



NEW ZEALAND MEDICAL ASSOCIATION

Rotorua GP CME 2009

General Practice Conference
& Medical Exhibition



How to...

Drug Testing/Occupational Screening

Introduction

- Introduction
- Testing Methods and Detection Times
- Legislation and Case Law
- The AS/NZS 4308:2008
- Workplace Drug Testing Statistics
- Testing Kids for Drugs



Important Terms

- Negative = Normal meaning
- Non-negative = A positive result on a screening device that has not yet been confirmed by a laboratory
- Positive = Confirmation by GC/MS of the presence of the drug equal to or over the cut off level

Types of Drug Screening / Testing

- **Hair** will detect drug usage over an extended period of time over 3 months depending on hair length, more used in custody type situations
- **Blood** will detect recent usage and is used in cases of serious accidents / fatalities / criminal nature.
- **Urine** will detect drug usage over a longer period of time. Urine testing has no relevance to impairment but will identify 'at risk' persons in the workplace. It is conducted according to the joint AS/NZS 4308 and is recognised as most reliable form of testing.



Types of Drug Screening / Testing

- Saliva will detect recent usage up to around 6-8 hours, however there is no NZ Standard for this type of testing at the moment.
- Sweat early technology for detection of recent use, concerns have been raised over cross contamination issues, no industrial standard worldwide.



Workplace Testing Methods

Urine

- Detection period days
- AS/NZS 4308:2008
- Devices need to be verified
- Confirmation only on non negative to 4308 Lab
- Can be cheated if forewarned
- No witness collection

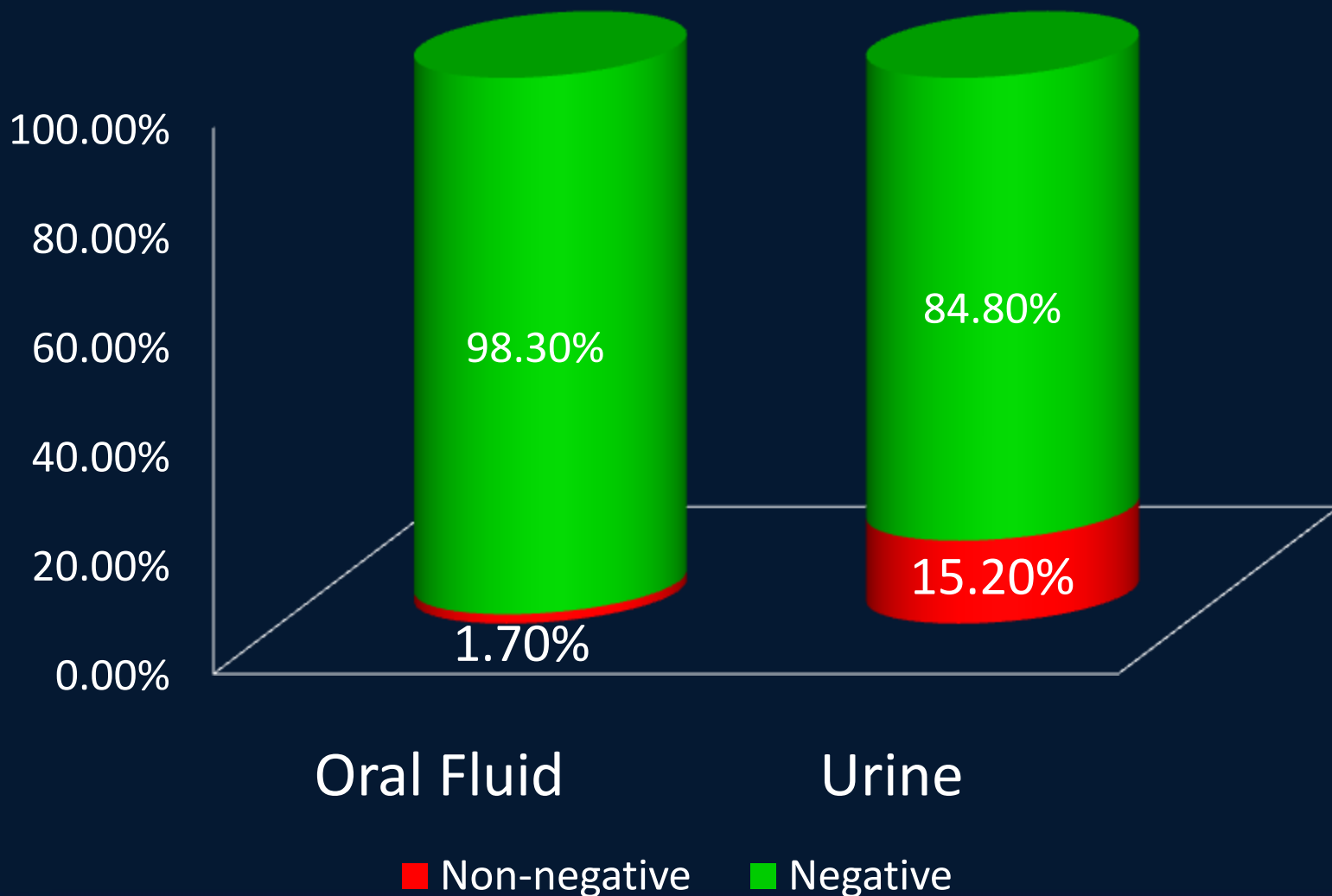


Oral Fluid

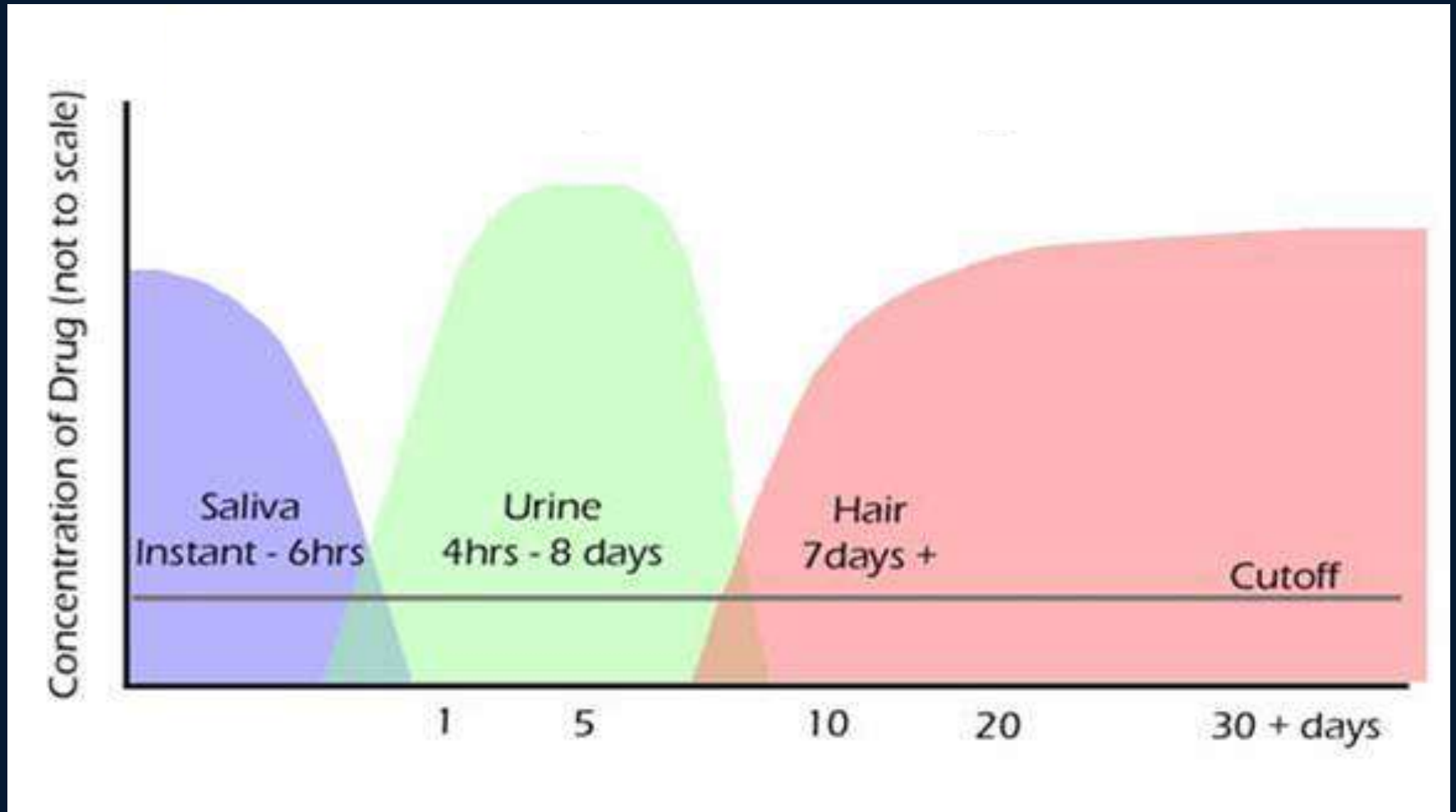
- Detection period of hours
- Good for random testing (deterrent)
- AS 4760 only
- No devices on market currently meet this
- Cannot be cheated
- Witnessed collection
- No Accredited labs in NZ to do confirmation testing as per standard



Oral Fluid vs Urine



Detection Times



Urine Detection Times

Drugs of Abuse Testing Detection Times after usage ceases.
It is a complex issue as it is dependant on: Dosage, Route of administration, An individuals metabolism, other drugs, etc.

DRUG TYPE	RETENTION TIME
Amphetamines	2 - 6 days
Benzodiazepines	2 – 14 days
Cannabis	2 – 30 days
Cocaine	2 – 5 days
Ecstasy	2 - 6 days
Methadone	2 – 8 days
Methamphetamines	2 – 6 days
Opiates	2 - 5 days



Why Institute Workplace Drug Testing?

Drug and alcohol use can give rise to:

- **A**ccidents
- **F**raud.
- **L**ow productivity.
- **A**bsenteeism.
- **S**taff theft.
- **H**igh staff turnover.

An **actively managed** drug and alcohol policy can reverse this.



Health and Safety in Employment Act 1992

- Imposes a legal obligation on employers to ensure the safety of employees while at work.
- Requires identification of and protection from hazards.
- Amendment in 2003 Defined a hazard as:
 - (a) an activity, arrangement, circumstance, event, occurrence, phenomenon, process, situation, **or substance (whether arising or caused within or outside a place of work)** that is an actual or potential cause or source of harm; and includes:
 - (b) a situation where a person's behavior may be an actual or potential cause or source of harm to the person or another person; and without limitation, a situation described in subparagraph (i) resulting from physical or mental fatigue, **drugs, alcohol, traumatic shock, or another temporary condition that affects a person's behavior.**

Air New Zealand 2004 Judgement

EPMU and others Vs Air New Zealand



- Bill of Rights Act
- Health and Safety in Employment Act
- Human Rights Act
- Privacy Act
- Employment Relations Act

Air New Zealand 2004 Judgement

The High Court also ruled in the EPMU vs Air New Zealand it was legal to conduct drug and alcohol testing within the workplace in the following situations:

- Pre-employment or and when an employee is on an internal transfer to a safety sensitive area
- Reasonable cause (also known as reasonable grounds)
- Post incident/accident
- Random testing should only be carried out where people are employed in a safety sensitive area

Lisa Cropp Supreme Court

- Top New Zealand jockey Lisa Cropp exhausted all of her avenues of appeal over a positive drugs test
- A urine sample she supplied tested positive for amphetamine and methamphetamine.
- She challenged New Zealand Thoroughbred Racing's rules of random drug tests through the courts.
- The Supreme Court ruled unanimously that the rules do not infringe her human rights.



Impairment vs 'At Risk'

- The science of toxicology in particular, cannot either predict or even report in absolute terms 'impairment'
- Urine testing may indicate use of drugs by an employee, both beyond work and sufficient time before the recommencement of work.
- An employee that tests positive for a drug, is more likely to use a drug in the future, than one returning a negative test. As a consequence the one that has tested positive is more likely to be at risk of being impaired.
- Employers seek to identify those at risk of being impaired by a scientifically valid and accepted method to eliminate or at least reduce the risk of impairment

MUNZ & ors TLNZ Ltd anor AK AC 51A/07 (21 December 2007).

Screening Urine is the Preferred Method

- Urine screening is one such process for detecting the use of drugs of abuse in the NZ workplace.
- It is inexpensive, fast and identifies “at risk” persons.
- It allows the Company to prove that it has provided a corrective program in an attempt to change drug-taking behaviour by persons through access to educational programs and employee assistance programs.
- This process also ensures the Company has the protection of a medico legal standard the AS/NZS 4308.
- A drug and alcohol policy in which the:
 - key component shall be to detect the presence of drugs and / or alcohol in the system and is not a matter of on-site impairment.

The New AS/NZS 4308:2008

The new AS/NZS 4308:2008 was *Published 19 March 2008*



AS/NZS 4308:2008

Summary of the Standard as it applies to collectors:

- Section 2 (Details the collection of urine)
- Appendix 'A' (Details the screening of urine)
- Company approved collectors shall complete a course of instruction – NZQA or AQTF (Unit Standards 25458 and 25511)
- Screening devices that are used have undergone verification under appendix 'B' of the Standard

AS/NZS 4308:2008

- Company approved collectors must conduct, daily controls (1 above and 1 below on all drug classes) prior to testing at the collecting site and after each subsequent 25 specimens or new batch and carry out at least another either above or below control.
- The results of all quality control tests shall be recorded in the permanent record system using 'Control' as a unique identifier.
- The collecting agency shall have a written protocol in the event of a quality control failure.

AS/NZS 4308:2008

- All positive screens (non – negative) must be sent to an accredited 4308 lab for confirmation testing.
- Company conducting the testing has a proficiency testing program in accordance with the Standard

Immunoassay Screening Test Cut-Off Levels

Drug	Initial Cut-off Level
Amphetamine	300 µg/L
Benzodiazepines	200 µg/L
Cocaine	300 µg/L
Cannabis	50 µg/L
Methamphetamine	300 µg/L
Opiates	300 µg/L

Laboratory Cut-Off Levels

GC/MS will identify and confirm the presence of a drug/metabolite at the concentration equal to or greater than the cut off level concentrations



Compound	Cut-off Level (µg/L)
Morphine	300
Codeine	300
6-Acetylmorphine*	10
Amphetamine	150
Methylamphetamine	150
Methylenedioxymethyl-amphetamine	150
Methylenedioxyamphetamine	150
Benzylpiperazine*	500
Phentermine*	500
Ephedrine*	500
Pseudoephedrine*	500
11-nor- Δ^9 – Tetrahydrocannabinol – 9 – carboxylic acid	15
Benzoyllecgonine	150
Ecgonine methyl ester	150
Diazepam	200
Nordiazepam	200
Oxazepam	200
Temazepam	200
7-amino-clonazepam	100
7-amino-Flunitrazepam	100
7-amino-nitrazepam	100

* These drugs may be optionally tested within each class and the specified cut-off levels shall apply

Comparison of Cut-Off Levels

Drug	Initial Screen	Confirmation ASNZS4308:2001	Confirmation ASNZS4308:2008
Amphetamine	300 µg/L	300 µg/L	150 µg/L
Benzodiazepines	200 µg/L	200 µg/L	200 µg/L
Cocaine	300 µg/L	150 µg/L	150 µg/L
Cannabis	50 µg/L	15 µg/L	15 µg/L
Methamphetamine	300 µg/L	300 µg/L	150 µg/L
Opiates	300 µg/L	300 µg/L	300 µg/L

Urine Testing Can Be Cheated

A quick search of the internet will reveal a wide range of products that are available to help someone cheat a drugs test.

- Synthetic Urine
- Urine Detoxifier
- Real Powdered Urine





ORIGINAL
THE WHIZZINATOR

Item 819-1919

Original Whizzinator

Fake phallus
with dried urine
guaranteed to pass
observed drug tests

"It's no one's fucking business
what you do on your own time"

Mfr's List \$150.00

HSN Price
\$120.85

S&H \$6.95

2:16



Prison beckons for drug cheating prosthetic penis men

Wed, 26 Nov 2008 11:32p.m.



Two men whose company sold a prosthetic penis that helped men cheat on drug tests have pleaded guilty in federal court.

George Wills and Robert Catalano each pleaded guilty Monday to two conspiracy counts. They owned the California-based internet company Puck Technology.

The device, called the Whizzinator, comes with a heating element and fake urine. US Attorney Mary Beth Buchanan's office says the goal of it and another device called Number 1 was to help people pass drug tests.

The devices were sold from 2005 to 2008. The men are scheduled to be sentenced in February and face up to eight years in prison, a US\$500,000 fine or both.

Drug Testing



Its About Health and Safety

Workforce Statistics

- 70% of substance users hold jobs
- 1 in 3 workers are aware of drugs being sold in the workplace
- 1 in 4 workers between the ages of 18-34 have used drugs in the past year
- As Many as 13% of the NZ workforce would test positive for drugs and or alcohol
- 50% of regular P users are in work 2/3 are male European

SUBSTANCE ABUSERS ARE:

- 10 times more likely to miss work
- 1/3 less productive than their non-abusing colleagues.
- 3 times more likely to be involved in workplace accidents and will be responsible for 40% of workplace fatalities

SOURCE: NZ Police-Massey university-ESR-
National Society on Alcohol and Drug Dependency.



NZDDA Statistics For 2008

- 11.3% of all people under going pre employment drug testing in the past year have returned positive results.



NZDDA Statistics For 2008

- 39% of employees asked to undergo a reasonable grounds drug test in the past year returned positive results.



NZDDA Statistics For 2008

- 7.8% of all people randomly tested for drugs in the workplace in the past year returned positive results.



NZDDA Statistics For 2008

- 24.2% or just under one in four workers tested for drugs after workplace accidents in the past year returned positive results.



600 – 1000 tests nation wide per month

10.9% positive test rate on average

The New Zealand Drug Detection Agency

NZDDA

ONSITE DRUG AND ALCOHOL SCREENING - POLICY DEVELOPMENT - EDUCATION

Made up of:

70.3% Cannabis

20.9% Methamphetamine

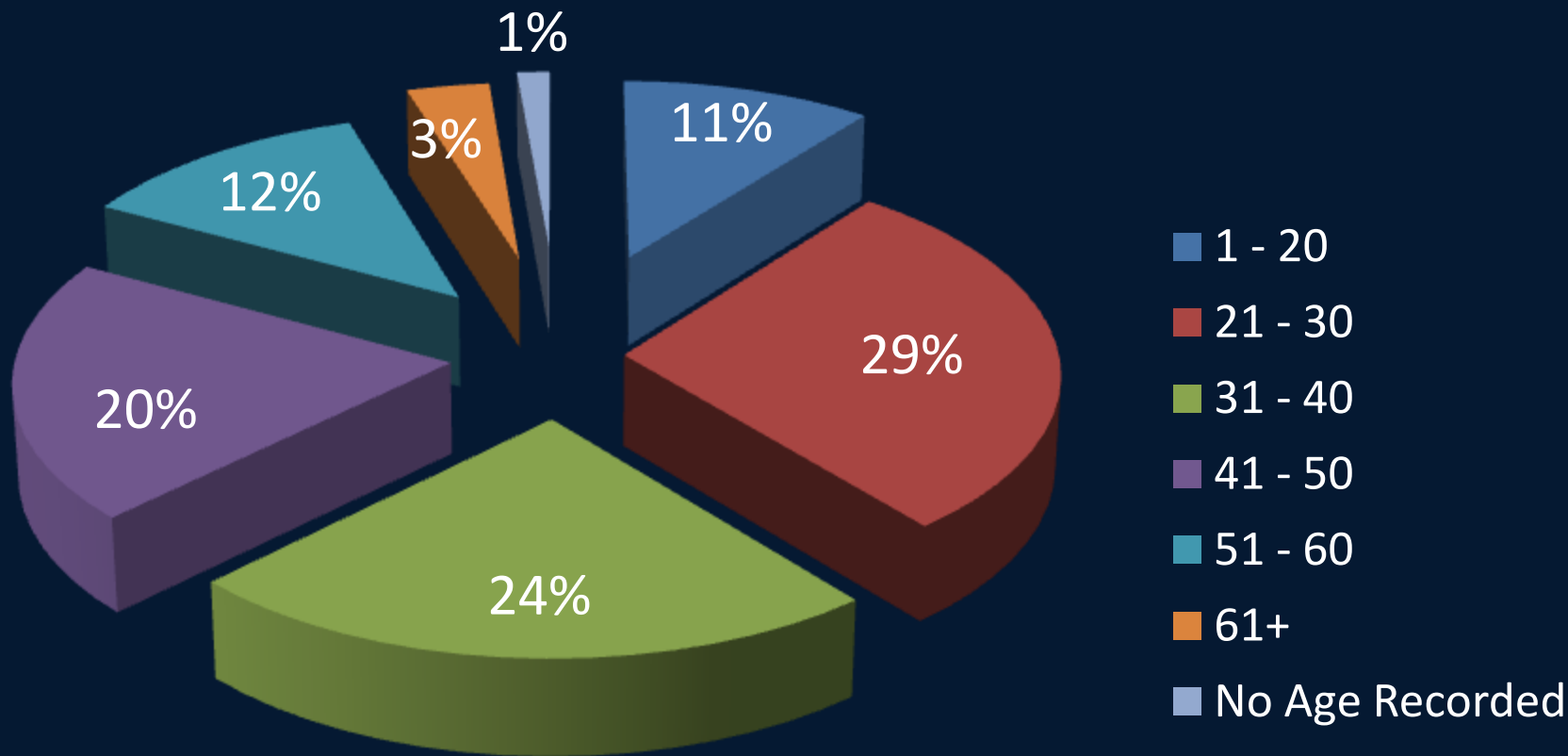
8.8% Other

The New Zealand Drug Detection Agency
NZDDA
www.nzdda.co.nz

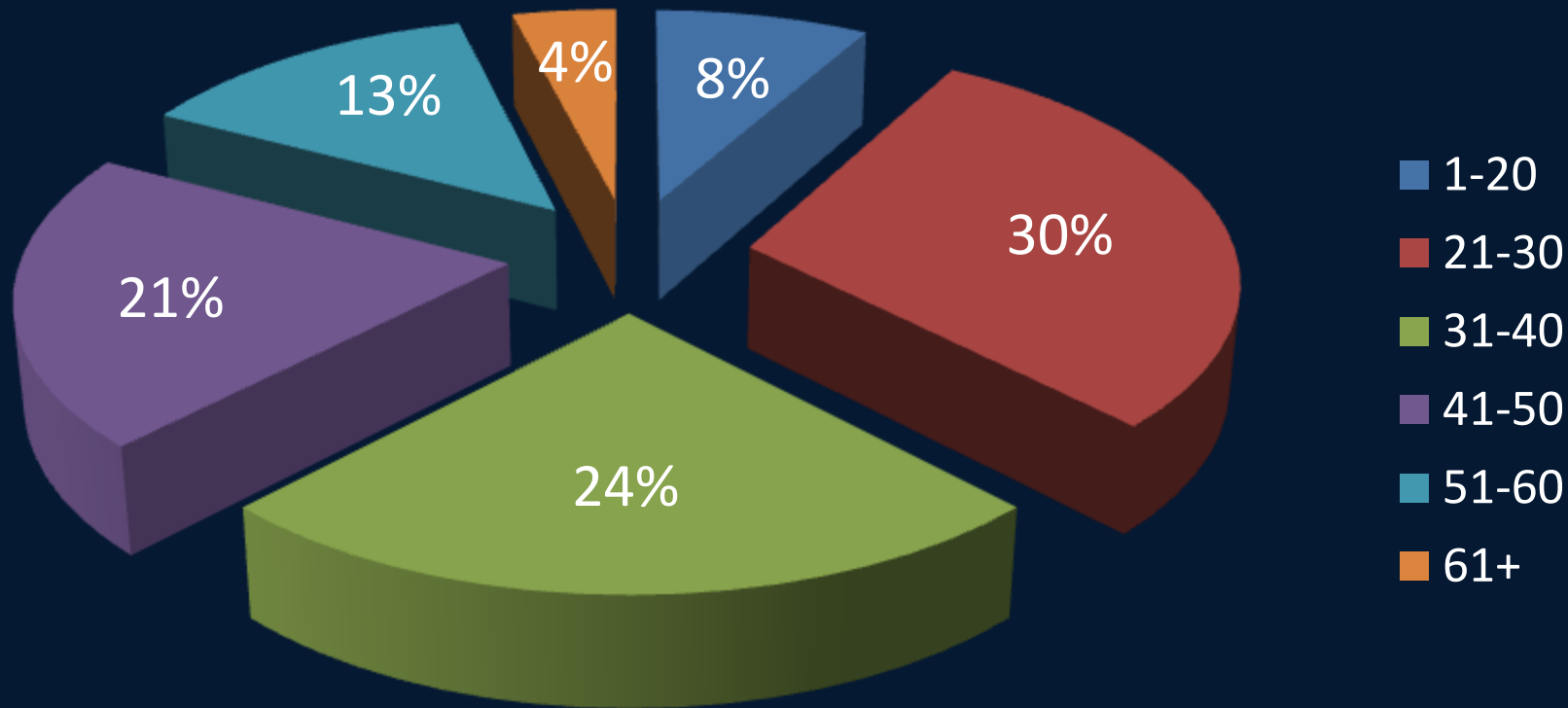
TRANSIT

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Percentage Tested by Age Group

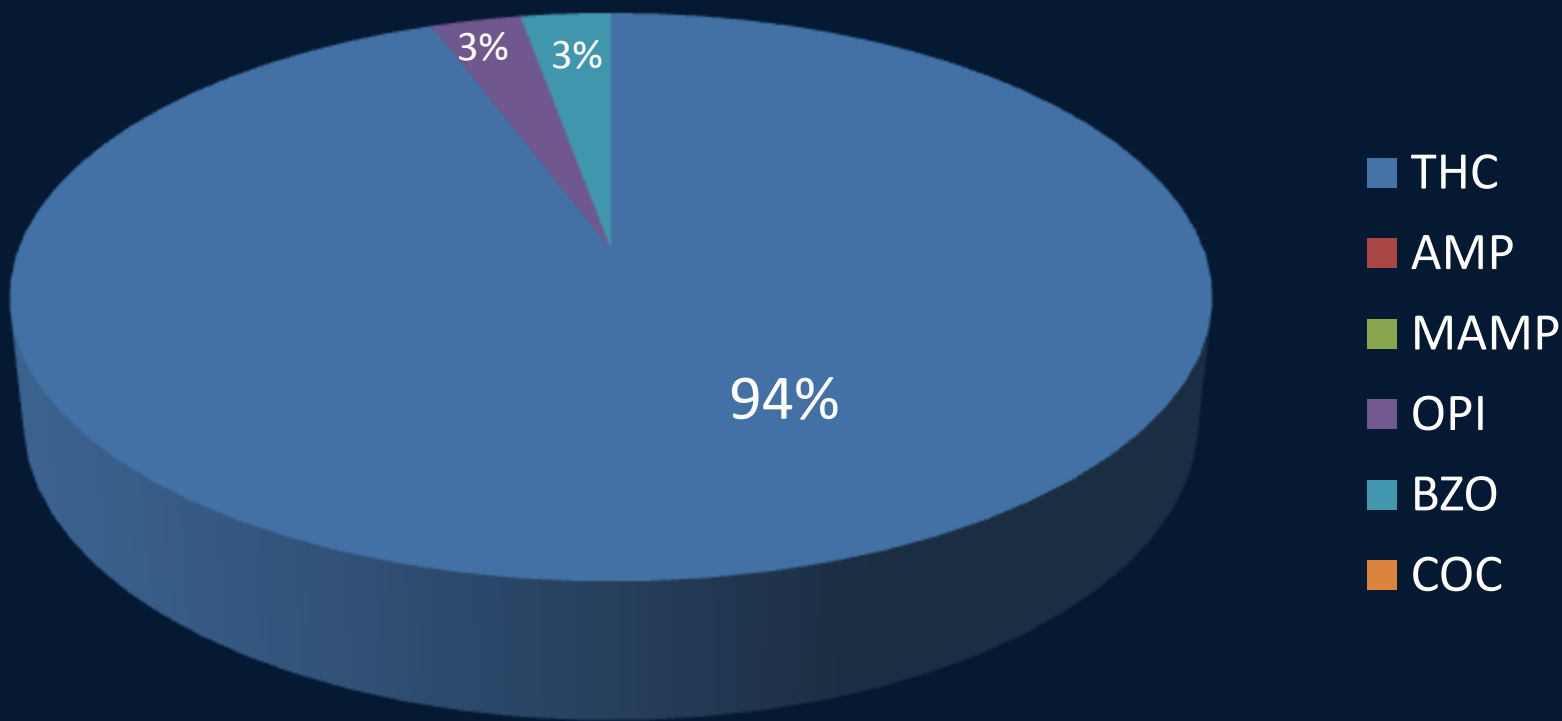


Non-Negative Results by Age Group



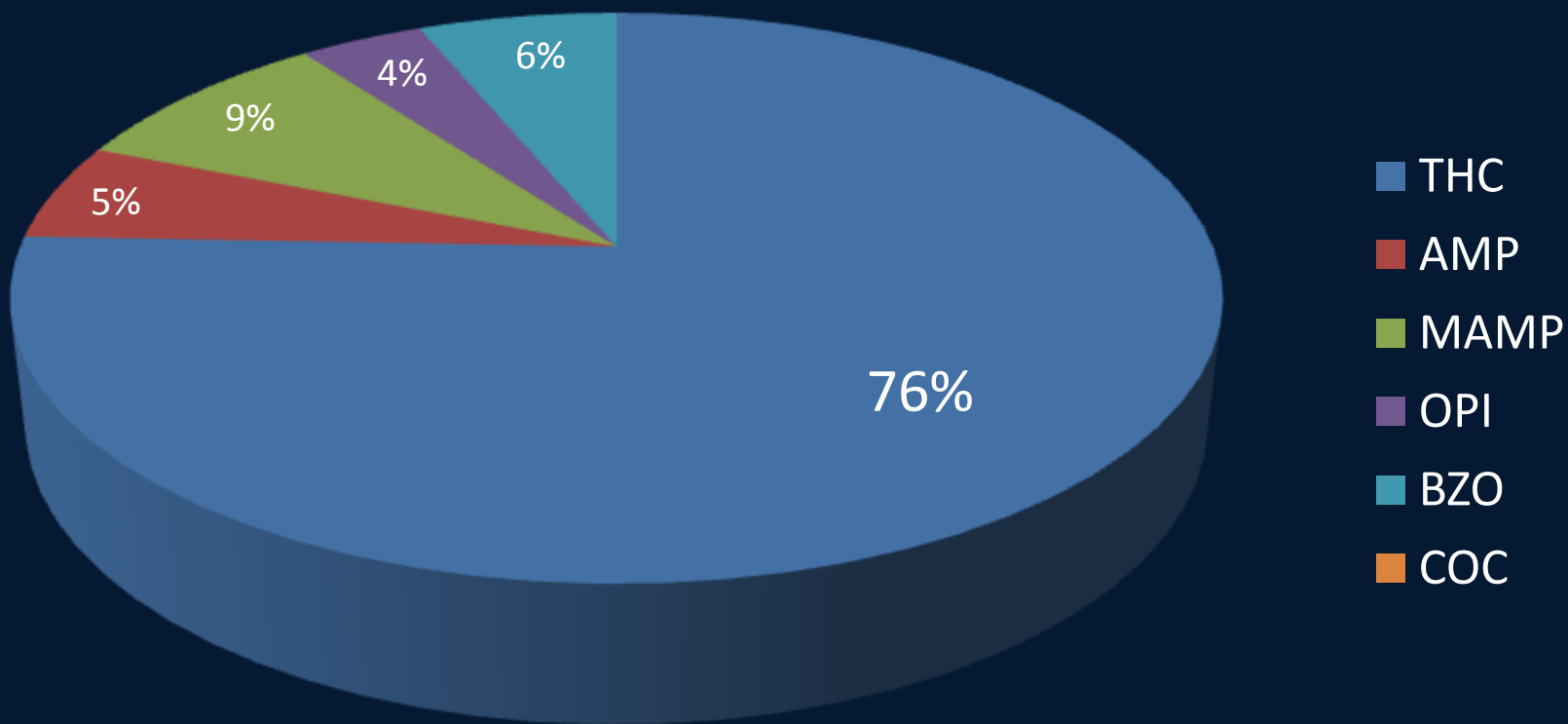
Drug Type By Age

1 - 20



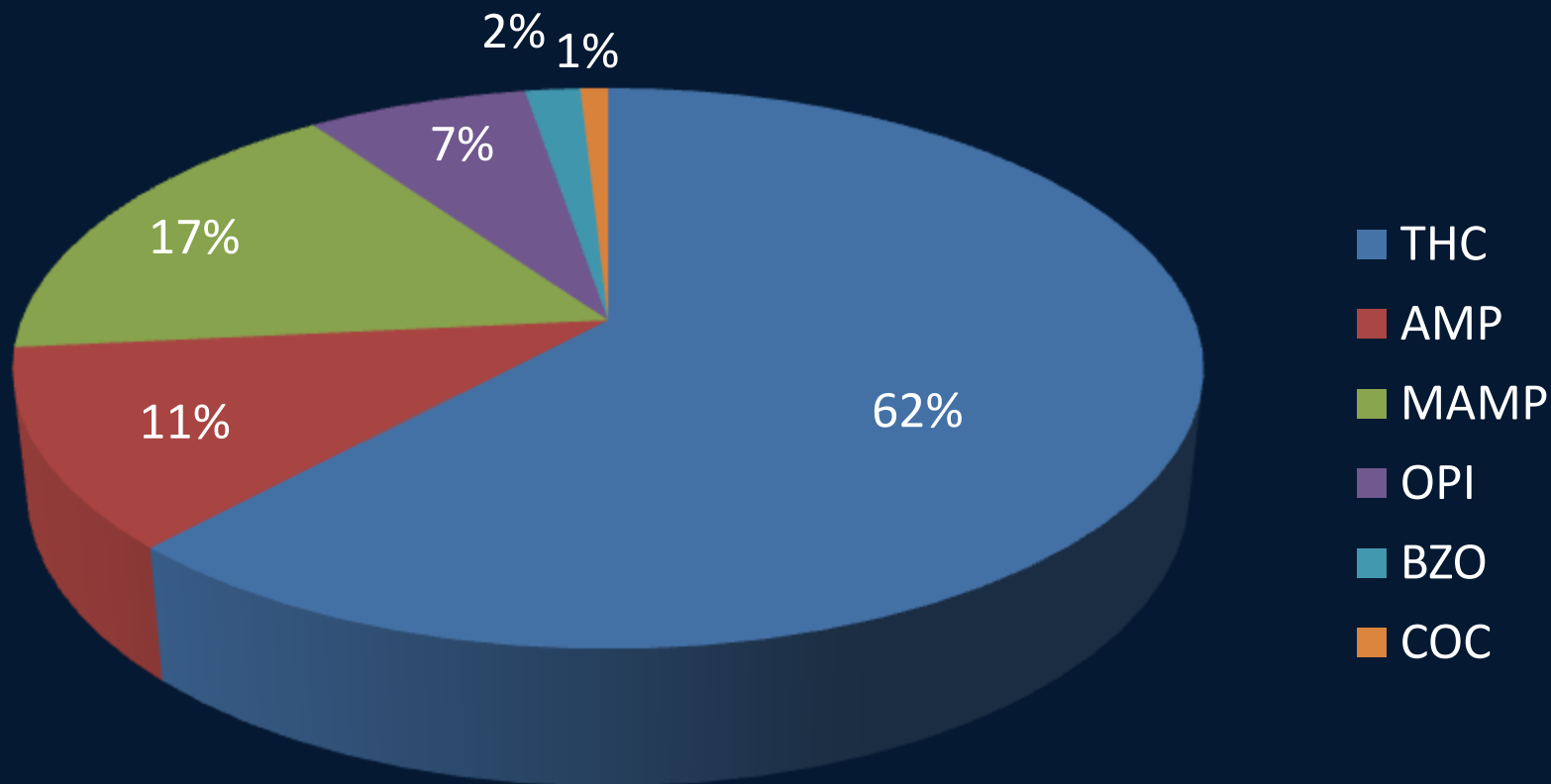
Drug Type By Age

21 - 30



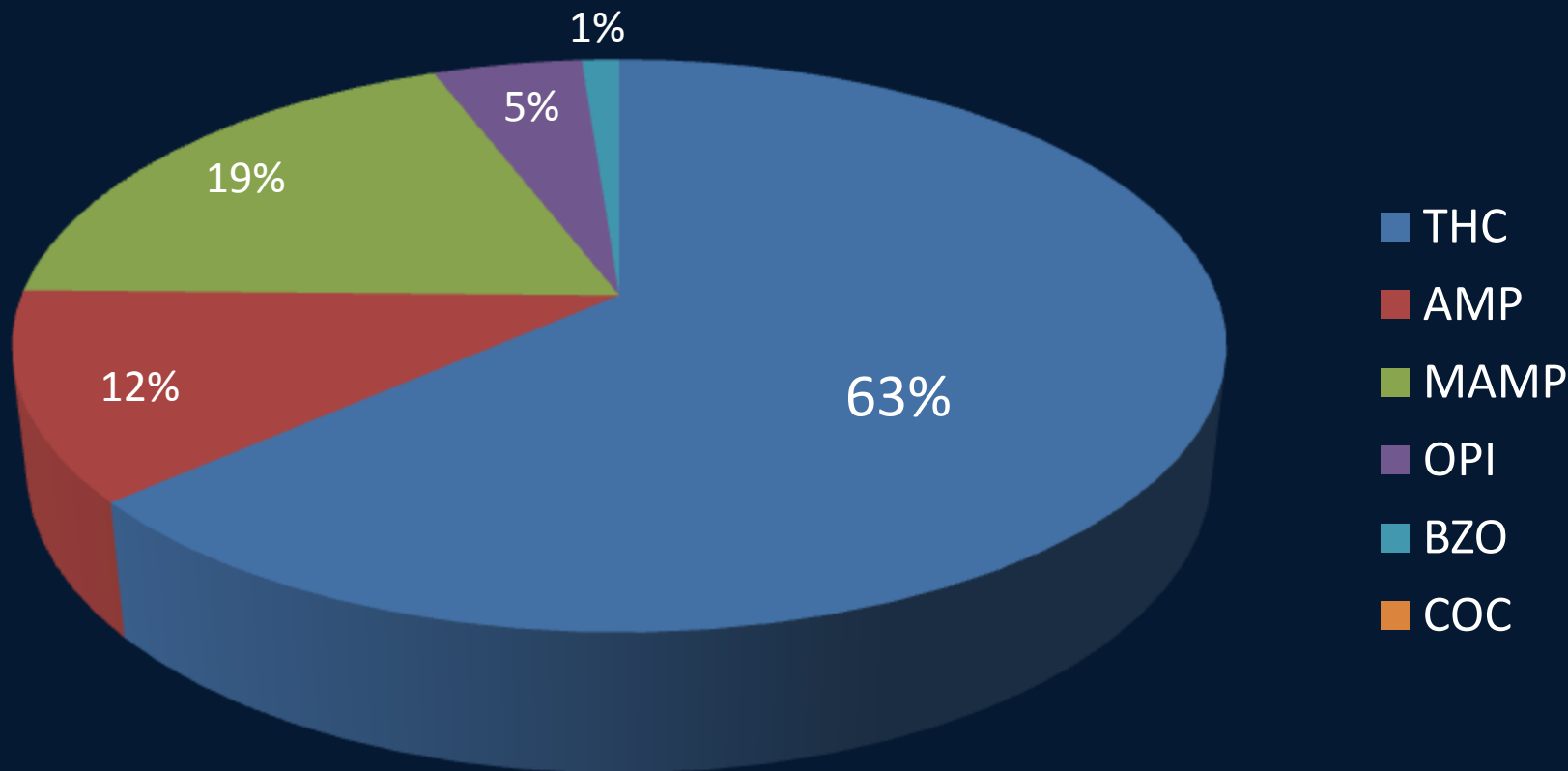
Drug Type By Age

31 - 40



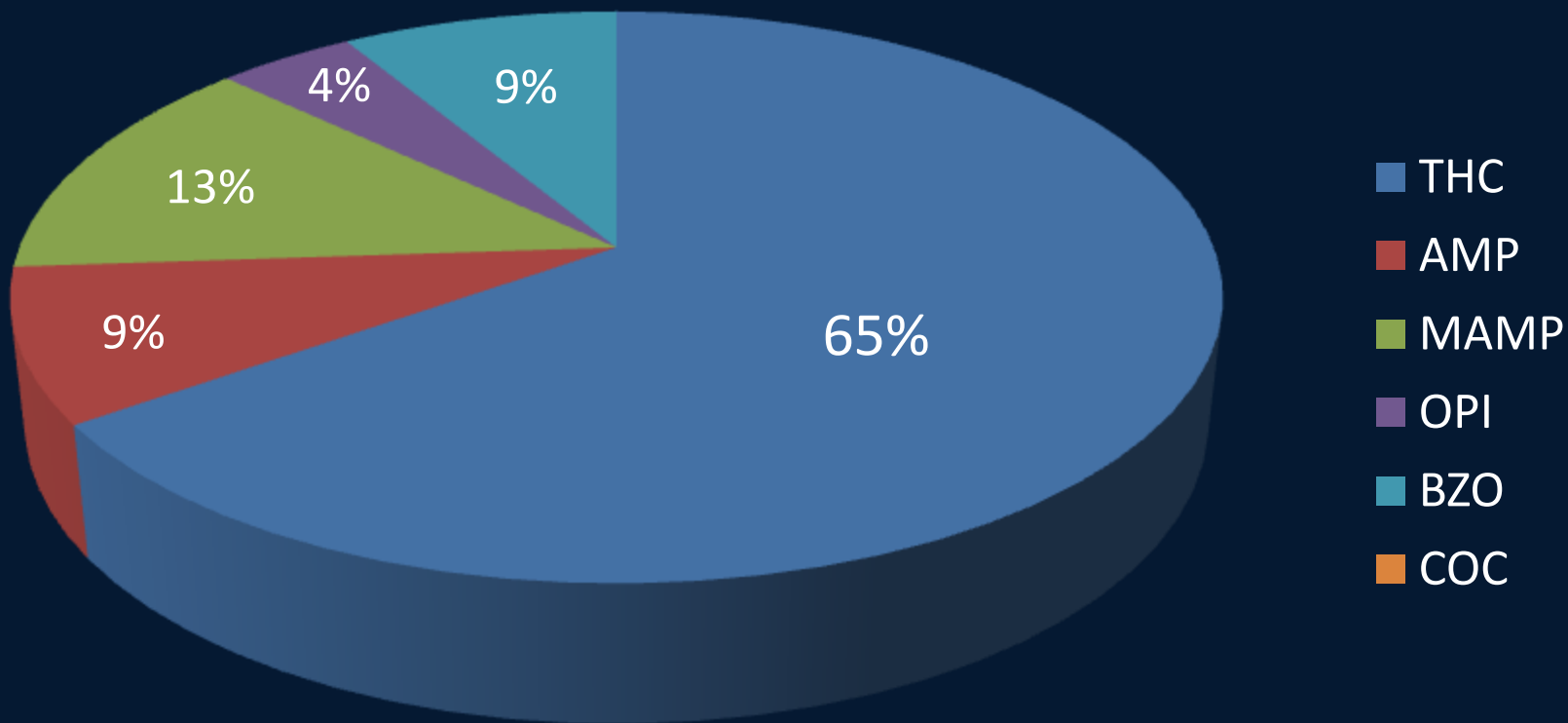
Drug Type By Age

41 - 50



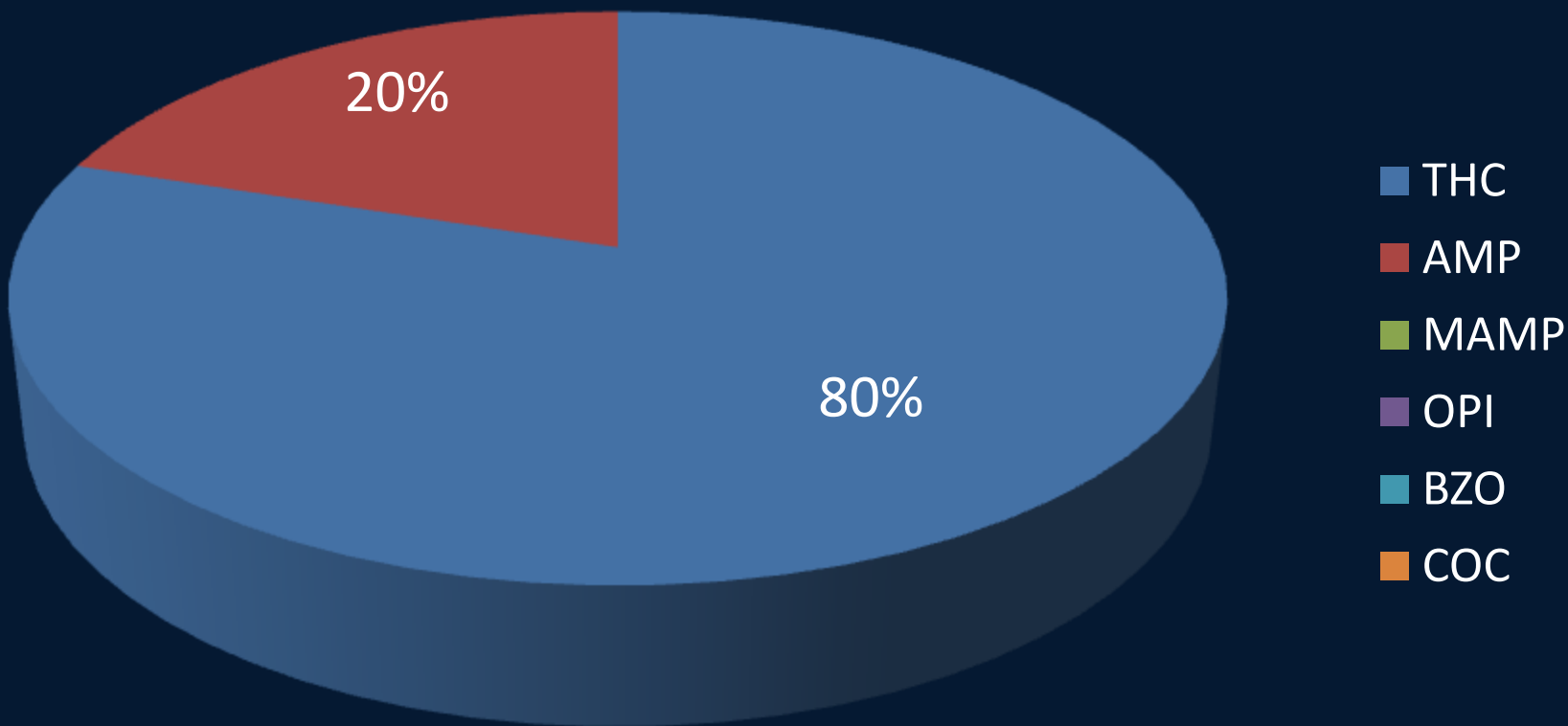
Drug Type By Age

51 - 60

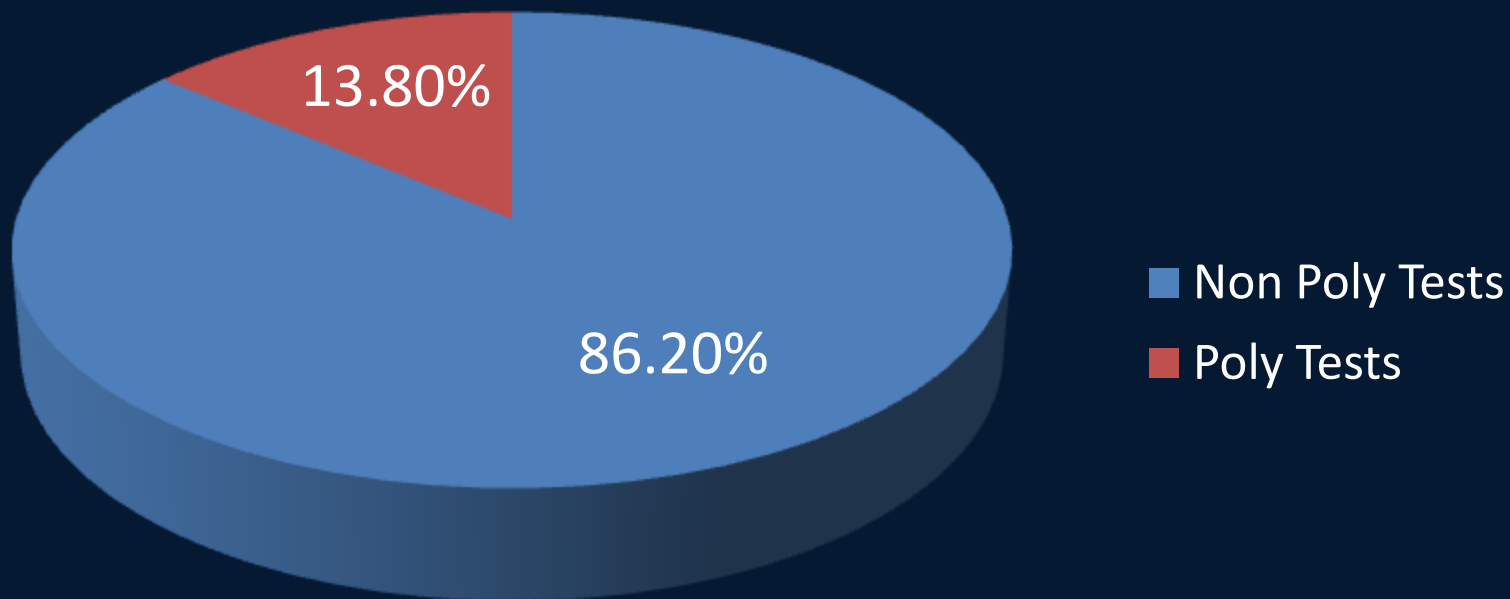


Drug Type By Age

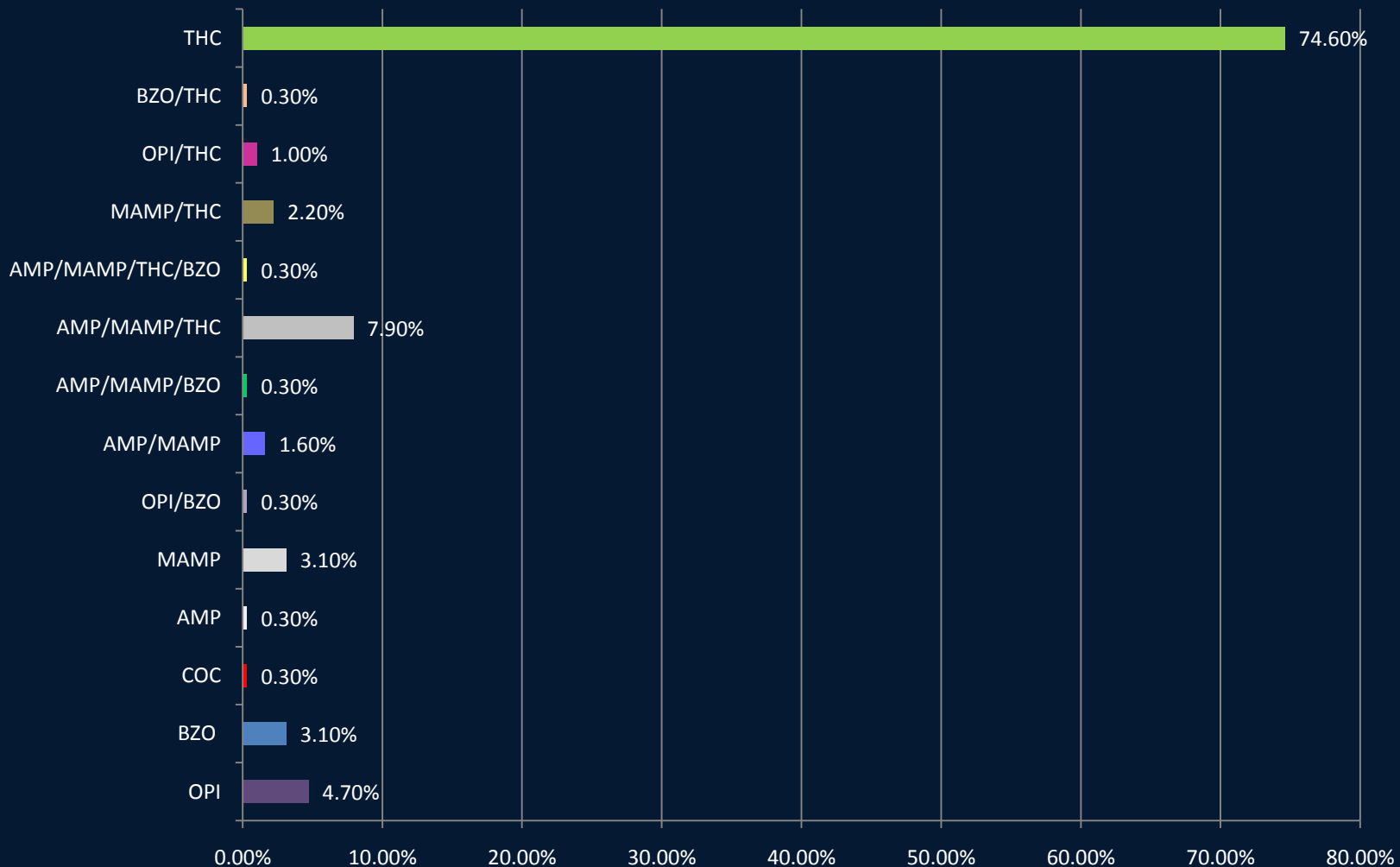
61+



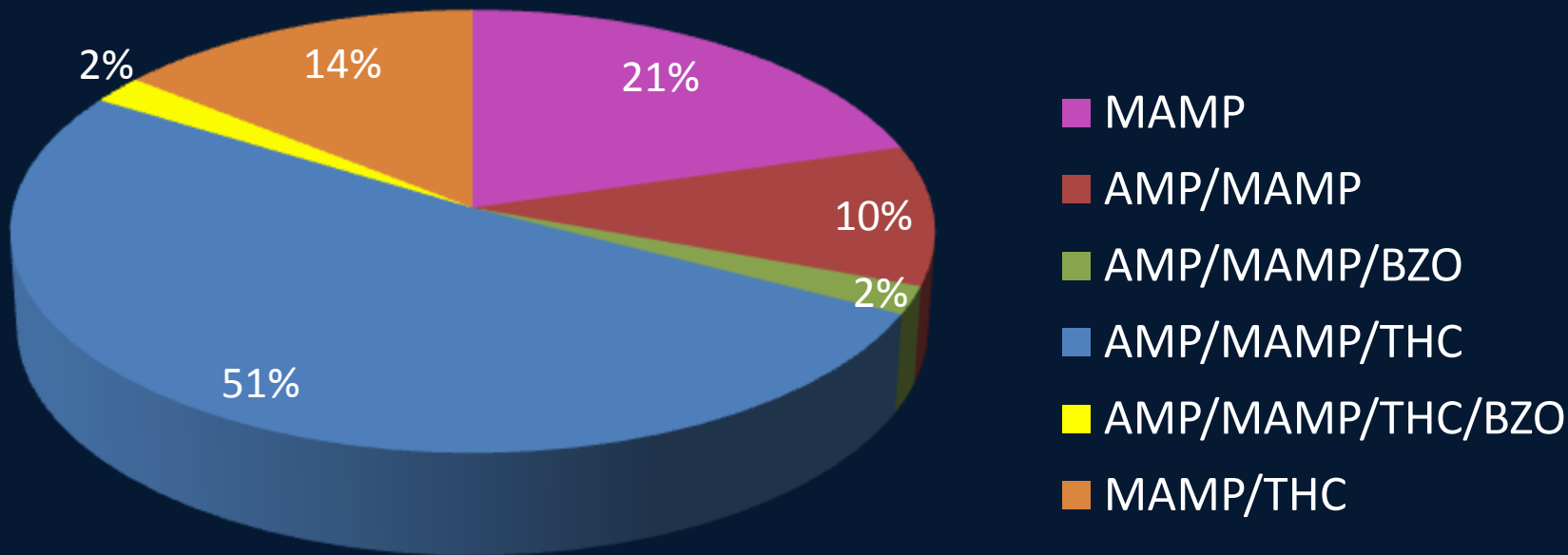
Poly Drug Users



The Breakdown

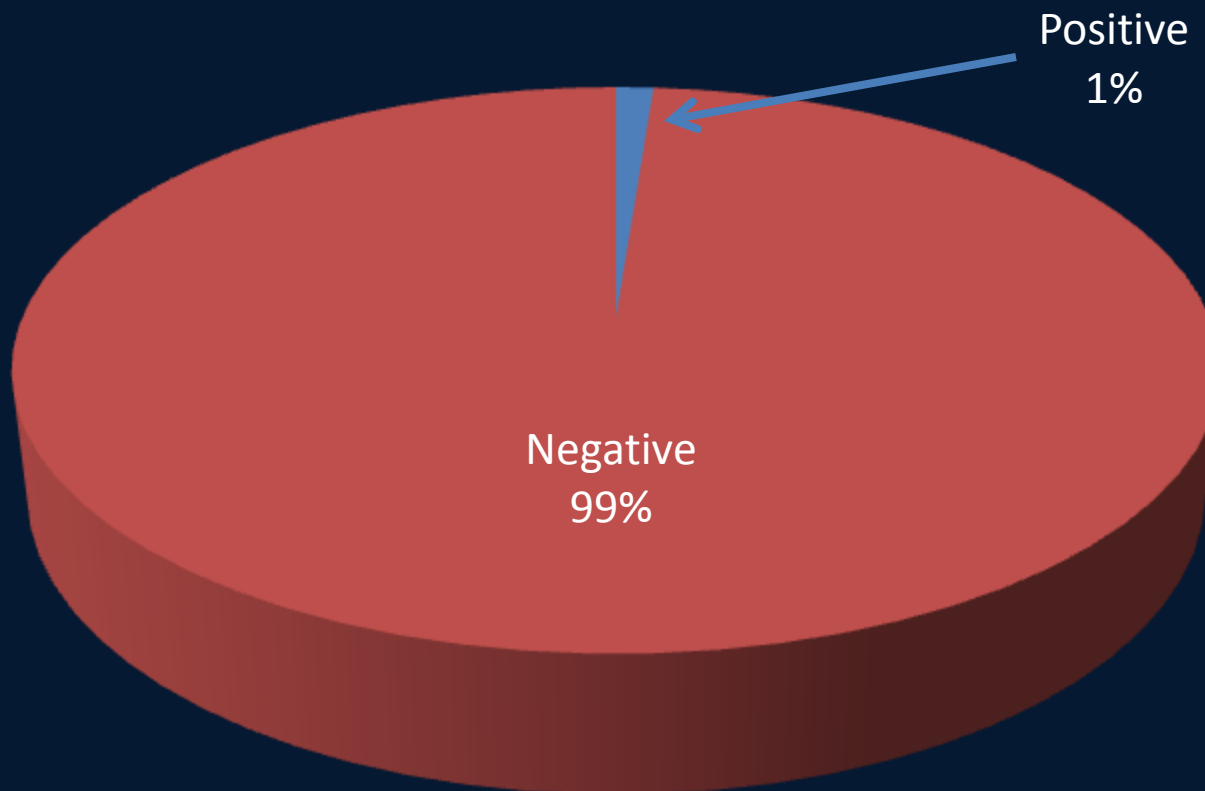


Methamphetamine & Poly Drug Use

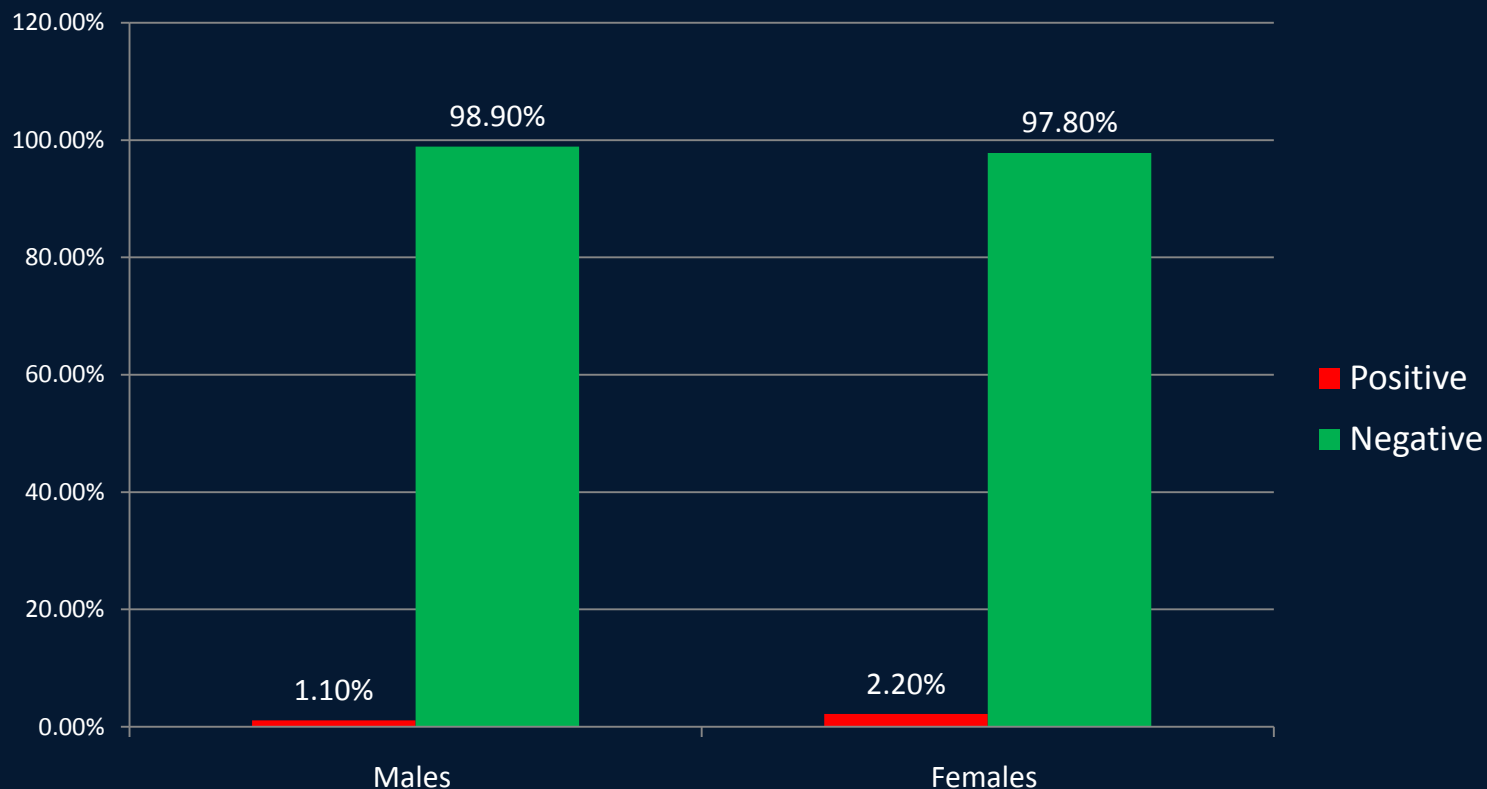


Breath Alcohol

Overall Breath Alcohol Results



Breath Alcohol Male v Female



Testing Kids For Drugs

- NZDDA is regularly called on to test kids who have been caught at school or at home using drugs.
- We take the same approach to testing kids as we do adults and require their full informed consent as well as that of the parent.
- Some schools will place the student on a random testing program similar to that used for employees.



Testing Kids For Drugs

- All of the kids we have dealt with have come to attention because of cannabis use.
- The youngest was 11 yrs old
- He admitted to smoking every day since 8yrs old
- He was being supplied the cannabis by his big brother



Questions?