# 2024 ANNUAL BERDIN MEETING

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# ALCOHOL AND/OR DRUG RELATED DEATHS IN BERMUDA

- Forensic Toxicology Section
- Perfoms toxicology analysis on biological samples after autopsy, on behalf of the Coroner

#### CORONERS ACT 1938

CORONERS ACT 1938

Duty to notify coroner in certain cases

8(1)Where the dead body of a person is found on land or in the territorial waters of Bermuda, or is brought or washed ashore, and there is reason to suspect that that person—
(a)died a violent or unnatural death; or
(b)a death of which the cause is unknown, every person finding that dead body, and every person having knowledge of that death, shall forthwith notify a police officer.

(2)Where a person dies in—
(a)a prison;
(b)a senior training school;
(c)a hospital providing treatment for persons suffering from mental disorder, the person in charge of that institution, and every person there having knowledge of that death, shall forthwith notify a police officer.

- (3)Where a person dies in police custody, every police officer having knowledge of the death shall forthwith notify a Coroner.
- (4)Where notification is given to a police officer under this section, the police officer shall notify a Coroner of the facts so notified to him.

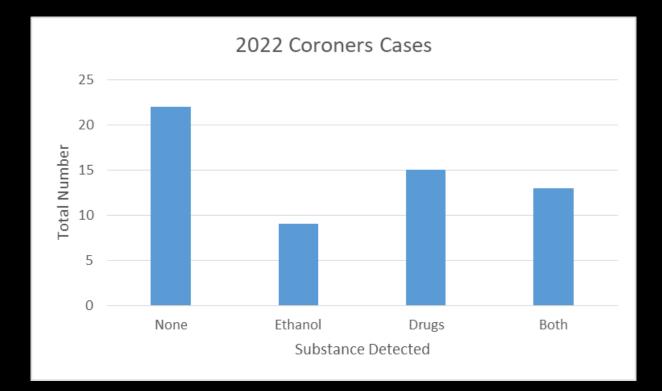
### **PROCESS**



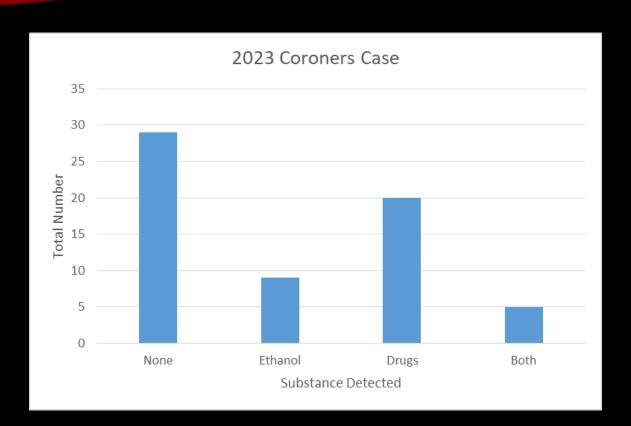
#### TESTING PANEL

- Ethanol
- Methamphetamine/Ecstacy
- Benzodiazepines
- Barbiturates
- Cannabinoids
- Cocaine
- Opiates
- Fentanyl
- Oxycodone
- Basics (expanded)
- Acids (expanded)

### 



Total Number of Screens	59
Age Group	
< 18 years	1
18-25 years	8
26-35 years	3
36-45 years	5
46-60 years	25
60+ years	17
Substances detected	
None	22
Ethanol	9
Drugs	15
Both	13
Gender	
Males	48
Females	11



### 

Total Number of Screens	62
Age Group	
< 18 years	1
18-25 years	4
26-35 years	3
36-45 years	7
46-60 years	22
60+ years	21
Substances detected	
None	29
Ethanol	9
Drugs	20
Both	5
Gender	
Males	46
Females	10

#### 2022 CASE STUDY

#### Female

- Blood
- Cocaine 100ng/mL
- BZE 1800ng/mL
- Fentanyl 21ng/mL
- Norfentanyl 11ng/mL
- Morphine Detected

#### Male

- Blood
- Zolpidem 2700ng/mL
- Citalopram 1800ng/mL
- Tramadol 70ng/mL

- Urine
- Zolpidem 10000ng/mL
- Citalopram >1000ng/mL
- Tramadol 3100ng/mL
- Oxycodone 200ng/mL
- Codeine 400ng/mL

#### 2023 CASE STUDY

#### Male

- Blood
- Delta-9 THC 21ng/mL
- Hydroxy-THC 67ng/mL
- Carboxy-THC >500ng/mL
- MDMA 2000ng/mL
- MDA 120ng/mL
- Morphine Detected

- Urine
- Carboxy-THC >500ng/mL
- MDMA 100,000ng/mL
- MDA 69,000ng/mL
- BZE 300ng/mL

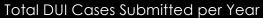
#### **DUI CASES**

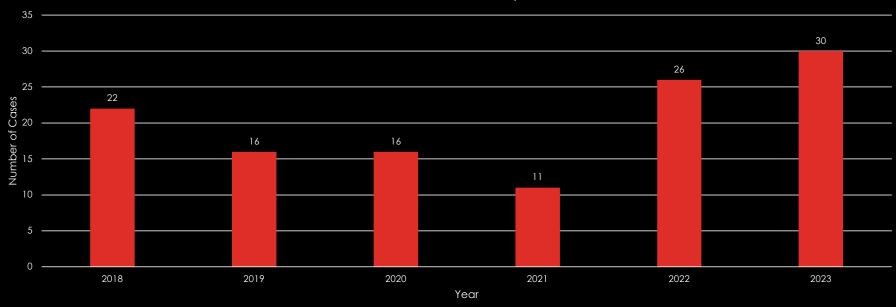
- Toxicology Analysis Performed on Blood Samples submitted by police in Accordance with the Road Traffic Act 1947
- Sections 35E and 35F

#### TESTING PANEL

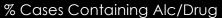
- Ethanol
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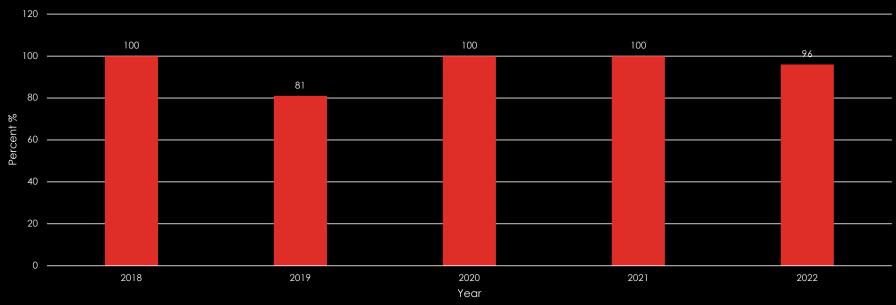
#### DUI CASES SUBMITTED PER YEAR





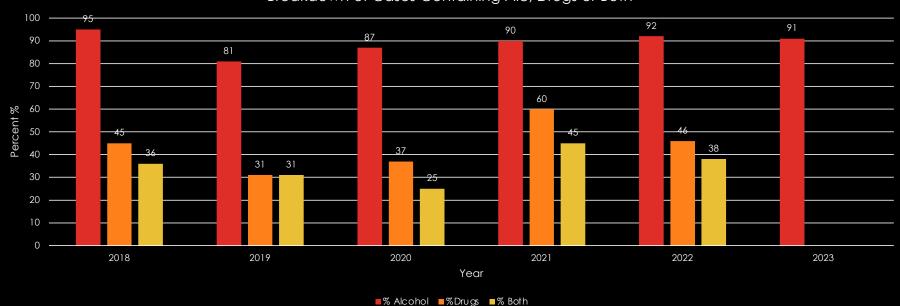
#### PERCENTANGE OF CASES THAT ARE POSITIVE





# BREAKDOWN OF CASES CONTAINING ALC/DRUGS

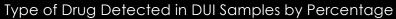
Breakdown of Cases Containing Alc, Drugs or Both

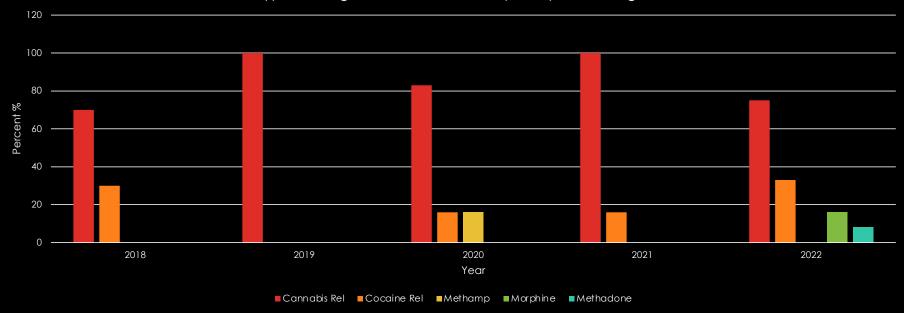


#### CLASS OF DRUGS DETECTED

- Cannabis Related
  - Delta-9 THC and associated metabolites
  - Cocaine Related
  - Cocaine and associated metabolites
  - Methamphetamine
  - Methadone
  - Morphine

# PERCENTAGE BREKADOWN OF DRUGS IN DUI SAMPLES





#### How long does it take to metabolize THC? Peaks of THC and its metabolites after Oral Ingestion can take a long time. 3-10 Minutes (A9-THC) -2 Hours 11-OH-THC 15 Minutes (1-2 Hours THCCOOH 81 Minutes THCCOOH 3.5 - 10 Hours It can take anywhere It takes around an hour from 3.5 to 10 hours to fully and a half to process metabolize THC by inhaled THC oral ingestion

#### DELTA-9 THC METABOLISM

Delta-9 THC



Hydroxy-THC



Carboxy-THC

#### **EXPANDED TESTING**

## Delta-8 THC

