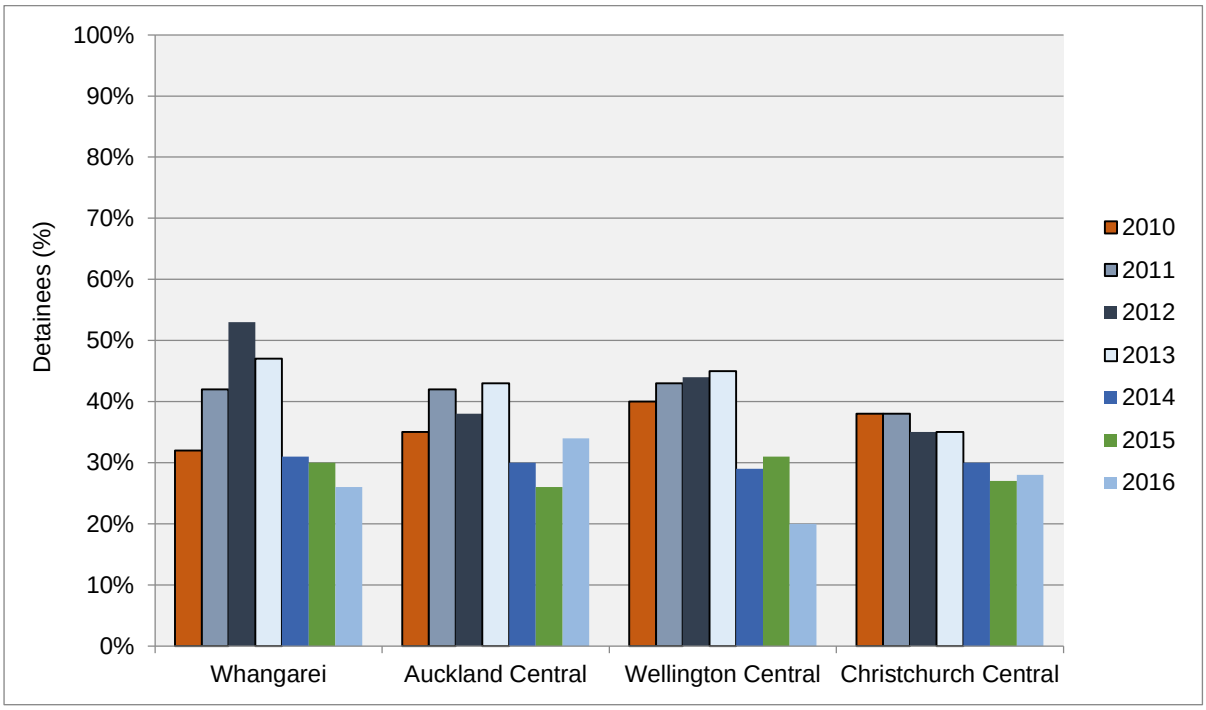


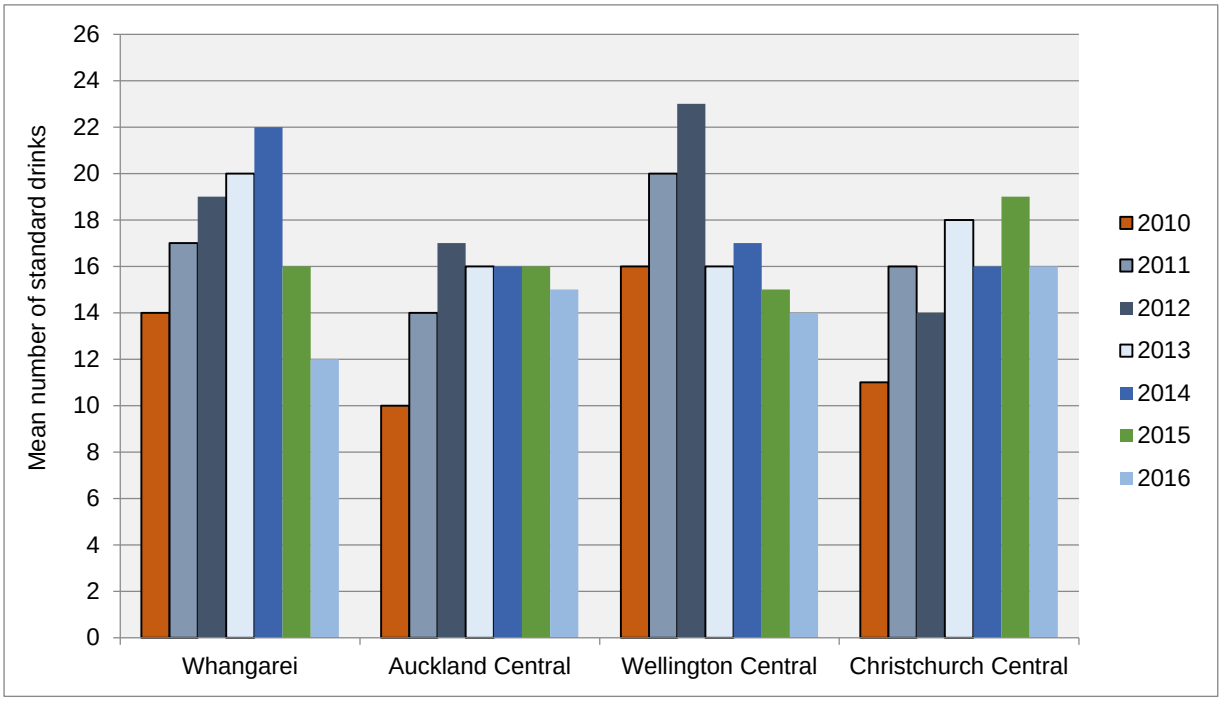
**Table 3 2: Proportion of police detainees who had been drinking alcohol prior to their arrest by location, 2010-2016**

| Sites | Year | N - value | Using when arrested (%) | Mean number of standard drinks before arrest * |
|---|---|---|---|---|
| Whangarei | 2010 | n=111 | 32 | 14 |
| | 2011 | n=149 | 42 | 17 |
| | 2012 | n=146 | 53 | 19 |
| | 2013 | n=150 | 47 | 20 |
| | 2014 | n=151 | 31 | 22 |
| | 2015 | n=166 | 30 | 16 |
| | 2016 | n=129 | 26 | 12 |
| Auckland Central | 2010 | n=283 | 35 | 10 |
| | 2011 | n=310 | 42 | 14 |
| | 2012 | n=243 | 38 | 17 |
| | 2013 | n=293 | 43 | 16 |
| | 2014 | n=315 | 30 | 16 |
| | 2015 | n=266 | 26 | 16 |
| | 2016 | n=220 | 34 | 15 |
| Wellington Central | 2010 | n=147 | 40 | 16 |
| | 2011 | n=170 | 43 | 20 |
| | 2012 | n=98 | 44 | 23 |
| | 2013 | n=104 | 45 | 16 |
| | 2014 | n=95 | 29 | 17 |
| | 2015 | n=106 | 31 | 15 |
| | 2016 | n=221 | 20 | 14 |
| Christchurch Central | 2010 | n=262 | 38 | 11 |
| | 2011 | n=189 | 38 | 16 |
| | 2012 | n=299 | 35 | 14 |
| | 2013 | n=288 | 35 | 18 |
| | 2014 | n=273 | 30 | 16 |
| | 2015 | n=290 | 27 | 19 |
| | 2016 | n=235 | 28 | 16 |
| All Sites | 2010 | n=803 | 36 | 12 |
| | 2011 | n=818 | 41 | 16 |
| | 2012 | n=786 | 40 | 18 |
| | 2013 | n=838 | 41 | 17 |
| | 2014 | n=835 | 30 | 17 |
| | 2015 | n=829 | 28 | 17 |
| | 2016 | n=796 | 28 | 15 |

* of those who had been drinking alcohol when arrested

The detainees consumed a mean of 14 drinks before their arrest in 2016 (Figure 3.6).

**Figure 3 6: Mean number of standard alcoholic drinks consumed at the time of arrest by location, 2010-2016**




## Current availability of alcohol

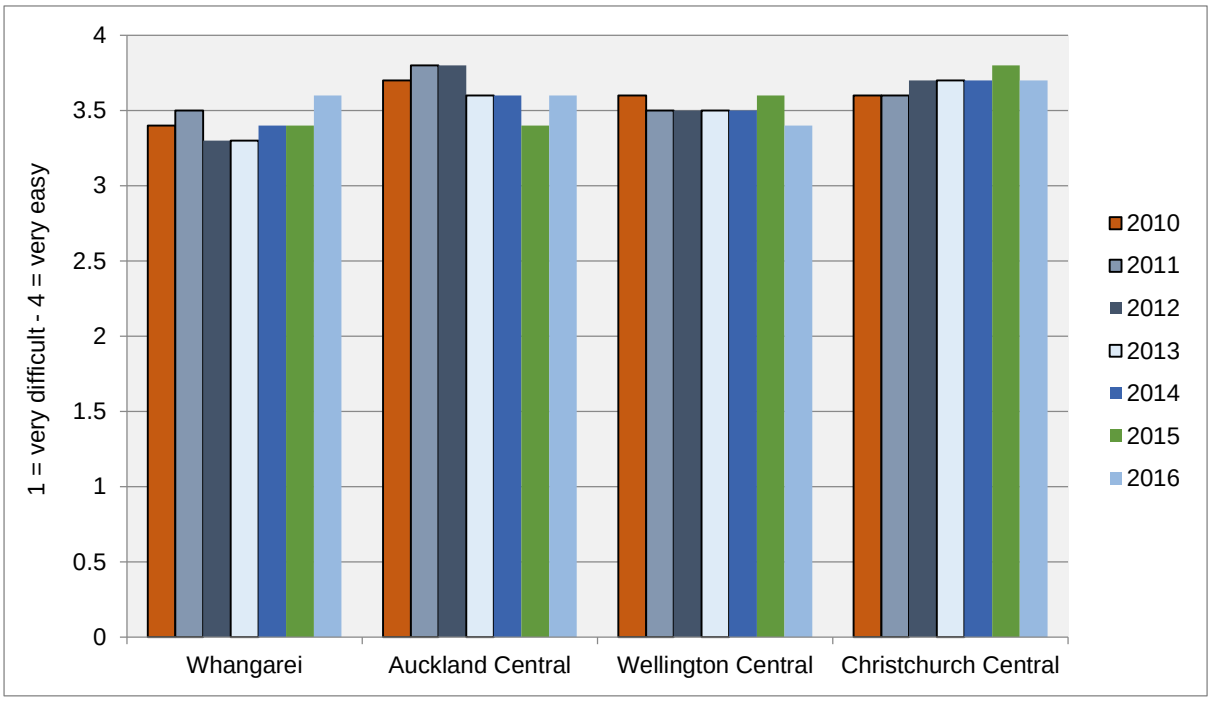
The detainees reported the current availability of alcohol was 'very easy/easy' in 2016 (Table 3.3). Overall, there was no change in the current availability of alcohol in 2016 compared to previous years. However, the current availability of alcohol in Auckland Central declined from 2011 to 2016 (down from 3.8 to 3.6, p=0.0058) (Figure 3.7). The availability of alcohol was reported to be more difficult in Wellington Central than Auckland Central (3.4 vs. 3.6, p=0.0198) and Christchurch Central (3.4 vs. 3.7, p<0.0001).

**Table 3 3: Police detainees' perceptions of the current availability of alcohol by location, 2010-2016**

| Current availability of alcohol | Year | N - value | Very Easy [4] | Easy [3] | Difficult [2] | Very difficult [1] | Average availability [1=very difficult - 4= very easy] | Overall current availability |
|---|---|---|---|---|---|---|---|---|
| **Whangarei** | 2010 | n=97 | 49% | 41% | 7% | 2% | 3.4 | Very easy / easy |
| | 2011 | n=139 | 60% | 28% | 10% | 2% | 3.5 | Very easy / easy |
| | 2012 | n=131 | 49% | 37% | 9% | 5% | 3.3 | Very easy / easy |
| | 2013 | n=117 | 46% | 38% | 12% | 3% | 3.3 | Very easy / easy |
| | 2014 | n=123 | 59% | 28% | 8% | 4% | 3.4 | Very easy / easy |
| | 2015 | n=147 | 62% | 20% | 13% | 5% | 3.4 | Very easy/ easy |
| | 2016 | n=101 | 70% | 19% | 9% | 2% | 3.6 | Very easy |
| **Auckland Central** | 2010 | n=245 | 77% | 17% | 4% | 2% | 3.7 | Very easy |
| | 2011 | n=278 | 85% | 12% | 2% | 1% | 3.8 | Very easy |
| | 2012 | n=211 | 85% | 11% | 3% | 1% | 3.8 | Very easy |
| | 2013 | n=269 | 69% | 25% | 3% | 3% | 3.6 | Very easy / easy |
| | 2014 | n=261 | 68% | 24% | 7% | 2% | 3.6 | Very easy / easy |
| | 2015 | n=225 | 52% | 40% | 5% | 3% | 3.4 | Very easy / easy |
| | 2016 | n=196 | 64% | 32% | 4% | 1% | 3.6 | Very easy / easy |
| **Wellington Central** | 2010 | n=138 | 70% | 23% | 5% | 1% | 3.6 | Very easy |
| | 2011 | n=155 | 61% | 28% | 8% | 3% | 3.5 | Very easy / easy |
| | 2012 | n=94 | 57% | 35% | 5% | 2% | 3.5 | Very easy / easy |
| | 2013 | n=94 | 67% | 24% | 4% | 4% | 3.5 | Very easy / easy |
| | 2014 | n=85 | 64% | 28% | 7% | 1% | 3.6 | Very easy / easy |
| | 2015 | n=92 | 63% | 32% | 4% | 1% | 3.6 | Very easy / easy |
| | 2016 | n=182 | 46% | 50% | 4% | 1% | 3.4 | Easy / very easy |
| **Christchurch Central** | 2010 | n=248 | 72% | 18% | 9% | 2% | 3.6 | Very easy |
| | 2011 | n=181 | 69% | 24% | 6% | 2% | 3.6 | Very easy / easy |
| | 2012 | n=275 | 76% | 22% | 3% | 1% | 3.7 | Very easy |
| | 2013 | n=265 | 77% | 15% | 5% | 3% | 3.7 | Very easy |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2014 | n=241 | 75% | 20% | 3% | 2% | 3.7 | Very easy |
| | 2015 | n=254 | 82% | 14% | 3% | 2% | 3.8 | Very easy |
| | 2016 | n=206 | 74% | 23% | 2% | 1% | 3.7 | Very easy |
| **All Sites** | 2010 | n=728 | 70% | 22% | 6% | 2% | 3.6 | Very easy |
| | 2011 | n=753 | 71% | 21% | 6% | 2% | 3.6 | Very easy |
| | 2012 | n=712 | 71% | 23% | 4% | 2% | 3.6 | Very easy / easy |
| | 2013 | n=745 | 69% | 23% | 4% | 3% | 3.6 | Very easy / easy |
| | 2014 | n=710 | 68% | 24% | 6% | 2% | 3.6 | Very easy / easy |
| | 2015 | n=716 | 65% | 27% | 5% | 3% | 3.5 | Very easy/ easy |
| | 2016 | n=689 | 65% | 31% | 4% | 1% | 3.6 | Very easy/ easy |

**Figure 3 7: Current availability of alcohol by location, 2010-2016**




## Change in availability of alcohol

The detainees reported the availability of alcohol had been 'stable' over the past six months in 2016 (Table 3.4). In 2016, 75% of detainees described the availability of alcohol as "stable". The availability of alcohol increased slightly from 2014 to 2016 (up from 2.1 to 2.2, p=0.0036). The availability of alcohol increased in Auckland Central from 2014 to 2016 (up from 2.0 to 2.3, p<0.0001).

**Table 3 4: Change in the availability of alcohol by location, 2010-2016**

| Change in availability of alcohol | Year | N - value | Easier [3] | Stable [2] | Fluctuates [2] | More difficult [1] | Mean change in availability [1=more difficult - 3=easier] | Overall change in availability |
|---|---|---|---|---|---|---|---|---|
| **Whangarei** | 2010 | n=96 | 26% | 64% | 5% | 5% | 2.2 | Stable / easier |
| | 2011 | n=137 | 18% | 67% | 4% | 11% | 2.1 | Stable / easier |
| | 2012 | n=125 | 15% | 69% | 6% | 10% | 2.1 | Stable / more difficult |
| | 2013 | n=113 | 19% | 64% | 5% | 12% | 2.1 | Stable / easier |
| | 2014 | n=119 | 17% | 68% | 8% | 8% | 2.1 | Stable / easier |
| | 2015 | n=135 | 28% | 63% | 2% | 7% | 2.2 | Stable / easier |
| | 2016 | n=99 | 13% | 78% | 6% | 3% | 2.1 | Stable |
| **Auckland Central** | 2010 | n=242 | 22% | 69% | 2% | 7% | 2.2 | Stable / easier |
| | 2011 | n=269 | 19% | 77% | 2% | 2% | 2.2 | Stable |
| | 2012 | n=204 | 19% | 76% | 1% | 3% | 2.2 | Stable |
| | 2013 | n=262 | 18% | 70% | 2% | 10% | 2.1 | Stable |
| | 2014 | n=254 | 17% | 67% | 3% | 13% | 2.0 | Stable / easier |
| | 2015 | n=217 | 23% | 64% | 4% | 10% | 2.1 | Stable/ easier |
| | 2016 | n=194 | 31% | 62% | 3% | 4% | 2.3 | Stable/ easier |
| **Wellington Central** | 2010 | n=137 | 19% | 71% | 3% | 7% | 2.1 | Stable |
| | 2011 | n=151 | 11% | 83% | 1% | 5% | 2.1 | Stable |
| | 2012 | n=92 | 21% | 68% | 4% | 7% | 2.1 | Stable / easier |
| | 2013 | n=93 | 12% | 83% | 4% | 1% | 2.1 | Stable |
| | 2014 | n=84 | 4% | 95% | 0% | 1% | 2.0 | Stable |
| | 2015 | n=89 | 7% | 89% | 0% | 4% | 2.0 | Stable |
| | 2016 | n=183 | 7% | 90% | 2% | 2% | 2.1 | Stable |
| **Christchurch Central** | 2010 | n=248 | 21% | 67% | 6% | 6% | 2.2 | Stable / easier |
| | 2011 | n=180 | 23% | 69% | 0% | 7% | 2.2 | Stable / easier |
| | 2012 | n=275 | 20% | 73% | 1% | 5% | 2.1 | Stable |
| | 2013 | n=263 | 21% | 68% | 2% | 9% | 2.1 | Stable / easier |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2014 | n=240 | 13% | 81% | <1% | 5% | 2.1 | Stable |
| | 2015 | n=252 | 11% | 85% | 0% | 4% | 2.1 | Stable |
| | 2016 | n=206 | 17% | 79% | <1 | 4% | 2.1 | Stable |
| **All Sites** | 2010 | n=723 | 22% | 68% | 4% | 6% | 2.2 | Stable / easier |
| | 2011 | n=737 | 18% | 74% | 2% | 6% | 2.1 | Stable |
| | 2012 | n=697 | 19% | 76% | 3% | 6% | 2.1 | Stable |
| | 2013 | n=731 | 18% | 71% | 3% | 8% | 2.1 | Stable |
| | 2014 | n=697 | 13% | 78% | 2% | 7% | 2.1 | Stable |
| | 2015 | n=693 | 17% | 75% | 2% | 6% | 2.1 | Stable |
| | 2016 | n=685 | 20% | 75% | 2% | 4% | 2.2 | Stable |

### Change in the price of alcohol

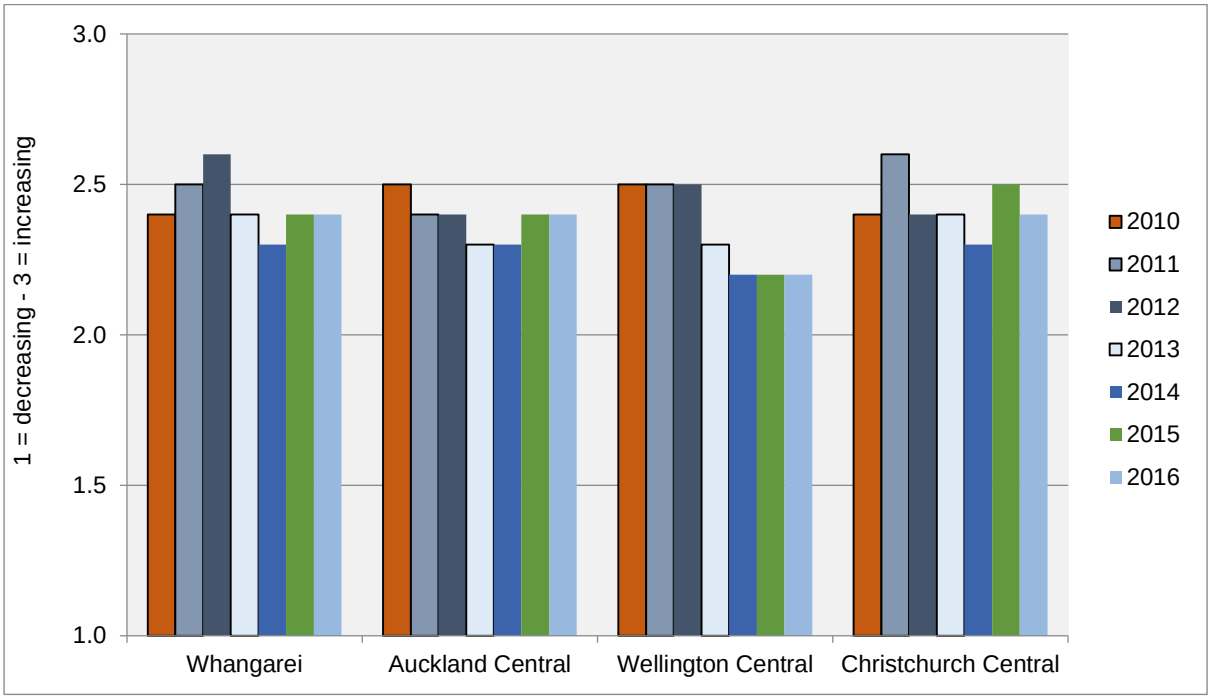
The detainees reported the price of alcohol had been 'stable/increasing' over the previous six months in 2016 (Table 3 5). A lower proportion of detainees reported the price of alcohol had been 'increasing' from 2010 to 2016 (down from 53% to 39%, p=0.0027). A lower proportion of detainees said the price of alcohol was 'increasing' in Whangarei (down from 66% in 2012 to 44% in 2016, p=0.0470), Central Wellington (down 57% in 2010 to 21% in 2016, p<0.0001) and Central Christchurch (down from 65% in 2011 to 44% in 2016, p=0.0336) (Figure 3 8).

**Table 3 5: Police detainees' perceptions of the change in the price of alcohol in the past six months by location, 2010-2016**

| Change in price of alcohol | Year | N - value | Increasing [3] | Fluctuating [2] | Stable [2] | Decreasing | Mean change in price [1=decreasing - 3=increasing] | Overall change in availability |
|---|---|---|---|---|---|---|---|---|
| **Whangarei** | 2010 | n=91 | 46% | 22% | 24% | 8% | 2.4 | Increasing / stable |
| | 2011 | n=121 | 56% | 12% | 22% | 10% | 2.5 | Increasing / stable |
| | 2012 | n=127 | 66% | 5% | 25% | 4% | 2.6 | Increasing / stable |
| | 2013 | n=120 | 47% | 18% | 26% | 9% | 2.4 | Increasing / stable |
| | 2014 | n=116 | 34% | 22% | 34% | 9% | 2.3 | Increasing / stable |
| | 2015 | n=132 | 43% | 6% | 43% | 8% | 2.4 | Stable / increasing |
| | 2016 | n=90 | 44% | 6% | 42% | 8% | 2.4 | Increasing / stable |
| **Auckland Central** | 2010 | n=224 | 54% | 9% | 29% | 8% | 2.5 | Increasing / stable |
| | 2011 | n=256 | 52% | 12% | 29% | 7% | 2.4 | Increasing / stable |
| | 2012 | n=197 | 48% | 13% | 32% | 7% | 2.5 | Increasing / stable |
| | 2013 | n=249 | 41% | 15% | 35% | 8% | 2.3 | Increasing / stable |
| | 2014 | n=242 | 43% | 9% | 38% | 9% | 2.3 | Increasing / stable |
| | 2015 | n=210 | 45% | 9% | 40% | 7% | 2.4 | Increasing / Stable |
| | 2016 | n=185 | 43% | 6% | 43% | 8% | 2.4 | Increasing / Stable |
| **Wellington Central** | 2010 | n=116 | 57% | 9% | 28% | 6% | 2.5 | Increasing / stable |
| | 2011 | n=143 | 52% | 13% | 30% | 4% | 2.5 | Increasing / stable |
| | 2012 | n=85 | 51% | 19% | 25% | 6% | 2.5 | Increasing / stable |
| | 2013 | n=85 | 31% | 15% | 49% | 5% | 2.3 | Stable / increasing |
| | 2014 | n=79 | 24% | 15% | 58% | 3% | 2.2 | Stable / increasing |
| | 2015 | n=85 | 19% | 25% | 55% | 1% | 2.2 | Stable / fluctuating |
| | 2016 | n=164 | 21% | 23% | 54% | 2% | 2.2 | Stable / fluctuating |
| **Christchurch Central** | 2010 | n=238 | 53% | 5% | 32% | 9% | 2.4 | Increasing / stable |
| | 2011 | n=171 | 65% | 8% | 22% | 5% | 2.6 | Increasing / stable |
| | 2012 | n=257 | 47% | 9% | 40% | 4% | 2.4 | Increasing / stable |
| | 2013 | n=257 | 49% | 13% | 34% | 5% | 2.4 | Increasing / stable |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2014 | n=229 | 36% | 16% | 45% | 3% | 2.3 | Stable / increasing |
| | 2015 | n=239 | 52% | 10% | 35% | 3% | 2.5 | Increasing / stable |
| | 2016 | n=195 | 44% | 7% | 47% | 3% | 2.4 | Stable / increasing |
| **All Sites** | 2010 | n=669 | 53% | 10% | 29% | 8% | 2.5 | Increasing / stable |
| | 2011 | n=691 | 57% | 11% | 26% | 7% | 2.5 | Increasing / stable |
| | 2012 | n=667 | 51% | 11% | 32% | 5% | 2.5 | Increasing / stable |
| | 2013 | n=711 | 43% | 15% | 36% | 7% | 2.4 | Increasing / stable |
| | 2014 | n=672 | 36% | 15% | 44% | 6% | 2.3 | Stable / increasing |
| | 2015 | n=666 | 42% | 12% | 42% | 5% | 2.4 | Increasing / Stable |
| | 2016 | n=641 | 39% | 9% | 46% | 5% | 2.3 | Stable / increasing |

**Figure 3 8: Police detainees' perceptions of the change in the price of alcohol in the past six months by location, 2010-2016**




## Time taken to purchase alcohol

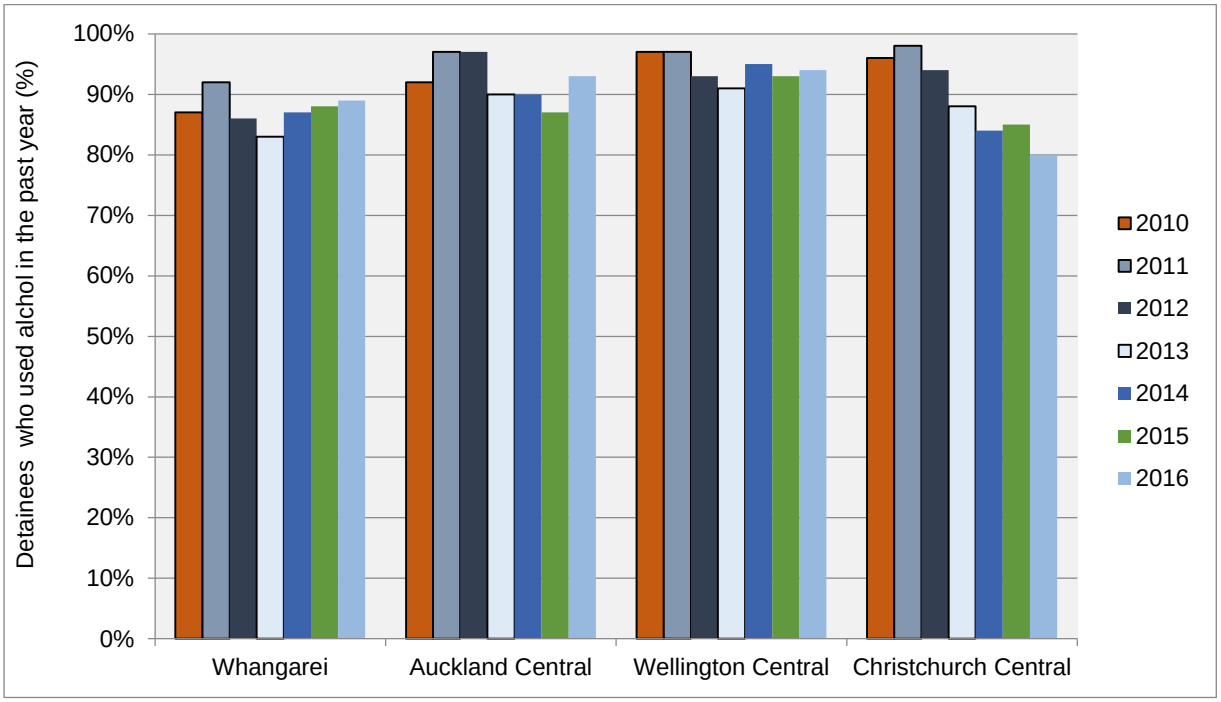
Eighty-nine percent of the detainees could purchase alcohol in one hour or less in 2016. Seventy-eight percent could purchase it in less than 20 minutes. The proportion of detainees who could purchase alcohol in one hour or less declined from 97% in 2011 to 89% in 2016 ($p<0.0001$) (Table 3 6). Lower proportions of detainees could purchase alcohol in one hour or less in Christchurch Central (down from 98% in 2011 to 80% in 2016, $p=0.0002$) (Figure 3 9).

**Table 3 6: Time taken by police detainees to purchase alcohol by location, 2010-2016**

| Time taken to purchase alcohol (%) | Year | N - value | Months | Weeks | Days | About 1 day | Hours | 1 hour | Less than 20 minutes |
|---|---|---|---|---|---|---|---|---|---|
| **Whangarei** | 2010 | n=96 | 0% | 2% | 6% | 1% | 4% | 13% | 74% |
| | 2011 | n=138 | 0% | 2% | 2% | 1% | 2% | 18% | 74% |
| | 2012 | n=133 | 0% | 1% | 0% | 6% | 8% | 16% | 70% |
| | 2013 | n=129 | 0% | 2% | 2% | 5% | 9% | 17% | 65% |
| | 2014 | n=126 | 1% | 2% | 2% | 0% | 8% | 19% | 67% |
| | 2015 | n=145 | 1% | 3% | 2% | 3% | 3% | 8% | 80% |
| | 2016 | n=99 | 0% | 3% | 2% | 3% | 4% | 5% | 83% |
| **Auckland Central** | 2010 | n=216 | 0% | 1% | 1% | 3% | 3% | 14% | 78% |
| | 2011 | n=276 | 1% | 0% | <1% | <1% | 1% | 9% | 88% |
| | 2012 | n=209 | <1% | 0% | 1% | 1% | <1% | 8% | 89% |
| | 2013 | n=270 | 1% | 1% | 0% | 3% | 5% | 7% | 83% |
| | 2014 | n=268 | 1% | 1% | 1% | 3% | 4% | 7% | 83% |
| | 2015 | n=223 | <1% | 2% | 1% | 4% | 4% | 10% | 78% |
| | 2016 | n=196 | 0% | 0% | 2% | 2% | 3% | 10% | 84% |
| **Wellington Central** | 2010 | n=137 | 0% | 0% | 0% | 1% | 3% | 15% | 82% |
| | 2011 | n=154 | 0% | 0% | 0% | 1% | 3% | 11% | 86% |
| | 2012 | n=93 | 1% | 0% | 1% | 2% | 2% | 6% | 87% |
| | 2013 | n=98 | 0% | 1% | 0% | 1% | 7% | 16% | 74% |
| | 2014 | n=84 | 0% | 0% | 0% | 2% | 2% | 10% | 86% |
| | 2015 | n=89 | 1% | 0% | 2% | 0% | 3% | 13% | 80% |
| | 2016 | n=177 | 1% | 0% | 1% | 1% | 3% | 12% | 82% |
| **Christchurch Central** | 2010 | n=247 | 0% | <1% | 0% | 0% | 3% | 12% | 84% |
| | 2011 | n=181 | 0% | 0% | 0% | 1% | 2% | 16% | 82% |
| | 2012 | n=273 | <1% | 1% | 1% | 1% | 4% | 12% | 82% |
| | 2013 | n=267 | 1% | <1% | 1% | 2% | 8% | 10% | 78% |
| | 2014 | n=238 | 0% | 1% | 1% | 1% | 13% | 13% | 71% |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2015 | n=253 | <1% | 0% | 2% | 2% | 11% | 9% | 76% |
| | 2016 | n=205 | <1 | 1% | 6% | 2% | 10% | 14% | 67% |
| **All Sites** | 2010 | n=696 | 0% | 1% | 1% | 1% | 3% | 13% | 80% |
| | 2011 | n=752 | <1% | <1% | 1% | 1% | 2% | 13% | 83% |
| | 2012 | n=708 | <1% | <1% | 1% | 2% | 3% | 10% | 84% |
| | 2013 | n=769 | 1% | 1% | 1% | 2% | 7% | 11% | 77% |
| | 2014 | n=720 | <1% | 1% | 1% | 2% | 8% | 11% | 77% |
| | 2015 | n=708 | <1% | 1% | 2% | 2% | 6% | 10% | 78% |
| | 2016 | n=683 | <1 | 1% | 3% | 2% | 6% | 11% | 78% |

**Figure 3 9: Proportion of the police detainees who could purchase alcohol in one hour or less by location, 2010-2016**



### 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-one percent of the alcohol using detainees said they did not drive and a further 10% said their driver licence was suspended in 2016. Nineteen percent of the detainees who drove and drank alcohol had completed at least some of their driving under the influence of alcohol in 2016 (Table 3 7).

**Table 3 7: Extent police detainees who drove and who had used alcohol in the past 12 months had driven under the influence of alcohol by location, 2010-2016**

| Extent drove under the influence of alcohol [%] | Year | N - value | All [4] | Most [3] | Some [2] | Hardly any [1] | None [0] |
|---|---|---|---|---|---|---|---|
| **Whangarei** | 2010 | n=79 | 3% | 3% | 14% | 37% | 44% |
| | 2011 | n=100 | 2% | 0% | 8% | 26% | 64% |
| | 2012 | n=96 | 1% | 5% | 14% | 25% | 55% |
| | 2013 | n=95 | 2% | 8% | 13% | 17% | 60% |
| | 2014 | n=98 | 2% | 4% | 12% | 13% | 68% |
| | 2015 | n=125 | 2% | 2% | 10% | 21% | 66% |
| | 2016 | n=60 | 2% | 0% | 17% | 15% | 67% |
| **Auckland Central** | 2010 | n=165 | 2% | 3% | 18% | 19% | 58% |
| | 2011 | n=198 | 2% | 5% | 20% | 20% | 54% |
| | 2012 | n=145 | 1% | 6% | 15% | 16% | 61% |
| | 2013 | n=109 | 3% | 4% | 14% | 32% | 47% |
| | 2014 | n=174 | 1% | 3% | 14% | 21% | 61% |
| | 2015 | n=142 | 2% | 5% | 8% | 28% | 56% |
| | 2016 | n=127 | 6% | 4% | 12% | 24% | 54% |
| **Wellington Central** | 2010 | n=91 | 4% | 3% | 14% | 18% | 60% |
| | 2011 | n=98 | 2% | 3% | 14% | 18% | 62% |
| | 2012 | n=72 | 1% | 3% | 6% | 22% | 68% |
| | 2013 | n=56 | 5% | 2% | 11% | 20% | 63% |
| | 2014 | n=59 | 5% | 7% | 5% | 24% | 59% |
| | 2015 | n=66 | 2% | 0% | 24% | 26% | 48% |
| | 2016 | n=120 | 4% | 3% | 18% | 13% | 62% |
| **Christchurch Central** | 2010 | n=54 | 2% | 6% | 19% | 18% | 55% |
| | 2011 | n=124 | 0% | 3% | 18% | 19% | 60% |
| | 2012 | n=208 | 1% | 2% | 19% | 22% | 56% |
| | 2013 | n=182 | 2% | 2% | 11% | 23% | 62% |
| | 2014 | n=178 | 2% | 3% | 15% | 23% | 57% |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | 2015 | n=180 | 2% | 3% | 9% | 23% | 62% |
| | 2016 | n=158 | 2% | 3% | 7% | 28% | 60% |
| **All Sites** | 2010 | n=489 | 3% | 4% | 17% | 21% | 55% |
| | 2011 | n=520 | 1% | 3% | 16% | 20% | 59% |
| | 2012 | n=521 | 1% | 4% | 14% | 21% | 60% |
| | 2013 | n=520 | 3% | 4% | 12% | 25% | 56% |
| | 2014 | n=513 | 2% | 4% | 12% | 21% | 60% |
| | 2015 | n=505 | 2% | 3% | 12% | 25% | 58% |
| | 2016 | n=470 | 4% | 3% | 12% | 23% | 59% |

## Summary

- The proportion of detainees who drank alcohol in the previous year declined from 92% in 2011 to 87% in 2016
- The proportion of Whangarei detainees who drank alcohol in the previous year declined from 93% in 2011 to 78% in 2016
- The mean number of days on which the detainees had drunk alcohol in the previous year declined from 101 days in 2013 to 76 days in 2016
- There were declines in number of days of alcohol consumption in Wellington Central (down from 111 days in 2011 to 64 days in 2016) and in Christchurch Central (down from 103 days in 2014 to 70 days in 2016)
- The mean number of alcoholic drinks consumed on a typical day of use decreased from 17 in 2013 to 15 in 2016
- The number of drinks consumed by Auckland Central detainees on a typical occasion increased from 11 in 2010 to 16 in 2016
- The number of drinks consumed by Wellington Central detainees on a typical occasion decreased from 18 in 2012 to 13 in 2016
- The number of days the male detainees had drunk five or more standard drinks in the past month declined from 8.9 days in 2011 to 7.0 days in 2016
- The number of days the male detainees from Wellington Central had drunk five or more standard drinks in the past month also declined, from 9.4 days in 2011 to 6.0 days in 2016
- The proportion of detainees who felt they were dependent on alcohol declined from 26% in 2013 to 17% in 2016
- The proportion of Christchurch Central detainees who felt they were dependent on alcohol declined from 25% in 2012 to 14% in 2016
- The proportion of detainees who had been drinking prior to their arrest declined from 41% in 2013 to 28% in 2016

- Levels of drinking prior to arrest declined in Whangarei (down from 53% in 2012 to 26% in 2016) and Wellington Central (down from 45% in 2013 to 20% in 2016)
- The current availability of alcohol in Auckland Central declined from 2011 to 2016
- The proportion of detainees who could purchase alcohol in one hour or less declined slightly from 97% in 2011 to 89% in 2016
- The proportion of Christchurch Central detainees who could purchase alcohol in one hour or less declined from 98% in 2011 to 80% in 2016
- In 2016, 19% of the detainees who drank alcohol and drove had completed at least some of their driving under the influence of alcohol

# 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 behaviour, 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, peaking at the population level in the mid-2000s before declining over subsequent years (Wilkins et al., 2002a; Wilkins & Sweetsur, 2008). The most recent population estimate, from a household survey conducted in 2014/15, found 0.9% of New Zealanders aged 16-64 years had used 'amphetamines'[2] in the previous year (Ministry of Health, 2015), similar to the levels found in the previous two years (Ministry of Health, 2014).

Higher levels of methamphetamine use have been found among 'at risk' populations, such as police detainees (Wilkins, et al., 2012a; Wilkins et al., 2011). Recent NZ-ADUM and IDMS annual surveys found increasing methamphetamine supply and lower prices (Wilkins et al., 2016a; Wilkins et al., 2015). The proportion of detainees who reported using methamphetamine in the previous year increased from 28% in 2012 to 36% in 2015 (Wilkins, et al., 2016a). The mean price of a gram of methamphetamine decreased from $788 in 2014 to $672 in 2015 (Wilkins, et al., 2016a).

These findings are consistent with the record seizures of methamphetamine made by New Zealand Police and New Zealand Customs Service over the past two years, including a one-off seizure of 494 kilograms in July 2016 (NDIB, 2016). Record seizures of methamphetamine have

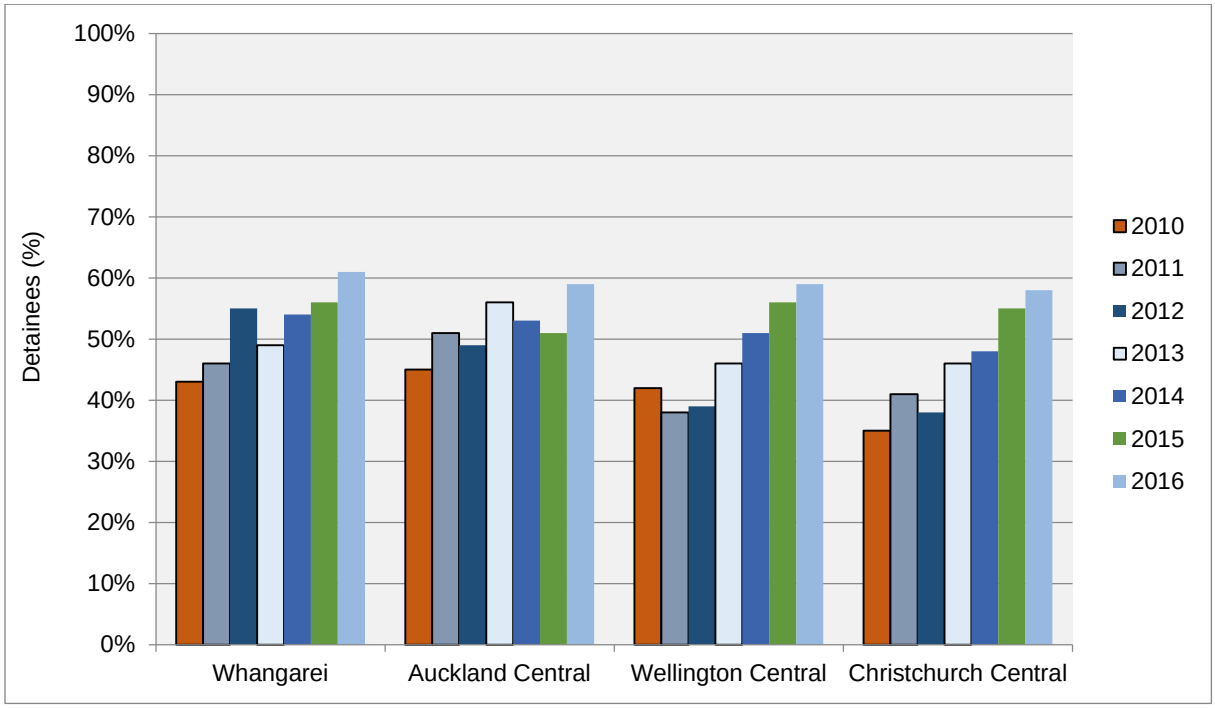
[2] In this survey the term 'amphetamines' referred to a number of amphetamine type drugs including methamphetamine, crystal methamphetamine (Ice) and amphetamine sulphate ('speed')

also been made at the Australia border (ACC, 2015), and in Europe (EMCDDA, 2016). In March 2017, a one-off seizure of 540 kilograms of methamphetamine was made in Western Sydney. Similarly, the United Nations Office of Drugs and Crime (UNODC) reported the quantity of methamphetamine seized in East and South-East Asia 'almost quadrupled' from 2009 to 2014 (UNODC, 2016). The UNODC also note the methamphetamine market is increasingly globally interconnected (UNODC, 2016). For example, methamphetamine seized in South-East Asia was found to have been made in West Africa and the Americas (UNODC, 2015).

## Patterns of methamphetamine use

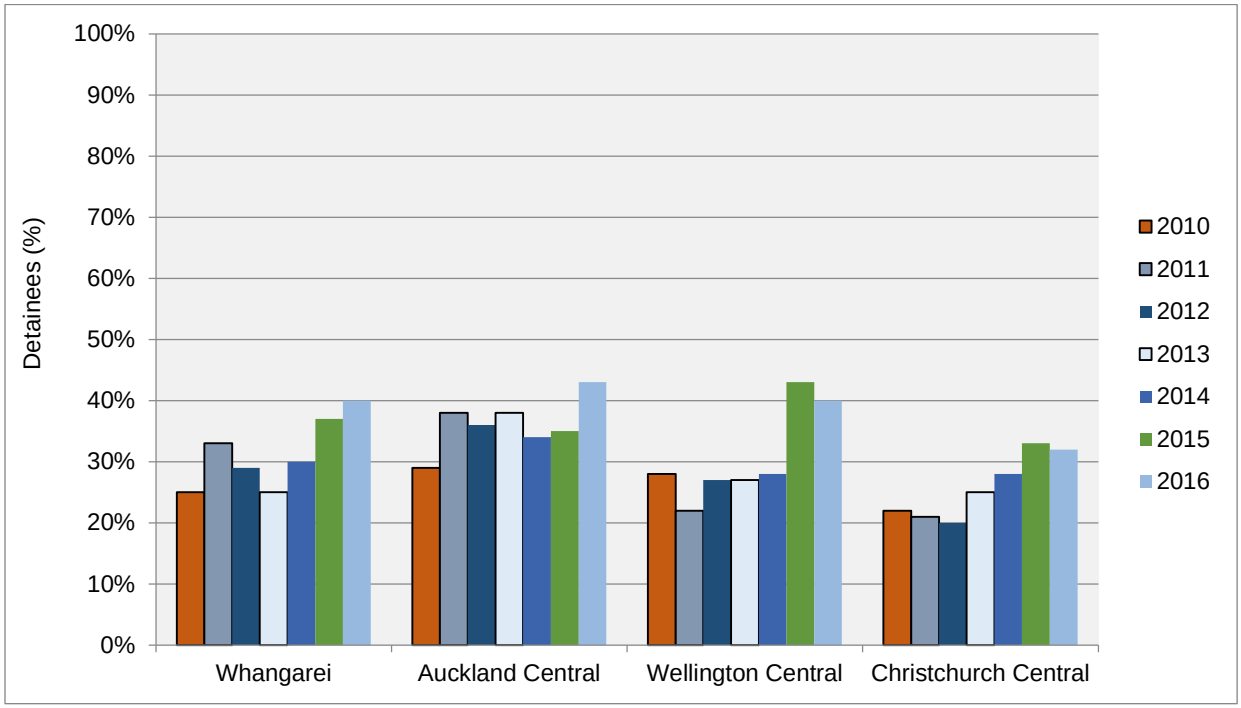
The proportion of detainees who reported having ever used methamphetamine in their lifetimes increased from 41% in 2010 to 59% in 2016 ($p<0.0001$). There was an increase in the lifetime use of methamphetamine in Auckland, Wellington and Christchurch from 2010 to 2016 (Figure 4.1).

**Figure 4.1: Proportion of police detainees who had ever used methamphetamine by location, 2010-2016**



The proportion of detainees who had used methamphetamine in the previous 12 months increased from 26% in 2010 to 38% in 2016 (p<0.0001). There were increases in last year use of methamphetamine in Wellington Central (up from 22% in 2011 to 40% in 2016, p=0.0029) and Christchurch Central (up from 20% in 2012 to 32% in 2016, p=0.0244) (Figure 4.2).

**Figure 4.2: Proportion of police detainees who had used methamphetamine in the past 12 months by location, 2010-2016**




The proportion of detainees who had used methamphetamine in the previous month increased from 14% in 2010 to 22% in 2016 (p=0.0017) (Figure 4.3). The proportion of Wellington Central detainees who had used methamphetamine in the previous month increased from 12% in 2010 to 26% in 2016 (p=0.0159).

**Figure 4.3: Proportion of police detainees who had used methamphetamine in the past month by location, 2010-2016**

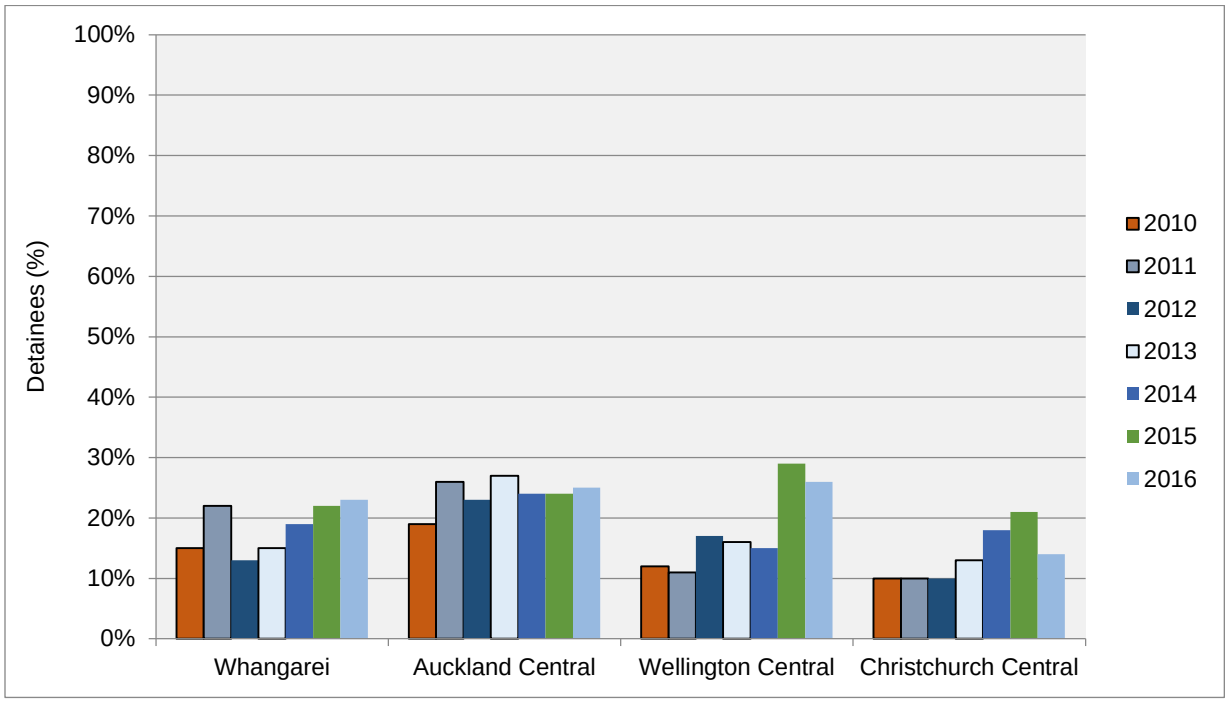


**Table 4 1: Police detainees' patterns of methamphetamine use by location, 2010-2016**

| Use of methamphetamine (%) | Year | N -Value | Ever used | Mean age first used (years)* | Used in past 12 months | Mean number of days used in past 12 months ** | Injected in the past 12 months ** | Felt dependent in past 12 months ** | Used in past month | Mean number of days used in past month*** |
|---|---|---|---|---|---|---|---|---|---|---|
| **Whangarei** | 2010 | n=115 | 43% | 22 | 25% | 44 | 10% | 19% | 15% | 7 |
| | 2011 | n=149 | 45% | 21 | 33% | 77 | 8% | 16% | 22% | 10 |
| | 2012 | n=151 | 55% | 21 | 29% | 55 | 8% | 24% | 13% | 9 |
| | 2013 | n=153 | 49% | 20 | 25% | 45 | 6% | 19% | 15% | 7 |
| | 2014 | n=151 | 54% | 22 | 30% | 86 | 5% | 26% | 19% | 12 |
| | 2015 | n=169 | 56% | 20 | 37% | 70 | 10% | 26% | 22% | 11 |
| | 2016 | n=131 | 61% | 20 | 40% | 55 | 10% | 25% | 23% | 7 |
| **Auckland Central** | 2010 | n=284 | 45% | 22 | 29% | 102 | 29% | 36% | 19% | 12 |
| | 2011 | n=316 | 51% | 22 | 38% | 82 | 20% | 31% | 26% | 8 |
| | 2012 | n=247 | 49% | 21 | 36% | 81 | 28% | 29% | 23% | 11 |
| | 2013 | n=294 | 56% | 22 | 38% | 105 | 22% | 37% | 27% | 12 |
| | 2014 | n=315 | 53% | 21 | 34% | 117 | 14% | 37% | 24% | 13 |
| | 2015 | n=267 | 51% | 20 | 35% | 90 | 25% | 44% | 24% | 11 |
| | 2016 | n=221 | 59% | 21 | 43% | 94 | 20% | 32% | 25% | 11 |
| **Wellington Central** | 2010 | n=152 | 42% | 22 | 28% | 67 | 18% | 28% | 12% | 9 |
| | 2011 | n=171 | 38% | 23 | 22% | 77 | 16% | 24% | 11% | 10 |
| | 2012 | n=101 | 39% | 21 | 27% | 58 | 7% | 21% | 17% | 10 |
| | 2013 | n=106 | 46% | 20 | 27% | 90 | 17% | 37% | 16% | 14 |
| | 2014 | n=95 | 51% | 21 | 28% | 78 | 12% | 31% | 15% | 12 |
| | 2015 | n=107 | 56% | 20 | 43% | 94 | 13% | 36% | 29% | 13 |
| | 2016 | n=213 | 59% | 20 | 40% | 109 | 18% | 35% | 26% | 13 |
| **Christchurch Central** | 2010 | n=262 | 35% | 22 | 22% | 35 | 15% | 7% | 10% | 5 |
| | 2011 | n=191 | 41% | 22 | 21% | 59 | 19% | 8% | 10% | 8 |
| | 2012 | n=303 | 38% | 23 | 20% | 58 | 28% | 20% | 10% | 10 |
| | 2013 | n=287 | 46% | 21 | 25% | 55 | 15% | 18% | 13% | 7 |
| | 2014 | n=273 | 48% | 21 | 28% | 105 | 11% | 45% | 18% | 12 |
| | 2015 | n=292 | 55% | 22 | 33% | 94 | 14% | 26% | 21% | 12 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2016 | n=235 | 58% | 21 | 32% | 70 | 17% | 21% | 14% | 10 |
| **All sites** | 2010 | n=813 | 41% | 22 | 26% | 68 | 20% | 25% | 14% | 9 |
| | 2011 | n=827 | 45% | 22 | 29% | 75 | 17% | 23% | 18% | 8 |
| | 2012 | n=802 | 44% | 21 | 28% | 68 | 21% | 25% | 16% | 10 |
| | 2013 | n=843 | 50% | 21 | 30% | 82 | 17% | 30% | 19% | 10 |
| | 2014 | n=835 | 51% | 21 | 30% | 102 | 12% | 37% | 19% | 13 |
| | 2015 | n=835 | 54% | 21 | 36% | 89 | 17% | 34% | 24% | 12 |
| | 2016 | n=800 | 59% | 21 | 38% | 85 | 18% | 28% | 22% | 11 |

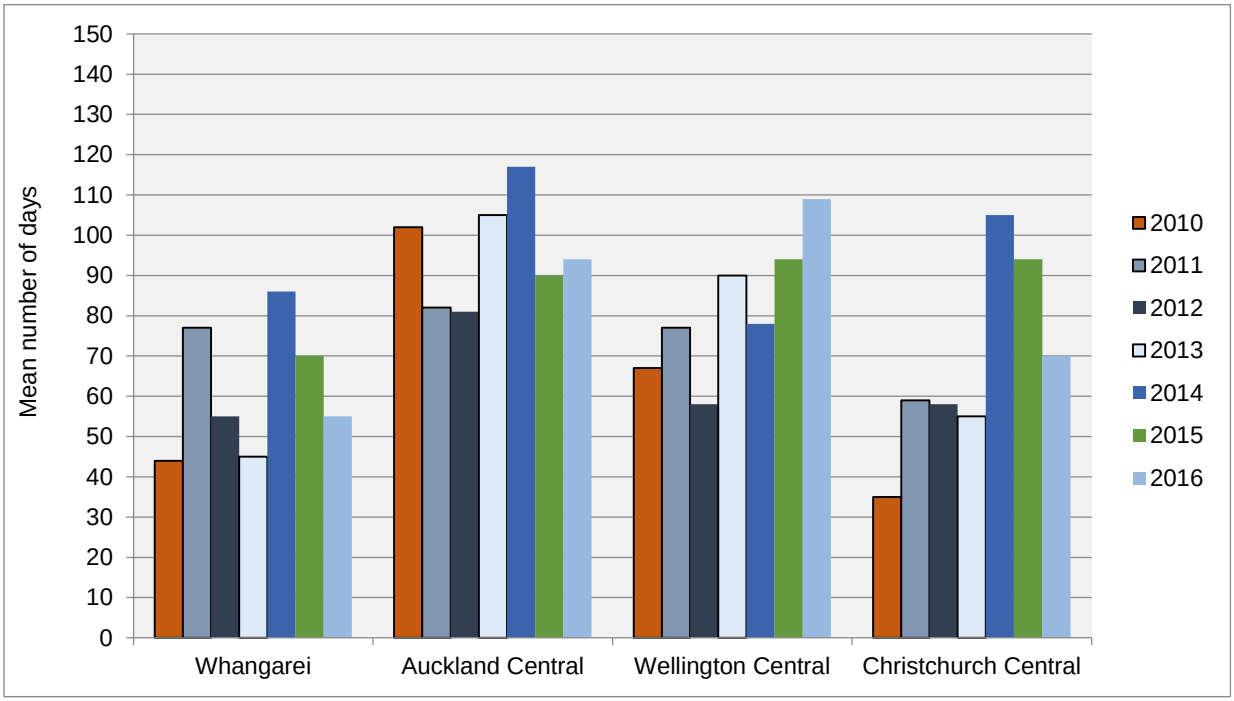
* of those who had ever tried
** of those who had used in the past 12 months
*** of those who had used in the past month

Eighteen percent of the detainees who had used methamphetamine in the past 12 months in 2016 had injected it.

## Frequency of methamphetamine use

The mean number of days the detainees had used methamphetamine increased from 68 days in 2010 to 84 days in 2016 (p=0.0039) (Figure 4.4).

**Figure 4.4: Mean number of days police detainees had used methamphetamine in the past 12 months by location, 2010- 2016**




## Dependency on methamphetamine

The detainees who had used methamphetamine in the previous year were asked if they had felt dependent on methamphetamine during the past 12 months. In 2016, 28% of the methamphetamine using detainees felt they were dependent on methamphetamine (Figure 4.5).

## 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 2016 (Table 4.2).

**Table 4 2: Methamphetamine use by police detainees at time of arrest by location, 2010-2016**

| | Year | N -Value | Using methamphetamine when arrested (%) |
|---|---|---|---|
| **Whangarei** | 2010 | n=113 | 2% |
| | 2011 | n=148 | 5% |
| | 2012 | n=144 | 4% |
| | 2013 | n=145 | 2% |
| | 2014 | n=145 | 5% |
| | 2015 | n=168 | 8% |
| | 2016 | n=131 | 5% |
| **Auckland Central** | 2010 | n=280 | 6% |
| | 2011 | n=309 | 8% |
| | 2012 | n=243 | 7% |
| | 2013 | n=290 | 9% |
| | 2014 | n=314 | 7% |
| | 2015 | n=265 | 7% |
| | 2016 | n=219 | 7% |
| **Wellington Central** | 2010 | n=149 | 3% |
| | 2011 | n=170 | 3% |
| | 2012 | n=99 | 4% |
| | 2013 | n=106 | 7% |
| | 2014 | n=93 | 5% |
| | 2015 | n=106 | 8% |
| | 2016 | n=212 | 8% |
| **Christchurch Central** | 2010 | n=262 | 1% |
| | 2011 | n=190 | 2% |
| | 2012 | n=299 | 2% |
| | 2013 | n=281 | 4% |
| | 2014 | n=270 | 7% |
| | 2015 | n=291 | 7% |
| | 2016 | n=232 | 4% |
| **All sites** | 2010 | n=804 | 3% |
| | 2011 | n=817 | 5% |
| | 2012 | n=785 | 5% |
| | 2013 | n=827 | 6% |
| | 2014 | n=827 | 6% |
| | 2015 | n=830 | 8% |
| | 2016 | n=793 | 6% |

## Current availability of methamphetamine

The detainees reported the current availability of methamphetamine to be 'very easy/easy' in 2016 (Table 4.3). The current availability of methamphetamine increased from 3.0 in 2010 to 3.3 in 2016 (p=0.0074). The current availability of methamphetamine increased in Christchurch Central from 2.9 in 2010 to 3.4 in 2016 (p=0.0478) (Figure 4.5).

**Figure 4 5: Mean score of current availability of methamphetamine by location, 2010-2016**

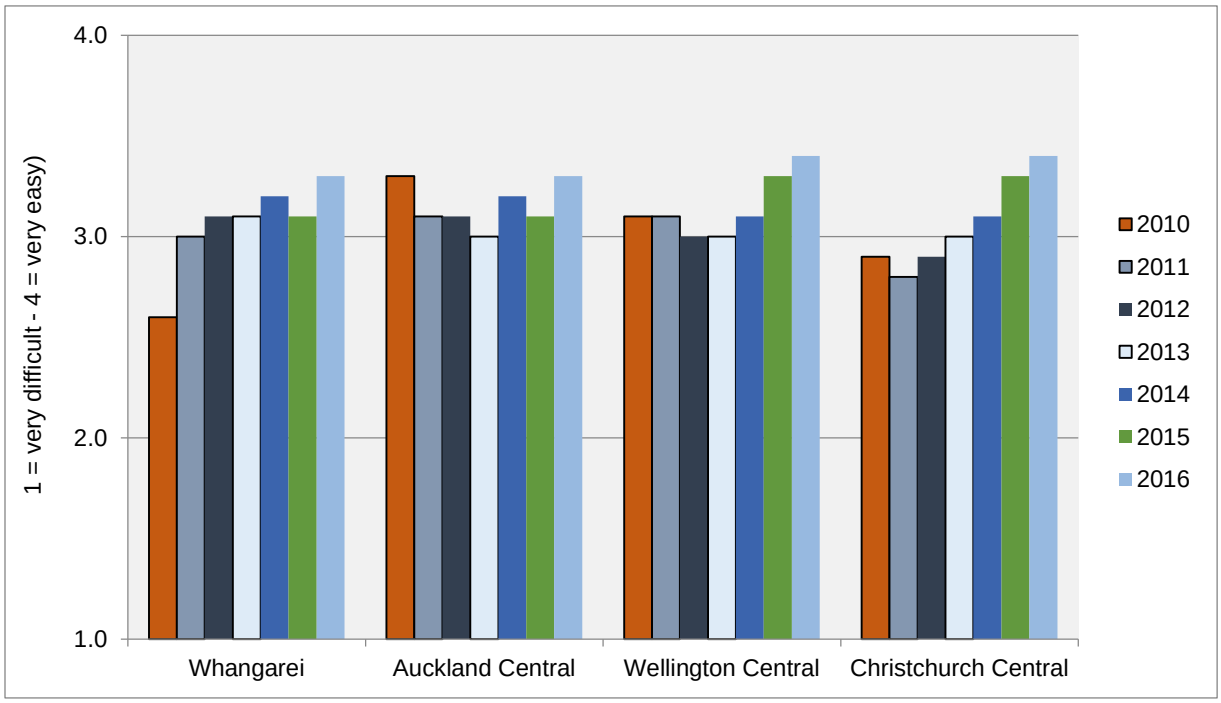


**Table 4 3: Police detainees' perceptions of the current availability of methamphetamine by location, 2010-2016**

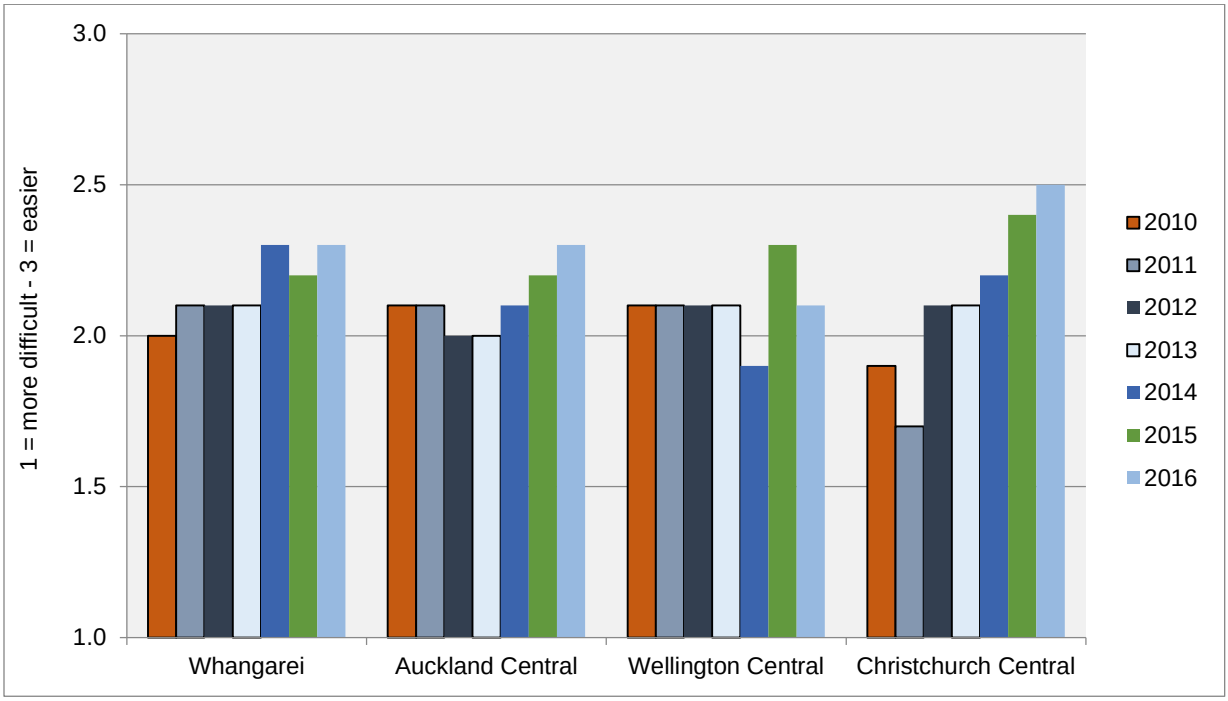
| Current availability of methamphetamine | Year | N -Value | Very easy [4] | Easy [3] | Difficult [2] | Very difficult [1] | Average availability score (1=very difficult - 4=very easy | Overall current status |
|---|---|---|---|---|---|---|---|---|
| **Whangarei** | 2010 | n=29 | 17% | 38% | 34% | 10% | 2.6 | Easy / difficult |
| | 2011 | n=48 | 35% | 33% | 27% | 4% | 3.0 | Very easy / easy |
| | 2012 | n=37 | 41% | 32% | 19% | 8% | 3.1 | Very easy / easy |
| | 2013 | n=37 | 35% | 43% | 22% | 0% | 3.1 | Easy / very easy |
| | 2014 | n=43 | 51% | 30% | 2% | 16% | 3.2 | Very easy / easy |
| | 2015 | n=59 | 49% | 22% | 15% | 14% | 3.1 | Very easy / easy |
| | 2016 | n=51 | 61% | 20% | 10% | 10% | 3.3 | Very easy / easy |
| **Auckland Central** | 2010 | n=82 | 50% | 28% | 20% | 2% | 3.3 | Very easy / easy |
| | 2011 | n=121 | 38% | 38% | 18% | 5% | 3.1 | Very easy / easy |
| | 2012 | n=83 | 41% | 36% | 13% | 10% | 3.1 | Very easy / easy |
| | 2013 | n=110 | 41% | 32% | 18% | 9% | 3.0 | Very easy / easy |
| | 2014 | n=100 | 45% | 30% | 20% | 5% | 3.2 | Very easy / easy |
| | 2015 | n=88 | 35% | 44% | 14% | 7% | 3.1 | Very easy / easy |
| | 2016 | n=91 | 44% | 41% | 13% | 2% | 3.3 | Very easy / easy |
| **Wellington Central** | 2010 | n=39 | 44% | 31% | 13% | 13% | 3.1 | Very easy / easy |
| | 2011 | n=33 | 36% | 45% | 12% | 6% | 3.1 | Easy / very easy |
| | 2012 | n=25 | 32% | 36% | 24% | 8% | 3.0 | Easy / very easy |
| | 2013 | n=26 | 35% | 35% | 23% | 8% | 3.0 | Very easy / easy |
| | 2014 | n=25 | 36% | 44% | 12% | 8% | 3.1 | Easy / very easy |
| | 2015 | n=41 | 46% | 41% | 7% | 5% | 3.3 | Very easy / easy |
| | 2016 | n=83 | 58% | 28% | 10% | 5% | 3.4 | Very easy / easy |
| **Christchurch Central** | 2010 | n=54 | 35% | 33% | 19% | 13% | 2.9 | Very easy / easy |
| | 2011 | n=34 | 29% | 29% | 32% | 9% | 2.8 | Very easy / easy |
| | 2012 | n=53 | 36% | 28% | 23% | 13% | 2.9 | Very easy / easy |
| | 2013 | n=72 | 43% | 28% | 18% | 11% | 3.0 | Very easy / easy |
| | 2014 | n=75 | 43% | 29% | 20% | 8% | 3.1 | Very easy / easy |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2015 | n=96 | 56% | 27% | 8% | 8% | 3.3 | Very easy / easy |
| | 2016 | n=70 | 59% | 29% | 10% | 3% | 3.4 | Very easy / easy |
| **All sites** | 2010 | n=204 | 40% | 31% | 20% | 8% | 3.0 | Very easy / easy |
| | 2011 | n=227 | 36% | 37% | 21% | 6% | 3.0 | Easy / very easy |
| | 2012 | n=198 | 38% | 34% | 18% | 10% | 3.0 | Very easy / easy |
| | 2013 | n=245 | 40% | 32% | 19% | 8% | 3.0 | Very easy / easy |
| | 2014 | n=241 | 44% | 32% | 16% | 8% | 3.1 | Very easy / easy |
| | 2015 | n=286 | 46% | 35% | 11% | 8% | 3.2 | Very easy / easy |
| | 2016 | n=294 | 53% | 32% | 11% | 4% | 3.3 | Very easy / easy |

## Change in availability of methamphetamine

In 2016, 43% of the detainees reported the availability of methamphetamine had been 'stable', 40% said it had become 'easier' and 9% said it had become 'more difficult' (Table 4 4). The overall availability of methamphetamine increased from 2010 to 2016 (up from 2.0 in 2010 to 2.3 in 2016, p<0.0001). The availability of methamphetamine increased in Christchurch Central (up from 1.9 in 2010 to 2.5 in 2016, p<0.0001) (Figure 4 6).

**Figure 4 6: Mean score of change in the availability of methamphetamine by location, 2010-2016**




In 2016, the availability of methamphetamine was increasing at a higher rate in Christchurch Central compared to Auckland Central (2.5 vs. 2.3, p=0.0259) and Wellington Central (2.5 vs. 2.1, p<0.0001).

**Table 4 4: Police detainees' perceptions of the change in availability of methamphetamine by location, 2010-2016**

| Change in availability of methamphetamine | Year | N -Value | Easier [3] | Stable [2] | Fluctuates [2] | More difficult [1] | Average change in availability score [1=more difficult - 3=easier] | Overall recent change |
|---|---|---|---|---|---|---|---|---|
| **Whangarei** | 2010 | n=27 | 19% | 33% | 26% | 22% | 2.0 | Stable / fluctuates |
| | 2011 | n=48 | 31% | 33% | 19% | 17% | 2.1 | Stable / easier |
| | 2012 | n=37 | 30% | 41% | 14% | 16% | 2.1 | Stable / easier |
| | 2013 | n=36 | 22% | 53% | 11% | 14% | 2.1 | Stable / easier |
| | 2014 | n=39 | 46% | 36% | 5% | 13% | 2.3 | Easier / stable |
| | 2015 | n=53 | 36% | 40% | 11% | 13% | 2.2 | Stable / easier |
| | 2016 | n=51 | 39% | 41% | 6% | 14% | 2.3 | Stable / easier |
| **Auckland Central** | 2010 | n=76 | 32% | 32% | 12% | 25% | 2.1 | Stable / easier |
| | 2011 | n=104 | 20% | 50% | 15% | 14% | 2.1 | Stable / easier |
| | 2012 | n=73 | 21% | 48% | 8% | 23% | 2.0 | Stable / more difficult |
| | 2013 | n=99 | 24% | 39% | 12% | 24% | 2.0 | Stable / easier |
| | 2014 | n=94 | 24% | 50% | 12% | 14% | 2.1 | Stable / easier |
| | 2015 | n=85 | 35% | 44% | 7% | 14% | 2.2 | Stable / easier |
| | 2016 | n=89 | 40% | 38% | 8% | 13% | 2.3 | Easier / stable |
| **Wellington Central** | 2010 | n=30 | 27% | 33% | 27% | 13% | 2.1 | Stable / easier |
| | 2011 | n=30 | 20% | 63% | 7% | 10% | 2.1 | Stable / easier |
| | 2012 | n=25 | 28% | 28% | 24% | 20% | 2.1 | Easier / stable |
| | 2013 | n=24 | 21% | 50% | 17% | 13% | 2.1 | Stable / easier |
| | 2014 | n=23 | 17% | 57% | 0% | 26% | 1.9 | Stable / more difficult |
| | 2015 | n=40 | 33% | 58% | 5% | 5% | 2.3 | Stable / easier |
| | 2016 | n=77 | 16% | 64% | 14% | 6% | 2.1 | Stable / easier |
| **Christchurch Central** | 2010 | n=51 | 16% | 39% | 16% | 29% | 1.9 | Stable / more difficult |
| | 2011 | n=34 | 6% | 47% | 12% | 35% | 1.7 | Stable / more difficult |
| | 2012 | n=48 | 27% | 38% | 17% | 19% | 2.1 | Stable / easier |
| | 2013 | n=67 | 31% | 39% | 10% | 19% | 2.1 | Stable / easier |
| | 2014 | n=72 | 43% | 26% | 8% | 22% | 2.2 | Easier / stable |
| | 2015 | n=91 | 45% | 33% | 14% | 8% | 2.4 | Easier / stable |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2016 | n=68 | 57% | 37% | 3% | 3% | 2.5 | Easier / stable |
| **All sites** | 2010 | n=184 | 24% | 34% | 17% | 24% | 2.0 | Stable / easier |
| | 2011 | n=216 | 20% | 48% | 14% | 18% | 2.0 | Stable / easier |
| | 2012 | n=183 | 25% | 41% | 14% | 21% | 2.0 | Stable / easier |
| | 2013 | n=226 | 25% | 43% | 12% | 20% | 2.1 | Stable / easier |
| | 2014 | n=226 | 33% | 41% | 8% | 18% | 2.1 | Stable / easier |
| | 2015 | n=272 | 38% | 43% | 9% | 10% | 2.3 | Stable / easier |
| | 2016 | n=285 | 40% | 43% | 7% | 9% | 2.3 | Stable / easier |

## Current price of methamphetamine

The detainees reported the median price of a 'point' (0.1 grams) of methamphetamine was $100 (mean $109) in 2016 (Table 4 5). There was no statistically significant change in the overall mean price of a 'point' of methamphetamine from 2010 to 2016. In 2016, the mean price paid for a 'point' of methamphetamine was higher in Christchurch Central than in Auckland Central ($126 vs. $102, p<0.0001), Wellington Central ($126 vs. $103, p<0.0001), and Whangarei ($126 vs. $106, p=0.0013) (Figure 4 7).

**Figure 4 7: Mean price paid for a 'point' (0.1 grams) of methamphetamine by location, 2010-2016**

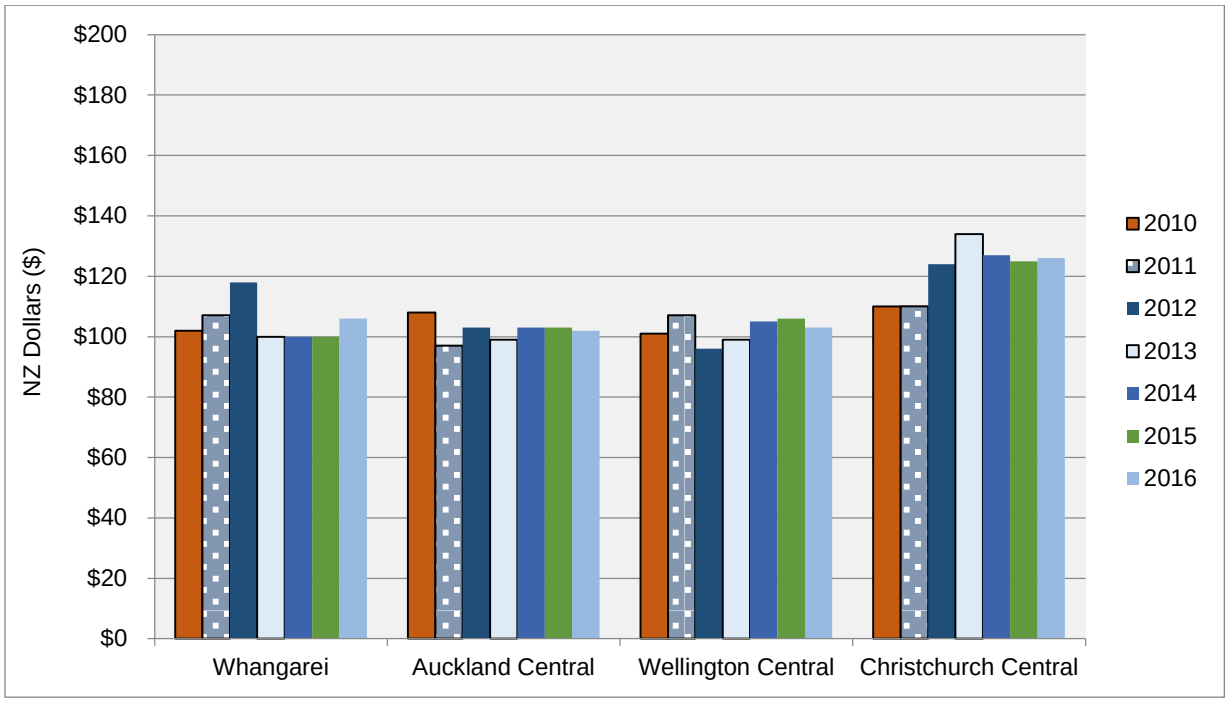
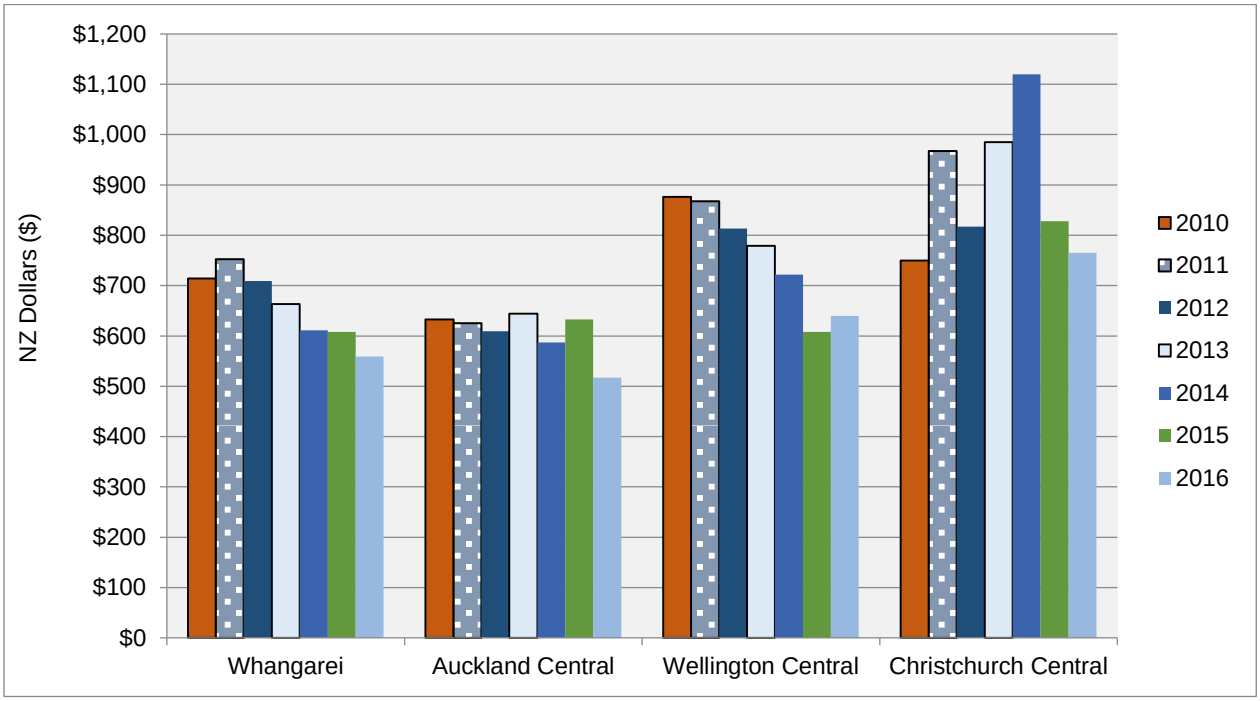


**Table 4 5: Current median (mean) price paid by police detainees for a 'point' and gram of methamphetamine (NZD) by location, 2010-2016**

| Current price of methamphetamine ($) | Median (mean) price 'point' (0.1 grams) | | | | Median (mean) price gram | | | |
|---|---|---|---|---|---|---|---|---|
| | Number with Knowledge | | Median | Mean | Number with Knowledge | | Median | Mean |
| **Whangarei** | 2010 | n=24 | 100 | 102 | 2010 | n=7 | 800 | 714 |
| | 2011 | n=36 | 100 | 107 | 2011 | n=22 | 775 | 752 |
| | 2012 | n=28 | 100 | 118 | 2012 | n=19 | 700 | 708 |
| | 2013 | n=25 | 100 | 100 | 2013 | n=23 | 700 | 663 |
| | 2014 | n=35 | 100 | 100 | 2014 | n=29 | 600 | 611 |
| | 2015 | n=52 | 100 | 100 | 2015 | n=41 | 600 | 608 |
| | 2016 | n=40 | 100 | 106 | 2016 | n=33 | 550 | 559 |
| **Auckland Central** | 2010 | n=63 | 100 | 108 | 2010 | n=34 | 600 | 633 |
| | 2011 | n=89 | 100 | 97 | 2011 | n=34 | 600 | 625 |
| | 2012 | n=59 | 100 | 103 | 2012 | n=35 | 600 | 609 |
| | 2013 | n=92 | 100 | 99 | 2013 | n=70 | 625 | 644 |
| | 2014 | n=93 | 100 | 103 | 2014 | n=77 | 600 | 587 |
| | 2015 | n=83 | 100 | 103 | 2015 | n=62 | 600 | 633 |
| | 2016 | n=78 | 100 | 102 | 2016 | n=51 | 525 | 517 |
| **Wellington Central** | 2010 | n=22 | 100 | 101 | 2010 | n=18 | 850 | 876 |
| | 2011 | n=25 | 100 | 107 | 2011 | n=16 | 888 | 867 |
| | 2012 | n=15 | 100 | 96 | 2012 | n=6 | 825 | 813 |
| | 2013 | n=20 | 100 | 99 | 2013 | n=13 | 750 | 779 |
| | 2014 | n=20 | 100 | 105 | 2014 | n=18 | 800 | 722 |
| | 2015 | n=36 | 100 | 106 | 2015 | n=34 | 650 | 608 |
| | 2016 | n=47 | 100 | 103 | 2016 | n=51 | 600 | 640 |
| **Christchurch Central** | 2010 | n=47 | 100 | 110 | 2010 | n=12 | 900 | 750 |
| | 2011 | n=20 | 100 | 110 | 2011 | n=15 | 1000 | 967 |
| | 2012 | n=41 | 120 | 124 | 2012 | n=18 | 900 | 817 |
| | 2013 | n=58 | 150 | 134 | 2013 | n=48 | 1000 | 985 |
| | 2014 | n=68 | 138 | 127 | 2014 | n=55 | 1000 | 1120 |
| | 2015 | n=73 | 125 | 126 | 2015 | n=55 | 850 | 828 |
| | 2016 | n=58 | 125 | 126 | 2016 | n=48 | 775 | 765 |
| **All sites** | 2010 | n=156 | 100 | 107 | 2010 | n=71 | 700 | 723 |
| | 2011 | n=170 | 100 | 102 | 2011 | n=87 | 750 | 778 |
| | 2012 | n=143 | 100 | 109 | 2012 | n=78 | 650 | 691 |
| | 2013 | n=195 | 100 | 109 | 2013 | n=154 | 700 | 766 |
| | 2014 | n=216 | 100 | 111 | 2014 | n=179 | 700 | 788 |
| | 2015 | n=244 | 100 | 109 | 2015 | n=190 | 600 | 672 |
| | 2016 | n=223 | 100 | 109 | 2016 | n=183 | 600 | 620 |

In 2016, the median price of a gram of methamphetamine was $600 (mean $620). The mean price of a gram of methamphetamine had decreased from $788 in 2014 to $620 in 2016 (p=0.0002). The gram price had decreased in Wellington from $876 in 2010 to $640 in 2016 (p<0.0001) (Figure 4 8). The price of a gram of methamphetamine in Christchurch Central had also decreased, from $1,120 in 2014 to $765 in 2016 (p=0.0054).The mean price of a gram of methamphetamine in 2016 was still higher in Christchurch Central than in Auckland Central ($765 vs. $517, p<0.0001) and Whangarei ($765 vs. $559, p=0.0014). The mean price of a gram of methamphetamine was also higher in Wellington Central than in Auckland Central ($640 vs. $517, p=0.0087).

**Figure 4 8: Mean price paid for a gram of methamphetamine by location, 2010-2016**




## Change in the price of methamphetamine

Fifty percent of the detainees said the price of methamphetamine had been 'stable', 21% said it had been 'fluctuating', and 17% said it had been 'decreasing' over the previous six months in 2016 (Table 4 6). The detainees were more likely to describe the price of methamphetamine as

declining from 2010 to 2016 (down from 2.1 to 1.9, p=0.0028) (Figure 4 9). The detainees reported a decline in the price of methamphetamine in Christchurch Central (down from 2.3 in 2011 to 1.9 in 2016, p=0.0212).

**Figure 4 9: Mean score of the change in the price of methamphetamine by location, 2010-2016**

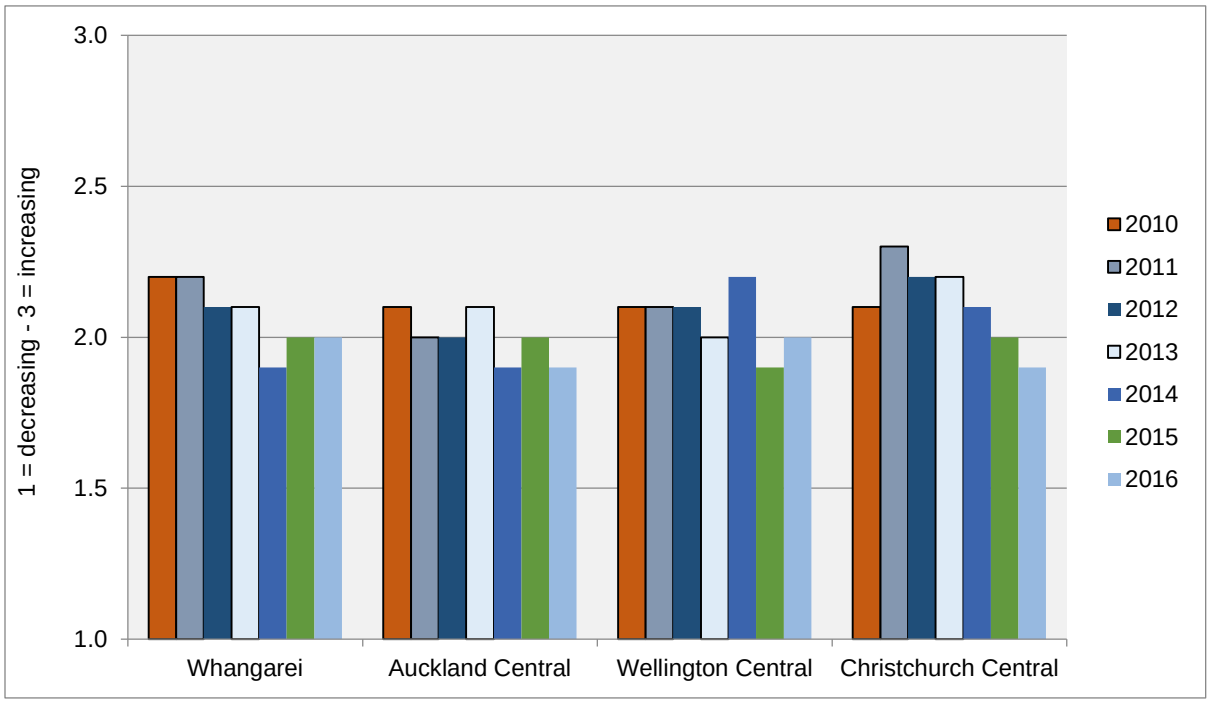


**Table 4 6: Police detainees' perceptions of the change in the price of methamphetamine in the past six months by location, 2010-2016**

| Change in price of methamphetamine | Year | N -Value | Increasing [3] | Fluctuating [2] | Stable [2] | Decreasing [1] | Average change in price [1=decreasing - 3 =increasing] | Overall recent change |
|---|---|---|---|---|---|---|---|---|
| **Whangarei** | 2010 | n=28 | 21% | 18% | 57% | 4% | 2.2 | Stable / increasing |
| | 2011 | n=42 | 29% | 21% | 43% | 7% | 2.2 | Stable / increasing |
| | 2012 | n=36 | 17% | 17% | 56% | 11% | 2.1 | Stable / increasing |
| | 2013 | n=32 | 19% | 28% | 41% | 13% | 2.1 | Stable / fluctuating |
| | 2014 | n=39 | 13% | 21% | 41% | 26% | 1.9 | Stable / decreasing |
| | 2015 | n=51 | 22% | 12% | 49% | 18% | 2.0 | Stable / increasing |
| | 2016 | n=51 | 8% | 25% | 57% | 10% | 2.0 | Stable / fluctuating |
| **Auckland Central** | 2010 | n=81 | 22% | 10% | 58% | 10% | 2.1 | Stable / increasing |
| | 2011 | n=100 | 8% | 22% | 58% | 12% | 2.0 | Stable / fluctuating |
| | 2012 | n= 73 | 12% | 14% | 66% | 8% | 2.0 | Stable / fluctuating |
| | 2013 | n=96 | 16% | 24% | 51% | 9% | 2.1 | Stable / fluctuating |
| | 2014 | n=99 | 7% | 20% | 61% | 12% | 1.9 | Stable / fluctuating |
| | 2015 | n=85 | 9% | 12% | 65% | 14% | 2.0 | Stable / decreasing |
| | 2016 | n=86 | 9% | 14% | 58% | 19% | 1.9 | Stable / decreasing |
| **Wellington Central** | 2010 | n=31 | 23% | 10% | 52% | 16% | 2.1 | Stable / increasing |
| | 2011 | n=32 | 16% | 19% | 59% | 6% | 2.1 | Stable / fluctuating |
| | 2012 | n=22 | 18% | 18% | 55% | 9% | 2.1 | Stable / increasing |
| | 2013 | n=24 | 0% | 29% | 67% | 4% | 2.0 | Stable / fluctuating |
| | 2014 | n=22 | 27% | 27% | 41% | 5% | 2.2 | Stable / increasing |
| | 2015 | n=41 | 0% | 24% | 63% | 12% | 1.9 | Stable / fluctuating |
| | 2016 | n=77 | 8% | 31% | 56% | 5% | 2.0 | Stable / fluctuating |
| **Christchurch Central** | 2010 | n=50 | 20% | 8% | 64% | 8% | 2.1 | Stable / increasing |
| | 2011 | n=33 | 30% | 9% | 58% | 3% | 2.3 | Stable / increasing |
| | 2012 | n=45 | 24% | 18% | 53% | 4% | 2.2 | Stable / increasing |
| | 2013 | n=67 | 24% | 15% | 57% | 4% | 2.2 | Stable / increasing |
| | 2014 | n=71 | 14% | 31% | 48% | 7% | 2.1 | Stable / fluctuating |
| | 2015 | n=88 | 10% | 28% | 47% | 15% | 2.0 | Stable / fluctuating |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2016 | n=64 | 20% | 22% | 28% | 30% | 1.9 | Decreasing / stable |
| **All sites** | 2010 | n=190 | 22% | 11% | 58% | 9% | 2.1 | Stable / increasing |
| | 2011 | n=207 | 17% | 19% | 55% | 9% | 2.1 | Stable / fluctuating |
| | 2012 | n=176 | 17% | 16% | 60% | 8% | 2.1 | Stable / increasing |
| | 2013 | n=219 | 16% | 23% | 54% | 7% | 2.1 | Stable / fluctuating |
| | 2014 | n=231 | 13% | 25% | 51% | 11% | 2.0 | Stable / fluctuating |
| | 2015 | n=265 | 9% | 20% | 57% | 14% | 1.9 | Stable / fluctuating |
| | 2016 | n=277 | 12% | 21% | 50% | 17% | 1.9 | Stable / fluctuating |

## Current strength of methamphetamine

In 2016, 31% of the detainees reported the current strength of methamphetamine as 'high', 28% said it 'fluctuates', and 26% said it was 'medium'. The overall current strength of methamphetamine was described 'high/fluctuating' (Table 4 7).

**Table 4 7: Police detainees' perceptions of current strength of methamphetamine in 2012-2016**

| Current strength of methamphetamine (%) | Year | N - Value | High [3] | Medium [2] | Fluctuates [2] | Low [1] | Average strength [1=low - 3=high] | Overall current status |
|---|---|---|---|---|---|---|---|---|
| **Whangarei** | 2012 | n=36 | 31% | 39% | 28% | 3% | 2.3 | Medium / high |
| | 2013 | n=37 | 49% | 14% | 22% | 16% | 2.3 | High / fluctuates |
| | 2014 | n=40 | 38% | 28% | 18% | 18% | 2.1 | High / medium |
| | 2015 | n=55 | 45% | 18% | 18% | 18% | 2.3 | High / medium |
| | 2016 | n=50 | 42% | 18% | 20% | 20% | 2.2 | High / fluctuates / low |
| **Auckland Central** | 2012 | n=80 | 30% | 29% | 20% | 21% | 2.1 | High / medium |
| | 2013 | n=100 | 33% | 18% | 34% | 15% | 2.2 | Fluctuates / high |
| | 2014 | n=100 | 38% | 24% | 27% | 11% | 2.3 | High / fluctuates |
| | 2015 | n=88 | 30% | 23% | 31% | 17% | 2.1 | Fluctuates / high |
| | 2016 | n=88 | 35% | 23% | 26% | 16% | 2.2 | High / fluctuates |
| **Wellington Central** | 2012 | n=23 | 26% | 39% | 22% | 13% | 2.1 | Medium / high |
| | 2013 | n=25 | 48% | 16% | 12% | 24% | 2.2 | High / low |
| | 2014 | n=22 | 23% | 27% | 41% | 9% | 2.1 | Fluctuates /medium |
| | 2015 | n=39 | 28% | 33% | 23% | 15% | 2.1 | Medium / high |
| | 2016 | n=76 | 20% | 39% | 29% | 12% | 2.1 | Medium / fluctuates |
| **Christchurch Central** | 2012 | n=49 | 51% | 24% | 18% | 6% | 2.4 | High / medium |
| | 2013 | n=69 | 42% | 22% | 17% | 19% | 2.2 | High / medium |
| | 2014 | n=74 | 43% | 18% | 20% | 19% | 2.2 | High / fluctuates |
| | 2015 | n=91 | 34% | 23% | 23% | 20% | 2.1 | High/ medium |
| | 2016 | n=64 | 31% | 19% | 34% | 16% | 2.2 | High / fluctuates |
| **All sites** | 2012 | n=188 | 35% | 31% | 21% | 13% | 2.2 | High / medium |
| | 2013 | n=231 | 40% | 18% | 25% | 17% | 2.2 | High / fluctuates |
| | 2014 | n=236 | 38% | 23% | 25% | 14% | 2.2 | High / fluctuates |
| | 2015 | n=273 | 34% | 23% | 25% | 18% | 2.1 | High / fluctuates |
| | 2016 | n=278 | 31% | 26% | 28% | 15% | 2.2 | High / fluctuates |

### Change in strength of methamphetamine

In 2016, 36% of the detainees reported the strength of methamphetamine had been ‘stable’, 28% said it had been ‘fluctuating’ and 22% said it had been ‘declining’ during the previous six months (Table 4 8). There was no change in the detainees’ perceptions of the change in the strength of methamphetamine from 2012 to 2016.

**Table 4 8: Police detainees' perceptions of change in strength of methamphetamine in the past six months in 2012-2016**

| Change in strength of methamphetamine (%) | Year | N -Value | Increasing [3] | Stable [2] | Fluctuating [2] | Decreasing [1] | Average strength [1=low - 3=high] | Overall current status |
|---|---|---|---|---|---|---|---|---|
| **Whangarei** | 2012 | n=33 | 12% | 42% | 21% | 24% | 1.9 | Stable / decreasing |
| | 2013 | n=28 | 21% | 25% | 21% | 25% | 2.0 | Stable / fluctuating |
| | 2014 | n=36 | 22% | 42% | 17% | 19% | 2.0 | Stable / increasing |
| | 2015 | n=47 | 21% | 23% | 23% | 32% | 1.9 | Decreasing / Stable |
| | 2016 | n=50 | 18% | 28% | 28% | 26% | 1.9 | Stable / fluctuating |
| **Auckland Central** | 2012 | n=74 | 12% | 35% | 23% | 30% | 1.8 | Stable / decreasing |
| | 2013 | n=95 | 12% | 37% | 29% | 22% | 1.9 | Stable / fluctuating |
| | 2014 | n=92 | 14% | 36% | 25% | 25% | 1.9 | Stable / fluctuating |
| | 2015 | n=83 | 17% | 45% | 25% | 13% | 2.0 | Stable / fluctuating |
| | 2016 | n=79 | 19% | 43% | 20% | 18% | 2.0 | Stable / fluctuating |
| **Wellington Central** | 2012 | n=21 | 14% | 57% | 19% | 10% | 2.0 | Stable / fluctuating |
| | 2013 | n=23 | 13% | 43% | 22% | 22% | 1.9 | Stable / fluctuating |
| | 2014 | n=19 | 11% | 32% | 37% | 21% | 1.9 | Fluctuating / stable |
| | 2015 | n=38 | 8% | 63% | 18% | 11% | 2.0 | Stable / fluctuating |
| | 2016 | n=67 | 7% | 40% | 37% | 15% | 1.9 | Stable / fluctuating |
| **Christchurch Central** | 2012 | n=41 | 5% | 46% | 32% | 17% | 1.9 | Stable / fluctuating |
| | 2013 | n=61 | 11% | 48% | 18% | 23% | 1.9 | Stable / decreasing |
| | 2014 | n=69 | 17% | 38% | 32% | 13% | 2.0 | Stable / fluctuating |
| | 2015 | n=84 | 14% | 31% | 27% | 27% | 1.9 | Stable / fluctuating |
| | 2016 | n=56 | 13% | 27% | 29% | 32% | 1.8 | Decreasing / fluctuating |
| **All sites** | 2012 | n=169 | 11% | 42% | 24% | 23% | 1.9 | Stable / fluctuating |
| | 2013 | n=207 | 13% | 39% | 25% | 23% | 1.9 | Stable/ fluctuating |
| | 2014 | n=216 | 16% | 37% | 27% | 20% | 2.0 | Stable / fluctuating |
| | 2015 | n=252 | 15% | 39% | 25% | 21% | 2.0 | Stable/ fluctuating |
| | 2016 | n=252 | 14% | 36% | 28% | 22% | 1.9 | Stable/ fluctuating |

### Time taken to purchase methamphetamine

Seventy-four percent of the detainees who had used methamphetamine in the previous 12 months were able to purchase it in one hour or less in 2016 (Table 4 9). The proportion of detainees who could purchase methamphetamine in one hour or less increased from 57% in 2010 to 74% in 2016 (p=0.0015). There were increases in the proportion of detainees who could purchase methamphetamine in one hour or less in Christchurch Central (up from 31% in 2011 to 66% in 2016, p=0.0113) and Wellington Central (up from 50% in 2010 to 80% in 2016, p=0.0245) (Figure 4 10).

**Figure 4 10: Proportion of police detainees who could purchase methamphetamine in one hour or less by location, 2010-2016**

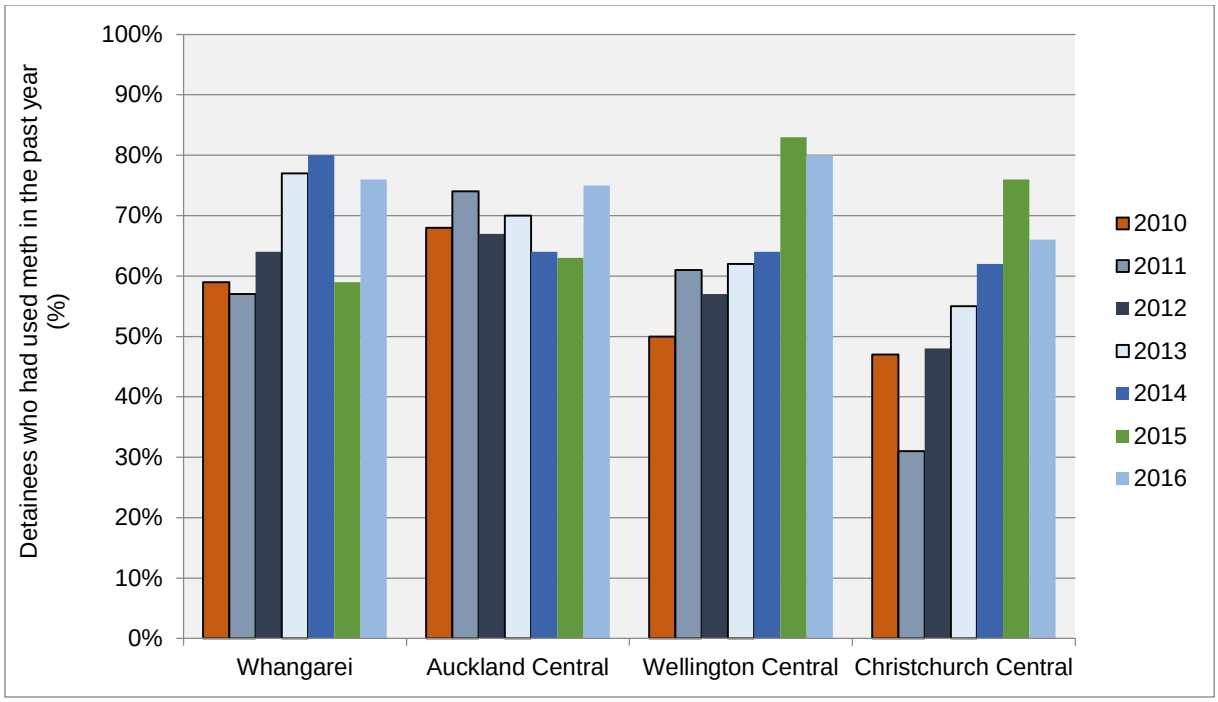


**Table 4 9: Time taken by police detainees to purchase methamphetamine by location, 2010-2016**

| Time to purchase methamphetamine (%) | Years | N - Value | Months | Weeks | Days | About 1 day | Hours | 1 Hour | Less than 20 minutes |
|---|---|---|---|---|---|---|---|---|---|
| **Whangarei** | 2010 | n=29 | 0 | 7 | 7 | 10 | 17 | 34 | 24 |
| | 2011 | n=49 | 0 | 4 | 18 | 4 | 16 | 22 | 35 |
| | 2012 | n=39 | 5 | 3 | 8 | 13 | 8 | 33 | 31 |
| | 2013 | n=35 | 0 | 3 | 6 | 3 | 11 | 37 | 40 |
| | 2014 | n=44 | 5 | 0 | 2 | 5 | 9 | 32 | 48 |
| | 2015 | n=56 | 0 | 5 | 7 | 5 | 23 | 13 | 46 |
| | 2016 | n=51 | 2 | 0 | 6 | 2 | 14 | 20 | 57 |
| **Auckland Central** | 2010 | n=81 | 0 | 3 | 5 | 8 | 16 | 34 | 34 |
| | 2011 | n=106 | 2 | 2 | 0 | 8 | 14 | 37 | 37 |
| | 2012 | n=83 | 2 | 1 | 4 | 7 | 18 | 27 | 41 |
| | 2013 | n=103 | 1 | 1 | 3 | 7 | 18 | 30 | 40 |
| | 2014 | n=106 | 2 | 2 | 5 | 8 | 20 | 19 | 44 |
| | 2015 | n=92 | 2 | 1 | 3 | 5 | 25 | 28 | 35 |
| | 2016 | n=88 | 0 | 1 | 7 | 2 | 15 | 30 | 45 |
| **Wellington Central** | 2010 | n=31 | 0 | 3 | 11 | 8 | 28 | 11 | 39 |
| | 2011 | n=31 | 3 | 3 | 6 | 6 | 19 | 23 | 39 |
| | 2012 | n=21 | 0 | 0 | 14 | 0 | 29 | 29 | 29 |
| | 2013 | n=26 | 8 | 0 | 8 | 4 | 19 | 27 | 35 |
| | 2014 | n=25 | 0 | 0 | 0 | 12 | 24 | 16 | 48 |
| | 2015 | n=40 | 0 | 0 | 5 | 3 | 10 | 23 | 60 |
| | 2016 | n=80 | 1 | 1 | 1 | 3 | 14 | 21 | 59 |
| **Christchurch Central** | 2010 | n=50 | 0 | 4 | 4 | 16 | 29 | 25 | 22 |
| | 2011 | n=36 | 3 | 0 | 17 | 17 | 33 | 11 | 19 |
| | 2012 | n=52 | 6 | 4 | 12 | 10 | 21 | 21 | 27 |
| | 2013 | n=71 | 1 | 0 | 11 | 4 | 28 | 28 | 27 |
| | 2014 | n=73 | 1 | 3 | 4 | 8 | 22 | 23 | 38 |
| | 2015 | n=94 | 0 | 0 | 4 | 2 | 18 | 30 | 46 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2016 | n=71 | 1 | 0 | 7 | 4 | 21 | 30 | 37 |
| **All Sites** | 2010 | n=194 | 0 | 4 | 6 | 11 | 22 | 27 | 30 |
| | 2011 | n=214 | 2 | 2 | 8 | 9 | 19 | 27 | 33 |
| | 2012 | n=199 | 3 | 2 | 8 | 7 | 19 | 27 | 34 |
| | 2013 | n=236 | 2 | 1 | 6 | 5 | 21 | 30 | 35 |
| | 2014 | n=244 | 2 | 2 | 3 | 8 | 20 | 22 | 44 |
| | 2015 | n=285 | 1 | 1 | 4 | 4 | 20 | 25 | 45 |
| | 2016 | n=289 | 1 | 1 | 6 | 3 | 16 | 26 | 47 |

## 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. In 2016, 24% of the methamphetamine using detainees said they did not drive and a further 12% said their driver licence was suspended. Of those who used methamphetamine and drove, 48% had completed at least some of their driving under the influence of methamphetamine (Table 4 10).

.

**Table 4 10: 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, 2010-2016**

| Extent drove under the influence of methamphetamine | Years | N - Value | All [4] | Most [3[ | Some [2] | Hardly any [1] | None [0] | Mean score of extent drove under the influence (0=none - 4=all) |
|---|---|---|---|---|---|---|---|---|
| **Whangarei** | 2010 | n=26 | 8% | 12% | 27% | 15% | 38% | 1.3 |
| | 2011 | n=34 | 12% | 9% | 24% | 9% | 47% | 1.3 |
| | 2012 | n=34 | 18% | 9% | 24% | 0% | 50% | 1.4 |
| | 2013 | n=26 | 15% | 12% | 31% | 8% | 35% | 1.7 |
| | 2014 | n=38 | 21% | 8% | 34% | 3% | 34% | 1.8 |
| | 2015 | n=49 | 8% | 8% | 18% | 12% | 53% | 1.1 |
| | 2016 | n=30 | 3% | 23% | 23% | 20% | 30% | 1.5 |
| **Auckland Central** | 2010 | n=54 | 7% | 17% | 20% | 13% | 43% | 1.3 |
| | 2011 | n=73 | 10% | 10% | 34% | 15% | 31% | 1.5 |
| | 2012 | n=61 | 7% | 15% | 23% | 15% | 41% | 1.3 |
| | 2013 | n=69 | 6% | 22% | 17% | 17% | 38% | 1.4 |
| | 2014 | n=67 | 19% | 10% | 15% | 19% | 36% | 1.6 |
| | 2015 | n=60 | 5% | 17% | 23% | 22% | 33% | 1.4 |
| | 2016 | n=50 | 8% | 14% | 22% | 18% | 38% | 1.4 |
| **Wellington Central** | 2010 | n=29 | 28% | 10% | 14% | 10% | 38% | 1.8 |
| | 2011 | n=23 | 43% | 9% | 4% | 17% | 26% | 2.3 |
| | 2012 | n=21 | 10% | 5% | 38% | 5% | 43% | 1.3 |
| | 2013 | n=21 | 29% | 0% | 10% | 5% | 57% | 1.4 |
| | 2014 | n=21 | 24% | 10% | 19% | 14% | 33% | 1.8 |
| | 2015 | n=27 | 22% | 7% | 26% | 11% | 33% | 1.7 |
| | 2016 | n=54 | 46% | 9% | 9% | 7% | 28% | 2.4 |
| **Christchurch Central** | 2010 | n=30 | 10% | 3% | 10% | 17% | 60% | 0.9 |
| | 2011 | n=26 | 8% | 8% | 12% | 23% | 50% | 1.0 |
| | 2012 | n=36 | 11% | 6% | 19% | 14% | 50% | 1.1 |
| | 2013 | n=55 | 11% | 7% | 15% | 18% | 49% | 1.1 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2014 | n=54 | 17% | 15% | 24% | 15% | 30% | 1.7 |
| | 2015 | n=66 | 18% | 18% | 18% | 12% | 33% | 1.8 |
| | 2016 | n=55 | 11% | 13% | 16% | 22% | 38% | 2.4 |
| **All Sites** | 2010 | n=139 | 12% | 12% | 18% | 14% | 44% | 2.3 |
| | 2011 | n=151 | 14% | 9% | 23% | 16% | 38% | 2.5 |
| | 2012 | n=157 | 10% | 10% | 25% | 10% | 45% | 2.3 |
| | 2013 | n=173 | 12% | 12% | 17% | 14% | 44% | 2.3 |
| | 2014 | n=180 | 20% | 11% | 22% | 14% | 33% | 2.7 |
| | 2015 | n=200 | 13% | 14% | 21% | 15% | 37% | 2.5 |
| | 2016 | n=187 | 16% | 14% | 18% | 17% | 35% | 2.6 |

## Summary

- The proportion of detainees who had used methamphetamine in the previous year increased from 26% in 2010 to 38% in 2016
- There were increases in methamphetamine use in the past year in Christchurch Central (up from 20% in 2012 to 32% in 2016) and Wellington Central (up from 22% in 2011 to 40% in 2016)
- The proportion of detainees who had used methamphetamine in the past month increased from 14% in 2010 to 22% in 2016
- The proportion of Wellington Central detainees who had used methamphetamine in the past month increased from 12% in 2010 to 26% in 2016
- The mean number of days the detainees had used methamphetamine in the past year increased from 68 days in 2010 to 84 days in 2016
- In 2016, 28% of methamphetamine using detainees felt dependent on the drug and 18% had injected it
- The availability of methamphetamine increased from 2010 to 2016
- The availability of methamphetamine increased in Christchurch Central from 2010 to 2016
- The mean price of a gram of methamphetamine decreased from $788 in 2014 to $620 in 2016
- Declines in the mean price of a gram of methamphetamine were found in Christchurch Central (from $1,120 in 2014 to $765 in 2016) and Wellington Central (from $876 in 2010 to $640 in 2016)
- The detainees were more likely to describe the price of methamphetamine as declining from 2010 to 2016
- In 2016, the mean price of a gram of methamphetamine was higher in Christchurch Central than in Auckland Central ($765 vs. $517), and in Whangarei ($765 vs. $559)
- The gram price was also higher in Wellington Central than Auckland Central ($640 vs. $517)
- In 2016, the mean price of a ‘point’ of methamphetamine was higher in Christchurch Central than Auckland Central, Wellington Central and Whangarei

- The proportion of detainees who could purchase methamphetamine in one hour or less increased from 57% in 2010 to 74% in 2016
- There were increases in the proportion of detainees who could purchase methamphetamine in one hour or less in Christchurch Central (up from 31% in 2011 to 66% in 2016) and Wellington Central (up from 50% in 2010 to 80% in 2016)

# Chapter 5 - Cannabis

## Introduction

Cannabis has been the most widely used illegal drug in in many countries around the world, including New Zealand, for many decades (Wilkins et al., 2002b). New Zealand has been self-sufficient in the supply of illegal cannabis since the early 1980s with large scale domestic clandestine cultivation occurring in a number of rural areas, and more recently in indoor growing facilities (Wilkins & Casswell, 2003).

Cannabis use is associated with a number of health and social problems, including respiratory illness, low educational achievement, mental illness, drug dependency and vehicle crashes (Room et al., 2010). Approximately 10% of those who have ever used cannabis develop dependency, and this increases to 17% among adolescent users and one third among daily users (World Health Organization, 2016). A number of studies have shown a consistent dose-response relationship between cannabis use in adolescence and the risk of developing psychotic symptoms, including schizophrenia. Daily cannabis use in adolescence is associated with a range of negative outcomes including early school-leaving, cognitive impairment, increased use of other drugs, depression and suicidal ideation (World Health Organization, 2016).

There is ongoing debate in New Zealand about the provision of cannabis for medical reasons (Newton-Howes & McBride, 2016; Wilkins, 2016). A public poll conducted in late 2016 found 79% of New Zealanders supported legal medicinal cannabis (RNZ, 2016). Medicinal cannabis is currently legally available in 10 countries and 28 U.S. states (Pacula et al., 2015). Australia passed legislation legalising medicinal cannabis in October 2016 (Therapeutic Goods Administration Department of Health, 2016).

There have been anecdotal reports in recent years of a ‘cannabis drought’ in New Zealand, particularly in the South Island. Recent NZ-ADUM and IDMS surveys have found declines in cannabis use and availability consistent with these reports. The proportion of detainees who had used cannabis in the previous year decreased from 76% in 2011 to 69% in 2015. The

proportion of cannabis users who were able to purchase cannabis in one hour or less declined from 81% in 2011 to 72% in 2015. Possible explanations for these trends include greater availability of synthetic cannabinoids which are often not detectable in standard drug testing assays, and the increasing effectiveness of the cannabis crop eradication operations. New Zealand Police have indicated a greater focus on organised criminal groups involved in cannabis cultivation as part of these operations and this may have negatively impacted cannabis supply.

## Use of cannabis

The proportion of detainees who had ever tried cannabis in their lifetimes increased from 87% in 2010 to 92% in 2016 (p=0.0428) (Figure 5 1).

**Figure 5 1: Proportion of police detainees who have ever used cannabis by location, 2010-2016**

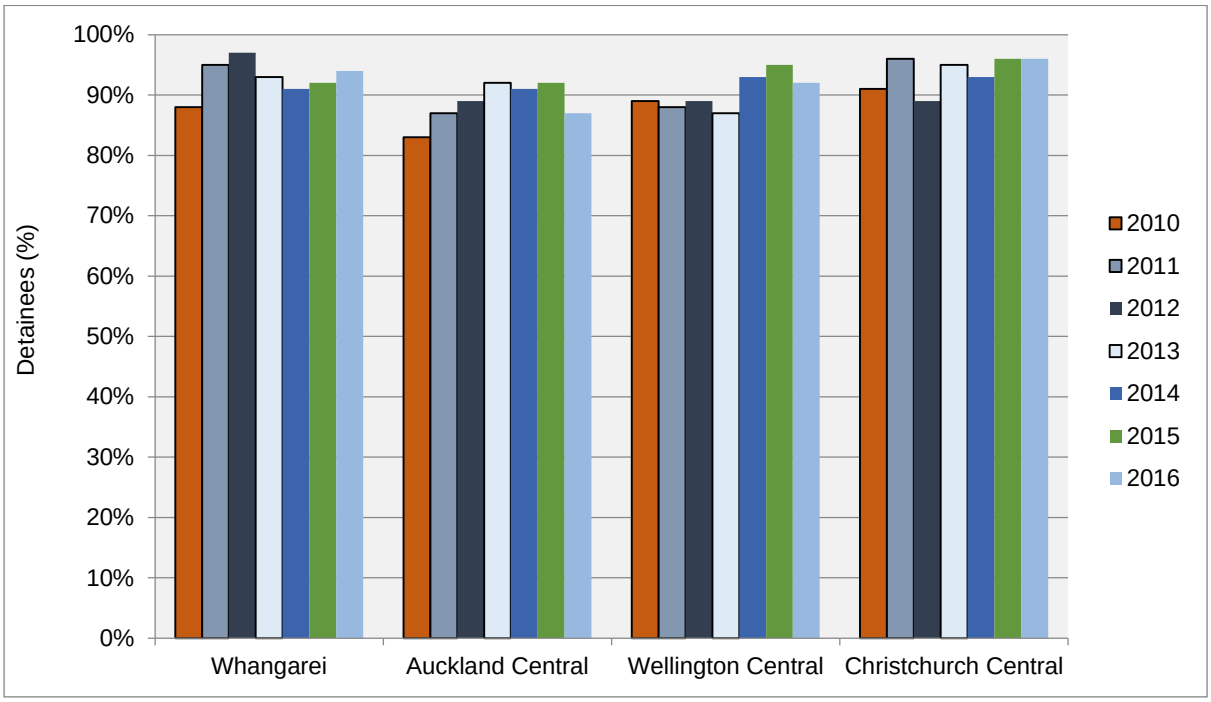


**Table 5 1: Police detainees' patterns of cannabis use by location, 2010-2016**

| Use of cannabis (%) | Year | N- Value | Ever used [%} | Mean age first used (years)* | Used in past 12 months [%] | Mean number of days used in past 12 months** | Felt dependent in the past 12 months** [%] | Used in past month | Mean number of days used in past month*** [%] |
|---|---|---|---|---|---|---|---|---|---|
| **Whangarei** | 2010 | n=115 | 88% | 15 | 68% | 160 | 30% | 58% | 16 |
| | 2011 | n=149 | 95% | 14 | 83% | 186 | 36% | 73% | 17 |
| | 2012 | n=151 | 97% | 13 | 78% | 186 | 37% | 64% | 20 |
| | 2013 | n=153 | 93% | 14 | 64% | 155 | 42% | 45% | 17 |
| | 2014 | n=151 | 91% | 13 | 67% | 156 | 31% | 59% | 15 |
| | 2015 | n=169 | 92% | 15 | 74% | 166 | 34% | 63% | 15 |
| | 2016 | n=131 | 94% | 13 | 70% | 198 | 36% | 62% | 19 |
| **Auckland Central** | 2010 | n=285 | 83% | 14 | 63% | 196 | 43% | 57% | 17 |
| | 2011 | n=316 | 87% | 14 | 69% | 151 | 30% | 58% | 15 |
| | 2012 | n=246 | 89% | 14 | 64% | 150 | 31% | 52% | 15 |
| | 2013 | n=299 | 92% | 15 | 70% | 146 | 32% | 56% | 15 |
| | 2014 | n=314 | 91% | 14 | 67% | 162 | 36% | 54% | 16 |
| | 2015 | n=266 | 92% | 15 | 67% | 146 | 35% | 52% | 15 |
| | 2016 | n=221 | 87% | 14 | 69% | 163 | 33% | 59% | 15 |
| **Wellington Central** | 2010 | n=152 | 89% | 15 | 76% | 181 | 44% | 63% | 18 |
| | 2011 | n=171 | 88% | 14 | 75% | 178 | 42% | 63% | 17 |
| | 2012 | n=100 | 89% | 13 | 74% | 183 | 39% | 63% | 17 |
| | 2013 | n=106 | 87% | 14 | 70% | 156 | 40% | 59% | 14 |
| | 2014 | n=95 | 93% | 13 | 73% | 210 | 40% | 61% | 20 |
| | 2015 | n=106 | 95% | 14 | 72% | 173 | 41% | 61% | 16 |
| | 2016 | n=213 | 92% | 14 | 66% | 169 | 36% | 54% | 16 |
| **Christchurch Central** | 2010 | n=262 | 91% | 14 | 81% | 191 | 34% | 71% | 18 |
| | 2011 | n=191 | 96% | 14 | 79% | 169 | 34% | 67% | 16 |
| | 2012 | n=303 | 89% | 15 | 70% | 162 | 29% | 57% | 16 |
| | 2013 | n=288 | 95% | 14 | 74% | 173 | 32% | 62% | 16 |
| | 2014 | n=273 | 93% | 14 | 67% | 169 | 24% | 54% | 17 |
| | 2015 | n=292 | 96% | 14 | 66% | 149 | 27% | 53% | 15 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2016 | n=235 | 96% | 14 | 66% | 162 | 26% | 52% | 17 |
| **All Sites** | 2010 | n=814 | 87% | 14 | 72% | 187 | 38% | 63% | 18 |
| | 2011 | n=827 | 91% | 14 | 76% | 168 | 35% | 64% | 16 |
| | 2012 | n=799 | 90% | 14 | 70% | 166 | 33% | 58% | 17 |
| | 2013 | n=849 | 92% | 14 | 70% | 158 | 34% | 57% | 15 |
| | 2014 | n=834 | 92% | 14 | 68% | 173 | 32% | 56% | 17 |
| | 2015 | n=832 | 94% | 14 | 69% | 155 | 34% | 56% | 15 |
| | 2016 | n=800 | 92% | 14 | 68% | 169 | 32% | 56% | 17 |

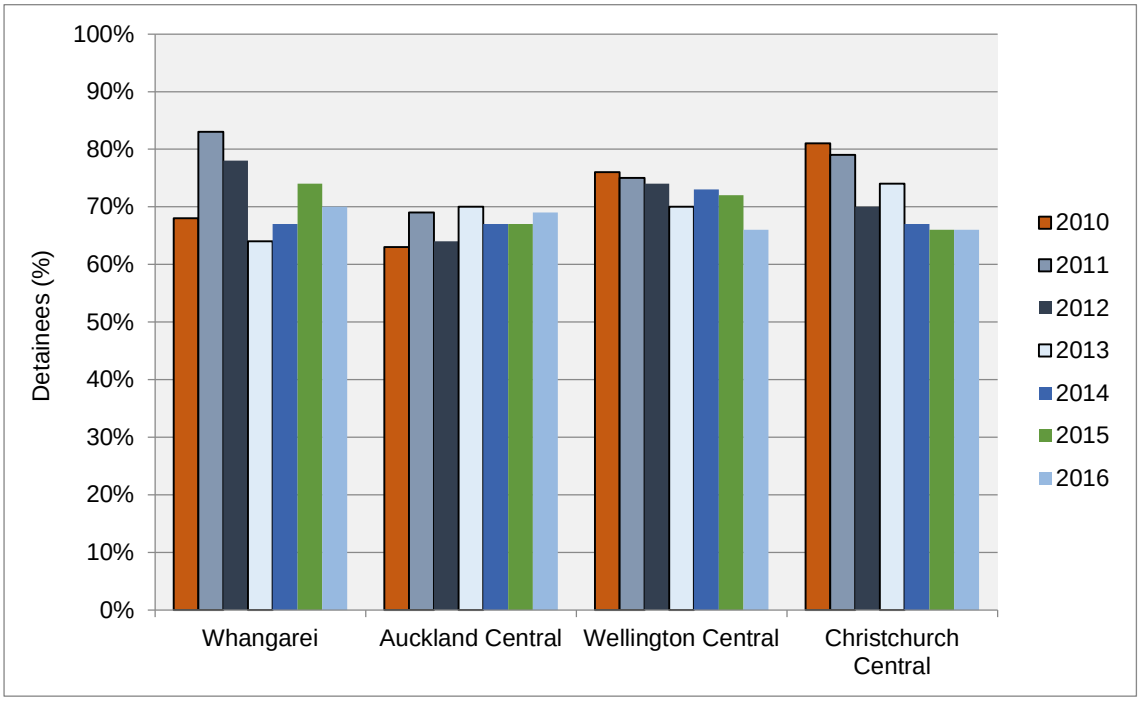
* of those who had ever tried

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

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

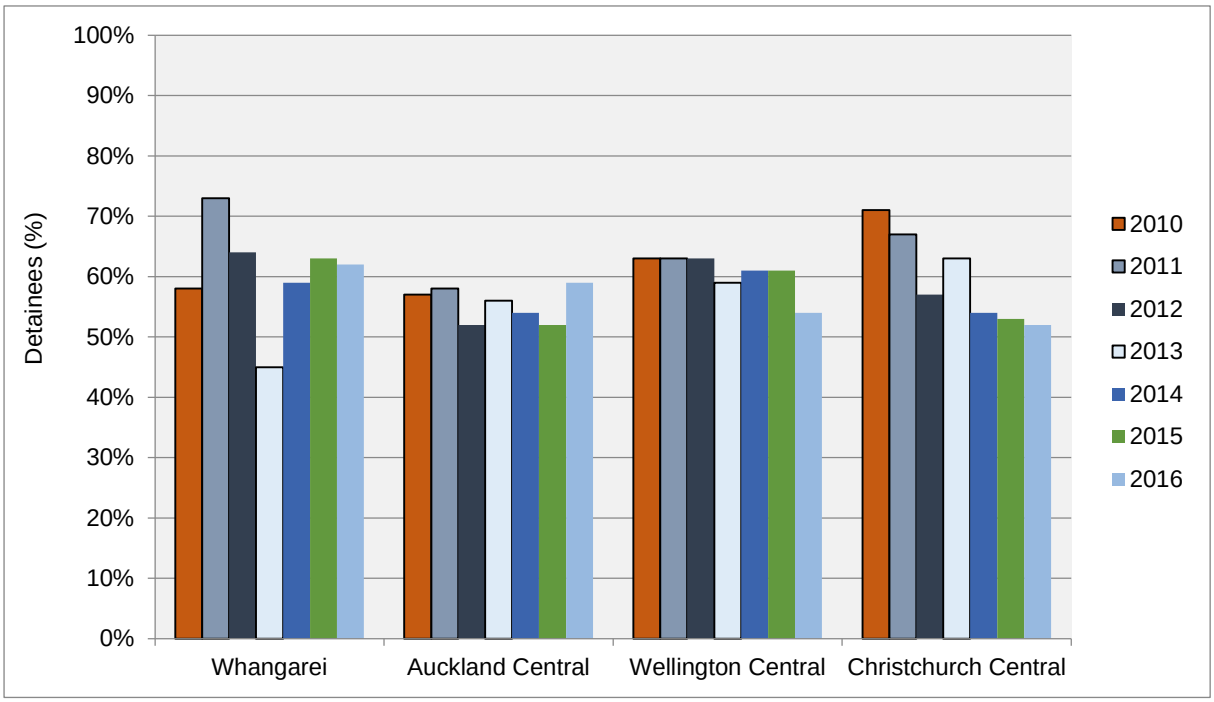
The proportion of detainees who had used cannabis in the previous 12 months declined from 76% in 2011 to 68% in 2016 (p=0.0071). The proportion of Christchurch Central detainees who had used cannabis in the previous year declined from 81% in 2010 to 66% in 2016 (p=0.0037) (Figure 5 2).

**Figure 5 2: Proportion of police detainees who had used cannabis in the past 12 months by location, 2010-2016**




The proportion of detainees who reported using cannabis in the past month decreased from 64% in 2011 to 56% in 2016 (p=0.0251). There was also a decrease in the proportion of Christchurch Central detainees who had used cannabis in the previous month from 71% in 2010 to 52% in 2016 (p=0.0004) (Figure 5 3).

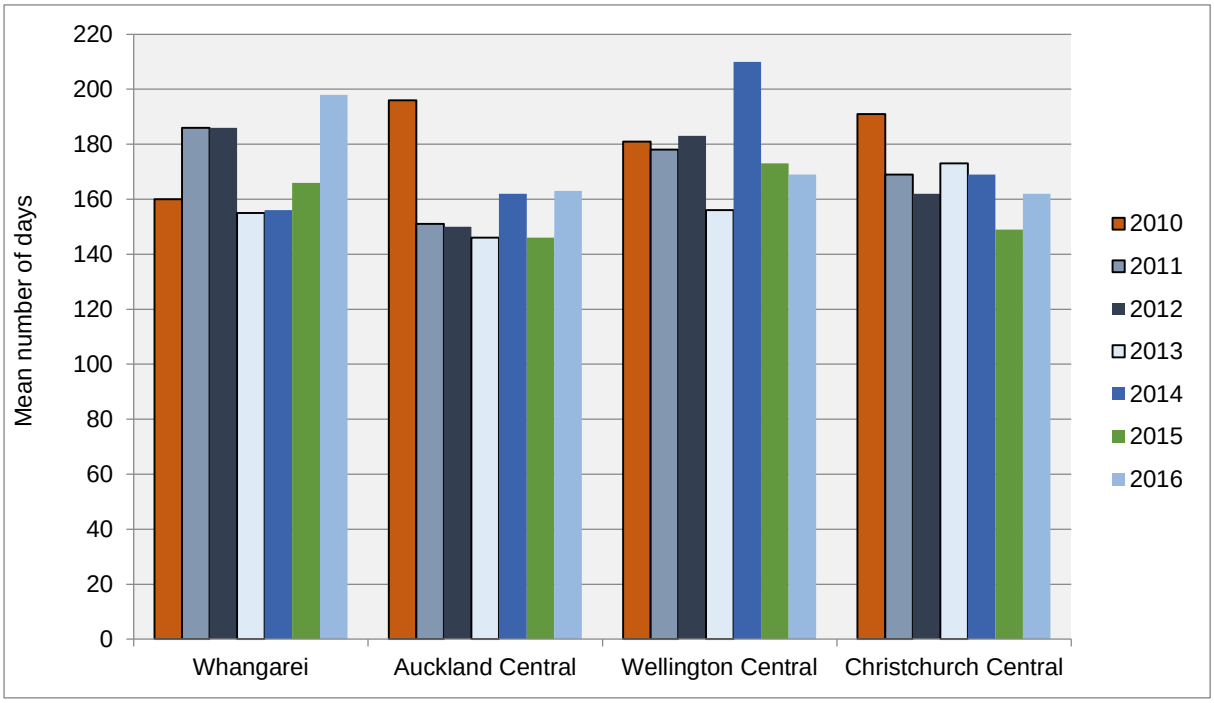
**Figure 5 3: Proportion of police detainees who used cannabis in the past month by location, 2010-2016**




## Frequency of cannabis use

The detainees had used cannabis on a mean of 169 days in the past 12 months in 2016 (median 104, 1-365 days) (Figure 5 4).

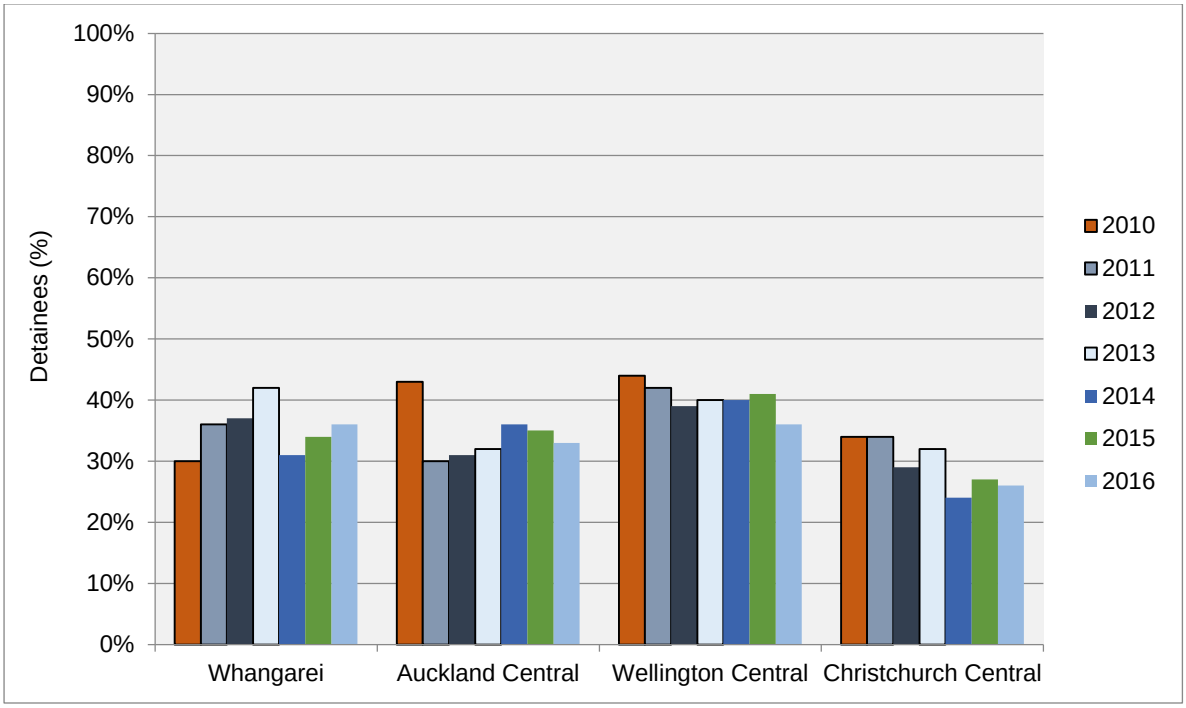
**Figure 5 4: Mean number days of cannabis use in the past 12 months by location, 2010-2016**



## Dependency on cannabis

In 2016, 32% of the detainees who had used cannabis in the previous year felt they were dependent on the drug (Figure 5 5).

**Figure 5 5: Proportion of police detainees who had felt dependent on cannabis in the past year by location (of those who had used cannabis in the past 12 months), 2010-2016**




## Cannabis use at the time of arrest

Sixteen percent of the detainees reported using cannabis prior to their arrest in 2016 (Table 5 2).

**Table 5 2: Cannabis use by police detainees at time of arrest by location, 2010-2016**

| Use of Cannabis | Year | N -Value | Using when arrested [%] |
|---|---|---|---|
| **Whangarei** | 2010 | n=110 | 18% |
| | 2011 | n=149 | 21% |
| | 2012 | n=147 | 25% |
| | 2013 | n=145 | 13% |
| | 2014 | n=150 | 17% |
| | 2015 | n=169 | 18% |
| | 2016 | n=131 | 12% |
| **Auckland Central** | 2010 | n=281 | 13% |
| | 2011 | n=310 | 14% |
| | 2012 | n=240 | 12% |
| | 2013 | n=288 | 17% |
| | 2014 | n=311 | 13% |
| | 2015 | n=264 | 14% |
| | 2016 | n=219 | 18% |
| **Welllington Central** | 2010 | n=150 | 24% |
| | 2011 | n=168 | 22% |
| | 2012 | n=96 | 23% |
| | 2013 | n=104 | 22% |
| | 2014 | n=93 | 10% |
| | 2015 | n=105 | 20% |
| | 2016 | n=211 | 15% |
| **Christchurch Central** | 2010 | n=259 | 20% |
| | 2011 | n=188 | 15% |
| | 2012 | n=299 | 18% |
| | 2013 | n=283 | 14% |
| | 2014 | n=273 | 17% |
| | 2015 | n=286 | 12% |
| | 2016 | n=232 | 16% |
| **All Sites** | 2010 | n=800 | 18% |
| | 2011 | n=815 | 17% |
| | 2012 | n=780 | 18% |
| | 2013 | n=824 | 17% |
| | 2014 | n=828 | 14% |
| | 2015 | n=823 | 15% |
| | 2016 | n=793 | 16% |

## Current availability of cannabis

The current availability of cannabis was described as 'very easy/easy' in 2016. The current availability of cannabis had declined from 2010 to 2016 (down from 3.3 to 3.1, $p<0.0001$). The availability of cannabis had also declined in Auckland Central (down from 3.4 in 2010 to

2.9 in 2016, p<0.0001) (Figure 5 6). In 2016, the current availability of cannabis was lower in Auckland Central than in Wellington Central (2.9 vs. 3.2, p=0.0443) and Christchurch Central (2.8 vs. 3.2, p=0.0221).

**Figure 5 6: Current availability of cannabis by location, 2010-2016**

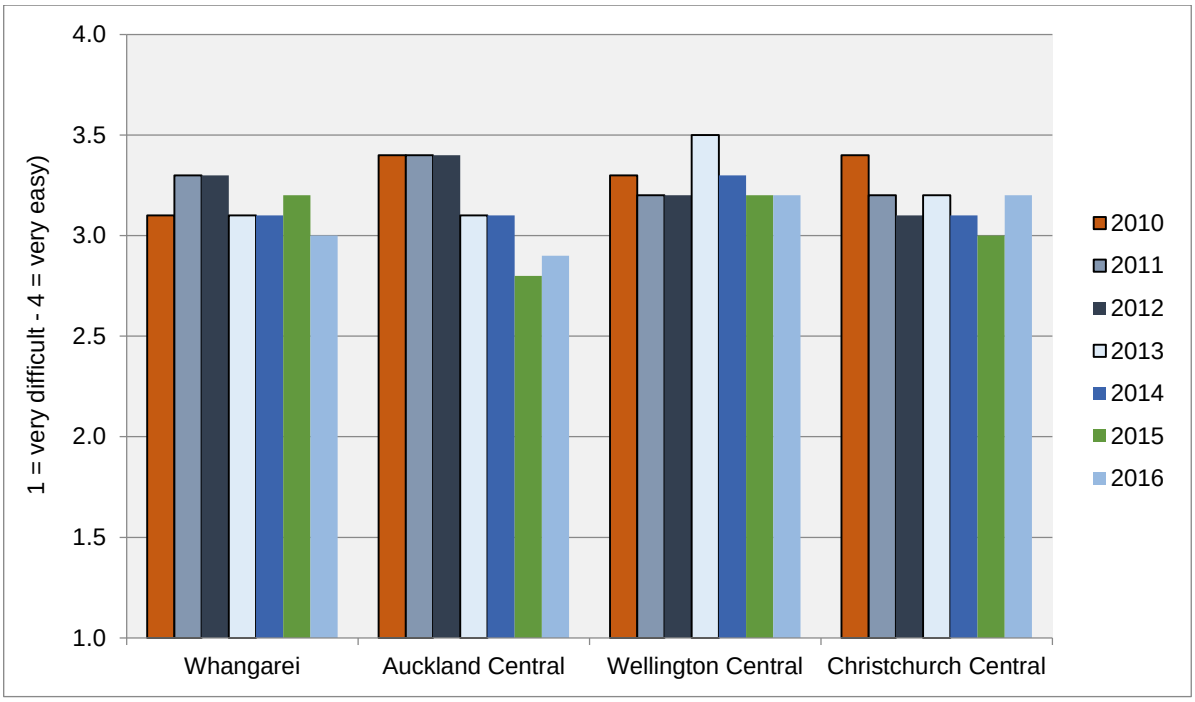


**Table 5 3: Police detainees' perceptions of the current availability of cannabis by location, 2010-2016**

| Current availability of cannabis (%) | Year | N-Value | Very easy [4] | Easy [3] | Difficult [2] | Very difficult [1] | Average availability score [1=very difficult - 4=very easy] | Overall current status |
|---|---|---|---|---|---|---|---|---|
| **Whangarei** | 2010 | n=80 | 41% | 34% | 21% | 4% | 3.1 | Very easy / easy |
| | 2011 | n=121 | 45% | 39% | 12% | 3% | 3.3 | Very easy / easy |
| | 2012 | n=114 | 57% | 25% | 10% | 8% | 3.3 | Very easy / easy |
| | 2013 | n=89 | 40% | 38% | 16% | 6% | 3.1 | Very easy / easy |
| | 2014 | n=96 | 40% | 39% | 13% | 8% | 3.1 | Very easy / easy |
| | 2015 | n=121 | 49% | 26% | 22% | 3% | 3.2 | Very easy / easy |
| | 2016 | n=89 | 40% | 29% | 19% | 11% | 3.0 | Very easy / easy |
| **Auckland Central** | 2010 | n=175 | 55% | 30% | 13% | 2% | 3.4 | Very easy / easy |
| | 2011 | n=205 | 53% | 34% | 11% | 4% | 3.4 | Very easy / easy |
| | 2012 | n=151 | 58% | 24% | 17% | 2% | 3.4 | Very easy / easy |
| | 2013 | n=207 | 40% | 40% | 14% | 6% | 3.1 | Very easy / easy |
| | 2014 | n=201 | 41% | 33% | 19% | 6% | 3.1 | Very easy / easy |
| | 2015 | n=169 | 22% | 47% | 24% | 7% | 2.8 | Easy / difficult |
| | 2016 | n=148 | 31% | 38% | 24% | 7% | 2.9 | Easy / very easy |
| **Wellington Central** | 2010 | n=110 | 54% | 31% | 11% | 5% | 3.3 | Very easy / easy |
| | 2011 | n=125 | 46% | 31% | 15% | 7% | 3.2 | Very easy / easy |
| | 2012 | n=71 | 45% | 35% | 13% | 7% | 3.2 | Very easy / easy |
| | 2013 | n=72 | 54% | 39% | 6% | 1% | 3.5 | Very easy / easy |
| | 2014 | n=66 | 45% | 38% | 14% | 3% | 3.3 | Very easy / easy |
| | 2015 | n=74 | 46% | 34% | 19% | 1% | 3.2 | Very easy / easy |
| | 2016 | n=138 | 45% | 35% | 17% | 4% | 3.2 | Very easy / easy |
| **Christchurch Central** | 2010 | n=209 | 58% | 28% | 12% | 2% | 3.5 | Very easy / easy |
| | 2011 | n=143 | 48% | 31% | 15% | 5% | 3.2 | Very easy / easy |
| | 2012 | n=204 | 40% | 36% | 21% | 3% | 3.1 | Very easy / easy |
| | 2013 | n=215 | 50% | 26% | 16% | 9% | 3.2 | Very easy / easy |
| | 2014 | n=179 | 48% | 27% | 15% | 10% | 3.1 | Very easy / easy |
| | 2015 | n=187 | 43% | 25% | 22% | 10% | 3.0 | Very easy / easy |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2016 | n=153 | 49% | 29% | 17% | 5% | 3.2 | Very easy / easy |
| **All Sites** | 2010 | n=574 | 54% | 30% | 13% | 3% | 3.3 | Very easy / easy |
| | 2011 | n=594 | 49% | 33% | 13% | 5% | 3.3 | Very easy / easy |
| | 2012 | n=536 | 49% | 30% | 16% | 4% | 3.2 | Very easy / easy |
| | 2013 | n=587 | 46% | 35% | 13% | 6% | 3.2 | Very easy / easy |
| | 2014 | n=546 | 44% | 33% | 16% | 7% | 3.1 | Very easy / easy |
| | 2015 | n=549 | 38% | 34% | 22% | 6% | 3.0 | Very easy / easy |
| | 2016 | n=529 | 41% | 33% | 20% | 6% | 3.1 | Very easy / easy |

### Change in availability of cannabis

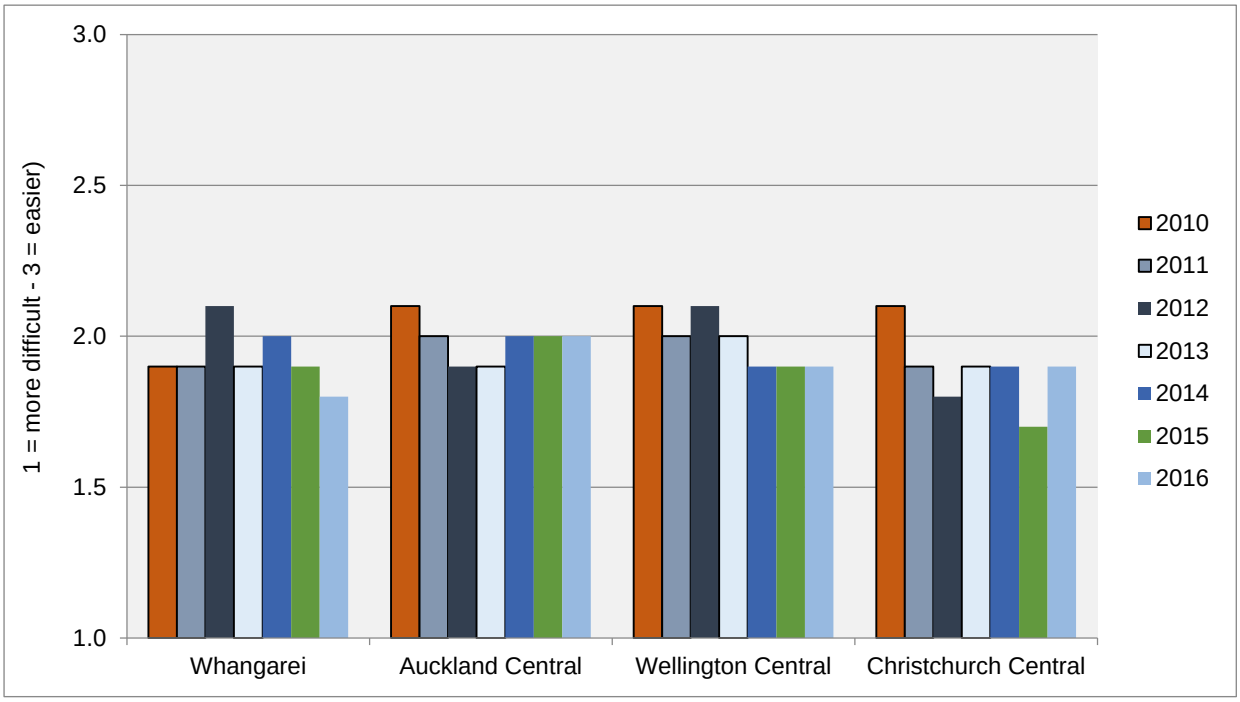
The detainees reported the availability of cannabis had been 'stable/more difficult' over the previous six months in 2016 (Table 5 4). The availability of cannabis was reported to have become more difficult from 2010 to 2016 (down from 2.1 to 1.9, $p<0.0001$). The availability of cannabis had declined in Whangarei (down from 2.1 in 2012 to 1.8 in 2016, $p=0.0075$), Wellington Central (down from 2.1 in 2010 to 1.9 in 2016, $p=0.0330$) and Christchurch Central (down from 2.1 in 2010 to 1.9 in 2016,$p=0.0366$) (Figure 5 7).

**Table 5 4: Police detainees' perceptions of the change in availability of cannabis by location, 2010 – 2016**

| Change in availability of cannabis (%) | Year | N- Value | Easier [3] | Stable [2] | Fluctuates [2] | More difficult [1] | Average change in availability score [1=very difficult - 4=very easy] | Overall current status |
|---|---|---|---|---|---|---|---|---|
| **Whangarei** | 2010 | n=78 | 12% | 58% | 10% | 21% | 1.9 | Stable / more difficult |
| | 2011 | n=120 | 15% | 45% | 18% | 23% | 1.9 | Stable / more difficult |
| | 2012 | n=108 | 25% | 52% | 9% | 14% | 2.1 | Stable / easier |
| | 2013 | n=84 | 17% | 48% | 10% | 26% | 1.9 | Stable / more difficult |
| | 2014 | n=91 | 21% | 44% | 15% | 20% | 2.0 | Stable / easier |
| | 2015 | n=114 | 18% | 41% | 17% | 25% | 1.9 | Stable / more difficult |
| | 2016 | n=88 | 8% | 52% | 11% | 28% | 1.8 | Stable / more difficult |
| **Auckland Central** | 2010 | n=167 | 25% | 49% | 13% | 13% | 2.1 | Stable / easier |
| | 2011 | n=203 | 17% | 63% | 7% | 13% | 2.0 | Stable / easier |
| | 2012 | n=142 | 14% | 54% | 9% | 23% | 1.9 | Stable / more difficult |
| | 2013 | n=199 | 17% | 54% | 7% | 22% | 1.9 | Stable / more difficult |
| | 2014 | n=190 | 14% | 58% | 9% | 18% | 2.0 | Stable / more difficult |
| | 2015 | n=170 | 18% | 46% | 14% | 22% | 2.0 | Stable / more difficult |
| | 2016 | n=146 | 25% | 37% | 10% | 27% | 2.0 | Stable / more difficult |
| **Wellington Central** | 2010 | n=109 | 21% | 62% | 7% | 9% | 2.1 | Stable / easier |
| | 2011 | n=117 | 13% | 64% | 11% | 12% | 2.0 | Stable / easier |
| | 2012 | n=69 | 19% | 55% | 13% | 13% | 2.1 | Stable / easier |
| | 2013 | n=67 | 16% | 63% | 4% | 16% | 2.0 | Stable / more difficult |
| | 2014 | n=63 | 14% | 57% | 6% | 22% | 1.9 | Stable / more difficult |
| | 2015 | n=73 | 8% | 60% | 14% | 18% | 1.9 | Stable / more difficult |
| | 2016 | n=133 | 4% | 68% | 14% | 14% | 1.9 | Stable / fluctuates |
| **Christchurch Central** | 2010 | n=206 | 18% | 59% | 12% | 11% | 2.1 | Stable / easier |
| | 2011 | n=141 | 12% | 50% | 13% | 25% | 1.9 | Stable / more difficult |
| | 2012 | n=191 | 7% | 47% | 18% | 28% | 1.8 | Stable / more difficult |
| | 2013 | n=214 | 17% | 38% | 13% | 32% | 1.9 | Stable / more difficult |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2014 | n=180 | 16% | 48% | 8% | 28% | 1.9 | Stable / more difficult |
| | 2015 | n=184 | 14% | 36% | 11% | 39% | 1.7 | More difficult / stable |
| | 2016 | n=149 | 20% | 36% | 9% | 34% | 1.9 | Stable / more difficult |
| **All Sites** | 2010 | n=560 | 20% | 57% | 11% | 13% | 2.1 | Stable /easier |
| | 2011 | n=582 | 15% | 56% | 12% | 18% | 2.0 | Stable / more difficult |
| | 2012 | n=511 | 15% | 51% | 13% | 21% | 1.9 | Stable / more difficult |
| | 2013 | n=564 | 17% | 49% | 9% | 25% | 1.9 | Stable / more difficult |
| | 2014 | n=530 | 16% | 52% | 9% | 23% | 1.9 | Stable / more difficult |
| | 2015 | n=541 | 15% | 45% | 13% | 27% | 1.9 | Stable / more difficult |
| | 2016 | n=518 | 17% | 45% | 11% | 27% | 1.9 | Stable / more difficult |

**Figure 5 7: Change in the availability of cannabis by location, 2010-2016**




## Current price of cannabis

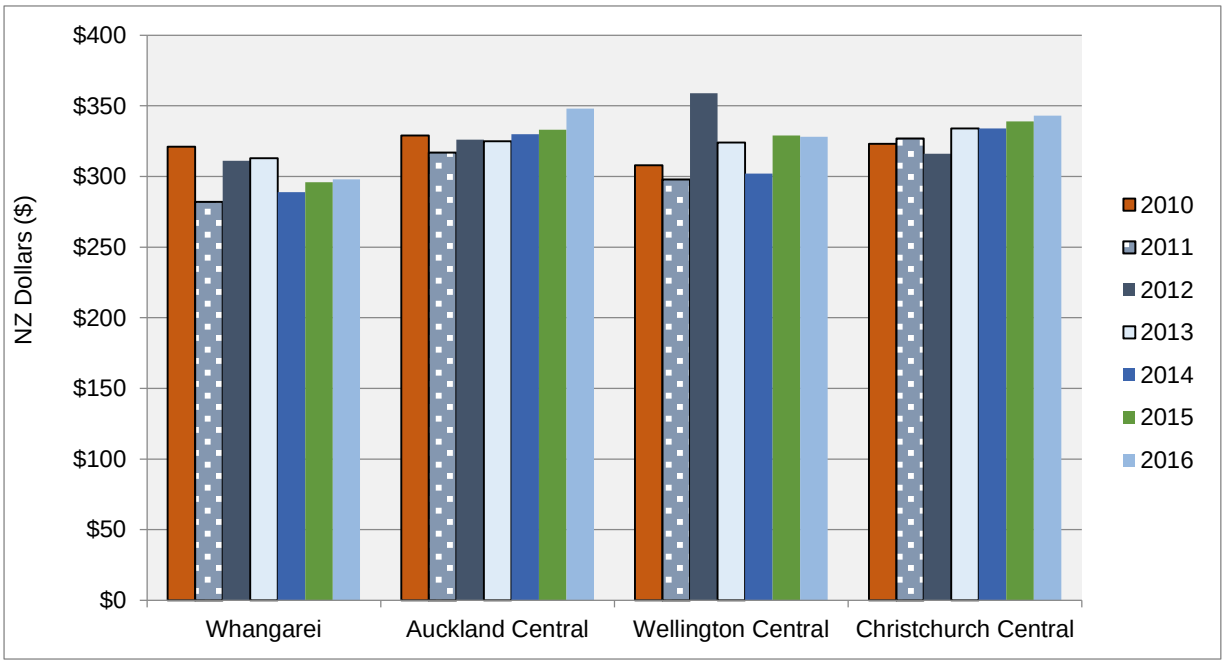
The detainees reported paying a median price of $20 for a 'tinny' of cannabis and $350 for an ounce of cannabis (Table 5 5). The mean price for an ounce of cannabis increased from $323 in 2014 to $340 in 2016 (p=0.0133). There were increases in the mean price of an 'ounce' of cannabis in Auckland Central (up from $325 in 2011 to $349 in 2016, p=0.0134) and Christchurch Central (up from $316 in 2012 to $343 in 2016, p<0.0001) (Figure 5 10). In 2016, the mean price for an ounce of cannabis was lower in in Whangarei than in Christchurch Central ($298 vs. $343, p<0.0001), Wellington Central ($298 vs. $328, p=0.0259) and Auckland Central ($298 vs. $348, p<0.0001). The mean price of a pound of cannabis also increased in Christchurch Central from $2,955 in 2012 to $4,294 in 2016 (p=0.0007).

**Table 5 5: Current median (mean) price paid by police detainees for cannabis (NZD) by location, 2010-2016**

| Current price of Cannabis ($) | Median (mean) price per 'Tinny' | | | | Median (mean) price per Ounce | | | | Median (mean) price per Pound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number with Knowledge | | Median | Mean | Number with Knowledge | | Median | Mean | Number with Knowledge | | Median | Mean |
| **Whangarei** | 2010 | n=73 | $20 | $20 | 2010 | n=6 | $325 | $321 | 2010 | n=2 | $1,925 | $1,925 |
| | 2011 | n=106 | $20 | $20 | 2011 | n=42 | $275 | $282 | 2011 | n=11 | $2,500 | $2,582 |
| | 2012 | n=97 | $20 | $20 | 2012 | n=74 | $330 | $311 | 2012 | n=47 | $3,000 | $3,042 |
| | 2013 | n=74 | $20 | $20 | 2013 | n=51 | $300 | $313 | 2013 | n=25 | $3,000 | $3,022 |
| | 2014 | n=88 | $20 | $20 | 2014 | n=56 | $300 | $289 | 2014 | n=33 | $3,000 | $2,674 |
| | 2015 | n=114 | $20 | $20 | 2015 | n=70 | $300 | $296 | 2015 | n=27 | $2,500 | $2,791 |
| | 2016 | n=73 | $20 | $20 | 2016 | n=27 | $300 | $298 | 2016 | n=10 | $3,125 | $2,933 |
| **Auckland Central** | 2010 | n=124 | $20 | $20 | 2010 | n=41 | $350 | $329 | 2010 | n=16 | $3,100 | $2,677 |
| | 2011 | n=187 | $20 | $20 | 2011 | n=58 | $350 | $317 | 2011 | n=12 | $2,550 | $2,558 |
| | 2012 | n=130 | $20 | $20 | 2012 | n=41 | $350 | $326 | 2012 | n=15 | $4,000 | $3,496 |
| | 2013 | n=195 | $20 | $20 | 2013 | n=145 | $350 | $325 | 2013 | n=71 | $3,700 | $3,312 |
| | 2014 | n=202 | $20 | $20 | 2014 | n=166 | $350 | $330 | 2014 | n=57 | $3,000 | $3,037 |
| | 2015 | n=171 | $20 | $20 | 2015 | n=109 | $350 | $333 | 2015 | n=42 | $4,000 | $3,538 |
| | 2016 | n=143 | $20 | $20 | 2016 | n=98 | $350 | $348 | 2016 | n=33 | $3,500 | $3,349 |
| **Wellington Central** | 2010 | n=87 | $20 | $20 | 2010 | n=26 | $300 | $308 | 2010 | n=10 | $1,240 | $2,152 |
| | 2011 | n=93 | $20 | $20 | 2011 | n=30 | $300 | $298 | 2011 | n=1 | $2,500 | $2,500 |
| | 2012 | n=59 | $20 | $20 | 2012 | n=16 | $350 | $359 | 2012 | n=4 | $4,150 | $3,950 |
| | 2013 | n=59 | $20 | $20 | 2013 | n=20 | $350 | $324 | 2013 | n=10 | $2,625 | $2,605 |
| | 2014 | n=67 | $20 | $20 | 2014 | n=36 | $300 | $302 | 2014 | n=15 | $3,500 | $2,987 |
| | 2015 | n=72 | $20 | $20 | 2015 | n=43 | $350 | $329 | 2015 | n=17 | $3,000 | $2,759 |
| | 2016 | n=124 | $20 | $20 | 2016 | n=50 | $350 | $328 | 2016 | n=19 | $3,500 | $3,300 |
| **Christchurch Central** | 2010 | n=191 | $20 | $20 | 2010 | n=33 | $340 | $323 | 2010 | n=14 | $3,500 | $3,700 |
| | 2011 | n=135 | $20 | $20 | 2011 | n=66 | $345 | $327 | 2011 | n=13 | $4,500 | $4,346 |
| | 2012 | n=169 | $20 | $20 | 2012 | n=108 | $320 | $316 | 2012 | n=38 | $3,000 | $2,955 |
| | 2013 | n=211 | $20 | $20 | 2013 | n=187 | $350 | $334 | 2013 | n=81 | $4,000 | $3,363 |
| | 2014 | n=178 | $20 | $20 | 2014 | n=157 | $350 | $334 | 2014 | n=73 | $3,500 | $3,414 |
| | 2015 | n=179 | $20 | $21 | 2015 | n=119 | $350 | $339 | 2015 | n=28 | $4,050 | $4,054 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2016 | n=202 | $20 | $20 | 2016 | n=106 | $350 | $343 | 2016 | n=39 | $4,000 | $4,294 |
| **All sites** | 2010 | n=475 | $20 | $20 | 2010 | n=107 | $325 | $322 | 2010 | n=41 | $3,100 | $2,857 |
| | 2011 | n=521 | $20 | $20 | 2011 | n=197 | $325 | $313 | 2011 | n=37 | $3,500 | $3,298 |
| | 2012 | n=455 | $20 | $20 | 2012 | n=239 | $325 | $321 | 2012 | n=104 | $3,000 | $3,156 |
| | 2013 | n=539 | $20 | $20 | 2013 | n=403 | $350 | $328 | 2013 | n=187 | $3,500 | $3,244 |
| | 2014 | n=535 | $20 | $20 | 2014 | n=415 | $350 | $323 | 2014 | n=178 | $3,200 | $3,137 |
| | 2015 | n=536 | $20 | $20 | 2015 | n=341 | $350 | $329 | 2015 | n=114 | $3,500 | $3,364 |
| | 2016 | n=483 | $20 | $20 | 2015 | n=281 | $350 | $340 | 2015 | n=101 | $3,575 | $3,688 |

**Figure 5 8: Mean price of an ounce of cannabis by location, 2010-2016**




## Change in the price of cannabis

The detainees reported the price of cannabis had been 'stable' over the previous six months in 2016 (Table 5 6). Seventy percent described the price as 'stable'. The detainees were slightly more likely to describe the price of cannabis as increasing from 2014 to 2016 (up from 2.06 to 2.13, p=0.0208). The Christchurch Central detainees were more likely to report the price of cannabis was increasing from 2010 to 2016 (up from 2.06 to 2.21, p=0.0109).

**Table 5 6: Police detainees' perceptions of the change in the price of cannabis in the past six months by location, 2010-2016**

| Change in price of cannabis (%) | Year | N-Value | Increasing [3] | Fluctuating [2] | Stable [2] | Decreasing [1] | Average change in price score [1=decreasing - 3=increasing] | Overall current status |
|---|---|---|---|---|---|---|---|---|
| **Whangarei** | 2010 | n=77 | 8% | 9% | 82% | 1% | 2.1 | Stable |
| | 2011 | n=122 | 16% | 7% | 70% | 6% | 2.1 | Stable |
| | 2012 | n=109 | 18% | 7% | 70% | 5% | 2.1 | Stable |
| | 2013 | n=84 | 15% | 10% | 74% | 1% | 2.1 | Stable |
| | 2014 | n=86 | 10% | 16% | 65% | 8% | 2.0 | Stable / fluctuating |
| | 2015 | n=113 | 20% | 9% | 68% | 3% | 2.2 | Stable / increasing |
| | 2016 | n=88 | 20% | 5% | 70% | 5% | 2.2 | Stable |
| **Auckland Central** | 2010 | n=168 | 9% | 5% | 85% | 1% | 2.1 | Stable |
| | 2011 | n=203 | 10% | 9% | 80% | 1% | 2.1 | Stable |
| | 2012 | n=136 | 7% | 4% | 88% | 2% | 2.1 | Stable |
| | 2013 | n=200 | 8% | 6% | 83% | 4% | 2.0 | Stable |
| | 2014 | n=203 | 9% | 3% | 85% | 3% | 2.1 | Stable |
| | 2015 | n=171 | 9% | 2% | 86% | 4% | 2.1 | Stable |
| | 2016 | n=144 | 15% | 9% | 72% | 4% | 2.1 | Stable |
| **Wellington Central** | 2010 | n=97 | 11% | 10% | 76% | 2% | 2.1 | Stable |
| | 2011 | n=120 | 7% | 8% | 81% | 4% | 2.0 | Stable |
| | 2012 | n=69 | 13% | 10% | 77% | 0% | 2.1 | Stable |
| | 2013 | n=66 | 5% | 8% | 88% | 0% | 2.0 | Stable |
| | 2014 | n=67 | 6% | 10% | 82% | 0% | 2.1 | Stable |
| | 2015 | n=71 | 3% | 15% | 82% | 0% | 2.0 | Stable |
| | 2016 | n=137 | 5% | 17% | 78% | 0% | 2.1 | Stable |
| **Christchurch Central** | 2010 | n=204 | 8% | 8% | 82% | 1% | 2.1 | Stable |
| | 2011 | n=143 | 10% | 6% | 82% | 2% | 2.1 | Stable |
| | 2012 | n=185 | 14% | 14% | 80% | 3% | 2.1 | Stable |
| | 2013 | n=213 | 15% | 10% | 83% | 1% | 2.1 | Stable |
| | 2014 | n=180 | 11% | 17% | 71% | 2% | 2.1 | Stable |
| | 2015 | n=183 | 19% | 8% | 69% | 4% | 2.2 | Stable / increasing |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2016 | n=151 | 25% | 11% | 62% | 3% | 2.2 | Stable / increasing |
| **All Sites** | 2010 | n=546 | 9% | 8% | 82% | 1% | 2.1 | Stable |
| | 2011 | n=588 | 11% | 8% | 79% | 3% | 2.1 | Stable |
| | 2012 | n=500 | 12% | 9% | 77% | 2% | 2.1 | Stable |
| | 2013 | n=563 | 11% | 8% | 79% | 2% | 2.1 | Stable |
| | 2014 | n=536 | 9% | 11% | 77% | 3% | 2.1 | Stable |
| | 2015 | n=538 | 13% | 7% | 77% | 3% | 2.1 | Stable |
| | 2016 | n=520 | 17% | 10% | 70% | 3% | 2.1 | Stable |

### Current strength of cannabis

The current strength of cannabis was reported to be ‘high/fluctuating’ in 2016 (Table 5 7). There was no change in perceptions of the current strength of cannabis from 2012 to 2016.

**Table 5 7: Police detainees' perceptions of current strength of cannabis in the past six months, 2012-2016**

| Current strength of cannabis (%) | Year | N- Value | High [3] | Medium [2] | Fluctuates [2] | Low [1] | Average Strength score [1=low - 3=high] | Overall current status |
|---|---|---|---|---|---|---|---|---|
| **Whangarei** | 2012 | n=105 | 30% | 35% | 30% | 6% | 2.2 | Medium / high |
| | 2013 | n=84 | 33% | 32% | 26% | 8% | 2.3 | High / medium |
| | 2014 | n=91 | 29% | 38% | 14% | 19% | 2.1 | Medium / high |
| | 2015 | n=114 | 36% | 33% | 16% | 15% | 2.2 | High / medium |
| | 2016 | n=88 | 36% | 28% | 16% | 19% | 2.2 | High / medium |
| **Auckland Central** | 2012 | n=145 | 38% | 32% | 23% | 8% | 2.3 | High / medium |
| | 2013 | n=202 | 37% | 28% | 25% | 10% | 2.3 | High / medium |
| | 2014 | n=202 | 33% | 27% | 28% | 12% | 2.2 | High / fluctuates |
| | 2015 | n=162 | 35% | 27% | 27% | 12% | 2.2 | High / medium |
| | 2016 | n=151 | 37% | 30% | 23% | 9% | 2.3 | High / medium |
| **Wellington Central** | 2012 | n=70 | 31% | 27% | 31% | 10% | 2.2 | High / fluctuates |
| | 2013 | n=68 | 26% | 37% | 28% | 9% | 2.2 | Medium / fluctuates |
| | 2014 | n=63 | 24% | 22% | 43% | 11% | 2.1 | Fluctuates / high |
| | 2015 | n=74 | 35% | 31% | 27% | 7% | 2.3 | High / medium |
| | 2016 | n=134 | 26% | 29% | 40% | 5% | 2.2 | Fluctuates / medium |
| **Christchurch Central** | 2012 | n=200 | 38% | 27% | 27% | 9% | 2.3 | High / medium |
| | 2013 | n=215 | 35% | 27% | 25% | 13% | 2.2 | High / medium |
| | 2014 | n=183 | 34% | 26% | 29% | 11% | 2.2 | High / fluctuates |
| | 2015 | n=186 | 39% | 23% | 27% | 10% | 2.3 | High / fluctuates |
| | 2016 | n=149 | 35% | 25% | 36% | 5% | 2.3 | Fluctuates / high |
| **All Sites** | 2012 | n=520 | 36% | 30% | 27% | 8% | 2.3 | High / medium |
| | 2013 | n=569 | 35% | 29% | 25% | 11% | 2.2 | High / medium |
| | 2014 | n=539 | 31% | 28% | 28% | 13% | 2.2 | High / medium |
| | 2015 | n=536 | 37% | 27% | 25% | 11% | 2.3 | High / medium |
| | 2016 | n=522 | 34% | 28% | 30% | 9% | 2.3 | High / fluctuates |

### Change in strength of cannabis

Overall, the strength of cannabis was described as 'stable/fluctuating' in 2016. The strength of cannabis declined in Wellington Central from 2012 to 2016 (down from 2.2 to 2.0, p=0.0075). In contrast, the strength of cannabis increased in Christchurch Central (up from 1.9 in 2015 to 2.1 in 2016, p=0.0254).

**Table 5 8: Police detainees' perceptions of change in strength of cannabis in the past six months, 2012-2016**

| Change in strength of cannabis (%) | Year | N- Value | Increasing [3] | Stable [2] | Fluctuating [2] | Decreasing [1] | Average change in strength [1=decreasing - 3=increasing] | Overall current status |
|---|---|---|---|---|---|---|---|---|
| **Whangarei** | 2012 | n=100 | 12% | 54% | 21% | 13% | 2.0 | Stable / fluctuating |
| | 2013 | n=75 | 13% | 45% | 25% | 16% | 2.0 | Stable / fluctuating |
| | 2014 | n=86 | 10% | 51% | 21% | 17% | 1.9 | Stable / fluctuating |
| | 2015 | n=106 | 20% | 48% | 12% | 20% | 2.0 | Stable / increasing |
| | 2016 | n=87 | 7% | 53% | 22% | 18% | 1.9 | Stable / fluctuating |
| **Auckland Central** | 2012 | n=130 | 18% | 45% | 19% | 18% | 2.0 | Stable / increasing |
| | 2013 | n=185 | 17% | 57% | 11% | 15% | 2.0 | Stable / increasing |
| | 2014 | n=193 | 12% | 56% | 15% | 17% | 2.0 | Stable / decreasing |
| | 2015 | n=160 | 11% | 49% | 26% | 14% | 2.0 | Stable / fluctuating |
| | 2016 | n=143 | 17% | 52% | 18% | 13% | 2.0 | Stable / fluctuating |
| **Wellington Central** | 2012 | n=63 | 25% | 41% | 27% | 6% | 2.2 | Stable / fluctuating |
| | 2013 | n=67 | 9% | 52% | 31% | 7% | 2.0 | Stable / fluctuating |
| | 2014 | n=62 | 8% | 63% | 21% | 8% | 2.0 | Stable / fluctuating |
| | 2015 | n=72 | 8% | 61% | 24% | 7% | 2.0 | Stable / fluctuating |
| | 2016 | n=128 | 4% | 46% | 45% | 5% | 2.0 | Stable / fluctuating |
| **Christchurch Central** | 2012 | n=189 | 15% | 38% | 39% | 8% | 2.1 | Stable / fluctuating |
| | 2013 | n=203 | 22% | 40% | 27% | 11% | 2.1 | Stable / fluctuating |
| | 2014 | n=178 | 12% | 48% | 29% | 11% | 2.0 | Stable / fluctuating |
| | 2015 | n=180 | 8% | 44% | 34% | 14% | 1.9 | Stable / fluctuating |
| | 2016 | n=145 | 19% | 41% | 33% | 8% | 2.1 | Stable / fluctuating |
| **All Sites** | 2012 | n=483 | 17% | 43% | 28% | 12% | 2.1 | Stable / fluctuating |
| | 2013 | n=530 | 17% | 48% | 22% | 13% | 2.0 | Stable / fluctuating |
| | 2014 | n=519 | 11% | 54% | 21% | 14% | 2.0 | Stable / fluctuating |
| | 2015 | n=518 | 12% | 49% | 25% | 14% | 2.0 | Stable / fluctuating |
| | 2016 | n=503 | 12% | 47% | 30% | 11% | 2.0 | Stable / fluctuating |

### Time taken to purchase cannabis

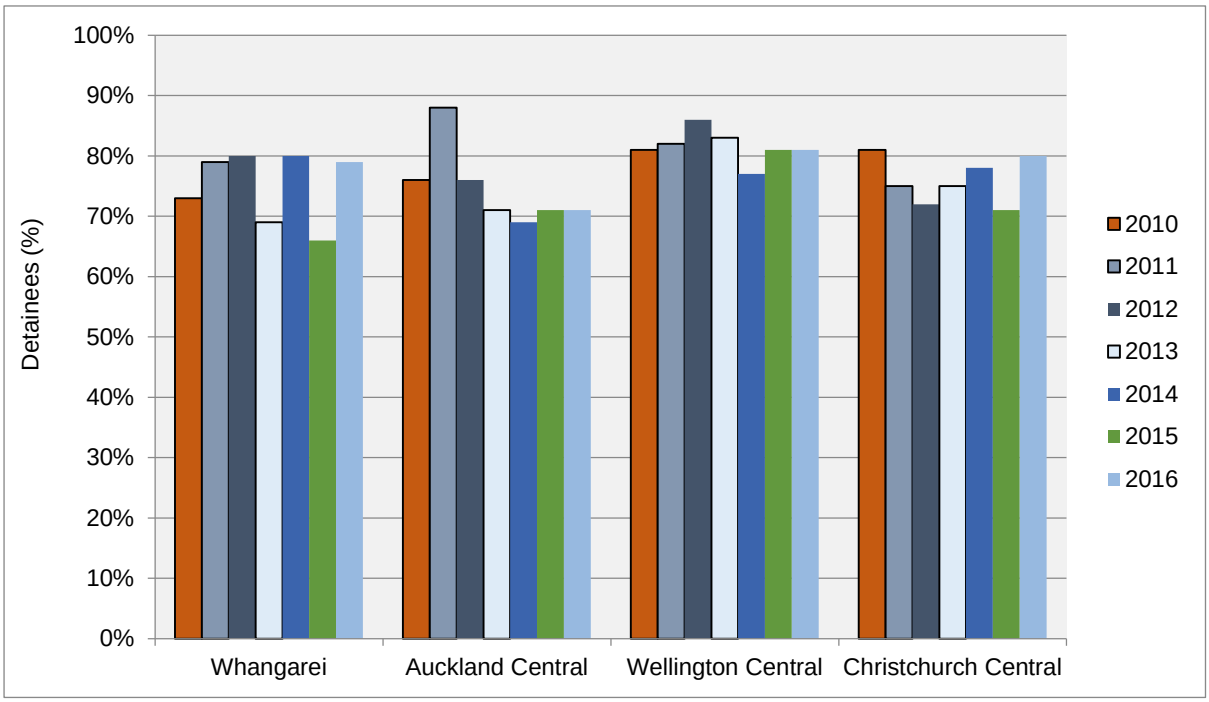
Seventy-seven percent of the detainees who had used cannabis in the past 12 months were able to purchase it in one hour or less in 2016 (Table 5 7). The proportion of detainees in Auckland Central who were able to purchase cannabis in one hour or less declined from 88% in 2011 to 71% in 2016 (p=0.0019) (Figure 5 9).

**Table 5 9: Time taken by police detainees to purchase cannabis by location, 2010-2016**

| Time to purchase cannabis (%) | Year | N- Value | Months | Weeks | Days | About 1 day | Hours | 1 hour | Less than 20 minutes |
|---|---|---|---|---|---|---|---|---|---|
| **Whangarei** | 2010 | n=79 | 1 | 3 | 6 | 4 | 13 | 19 | 54 |
| | 2011 | n=124 | 1 | 2 | 2 | 6 | 10 | 25 | 54 |
| | 2012 | n=112 | 1 | 0 | 3 | 9 | 7 | 6 | 63 |
| | 2013 | n=87 | 3 | 3 | 3 | 11 | 9 | 13 | 56 |
| | 2014 | n=96 | 1 | 2 | 3 | 6 | 7 | 16 | 65 |
| | 2015 | n=117 | 0 | 2 | 8 | 9 | 16 | 16 | 50 |
| | 2016 | n=87 | 0 | 1 | 3 | 5 | 11 | 23 | 56 |
| **Auckland Central** | 2010 | n=152 | 1 | 1 | 7 | 8 | 8 | 20 | 56 |
| | 2011 | n=201 | 0 | 0 | 0 | 3 | 9 | 31 | 57 |
| | 2012 | n=148 | 0 | 1 | 5 | 6 | 12 | 16 | 60 |
| | 2013 | n=200 | 1 | 2 | 4 | 7 | 16 | 21 | 50 |
| | 2014 | n=204 | 1 | <1 | 5 | 11 | 14 | 16 | 53 |
| | 2015 | n=169 | 1 | 1 | 2 | 5 | 20 | 27 | 44 |
| | 2016 | n=150 | 1 | 2 | 6 | 9 | 11 | 21 | 50 |
| **Wellington Central** | 2010 | n=110 | 2 | 0 | 1 | 8 | 8 | 31 | 50 |
| | 2011 | n=117 | 0 | 1 | 3 | 7 | 8 | 25 | 57 |
| | 2012 | n=72 | 0 | 0 | 3 | 1 | 10 | 26 | 60 |
| | 2013 | n=71 | 0 | 1 | 4 | 6 | 6 | 30 | 54 |
| | 2014 | n=64 | 0 | 0 | 2 | 5 | 17 | 23 | 53 |
| | 2015 | n=74 | 0 | 0 | 1 | 7 | 11 | 15 | 66 |
| | 2016 | n=135 | 0 | 0 | 5 | 1 | 13 | 18 | 63 |
| **Christchurch Central** | 2010 | n=208 | 0 | <1 | 3 | 5 | 11 | 23 | 58 |
| | 2011 | n=146 | 0 | 0 | 4 | 8 | 13 | 27 | 48 |
| | 2012 | n=198 | 1 | 1 | 6 | 8 | 12 | 20 | 52 |
| | 2013 | n=216 | <1 | 2 | 4 | 5 | 13 | 27 | 48 |
| | 2014 | n=179 | 0 | 1 | 3 | 4 | 14 | 26 | 52 |
| | 2015 | n=187 | 0 | 1 | 7 | 4 | 17 | 21 | 49 |
| | 2016 | n=150 | 0 | 0 | 3 | 6 | 11 | 29 | 51 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **All Sites** | 2010 | n=549 | 1 | 1 | 4 | 6 | 10 | 23 | 55 |
| | 2011 | n=591 | 0 | 0 | 2 | 6 | 10 | 27 | 54 |
| | 2012 | n=528 | <1 | 1 | 5 | 6 | 11 | 19 | 58 |
| | 2013 | n=578 | 1 | 2 | 4 | 6 | 12 | 24 | 51 |
| | 2014 | n=546 | <1 | 1 | 3 | 7 | 13 | 21 | 54 |
| | 2015 | n=547 | <1 | 1 | 4 | 6 | 16 | 21 | 51 |
| | 2016 | n=524 | <1 | 1 | 5 | 6 | 11 | 23 | 53 |

**Figure 5 9: Proportion of police detainees who could purchase cannabis in one hour or less, 2010-2016**



### 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 2016, 24% of the cannabis using detainees said they did not drive and a further 11% said their driver licence was suspended. Forty-four 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).

**Table 5 10: 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 - 2016**

| Extent drove under the influence of cannabis | Years | N - Value | All [4] | Most [3[ | Some [2] | Hardly any [1] | None [0] | Mean score of extent drove under the influence (0=none - 4=all) |
|---|---|---|---|---|---|---|---|---|
| **Whangarei** | 2010 | n=63 | 10% | 13% | 24% | 16% | 38% | 2.4 |
| | 2011 | n=83 | 16% | 13% | 13% | 13% | 45% | 2.4 |
| | 2012 | n=84 | 13% | 18% | 19% | 19% | 31% | 2.6 |
| | 2013 | n=63 | 11% | 10% | 24% | 14% | 41% | 2.3 |
| | 2014 | n=71 | 15% | 8% | 28% | 8% | 39% | 2.5 |
| | 2015 | n=101 | 8% | 8% | 24% | 7% | 53% | 2.1 |
| | 2016 | n=54 | 4% | 17% | 26% | 19% | 35% | 2.4 |
| **Auckland Central** | 2010 | n=110 | 8% | 13% | 22% | 17% | 40% | 2.3 |
| | 2011 | n=143 | 7% | 8% | 33% | 15% | 37% | 2.3 |
| | 2012 | n=106 | 8% | 10% | 19% | 13% | 49% | 2.2 |
| | 2013 | n=139 | 10% | 9% | 14% | 23% | 44% | 2.2 |
| | 2014 | n=134 | 10% | 9% | 21% | 14% | 46% | 2.2 |
| | 2015 | n=107 | 8% | 12% | 21% | 17% | 42% | 2.3 |
| | 2016 | n=89 | 12% | 11% | 17% | 12% | 47% | 2.3 |
| **Wellington Central** | 2010 | n=80 | 18% | 11% | 20% | 13% | 39% | 2.6 |
| | 2011 | n=80 | 24% | 14% | 23% | 10% | 30% | 2.9 |
| | 2012 | n=55 | 16% | 9% | 22% | 9% | 44% | 2.5 |
| | 2013 | n=40 | 20% | 13% | 20% | 23% | 25% | 2.8 |
| | 2014 | n=43 | 30% | 9% | 9% | 14% | 37% | 2.8 |
| | 2015 | n=48 | 17% | 15% | 17% | 10% | 42% | 2.5 |
| | 2016 | n=85 | 47% | 7% | 19% | 9% | 18% | 3.6 |
| **Christchurch Central** | 2010 | n=125 | 14% | 14% | 22% | 15% | 34% | 2.6 |
| | 2011 | n=96 | 14% | 12% | 25% | 14% | 35% | 2.5 |
| | 2012 | n=145 | 17% | 10% | 26% | 14% | 34% | 2.6 |
| | 2013 | n=145 | 10% | 11% | 24% | 19% | 36% | 2.4 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2014 | n=134 | 13% | 18% | 28% | 13% | 28% | 2.8 |
| | 2015 | n=128 | 13% | 11% | 21% | 18% | 38% | 2.4 |
| | 2016 | n=114 | 10% | 9% | 15% | 33% | 33% | 2.3 |
| **All Sites** | 2010 | n=378 | 12% | 13% | 22% | 15% | 38% | 2.5 |
| | 2011 | n=402 | 14% | 10% | 26% | 13% | 37% | 2.5 |
| | 2012 | n=390 | 13% | 11% | 22% | 13% | 40% | 2.4 |
| | 2013 | n=387 | 12% | 10% | 20% | 20% | 38% | 2.4 |
| | 2014 | n=382 | 16% | 12% | 22% | 13% | 37% | 2.6 |
| | 2015 | n=384 | 11% | 11% | 21% | 14% | 43% | 2.3 |
| | 2016 | n=344 | 16% | 10% | 18% | 20% | 35% | 2.5 |

## Summary

- The proportion of detainees who had used cannabis in the previous year declined from 76% in 2011 to 68% in 2016
- The proportion of detainees in Christchurch Central who had used cannabis in the past year declined from 81% in 2010 to 66% in 2016
- The proportion of detainees who reported using cannabis in the past month decreased from 64% in 2011 to 56% in 2016
- There was also a decrease in the proportion of Christchurch Central detainees who had used cannabis in the past month from 71% in 2010 to 52% in 2016
- In 2016, 32% of the cannabis using detainees felt they were dependent on cannabis
- In 2016, 16% of the detainees had been using cannabis prior to their arrest
- The current availability of cannabis declined from 2010 to 2016
- The current availability of cannabis declined in Auckland Central from 2010 to 2016
- Cannabis was considered increasingly difficult to obtain from 2010 to2016
- Cannabis was considered increasingly difficult to obtain in Whangarei, Wellington Central and Christchurch Central from 2010 to2016
- There was no change in the mean price paid for a 'tinny' of cannabis from 2010 to 2016 (i.e. $20 in all years)
- The mean price of an ounce of cannabis increased from $323 in 2014 to $340 in 2016
- There were increases in the mean price of an ounce of cannabis in Auckland Central (up from $325 in 2011 to $349 in 2016) and Christchurch Central (up from $316 in 2012 to $343 in 2016)

- In 2016, 44% of the cannabis using detainees who drove had completed at least some of their driving under the influence of cannabis

# Chapter 6 – Ecstasy

## Introduction

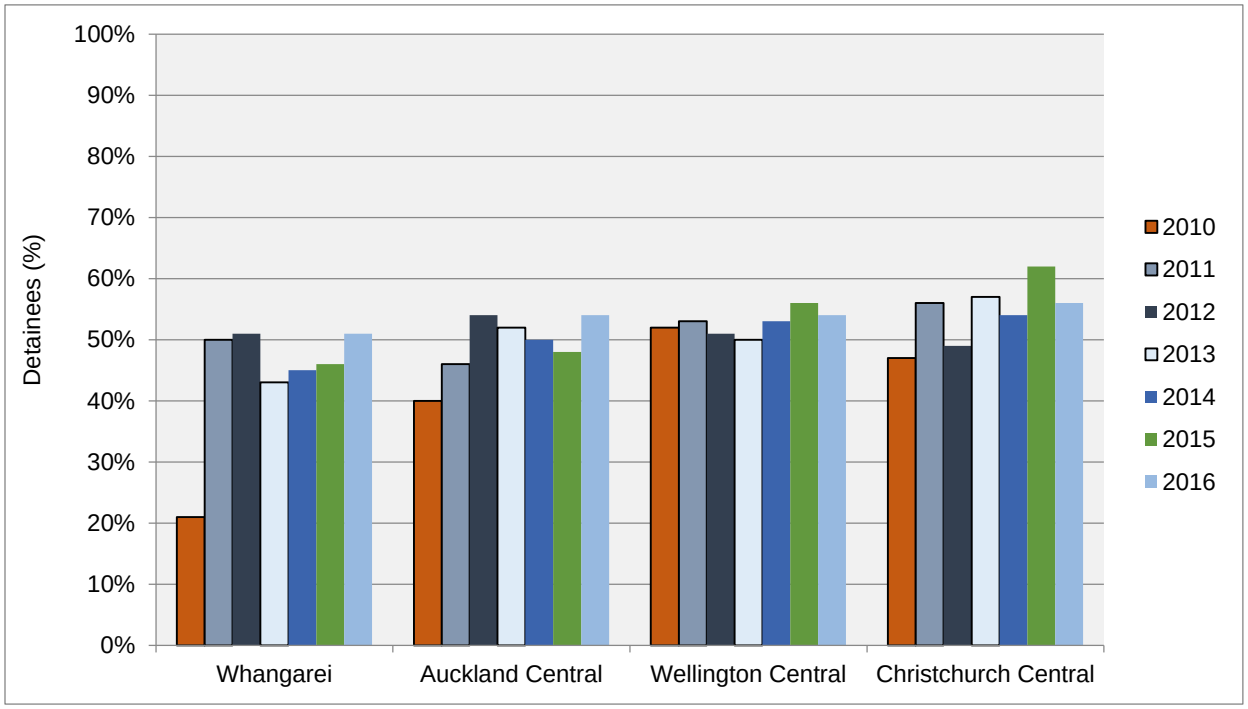
The “ecstasy” market has become increasingly diversified over recent years and according to the UNODC now features three different broad product types: (1) “ecstasy” tablets containing little or no 3,4-methylenedioxymethamphetamine (MDMA); (2) “ecstasy” tablets with an unusually high dose of MDMA; and (3) “ecstasy” sold in powder form containing MDMA of high purity (UNODC, 2016). The “ecstasy” seized in New Zealand reflects these diversified product types (ESR, 2014). Frequent illegal drug users interviewed for the IDMS have reported declining strength and prices for ecstasy over the past five years or so (Wilkins, et al., 2015).

This international picture for MDMA supply is further complicated in the New Zealand domestic context by the rise and fall of local “ecstasy” syndicates selling substitute ecstasy compounds (NDIB, 2013). These local ecstasy syndicates emerged around 2009 and their activity resulted in increased availability of “ecstasy”. A series of successful law enforcement operations against these syndicates in 2011 and 2012 led to a subsequent decline in the availability and use of ecstasy (Wilkins et al., 2012b). The 2015 NZ-ADUM found the proportion of detainees who had used ecstasy in the previous year declined from 28% in 2011 to 19% in 2015. However, there were reports of a recovery in the strength of ecstasy, consistent with reports of high purity MDMA in Europe.

## Use of ecstasy

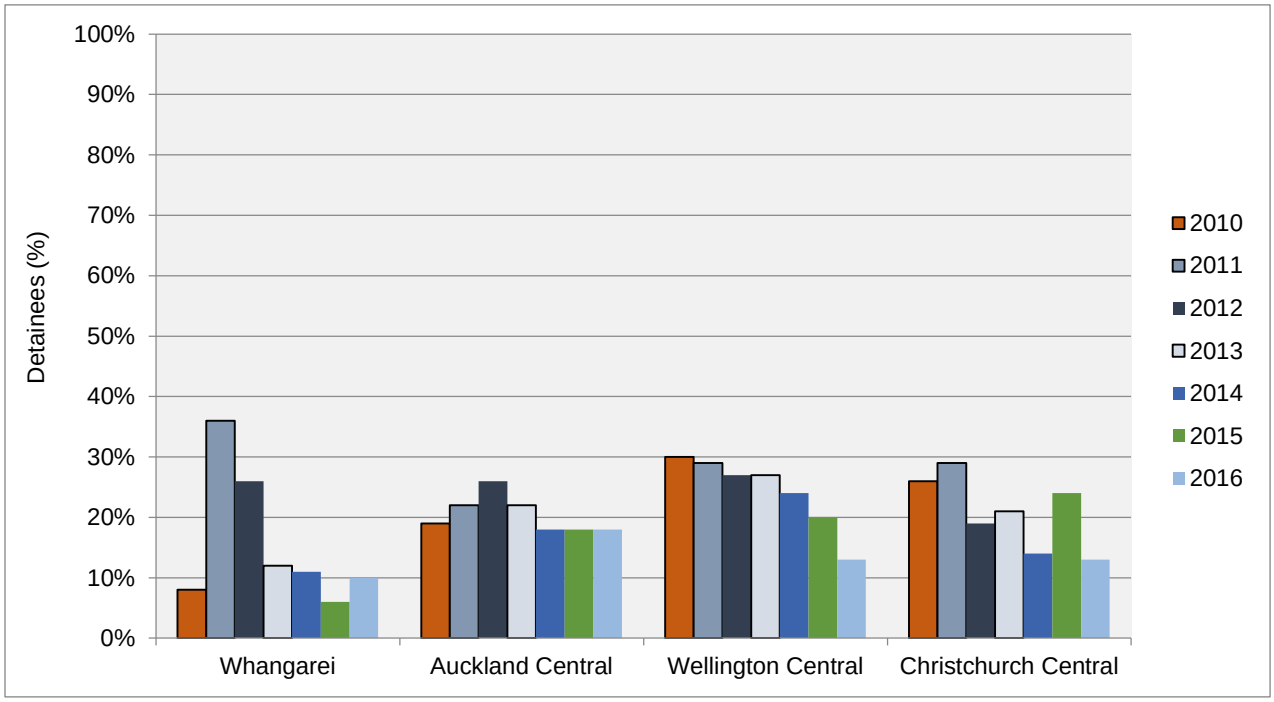
The proportion of detainees who had ever tried ecstasy increased from 42% in 2010 to 54% in 2016 ($p<0.0001$). The proportion of detainees who had ever tried ecstasy increased in Whangarei (up from 21% in 2010 to 51% in 2016, $p<0.0001$) and Auckland Central (up from 40% in 2010 to 54% in 2016, $p=0.0205$) (Figure 6.1).

**Figure 6.1: Proportion of police detainees who had ever used ecstasy by location, 2010-2016**




The proportion of detainees who had used ecstasy in the previous year decreased from 28% in 2011 to 14% in 2016 ($p<0.0001$) (Figure 6.2). There were declines in the last year use of ecstasy among detainees in Wellington Central (down from 30% in 2010 to 13% in 2016, $p=0.0015$), Christchurch Central (down from 29% in 2011 to 13% in 2016, $p=0.0043$), and Whangarei (down from 36% in 2011 to 10% in 2016, $p<0.0001$).

**Figure 6 2: Proportion of police detainees who had used ecstasy in the past 12 months by location, 2010-2016**




The proportion of detainees who had used ecstasy in the previous month decreased from 11% in 2011 to 5% in 2016 (p=0.0002) (Figure 6.3).

**Figure 6 3: Proportion of police detainees who had used ecstasy in the past month by location, 2010-2016**

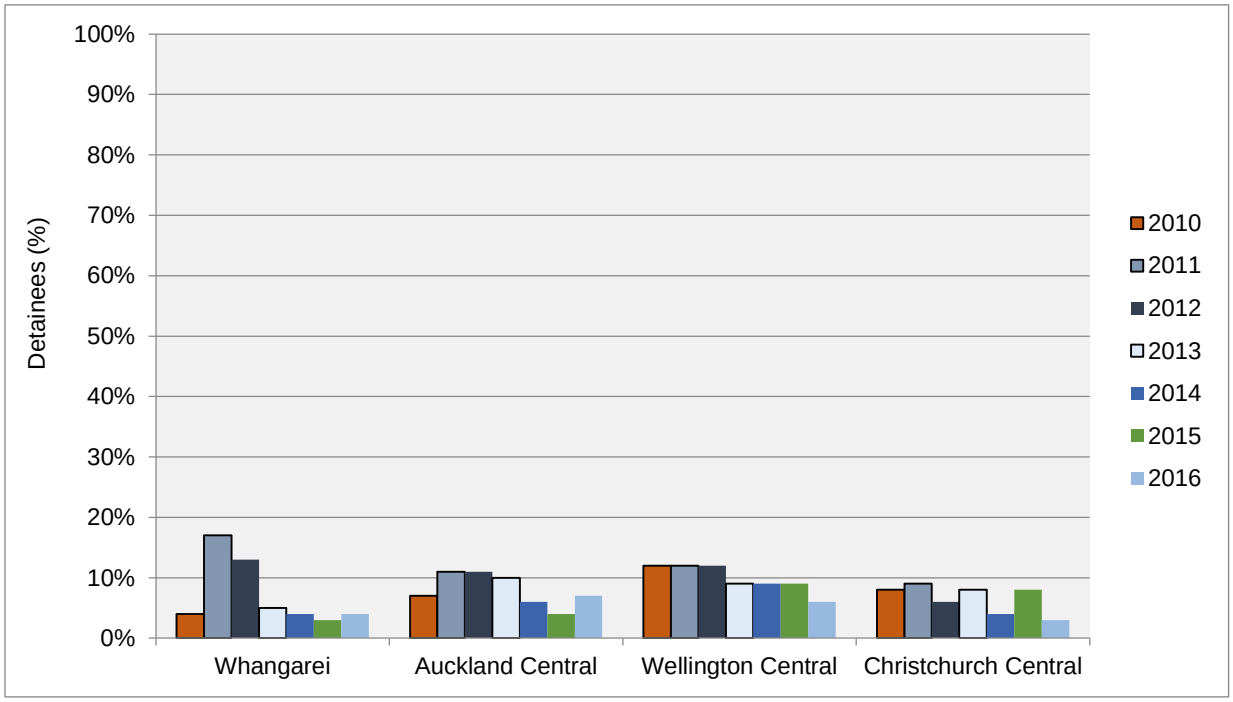


**Table 6 1: Police detainees' patterns of ecstasy use by location, 2010-2016**

| Use of ecstasy | Year | N - value | Ever used (%) | Mean age first used (years)* | Used in past 12 months (%) | Mean number of days used in past 12 months | Felt dependent in past 12 months [%]** | Used in past month [%] | Mean number of days used in past month** |
|---|---|---|---|---|---|---|---|---|---|
| **Whangarei** | 2010 | n=115 | 21% | 21 | 8% | 4 | 9% | 4% | 2 |
| | 2011 | n=149 | 50% | 21 | 36% | 12 | 6% | 17% | 3 |
| | 2012 | n=151 | 51% | 21 | 26% | 13 | 3% | 13% | 3 |
| | 2013 | n=152 | 43% | 20 | 12% | 23 | 0% | 5% | 4 |
| | 2014 | n=151 | 45% | 19 | 11% | 27 | 19% | 4% | 5 |
| | 2015 | n=169 | 46% | 19 | 6% | 6 | 0% | 3% | 3 |
| | 2016 | n=131 | 51% | 19 | 10% | 4 | 0% | 4% | 2 |
| **Auckland Central** | 2010 | n=284 | 40% | 21 | 19% | 18 | 6% | 7% | 3 |
| | 2011 | n=316 | 46% | 20 | 22% | 25 | 5% | 11% | 3 |
| | 2012 | n=247 | 54% | 19 | 26% | 11 | 5% | 11% | 2 |
| | 2013 | n=295 | 52% | 20 | 22% | 19 | 2% | 10% | 3 |
| | 2014 | n=315 | 52% | 19 | 18% | 13 | 2% | 6% | 3 |
| | 2015 | n=267 | 48% | 19 | 18% | 15 | 7% | 4% | 3 |
| | 2016 | n=221 | 54% | 20 | 18% | 13 | 5% | 7% | 4 |
| **Wellington Central** | 2010 | n=152 | 52% | 21 | 30% | 14 | 5% | 12% | 2 |
| | 2011 | n=171 | 53% | 21 | 29% | 12 | 6% | 12% | 3 |
| | 2012 | n=101 | 51% | 19 | 27% | 25 | 0% | 12% | 4 |
| | 2013 | n=106 | 50% | 19 | 27% | 22 | 0% | 9% | 4 |
| | 2014 | n=95 | 52% | 19 | 24% | 21 | 5% | 9% | 2 |
| | 2015 | n=107 | 56% | 18 | 20% | 16 | 5% | 9% | 2 |
| | 2016 | n=213 | 54% | 18 | 13% | 14 | 8% | 6% | 2 |
| **Christchurch Central** | 2010 | n=262 | 47% | 20 | 26% | 5 | 0% | 8% | 2 |
| | 2011 | n=191 | 56% | 19 | 29% | 8 | 2% | 9% | 2 |
| | 2012 | n=303 | 49% | 19 | 19% | 8 | 0% | 6% | 3 |
| | 2013 | n=285 | 57% | 19 | 21% | 14 | 0% | 8% | 3 |
| | 2014 | n=273 | 54% | 19 | 14% | 11 | 0% | 7% | 1 |
| | 2015 | n=292 | 62% | 19 | 24% | 14 | 0% | 8% | 4 |
| | 2016 | n=235 | 56% | 19 | 13% | 11 | 4% | 3% | 2 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **All Sites** | 2010 | n=814 | 42% | 21 | 22% | 11 | 4% | 8% | 2 |
| | 2011 | n=827 | 51% | 20 | 28% | 14 | 4% | 12% | 3 |
| | 2012 | n=802 | 51% | 19 | 24% | 13 | 2% | 10% | 3 |
| | 2013 | n=841 | 52% | 20 | 22% | 16 | 1% | 9% | 3 |
| | 2014 | n=835 | 51% | 19 | 16% | 16 | 4% | 5% | 2 |
| | 2015 | n=835 | 54% | 19 | 19% | 14 | 3% | 6% | 3 |
| | 2016 | n=800 | 54% | 19 | 14% | 12 | 5% | 5% | 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 12 days in the past 12 months in 2016 (median 3, range 1–156 days) (Table 6.1).

### Dependency on ecstasy

Only 5% of the ecstasy using detainees said they had felt dependent on ecstasy in 2016 (Table 6.1).

### Ecstasy use at the time of arrest

Less than one percent of the detainees had been using ecstasy prior to their arrest, and this had not changed from previous years.

### Current availability of ecstasy

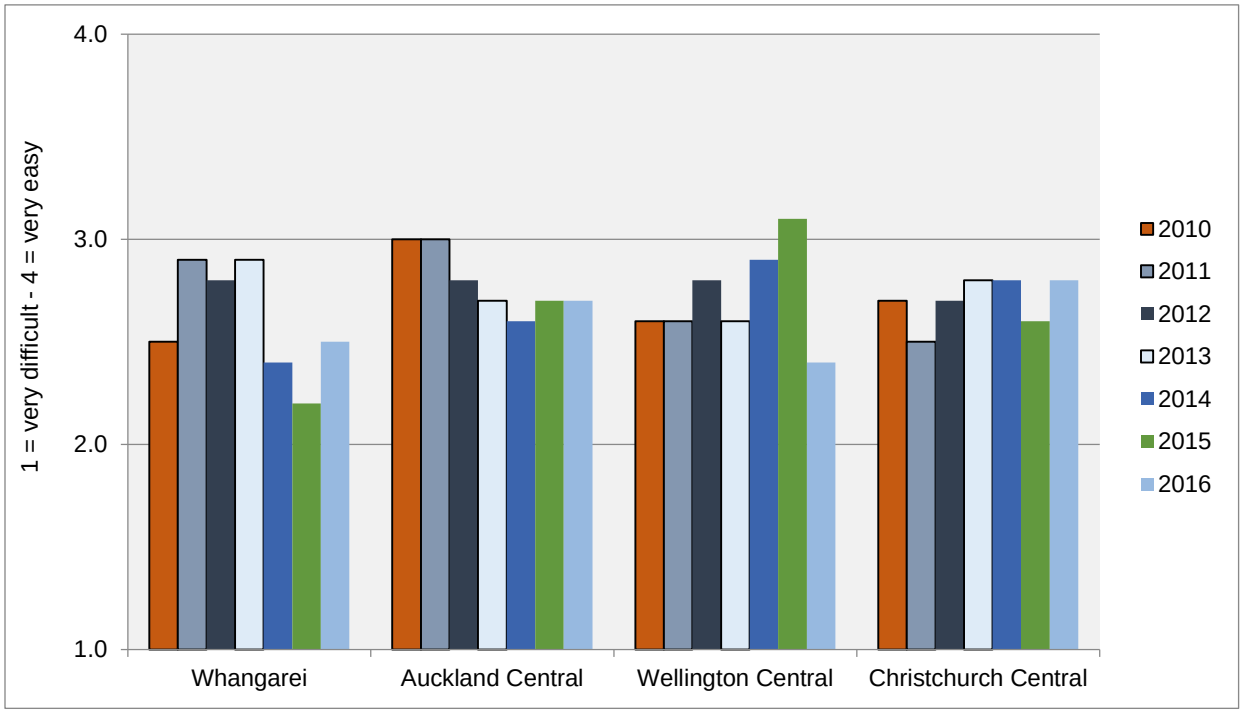
The current availability of ecstasy was reported to be 'easy/difficult' in 2016 (Table 6.2). There was no change in perceptions of the current availability of ecstasy from 2010 to 2016 (Figure 6.4).

**Table 6 2: Police detainees' perceptions of the current availability of ecstasy by location, 2010-2016**

| Current availability of ecstasy | Years | N - Value | Very easy [4] | Easy [3] | Difficult [2] | Very difficult [1] | Average availability score [1=very difficult - 4=very easy] | Overall current status |
|---|---|---|---|---|---|---|---|---|
| **Whangarei** | 2010 | n=10 | 20% | 40% | 10% | 30% | 2.5 | Easy / very difficult |
| | 2011 | n=51 | 24% | 45% | 25% | 6% | 2.9 | Easy / difficult |
| | 2012 | n=34 | 32% | 32% | 15% | 21% | 2.8 | Very easy / easy |
| | 2013 | n=18 | 33% | 33% | 28% | 6% | 2.9 | Very easy / easy |
| | 2014 | n=15 | 13% | 40% | 20% | 27% | 2.4 | Easy / very difficult |
| | 2015 | n=11 | 9% | 27% | 36% | 27% | 2.2 | Difficult / easy |
| | 2016 | n=13 | 0% | 62% | 23% | 15% | 2.5 | Easy / difficult |
| **Auckland Central** | 2010 | n=49 | 35% | 39% | 22% | 4% | 3 | Easy / very easy |
| | 2011 | n=62 | 34% | 39% | 23% | 5% | 3 | Easy / very easy |
| | 2012 | n=57 | 28% | 35% | 23% | 14% | 2.8 | Easy / very easy |
| | 2013 | n=63 | 25% | 35% | 24% | 16% | 2.7 | Easy / very easy |
| | 2014 | n=49 | 16% | 37% | 33% | 14% | 2.6 | Easy / difficult |
| | 2015 | n=40 | 23% | 35% | 33% | 10% | 2.7 | Easy / difficult |
| | 2016 | n=37 | 24% | 38% | 27% | 11% | 2.8 | Easy / difficult |
| **Wellington Central** | 2010 | n=39 | 28% | 26% | 28% | 18% | 2.6 | Very easy / difficult |
| | 2011 | n=45 | 20% | 31% | 36% | 13% | 2.6 | Difficult / easy |
| | 2012 | n=26 | 15% | 58% | 19% | 8% | 2.8 | Easy / difficult |
| | 2013 | n=28 | 21% | 29% | 39% | 11% | 2.6 | Difficult / easy |
| | 2014 | n=21 | 24% | 43% | 33% | 0% | 2.9 | Easy / difficult |
| | 2015 | n=19 | 32% | 47% | 16% | 5% | 3.1 | Easy / very easy |
| | 2016 | n=26 | 15% | 23% | 50% | 12% | 2.4 | Difficult / easy |
| **Christchurch Central** | 2010 | n=65 | 22% | 34% | 35% | 9% | 2.7 | Difficult / easy |
| | 2011 | n=51 | 24% | 20% | 39% | 18% | 2.5 | Difficult / very easy |
| | 2012 | n=47 | 23% | 36% | 28% | 13% | 2.7 | Easy / difficult |
| | 2013 | n=65 | 28% | 31% | 32% | 9% | 2.8 | Difficult / easy |
| | 2014 | n=35 | 31% | 34% | 20% | 14% | 2.8 | Easy / very easy |
| | 2015 | n=66 | 27% | 32% | 17% | 24% | 2.6 | Easy / very easy |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2016 | n=28 | 21% | 43% | 29% | 7% | 2.8 | Easy / difficult |
| **All Sites** | 2010 | n=163 | 27% | 34% | 28% | 11% | 2.8 | Easy / difficult |
| | 2011 | n=209 | 26% | 33% | 31% | 11% | 2.7 | Easy / difficult |
| | 2012 | n=164 | 25% | 40% | 22% | 13% | 2.8 | Easy / very easy |
| | 2013 | n=174 | 26% | 32% | 31% | 12% | 2.7 | Easy / difficult |
| | 2014 | n=120 | 23% | 38% | 28% | 12% | 2.7 | Easy / difficult |
| | 2015 | n=136 | 26% | 36% | 23% | 16% | 2.7 | Easy / very easy |
| | 2016 | n=104 | 19% | 39% | 31% | 10% | 2.7 | Easy / difficult |

**Figure 6 4: Mean score of the current availability of ecstasy by location, 2010-2016**




## Change in availability of ecstasy

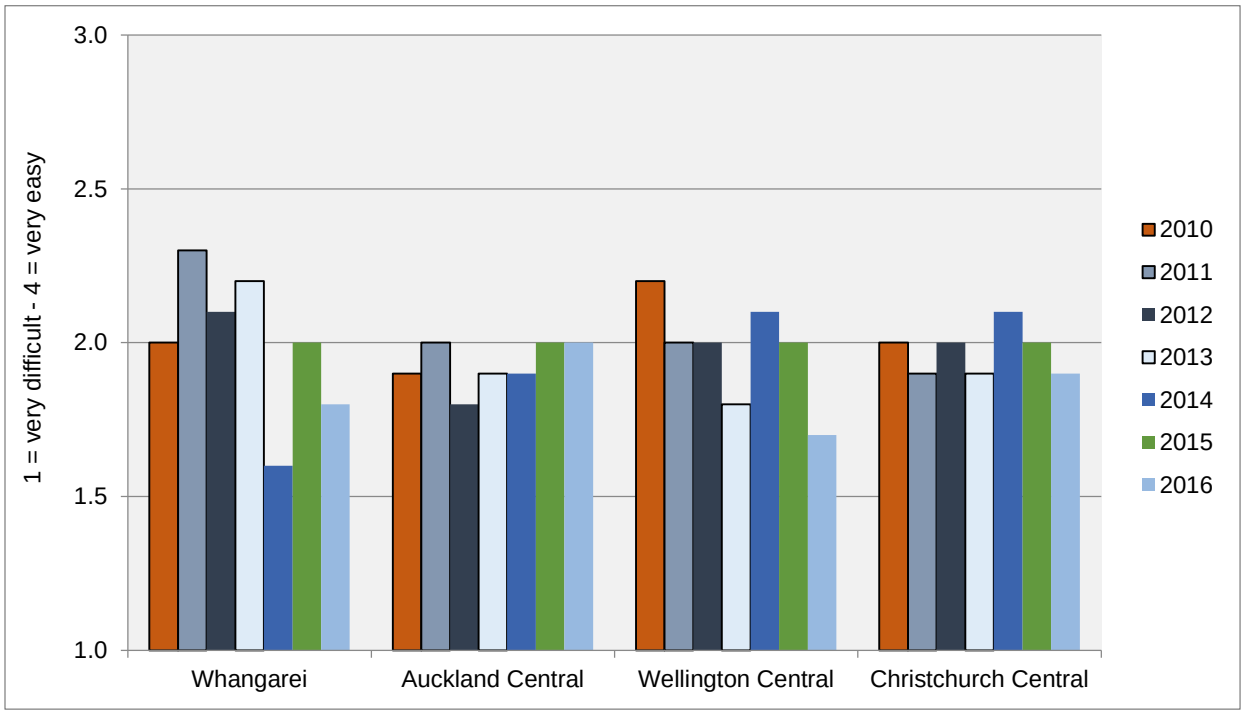
The detainees reported the availability of ecstasy had been 'stable/more difficult' in the previous six months in 2016 (Table 6.3). There was no change in the perception of the change in availability of ecstasy from 2010 to 2016 (Figure 6.5).

**Table 6 3: Police detainees' perceptions of the change in availability of ecstasy by location, 2010-2016**

| Change in availability of ecstasy [%] | Years | N - Value | Easier [3] | Stable [2] | Fluctuates [2] | More difficult [1] | Average change in availability score [1=more difficult - 3=easier] | Overall current status |
|---|---|---|---|---|---|---|---|---|
| **Whangarei** | 2010 | n=12 | 25% | 33% | 17% | 25% | 2.0 | Stable / more difficult |
| | 2011 | n=51 | 41% | 37% | 8% | 14% | 2.3 | Easier / stable |
| | 2012 | n=30 | 23% | 50% | 10% | 17% | 2.1 | Stable / easier |
| | 2013 | n=18 | 33% | 33% | 17% | 17% | 2.2 | Easier / stable |
| | 2014 | n=13 | 8% | 46% | 0% | 46% | 1.6 | Stable / more difficult |
| | 2015 | n=9 | 11% | 44% | 33% | 11% | 2.0 | Stable / fluctuates |
| | 2016 | n=12 | 0% | 67% | 17% | 17% | 1.8 | Stable / fluctuates/ more difficult |
| **Auckland Central** | 2010 | n=45 | 18% | 40% | 11% | 31% | 1.9 | Stable / more difficult |
| | 2011 | n=52 | 21% | 48% | 10% | 21% | 2.0 | Stable / easier /more difficult |
| | 2012 | n=49 | 16% | 41% | 10% | 33% | 1.8 | Stable / more difficult |
| | 2013 | n=55 | 16% | 47% | 11% | 25% | 1.9 | Stable / more difficult |
| | 2014 | n=44 | 16% | 41% | 14% | 30% | 1.9 | Stable / more difficult |
| | 2015 | n=37 | 24% | 43% | 8% | 24% | 2.0 | Easier / more difficult |
| | 2016 | n=37 | 27% | 41% | 8% | 24% | 2.0 | Stable / easier |
| **Wellington Central** | 2010 | n=31 | 26% | 45% | 16% | 13% | 2.2 | Stable / easier |
| | 2011 | n=35 | 20% | 57% | 9% | 14% | 2.0 | Stable / easier |
| | 2012 | n=26 | 12% | 62% | 8% | 19% | 2.0 | Stable / more difficult |
| | 2013 | n=23 | 9% | 39% | 22% | 30% | 1.8 | Stable / more difficult |
| | 2014 | n=209 | 20% | 50% | 15% | 15% | 2.0 | Stable / easier |
| | 2015 | n=17 | 12% | 71% | 6% | 12% | 2.0 | Stable |
| | 2016 | n=23 | 0% | 57% | 17% | 26% | 1.7 | Stable / more difficult |
| **Christchurch Central** | 2010 | n=60 | 27% | 40% | 7% | 27% | 2.0 | Stable / more difficult |
| | 2011 | n=51 | 16% | 39% | 16% | 29% | 1.9 | Stable / more difficult |
| | 2012 | n=44 | 20% | 28% | 28% | 25% | 2.0 | Stable / fluctuates |
| | 2013 | n=61 | 11% | 48% | 15% | 26% | 1.9 | Stable / more difficult |
| | 2014 | n=34 | 21% | 47% | 21% | 12% | 2.1 | Stable / fluctuates |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2015 | n=62 | 19% | 37% | 19% | 24% | 2.0 | Stable / more difficult |
| | 2016 | n=22 | 18% | 32% | 18% | 32% | 1.9 | Stable / more difficult |
| **All Sites** | 2010 | n=148 | 24% | 41% | 11% | 25% | 2.0 | Stable / more difficult |
| | 2011 | n=189 | 24% | 44% | 11% | 21% | 2.0 | Stable / easier |
| | 2012 | n=149 | 17% | 44% | 14% | 25% | 1.9 | Stable / more difficult |
| | 2013 | n=157 | 14% | 44% | 15% | 26% | 1.9 | Stable / more difficult |
| | 2014 | n=111 | 18% | 46% | 15% | 22% | 2.0 | Stable / more difficult |
| | 2015 | n=125 | 19% | 46% | 14% | 21% | 2.0 | Stable / more difficult |
| | 2016 | n=94 | 18% | 44% | 13% | 26% | 1.9 | Stable / more difficult |

**Figure 6 5: Mean score for perceptions of the change in the availability of ecstasy by location, 2010-2016**



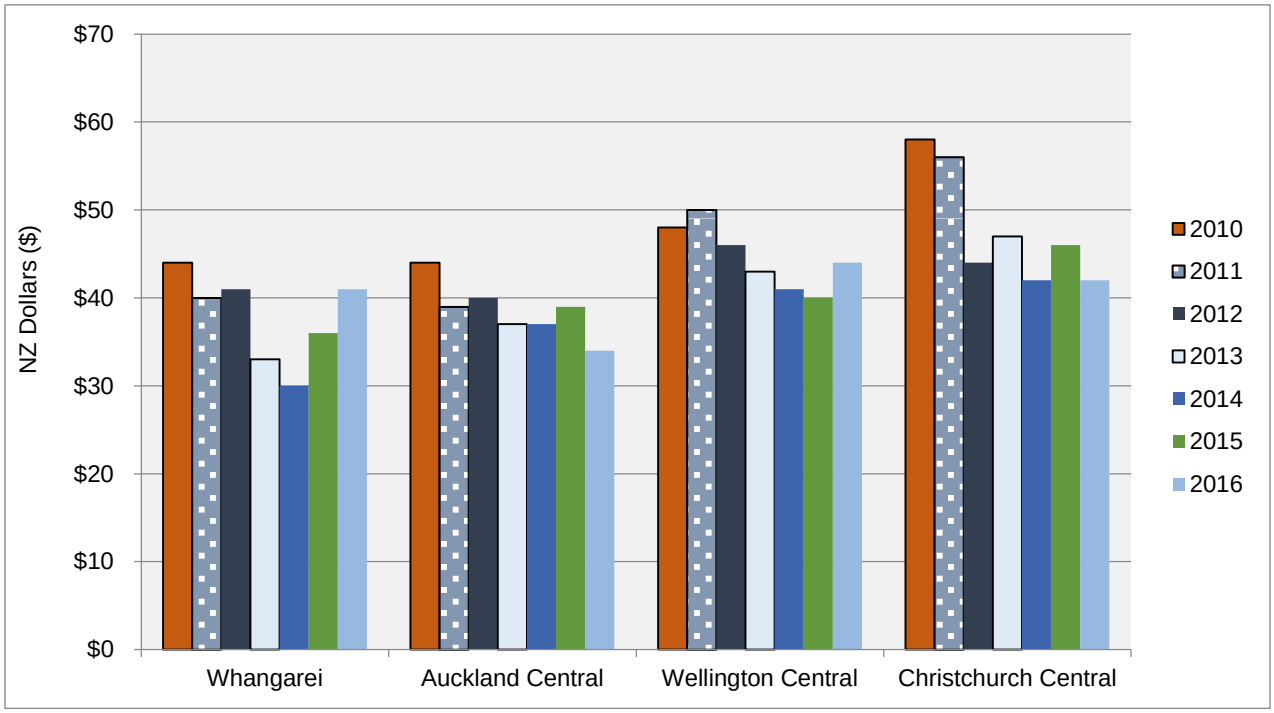

## Current price of ecstasy

The price of a pill of ecstasy decreased from $50 in 2010 to $38 in 2016 ($p<0.0001$) (Figure 6.6). The price paid for a pill of ecstasy in Christchurch Central declined from $58 in 2010 to $42 in 2016 ($p=0.0124$).

**Table 6 4: Current median (mean) price paid by police detainees for a pill of ecstasy (NZD) by location, 2010-2016**

| Current price of ecstasy ($) | | | | |
|---|---|---|---|---|
| | Number with Knowledge | | Median | Mean |
| **Whangarei** | 2010 | n=7 | $50 | $44 |
| | 2011 | n=50 | $40 | $40 |
| | 2012 | n=30 | $40 | $41 |
| | 2013 | n=18 | $30 | $33 |
| | 2014 | n=11 | $25 | $30 |
| | 2015 | n=10 | $40 | $36 |
| | 2016 | n=11 | $40 | $41 |
| **Auckland Central** | 2010 | n=43 | $40 | $44 |
| | 2011 | n=60 | $40 | $39 |
| | 2012 | n=59 | $40 | $40 |
| | 2013 | n=58 | $34 | $37 |
| | 2014 | n=50 | $40 | $37 |
| | 2015 | n=37 | $35 | $39 |
| | 2016 | n=36 | $30 | $34 |
| **Wellington Central** | 2010 | n=38 | $50 | $48 |
| | 2011 | n=39 | $50 | $50 |
| | 2012 | n=23 | $45 | $46 |
| | 2013 | n=27 | $40 | $43 |
| | 2014 | n=19 | $40 | $41 |
| | 2015 | n=18 | $39 | $40 |
| | 2016 | n=20 | $40 | $44 |
| **Christchurch Central** | 2010 | n=65 | $60 | $58 |
| | 2011 | n=46 | $60 | $56 |
| | 2012 | n=44 | $40 | $44 |
| | 2013 | n=61 | $40 | $47 |
| | 2014 | n=32 | $40 | $42 |
| | 2015 | n=59 | $40 | $46 |
| | 2016 | n=21 | $40 | $42 |
| **All sites** | 2010 | n=153 | $50 | $50 |
| | 2011 | n=195 | $40 | $46 |
| | 2012 | n=156 | $40 | $42 |
| | 2013 | n=164 | $40 | $41 |
| | 2014 | n=112 | $40 | $39 |
| | 2015 | n=124 | $40 | $42 |
| | 2016 | n=88 | $40 | $38 |

**Figure 6.6: Mean price paid for a pill of ecstasy by location, 2010-2016**




## Change in the price of ecstasy

The detainees reported the price of ecstasy had been 'stable/fluctuating' over the past six months in 2016 (Table 6.6). There was no change in the detainees' perceptions of the change in the price of ecstasy from 2010 to 2016.

**Table 6 5: Police detainees' perceptions of the change in the price of ecstasy in the past six months by location, 2010-2016**

| Change in price of ecstasy [$] | Years | N - Value | Increasing [ 3 ] | Fluctuating [2] | Stable [2] | Decreasing [1] | Average change in availability score [1=decreasing - 3=increasing] | Overall current status |
|---|---|---|---|---|---|---|---|---|
| **Whangarei** | 2010 | n=9 | 22% | 22% | 44% | 11% | 2.1 | Stable / fluctuating |
| | 2011 | n=46 | 20% | 20% | 48% | 13% | 2.1 | Stable / increasing / fluctuating |
| | 2012 | n=31 | 10% | 13% | 61% | 10% | 2.0 | Stable / fluctuating |
| | 2013 | n=18 | 11% | 39% | 39% | 11% | 2.0 | Stable/ fluctuating |
| | 2014 | n=10 | 20% | 30% | 40% | 10% | 2.1 | Stable / fluctuating |
| | 2015 | n=9 | 30% | 0% | 40% | 20% | 2.1 | Stable / increasing |
| | 2016 | n=10 | 10% | 30% | 60% | 0% | 2.1 | Stable/ fluctuating |
| **Auckland Central** | 2010 | n=43 | 14% | 14% | 47% | 26% | 1.9 | Stable / increasing / fluctuating |
| | 2011 | n=54 | 17% | 24% | 46% | 13% | 2.0 | Stable / increasing / fluctuating |
| | 2012 | n=53 | 19% | 11% | 60% | 9% | 2.1 | Stable / increasing |
| | 2013 | n=57 | 9% | 12% | 61% | 18% | 1.9 | Stable / decreasing |
| | 2014 | n=45 | 7% | 29% | 53% | 11% | 2.0 | Stable / fluctuating |
| | 2015 | n=34 | 12% | 12% | 62% | 15% | 2.0 | Stable / decreasing |
| | 2016 | n=33 | 9% | 12% | 70% | 9% | 2.0 | Stable |
| **Wellington Central** | 2010 | n=32 | 19% | 19% | 50% | 22% | 2.0 | Stable / decreasing |
| | 2011 | n=35 | 6% | 6% | 31% | 29% | 1.8 | Fluctuating / stable |
| | 2012 | n=26 | 19% | 19% | 42% | 12% | 2.1 | Stable / fluctuating |
| | 2013 | n=23 | 9% | 9% | 74% | 0% | 2.1 | Stable |
| | 2014 | n=17 | 6% | 6% | 76% | 6% | 2.0 | Stable |
| | 2015 | n=18 | 17% | 33% | 50% | 0% | 2.2 | Stable / fluctuating |
| | 2016 | n=21 | 10% | 38% | 43% | 10% | 2.0 | Stable / fluctuating |
| **Christchurch Central** | 2010 | n=63 | 14% | 22% | 44% | 19% | 2.0 | Stable / fluctuating |
| | 2011 | n=44 | 23% | 11% | 59% | 7% | 2.2 | Stable / increasing |
| | 2012 | n=40 | 13% | 33% | 33% | 23% | 1.9 | Fluctuating / stable |
| | 2013 | n=55 | 20% | 20% | 49% | 11% | 2.1 | Stable / fluctuating |
| | 2014 | n=35 | 9% | 23% | 57% | 11% | 2.0 | Stable / fluctuating |
| | 2015 | n=60 | 10% | 20% | 55% | 15% | 2.0 | Stable/ fluctuating |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2016 | n=21 | 14% | 33% | 38% | 14% | 2.0 | Stable/ fluctuating |
| **All Sites** | 2010 | n=147 | 16% | 17% | 46% | 21% | 1.9 | Stable / decreasing |
| | 2011 | n=179 | 17% | 21% | 48% | 14% | 2.0 | Stable / fluctuating |
| | 2012 | n=150 | 16% | 21% | 50% | 13% | 2.0 | Stable / fluctuating |
| | 2013 | n=153 | 13% | 18% | 58% | 11% | 2.0 | Stable / fluctuating |
| | 2014 | n=107 | 8% | 23% | 59% | 10% | 2.0 | Stable / fluctuating |
| | 2015 | n=121 | 13% | 19% | 55% | 12% | 2.0 | Stable / fluctuating |
| | 2016 | n=85 | 11% | 24% | 56% | 10% | 2.0 | Stable / fluctuating |

### Current strength of ecstasy

In 2016, the detainees reported the current strength of ecstasy was ‘medium/high’ (Table 6.6). Overall, there was no statistically significant change in the current strength of ecstasy from 2012 to 2016. The strength of ecstasy increased in Wellington Central from 2013 to 2016 (up from 1.5 to 2.2, p=0.0083).

**Table 6 6: Police detainees' perceptions of the current strength of ecstasy in the past six months by location, 2012-2016**

| Current strength of ecstasy | Year | N- Value | High [3] | Medium [2] | Fluctuates [2] | Low [1] | Average strength score [1=low - 3=high] | Overall current status |
|---|---|---|---|---|---|---|---|---|
| **Whangarei** | 2012 | n=28 | 29% | 25% | 29% | 18% | 2.1 | High / fluctuates |
| | 2013 | n=19 | 26% | 42% | 21% | 11% | 2.2 | Medium / high |
| | 2014 | n=10 | 20% | 40% | 10% | 30% | 1.9 | Medium / low |
| | 2015 | n=10 | 30% | 40% | 20% | 10% | 2.2 | Medium / high |
| | 2016 | n=12 | 33% | 33% | 8% | 25% | 2.1 | High / medium |
| **Auckland Central** | 2012 | n=58 | 28% | 24% | 21% | 28% | 2.0 | High / low |
| | 2013 | n=60 | 27% | 18% | 18% | 37% | 1.9 | Low / high |
| | 2014 | n=50 | 22% | 22% | 22% | 34% | 1.9 | High / medium / fluctuates |
| | 2015 | n=37 | 32% | 24% | 27% | 16% | 2.2 | High / fluctuates |
| | 2016 | n=36 | 28% | 36% | 14% | 22% | 2.1 | Medium / high |
| **Wellington Central** | 2012 | n=26 | 19% | 23% | 23% | 35% | 1.8 | Low / medium |
| | 2013 | n=22 | 9% | 23% | 14% | 55% | 1.5 | Low / medium |
| | 2014 | n=19 | 32% | 32% | 32% | 5% | 2.3 | High / medium / fluctuates |
| | 2015 | n=17 | 29% | 24% | 41% | 6% | 2.2 | Fluctuates / high |
| | 2016 | n=23 | 39% | 26% | 17% | 17% | 2.2 | High / medium |
| **Christchurch Central** | 2012 | n=49 | 35% | 24% | 18% | 22% | 2.1 | High / medium |
| | 2013 | n=66 | 29% | 32% | 21% | 18% | 2.1 | Medium / high |
| | 2014 | n=35 | 34% | 34% | 14% | 17% | 2.2 | High / medium |
| | 2015 | n=66 | 39% | 24% | 11% | 26% | 2.1 | High / low |
| | 2016 | n=26 | 23% | 38% | 27% | 12% | 2.1 | Medium /fluctuates |
| **All Sites** | 2012 | n=161 | 35% | 24% | 18% | 25% | 2.0 | High / low |
| | 2013 | n=167 | 25% | 27% | 19% | 29% | 1.9 | Low / medium |
| | 2014 | n=114 | 27% | 29% | 20% | 24% | 2.1 | Medium / high |
| | 2015 | n=130 | 35% | 25% | 20% | 19% | 2.2 | High / medium |
| | 2016 | n=97 | 30% | 34% | 18% | 19% | 2.1 | Medium / high |

## Change in strength of ecstasy

The detainees described the strength of ecstasy as 'stable/fluctuating' in the previous six months in 2016 (Table 6.7).

**Table 6 7: Police detainees' perceptions of change in strength of ecstasy in the past six months by location, 2012-2016**

| Change in strength of ecstasy [%] | Year | N-Value | Increasing [3] | Stable [2] | Fluctuating [2] | Decreasing [1] | Average change in strength score [1=decreasing - 3=increasing] | Overall current status |
|---|---|---|---|---|---|---|---|---|
| **Whangarei** | 2012 | n=25 | 16% | 60% | 8% | 16% | 2.0 | Stable / decreasing |
| | 2013 | n=14 | 14% | 57% | 14% | 14% | 2.0 | Stable / decreasing |
| | 2014 | n=9 | 11% | 33% | 22% | 33% | 1.8 | Stable / decreasing |
| | 2015 | n=8 | 25% | 50% | 0% | 25% | 2.0 | Stable / increasing /decreasing |
| | 2016 | n=8 | 13% | 63% | 25% | 0% | 2.1 | Stable / fluctuating |
| **Auckland Central** | 2012 | n=45 | 11% | 22% | 29% | 38% | 1.7 | Decreasing / fluctuating |
| | 2013 | n=50 | 14% | 34% | 18% | 34% | 1.8 | Stable / decreasing |
| | 2014 | n=42 | 17% | 43% | 21% | 19% | 2.0 | Stable / fluctuating |
| | 2015 | n=35 | 3% | 49% | 34% | 14% | 1.9 | Stable / fluctuating |
| | 2016 | n=29 | 3% | 69% | 10% | 17% | 1.9 | Stable / decreasing |
| **Wellington Central** | 2012 | n=21 | 10% | 33% | 19% | 38% | 1.7 | Decreasing / stable |
| | 2013 | n=18 | 0% | 33% | 33% | 33% | 1.7 | Stable / decreasing |
| | 2014 | n=14 | 0% | 57% | 43% | 0% | 2.0 | Stable / fluctuating |
| | 2015 | n=15 | 7% | 20% | 53% | 20% | 1.9 | Fluctuating / stable / decreasing |
| | 2016 | n=17 | 6% | 35% | 41% | 18% | 1.9 | Fluctuating / stable |
| **Christchurch Central** | 2012 | n=40 | 18% | 30% | 35% | 18% | 2.0 | Fluctuating / stable |
| | 2013 | n=54 | 6% | 52% | 26% | 17% | 1.9 | Stable / fluctuating |
| | 2014 | n=33 | 9% | 55% | 18% | 18% | 1.9 | Stable / decreasing |
| | 2015 | n=54 | 17% | 43% | 19% | 22% | 1.9 | Stable / decreasing |
| | 2016 | n=21 | 14% | 14% | 57% | 14% | 2.0 | Fluctuating / stable / increasing / decreasing |
| | 2012 | n=131 | 14% | 34% | 25% | 27% | 1.8 | Stable / decreasing |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **All Sites** | 2013 | n=136 | 9% | 43% | 23% | 25% | 1.8 | Stable / decreasing |
| | 2014 | n=98 | 11% | 48% | 23% | 17% | 1.9 | Stable / fluctuating |
| | 2015 | n=112 | 12% | 42% | 27% | 20% | 1.9 | Stable / fluctuating |
| | 2016 | n=75 | 8% | 45% | 32% | 15% | 1.9 | Stable / fluctuating |

### Time taken to purchase ecstasy

Fifty-one percent of the detainees who had used ecstasy in the previous year were able to purchase it in one hour or less in 2016 (Table 6.8).

**Table 6 8: Time taken by police detainees to purchase ecstasy by location, 2010-2016**

| Time to purchase ecstasy (%) | Year | N- Value | Months | Weeks | Days | About 1 day | Hours | 1 hour | Less than 20 minutes |
|---|---|---|---|---|---|---|---|---|---|
| **Whangarei** | 2010 | n=9 | 0% | 11% | 33% | 11% | 11% | 33% | 0% |
| | 2011 | n=54 | 0% | 2% | 19% | 11% | 20% | 20% | 28% |
| | 2012 | n=33 | 0% | 12% | 9% | 9% | 12% | 27% | 30% |
| | 2013 | n=18 | 6% | 0% | 11% | 11% | 22% | 17% | 33% |
| | 2014 | n=15 | 7% | 7% | 20% | 0% | 20% | 13% | 33% |
| | 2015 | n=11 | 0% | 0% | 9% | 27% | 36% | 0% | 27% |
| | 2016 | n=13 | 0% | 15% | 15% | 23% | 15% | 23% | 8% |
| **Auckland Central** | 2010 | n=45 | 2% | 0% | 11% | 16% | 22% | 20% | 29% |
| | 2011 | n=61 | 0% | 0% | 7% | 3% | 16% | 49% | 25% |
| | 2012 | n=58 | 2% | 3% | 10% | 17% | 14% | 22% | 31% |
| | 2013 | n=61 | 3% | 3% | 5% | 23% | 21% | 21% | 23% |
| | 2014 | n=54 | 4% | 6% | 9% | 19% | 20% | 24% | 19% |
| | 2015 | n=42 | 0% | 2% | 14% | 10% | 26% | 24% | 24% |
| | 2016 | n=36 | 3% | 11% | 8% | 3% | 14% | 28% | 33% |
| **Wellington Central** | 2010 | n=37 | 0% | 8% | 19% | 14% | 14% | 24% | 22% |
| | 2011 | n=42 | 2% | 5% | 10% | 10% | 19% | 31% | 24% |
| | 2012 | n=25 | 0% | 0% | 8% | 12% | 32% | 24% | 24% |
| | 2013 | n=27 | 0% | 4% | 26% | 7% | 30% | 16% | 19% |
| | 2014 | n=19 | 0% | 0% | 11% | 0% | 11% | 37% | 42% |
| | 2015 | n=16 | 0% | 6% | 0% | 6% | 25% | 31% | 31% |
| | 2016 | n=24 | 0% | 4% | 13% | 21% | 17% | 21% | 25% |
| **Christchurch Central** | 2010 | n=66 | 0% | 5% | 8% | 27% | 24% | 15% | 21% |
| | 2011 | n=50 | 2% | 4% | 20% | 24% | 16% | 12% | 22% |
| | 2012 | n=51 | 2% | 8% | 7% | 12% | 18% | 22% | 18% |
| | 2013 | n=69 | 6% | 6% | 22% | 6% | 14% | 26% | 20% |
| | 2014 | n=37 | 3% | 8% | 5% | 14% | 32% | 14% | 27% |
| | 2015 | n=66 | 0% | 6% | 14% | 8% | 30% | 21% | 21% |
| | 2016 | n=28 | 0% | 4% | 14% | 7% | 29% | 39% | 7% |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **All Sites** | 2010 | n=157 | 1% | 4% | 13% | 20% | 20% | 20% | 22% |
| | 2011 | n=206 | 1% | 3% | 14% | 12% | 18% | 28% | 24% |
| | 2012 | n=171 | 1% | 5% | 13% | 14% | 18% | 23% | 26% |
| | 2013 | n=181 | 4% | 4% | 16% | 12% | 21% | 21% | 22% |
| | 2014 | n=128 | 3% | 4% | 9% | 11% | 22% | 23% | 28% |
| | 2015 | n=138 | 0% | 5% | 11% | 9% | 28% | 23% | 24% |
| | 2016 | n=104 | 1% | 8% | 12% | 9% | 19% | 30% | 22% |

## 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. Twenty-three percent of the detainees said they did not drive and a further 12% said their driver licence was suspended. In 2016, 13% of the ecstasy using detainees had completed at least some of their driving under the influence of ecstasy (Table 6.10).

**Table 6 9: Extent police detainees who drove and who used ecstasy in the past 12 months had driven under the influence of ecstasy by location, 2010 - 2016**

| Extent drove under the influence of ecstasy | Years | N-value | All [4] | Most [3] | Some [2] | Hardly any [1] | None [0] | Mean score of extent drove under influence [0=none - 4=all] |
|---|---|---|---|---|---|---|---|---|
| **Whangarei** | 2010 | n=10 | 0% | 0% | 10% | 0% | 90% | 0.2 |
| | 2011 | n=39 | 5% | 3% | 3% | 10% | 79% | 0.4 |
| | 2012 | n=29 | 3% | 0% | 10% | 10% | 76% | 0.4 |
| | 2013 | n=13 | 0% | 8% | 15% | 8% | 69% | 0.6 |
| | 2014 | n=13 | 0% | 23% | 15% | 0% | 62% | 1 |
| | 2015 | n=10 | 10% | 0% | 20% | 10% | 60% | 0.9 |
| | 2016 | n=6 | 0% | 0% | 0% | 33% | 67% | 0.3 |
| **Auckland Central** | 2010 | n=36 | 3% | 6% | 8% | 14% | 69% | 0.6 |
| | 2011 | n=47 | 0% | 2% | 19% | 21% | 57% | 0.7 |
| | 2012 | n=47 | 0% | 4% | 6% | 4% | 85% | 0.3 |
| | 2013 | n=46 | 0% | 0% | 9% | 15% | 76% | 0.3 |
| | 2014 | n=39 | 5% | 0% | 5% | 10% | 79% | 0.4 |
| | 2015 | n=25 | 0% | 4% | 8% | 0% | 88% | 0.3 |
| | 2016 | n=21 | 0% | 5% | 10% | 14% | 71% | 0.5 |
| **Wellington Central** | 2010 | n=28 | 0% | 0% | 4% | 11% | 86% | 0.2 |
| | 2011 | n=31 | 6% | 3% | 3% | 16% | 71% | 0.6 |
| | 2012 | n=19 | 0% | 5% | 0% | 21% | 74% | 0.4 |
| | 2013 | n=20 | 25% | 0% | 15% | 10% | 50% | 1.4 |
| | 2014 | n=18 | 17% | 6% | 11% | 6% | 61% | 1.1 |
| | 2015 | n=13 | 8% | 0% | 8% | 8% | 77% | 0.5 |
| | 2016 | n=18 | 11% | 0% | 6% | 6% | 78% | 0.6 |
| **Christchurch Central** | 2010 | n=47 | 0% | 0% | 2% | 6% | 91% | 0.1 |
| | 2011 | n=37 | 3% | 3% | 16% | 11% | 68% | 0.6 |
| | 2012 | n=44 | 0% | 2% | 11% | 7% | 80% | 0.4 |
| | 2013 | n=54 | 2% | 4% | 6% | 22% | 67% | 0.5 |
| | 2014 | n=31 | 3% | 6% | 6% | 16% | 68% | 0.6 |
| | 2015 | n=50 | 6% | 2% | 4% | 14% | 74% | 0.5 |
| | 2016 | n=20 | 5% | 0% | 5% | 20% | 70% | 0.5 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **All Sites** | 2010 | n=121 | 1% | 2% | 5% | 9% | 83% | 0.3 |
| | 2011 | n=153 | 3% | 3% | 11% | 15% | 68% | 0.6 |
| | 2012 | n=141 | 1% | 3% | 7% | 9% | 80% | 0.4 |
| | 2013 | n=137 | 6% | 2% | 9% | 16% | 66% | 0.7 |
| | 2014 | n=105 | 7% | 6% | 8% | 10% | 69% | 0.7 |
| | 2015 | n=99 | 5% | 2% | 7% | 9% | 77% | 0.5 |
| | 2016 | n=66 | 4% | 2% | 7% | 16% | 72% | 0.5 |

## Summary

- The proportion of detainees who had used ecstasy in the previous year decreased from 28% in 2011 to 14% in 2016
- Use of ecstasy in the previous year declined in Whangarei (down from 36% in 2011 to 10% in 2016) and Christchurch (down from 29% in 2011 to 13% in 2016)
- In 2016, the detainees had used ecstasy on a mean of only 12 days in the previous year
- In 2016, only five percent of the ecstasy using detainees felt they were dependent on the drug, and less than one percent had been using ecstasy prior to their arrest
- The current availability of ecstasy was reported to be 'easy/difficult' in 2016
- The availability of ecstasy was 'stable/more difficult' over the previous six months in 2016
- The mean price of a pill of ecstasy declined from $50 in 2010 to $38 in 2016
- The mean price of a pill of ecstasy in Christchurch Central declined from $58 in 2010 to $42 in 2016
- The current strength of ecstasy was reported to be ''medium/high' in 2016
- Fifty-one percent of detainees who had used ecstasy in the previous year were able to purchase it in one hour or less in 2016
- In 2016, 17% of detainees who drove and used ecstasy had competed some of their driving under the influence of ecstasy

# Chapter 7 - Opioids

## Introduction

The international supply of heroin to New Zealand was substantially disrupted in the late 1970s (New Zealand Customs Service, 2002; Newbold, 2000). Three domestic sources of opioids emerged over the subsequent decades to largely replace international 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). While morphine remains the principal opioid used by injecting drug users in New Zealand, there is evidence from the IDMS of growing use of new pharmaceutical opioid products, such as oxycodone (Wilkins, et al., 2015). The IDMS has also found growing gang involvement in the recovering street morphine market in Christchurch (Wilkins, et al., 2015). The police detainees in NZ-ADUM are asked about use of a range of opioids including heroin, morphine, opiates/opioids, smack, skag, junk and misties.

### Use of opioids

In 2016, 17% of the police detainees had used an opioid in their lifetimes, 5% had used an opioid in the previous 12 months and 2% had used an opioid in the past 30 days (Table 7 1). There was no statistically significant change in the proportion of detainees who had ever tried opioids from 2010 to 2016. There was also no statistically significant change in the proportion of detainees who had used an opioid in the previous 12 months from 2010 to 2016 (i.e. 8% to 5%) (Figure 7 1).

**Figure 7 1: Proportion of police detainees who had used opioids in the past 12 months by location, 2010-2016**

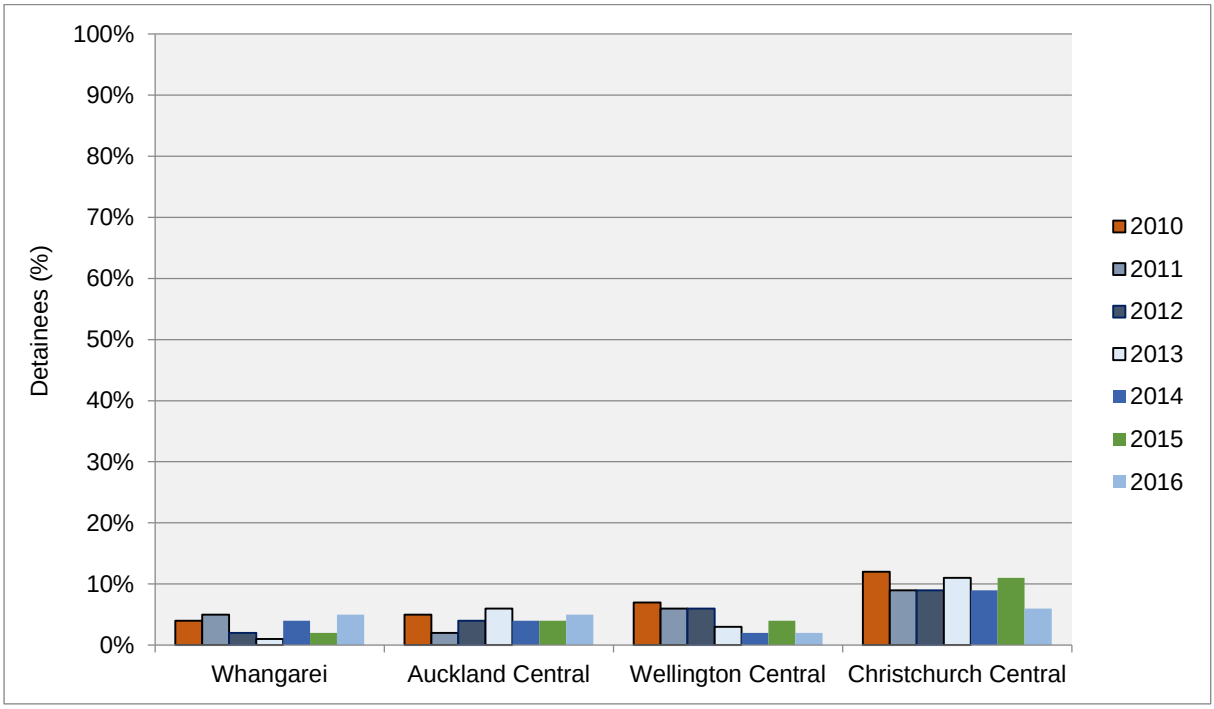


**Table 7 1: Police detainees' patterns of opioid use by location, 2010-2016**

| Use of opioids | Year | N - value | Ever used (%) | Mean age first used (years)* | Used in past 12 months (%) | Mean number of days used in past 12 months ** | Injected in past 12 months ** | Felt dependent in past 12 months [%]** | Used in past month [%] | Mean number of days used in past month*** |
|---|---|---|---|---|---|---|---|---|---|---|
| **Whangarei** | 2010 | n=115 | 12% | 25 | 4% | 29 | 20% | 40% | 3% | 18 |
| | 2011 | n=149 | 12% | 21 | 5% | 12 | 50% | 0% | 2% | 3 |
| | 2012 | n=151 | 15% | 22 | 2% | 1 | 33% | 0% | 1% | 0 |
| | 2013 | n=152 | 13% | 21 | 1% | 4 | 0% | 0% | 1% | 1 |
| | 2014 | n=151 | 15% | 22 | 4% | 3 | 67% | 0% | 3% | 2 |
| | 2015 | n=169 | 10% | 18 | 2% | 182 | 33% | 67% | 1% | 30 |
| | 2016 | n=131 | 22% | 19 | 5% | 48 | 29% | 29% | 2% | 11 |
| **Auckland Central** | 2010 | n=285 | 15% | 21 | 5% | 112 | 60% | 47% | 3% | 15 |
| | 2011 | n=316 | 10% | 21 | 2% | 95 | 57% | 43% | 2% | 11 |
| | 2012 | n=247 | 15% | 20 | 4% | 45 | 73% | 18% | 2% | 7 |
| | 2013 | n=294 | 16% | 20 | 6% | 27 | 47% | 25% | 3% | 4 |
| | 2014 | n=314 | 15% | 21 | 4% | 44 | 30% | 8% | 3% | 5 |
| | 2015 | n=267 | 15% | 19 | 4% | 56 | 50% | 27% | 2% | 9 |
| | 2016 | n=221 | 16% | 21 | 5% | 36 | 60% | 40% | 2% | 4 |
| **Wellington Central** | 2010 | n=152 | 11% | 25 | 7% | 46 | 56% | 25% | 5% | 6 |
| | 2011 | n=171 | 17% | 21 | 6% | 123 | 73% | 45% | 5% | 14 |
| | 2012 | n=101 | 12% | 20 | 6% | 69 | 17% | 0% | 2% | 10 |
| | 2013 | n=106 | 12% | 22 | 3% | 198 | 50% | 25% | 3% | 17 |
| | 2014 | n=95 | 11% | 19 | 2% | 21 | 0% | 50% | 2% | 16 |
| | 2015 | n=107 | 12% | 18 | 4% | 13 | 67% | 33% | 1% | 8 |
| | 2016 | n=213 | 13% | 19 | 2% | 112 | 75% | 75% | <1 | 30 |
| **Christchurch Central** | 2010 | n=262 | 20% | 19 | 12% | 110 | 53% | 43% | 6% | 19 |
| | 2011 | n=191 | 21% | 20 | 9% | 122 | 82% | 53% | 6% | 20 |
| | 2012 | n=303 | 23% | 20 | 9% | 114 | 55% | 58% | 6% | 18 |
| | 2013 | n=284 | 27% | 20 | 11% | 166 | 53% | 53% | 8% | 17 |
| | 2014 | n=273 | 23% | 20 | 9% | 123 | 57% | 38% | 4% | 19 |
| | 2015 | n=292 | 27% | 20 | 11% | 115 | 65% | 45% | 6% | 17 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2016 | n=235 | 18% | 20 | 6% | 105 | 69% | 47% | 4% | 10 |
| **All Sites** | 2010 | n=814 | 15% | 21 | 8% | 94 | 53% | 41% | 4% | 15 |
| | 2011 | n=827 | 15% | 21 | 6% | 104 | 72% | 43% | 4% | 16 |
| | 2012 | n=802 | 17% | 20 | 6% | 82 | 51% | 32% | 3% | 12 |
| | 2013 | n=839 | 19% | 21 | 6% | 118 | 48% | 40% | 4% | 13 |
| | 2014 | n=834 | 17% | 20 | 5% | 83 | 48% | 27% | 3% | 12 |
| | 2015 | n=835 | 18% | 20 | 6% | 92 | 60% | 40% | 3% | 14 |
| | 2016 | n=800 | 17% | 20 | 5% | 73 | 60% | 44% | 2% | 9 |

* 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 opioid use

The detainees had used opioids on a mean of 73 days in the past 12 months in 2016 (median 7, 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 2016.

### Dependency on opioids

Forty-four percent of the detainees who had used an opioid in the previous year reported they felt dependent on them in 2016. There was no statistically significant change in level of dependency on opioids from 2010 to 2016.

### 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 2016, and this had not changed from previous years.

### Current availability of opioids

The detainees described the current availability of opioids as 'easy/very easy' in 2016 (Table 7 2). There was no statistically significant change in the current availability of opioids from 2010 to 2016.

**Table 7 2: Police detainees' perceptions of the current availability of opioids, 2010-2016**

| Current availability of opioids | All Sites | | | | | | |
|---|---|---|---|---|---|---|---|
| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| | n=53 | n=41 | n=44 | n=51 | n=42 | n=46 | n=35 |
| Very easy [4] | 32% | 30% | 18% | 33% | 20% | 36% | 32% |
| Easy [3] | 42% | 28% | 60% | 21% | 46% | 24% | 40% |
| Difficult [2] | 17% | 35% | 12% | 28% | 18% | 23% | 23% |
| Very difficult [1] | 9% | 8% | 11% | 18% | 16% | 17% | 5% |
| Average availability score [1=very difficult - 4=very easy] | 3.0 | 2.8 | 2.9 | 2.7 | 2.7 | 2.8 | 3.0 |
| Overall current status | Easy/ very easy | Difficult/ very easy | Easy/ very easy | Very easy/ difficult | Easy/ very easy | Very easy/ easy | Easy/very easy |

## Change in availability of opioids

The detainees described the availability of opioids as 'stable/easier' in 2016 (Table 7 3).

**Table 7 3: Police detainees' perceptions of the change in availability of opioids, 2010-2016**

| Change in availability of opioids | All Sites | | | | | | |
|---|---|---|---|---|---|---|---|
| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| | n=51 | n=37 | n=36 | n=46 | n=39 | n=40 | n=34 |
| Easier [3] | 24% | 16% | 24% | 8% | 16% | 21% | 23% |
| Stable [2] | 47% | 42% | 41% | 40% | 41% | 34% | 54% |
| Fluctuates [2] | 10% | 14% | 21% | 12% | 12% | 18% | 9% |
| More difficult [1] | 19% | 27% | 14% | 39% | 30% | 25% | 14% |
| Average change in availability score [1=more difficult - 3=easier] | 2.0 | 1.9 | 2.1 | 1.7 | 1.9 | 2.0 | 2.1 |
| Overall current change | Stable/ easier | Stable/ more difficult | Stable/ easier | Stable/ more difficult | Stable/ more difficult | Stable/ more difficult | Stable/ easier |

## Current price of opioids

Only 22 of the detainees reported the price of opioids in 2016. While this is similar to the number of respondents from previous years, it limits the capacity to detect changes over time. The median price of opioids was reported to be $1 per milligram or $100 per 100 milligrams (mean $0.90 per milligram).

## Change in the price of opioids

The detainees reported the price of opioids had been 'stable/decreasing' over the previous six months in 2016 (Table 7 4). Overall, there was no statistically significant change in the perceptions of the change in the price of opioids from 2010 to 2016. However, detainees in Christchurch Central reported the price of opioids had been declining from 2013 to 2016 (p=0.0062).

**Table 7 4: Police detainees' perceptions of the change in the price of opioids in the past six months, 2010-2016**

| Change in price of opioids | All Sites | | | | | | |
|---|---|---|---|---|---|---|---|
| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| | n=42 | n=36 | n=32 | n=37 | n=28 | n=35 | n=30 |
| Increasing [1] | 12% | 17% | 22% | 28% | 13% | 16% | 7% |
| Fluctuating [2] | 12% | 10% | 9% | 10% | 13% | 6% | 17% |
| Stable [2] | 69% | 71% | 59% | 52% | 66% | 73% | 57% |
| Decreasing [1] | 7% | 3% | 10% | 6% | 8% | 5% | 19% |
| Average change in price score [1=decreasing - 3=increasing] | 2.0 | 2.1 | 2.1 | 2.2 | 2.0 | 2.1 | 1.9 |
| Overall recent change | Stable / fluctuating | Stable | Stable / increasing | Stable / increasing | Stable / fluctuating | Stable | Stable/ decreasing |

## Current strength of opioids

The opioid using detainees described the current strength of opioids as 'medium/high' in 2016 (Table 7 5). There was no statistically significant change in the current strength of opioids from 2012 to 2016.

**Table 7 5: Police detainees' perceptions of the current strength of opioids in the past six months, 2012-2016**

| Current strength of opioids [%] | All sites | | | | |
|---|---|---|---|---|---|
| | 2012 | 2013 | 2014 | 2015 | 2016 |
| | n=39 | n=46 | n=37 | n=39 | n=35 |
| High [3] | 54% | 37% | 49% | 36% | 37% |
| Medium [2] | 26% | 44% | 30% | 51% | 51% |
| Fluctuates [2] | 18% | 13% | 16% | 3% | 3% |
| Low [1] | 3% | 7% | 5% | 10% | 9% |
| Average strenght score [1=low - 3=high] | 2.5 | 2.3 | 2.4 | 2.2 | 2.3 |
| Overall current status | High/ medium | Medium/ high | High/ medium | Medium/ high | Medium/ high |

## Change in strength of opioids

The strength of opioids was reported to have been 'stable' over the previous six months in 2016 (Table 7 6). Eighty-five percent of the opioid using detainees described purity as 'stable' in 2016.

**Table 7 6: Police detainees' perceptions of change in purity of opioids in the past six months in 2016**

| Change in purity of opioids [%] | All sites | | | | |
|---|---|---|---|---|---|
| | 2012 | 2013 | 2014 | 2015 | 2016 |
| | n=31 | n=41 | n=31 | n=37 | n=33 |
| Increasing [3] | 0% | 5% | 3% | 8% | 3% |
| Stable [2] | 90% | 80% | 77% | 78% | 85% |
| Fluctuating [2] | 3% | 10% | 19% | 8% | 0% |
| Decreasing [1] | 6% | 5% | 0% | 5% | 12% |
| Average change in purity [1=decreasing - 3=increasing] | 1.9 | 2.0 | 2.0 | 2.0 | 1.9 |
| Overall recent change | Stable | Stable | Stable | Stable | Stable |

## Time taken to purchase opioids

In 2016, 65% of the opioid using detainees reported they could purchase an opioid in one hour or less (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 2016 (i.e. 60% in 2010, 49% in 2011, 53% in 2012, 52% in 2013, 55% in 2014, 50% in 2015 and 65% in 2016).

**Table 7 7: Time taken by police detainees to purchase opioids, 2010-2016**

| Time taken to purchase opioids [%] | All sites | | | | | | |
|---|---|---|---|---|---|---|---|
| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| | n=53 | n=48 | n=38 | n=47 | n=41 | n=43 | n=37 |
| Months | 0% | 5% | 7% | 9% | 5% | 0% | 3% |
| Weeks | 25% | 4% | 0% | 2% | 0% | 3% | 3% |
| Days | 6% | 14% | 0% | 7% | 12% | 16% | 5% |
| About one day | 4% | 13% | 24% | 10% | 11% | 7% | 9% |
| Hours | 28% | 16% | 16% | 19% | 17% | 24% | 14% |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 Hour | 25% | 17% | 21% | 20% | 31% | 19% | 22% |
| Less than 20 minutes | 36% | 31% | 32% | 32% | 24% | 31% | 43% |

## 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 2016, 30% of the opioid using detainees said they did not drive and a further 14% said their licence was suspended. Thirty-six percent of the detainees who used opioids and drove had completed at least some of their driving under the influence of opioids in 2016 (Table 7 8). There was no statistically significant change in the extent of driving under the influence of opioids from 2010 to 2016.

**Table 7 8: Extent to which police detainees who drove and who had used opioids in the past 12 months had driven under the influence of opioids, 2010-2016**

| Extent drove under the influence of opioids | All sites | | | | | | |
|---|---|---|---|---|---|---|---|
| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| | n=35 | n=26 | n=27 | n=36 | n=27 | n=24 | n=20 |
| All [4] | 14% | 17% | 15% | 8% | 8% | 12% | 21% |
| Most [3] | 6% | 22% | 6% | 14% | 3% | 0% | 0% |
| Some [2] | 20% | 10% | 6% | 12% | 4% | 11% | 15% |
| Hardly any [1] | 12% | 5% | 18% | 16% | 11% | 15% | 17% |
| None [0] | 48% | 44% | 55% | 50% | 74% | 62% | 47% |
| Mean score of extent drove under influence [0=none - 4=all] | 1.3 | 1.6 | 1.1 | 1.1 | 0.6 | 0.8 | 1.3 |

## Summary

- Seventeen percent of the detainees in 2016 had tried an opioid in their lifetimes, and this had not changed from previous years
- There was also no change in the proportion of detainees who had used an opioid in the previous year from 2010 to 2016 (i.e. 8% to 5%)
- The opioid using detainees had used opioids on a mean of 73 days in the previous 12 months in 2016, and this had not changed from previous years
- Forty-four percent of the opioid using detainees felt they were dependent on opioids in 2016, and this had not changed from previous years
- Only 1% of the detainees had been using opioids at the time of their arrest in 2016
- In 2016, the detainees described the current availability of opioids as 'easy/very easy'
- There was no change in the current availability of opioids from 2010 to 2016
- In 2016, the median price of 100 milligrams of opioids was reported to be $100
- The price of opioids was reported to be 'stable' in 2016
- The current purity of opioids was reported to be 'medium/high' in 2016
- In 2016, 85% of the opioid using detainees described the purity of opioids as 'stable'
- In 2016, 36% of the detainees who used opioids and drove had completed at least some of their driving under the influence of opioids

# Chapter 8 – Cocaine

## Introduction

Cocaine use has historically been very low in New Zealand (Field & Casswell, 1999; Wilkins & Sweetsur, 2008). 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).

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 concern is that this established international supply route to Australia could facilitate the development of a larger cocaine market in New Zealand (NDIB, 2012). The proportion of detainees who had tried cocaine at some point in their lives has been steadily increasing in recent years, but current use has remained persistently low. A possible explanation for this is the reported experience with cocaine may have occurred overseas in Australia, the United States or Europe where cocaine is much more readily available.

## Use of cocaine

The proportion of detainees who had ever used cocaine increased from 17% in 2010 to 26% in 2016 ($p<0.0001$). Lifetime use of cocaine increased in Whangarei (up from 10% in 2010 to 29% in 2016, $p=0.0048$), and Auckland Central (up from 18% in 2011 to 30% in 2016, $p=0.0340$) (Figure. 8.1).

**Figure 8.1: Proportion of police detainees who had ever used cocaine by location, 2010-2016**

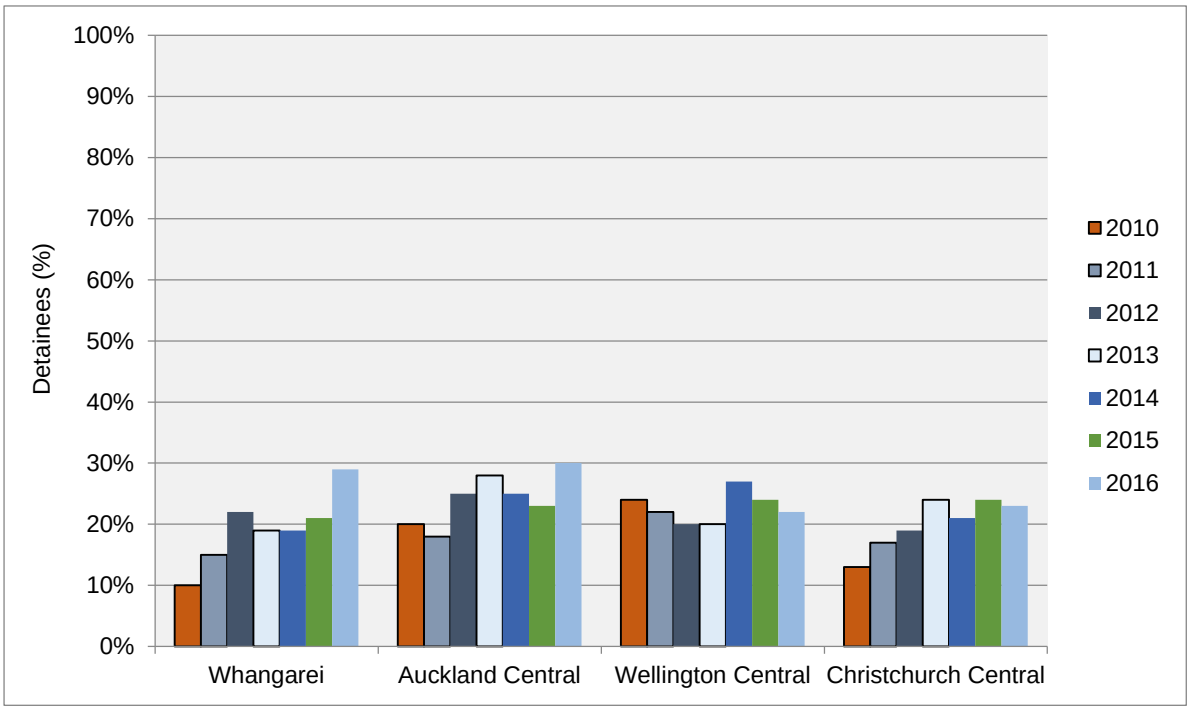


**Table 8 1: Police detainees' patterns of cocaine use by location, 2010-2016**

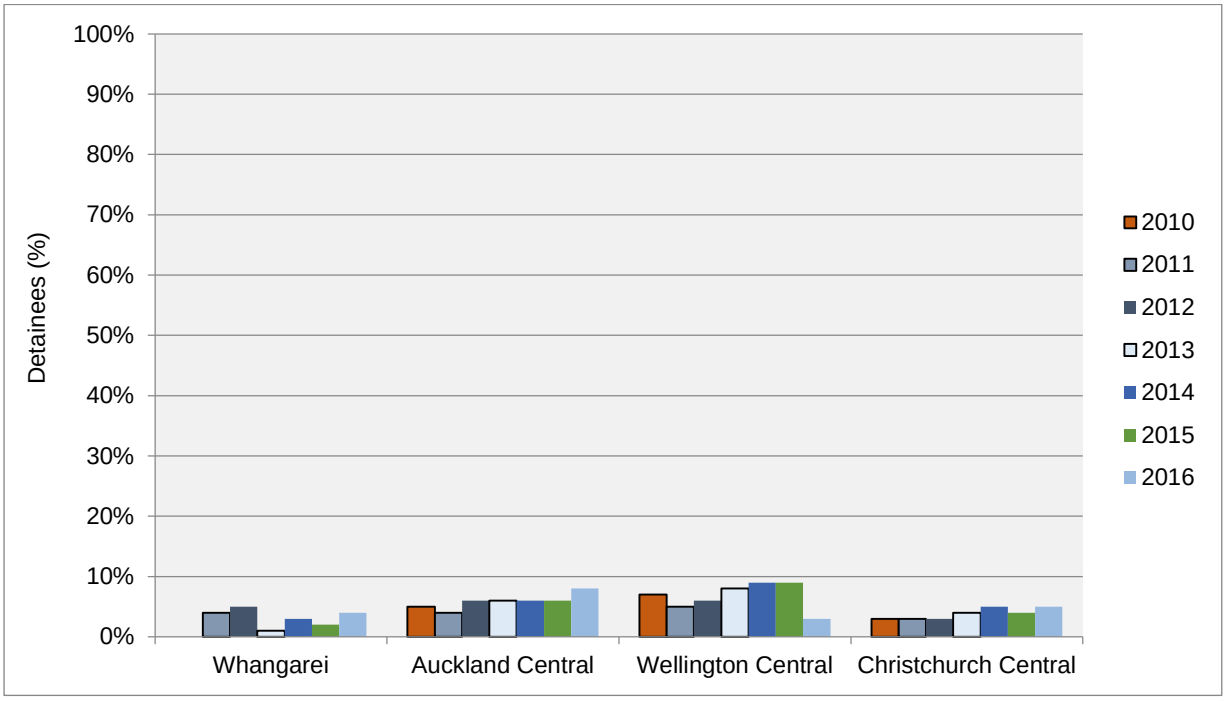
| Use of cocaine | Year | N - value | Ever used (%) | Mean age first used (years)* | Used in past 12 months (%) | Mean number of days used in past 12 months ** |
|---|---|---|---|---|---|---|
| **Whangarei** | 2010 | n=115 | 10% | 23 | 0% | - |
| | 2011 | n=149 | 15% | 17 | 4% | 93 |
| | 2012 | n=151 | 22% | 20 | 5% | 7 |
| | 2013 | n=152 | 19% | 19 | 1% | 3 |
| | 2014 | n=151 | 19% | 20 | 3% | 10 |
| | 2015 | n=168 | 21% | 20 | 2% | 47 |
| | 2016 | n=131 | 29% | 20 | 4% | 30 |
| **Auckland Central** | 2010 | n=285 | 20% | 21 | 5% | 2 |
| | 2011 | n=316 | 18% | 20 | 4% | 24 |
| | 2012 | n=246 | 25% | 19 | 6% | 13 |
| | 2013 | n=292 | 28% | 21 | 6% | 4 |
| | 2014 | n=315 | 25% | 20 | 6% | 11 |
| | 2015 | n=265 | 23% | 20 | 6% | 15 |
| | 2016 | n=221 | 30% | 20 | 8% | 4 |
| **Wellington Central** | 2010 | n=152 | 24% | 22 | 7% | 10 |
| | 2011 | n=171 | 22% | 20 | 5% | 23 |
| | 2012 | n=100 | 20% | 19 | 6% | 15 |
| | 2013 | n=103 | 20% | 20 | 8% | 5 |
| | 2014 | n=95 | 27% | 21 | 9% | 5 |
| | 2015 | n=107 | 24% | 20 | 9% | 4 |
| | 2016 | n=213 | 22% | 19 | 3% | 29 |
| **Christchurch Central** | 2010 | n=262 | 13% | 22 | 3% | 3 |
| | 2011 | n=191 | 17% | 20 | 3% | 1 |
| | 2012 | n=302 | 19% | 21 | 3% | 37 |
| | 2013 | n=287 | 24% | 21 | 4% | 2 |
| | 2014 | n=273 | 21% | 21 | 5% | 28 |
| | 2015 | n=291 | 24% | 21 | 4% | 3 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | 2016 | n=235 | 23% | 19 | 5% | 2 |
| **All Sites** | 2010 | n=814 | 17% | 22 | 4% | 5 |
| | 2011 | n=827 | 18% | 20 | 4% | 29 |
| | 2012 | n=799 | 22% | 20 | 5% | 17 |
| | 2013 | n=839 | 24% | 21 | 5% | 4 |
| | 2014 | n=835 | 23% | 20 | 6% | 15 |
| | 2015 | n=831 | 24% | 20 | 5% | 10 |
| | 2016 | n=800 | 26% | 20 | 6% | 9 |

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

Six percent of detainees had used cocaine in the previous 12 months in 2016 and this had not changed from previous years (Figure 8 2).

**Figure 8 2: Proportion of police detainees who had used cocaine in the past 12 months by location, 2010-2016**




## Frequency of cocaine use

The detainees who had used cocaine in the previous year had used it on a mean of only 9 days in the past 12 months in 2016 (median 2, 1-180 days). There was no statistically significant change in the frequency of cocaine use from 2010 to 2016.

## Current availability of cocaine

Thirty-five percent of the detainees described the current availability of cocaine as 'difficult' and a further 35% as 'very difficult' in 2016 (Table 8 2). There was no statistically significant change in the current availability of cocaine from 2010 to 2016.

**Table 8 2: Police detainees' perceptions of the current availability of cocaine, 2010-2016**

| Current availability of cocaine | All Sites | | | | | | |
|---|---|---|---|---|---|---|---|
| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| | n=30 | n=31 | n=31 | n=36 | n=42 | n=22 | n=42 |
| Very easy [4] | 7% | 16% | 14% | 10% | 17% | 15% | 19% |
| Easy [3] | 13% | 13% | 28% | 16% | 21% | 20% | 10% |
| Difficult [2] | 47% | 37% | 25% | 28% | 23% | 43% | 35% |
| Very difficult [1] | 33% | 33% | 33% | 46% | 39% | 23% | 35% |
| Availability mean score [1=very difficult - 4=very easy] | 1.9 | 2.1 | 2.2 | 1.9 | 2.2 | 2.3 | 2.1 |
| Overall current status | Difficult / very difficult | Difficult / very difficult | Very difficult / easy | Very difficult / difficult | Very difficult / difficult | Difficult / very difficult | Difficult / very difficult |

## Change in availability of cocaine

The detainees reported the availability of cocaine had been 'more difficult/stable' over the previous six months in 2016 (Table 8 3). Thirty-seven percent said availability had been 'more difficult' in the previous six months. There was no statistically significant change in this assessment of the availability of cocaine from 2010 to 2016.

**Table 8 3: Police detainees' perceptions of the current availability of cocaine, 2010-2016**

| Change in availability of cocaine | All Sites | | | | | | |
|---|---|---|---|---|---|---|---|
| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| | n=29 | n=26 | n=27 | n=31 | n=34 | n=36 | n=35 |
| Easier [3] | 17% | 16% | 14% | 8% | 7% | 17% | 27% |
| Stable [2] | 31% | 39% | 41% | 51% | 54% | 49% | 26% |
| Fluctuates [2] | 14% | 7% | 15% | 3% | 13% | 11% | 10% |
| More difficult [1] | 38% | 39% | 31% | 38% | 26% | 22% | 37% |
| Availability mean score [1=more difficult - 3=easier] | 1.8 | 1.8 | 1.8 | 1.7 | 1.8 | 2.0 | 1.9 |
| Overall current status | More difficult / stable | Stable / more difficult | Stable / more difficult | Stable / more difficult | Stable / more difficult | Stable / more difficult | More difficult / easier |

### Current price of cocaine

Only 25 of the detainees were able to provide a price for cocaine in 2016. They reported paying a median price of $280 for a gram of cocaine (mean $306).

### Change in the price of cocaine

The detainees reported the price of cocaine had been 'stable/fluctuating' over the previous six months in 2016 (Table 8 4).

**Table 8 4: Police detainees' perceptions of the change in the price of cocaine in the past six months, 2010-2016**

| Change in price of cocaine | All Sites | | | | | | |
|---|---|---|---|---|---|---|---|
| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| | n=20 | n=18 | n=18 | n=22 | n=28 | n=24 | n=22 |
| Increasing [3] | 15% | 10% | 30% | 21% | 13% | 18% | 18% |
| Fluctuating [2] | 0% | 16% | 10% | 12% | 32% | 34% | 25% |
| Stable [2] | 75% | 74% | 51% | 59% | 52% | 44% | 51% |
| Decreasing [1] | 10% | 0% | 8% | 8% | 3% | 4% | 5% |
| Mean change in price [1=decreasing - 3=increasing] | 2.1 | 2.1 | 2.2 | 2.1 | 2.1 | 2.1 | 2.1 |
| Overall change in price | Stable | Stable | Stable / increasing | Stable / increasing | Stable / fluctuating | Stable / fluctuating | Stable / fluctuating |

## Current purity of cocaine

Thirty-five percent of the detainees described the current purity of cocaine as 'high' and 29% said it was 'low' in 2016 (Table 8 5).

**Table 8 5: Police detainees' perceptions of current purity of cocaine in the past six months, 2012-2016**

| Current purity of cocaine [%] | All sites | | | | |
|---|---|---|---|---|---|
| | 2012 | 2013 | 2014 | 2015 | 2016 |
| | n=27 | n=31 | n=34 | n=34 | n=34 |
| High [3] | 26% | 42% | 38% | 44% | 35% |
| Medium [2] | 37% | 13% | 26% | 29% | 15% |
| Fluctuates [2] | 7% | 19% | 15% | 12% | 21% |
| Low [1] | 30% | 26% | 21% | 15% | 29% |
| Average purity score [1=low - 3=high] | 2.0 | 2.1 | 2.2 | 2.3 | 2.1 |
| Overall current status | Medium / low | High / low | High / medium | High / medium | High / low |

## Change in purity of cocaine

The detainees largely described the strength of cocaine as 'stable/fluctuating' over the past six months in 2016 (Table 8 6).

**Table 8 6: Police detainees' perceptions of change in purity of cocaine in the past six months, 2012-2016**

| Change in purity of cocaine [%] | All sites | | | | |
|---|---|---|---|---|---|
| | 2012 | 2013 | 2014 | 2015 | 2016 |
| | n=20 | n=23 | n=28 | n=26 | N=22 |
| Increasing [3] | 10% | 4% | 14% | 8% | 18% |
| Stable [2] | 40% | 52% | 50% | 50% | 36% |
| Fluctuating [2] | 10% | 22% | 29% | 27% | 23% |
| Decreasing [1] | 40% | 22% | 7% | 15% | 23% |
| Average change in purity [1=decreasing - 3=increasing] | 1.7 | 1.8 | 2.1 | 1.9 | 2.0 |
| Overall recent change | Stable / decreasing | Stable / decreasing | Stable / fluctuating | Stable / fluctuating | Stable/ fluctuating/ decreasing |

## Summary

- The proportion of detainees who had tried cocaine in their lifetimes increased from 17% in 2010 to 26% in 2016
- There was an increase in the proportion of detainees who had ever tried cocaine in Auckland Central (up from 18% in 2011 to 305 in 2016) and Whangarei (up from 10% in 2010 to 30% in 2016)
- There was no change in the last year use of cocaine from 2010 to 2016 (5% to 6%)
- The detainees had used cocaine on a mean of only 9 days in the previous 12 months in 2016
- Seventy percent of detainees described the current availability of cocaine as either 'difficult' or 'very difficult' in 2016
- In 2016, the median price of a gram of cocaine was reported to be $280 (mean $306)
- The detainees described the price of cocaine as 'stable/fluctuating' over the past six months in 2016
- Thirty-five percent of the detainees described the current purity of cocaine as 'high' and 29% said it was 'low' in 2016

# Chapter 9 - New Drugs

## Introduction

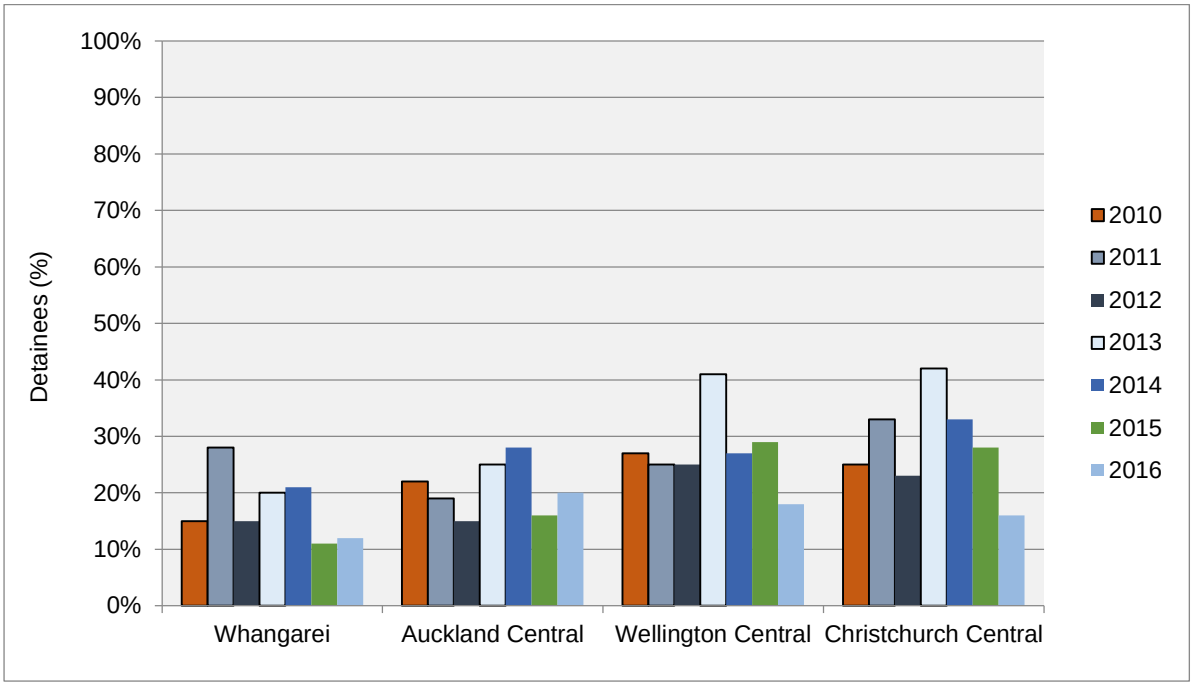
A range of new psychoactive substances (NPS) have emerged around the world over the past five years or so, including synthetic cannabinoids (e.g. JWH-018), piperazines (e.g. benzylpiperazine), cathinones (e.g. mephedrone, methylone), tryptamines (e.g. DMT), phenethylamines (e.g. 2C-B, 2C-I) and plant extracts such as salvia divinorum (Griffiths et al., 2013; UNODC, 2013). The number of NPS compounds reported worldwide increased from 166 in 2009 to 541 in 2014 (UNODC, 2015). NPS are often sold as 'legal highs' as they are generally not controlled under international drug control treaties, although they are increasingly controlled under domestic laws, and also as generic illegal street drugs such as 'ecstasy' or 'LSD'.

New Zealand has been at the forefront of the NPS phenomena over the past decade with an established legal BZP 'party pill' market during the mid-2000s, followed more recently by a market for a range of synthetic cannabinoid products (Wilkins et al., 2013). The enactment of the *Psychoactive Substances Act* (PSA) in July 2013 established a regulated legal market for a number of licensed NPS products, the majority of which were synthetic cannabinoids (Wilkins, 2014b, 2014d). The interim PSA regime was brought to an abrupt end in May 2014 following reports of adverse health effects from products and social disruption around retail outlets (Wilkins, 2014c; Wilkins et al., 2016b).

### Drug types used for the first time in 2016

In 2016, 17% of the detainees had tried a drug for the first time in the previous 12 months. The proportion of detainees who had tried a drug for the first time decreased from 32% in 2013 to 17% in 2016 ($p<0.0001$).The proportion of detainees who had tried a drug for the first time declined in Whangarei (down from 28% in 2011 to 12% in 2016, $p=0.0141$), Wellington Central (down from 41% in 2013 to 18% in 2016, $p<0.0001$) and Christchurch Central (down from 42% in 2013 to 16% in 2016, $p<0.0001$) (Figure 9 1).

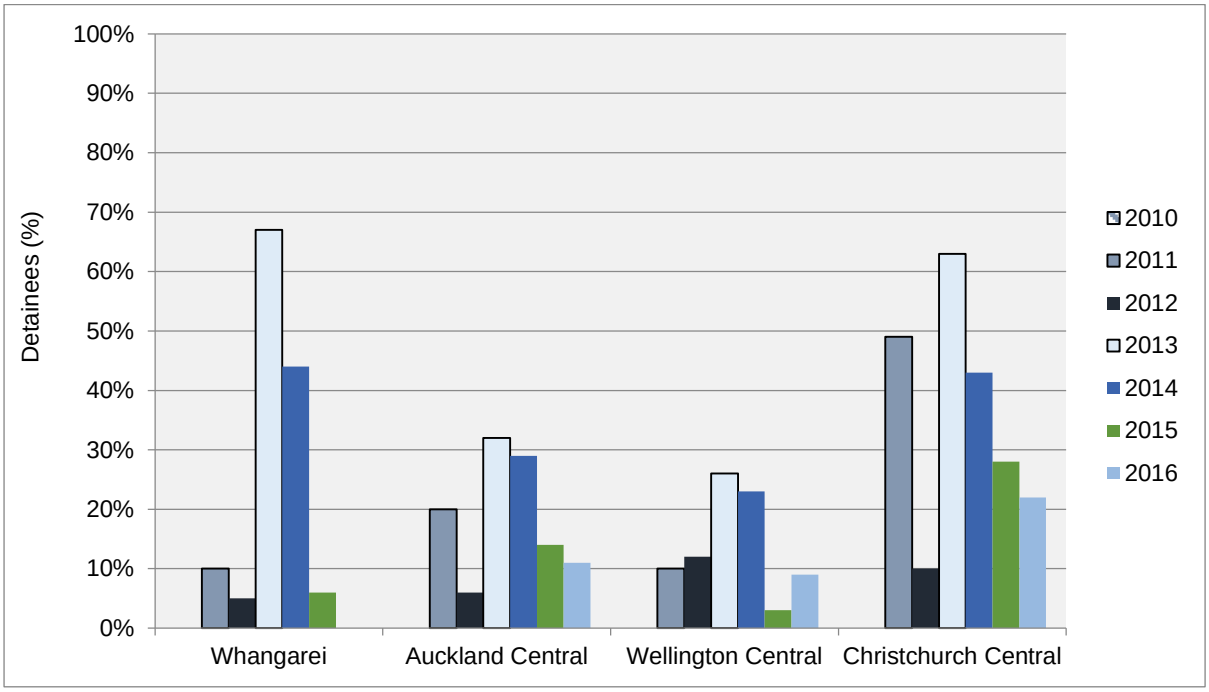
**Figure 9 1: Proportion of police detainees who had tried a drug for the first time in the past 12 months by location, 2010-2016**




The drug types which the detainees had most commonly used for the first time in 2016 were methamphetamine (19%), 'ecstasy' (14%), synthetic cannabinoids (13%), GHB (13%), cocaine (9%), LSD (8%), 'magic mushrooms' (psilocybin) (8%) and 'Ritalin' (methylphenidate) (5%), ketamine (3%), street BZP (3%), MDPV (3%) and other pharmaceuticals (3%).

The proportion of detainees who had used synthetic cannabinoids for the first time declined from 46% in 2013 to 13% in 2016 ($p<0.0001$). Similar declines in the first-time use of synthetic cannabinoids were found in all of the four sites from 2013 to 2016 (Figure 9 2).

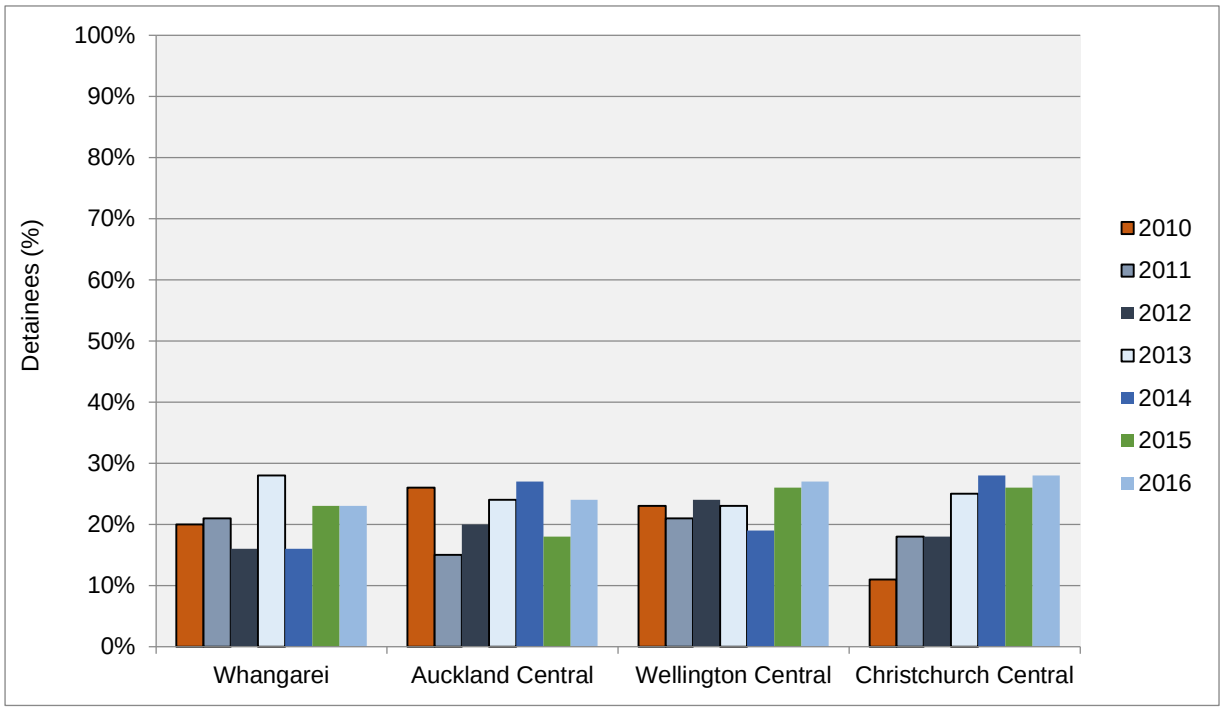
**Figure 9 2: Proportion of police detainees who had tried synthetic cannabinoids for the first time in the past 12 months by location (of those who had tried a drug for the first time), 2010-2016**




## New drugs noticed

The detainees were asked whether they had heard of any 'new drugs' being used in 2016. The proportion of detainees who had heard of a new drug(s) being used increased from 18% in 2011 to 26% in 2016 (p=0.0032). The proportion of detainees in Christchurch Central who had heard of a new drug being used increased from 11% in 2010 to 28% in 2016 (p=0.0002) (Figure 9 3).

**Figure 9 3: Proportion of police detainees who had heard of a new drug being used by location, 2010-2016**




The 'new' drug types which the detainees had most commonly heard of being used in 2016 were GBH (18%), 'ecstasy' (11%), PCP (11%), methamphetamine (6%), other pharmaceuticals (5%), LSD (4%), cocaine (4%) and solvents (4%).

## Summary

- The proportion of detainees who had tried a drug for the first time declined from 32% in 2013 to 17% in 2016
- There was decline in the proportion of detainees using a drug for the first time in Whangarei (down from 28% in 2011 to 12% in 2016), Wellington Central (down from 41% in 2013 to 18% in 2016) and Christchurch Central (down from 42% in 2013 to 16% in 2016)
- The drug types which the detainees had most commonly used for the first time in 2016 were methamphetamine (19%), ecstasy (14%), synthetic cannabis (13%), GHB (13%) and cocaine (9%)
- The proportion of detainees who had tried synthetic cannabinoids for the first time declined from 46% in 2013 to 13% in 2016
- Declines in the first time use of synthetic cannabinoids were found in all sites from 2013 to 2016
- The proportion of detainees who noticed a new drug being used increased from 18% in 2011 to 26% in 2016
- The proportion of detainees from Christchurch Central who noticed a new drug being used increased from 11% in 2010 to 28% in 2016
- The 'new' drug types which the detainees had most commonly heard of being used in 2016 were GBH (18%), ecstasy (11%), PCP (11%), methamphetamine (6%) and other pharmaceuticals (5%)

# Chapter 10 – Urine test results for drug use

## Introduction

The ADUM study includes the capacity to verify detainees' self-reported information on recent drug use with urine testing for the presence of drug use. Past comparisons have shown a fairly high level of truthfulness among the interviewed detainees, although as might be expected this varies according to the drug type in question and related legal penalties and social stigma.

The validity of the comparison between a positive urine test and self-reported data is also affected by the capacity of the biological 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 MDMA, but may have actually been sold a tablet containing a range of other substitute compounds. Many synthetic cannabinoids are currently not detectable by routine drug testing, and legal high users have indicated they choose to use these products specifically to avoid a positive drug test (Beck et al., 2013; Perrone et al., 2013).

The ESR routine drug testing completed for NZ-ADUM is able to detect (natural) cannabis, methamphetamine, amphetamine, cocaine, morphine, methadone, codeine and BZP. A total of 202 detainees provided urine samples for testing as part of the 2016 NZ-ADUM study. 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 cannabis use

In 2016, 56% of the detainees who provided a urine sample tested positive for cannabis use. There was no statistically significant change in the proportion of detainees testing positive for cannabis in 2016 compared to previous years (Table 10 1).

## Urine test results for methamphetamine use

The proportion of detainees testing positive for methamphetamine increased from 6% in 2011 to 19% in 2016 (p=0.0049), and from 5% in 2014 to 19% in 2016 (p=0.0012) (Figure 10 1)

**Figure 10 1: Proportion of detainees who tested positive for methamphetamine at the time of interview by location (of the 198 detainees tested), 2010-2016**

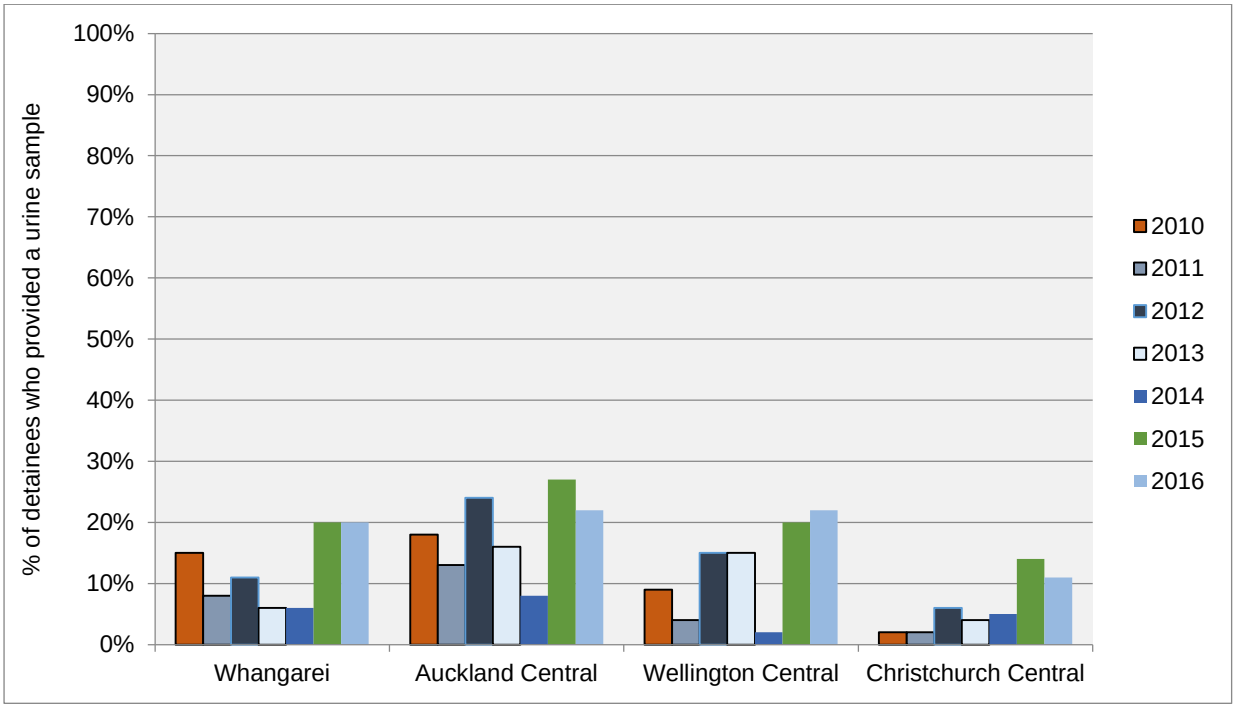


**Table 10 1: Proportion of police detainees who tested positive for drug use at the time of interview (of the 202 detainees tested), 2010-2016**

| Positive urine test for drug use [% detainees] | Year | N - Value | Cannabis | Amphetamine | Methamphetamine | Benzodiazepines | Codeine | Morphine | Methadone | Benzylpiperazine |
|---|---|---|---|---|---|---|---|---|---|---|
| **Whangarei** | 2010 | n=20 | 70% | 10% | 15% | 0% | 0% | 0% | 0% | 0% |
| | 2011 | n=25 | 64% | 8% | 8% | 0% | 8% | 8% | 0% | 0% |
| | 2012 | n=37 | 70% | 11% | 11% | 3% | 5% | 3% | 0% | 0% |
| | 2013 | n=31 | 48% | 6% | 6% | 0% | 3% | 0% | 0% | 0% |
| | 2014 | n=31 | 77% | 6% | 6% | 3% | 0% | 0% | - | 0% |
| | 2015 | n=61 | 62% | 16% | 20% | 2% | 2% | 3% | - | - |
| | 2016 | n=20 | 75% | 15% | 20% | 0% | 0% | 0% | - | - |
| **Auckland Central** | 2010 | n=72 | 64% | 13% | 18% | 1% | 4% | 3% | 0% | 0% |
| | 2011 | n=71 | 39% | 13% | 13% | 1% | 1% | 3% | 3% | 3% |
| | 2012 | n=66 | 65% | 26% | 24% | 3% | 2% | 0% | 0% | 0% |
| | 2013 | n=68 | 40% | 18% | 16% | 4% | 0% | 1% | 0% | 0% |
| | 2014 | n=77 | 61% | 13% | 8% | 3% | 1% | 1% | 0% | 0% |
| | 2015 | n=41 | 56% | 27% | 27% | 2% | 2% | 5% | 0% | 0% |
| | 2016 | n=46 | 52% | 15% | 22% | 2% | 0% | 0% | 0% | 0% |
| **Wellington Central** | 2010 | n=53 | 60% | 8% | 9% | 0% | 0% | 6% | 0% | 0% |
| | 2011 | n=54 | 52% | 4% | 4% | 2% | 2% | 2% | 0% | 0% |
| | 2012 | n=27 | 81% | 15% | 15% | 0% | 0% | 0% | 0% | 0% |
| | 2013 | n=53 | 58% | 15% | 15% | 0% | 0% | 0% | 0% | 0% |
| | 2014 | n=44 | 57% | 9% | 2% | 2% | 0% | 0% | - | - |
| | 2015 | n=40 | 60% | 18% | 20% | 5% | 3% | 3% | 3% | - |
| | 2016 | n=91 | 54% | 23% | 22% | 1% | 0% | 2% | 1% | - |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Christchurch Central** | 2010 | n=56 | 70% | 2% | 2% | 5% | 0% | 4% | 2% | 2% |
| | 2011 | n=50 | 64% | 2% | 2% | 8% | 4% | 10% | 2% | 4% |
| | 2012 | n=78 | 63% | 8% | 6% | 3% | 3% | 1% | 4% | 0% |
| | 2013 | n=57 | 49% | 4% | 4% | 2% | 4% | 4% | 0% | 0% |
| | 2014 | n=44 | 57% | 2% | 5% | 2% | 5% | 5% | 0% | 0% |
| | 2015 | n=56 | 41% | 14% | 14% | 4% | 0% | 2% | 0% | 0% |
| | 2016 | n=45 | 58% | 9% | 11% | 0% | 0% | 2% | 0% | 2% |
| **All Sites** | 2010 | n=201 | 65% | 8% | 11% | 2% | 1% | 3% | 2% | 1% |
| | 2011 | n=200 | 53% | 6% | 7% | 3% | 3% | 6% | 1% | 2% |
| | 2012 | n=208 | 68% | 16% | 15% | 2% | 2% | 1% | 2% | 0% |
| | 2013 | n=209 | 50% | 12% | 12% | 2% | 1% | 1% | 0% | 0% |
| | 2014 | n=196 | 61% | 8% | 5% | 3% | 1% | 1% | 0% | 0% |
| | 2015 | n=198 | 55% | 19% | 20% | 3% | 2% | 3% | 1% | 0% |
| | 2016 | n=202 | 56% | 16% | 19% | 1% | 0% | 1% | <1% | 1% |

## Corroboration of self-reported drug use with urinalysis

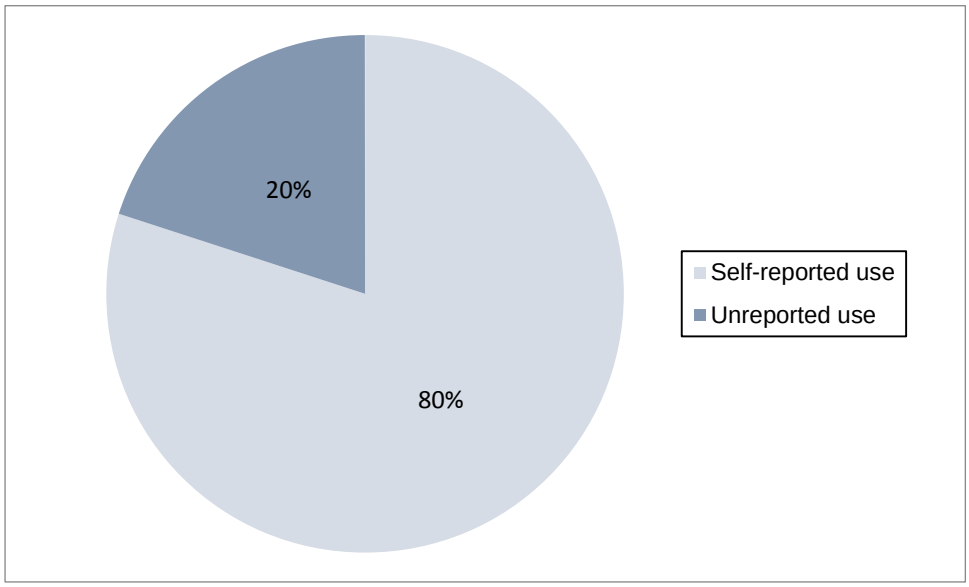
### Cannabis use

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. In 2016, 80% of those detainees who tested positive for cannabis had also self-reported using cannabis in the past month (Figure 10 2). Interestingly, 26% of the detainees who did not test positive for cannabis had self-reported use in the previous month. This likely represents some limitations with the accuracy of the urine testing in some instances.

**Table 10 2: Comparison of test results for the presence of cannabis use with self-reported cannabis use in the past month, 2010-2016**

| Tested positive for self-reported cannabis use in the past month [%] | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Tested positive for cannabis use [%] | 2010 | | 2011 | | 2012 | | 2013 | | 2014 | | 2015 | | 2016 | |
| | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes |
| No | 89% | 11% | 71% | 29% | 75% | 25% | 68% | 32% | 78% | 22% | 71% | 29% | 74% | 26% |
| Yes | 6% | 94% | 11% | 89% | 16% | 84% | 21% | 79% | 16% | 84% | 15% | 85% | 20% | 80% |

**Figure 10 2: Proportion of police detainees who tested positive for cannabis use and who also self-reported cannabis use in the previous month, 2016**



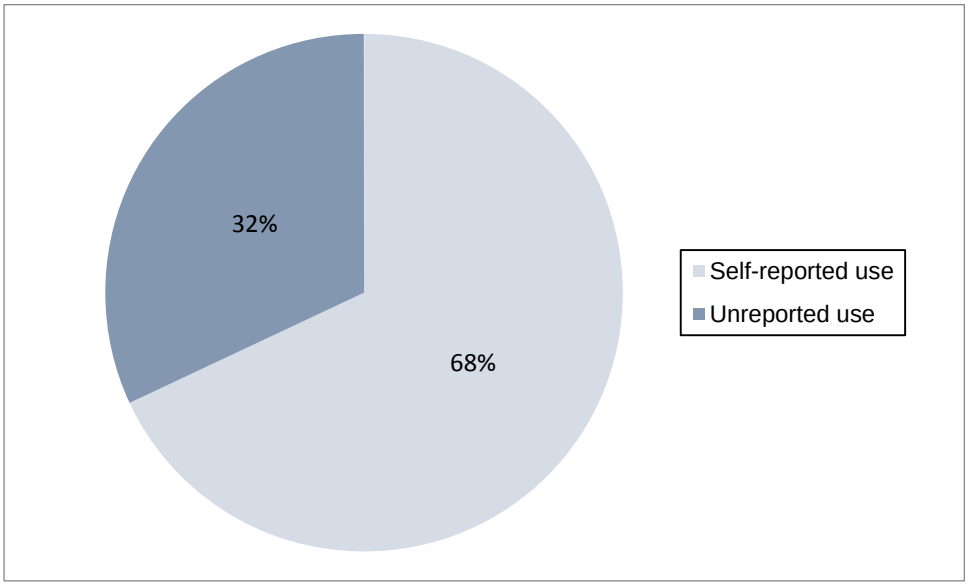
## Methamphetamine use

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 2016, 68% percent of those detainees who tested positive for methamphetamine had also self-reported using methamphetamine in the previous month (Figure 10 3). Eleven percent of the detainees who did not test positive for methamphetamine self-reported use in the past month in 2016.

**Table 10 3: Comparison of test results for the presence of methamphetamine use with self-reported methamphetamine use in the past month, 2010-2016**

| Self-reported methamphetamine use in the past month [%] | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Tested positive for methamphetamine use [%] | 2010 | | 2011 | | 2012 | | 2013 | | 2014 | | 2015 | | 2016 | |
| | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes |
| No | 89 % | 11 % | 89 % | 11 % | 89 % | 11 % | 87 % | 13 % | 82 % | 18 % | 91 % | 9% | 89 % | 11 % |
| Yes | 18 % | 82 % | 42 % | 58 % | 24 % | 76 % | 19 % | 81 % | 26 % | 74 % | 18 % | 82 % | 32 % | 68 % |

**Figure 10 3: Proportion of police detainees who tested positive for methamphetamine use and who also self-reported methamphetamine use in the past month, 2016**



### Opioid use

The self-reported opioid category includes the self-reporting of morphine and methadone use in the previous 30 days. Only five of the detainees provided a urine sample which tested positive for the presence of opioids in 2016. Of these, only two had also self-reported use. The low numbers mean the percentage comparison should be treated with caution.

## Summary

- In 2016, 56% of the police detainees tested positive for cannabis use
- The proportion of detainees testing positive for methamphetamine increased from 6% in 2011 to 19% in 2016
- In 2016, 80% of the detainees who tested positive for cannabis use had also self-reported use in the previous month
- In 2016, 68% of the detainees who tested positive for methamphetamine had also self-reported use of methamphetamine in the past month

# Chapter 11 – Alcohol and other drug harm

## Introduction

Alcohol and other drug use is associated with a range of health and social problems, including anti-social behaviour, crime, substance dependency, overdose, chronic illness, mental illness, relationship breakdown, suicide, violence, sexual abuse, physical injury, impaired educational achievement, unemployment, dangerous driving and workplace accidents (Babor, et al., 2010a; Babor et al., 2010b). Police detainees have much higher levels of alcohol and other drug use than the wider population and consequently experience higher levels of substance-related harm. This includes problems which are directly borne by the detainee themselves, including overdose, addiction and psychosis, and social harms borne by their family, friends, neighbours and work colleagues, such as parental neglect, family violence, sexual abuse, poverty, dangerous driving and unsafe workplace practices.

In the 2015 NZ-ADUM 85% of police detainees reported experiencing at least one problem from their alcohol and other drug use in the previous year. Thirty-one percent had 'damaged someone's property', 29% had 'physically hurt someone', 26% had 'stolen someone's property', 17% had 'physically hurt themselves', 12% had 'lost their job', 11% had 'had a car crash' and 7% had 'overdosed' as a result of their substance use during the previous 12 months.

### Extent of alcohol and other drug use

In 2016, 98% of the detainees had used alcohol, tobacco, legal highs or other drugs in the previous 12 months. Eighty-seven percent had drunk alcohol, 85% had smoked tobacco, 68% had used cannabis, 38% had used methamphetamine, 20% had smoked synthetic cannabinoids, 18% had used hallucinogens and 14% had used ecstasy in the previous year. Seventy-six percent of the detainees had used an illegal drug in the previous 12 months in 2016. There was no change in the proportion of detainees who had used an illegal drug over the previous five years (i.e. 75%=2010, 79%=2011, 77%=2012, 76%=2013, 75%=2014, 76%=2015, 76%=2016).

### 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. In 2016, 84% of detainees had experienced at least one problem related to their substance use in 2016. There was no change in the proportion of detainees who reported at least one harm due to their substance use from 2010 to 2016 (87%=2010, 87%=2011, 86%=2012, 88%=2013, 88%=2014, 85%=2015, 84%= 2016).

### General problems due to alcohol and other drug use

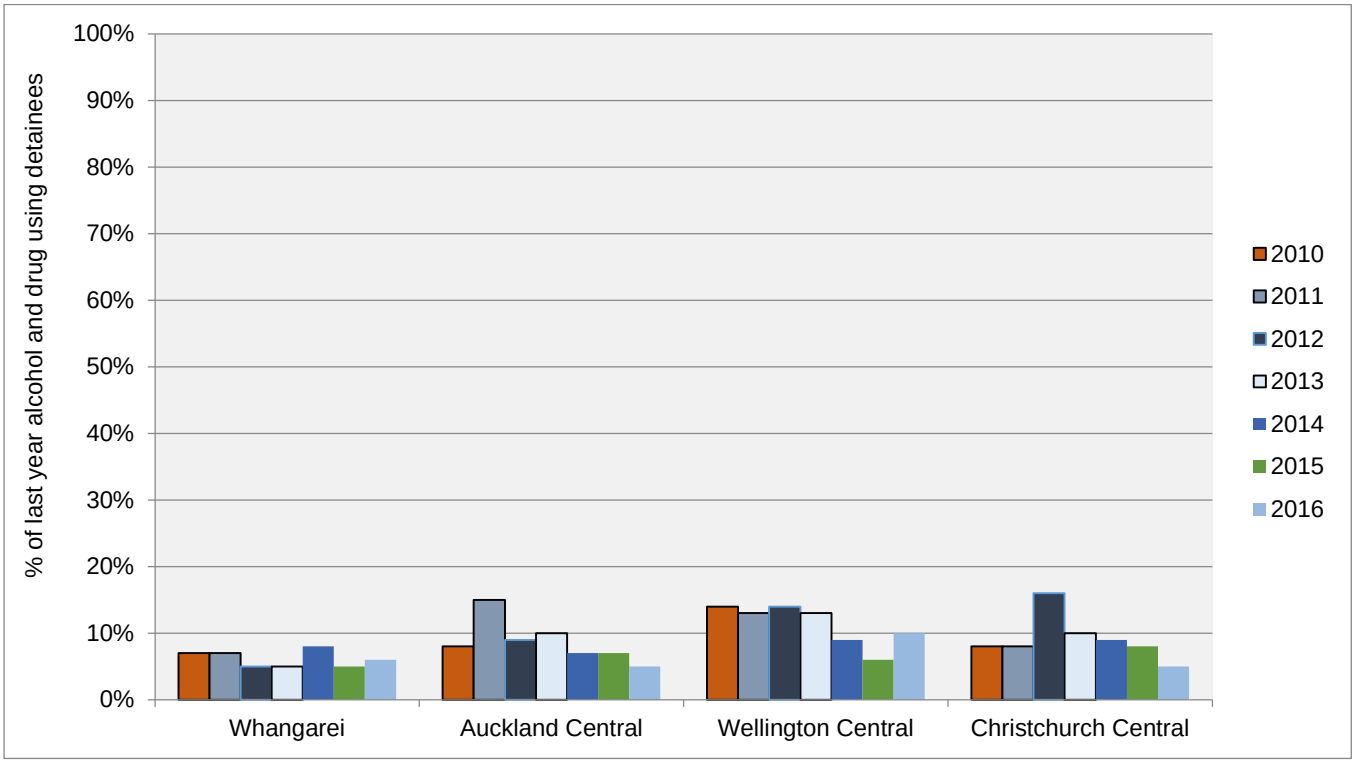
Forty-nine percent of the alcohol and other drug using detainees reported they 'couldn't remember what happened the night before' due to their substance use in 2016 (Table 11 1). Twenty-one percent had 'stole someone's property' and 20% had 'physically hurt themselves' as a result of their substance use. There was a statistically significant decline in the proportion of substance using detainees who 'could not remember what happened the night before' (down from 57% in 2010 to 49% in 2016, p=0.0266), had 'damaged someone else's property' (down from 43% in 2010 to 29% in 2016, p<0.0001), had 'stolen someones property' (down from 30% in 2010 to 21% in 2016,p=0.0016), and had 'physically hurt themselves' (down from 29% in 2010 to 20% in 2016, p=0.0008).

**Table 11 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, 2010-2016**

| Harm (%) | All sites | | | | | | |
|---|---|---|---|---|---|---|---|
| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| | (n=789) | (n=803) | (n=772) | (n=799) | (n=812) | (n=799) | (n=785) |
| Couldn't remember what happened the night before | 57 | 60 | 58 | 48 | 53 | 49 | 49 |
| Upset a family relationship | 50 | 50 | 50 | 50 | 55 | 49 | 50 |
| Got into debt/owing money | 33 | 36 | 27 | 31 | 34 | 32 | 30 |
| Damaged someone's property | 43 | 44 | 39 | 40 | 43 | 31 | 29 |
| Had reduced work/ study performance | 39 | 39 | 35 | 40 | 40 | 31 | 33 |
| Stole someone's property | 30 | 32 | 31 | 30 | 32 | 26 | 21 |
| Physically hurt yourself | 29 | 31 | 32 | 28 | 31 | 17 | 20 |
| Sacked/ lose business/ quit study course | 13 | 13 | 12 | 14 | 15 | 12 | 13 |
| Overdosed on drugs | 9 | 11 | 12 | 10 | 8 | 7 | 6 |

The proportion of substance using detainees who had 'overdosed' on a drug declined from 11% in 2011 to 6% in 2016 (p=0.0075) (Figure 11 1). The proportion of detainees who reported overdosing on a substance in Auckland Central declined from 15% in 2011 to 5% in 2016 (p=0.0126), and in Christchurch Central from 16% in 2012 to 5% in 2016 (p=0.0025).

**Figure 11 1: Proportion of police detainees who 'overdosed' on drugs (of those who used alcohol and other drugs in the past 12 months), 2010-2016**




## Aggression due to alcohol and other drug use

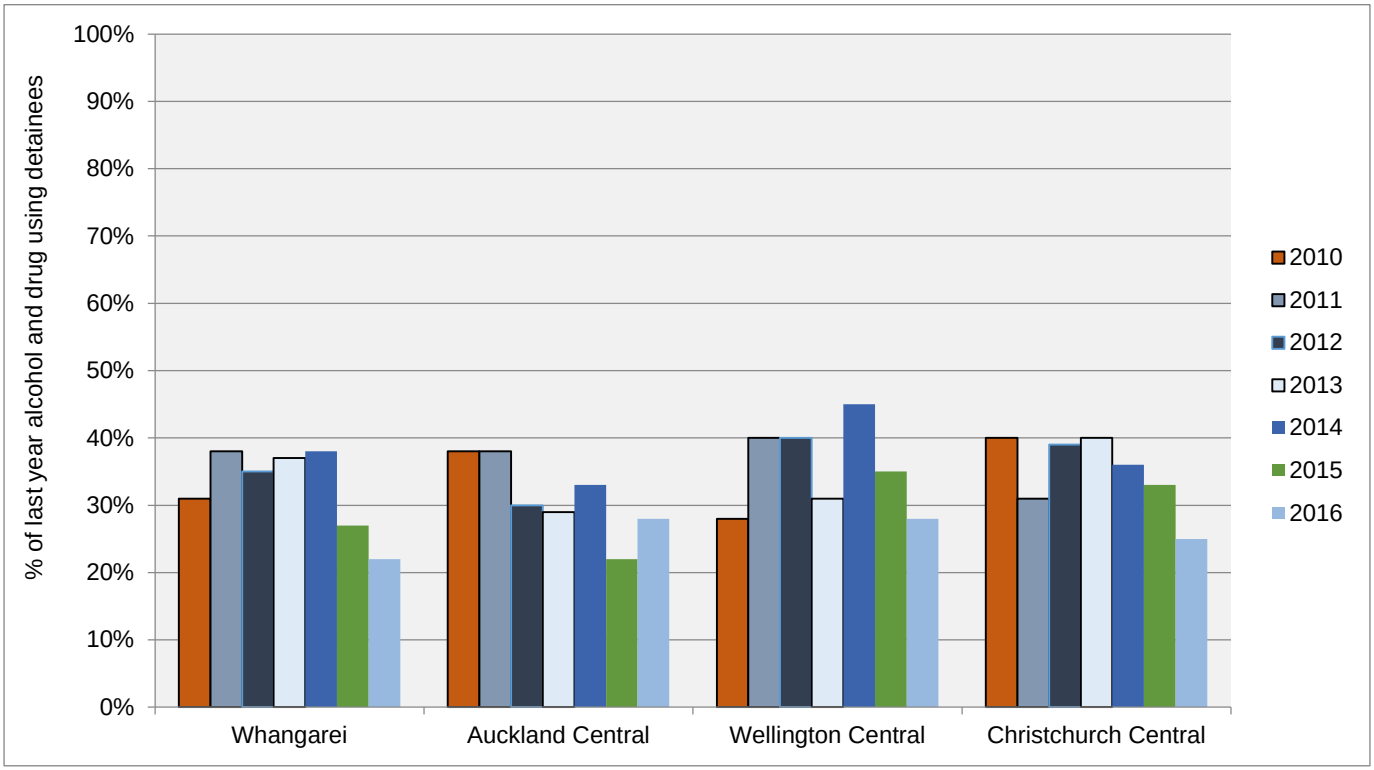
In 2016, 39% of the substance using detainees had 'physically or verbally threatened someone' and 26% had 'physically hurt someone' due to their alcohol and other drug use during the previous 12 months (Table 11 2).

**Table 11 2: Proportion of alcohol and other drug using detainees who reported aggression due to their substance use in the past 12 months, 2010-2016**

| Harm (%) | All sites | | | | | | |
|---|---|---|---|---|---|---|---|
| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| | (n=785) | (n=801) | (n=766) | (n=800) | (n= 811) | (n=798) | (n=785) |
| Physically or verbally threatened someone | 50 | 50 | 50 | 50 | 51 | 41 | 39 |
| Physically hurt someone | 36 | 36 | 36 | 34 | 37 | 29 | 26 |
| Were physically assaulted | 34 | 35 | 36 | 32 | 33 | 27 | 27 |

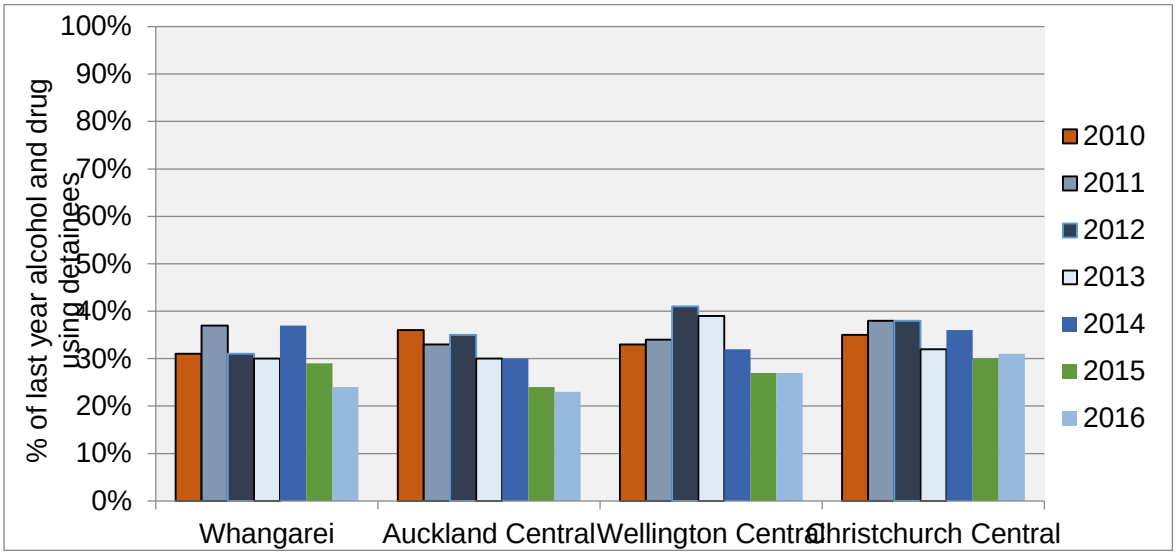
The proportion of detainees who reported 'physically hurting someone' declined from 36% in 2010 to 26% in 2016 (p=0.0012). The proportion of Christchurch Central detainees who had physically hurt someone declined from 40% in 2010 to 25% in 2016 (p=0.0081) (Figure 11 2).

**Figure 11 2: Proportion of police detainees who 'physically hurt someone' as a result of their alcohol and other drug use by location (of those who had used a substance in the past 12 months), 2010-2016**




The proportion of detainees who were physically assaulted due to alcohol and other drug use declined from 34% in 2010 to 27% in 2016 (p=0.0169). The proportion of Auckland Central detainees who were physically assaulted declined from 36% in 2010 to 23% in 2016 (p=0.0407) (Figure 11 3).

**Figure 11 3: Proportion of police detainees who were 'physically assaulted' as a result of their alcohol and drug use by location (of those who had used a substance in the past 12 months), 2010-2016**

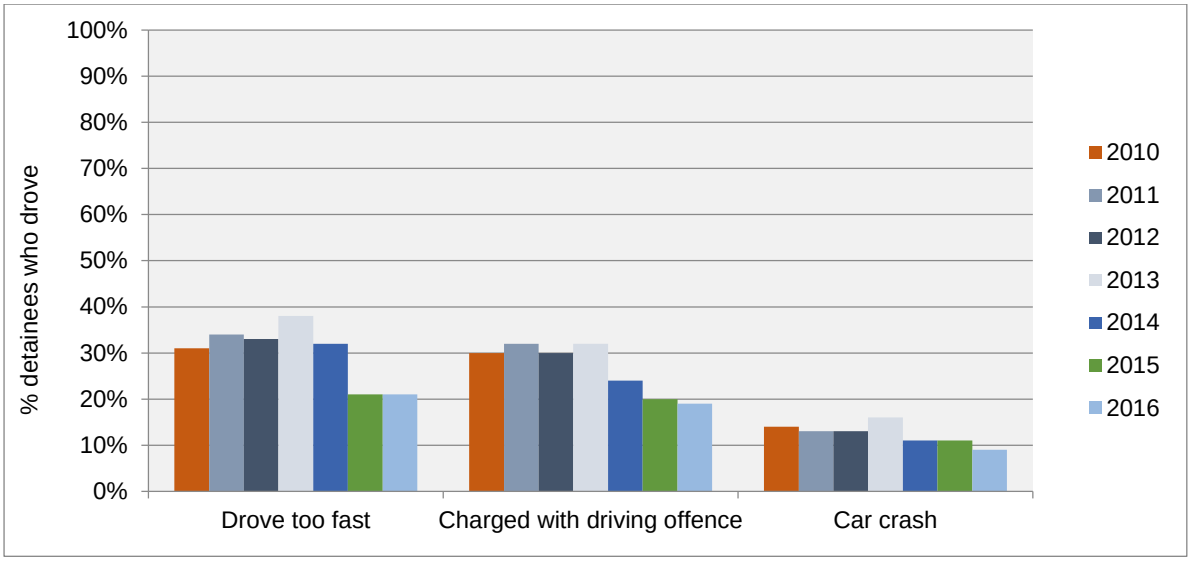



Similarly, the proportion of detainees who had 'physically or verbally threatened someone' due to their alcohol and other drug use declined from 50% in 2010 to 39% in 2016 (p=0.0006). The proportion of detainees who had 'physically or verbally threatened someone' declined in Whangarei (down from 56% in 2011 to 31% in 2016, p=0.0010) and Christchurch Central (down from 57% in 2010 to 39% in 2016, p=0.0008).

## Driving incidents due to alcohol and other drug use

In 2016, 21% of the substance using detainees who drove reported driving 'too fast' due to their alcohol and other drug use use. Nineteen percent had been charged with a 'driving offence', 17% had 'lost concentration while driving', and 16% reported 'driving through a stop sign/red light' due to their alcohol and other drug use. There was a decline in the proportion of detainees who 'drove too fast' due to substance use (down from 31% in 2010 to 21% in 2016, p=0.0011), had been 'charged with driving offence' (down from 30% in 2010 to 19% in 2016, p<0.0001), and had a 'car crash' (down from 16% in 2013 to 9% in 2016, p=0.0117) (Figure 11 4).

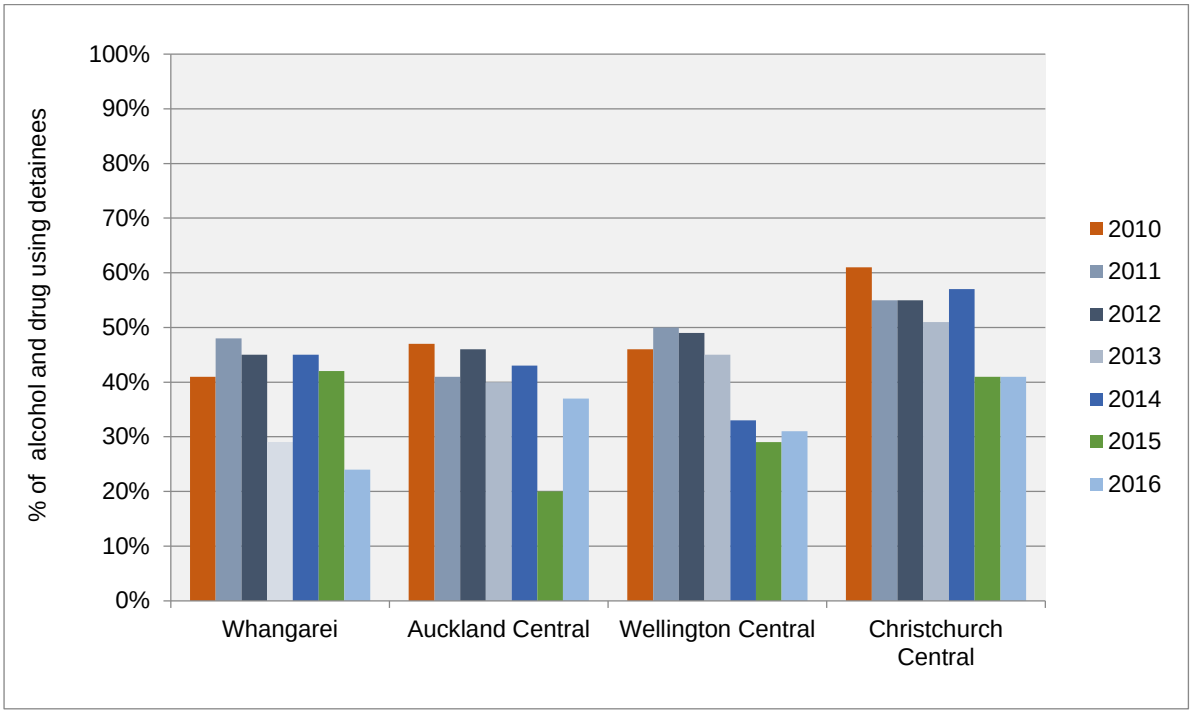
**Figure 11 4: Proportion of police detainees who 'drove too fast', were 'charged with a driving offence' and had a 'car crash' as a result of their alcohol and other drug use (of those who had used a substance in the past 12 months and drove), 2010-2016**




## Sexual harm incidents due to alcohol and other drug use

In 2016, 35% of the detainees had 'unprotected sex' due to their alcohol and other drug use. The proportion of detainees who had 'unprotected sex' due to their substance use declined from 51% in 2010 to 35% in 2016 ($p<0.0001$). The proportion of detainees who had 'unprotected sex' due to substance use declined in Whangarei (down from 48% in 2011 to 24% in 2016, $p=0.0015$), Wellington Central (down from 50% in 2011 to 31% in 2016, $p=0.0048$) and Christchurch Central (down from 61% in 2010 to 41% in 2016, $p<0.0001$). However, the proportion of detainees who had 'unprotected sex' due to their substance use increased in Auckland Central from 20% in 2015 to 37% in 2016 ($p=0.0013$) (Figure 11 5).

**Figure 11 5: Proportion of police detainees who had 'unprotected sex' as a result of their alcohol and other drug use by location (of those who had used a substance in the past 12 months), 2010-2016**




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

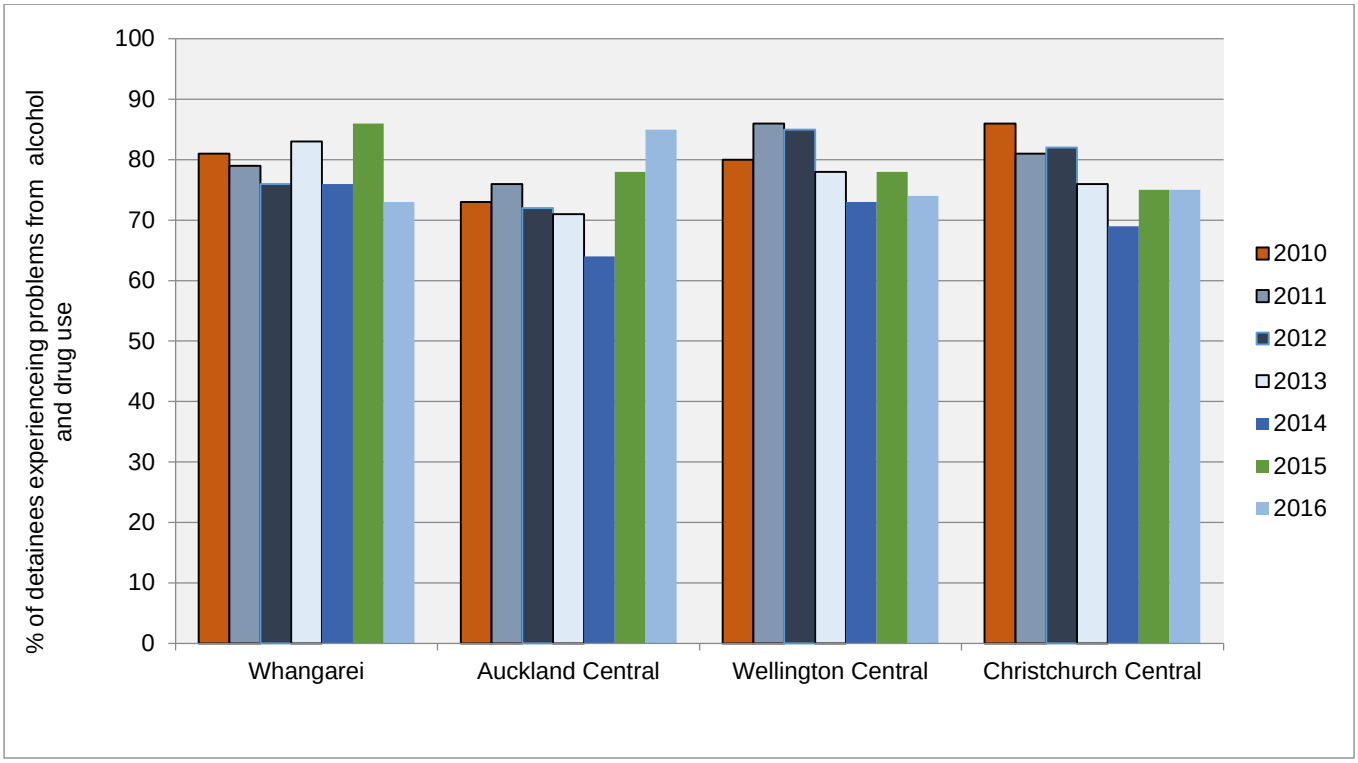
Those detainees who had experienced problems related to their alcohol and drug use in the previous year were asked about the drug type(s) to which they mainly attributed these problems. Detainees could nominate more than one substance type. In 2016, detainees named three drug types as largely responsible for their substance use related problems: alcohol (78%), methamphetamine (33%), and cannabis (32%) (Table 11 3). Nine percent of the detainees considered synthetic cannabinoids to be responsible for their substance use problems (up from only <1% in 2012). In Christchurch Central, 18% of the detainees named synthetic cannabinoids as the substance responsible for their drug-related harm

**Table 11 3: Drug type(s) which the police detainees nominated as responsible for their substance related problems in the past 12 months by location, 2010-2016**

| Harm (%) | All sites | | | | | | |
|---|---|---|---|---|---|---|---|
| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| | (n=705) | (n=696) | (n=700) | (n=698) | (n=703) | (n=685) | (n=650) |
| Alcohol | 80 | 80 | 79 | 76 | 69 | 78 | 78 |
| Methamphetamine | 14 | 17 | 14 | 18 | 20 | 31 | 33 |
| Cannabis | 33 | 32 | 28 | 25 | 23 | 34 | 32 |
| Synthetic cannabinoids | - | <1 | <1 | 8 | 14 | 11 | 9 |
| Tobacco | 6 | 6 | 4 | 2 | 5 | 3 | 4 |
| Ecstasy | 3 | 3 | 3 | 1 | 1 | 4 | 2 |
| Benzodiazepines | 2 | 1 | 2 | <1 | <1 | 1 | 2 |
| Morphine | 2 | 1 | 1 | 1 | 1 | 2 | 1 |
| Magic mushrooms | 2 | 1 | 1 | <1 | <1 | 1 | 1 |
| Heroin | 1 | 1 | <1 | <1 | <1 | 1 | 1 |
| Ritalin (methylphenidate) | 1 | <1 | 1 | <1 | <1 | 1 | 1 |
| LSD | 3 | 1 | 1 | 2 | <1 | 2 | <1 |
| Can't specify | 2 | <1 | <1 | <1 | <1 | <1 | <1 |
| Amyl nitrate | <1 | 0 | <1 | <1 | <1 | <1 | <1 |
| Cocaine | <1 | <1 | <1 | <1 | <1 | 1 | <1 |
| GHB | <1 | 0 | <1 | <1 | <1 | <1 | <1 |
| Methadone | 1 | 1 | 1 | 1 | 0 | <1 | <1 |
| Crystal methamphetamine | 1 | 1 | <1 | 1 | <1 | 0 | <1 |

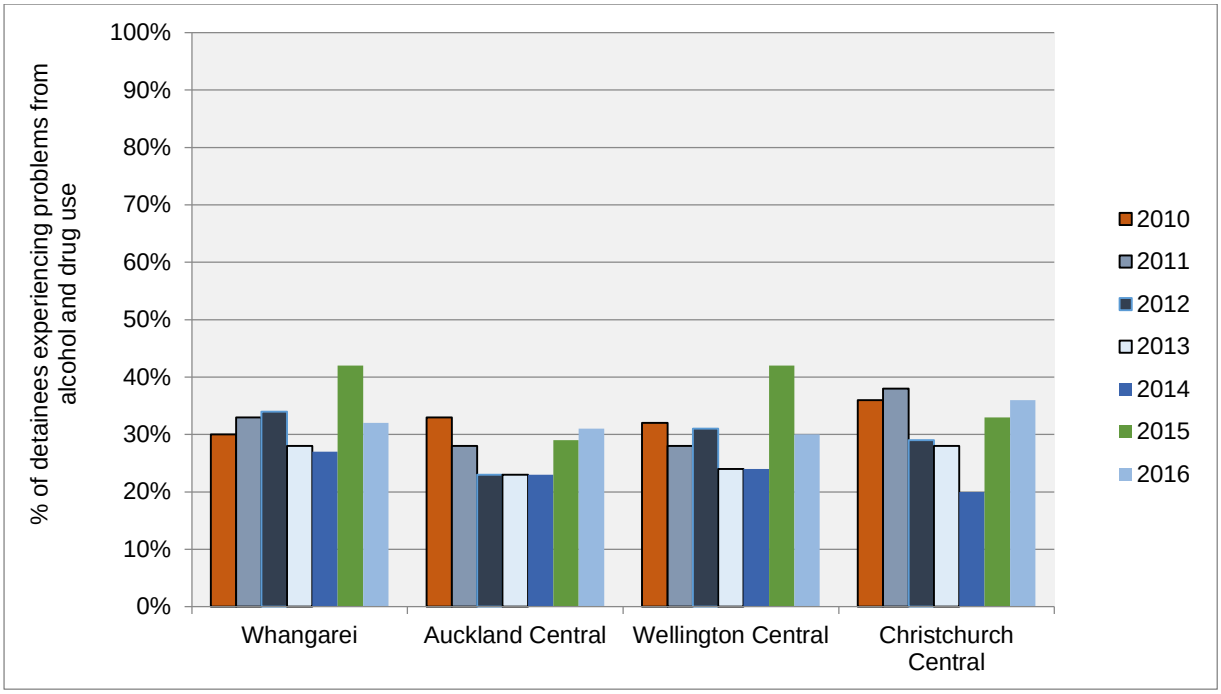
The proportion of detainees who attributed their substance use problems to alcohol increased from 69% in 2014 to 78% in 2016 (p=0.0051). The proportion of Auckland Central detainees who attributed their substance-related problems to alcohol increased from 64% in 2014 to 85% in 2016 (p<0.0001) (Figure 11 6). Conversely, the proportion of Christchurch Central detainees who attributed their problems to alcohol declined from 86% in 2010 to 75% in 2016 (p=0.0431).

**Figure 11 6: Proportion of police detainees who attributed their substance use related problems to alcohol by location (of those detainees who had experienced an alcohol and other drug problem in the past 12 months), 2010-2016**



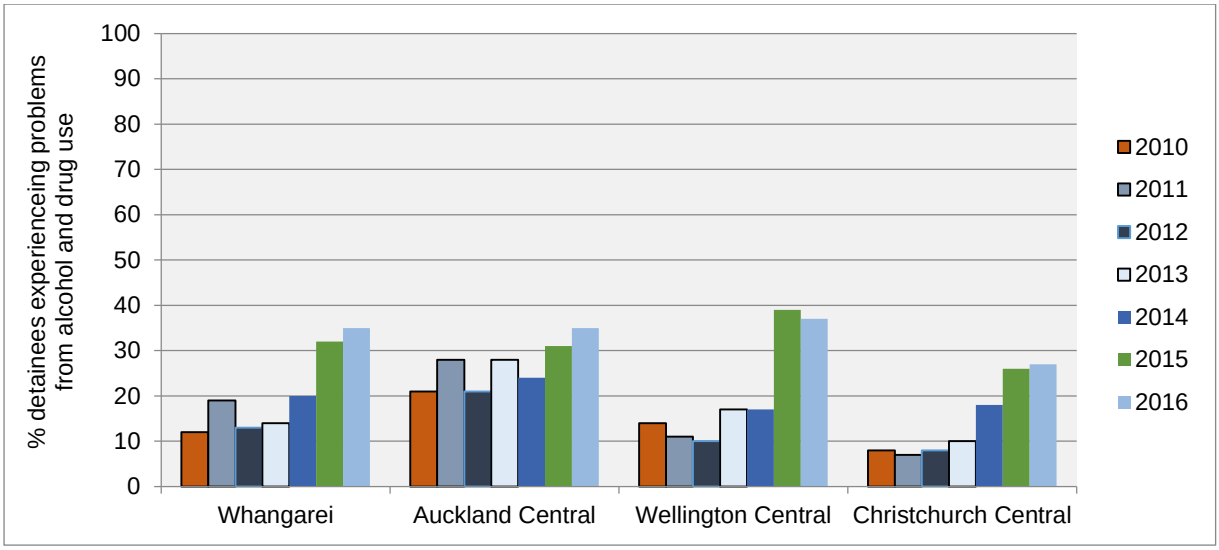

The proportion of detainees who attributed their substance use related problems to cannabis increased from 23% in 2014 to 32% in 2016 (p=0.0018). The proportion of Christchurch Central detainees who attributed their substance use related problems to cannabis increased from 20% in 2014 to 36% in 2016 (p=0.0063) (Figure 11 7).

**Figure 11 7: 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), 2010-2016**



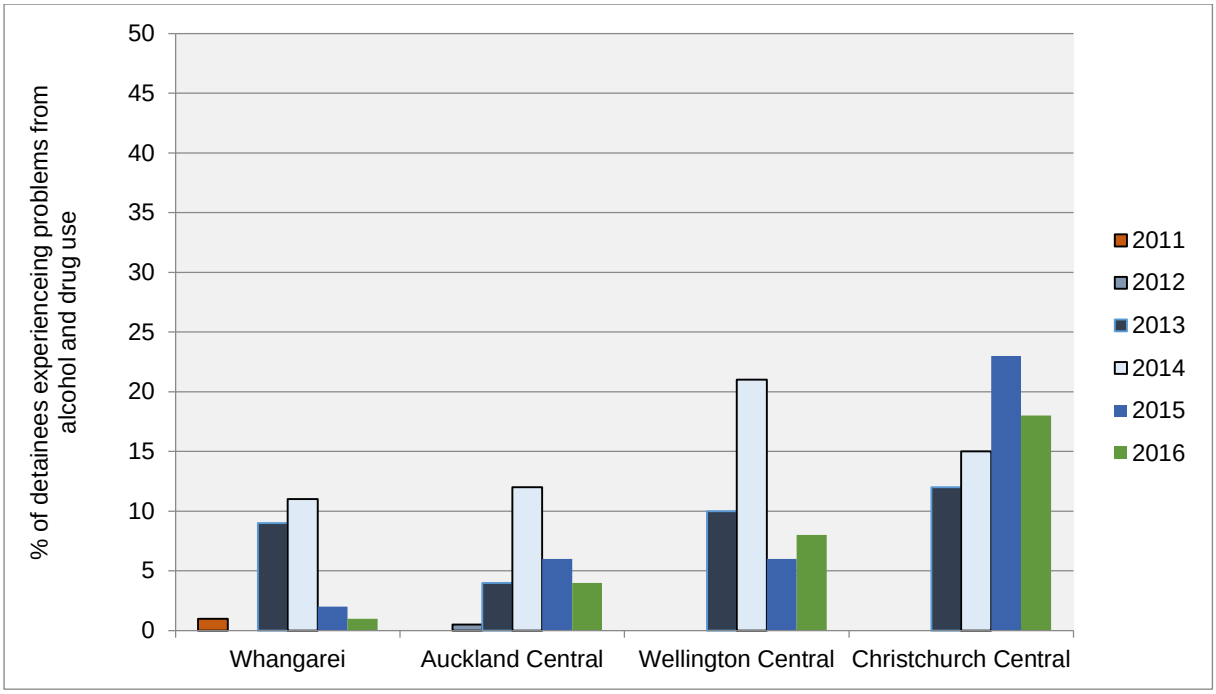

The proportion of detainees who attributed their substance use problems to methamphetamine increased from 14% in 2010 to 33% in 2016 ($p<0.0001$). The proportion of detainees who attributed their substance use problems to methamphetamine increased in Whangarei (from 12% in 2010 to 35% in 2016, $p=0.0033$), Auckland Central (up from 21% in 2010 to 35% in 2016, $p=0.0173$), Wellington Central (up from 14% in 2010 to 37% in 2016, $p=0.0003$) and Christchurch Central (up from 8% in 2010 to 27% in 2016, $p<0.0001$) (Figure 11 8).

**Figure 11 8: Proportion of police detainees who attributed their substance use related problems to methamphetamine by location (of those detainees who had experienced an alcohol and other drug problem in the past 12 months), 2010-2016**




The proportion of detainees who attributed their substance use related problems to synthetic cannabinoids declined from 14% in 2014 to 9% in 2016 (p=0.0208). The proportion of detainees from Wellington Central who attributed their substance use problems to synthetic cannabinoids declined from 21% in 2014 to 8% in 2016 (p=0.0223) (Figure 11 9).

**Figure 11 9: Proportion of police detainees who attributed their substance use related problems to synthetic cannabinoids by location (of those detainees who had experienced an alcohol and other drug problem in the past 12 months), 2010-2016**




## Alcohol and Driving

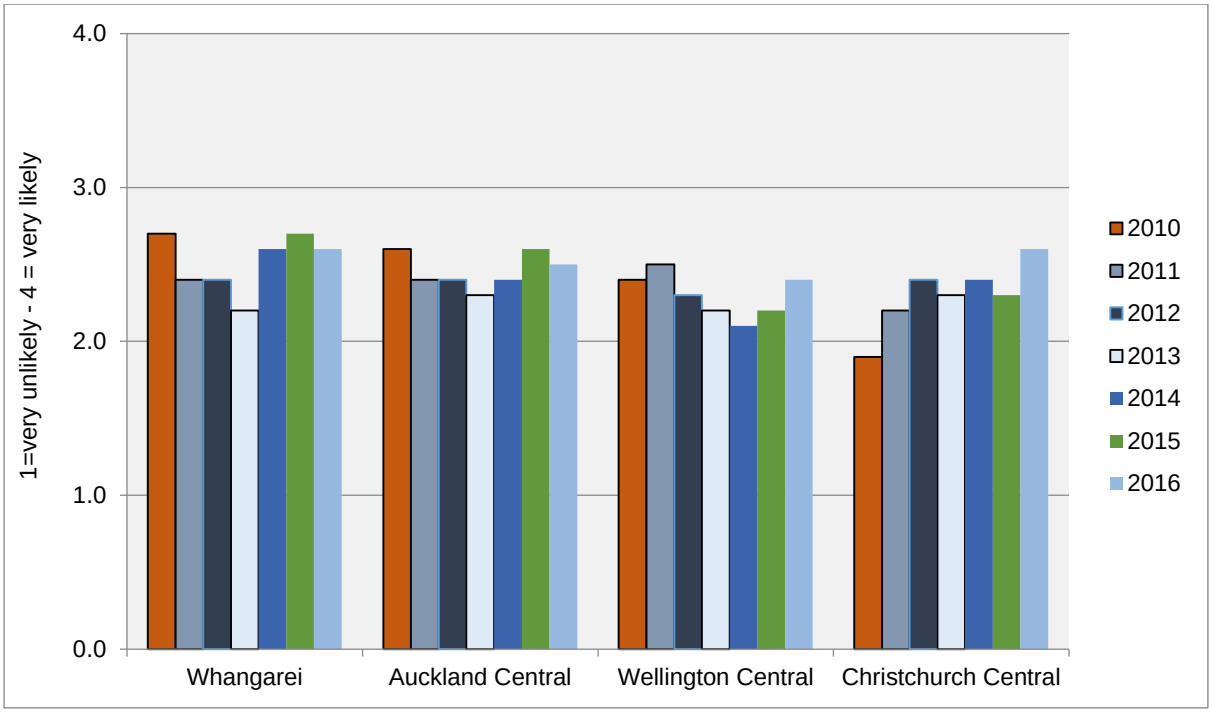
The detainees who had used alcohol and other drugs in the previous 12 months were asked how likely they thought it was that they would be stopped if they drove under the influence of alcohol. In 2016, 22% said they did not drive and a further 8% had had their licence suspended. Twenty-five percent of the detainees who had driven in 2016 thought it was 'very unlikely' they would be stopped by the police while driving under the influence of alcohol (Table 11 4). The detainees were more likely to believe they would be stopped while driving under the influence of alcohol from 2010 to 2016 (up from 2.3 to 2.5, p=0.0036) . Detainees from Christchurch Central were more likely to believe they would be stopped while driving under the influence of alcohol from 2010 to 2016 (up from 1.9 to 2.6, p<0.0001)(Figure 11 10).

**Table 11 4: Police detainees' perceptions of the likelihood of being stopped by police whilst driving under the influence of alcohol by location (of those detainees who had used alcohol and other drugs in the past year and who drove), 2010-2016**

| Likelihood of being stopped by police while under influence of alcohol | Year | N-value | Very likely [4] | Likely [3] | Unlikely [2] | Very unlikely [1] | Mean score of likelihood of being stopped (1=Very unlikely – Very likely [4] |
|---|---|---|---|---|---|---|---|
| **Whangarei** | 2010 | n=29 | 28% | 28% | 31% | 14% | 2.7 |
| | 2011 | n=97 | 23% | 26% | 15% | 36% | 2.4 |
| | 2012 | n=110 | 26% | 25% | 18% | 31% | 2.5 |
| | 2013 | n=107 | 21% | 20% | 22% | 37% | 2.2 |
| | 2014 | n=96 | 31% | 22% | 20% | 27% | 2.6 |
| | 2015 | n=139 | 34% | 26% | 12% | 28% | 2.7 |
| | 2016 | n=71 | 37% | 23% | 4% | 37% | 2.6 |
| **Auckland Central** | 2010 | n=153 | 22% | 33% | 25% | 20% | 2.6 |
| | 2011 | n=194 | 18% | 30% | 30% | 22% | 2.4 |
| | 2012 | n=138 | 28% | 20% | 20% | 32% | 2.4 |
| | 2013 | n=194 | 23% | 22% | 22% | 24% | 2.3 |
| | 2014 | n=166 | 24% | 21% | 27% | 28% | 2.4 |
| | 2015 | n=167 | 26% | 34% | 17% | 22% | 2.6 |
| | 2016 | n=136 | 21% | 26% | 33% | 20% | 2.5 |
| **Wellington Central** | 2010 | n=110 | 25% | 22% | 22% | 32% | 2.4 |
| | 2011 | n=94 | 23% | 29% | 22% | 26% | 2.5 |
| | 2012 | n=69 | 17% | 25% | 25% | 33% | 2.3 |
| | 2013 | n=54 | 17% | 20% | 28% | 35% | 2.2 |
| | 2014 | n=63 | 17% | 17% | 27% | 38% | 2.1 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | 2015 | n=83 | 14% | 27% | 27% | 33% | 2.2 |
| | 2016 | n=140 | 25% | 21% | 23% | 31% | 2.4 |
| **Christchurch Central** | 2010 | n=226 | 16% | 16% | 15% | 54% | 1.9 |
| | 2011 | n=128 | 20% | 18% | 24% | 38% | 2.2 |
| | 2012 | n=211 | 27% | 20% | 20% | 33% | 2.4 |
| | 2013 | n=167 | 21% | 23% | 18% | 38% | 2.3 |
| | 2014 | n=184 | 24% | 29% | 14% | 33% | 2.4 |
| | 2015 | n=195 | 22% | 22% | 16% | 39% | 2.3 |
| | 2016 | n=179 | 26% | 32% | 21% | 22% | 2.6 |

**Figure 11 10: Mean score of likelihood of being stopped while driving under the influence of alcohol by location (of those detainees who had used alcohol and other drugs in the past year and who drove), 2010-2016**




## Drugs and Driving

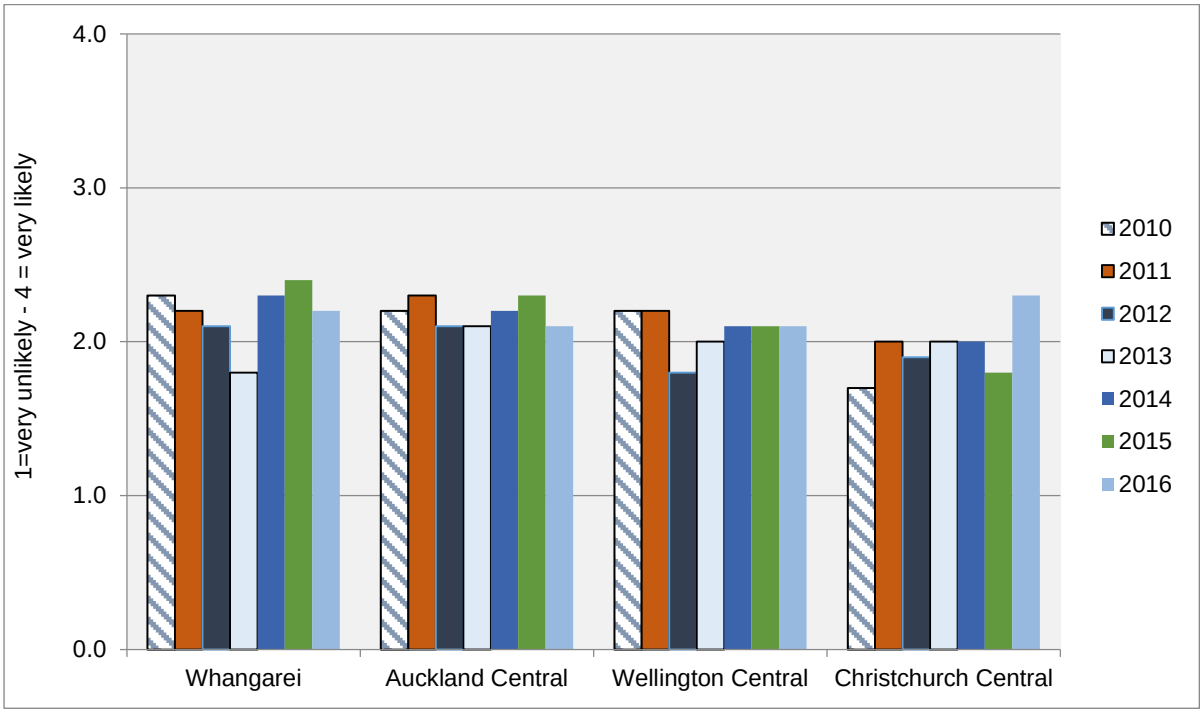
The detainees were also asked how likely they thought it was that they would be stopped if they drove under the influence of drugs 'other than alcohol' (e.g. cannabis, methamphetamine, ecstasy or heroin). In 2016, thirty-one percent of the detainees who drove thought it was 'very unlikely' they would be stopped by the police while driving under the influence of drugs; a futher 30% said they were 'unlikey' to be stopped (Table 11 5). The detainees were more likely to believe they would be stopped while driving under the influence of drugs from 2013 to 2016 (up from 2.0 to 2.2, p=0.0382). Christchurch detainees were more likely to believe they would be stopped by police while driving under the influence of drugs from 2010 to 2016 (up from 1.7 to 2.3, p<0.0001) (Figure 11 11).

**Table 11 5: 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 had used alcohol and drugs in the past year and who drove), 2010-2016**

| Likelihood of being stopped by police while under influence of drugs | Year | N-value | Very likely [4] | Likely [3] | Unlikely [2] | Very unlikely [1] | Mean score of likelihood of being stopped (1=Very unlikely – Very likely [4] |
|---|---|---|---|---|---|---|---|
| **Whangarei** | 2010 | n=29 | 14% | 24% | 45% | 17% | 2.3 |
| | 2011 | n=93 | 18% | 25% | 18% | 39% | 2.2 |
| | 2012 | n=110 | 14% | 20% | 30% | 36% | 2.1 |
| | 2013 | n=109 | 9% | 17% | 20% | 53% | 1.8 |
| | 2014 | n=95 | 22% | 17% | 26% | 35% | 2.3 |
| | 2015 | n=137 | 20% | 25% | 27% | 28% | 2.4 |
| | 2016 | n=68 | 16% | 25% | 21% | 38% | 2.2 |
| **Auckland Central** | 2010 | n=144 | 15% | 24% | 28% | 33% | 2.2 |
| | 2011 | n=176 | 13% | 30% | 31% | 27% | 2.3 |
| | 2012 | n=131 | 16% | 16% | 30% | 38% | 2.1 |
| | 2013 | n=192 | 13% | 22% | 30% | 35% | 2.1 |
| | 2014 | n=162 | 14% | 21% | 33% | 31% | 2.2 |
| | 2015 | n=165 | 15% | 27% | 33% | 25% | 2.3 |
| | 2016 | n=129 | 12% | 22% | 36% | 30% | 2.1 |
| **Wellington Central** | 2010 | n=106 | 20% | 19% | 26% | 35% | 2.2 |
| | 2011 | n=92 | 16% | 22% | 27% | 35% | 2.2 |
| | 2012 | n=66 | 5% | 23% | 26% | 47% | 1.8 |
| | 2013 | n=53 | 15% | 17% | 23% | 45% | 2.0 |
| | 2014 | n=63 | 13% | 19% | 32% | 37% | 2.1 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | 2015 | n=83 | 8% | 27% | 28% | 37% | 2.1 |
| | 2016 | n=142 | 15% | 19% | 23% | 42% | 2.1 |
| **Christchurch Central** | 2010 | n=219 | 9% | 16% | 17% | 58% | 1.7 |
| | 2011 | n=132 | 11% | 23% | 23% | 42% | 2.0 |
| | 2012 | n=202 | 11% | 16% | 28% | 45% | 1.9 |
| | 2013 | n=165 | 16% | 16% | 18% | 49% | 2.0 |
| | 2014 | n=179 | 12% | 22% | 21% | 44% | 2.0 |
| | 2015 | n=190 | 10% | 14% | 24% | 52% | 1.8 |
| | 2016 | n=171 | 12% | 32% | 32% | 25% | 2.3 |

**Figure 11 11: Mean score of likelihood of being stopped while under the influence of drugs (other than alcohol) by location (of those detainees who had used alcohol and other drugs in the past year and who drove), 2010-2016**




## Summary

- In 2016, 76% of the detainees had used an illegal drug in the previous 12 months, and this had not changed over the previous six years
- In 2016, 84% of the substance using detainees had experienced at least one problem from their alcohol and other drug use in the previous 12 months
- There was a decline in the proportion of substance using detainees who reported 'damaging someone else's property' (down from 43% in 2010 to 29% in 2016) and 'stealing someones property' (down from 30% in 2010 to 21% in 2016) due to alcohol and other drug use
- There was also a decline in the proportion of detainees who reported 'physically hurting someone' (down from 36% in 2010 to 26% in 2016) and who were physically assaulted (down from 34% in 2010 to 27% in 2016) due to alcohol and other drug use
- The proportion of substance using detainees who had 'overdosed' on a drug declined from 11% in 2011 to 6% in 2016

- There was a steady decline in the proportion of detainees who 'drove too fast' (down from 31% in 2010 to 21% in 2016), had been 'charged with driving offence' (down from 30% in 2010 to 19% in 2016), and had a 'car crash' (down from 16% in 2013 to 9% in 2016) due to alcohol and other drug use

- The detainees named three drug types as mainly responsible for their substance use problems in 2016: alcohol (78%), methamphetamine (33%) and cannabis (32%)

- Nine percent of detainees attributed their substance use problems to synthetic cannabinoids (including 18% of the detainees in Christchurch Central).

- The proportion of detainees who attributed their substance use related problems to alcohol increased from 69% in 2014 to 78% in 2016

- The proportion of detainees who attributed their substance use related problems to methamphetamine increased from 14% in 2010 to 33% in 2016

- Increases in the proportion of detainees who attributed their substance use problems to methamphetamine were found in Whangarei (from 12% in 2010 to 35% in 2016), Auckland Central (up from 21% in 2010 to 35% in 2016), Wellington Central (up from 14% in 2010 to 37% in 2016) and Christchurch Central (up from 8% in 2010 to 27% in 2016)

- The proportion of detainees who attributed their substance use related problems to cannabis increased from 23% in 2014 to 32% in 2016

- The proportion of detainees who attributed their substance use problems to synthetic cannabinoids decreased from 14% in 2014 to 9% in 2016

- The proportion of detainees in Wellington Central who attributed their substance use problems to synthetic cannabinoids declined from 21% in 2014 to 8% in 2016

- In 2016, 25% of the detainees who drove thought it was 'very unlikely' they would be stopped by the police while driving under the influence of alcohol

- The detainees were more likely to believe they would be stopped while driving under the influence of alcohol from 2010 to 2016

- Detainees from Christchurch Central were more likely to believe they would be stopped while driving under the influence of alcohol from 2010 to 2016

- In 2016, 31% of the detainees who drove thought it was ‘very unlikely’ and a further 30% ‘unlikely’ they would be stopped by the police while driving under the influence of drugs other than alcohol

- The detainees were more likely to believe they would be stopped while driving under the influence of drugs from 2013 to 2016

- Christchurch Central detainees were more likely to believe they would be stopped by police while driving under the influence of drugs from 2010 to 2016

# Chapter 12 – Synthetic cannabinoids

## Introduction

Synthetic cannabinoids include a wide range of compounds and products that mimic the effects of natural cannabis, although often with greater affinity to brain receptors (Aung et al., 2000; Castaneto et al., 2014; Hermanns-Clausen et al., 2013; Uchiyama et al., 2011). Studies of synthetic cannabinoid use have reported a range of adverse effects including tachycardia, vomiting, agitation, drowsiness, psychosis, hallucinations, anxiety, headache, seizures and suicidal ideation (Castaneto, et al., 2014; Every-Palmer, 2010, 2011; Glue et al., 2013; Harris & Brown, 2013; Schep et al., 2011; Spaderna et al., 2013; Wilkins, et al., 2016b; Winstock & Barratt, 2013). Acute synthetic cannabinoid intoxication has resulted in emergency department admissions (Castaneto, et al., 2014)(Castaneto et al., 2014, Winstock and Barratt, 2013b) (Castaneto, et al., 2014; Winstock & Barratt, 2013) (Castaneto, et al., 2014; Winstock & Barratt, 2013) (Castaneto, et al., 2014; Winstock & Barratt, 2013) (Castaneto, et al., 2014; Winstock & Barratt, 2013) (Castaneto, et al., 2014; Winstock & Barratt, 2013) (Castaneto, et al., 2014; Winstock & Barratt, 2013) (Castaneto, et al., 2014; Winstock & Barratt, 2013) (Castaneto, et al., 2014; Winstock & Barratt, 2013) (Castaneto, et al., 2014; Winstock & Barratt, 2013) (Castaneto, et al., 2014; Winstock & Barratt, 2013), and some cases of dependence on synthetic cannabinoids have also been reported after chronic use (Castaneto, et al., 2014; Nacca et al., 2013; Vandrey et al., 2012; Zimmermann et al., 2009).

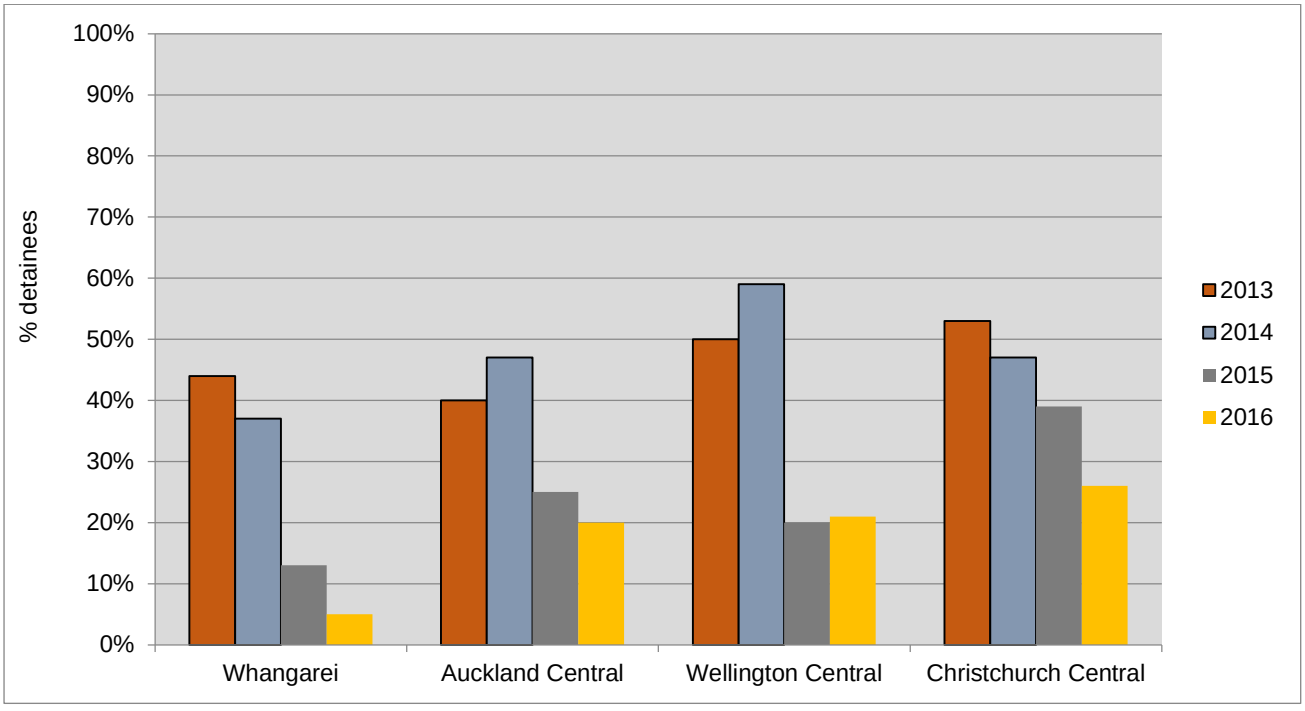
Synthetic cannabinoid products first emerged in New Zealand around 2009 and dozens of products were introduced over subsequent years and sold from local convenience stores (Wilkins, et al., 2013). They were able to be legally sold as the active compounds were not specifically prohibited by the *Misuse of Drugs Act 1975*. The passage of the *Psychoactive Substances Act* (PSA) in July 2013 allowed a number of synthetic cannabinoid products to be licensed and legally sold from licensed retail outlets subject to new retail restrictions (e.g. R18, no sales from convenience stores) (Wilkins, 2014a, 2014b). The interim PSA regime was brought to an abrupt end in May 2014 (Wilkins, 2014c), effectively making all products with psychoactive effects illegal (Rychert & Wilkins, 2015).

The 2014 NZ-ADUM only partially captured the impact of the 2014 PSA bans as the bans had only just been imposed when interviewing was being conducted, and some formerly legal stocks were still likely to be available via the black market. The 2015 NZ-ADUM results provided a clearer picture of the impact of the bans and found declining use, availability and related harm (Wilkins, et al., 2016a). However, the use and availability of synthetic cannabinoids was noticeably higher in Christchurch Central than the other locations, suggesting a more entrenched market.

## Use of synthetic cannabinoids

The proportion of detainees who had used synthetic cannabinoids in the previous 12 months declined from 47% in 2013 to 20% in 2016 ($p<0.0001$). There was a decline in the proportion of detainees who had used synthetic cannabinoids in the previous year in Whangarei (down from 44% in 2014 to 5% in 2016, $p<0.0001$), Auckland Central (down from 40% in 2013 to 20% in 2016, $p<0.0001$), Wellington Central (down from 50% in 2014 to 21% in 2016, $p<0.0001$) and Christchurch Central (down from 53% in 2013 to 26% in 2016, $p<0.0001$) (Figure 12 1). In 2016, detainees in Whangarei were less likely to have used synthetic cannabinoids in the previous 12 months than those in Auckland Central (5% vs. 20%, $p=0.0005$), Wellington Central (5% vs. 21%, $p=0.0010$) and Whangarei (5% vs. 26%, $p<0.0001$).

**Figure 12 1: Proportion of police detainees who had used synthetic cannabinoids in the past 12 months by location, 2013-2016**



Similarly, the proportion of detainees who had used synthetic cannabinoids in the past month declined from 29% in 2013 to 10% in 2016 ($p<0.0001$) (Figure 12 3). The proportion of detainees who had used synthetic cannabinoids in the past month declined in Auckland Central (down from 26% in 2013 to 11% in 2016, $p=0.0002$), Wellington Central (down from 36% in 2013 to 8% in 2016, $p<0.0001$) and Christchurch Central (down from 32% in 2013 to 17% in 2016, $p=0.0005$). The detainees in Whangarei reported no use of synthetic cannabinoids in the past month in 2016.

**Table 12 1: Police detainees' patterns of synthetic cannabinoid use by location, 2013-2016**

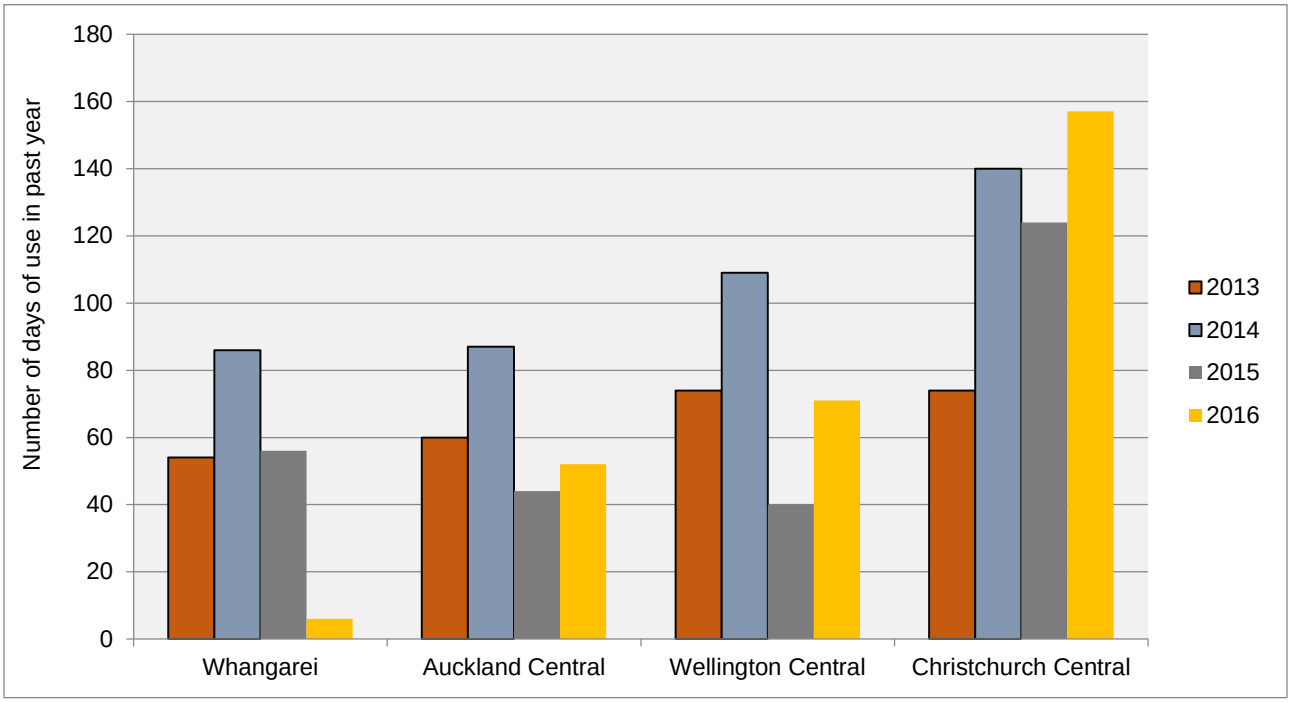
| Use of synthetic cannabinoids | Year | N - value | Ever used (%) | Used in past 12 months (%) | Mean number of days used in past 12 months** | Felt dependent in the past 12 months (%)** | Used in past month (%) | Mean number of days used in past month*** |
|---|---|---|---|---|---|---|---|---|
| **Whangarei** | 2013 | n=149 | 52% | 44% | 54 | 10% | 24% | 10 |
| | 2014 | n=151 | 57% | 37% | 86 | 25% | 19% | 12 |
| | 2015 | n=169 | 57% | 13% | 56 | 9% | 5% | 14 |
| | 2016 | n=131 | 51% | 5% | 6 | 0% | 0% | - |
| **Auckland Central** | 2013 | n=287 | 48% | 40% | 60 | 12% | 26% | 10 |
| | 2014 | n=315 | 64% | 47% | 87 | 28% | 22% | 14 |
| | 2015 | n=267 | 50% | 25% | 44 | 17% | 10% | 10 |
| | 2016 | n=221 | 57% | 20% | 52 | 14% | 11% | 8 |
| **Wellington Central** | 2013 | n=106 | 54% | 50% | 74 | 16% | 36% | 11 |
| | 2014 | n=95 | 73% | 59% | 109 | 29% | 32% | 15 |
| | 2015 | n=107 | 68% | 20% | 40 | 20% | 4% | 10 |
| | 2016 | n=213 | 63% | 21% | 71 | 23% | 8% | 12 |
| **Christchurch Central** | 2013 | n=280 | 62% | 53% | 74 | 24% | 32% | 12 |
| | 2014 | n=273 | 59% | 47% | 140 | 36% | 28% | 14 |
| | 2015 | n=292 | 67% | 39% | 124 | 37% | 22% | 17 |
| | 2016 | n=235 | 68% | 26% | 157 | 47% | 17% | 19 |
| **All sites** | 2013 | n=822 | 54% | 47% | 67 | 17% | 29% | 11 |
| | 2014 | n=834 | 62% | 47% | 110 | 30% | 24% | 14 |
| | 2015 | n=835 | 60% | 27% | 82 | 26% | 12% | 14 |
| | 2016 | n=800 | 61% | 20% | 97 | 29% | 10% | 14 |

** 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 who had used synthetic cannabinoids in the previous 12 months used them on a mean of 97 days in 2016 (median 10, 1-365 days). There was no statistically significant change in the number of days the detainees has used synthetic cannabinoids in the past year from 2013 to 2016. In 2016, the detainees in Christchurch Central had used synthetic cannabinoids on a higher mean number of days than those in Auckland Central (157 days vs. 52 days, p=0.0053), Whangarei (157 days vs. 6 days, p=0.0053) and Wellington Central (157 days vs. 71 days, p=0.0012) (Figure 12 2).

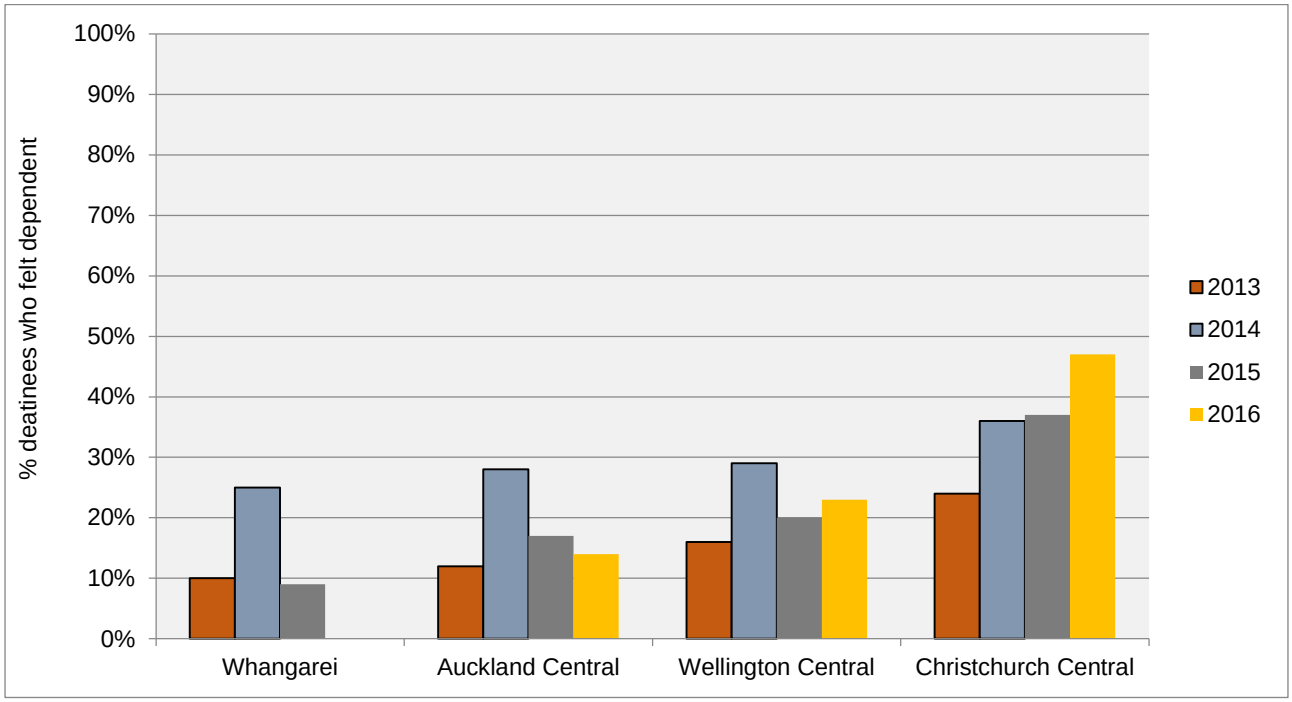
**Figure 12 2: Mean number of days police detainees used synthetic cannabinoids in the past 12 months by location (of those who had used synthetic cannabinoids in the past 12 months), 2010- 2016**




## Dependency on synthetic cannabinoids

Those detainees who had used synthetic cannabinoids in the past year were asked if they felt dependent on them. The proportion of detainees who felt dependent on synthetic cannabinoids increased from 17% in 2013 to 29% in 2016 (p=0.0097). The proportion of Christchurch Central detainees who felt dependent on synthetic cannabinoids increased from 24% in 2013 to 47% in 2016 (p=0.0098) (Figure 12 3).

**Figure 12 3: 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), 2013-2016**




## Synthetic cannabinoid use at the time of arrest

The proportion of detainees who had been using synthetic cannabinoids prior to their arrest declined from 7% in 2013 to 3% in 2016 (p=0.0004). The proportion of Wellington Central detainees who had been using synthetic cannabinoids prior to their arrest declined from 9% in 2013 to 2% in 2016 (p=0.0179).

**Table 12 2: Synthetic cannabinoid use by police detainees at time of arrest by location, 2013-2016**

| Use of synthetic cannabinoids | Year | n-value | Using when arrested (%) |
|---|---|---|---|
| **Whangarei** | 2013 | n=153 | 5% |
| | 2014 | n=151 | 1% |
| | 2015 | n=169 | 1% |
| | 2016 | n=131 | 0% |
| **Auckland Central** | 2013 | n=300 | 6% |
| | 2014 | n=315 | 6% |
| | 2015 | n=267 | 4% |
| | 2016 | n=221 | 3% |
| **Wellington Central** | 2013 | n=106 | 9% |
| | 2014 | n=95 | 12% |
| | 2015 | n=107 | 0% |
| | 2016 | n=2013 | 2% |
| **Christchurch Central** | 2013 | n=289 | 8% |
| | 2014 | n=273 | 9% |
| | 2015 | n=292 | 8% |
| | 2016 | n=235 | 4% |
| **All Sites** | 2013 | n=848 | 7% |
| | 2014 | n=834 | 7% |
| | 2015 | n=835 | 4% |
| | 2016 | n=800 | 3% |

## Current availability of synthetic cannabinoids

In 2016, 62% of the detainees described the current availability of synthetic cannabinoids as 'very easy' and a further 25% described it as 'easy' (Table 12 6). Overall, there was no statistically significant change in the current availability of synthetic cannabinoids in 2016 compared to previous years. The current availability of synthetic cannabinoids declined in Whangarei from 2013 to 2016 (down from 3.4 to 2.2, p=0.0400) (Figure 12 3). Conversely, the current availability of synthetic cannabinoids increased in Wellington Central from 2015 to 2016 (up from 2.8 to 3.4, p=0.0431). In 2016, the current availability of synthetic cannabinoids was considered to be higher in Christchurch Central than Whangarei (3.7 vs. 2.2, p<0.0001) and Auckland Central (3.7 vs. 3.3, p=0.0474).

**Figure 12 4: Current availability of synthetic cannabinoids by location, 2013-2016**

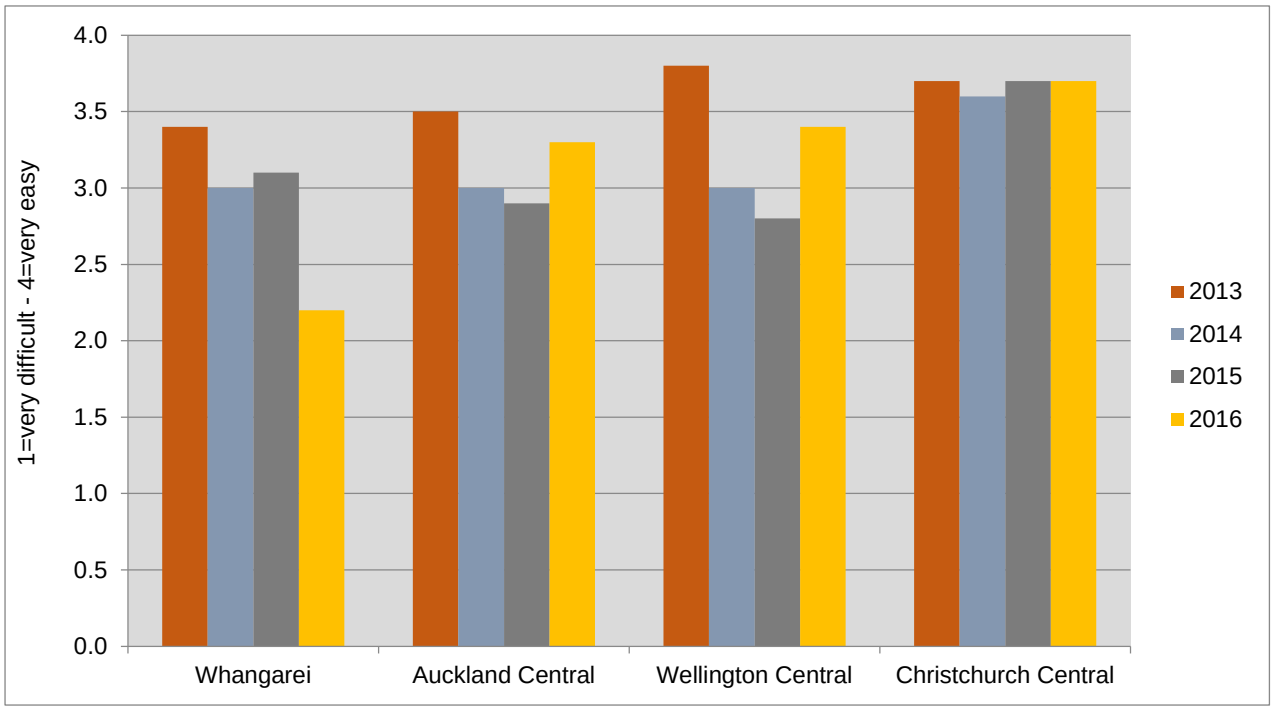


**Table 12 3: Police detainees' perceptions of the current availability of synthetic cannabinoids by location, 2013-2016**

| Current availability of synthetic cannabinoids (%) | Year | N-value | Very easy [4] | Easy [3] | Difficult [2] | Very difficult [1] | Average availability score (1=very difficult – 4=very easy) | Overall current status |
|---|---|---|---|---|---|---|---|---|
| **Whangarei** | 2013 | n=57 | 61% | 25% | 5% | 9% | 3.4 | Very easy / easy |
| | 2014 | n=45 | 44% | 31% | 7% | 18% | 3.0 | Very easy / easy |
| | 2015 | n=18 | 61% | 6% | 11% | 22% | 3.1 | Very easy / very difficult |
| | 2016 | n=6 | 17% | 17% | 33% | 33% | 2.2 | Very difficult/ difficult |
| **Auckland Central** | 2013 | n=117 | 65% | 21% | 10% | 4% | 3.5 | Very easy / easy |
| | 2014 | n=129 | 50% | 21% | 9% | 20% | 3.0 | Very easy / easy |
| | 2015 | n=59 | 37% | 29% | 17% | 17% | 2.9 | Very easy / easy |
| | 2016 | n=40 | 48% | 35% | 15% | 3% | 3.3 | Very easy / easy |
| **Wellington Central** | 2013 | n=53 | 85% | 13% | 0% | 2% | 3.8 | Very easy |
| | 2014 | n=48 | 50% | 21% | 13% | 17% | 3.0 | Very easy / easy |
| | 2015 | n=20 | 25% | 35% | 35% | 5% | 2.8 | Easy / difficult |
| | 2016 | n=44 | 61% | 27% | 5% | 7% | 3.4 | Very easy / easy |
| **Christchurch Central** | 2013 | n=151 | 78% | 13% | 5% | 3% | 3.7 | Very easy |
| | 2014 | n=123 | 76% | 15% | 2% | 7% | 3.6 | Very easy |
| | 2015 | n=107 | 80% | 11% | 5% | 4% | 3.7 | Very easy |
| | 2016 | n=59 | 78% | 17% | 2% | 3% | 3.7 | Very easy |
| **All Sites** | 2013 | n=378 | 72% | 17% | 6% | 4% | 3.6 | Very easy |
| | 2014 | n=345 | 58% | 20% | 7% | 15% | 3.2 | Very easy / easy |
| | 2015 | n=204 | 61% | 18% | 12% | 9% | 3.3 | Very easy / easy |
| | 2016 | n=149 | 62% | 25% | 7% | 5% | 3.4 | Very easy / easy |

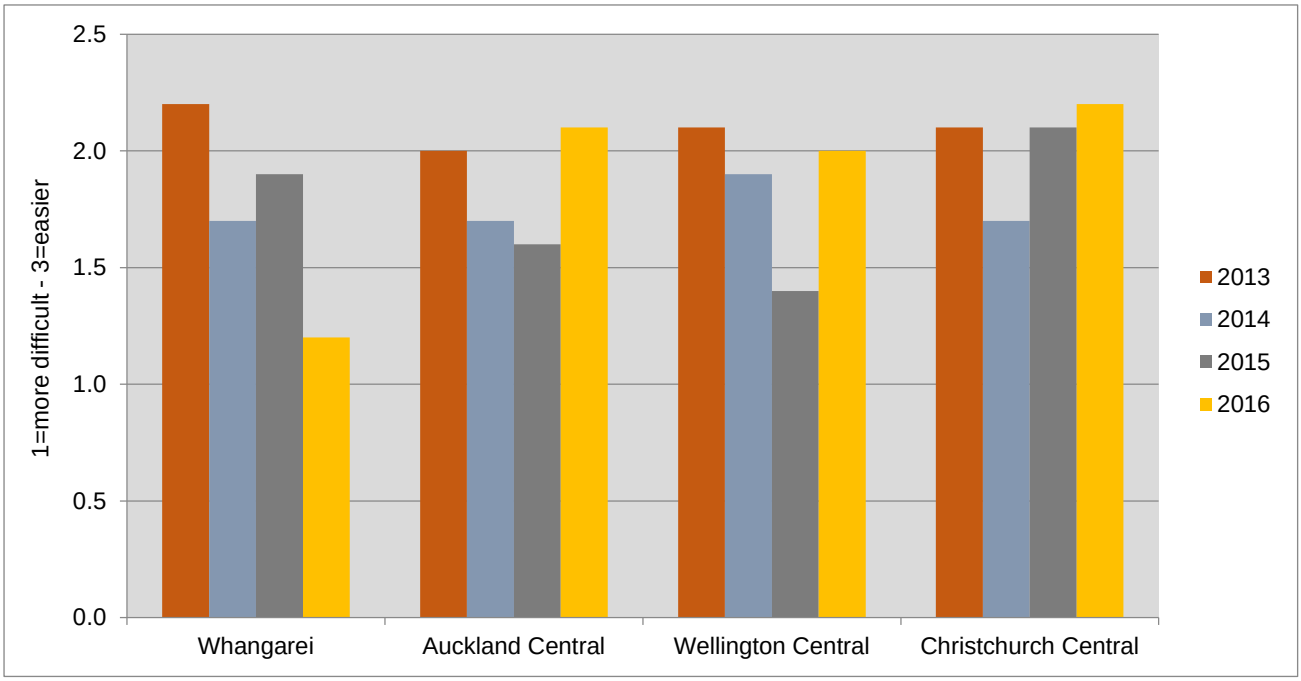
### Change in availability of synthetic cannabinoids

In 2016, 42% of the detainees described the availability of synthetic cannabinoids as 'stable' and 31% as 'easier' compared to six months ago (Table 12 4). The reported availability of synthetic cannabis increased from 2015 to 2016 (up from 1.8 to 2.1, p=0.0033). The availability of synthetic cannabinoids declined in Whangarei from 2013 to 2016 (down from 2.2 to 1.2, p=0.0307) (Figure 12 4). Conversely, the availability of synthetic cannabinoids increased in Auckland Central (up from 1.6 in 2015 to 2.1 in 2016, p=0.0003), Wellington Central (up from 1.4 in 2015 to 2.0 in 2016, p=0.0021) and Christchurch Central (up from 1.7 in 2014 to 2.2 in 2016, p<0.0001). In 2016, the availability of synthetic cannabinoids was more likely to be considered to be increasing in Christchurch Central than Whangarei (2.2 vs. 1.2, p=0.0101).

**Table 12 4: Police detainees' perceptions of the change in availability of synthetic cannabinoids by location, 2016**

| Change in availability of synthetic cannabinoids (%) | Year | N-value | Easier [3] | Stable [2] | Fluctuates [2] | More difficult [1] | Average change in availability score (1=more difficult – 3=easier) | Overall recent change |
|---|---|---|---|---|---|---|---|---|
| **Whangarei** | 2013 | n=56 | 38% | 36% | 5% | 21% | 2.2 | Easier / stable |
| | 2014 | n=45 | 13% | 31% | 11% | 44% | 1.7 | More difficult / stable |
| | 2015 | n=21 | 29% | 24% | 5% | 43% | 1.9 | More difficult / easier |
| | 2016 | n=56 | 0% | 20% | 0% | 80% | 1.2 | More difficult |
| **Auckland Central** | 2013 | n=112 | 17% | 58% | 8% | 17% | 2.0 | Stable / easier |
| | 2014 | n=129 | 20% | 24% | 7% | 49% | 1.7 | More difficult / stable |
| | 2015 | n=58 | 12% | 21% | 12% | 55% | 1.6 | More difficult / stable |
| | 2016 | n=36 | 36% | 36% | 6% | 22% | 2.1 | Easier / stable |
| **Wellington Central** | 2013 | n=47 | 21% | 70% | 2% | 6% | 2.1 | Stable |
| | 2014 | n=47 | 32% | 21% | 2% | 45% | 1.9 | More difficult / easier |
| | 2015 | n=17 | 0% | 29% | 6% | 65% | 1.4 | More difficult / stable |
| | 2016 | n=39 | 13% | 67% | 10% | 10% | 2.0 | Stable / easier |
| **Christchurch Central** | 2013 | n=146 | 26% | 51% | 6% | 16% | 2.1 | Stable / easier |
| | 2014 | n=120 | 18% | 27% | 2% | 53% | 1.7 | More difficult / Stable |
| | 2015 | n=107 | 34% | 43% | 4% | 20% | 2.1 | Stable / easier |
| | 2016 | n=57 | 42% | 32% | 5% | 21% | 2.2 | Easier / stable |
| **All Sites** | 2013 | n=361 | 24% | 53% | 6% | 16% | 2.1 | Stable / easier |
| | 2014 | n=341 | 20% | 26% | 5% | 49% | 1.7 | More difficult / stable |
| | 2015 | n=203 | 24% | 34% | 6% | 36% | 1.8 | More difficult / stable |
| | 2016 | n=137 | 31% | 42% | 7% | 20% | 2.1 | Stable / easier |

**Figure 12 5: Change in availability of synthetic cannabinoids by location, 2013-2016**



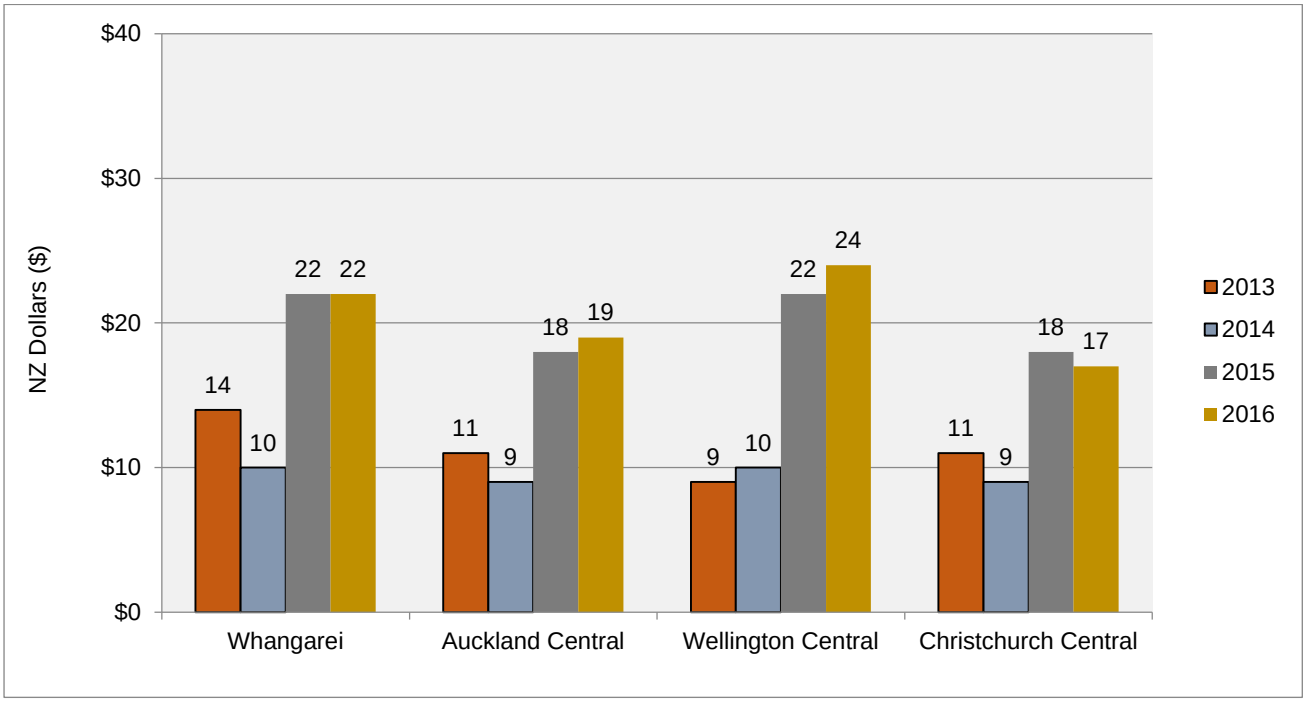

## Price

The price of a gram of synthetic cannabinoids increased from $11 in 2013 to $19 in 2016 ($p<0.0001$). The gram price of synthetic cannabinoids increased in Whangarei (up from $10 in 2014 to $22 in 2016, $p=0.0034$), Auckland Central ($11 in 2013 to $19 in 2016, $p<0.0001$), Wellington Central ($9 in 2013 to $24 in 2016, $p<0.0001$) and Christchurch Central ($11 in 2013 to $17 in 2016, $p<0.0001$) (Figure 12 5).

**Table 12 5: Current price of synthetic cannabinoids by location , 2016**

| Current price of synthetic cannabinoid ($) | Year | N-value | Price ($/gram) |
|---|---|---|---|
| **Whangarei** | 2013 | n=52 | $14 |
| | 2014 | n=37 | $10 |
| | 2015 | n=14 | $22 |
| | 2016 | n=52 | $22 |
| **Auckland Central** | 2013 | n=110 | $11 |
| | 2014 | n=104 | $9 |
| | 2015 | n=47 | $18 |
| | 2016 | n=37 | $19 |
| **Wellington Central** | 2013 | n=46 | $9 |
| | 2014 | n=44 | $10 |
| | 2015 | n=13 | $22 |
| | 2016 | n=39 | $24 |
| **Christchurch Central** | 2013 | n=131 | $11 |
| | 2014 | n=108 | $9 |
| | 2015 | n=96 | $18 |
| | 2016 | n=45 | $17 |
| **All Sites** | 2013 | n=339 | $11 |
| | 2014 | n=293 | $9 |
| | 2015 | n=170 | $18 |
| | 2016 | n=126 | $19 |

**Figure 12 6: Mean price of synthetic cannabinoids per gram by location, 2013-2016**



## Change in the price of synthetic cannabinoids

In 2016, 60% of the detainees reported the price of synthetic cannabinoids had been 'stable' and 24% said the price had been 'increasing' in the previous six months. The price of synthetic cannabinoids was reported to be increasing from 2013 to 2016 (up from 1.9 to 2.2, p<0.0001). The price of synthetic cannabinoids was reported to be increasing in Central Christchurch from 2013 to 2016 (up from 1.9 to 2.3, p<0.0001) (Figure 12 6).

**Figure 12 7: Mean score of the change in the price of synthetic cannabinoids by location, 2013-2016**

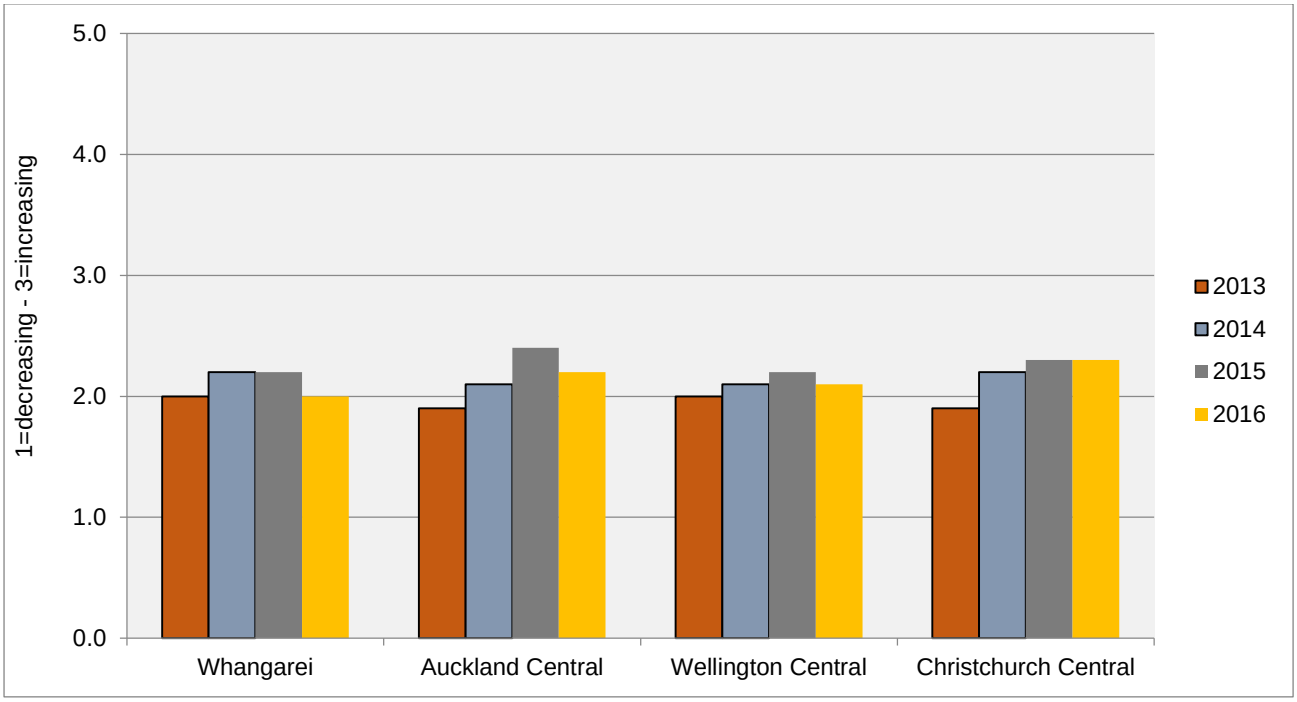


**Table 12 6: Police detainees' perceptions of the change in the price of synthetic cannabinoids in the past six months by location, 2016**

| Change in price of synthetic cannabinoids (%) | Year | N-value | Increasing [3] | Fluctuating [2] | Stable [2] | Decreasing [1] | Average change in availability score (1=decreasing – 3=increasing) | Overall recent change |
|---|---|---|---|---|---|---|---|---|
| **Whangarei** | 2013 | n=46 | 4% | 2% | 85% | 9% | 2.0 | Stable |
| | 2014 | n=37 | 46% | 14% | 16% | 24% | 2.2 | Increasing / decreasing |
| | 2015 | n=14 | 43% | 0% | 36% | 21% | 2.2 | increasing / stable |
| | 2016 | n=4 | 25% | 25% | 25% | 25% | 2.0 | n/a |
| **Auckland Central** | 2013 | n=99 | 8% | 8% | 70% | 14% | 1.9 | Stable |
| | 2014 | n=99 | 29% | 11% | 41% | 18% | 2.1 | Stable / increasing |
| | 2015 | n=50 | 48% | 6% | 34% | 12% | 2.4 | increasing / stable |
| | 2016 | n=34 | 29% | 9% | 56% | 6% | 2.2 | Stable / increasing |
| **Wellington Central** | 2013 | n=44 | 5% | 2% | 84% | 9% | 2.0 | Stable |
| | 2014 | n=40 | 30% | 5% | 43% | 23% | 2.1 | Stable / increasing |
| | 2015 | n=15 | 33% | 13% | 40% | 13% | 2.2 | Stable / increasing |
| | 2016 | n=38 | 16% | 18% | 61% | 5% | 2.1 | Stable / fluctuating |
| **Christchurch Central** | 2013 | n=130 | 6% | 2% | 72% | 20% | 1.9 | Stable |
| | 2014 | n=102 | 30% | 17% | 41% | 12% | 2.2 | Stable / increasing |
| | 2015 | n=91 | 30% | 9% | 58% | 3% | 2.3 | Stable / increasing |
| | 2016 | n=55 | 27% | 7% | 64% | 2% | 2.3 | Stable / increasing |
| **All Sites** | 2013 | n=319 | 6% | 4% | 75% | 15% | 1.9 | Stable |
| | 2014 | n=278 | 32% | 13% | 38% | 17% | 2.1 | Stable / increasing |
| | 2015 | n=170 | 36% | 8% | 48% | 8% | 2.3 | Stable / increasing |
| | 2016 | n=131 | 24% | 11% | 60% | 5% | 2.2 | Stable / increasing |

## Current strength of synthetic cannabinoids

In 2016, 56% of the detainees described the current strength of synthetic cannabinoids as 'high' and 19% said it was 'medium' (Table 12 6). There was no statistically significant change in the strength of synthetic cannabinoids from 2013 to 2016.

**Table 12 7: Police detainees' perceptions of current strength of synthetic cannabinoids in the past six months, 2013-2016**

| Current strength of synthetic cannabinoids (%) | Year | N-value | High [3] | Medium [2] | Fluctuates [2] | Low [1] | Average strength score (1=low – 3=high) | Overall current status |
|---|---|---|---|---|---|---|---|---|
| **Whangarei** | 2013 | n=55 | 65% | 16% | 5% | 13% | 2.5 | High / medium |
| | 2014 | n=43 | 72% | 7% | 2% | 19% | 2.5 | High |
| | 2015 | n=20 | 60% | 10% | 0% | 30% | 2.3 | High / low |
| | 2016 | n=4 | 50% | 25% | 0% | 25% | 2.3 | High / medium / low |
| **Auckland Central** | 2013 | n=118 | 47% | 22% | 7% | 24% | 2.2 | High / low |
| | 2014 | n=129 | 61% | 13% | 10% | 16% | 2.5 | High / low |
| | 2015 | n=60 | 55% | 17% | 12% | 17% | 2.4 | High / medium |
| | 2016 | n=43 | 53% | 21% | 12% | 14% | 2.4 | High / medium |
| **Wellington Central** | 2013 | n=51 | 51% | 29% | 10% | 10% | 2.4 | High / medium |
| | 2014 | n=45 | 47% | 31% | 16% | 7% | 2.4 | High / medium |
| | 2015 | n=14 | 50% | 14% | 14% | 21% | 2.3 | High / low |
| | 2016 | n=42 | 74% | 17% | 5% | 5% | 2.7 | High |
| **Christchurch Central** | 2013 | n=149 | 68% | 13% | 3% | 15% | 2.5 | High / low |
| | 2014 | n=121 | 70% | 7% | 7% | 16% | 2.5 | High |
| | 2015 | n=106 | 55% | 14% | 17% | 14% | 2.4 | High / fluctuates |
| | 2016 | n=57 | 46% | 19% | 25% | 11% | 2.4 | High / fluctuates |
| **All Sites** | 2013 | n=373 | 59% | 19% | 6% | 17% | 2.4 | High / medium |
| | 2014 | n=338 | 62% | 12% | 9% | 15% | 2.5 | High / low |
| | 2015 | n=200 | 55% | 15% | 14% | 17% | 2.4 | High / low |
| | 2016 | n=146 | 56% | 19% | 14% | 10% | 2.4 | High / medium |

### Change in strength of synthetic cannabinoids

Thirty-six percent of the detainees reported the strength of synthetic cannabinoids had been 'increasing' and 27% said it had been 'stable' in the past six months in 2016. Overall, there was no statistically significant change in perceptions of the change in the strength of synthetic cannabinoids from 2013 to 2016. The strength of synthetic cannabinoids increased in Wellington Central from 2015 to 2016 (up from 1.8 to 2.4, p=0.0234).

**Table 12 8: Police detainees' perceptions of change in strength of synthetic cannabinoids in the past six months, 2016**

| Change in strength of synthetic cannabinoids (%) | Year | N-value | Increasing [3] | Stable [2] | Fluctuating [2] | Decreasing [1] | Average change in strength (1=decreasing – 3=increasing) | Overall recent change |
|---|---|---|---|---|---|---|---|---|
| **Whangarei** | 2013 | n=42 | 14% | 71% | 5% | 10% | 2.0 | Stable |
| | 2014 | n=30 | 23% | 47% | 7% | 23% | 2.0 | Stable / increasing |
| | 2015 | n=14 | 29% | 50% | 0% | 21% | 2.1 | Stable / increasing |
| | 2016 | n=4 | 75% | 0% | 0% | 25% | 2.5 | Stable |
| **Auckland Central** | 2013 | n=93 | 13% | 69% | 5% | 13% | 2.0 | Stable / increasing |
| | 2014 | n=104 | 22% | 47% | 11% | 20% | 2.0 | Stable / increasing |
| | 2015 | n=53 | 17% | 49% | 15% | 19% | 2.0 | Stable / decreasing |
| | 2016 | n=35 | 43% | 29% | 11% | 17% | 2.3 | increasing / stable |
| **Wellington Central** | 2013 | n=41 | 27% | 46% | 22% | 5% | 2.2 | Stable / increasing |
| | 2014 | n=35 | 26% | 46% | 9% | 20% | 2.1 | Stable / increasing |
| | 2015 | n=10 | 10% | 60% | 0% | 30% | 1.8 | Stable / decreasing |
| | 2016 | n=34 | 44% | 38% | 15% | 3% | 2.4 | increasing / stable |
| **Christchurch Central** | 2013 | n=136 | 18% | 60% | 13% | 9% | 2.1 | Stable / increasing |
| | 2014 | n=103 | 23% | 40% | 24% | 13% | 2.1 | Stable / fluctuating |
| | 2015 | n=94 | 21% | 32% | 27% | 20% | 2.0 | Stable / fluctuating |
| | 2016 | n=54 | 24% | 20% | 24% | 31% | 1.9 | decreasing / increasing / fluctuating |
| **All Sites** | 2013 | n=312 | 17% | 62% | 11% | 10% | 2.1 | Stable / increasing |
| | 2014 | n=272 | 23% | 44% | 15% | 18% | 2.1 | Stable / increasing |
| | 2015 | n=171 | 20% | 40% | 19% | 20% | 2.0 | Stable / increasing |
| | 2016 | n=127 | 36% | 27% | 17% | 20% | 2.1 | increasing / stable |

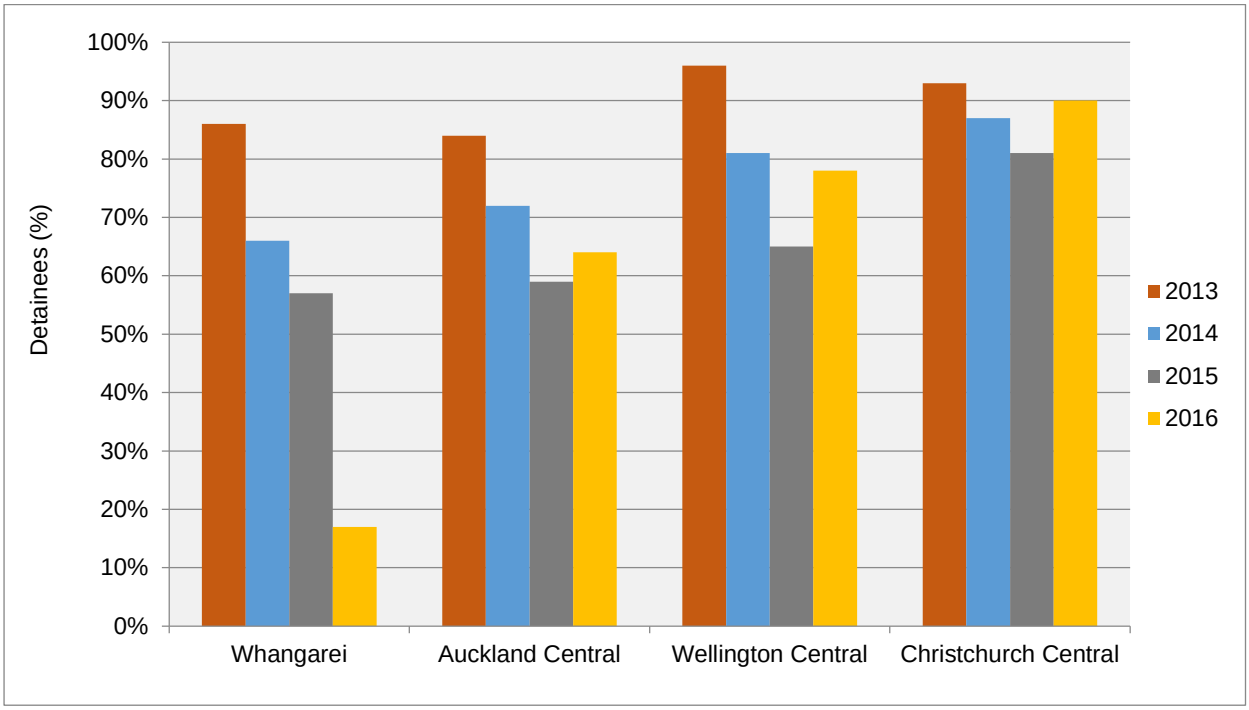
## Time taken to purchase synthetic cannabinoids

In 2016, 77% of the detainees who had used synthetic cannabinoids in the previous year were able to purchase them in one hour or less (Table 12 8). The proportion of detainees who could purchase synthetic cannabinoids in one hour or less declined from 88% in 2013 to 77% in 2016 (p=0.0028) (Figure 12 4). In 2016, detainees in Christchurch Central were more likely to be able to purchase synthetic cannabinoids in one hour or less than those in Auckland Central (90% vs. 64%, p=0.0153) and Whangarei (90% vs. 17%, p=0.0057).

**Table 12 9: Time taken by police detainees to purchase synthetic cannabinoids by location, 2016**

| Time to purchase synthetic cannabinoids (%) | Year | N-value | Months | Weeks | Days | About one day | Hours | 1 Hour | less than 20 minutes |
|---|---|---|---|---|---|---|---|---|---|
| **Whangarei** | 2013 | n=53 | 6% | 2% | 2% | 8% | 8% | 23% | 53% |
| | 2014 | n=44 | 9% | 2% | 7% | 5% | 11% | 9% | 57% |
| | 2015 | n=21 | 10% | 5% | 10% | 5% | 14% | 14% | 43% |
| | 2016 | n=6 | 0% | 17% | 33% | 17% | 17% | 17% | 0% |
| **Auckland Central** | 2013 | n=117 | 1% | 1% | 2% | 3% | 9% | 10% | 74% |
| | 2014 | n=125 | 2% | 2% | 5% | 9% | 10% | 17% | 55% |
| | 2015 | n=59 | 0% | 8% | 8% | 12% | 12% | 15% | 44% |
| | 2016 | n=39 | 0% | 0% | 5% | 3% | 28% | 23% | 41% |
| **Wellington Central** | 2013 | n=48 | 2% | 0% | 0% | 2% | 0% | 13% | 83% |
| | 2014 | n=46 | 2% | 2% | 9% | 2% | 4% | 11% | 70% |
| | 2015 | n=17 | 0% | 0% | 6% | 0% | 29% | 18% | 47% |
| | 2016 | n=41 | 0% | 0% | 5% | 7% | 10% | 20% | 59% |
| **Christchurch Central** | 2013 | n=148 | 3% | 1% | 1% | 1% | 1% | 8% | 85% |
| | 2014 | n=115 | 3% | 2% | 0% | 2% | 7% | 11% | 76% |
| | 2015 | n=106 | 3% | 1% | 1% | 2% | 12% | 22% | 59% |
| | 2016 | n=59 | 0% | 0% | 0% | 3% | 7% | 24% | 66% |
| **All Sites** | 2013 | n=366 | 2% | 1% | 1% | 3% | 4% | 11% | 77% |
| | 2014 | n=330 | 3% | 2% | 4% | 5% | 8% | 13% | 65% |
| | 2015 | n=203 | 2% | 3% | 4% | 5% | 14% | 19% | 52% |
| | 2016 | n=145 | 0% | 1% | 4% | 5% | 14% | 22% | 54% |

**Figure 12 8: Proportion of police detainees who could purchase synthetic cannabinoids in one hour or less by location, 2013-2016**




## Summary

- The proportion of detainees who had used synthetic cannabinoids in the previous 12 months declined from 47% in 2013 to 20% in 2016

- There was a decline the proportion of detainees who had used synthetic cannabinoids in the previous year in Whangarei (down from 44% in 2014 to 5% in 2016), Auckland Central (down from 40% in 2013 to 20% in 2016), Wellington Central (down from 50% in 2014 to 21% in 2016) and Christchurch Central (down from 53% in 2013 to 26% in 2016)

- In 2016, the detainees who had used synthetic cannabinoids had used them on an average of 82 days in the past year

- The proportion of detainees who had used synthetic cannabinoids in the past year and felt dependent on them increased from 17% in 2013 to 29% in 2016

- The proportion of Christchurch Central detainees who felt dependent on synthetic cannabinoids increased from 24% in 2013 to 47% in 2016

- The proportion of detainees who had been using synthetic cannabinoids prior to arrest declined from 7% in 2013 to 3% in 2016

- The availability of synthetic cannabinoids was reported to be declining in Whangarei from 2013 to 2016

- Conversely, the availability of synthetic cannabis increased in Auckland Central, Wellington Central and Christchurch Central

- The price of a gram of synthetic cannabinoid increased from $11 in 2013 to $19 in 2016

- The gram price of synthetic cannabinoids increased in Whangarei (up from $10 in 2014 to $22 in 2016), Auckland Central ($11 in 2013 to $19 in 2016), Wellington Central ($9 in 2013 to $24 in 2016) and Christchurch Central ($11 in 2013 to $17 in 2016)

- In 2016, 56% of the detainees described the current strength of synthetic cannabinoids as 'high'

# References


ACC. (2015). *Australian Crime Commission's Illicit Drug Data Report 2013–14*. Canberra: Australian Crime Commission. https://crimecommission.gov.au/publications/intelligence-products/illicit-drug-data-report/illicit-drug-data-report-2013-14.

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.

Aung, M., Griffin, G., Huffman, J., Wu, M., Keel, C., Yang, B., et al. (2000). Influence of the N-1 alkyl chain length of cannabimimetic indoles upon CB(1) and CB(2) receptor binding. *Drug and Alcohol Dependence,* 60(2), 133-140.

Babor, T., Caetano, R., Casswell, S., Edwards, G., Giesbrecht, N., Graham, K., et al. (2010a). *Alcohol: No Ordinary Commodity Research and Public Policy* (2nd ed.). Oxford: Oxford University Press.

Babor, T., Caulkins, J., Edwards, G., Fischer, B., Foxcroft, D., Humphreys, K., et al. (2010b). *Drug Policy and the Public Good*. Oxford: Oxford University Press.

Beck, O., Stephanson, J., Sandqvist, S., Franck, J. (2013). Detection of drugs of abuse in exhaled breath using a device for rapid collection - comparison with plasma, urine and self-report in 47 drug users. *Journal of Breath,* 7(2), doi:10.1088/1752-7155/1087/1082/026006.

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

Castaneto, M., Gorelick, D., Desrosiers, N., Hartman, R., Pirard, S., Huestis, M. (2014). Synthetic cannabinoids: epidemiology, pharmacodynamics, and clinical implications. *Drug and Alcohol Dependence,* 144, 12-41.

EMCDDA. (2016). European Drug Report 2016: Trends and Developments. [European Monitoring Centre for Drugs and Drug Addiction]. Retrieved 16 June 2016, from http://www.emcdda.europa.eu/system/files/publications/2637/TDAT16001ENN.pdf

ESR. (2014). *ESR Drugs Trends Report February 2013 - October 2013*. Wellington: Institute of Environmental Science and Research.

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

Every-Palmer, S. (2011). Synthetic cannabinoid JWH-018 and psychosis: An explorative study. *Drug and Alcohol Dependence,* 117, 152-157.

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.

Glue, P., Al-Shaqsi, S., Hancock, D., Gale, C., Strong, B., Schep, L. (2013). Hospitalisation associated with use of the synthetic cannabinoid K2. *New Zealand Medical Journal,* 126(1377), 18-23.

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.

Harris, C., & Brown, A. (2013). Synthetic cannabinoid intoxication: A case series and review. *Journal of Emergency Medicine,* 44(2), 360-366.

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: clinical and laboratory findings. *Addiction,* 108(3), 534-544.

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.

Ministry of Health. (2014). *Amphetamine use 2013/14: New Zealand Health Survey*. Wellington.

Ministry of Health. (2015). *Amphetamine Use 2014/15: New Zealand Health Survey*, December. Wellington.

Nacca, N., Vatti, D., Sullivan, R., Sud, P., Su, M., Marraffa, J. (2013). The synthetic cannabinoid withdrawal syndrome. *J Addict Med,* 7, 296-298.

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. (2016). *Personal communication*. Wellington: National Drug Intelligence Bureau.

New Zealand Customs Service. (2002). *Review of Customs Drug Enforcement Strategies 2002. Project Horizon Outcome Report*. Wellington.

Newbold, G. (2000). *Crime in New Zealand*. Palmerston North: Dunmore Press.

Newton-Howes, G., & McBride, S. (2016). Cannabis in New Zealand: smoking gun or medicalised smokescreen<. *New Zealand Medical Journal,* 129(1433), 13-16.

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.

Pacula, R., Powell, D., Heaton, P., Sevigny, E. (2015). Assessing the effects of medical marijuana laws on marijuana use: the devil is in the details. *Journal of Policy Analysis and Management,* 34(1), 7-31.

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, 216-224.

RNZ. (2016, 15 August). Majority back decriminalisation of cannabis use, poll suggests. Retrieved 5 February 2017, from http://www.radionz.co.nz/news/national/310947/cannabis-law-change-wins-support-in-poll

Room, R., Fischer, B., Hall, W., Lenton, S., Reuter, P. (2010). *Cannabis policy: moving beyond stalemate*. Oxford: Oxford University Press.

Rychert, M., & Wilkins, C. (2015). Is the recent ban on animal testing of legal high products a fatal blow to the development of a legal market for 'low-risk' psychoactive products in New Zealand? [Letter]. *Addiction,* 110(4), 714-715.

Schep, L., Slaughter, R., Temple, W. (2011). Synthetic cannabinoid use in New Zealand: A brief evaluation of enquiries to the New Zealand National Poisons Centre. *New Zealand Medical Journal,* 124(1347), 99-101.

Shearer, J., Sherman, J., Wodak, A., van Beek, I. (2002). Substitution theory for amphetamine users. *Drug and Alcohol Review,* 21, 179-185.

Spaderna, M., Addy, P., D'Souza, D. (2013). Spicing things up: Synthetic cannabinoids. *Psychopharmacology,* 228, 525-540.

Taylor, B. (Ed.). (2002). *I-ADAM in Eight Countries: Approaches and Challenges.* Office of Justice Programs & National Institute of Justice, US Department of Justice.

Therapeutic Goods Administration Department of Health. (2016, 31 October). Access to medicinal cannabis products. [Australian Government]. Retrieved 16 February 2017, from https://www.tga.gov.au/access-medicinal-cannabis-products

Uchiyama, N., Kikura-Hanajiri, R., Matsumoto, N., Huang, Z., Goda, Y., Urade, Y. (2011). Effects of synthetic cannabinoids, cannabicyclohexanol and jwh-018, on electroencephalogram power spectra and locomotor activity in rats. *Sleep and Biological Rhythms,* 9, 342.

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. (2015). *World Drug Report 2015*. Vienna: United Nations Office on Drugs and Crime. https://www.unodc.org/documents/wdr2015/World_Drug_Report_2015.pdf.

UNODC. (2016). World Drug Report 2016. [United Nations Office on Drugs and Crime]. Retrieved 9 December 2016, from https://www.unodc.org/doc/wdr2016/WORLD_DRUG_REPORT_2016_web.pdf

Vandrey, R., Dunn, K., Fry, J., Girling, E. (2012). A survey study to characterize use of Spice products (synthetic cannabinoids). *Drug and Alcohol Dependence,* 120, 238-241.

Weisheit, R., & White, W. (2009). *Methamphetamine: Its History, Physiology, and Treatment*. Center City, MN: Hazelden.

Wilkins, C. (2014a). A critical first assessment of the new pre-market approval regime for new psychoactive substances (NPS) in New Zealand. *Addiction,* 109(10), 1580-1586.

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,* 6, 868-875.

Wilkins, C. (2014c). Recent developments with the establishment of a regulated legal market for new psychoactive substances ('legal highs') in New Zealand [Letter]. *Drug and Alcohol Review,* 33, 678-680.

Wilkins, C. (2014d). Response to commentaries: A critical first assessment of the new pre-market approval regime for new psychoactive substances (NPS) in New Zealand [Letter]. *Addiction,* 109(10), 1593-1594.

Wilkins, C. (2016). The case for medicinal cannabis: where there is smoke there may well be fire [Editorial]. *New Zealand Medical Journal,* 129, 11-14.

Wilkins, C., Bhatta, K., Casswell, S. (2002a). 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. (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. (2002b). *Drug Use in New Zealand: National Surveys Comparison 1998 & 2001*. Auckland: Alcohol & Public Health Research Unit.

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., Prasad, J., Parker, K., Rychert, M., Moewaka Barnes, H. (2016a). *New Zealand Arrestee Drug Use Monitoring (NZ-ADUM) 2010 - 2015*. Auckland: SHORE & Whariki Research Centre, College of Health, Massey University.

Wilkins, C., Prasad, J., Wong, K., Rychert, M. (2015). *Recent trends in illegal drug use in New Zealand 2006-2014: Findings from the 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013 and 2014*

*Illegal Drug Monitoring System (IDMS)*. Auckland: SHORE & Whariki Research Centre, Massey University.

Wilkins, C., Prasad, J., Wong, K., Rychert, M., Graydon Guy, T. (2016b). An exploratory study of the health harms and utilisation of health services of frequent legal high users under an interim regulated legal high market in central Auckland *New Zealand Medical Journal,* 129(1431), 51-58.

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. (2008). 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., 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. (2012a). *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. (2011). *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. (2012b). *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.

Winstock, A., & Barratt, M. (2013). The 12-month prevalence and nature of adverse experiences resulting in emergency medical presentations associated with the use of synthetic cannabinoid products. *Human Psychopharmacology,* 28(4), 390-393.

World Health Organization. (2016). *The health and social effects of nonmedical cannabis use*.

Zimmermann, U., Winkelmann, P., Pilhatsch, M., Nees, J., Spanagel, R., Schulz, K. (2009). Withdrawal phenomena and dependence syndrome after the consumption of “Spice Gold”. *Dtsch Arztebl Int,* 106, 464-467.