

Road Safety Authority Academic Day,

Royal College of Surgeons in Ireland.

Monday 7th October 2019

*Drug Impaired Driving:
The Confirmed New Reality in Modern Ireland.*

**Denis A. Cusack,
Director, Medical Bureau of Road Safety, Ireland
&
Full Professor Emeritus Forensic & Legal Medicine,
UCD School of Medicine, Dublin, Ireland.**



Medical Bureau of Road Safety **An Lia-Bhiúró um Shábháilteacht ar** **Bhóithre**

50 Years: 1968 – 2018



Medical Bureau of Road Safety

- The MBRS is the National independent statutory forensic body in Ireland responsible for the chemical testing of intoxicants in drivers under the Road Traffic Acts
- Responsibilities include:
 - Approval, supply and testing of equipment
 - Forensic Laboratory based chemical testing
 - Road Traffic Medicine research

Summary of Integrated Intoxicant Driver Testing 2019

- ❑ **Preliminary Alcohol Testing** – new PBT Dräger 7510 - 1,200 devices issued to Gardaí
- ❑ **Preliminary Drug Testing** – roadside or Garda station, 159 PDT Dräger DrugTest 5000 devices (67 + 87 + 5 Garda training) issued nationwide
- ❑ **Intoxicant Impairment Testing** – 2019 cadre of trained Gardaí from 2011 programme
- ❑ **Evidential Alcohol Testing** – 87 EBT instruments
- ❑ **Forensic Laboratory Alcohol and Drug Testing & Developments:** screening and confirmatory

Significant Changes in Legislation Since 1968

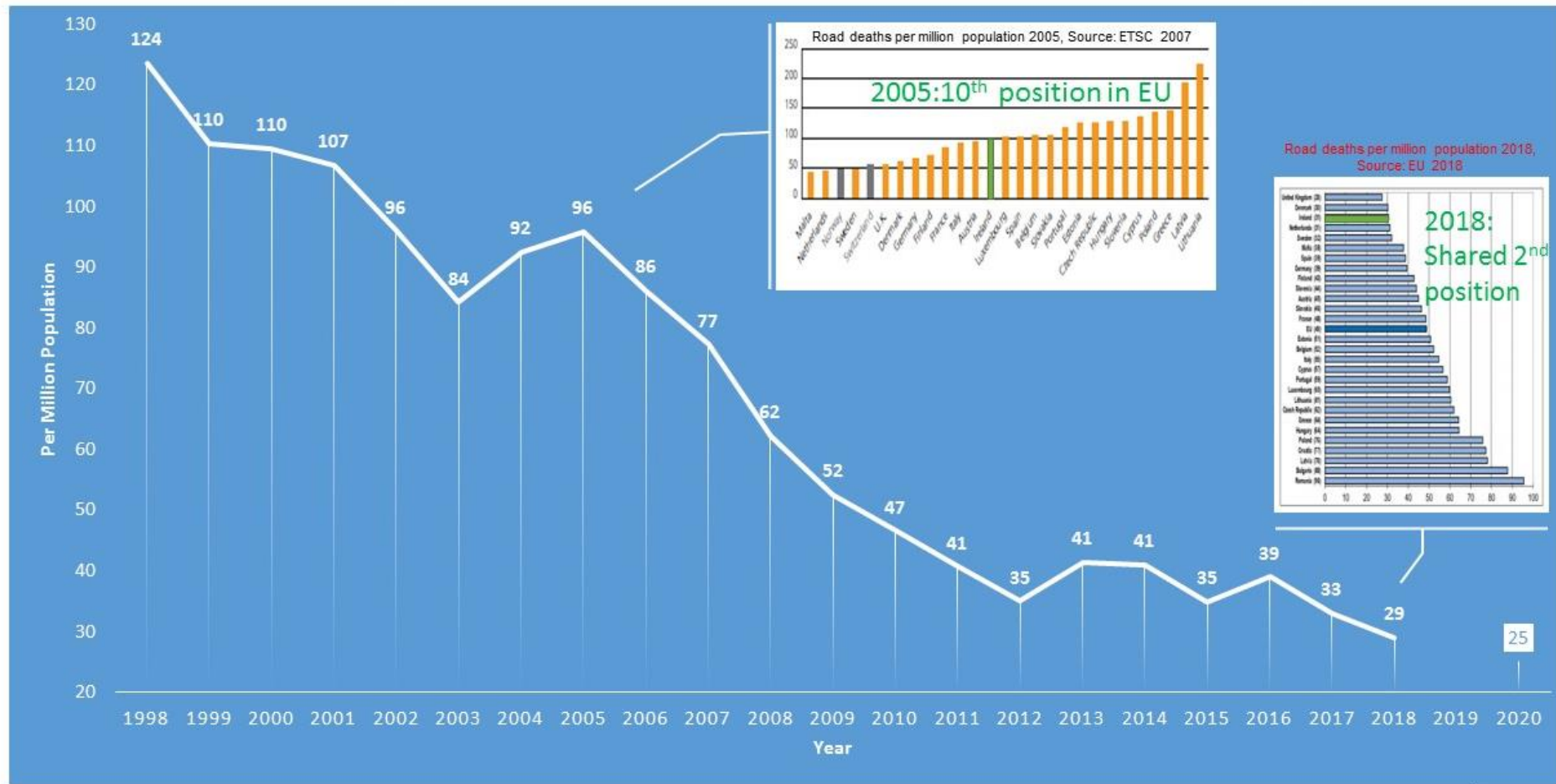
- 1978: Specimens to be divided into 2 parts
- 1994: Limits for breath, taking of specimens in hospitals
- 1995: Graded penalties for alcohol
- 1999: Evidential breath testing
- 2001: Provision of certificates for the presence of drugs
- 2002: Alcohol testing at road traffic collisions
- 2006: Mandatory Alcohol Testing Garda road checkpoints
- 2010: Roadside Traffic Impairment Testing (RTIT)
- 2014: Specimens from unconscious drivers and RTIT
- 2016: *per se* levels for drugs, oral fluid testing and Medicinal Cannabis exemption

Most Recent Changes in Legislation

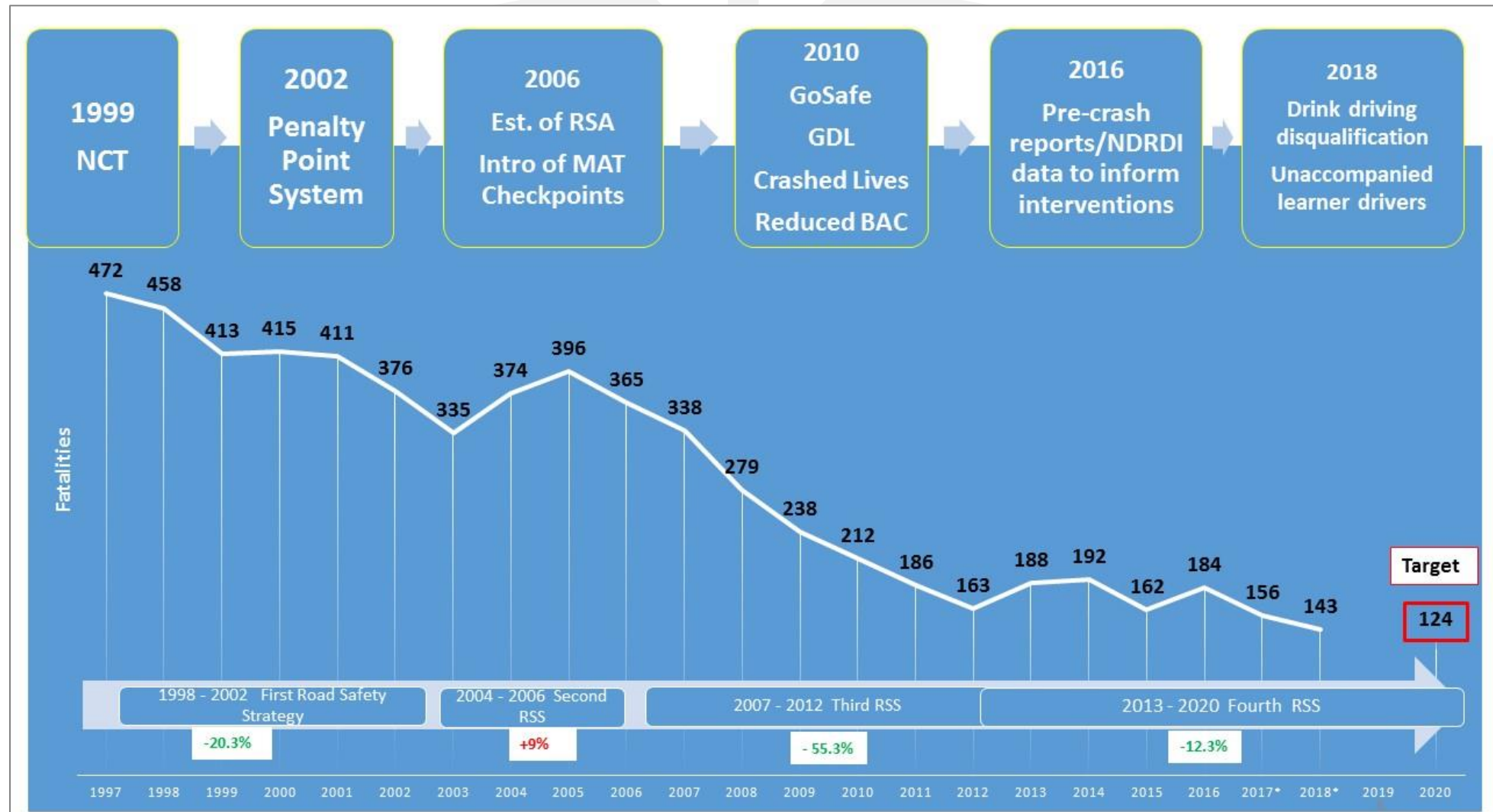
- Road Traffic Act 2016:
 - Preliminary drug testing (oral fluid) including Mandatory Intoxicant Testing checkpoints
 - *per se* drug levels
 - Medical exemption for Δ^9 Tetrahydrocannabinol (but still an offence if impairment evidence)

Road Fatalities Ireland 1998-2018

In 1998, Ireland had 124 deaths per million, reducing to 29 in 2018



Road Fatalities Ireland 1998-2018 & Road Safety Strategies (RSS)



Courtesy of Road Safety Authority

Intoxicant



- “intoxicant” includes alcohol and drugs and any combination of drugs or of drugs and alcohol
- substance which when taken into a body by one mean or another produces a condition of diminished mental and physical ability, hyperexcitability, or stupefaction.

Intoxicants and Driving



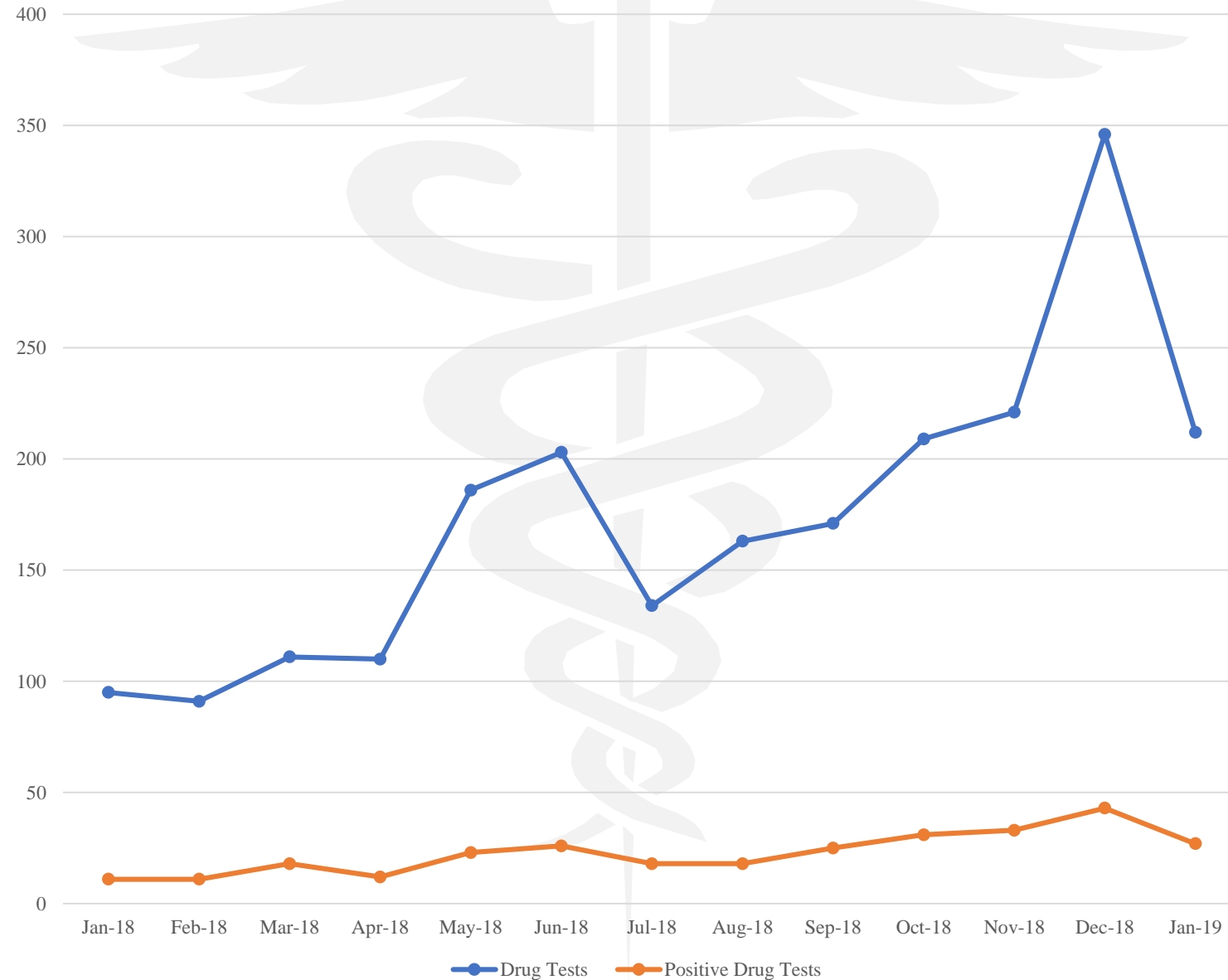
□ Depressants

- Alcohol
- Cannabis
- Benzodiazepines
- Opiates
- Z drugs
- Pregabalin

□ Stimulants

- Cocaine
- (Cocaethylene)
- Amphetamines
- Metamphetamine

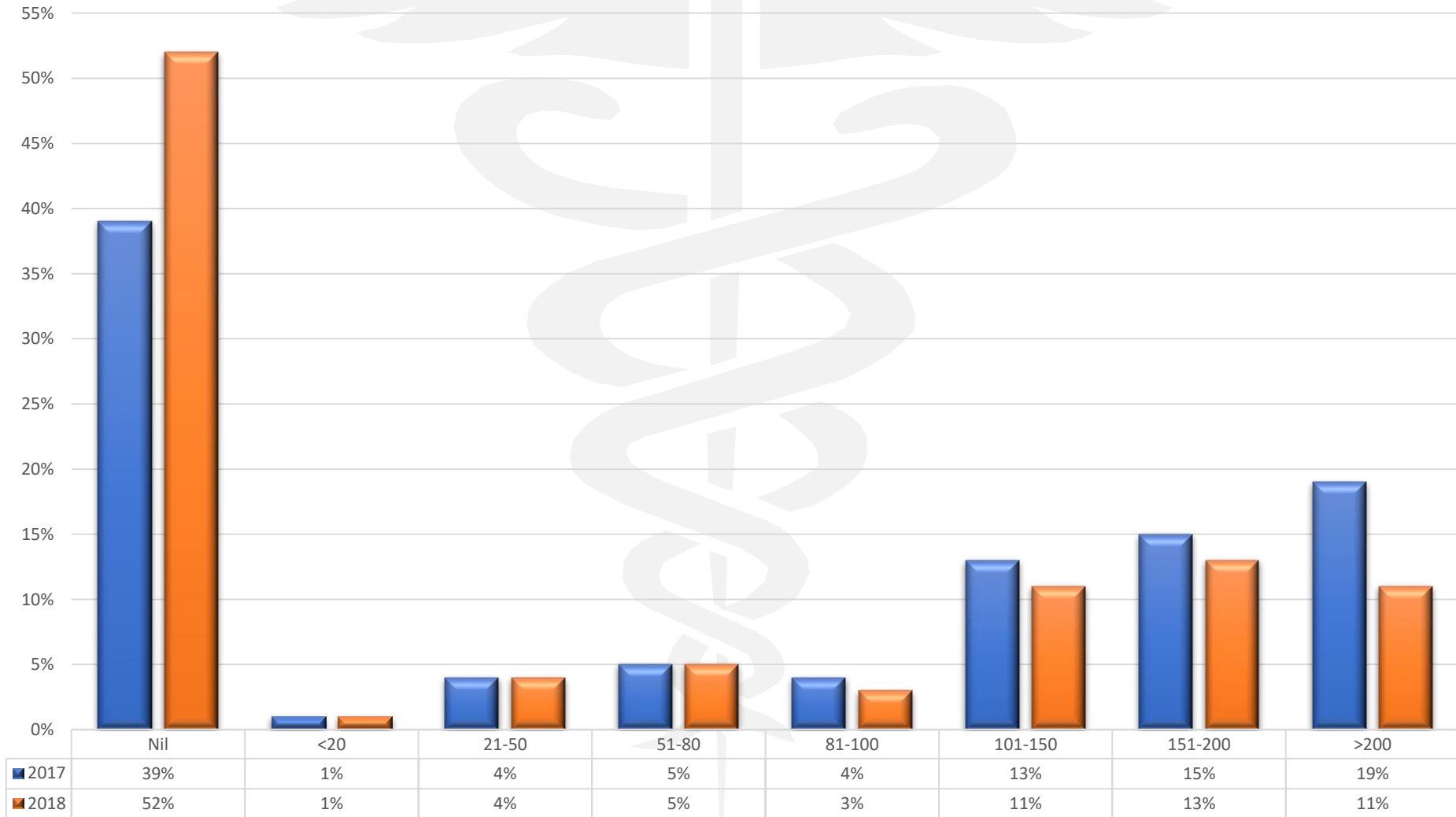
Mandatory Intoxicant Checkpoints





2018: >300,000 PBT roadside tests with 0.5% failure rate

Certified Blood Alcohol Levels 2018 v 2017



Samples Analysed for Alcohol and Drugs 2018

- Alcohol (B&U) 3,865
 - 52% NIL (39% in 2017)
 - 62% < 80 BAC
 - translating into drugs +ves
 - 38% > 80 BAC [c. 1,500]
- Alcohol (Br) 6,021
 - 5% NIL / (29% < 80 BAC)
 - indicating high detection of alcohol driving but DUID not being detected unless PDT
- Drugs (B&U) 2,144 (34% increase over 2017)
 - 2,099 < 80 BAC tested + 28 B&U over the limits + 17 EBT over limits
 - 76% positive on preliminary testing
 - 75% of these positive for Cannabis [c. 1,200]
 - Not detecting DUIDs in EBT NILS and lower < 80 alcohols

Different Perspectives in Tension on Cannabis Use

- Road safety and DUID
- Criminal misuse of illicit drugs and prescribable medicines
- Safe and healthy driving
- Healthcare considerations
- Social and recreational uses and decriminlisation or legalisation of cannabis

International debate on PDT, *per se* levels and driving impairment

- Risk threshold limits – *e.g. England & Wales*
- Lower impairment effect limits – *e.g. Norway*
- Zero tolerance levels – *e.g. Ireland*
- Scientific analytical limit of detection – *e.g. Sweden*
- Presence plus impairment if prescribed medication including some *per se* drugs – *Most jurisdictions*
- In reality combinations of above – *Most jurisdictions*
- Separate issues of criminal enforcement, public health and impaired driving

per se Levels

Drug/Metabolite	Level in Whole Blood
Δ 9 -Tetrahydrocannabinol (Cannabis)	1ng/ml
11-nor-9-carboxy- Δ 9 -tetrahydrocannabinol (Cannabis)	5ng/ml
Cocaine	10ng/ml
Benzoylcegonine (Cocaine)	50ng/ml
6-Acetylmorphine (Heroin)	5ng/ml

1. Level must be greater than or equal to levels specified above
2. Uncertainty of measurement will be deducted **(-30%)**
3. Maximum permitted time for collection is 3 hours
4. Strict liability 1 year disqualification
5. No requirement for impairment to be proven- Government Road Safety Strategy Policy of Zero Tolerance



Cut-off concentrations for blood levels of THC in Europe (EMCDDA & CCSUA May 2018)

THC (ng/ml)	Country
1	Belgium Denmark Ireland Luxembourg Netherlands (if other drugs are present)
1.3	Norway (*)
2	Czech Republic United Kingdom
3	Netherlands (if THC only is detected) Norway (*)
9	Norway (*)

Legal cut-off concentrations for blood levels of THC in some European countries

(*) In Norway, the severity of the penalty is increased according to the level of THC detected.

Source: Hughes, 2017



Other Jurisdictions in Europe with THCA DUID Levels

THCA (ng/ml)	Country
5	Finland Portugal Slovenia
LLOQ	Sweden

Source: DRUID



Drugs other than *per se*

Evidence of:

- Confirmed presence (not concentration) of the drug
 - MBRS statutory certificate
- and**
- Impaired driving
 - An Garda Síochána

Legislative Change Needed

- Graded penalties for increasing levels of alcohol already in place since 1995 (20, 50, 80, 100, 150 mg%)
- Graded penalties for combination (hybrid) of alcohol with other drugs positive (e.g. alcohol 80mg% + cocaine) or multiple drugs positive (e.g. cannabis and benzodiazepines) now needed

Oral Fluid Testing

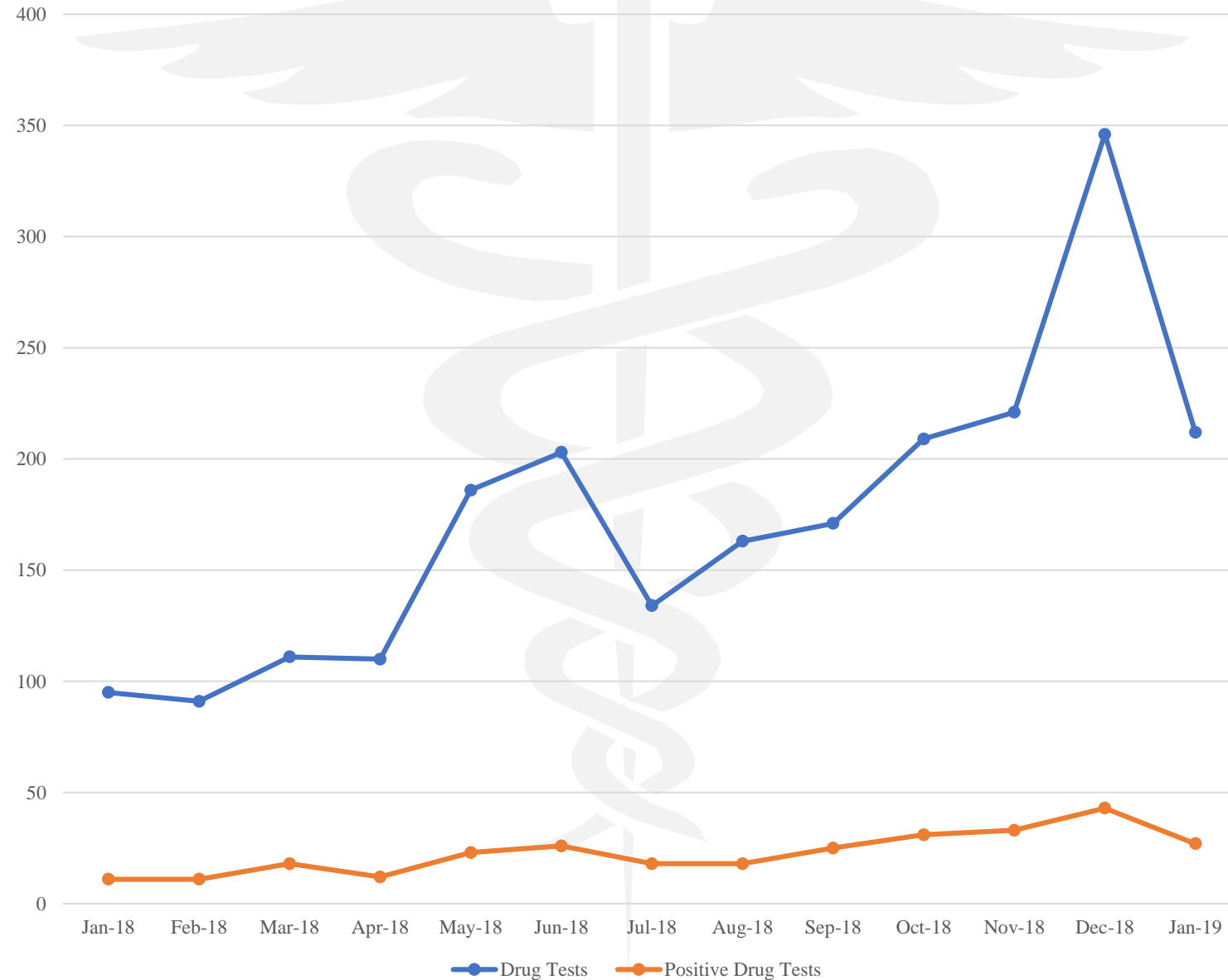


Dräger DrugTest 5000

Drugs Dräger DT5000 Can Detect

- ❑ Cannabis
- ❑ Benzodiazepines
- ❑ Cocaine
- ❑ Opiates
- ❑ Above 4 in place 2017
- ❑ Methadone, Amphetamine and
Metamphetamine under review for 2020

Mandatory Intoxicant Checkpoints

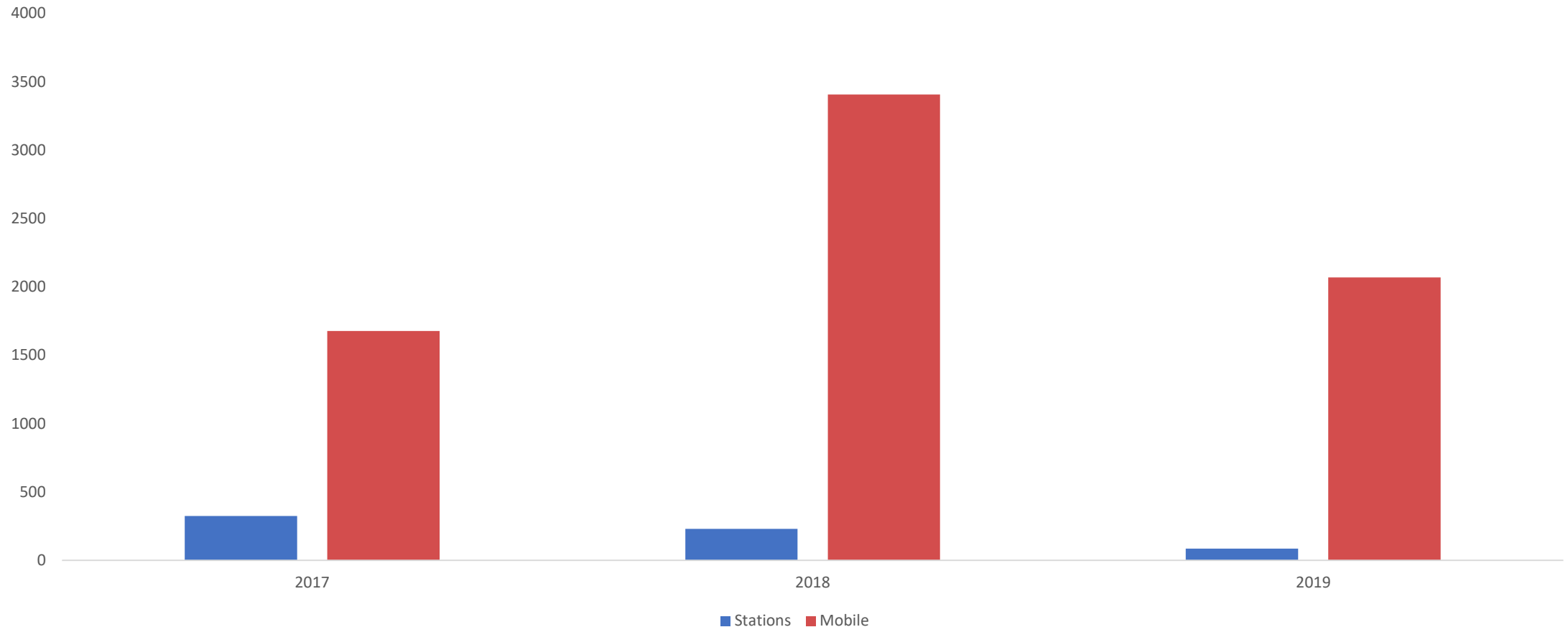


EBT / PDT Locations in Ireland - April 2019

Population: 4.9 million



Dräger Drugtest 5000 Usage April 2017 to July 2019 (cumulative)



Message: Scope to increase PDT usage at roadside but more particularly in Garda stations – to increase the detection of DUID

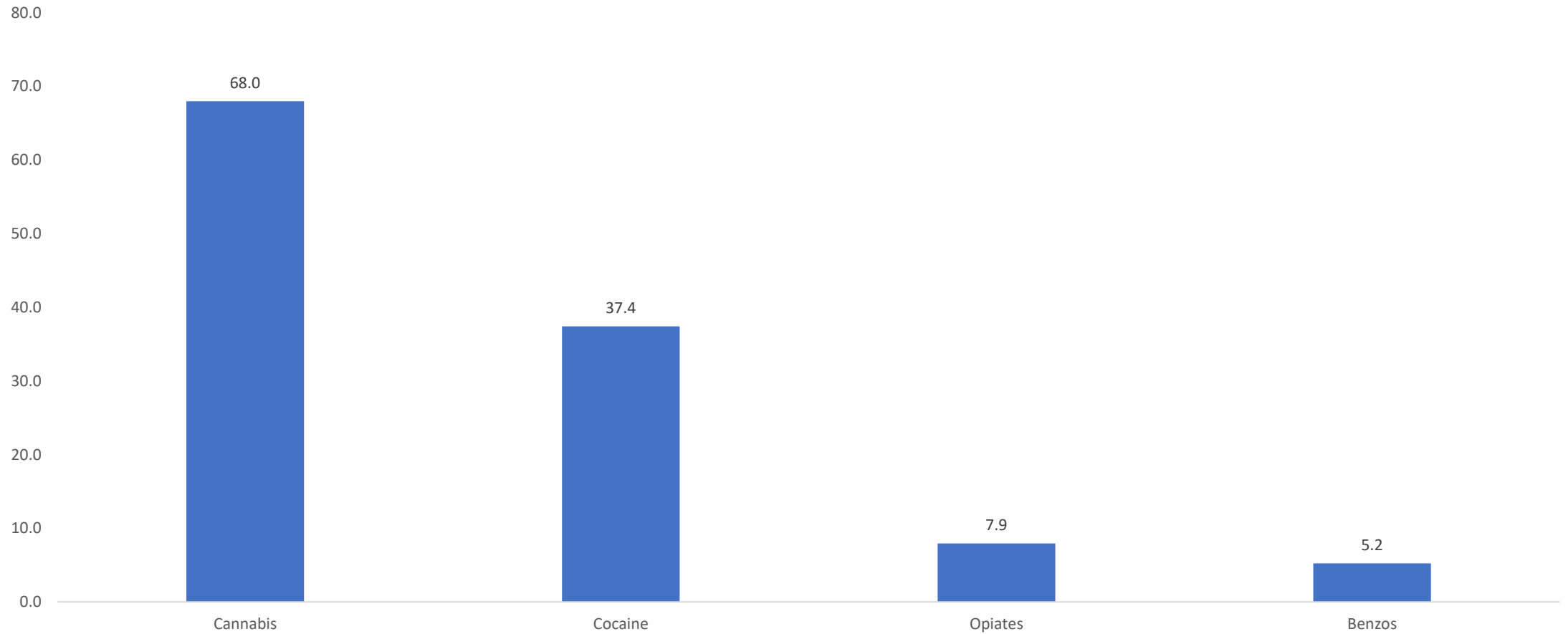


2018: >2,000 roadside MIT PDT tests with 13% positive rate
and estd. >750-1,000 other roadside PDT tests (AGS figures awaited)

2019: projected roadside 3,500 MIT PDT tests with c. 15% positivity
and estd. >1,500 other roadside PDT tests

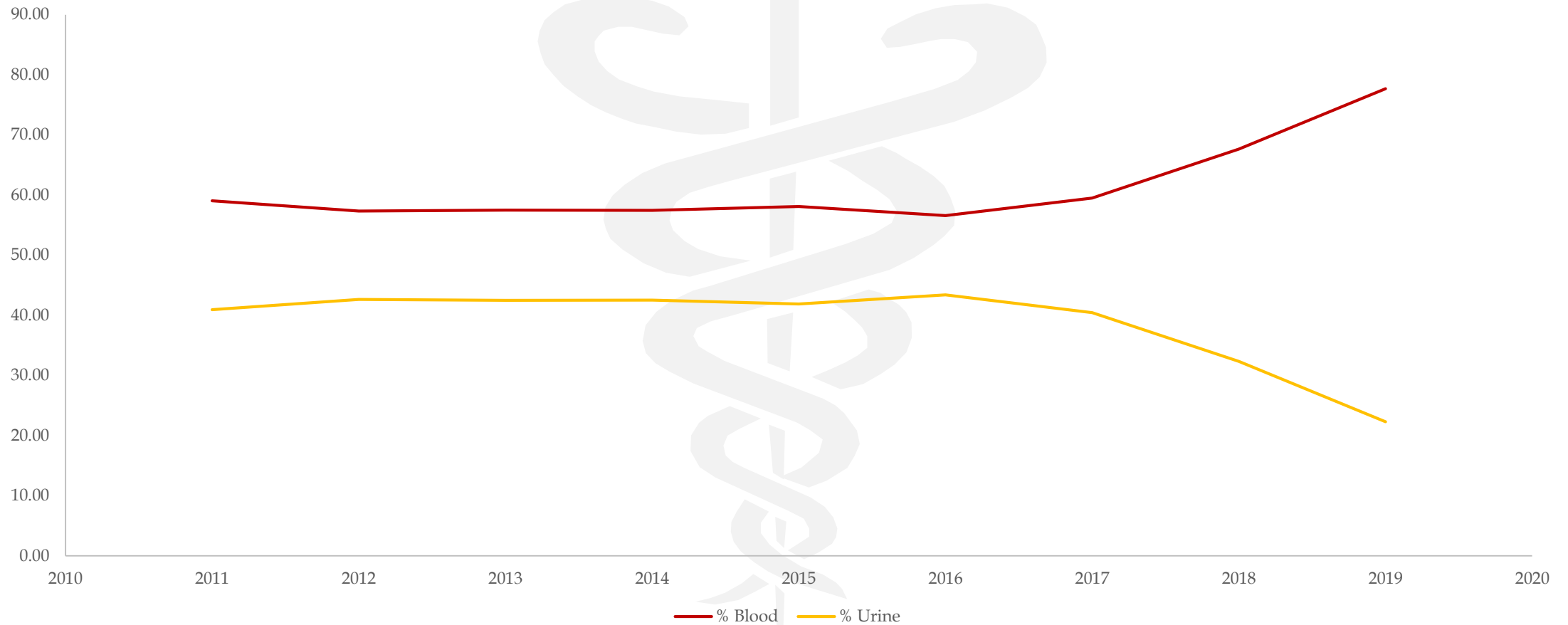
Drug Prevalence with DT5000 PDT

(April 2017-July 2019)



Blood v Urine Percentages by Year

(2011 to July 2019)

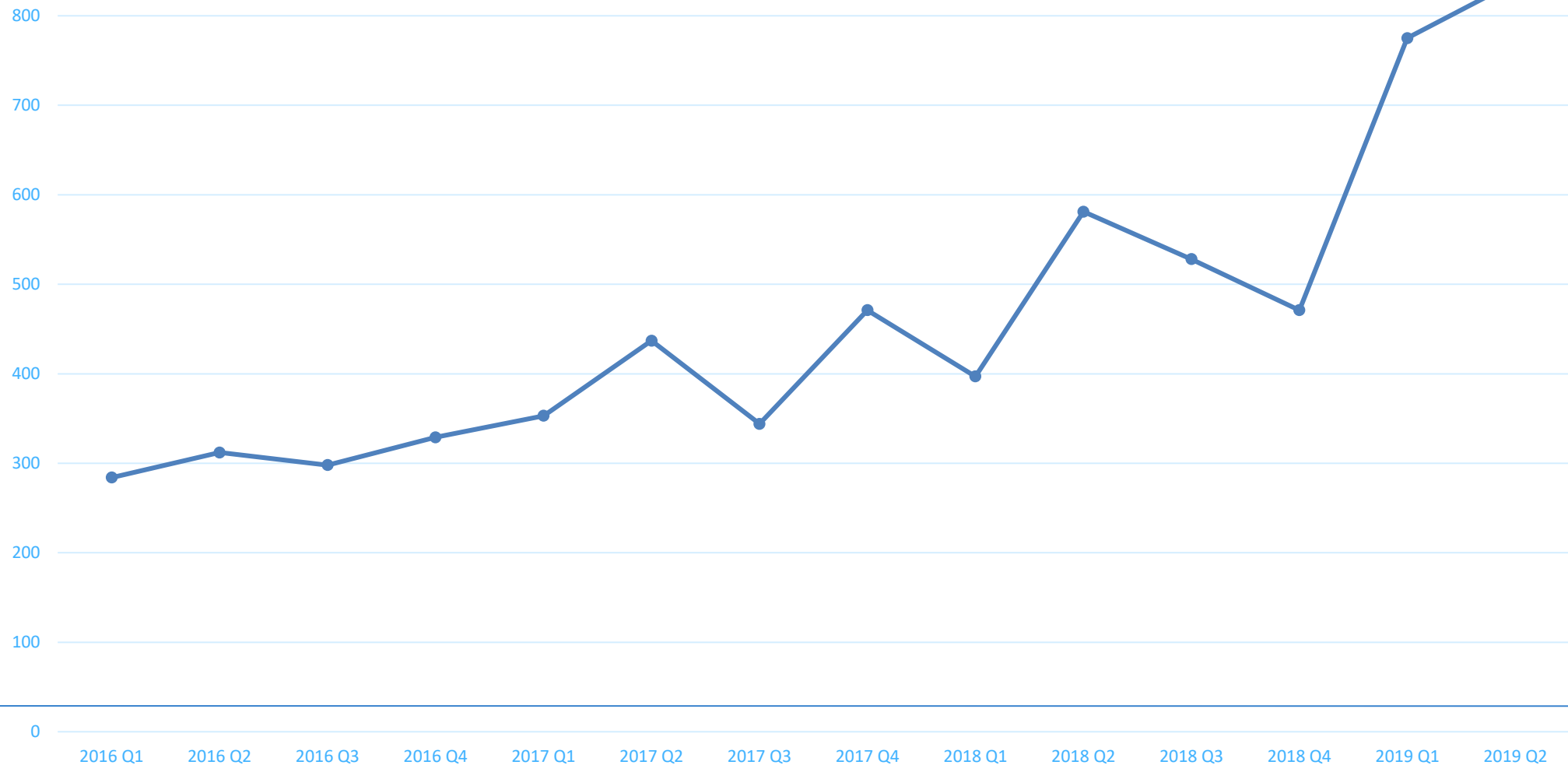


Drugs Tested in MBRS

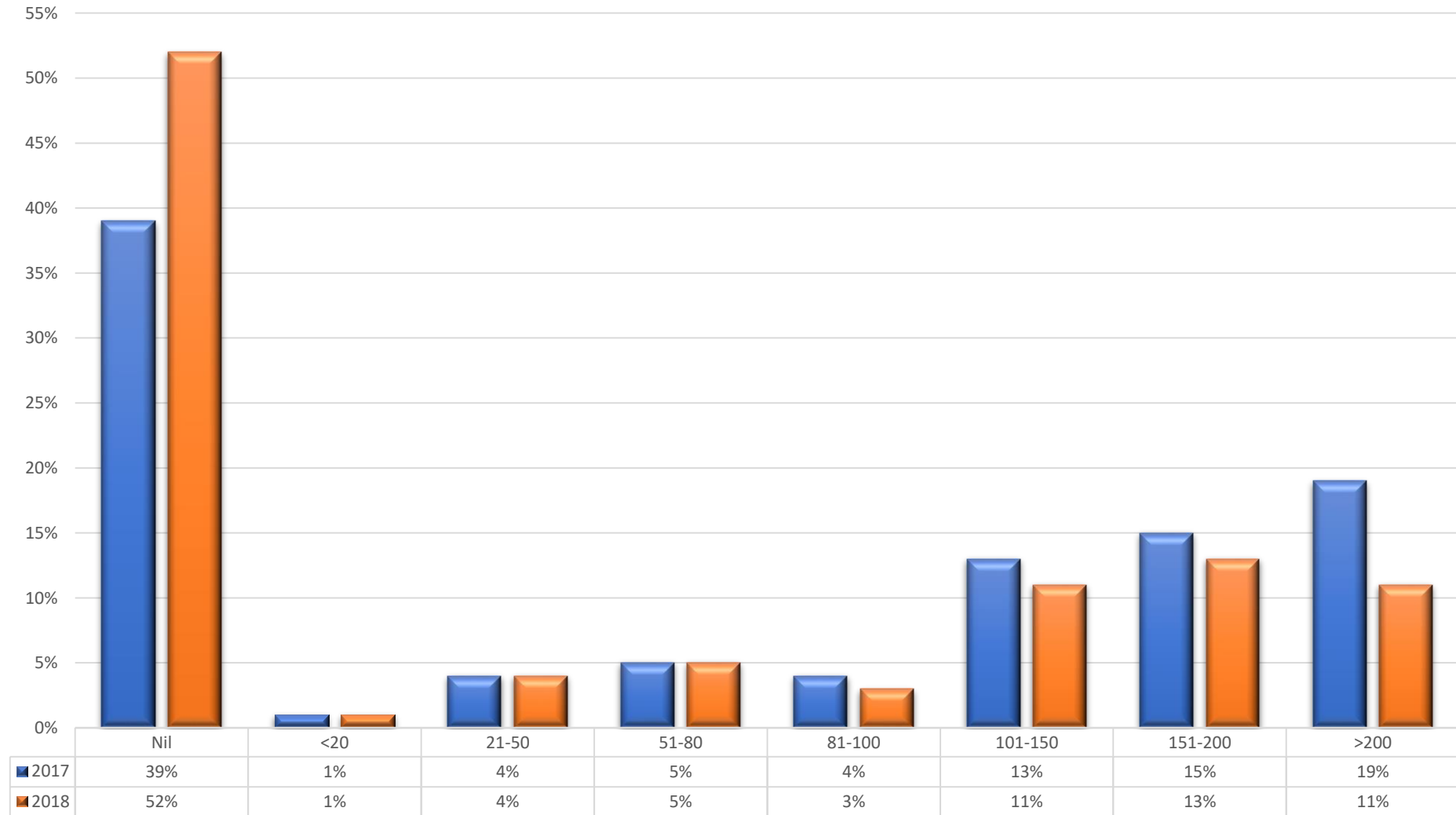


The list of some of the many drugs for which the Bureau tests is on the website at www.mbrs.ie under Scope of Accreditation for Alcohol and Drugs Testing 2017-2022 in the Publications section.

Total Specimens for lab Testing 2016-2019



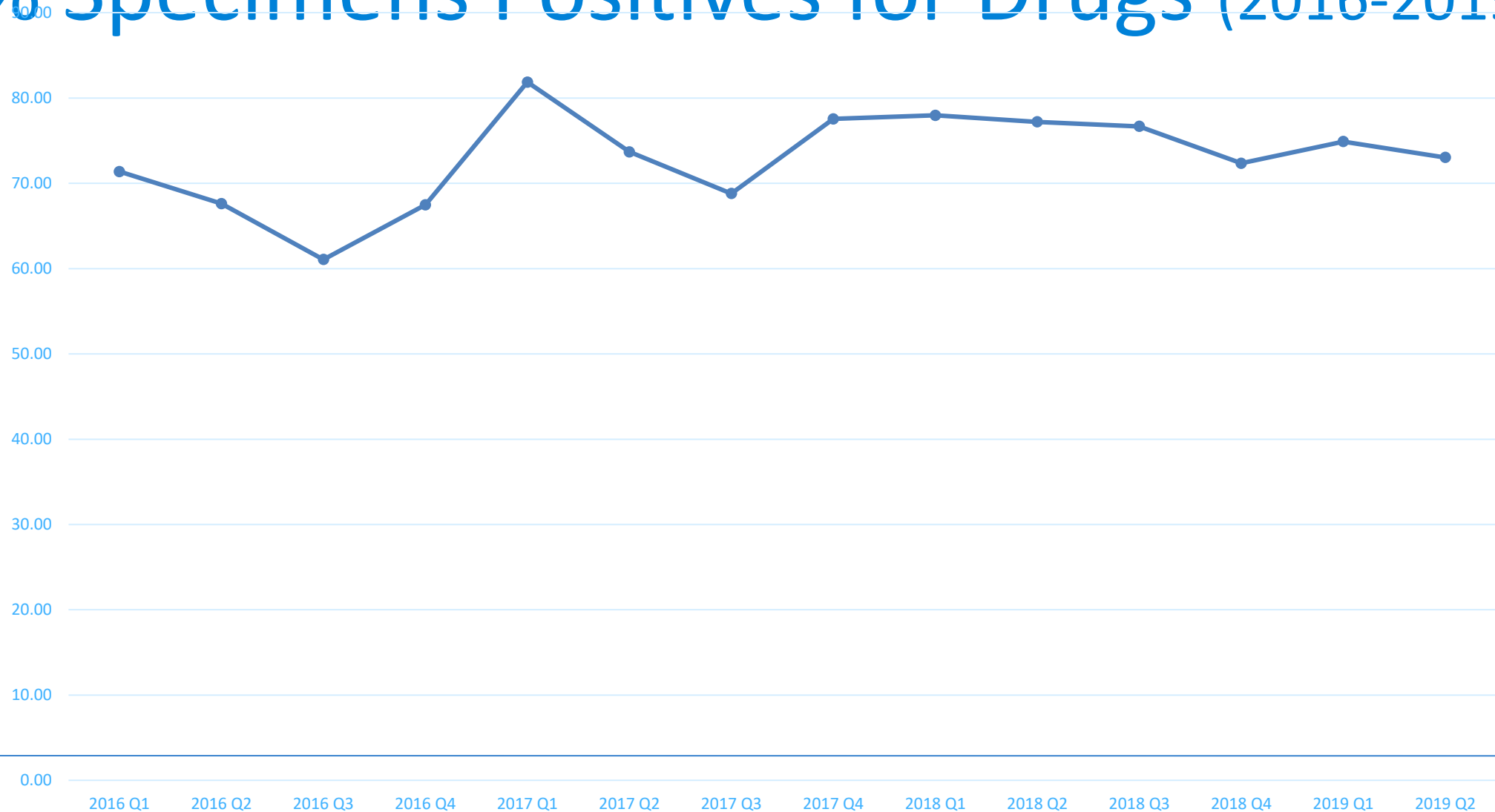
Certified Blood Alcohol Levels 2018 v 2017



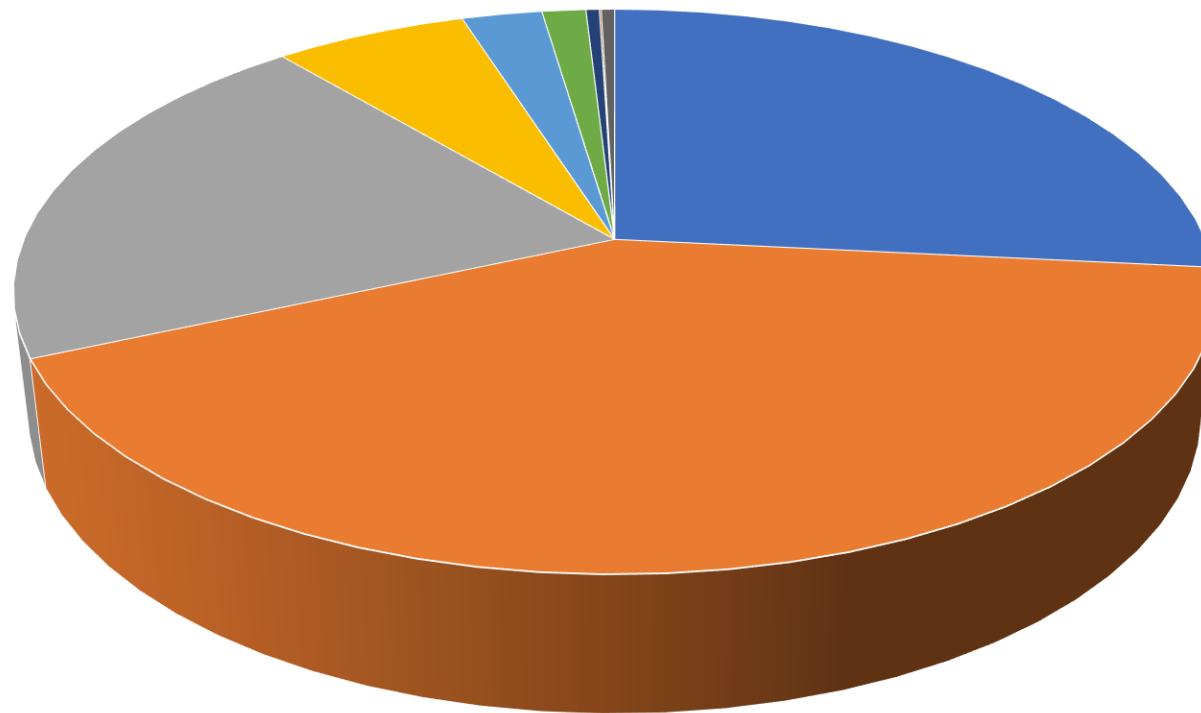
Drugs Analyses 2016-2018

- 2016 - 1,108 tested - 813 positive (72%)
- 2017 - 1,592 tested - 997 positive (63%)
- 2018 - 2,144 tested - 1,628 positive (76%)

% Specimens Positives for Drugs (2016-2019)

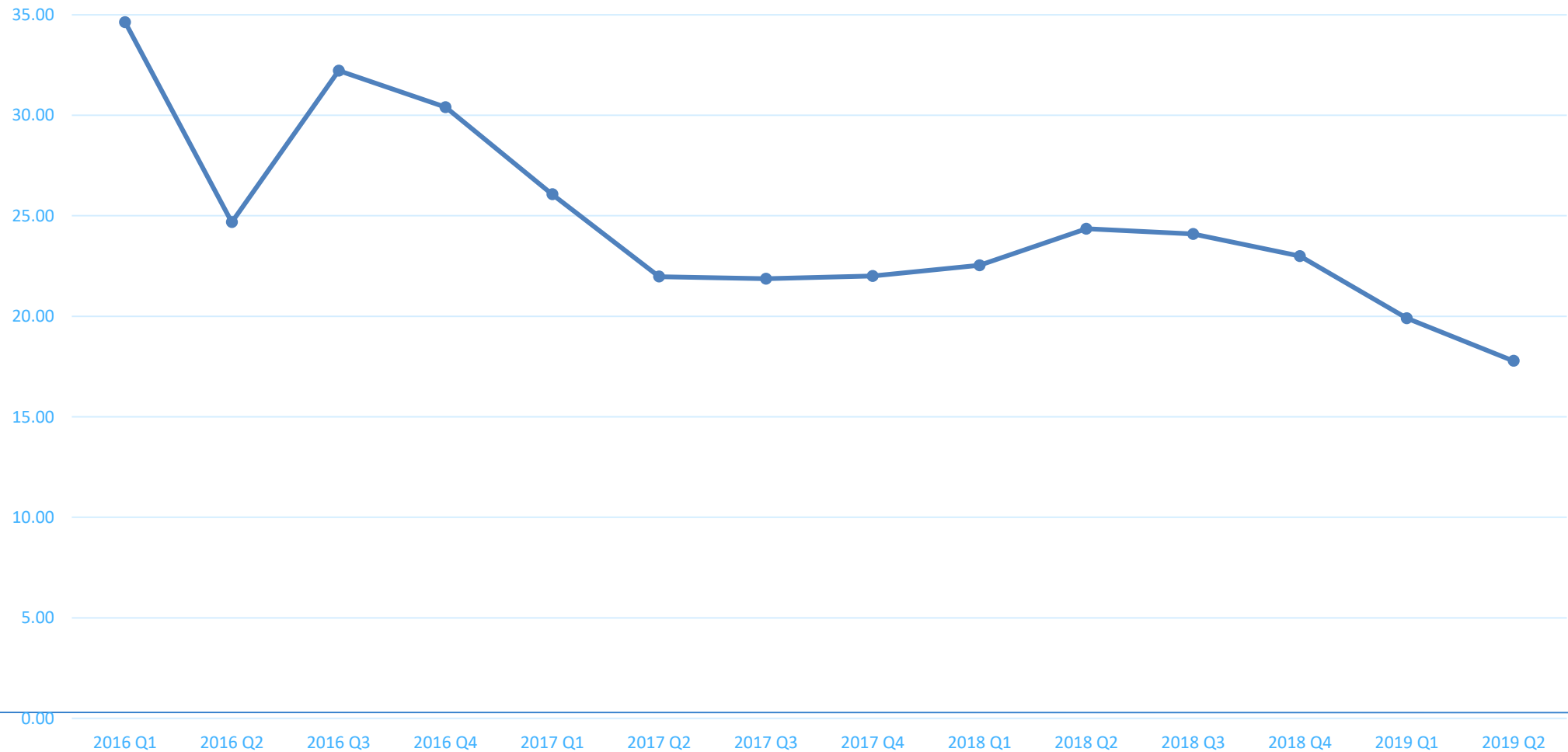


Age Profile of Drug Screening Positive Drivers 2018

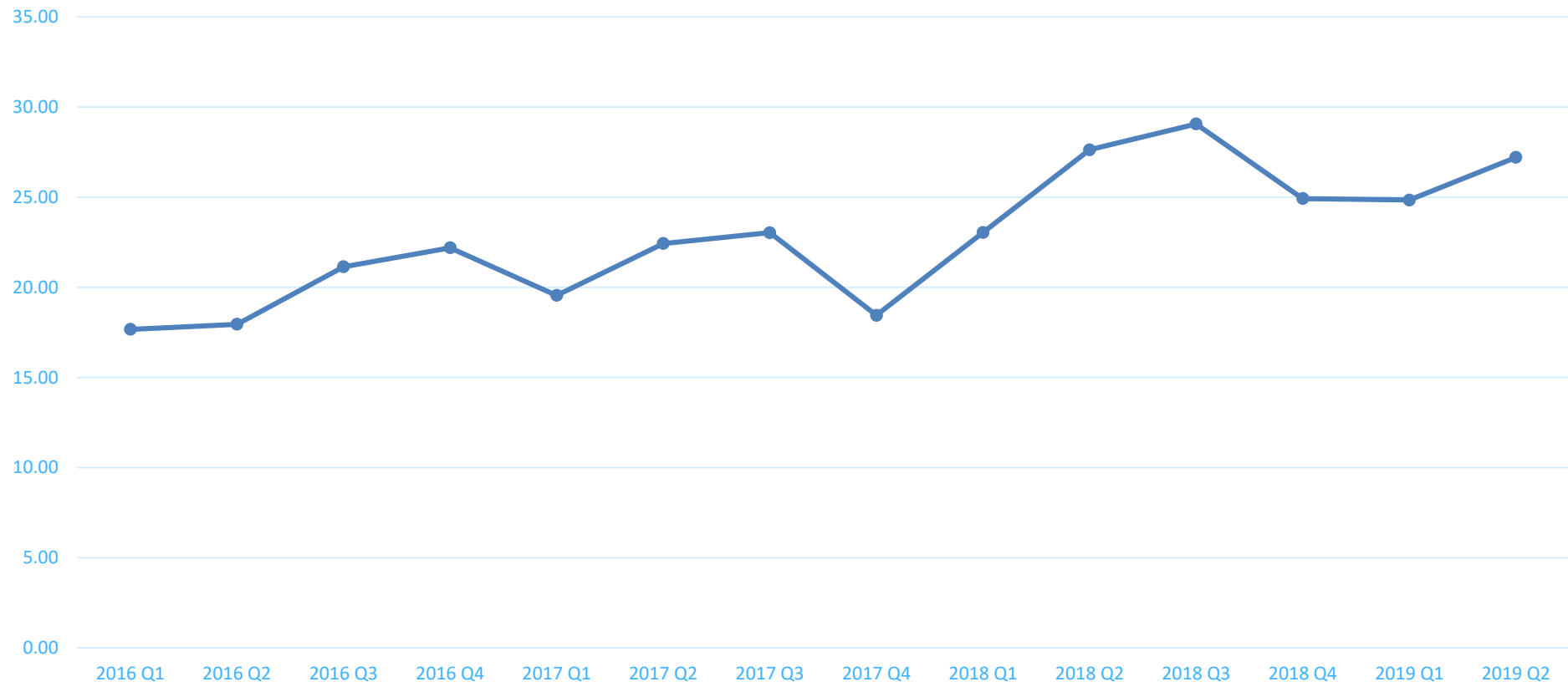


■ ≤24 ■ 25-34 ■ 35-44 ■ 45-54 ■ 55-64 ■ 65-74 ■ 75-84 ■ ≥85 ■ Not stated

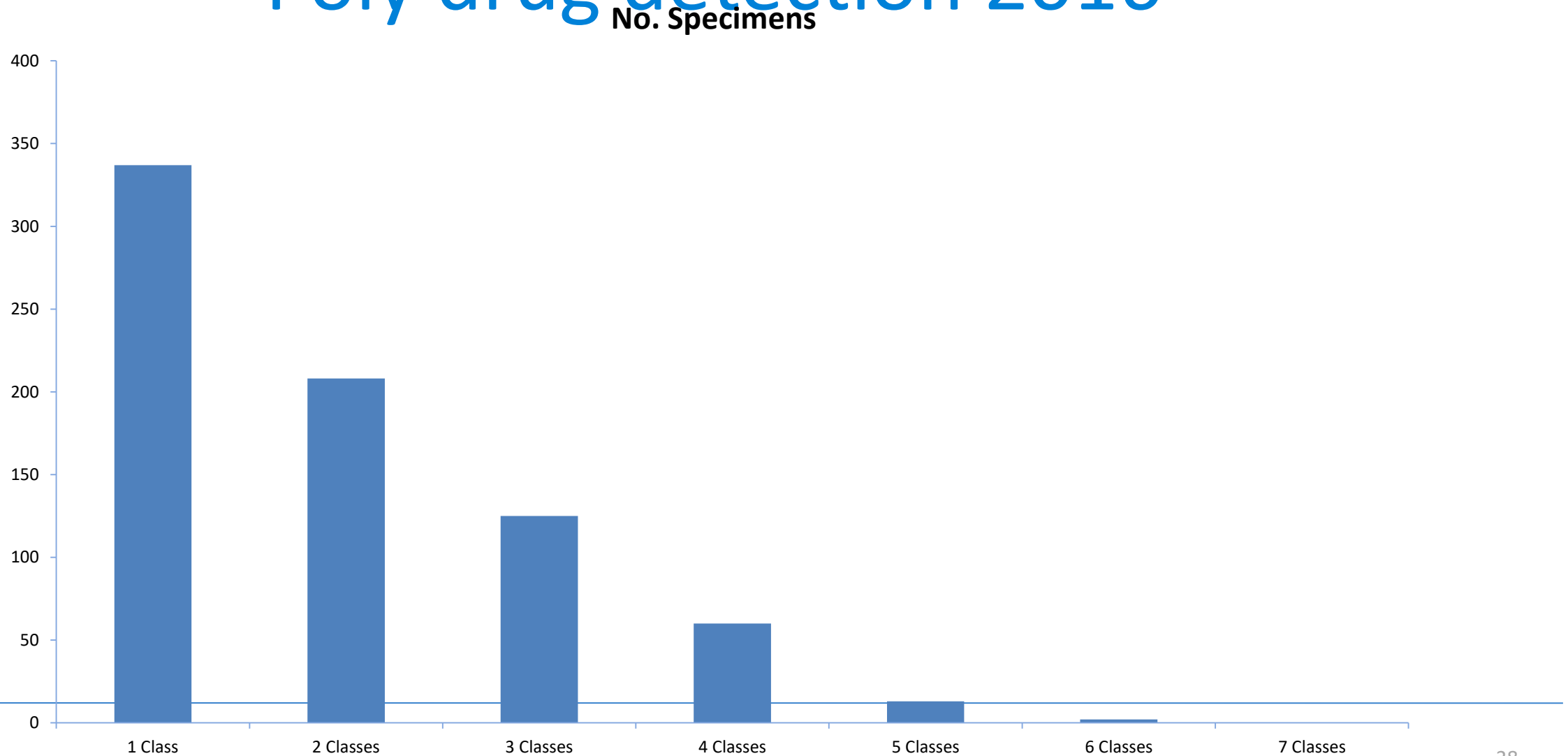
% Positive for Benzodiazepines (2016-2019)



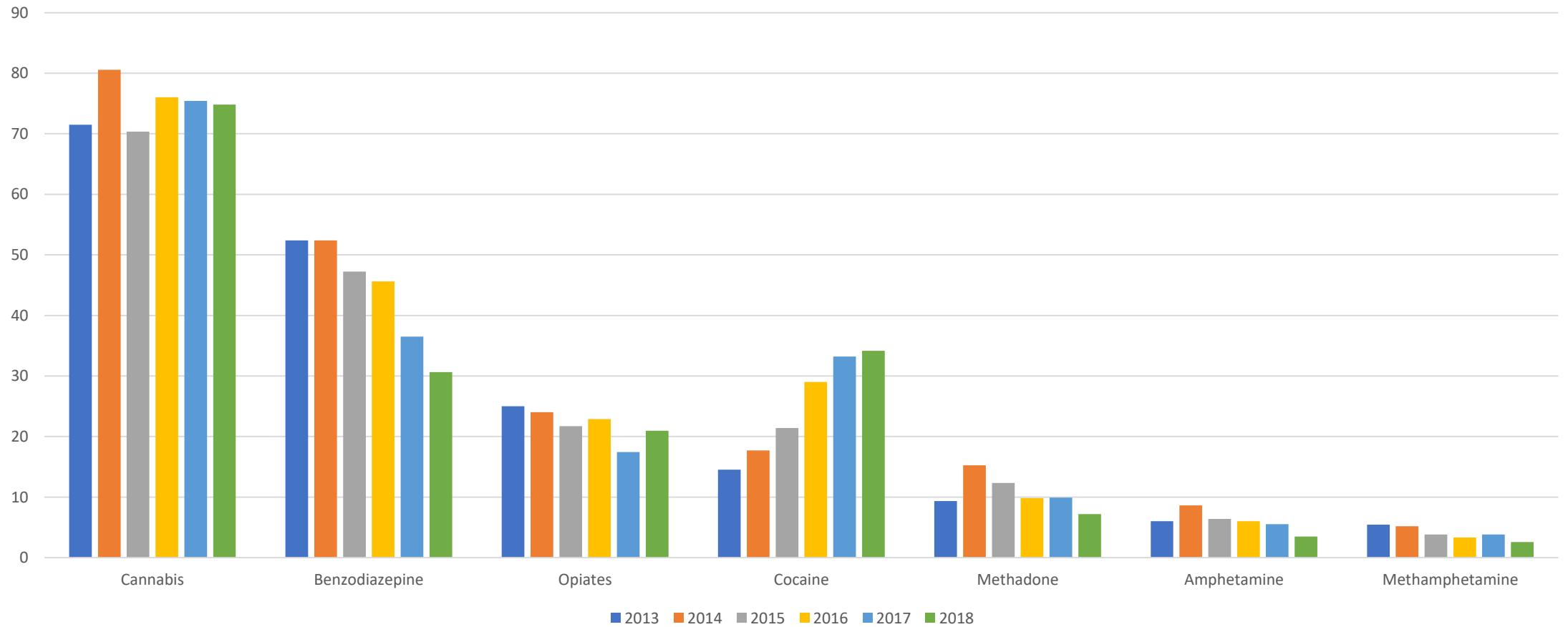
% Positive for Cocaine (2016-2019)



Poly drug detection 2016



Drugs Prevalence (%): MBRS Analysis 2013-2018



Prescribable Medications



- Benzodiazepines
- Opiates
 - Morphine
 - Codeine
 - Methadone
- Cannabis
- Taken as per prescription
- In excess of prescription
- Off prescription (“borrowed” or “street market”)

Over the Counter Medications

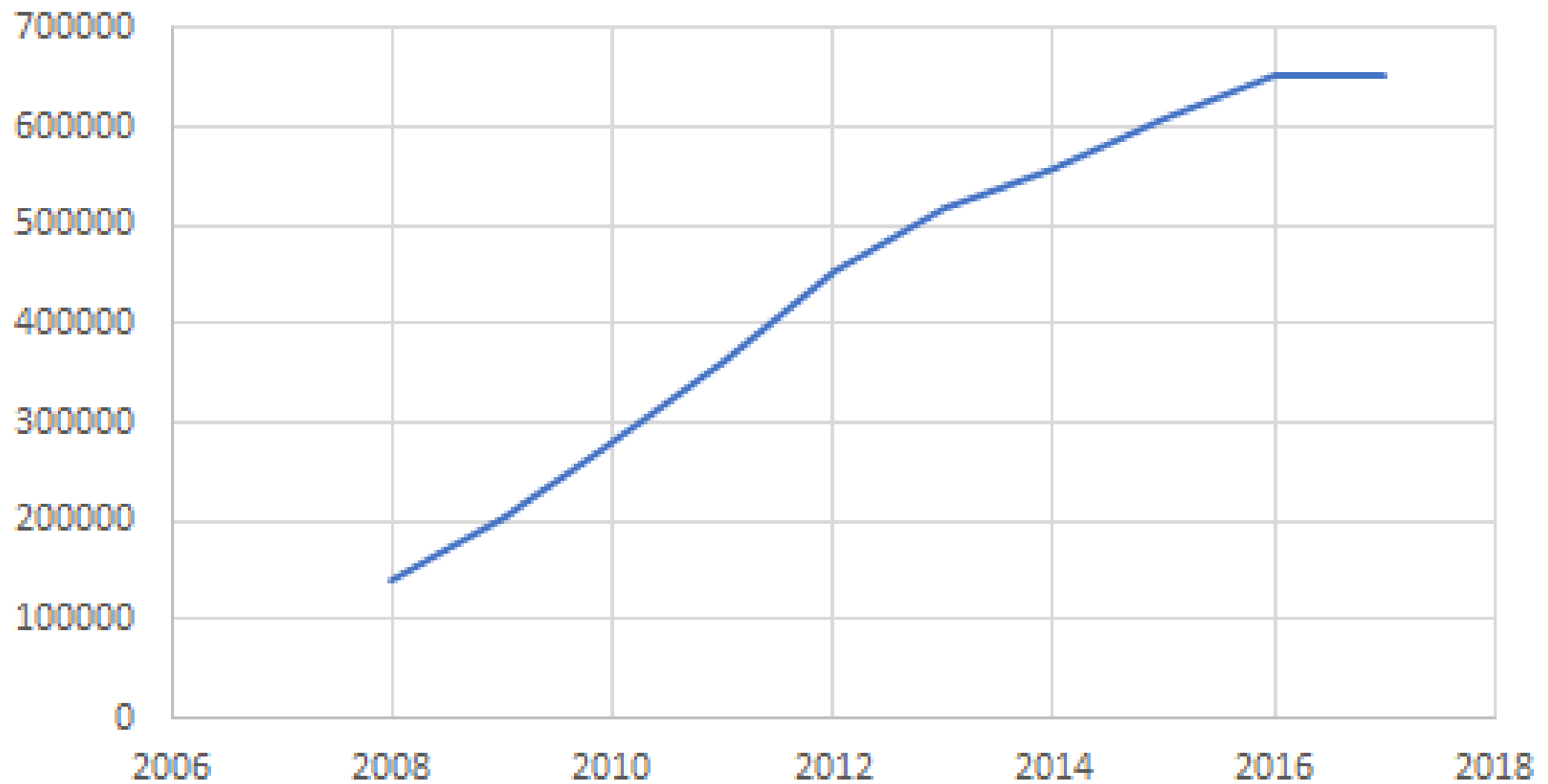
- Medications containing codeine (and paracetamol*), most frequently purchased-
 - Solpadeine * / Solpadol *
 - Migraleve *
 - Feminex *
 - Uniflu Plus *
 - Nurofen Plus
 - Night Nurse
- <http://www.rsa.ie/en/Utility/News/2017/GARDAI-CAN-NOW-TEST-MOTORISTS-FOR-DRUGS-AT-THE-ROADSIDE/>

Increase in Prescription Drugs, Ireland: Healthcare Card Holders 2006-2016

- Pregabalin 1086% ↑
- Escitalopram 232% ↑
- Codeine 208% ↑
- Oxycodone 159% ↑
- Zolpidem 88% ↑

Medicines Management Programme / Sunday Business Post 4th Feb18

Pregabalin GMS Prescribing Frequency



Medical Council Warns Doctors to Reduce Over-Prescribing of Benzodiazepines, Z-drugs and Pregabalin

Thursday, 19th September 2019:

The Medical Council has today issued advice to all doctors prescribing benzodiazepines, z-drugs and Pregabalin to follow best practice guidelines and to only prescribe benzodiazepines or similar drugs when absolutely required.

The Medical Council, with its dual role of protecting patients and supporting doctors, takes a very serious view of over-prescribing of benzodiazepines, z-drugs and Pregabalin and is actively working with the HSE, the Department of Health, the Pharmaceutical Society of Ireland and the medical profession to take action on this issue on a national level.

Sláinte agus Tiomáint (October 2018 Edition)

[DUID and the link with
Fitness to Drive]

Chapter 6.1 and 6.2:

Alcohol and Drugs Misuse and
Dependence

Information Leaflets:

Medicines and Driving

&

Driving Under the Influence of Illicit
Drugs and/or the Abuse of Prescription
Drugs





What is the law?

It is an offence to drive or attempt to drive a vehicle while under the influence of an 'intoxicant' to the point that you cannot keep proper control over the vehicle. An 'intoxicant' includes alcohol, illegal drugs, and medicine, and any combination of drugs or combination of drugs and alcohol.

Drug driving and the law

In Ireland, we have a twin-track approach to drug driving:

It is against the law to:

- 1) drive under the influence of drugs (including prescribed drugs) where your driving is impaired to such an extent that you don't have proper control of the vehicle;
- 2) drive under the influence of certain drugs (regardless of driving performance) above specified levels. There are currently three drugs specified – cannabis, cocaine and heroin.

If you are found to have any of these drugs above the specified limits, you can be prosecuted for drug driving with no proof of impairment necessary. This is the same as the law where a driver exceeds specified alcohol levels.

New 'preliminary' drug test

In April 2017, Gardaí were given new powers to conduct 'Preliminary Drug Testing' at the roadside or in Garda stations. This allows the Gardaí to establish checkpoints for testing drivers for drugs with similar powers to existing alcohol testing checkpoints. This system will allow Gardaí to test a driver's saliva for cannabis, cocaine, opiates (for example, heroin, morphine) and benzodiazepines (for example, Valium).

Drivers with medical conditions should continue to take their prescribed medications in accordance with healthcare advice and medical fitness-to-drive guidelines, which can be viewed at <http://www.rsa.ie/RSA/Licensed-Drivers/Safe-driving/Medical-Issues/>

But be aware of how the drugs you are taking might affect your ability to drive.

So, if you are taking prescription or over-the-counter medicines under the advice of your doctor or pharmacist, **and so long as those medicines don't impair your driving**, you have nothing to be concerned about.

If you are in any doubt, speak to your doctor or pharmacist about your concerns.

A statutory medical exemption certificate is provided for in the law for people who have been prescribed medicinal cannabinoids (medicinal marijuana) in Ireland. If this applies to you, you should carry the medical certificate with you while driving.



Follow us on:



Údarás Um Shábháilteacht Ar Bhóithre
Road Safety Authority

Páirc Ghnó Ghleann na Muaidhe, Cnoc an tSabhaircín,
Bóthar Bhaile Átha Cliath, Béal an Átha, Co. Mhaigh Eo
Moy Valley Business Park, Primrose Hill, Dublin Road, Ballina, Co. Mayo
locall: 1890 50 60 80 fax: (096) 25 252
email: info@rsa.ie website: www.rsa.ie

RSA



Medicines and driving

Údarás Um Shábháilteacht Ar Bhóithre
Road Safety Authority

April 2017

These tests can be used as evidence of driver impairment in a prosecution for drug driving. Where a person is arrested on suspicion of drug driving the Gardai have the power to require the person to provide a blood specimen.

Penalties

If you are convicted of drug driving, you will get:

- a minimum 1-year driving disqualification if you are found to be above the legal threshold for cocaine, cannabis or heroin (since April 2017);
- a minimum of 4 years driving disqualification if you are found to have drugs in your body and are impaired to such an extent that you do not have proper control of a vehicle;
- up to €5,000 fine;
- up to 6 months in prison;
- a criminal record.

Medicines and driving

If you are taking prescription or over-the-counter medicines under the advice of your doctor or pharmacist, and so long as those medicines don't impair your driving, you have nothing to be concerned about. If you are in any doubt, you should speak to your doctor or pharmacist about your concerns.

A statutory medical exemption certificate is provided for in the law for people who have been prescribed medicinal cannabinoids in Ireland (medicinal marijuana). If this applies to you, you should carry the medical certificate with you while driving.



Follow us on:



Údarás Um Shábháilteacht Ar Bhóithre
Road Safety Authority

Páirc Ghnó Ghleann na Muaidhe, Cnoc an tSabhaircín,
Bóthar Bhaile Átha Cliath, Béal an Átha, Co. Mhaigh Eo
Moy Valley Business Park, Primrose Hill, Dublin Road, Ballina, Co. Mayo
local: 1890 50 60 80 fax: (096) 25 252
email: info@rsa.ie website: www.rsa.ie

RSA



Driving Under the
Influence of Illicit
Drugs and/or
the Abuse of
Prescription Drugs

Údarás Um Shábháilteacht Ar Bhóithre
Road Safety Authority

Medical Exemption Certificate



- ❑ Ireland has licensed for use a medicinal form of cannabis, brand name 'Sativex.'
- ❑ The 2016 Act allows for a medical exemption certificate to be prescribed in regulations for people who have been prescribed medicinal cannabinoids.
- ❑ The new per se offence will not apply to holders of the certificate in so far as THC or THC acid is found in their blood.

Medical Cannabis Use

- ❑ Misuse of Drugs (Prescription and Control of Supply of Cannabis for Medical Use) Regulations 2019 (June) referring to THC
- ❑ Limited to -
 - spasticity associated with multiple sclerosis
 - intractable nausea and vomiting associated with chemotherapy
 - severe, refractory (treatment-resistant) epilepsy
- ❑ Strict conditions under the regulations
- ❑ Licensed drugs containing THC and CBD, and CBD containing preparations, are different considerations

RTC Drug Data Overview



- The Health Research Board (HRB) collect Road Traffic Collision (RTC) fatalities data annually on behalf of the RSA from closed Coronial files using the National Drug-Related Deaths Index (NDRDI) methodology.
- To date, the RSA have access to Coronial data for RTC fatalities that occurred in 2013-2016.
- Coronial files generally contain: An Garda Síochána Investigation Report, Forensic Collision Investigation (FCI) Report, witness(es) deposition/statement(s), autopsy report, toxicology report, death certificate and the Coroner's verdict.

Toxicology in Fatal Road Traffic Collisions

Drug Prevalence 1

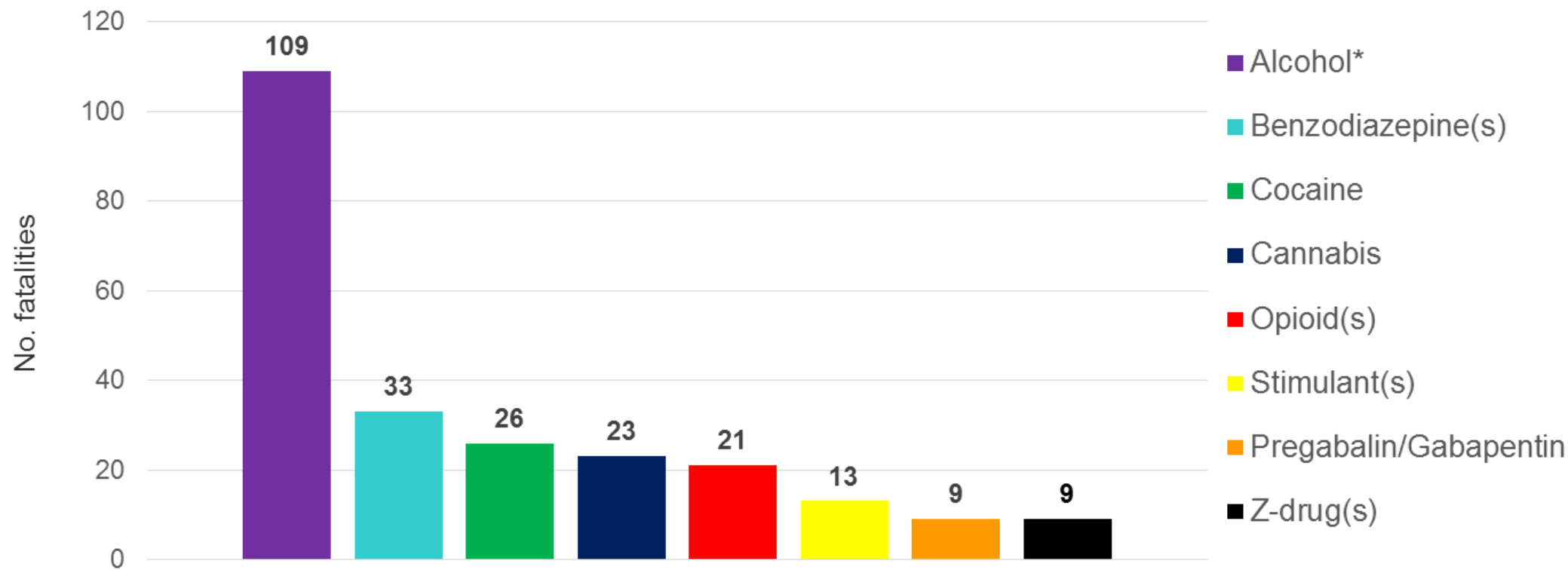


Figure 1. Number of driver fatalities (2013-2016) with a positive toxicology by drug category.

*Presence of alcohol is confirmed with a BAC >20mg/ml (or equivalent in urine).

Toxicology results from 310 driver fatalities were analysed.

Drug Prevalence 2

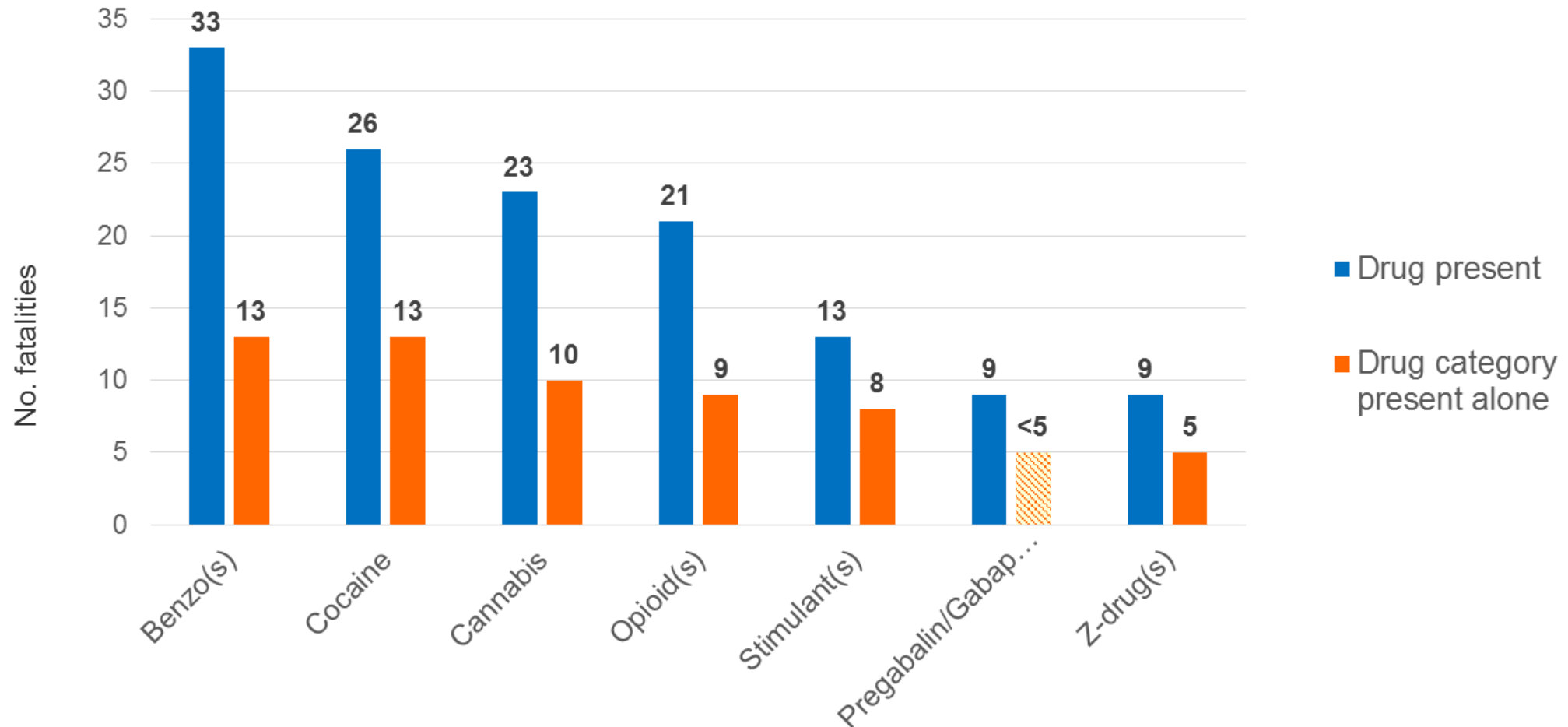


Figure 2. Number of driver fatalities (2013-2016) with a positive toxicology by drug category*.

*Please note that alcohol is not incorporated in the drug categories for this figure.

Drug Prevalence 3

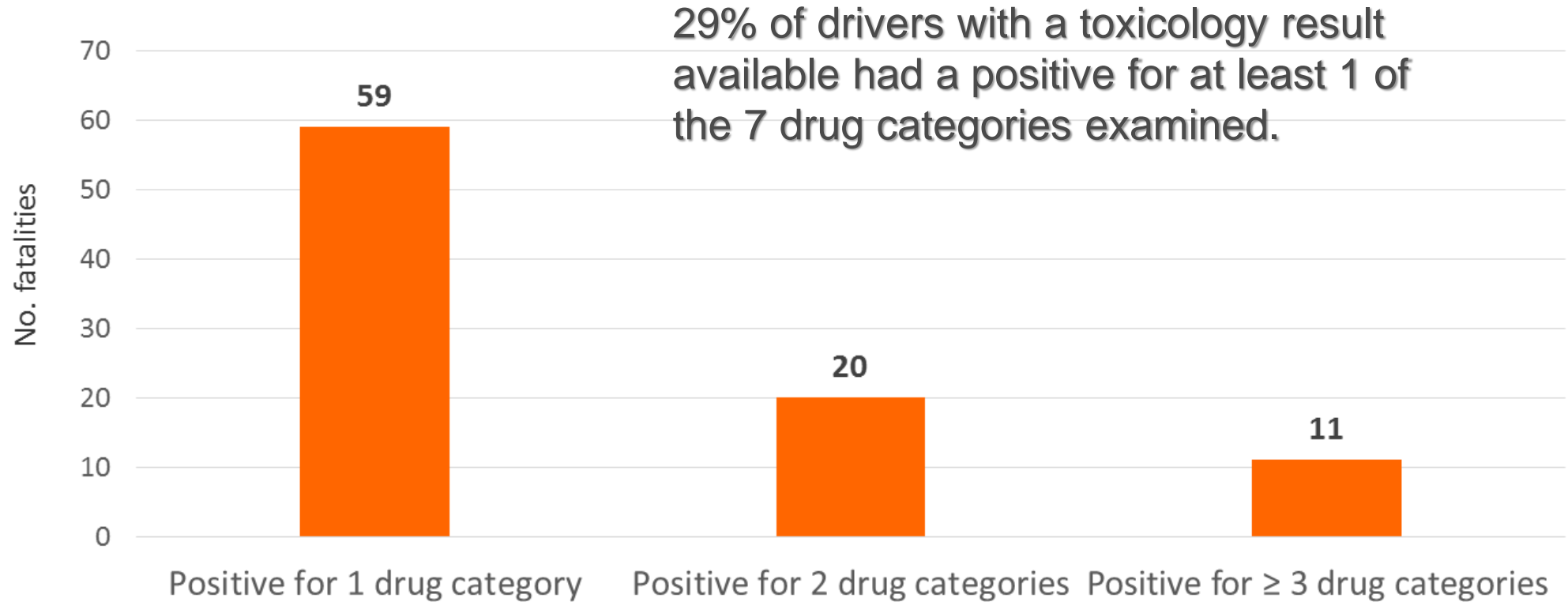


Figure 3. Number of driver fatalities (2013-2016) by number of drug categories positive on toxicology*.

**Please note that alcohol is not incorporated in the drug categories for this figure.*

Driver and collision profiles (n = 90)



- Driver fatalities (90 in total) with a positive toxicology for at least 1 of the following 7 drug categories:

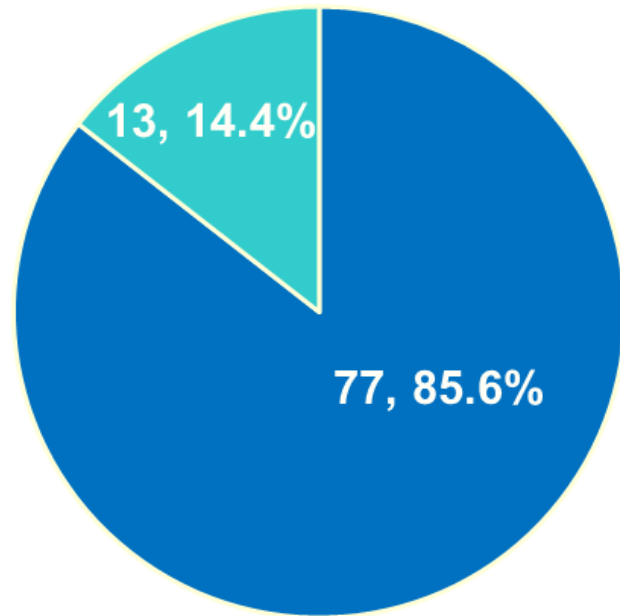
Benzodiazepines, Cannabis, Cocaine, Opioids,
Pregabalin/Gabapentin, Stimulants, Z-drugs

- Of these 90 driver fatalities with a positive toxicology for at least one of the above drug categories, 40 (44.4%) also had a positive toxicology for alcohol.

Driver profile (n = 90)

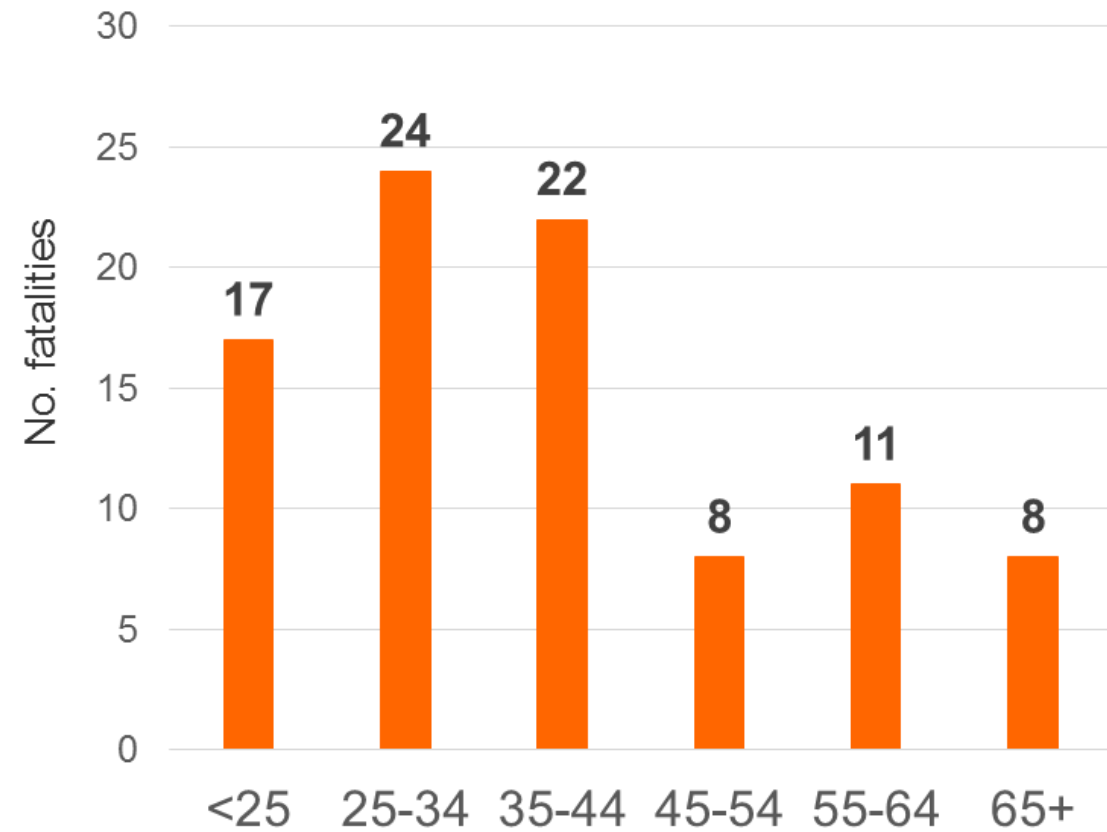


Gender



■ Male ■ Female

Age



Personal Cannabis Use Legalised

- ❑ Illegal, decriminalized and legalised – differentiate the legal status
- ❑ US States: 11 since 2012
 - Alaska, California, Colorado, Illinois, Maine, Massachusetts, Michigan, Nevada, Ohio, Oregon & Washington States and also
 - Washington D.C.
- ❑ Uruguay 2013
- ❑ Canada October 2018
- ❑ Luxembourg proposal August 2019
- ❑ Australian Capital Territory January 2020

ICADTS 2019



- ❑ International Council on Alcohol, Drugs and Traffic Safety
- ❑ Conference in Edmonton, Canada in August 2019
- ❑ Recent legalization in Canada of cannabis for personal use and the consequences for DUI was a major theme

Plain Messages – Drugs Driving

- Drugs Driving is now a major problem in Ireland and more information is becoming available 2019-2020
- Alcohol remains the single largest DUI problem and those over the limit are well over the limit
- Cannabis is now not far behind alcohol in blood and urine samples but more complex

Plain Messages – Drugs Driving

- Gardai are successful in detecting DUID at the roadside in increasing numbers
- Need to increase drug testing in drivers in Garda stations
- Younger men are the largest DUI group

Plain Messages – Prescribable and Over the Counter Drugs

- ❑ Prescribable and OTC drugs are also a real problem and mirror taking of drugs and medications in Ireland
- ❑ Need to watch benzodiazepines, Z-drugs and pregabalin
- ❑ Take your on medications, be safe on them, read the patient information leaflet and listen to your doctor's and pharmacist's advice
- ❑ Drive safely, be aware of your own impairment and don't kill or maim others or yourself or risk losing your licence to drive

Bigí ullamh



Údarás Um Shábháilteacht Ar Bhóithre
Road Safety Authority



Acknowledgements

- Dr. Richard Maguire and team MBRS
- All the Scientists, Technical & Administrative Staff of MBRS
- Dr. Aoife Kervick RSA & Ms. Ena Lynn, Dr. Suzi Lyons and Ms. Emma Spellman HRB / NDRDI





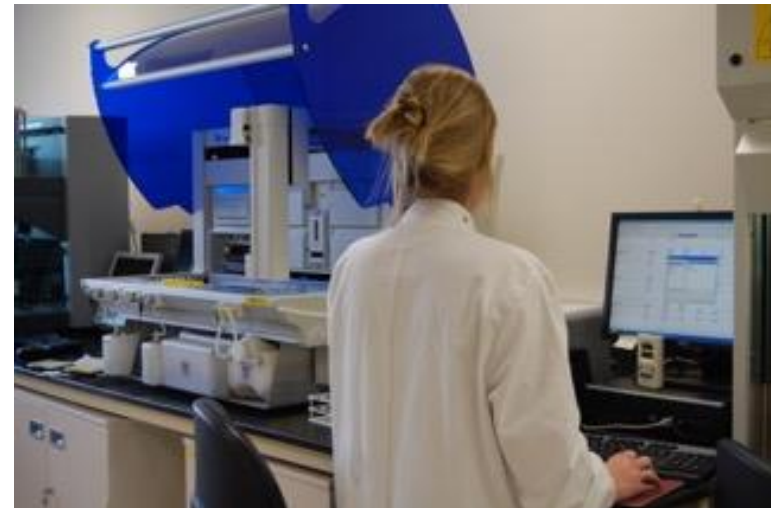
**These notes are intended for use in
conjunction with this presentation
only.**

The notes do not constitute medical, legal or
medico-legal advice. No part to be
reproduced without permission of the
author. © 2019.

Medical Bureau of Road Safety

50 Years: 1968 – 2018

www.mbrs.ie





Go raibh maith agaibh

Thank you

Discussion